



Measurement & Analytics - Measurement Made Easy

# 2600T Pressure Transmitters

## Pressure Measurement Made Easy

# Expertise in technology

## More than a century of experience

To operate any process efficiently, it is essential to measure, actuate, record and control. With ABB's measurement products and solutions, you are receiving the best technology combined with the most reliable products available on the market.

ABB offers a broad range of life cycle services for optimum product performance. A global network of measurement products specialists delivers local service and support.

Research and development is a vital source of ABB's technology leadership. It builds on the foundation of existing technologies for new applications, and continues to develop the breakthrough technologies needed to meet the challenges of the future.

ABB and its heritage companies have been leaders in innovation and technology for more than 100 years.

Aztec

**Bailey**

**BOMEM**

Bush Beach Engineering  
Limited

FISCHER  
& PORTER **F**

**Hartmann & Braun**

**K-TEK**

Kent

Pressductor®

**SENSYCON**

Schoppe & Faeser

*Taylor*

**TBI-Bailey**

**TORBAR**  
FLOWMETERS LTD

**TOTALFLOW**  
MEASUREMENT & CONTROL SYSTEMS

# Comprehensive measurement solutions

## Serving your industry

### ABB's measurement products portfolio:

- Analytical measurement
- Flow measurement
- Natural gas measurement
- Actuators and positioners
- Pressure measurement
- Temperature measurement
- Recorders and controllers
- Level measurement
- Device management
- Force measurement
- Service

ABB measurement products provide world-class measurement solutions for any industry, utility or municipality. Innovations deliver technological solutions to make it easier for you to run your plants. ABB's measurement products are based on common technology, providing a common look and feel and method of operation. This results in products, that are easy to configure, easy to integrate, and easy to maintain.

For more information please visit:  
[www.abb.com/measurement](http://www.abb.com/measurement)

1 Water and waste water | 2 Power and industrial steam | 3 Chemical and petrochemical | 4 Oil and gas | 5 Pulp and paper | 6 Minerals | 7 Metals | 8 Food and beverage | 9 Pharmaceuticals





# Services for measurement products

## Performance optimization solutions



Dedicated to optimizing your plant productivity and performance, ABB's services enable improved utilization and performance of your automation equipment, processes, and personnel. ABB provides support from the planning phase right through to commissioning and servicing.

**ABB's service specialists are strategically located to support all products and systems globally. ABB's broad scope of services lays the foundation for end-to-end support for your enterprise.**

#### **ABB's performance optimization services:**

- Consulting
- Installation and commissioning
- Maintenance and field services
- Asset management systems
- Fieldbus and wireless solutions
- Project execution
- Migration and upgrades
- Repairs and calibration
- Spare parts and consumables
- Support, remote service, and training
- Maintenance support agreements
- In the field meter verification
- Meter recalibration

ABB service – value added services for bottom-line results.



# 2600T produced by evolution

## Discover all the innovative features

### A top quality transmitter family

Unrivalled in its expertise and longstanding tradition in transmitter manufacturing, ABB offers the world's most comprehensive range of pressure measurement products. The 2600T family provides products specifically designed to meet the widest range of applications ranging from arduous conditions in offshore oil and gas to the laboratory environment of the pharmaceutical industry.

- New intuitive HMI for quick commissioning
- Reliable sensor technologies
- Easy to install and configure
- Multivariable version
- Taylor Instrument's all-welded technology for diaphragm seals
- Best-in-class stability

### Information whenever you need it

ABB's measurement products feature the latest in onboard diagnostics and intelligence to help you run your business more effectively. ABB gives you the choice to decide which communication protocols you would like to use to access this information. You can select from a family of tools and from different ways to manage the lifecycle of the devices in order to get the most out of your investment.

### ABB's device management product range includes

- Fieldbus and wireless solutions
- Mobility handhelds
- Asset Vision software
- Scalable service management



# ABB, common features across the range

## Unique ease of operation – innovative plug & play graphic display

The user friendly HMI allows simple and intuitive transmitter operation. The “Easy Setup” procedure allows the user to easily commission the instrument without the need for an expensive hand-held terminal.

## The Communication You Need

ABB Instrumentation products are available with HART / 4-20 mA, PROFIBUS PA, FOUNDATION Fieldbus, MODBUS and WirelessHART communication protocols. The 266 series allows you to preserve your investment allowing an upgrade from HART to any other available communication protocol in minutes with no need to remove the device from its installation or to reconfigure it. The modular construction of the 266 series allows repairs to be carried out in-field so that the instrument is back in operation few minutes after failure detection.

## Reliability in severe service with S26 diaphragm seals

ABB remote seals have a high-integrity, All-Welded construction as standard. This construction is based on decades of experience in remote seal manufacturing inherited by Taylor Instruments. All-Welded manufacturing technique definitely ensures optimum solution even in high vacuum, high temperature applications.

S26 diaphragm seals are completely designed and manufactured by ABB. The wide range of special materials (Tantalum, SuperDuplex, Inconel 625, Monel, Hastelloy C-276 and unique from ABB Hastelloy C-2000) allows Customers to easily find the best fit for their specific processes providing long lasting solutions for highly corrosive media while increasing overall instrument lifecycle. Diaphragm seal portfolio includes also different coatings such as anti-abrasion Diaflex, gold plated to prevent hydrogen penetration, anti-stick and anticorrosion.

ABB also offer special designed remote seals for individual process solutions.

S26 seals repair is supported by the ABB pressure service centers worldwide.



# 261 pressure transmitters

## The quality cost-effective solution

### The 261 series is the result of our focus on essential features for pressure and level measurement

- Base accuracy  $\pm 0.1\%$
- Compact and extremely robust housing out of stainless steel 316L
- Maintenance free due to ABB's reliable well-proven sensor technology
- Easy operation and set up via the graphic display with intuitive menu navigation
- Wide choice of process connections to suit multiple installations in various industry segments e.g.:
  - Threaded connections for the power or pulp/paper industries
  - Flanged connections for the chemical industry
  - Hygienic connections: e.g. for the pharmaceutical or food and beverages industries
- Designed to meet both CIP and SIP applications
- Output signal 4...20 mA with HART digital communication
- Conforms to SIL2 acc. to IEC 61508 / IEC 61511

### Most served industry segments

- Water
- Food, Beverage and Pharmaceutical
- Pulp and Paper





# 266 pressure transmitters

## Performance with intelligence

### 266 delivers previously unattainable operational benefits

From the design to the software functionality, the 266 series represents the latest evolutionary step in the wide ABB product portfolio. Users can easily find the right application solution for their measurement needs and select among different levels of accuracy.

The 266 is available with an accuracy from 0.075% up to the 'Top performance' accuracy of 0.025%. This allows the user to control their processes with an excellent precision for pressure, level and flow measurements. Accuracy is no longer a constraint.

Notable is also the choice of measuring ranges allowing to measure pressures from 0.05 kPa (0.2 inH<sub>2</sub>O) up 105 MPa (15000 psi). 266 is one of the few low range differential pressure transmitters offering an outstanding suitability draft range measurements.

Pressure transmitter models are suitable for measurements up to 1050 bar (15000 psi), using Inconel 718 NACE compliant material for wetted parts.

One further highlight available with the 266 differential pressure transmitter is the version for high static pressure applications. This allows to measure differential pressure with a high accuracy in applications with maximum working pressure (MWP) up to 60 MPa (8700 psi). Naturally this version also includes Ex certifications, if required.

### Go for wireless with 266 Pressure transmitters

ABB WirelessHART 266 pressure transmitter enables the easy addition of pressure measurement points throughout your

operation. You can now monitor hard-to-reach locations and keep your employees out of dangerous and hazardous areas. 266 WirelessHART has a battery life up to 10 years at 32 sec. update time, delivering a very cost-effective and reliable solution to monitor your process assets.

Installation times and overall implementation costs of process measurements are significantly reduced by eliminating complex wired infrastructures.

### Most served industry segments

- Oil and Gas
- Chemical
- Power
- Metal and Mining
- Water

### TTG Technology: no more barriers between users and instruments

ABB is the first instrumentation company able to offer on its HMI (Human Machine Interface) the TTG Technology (Through The Glass). With this exclusive and innovative option, users can interact directly with the instrument, without removing the windowed front cover, saving cost and time, especially in hazardous areas.

Using ABB's proven four button HMI with intuitive menu navigation and Easy Set Up menu, configuration times can be greatly reduced.

Moreover, expensive hand-held configurators are no longer necessary since all the essential parameters can be set via the HMI with just one touch.

### Easy to use... starting from the outside

The external non-intrusive zero and span push buttons allow users to rerange the transmitter safely in a few seconds.

An additional external write protection is also provided.



# Simplicity and compactness

## The key to the platform for pressure

### The 266 series never lets you down: plug-in communication board and terminal block

The new design enables in-field maintenance operations. Both terminal block and communication boards can be replaced in few minutes without the need to reconfigure the transmitter.

Failures due to lightning, wrong earth wiring, etc. are not now an issue: 266 is protecting your plant productivity smartly.



### PILD: Plugged Impulse Line Diagnostic as standard

Process diagnostics will continuously protect your 266 HART / 4-20 mA, PROFIBUS PA and FOUNDATION Fieldbus pressure transmitters from the risk of impulse line clogging or freezing.

Once a process anomaly is detected, the PILD function will generate a warning on the local LCD as well as via the communication protocol.



### SIL2 and SIL3 TUV certified

The 266 series is certified by TUV NORD for use in safety instrumented systems as per the requirements of IEC61508. The transmitters meet the requirements for SIL2 applications in a single transmitter configuration (1oo1) and for SIL3 applications in a redundant configuration (1oo2).



# Multivariable transmitters of 266 series

## Ideal for mass flow application

### Reliable solution for high pressure direct mass measurement

The unique combination of several sensor systems in a single device permits simultaneous measurement of differential pressure, absolute pressure and, via an external sensor, process temperature. Used for DP flow measurement it calculates the mass flow of gas, steam, and liquid with dynamic compensation. The measurement accuracy improves by 1 to 2%. Due to the available draft range this transmitter is tailored for use with the cheap and easy to install averaging Pitot tubes. In level applications the Multivariable transmitter calculates fluid density depending on temperature and pressure for dramatically increase of measurement accuracy even when using diaphragm seals.

### Push down cost, increase safety

Less process penetrations means less potential leaking points and higher safety.

### Boost the availability

And in the seldom case of fault the smart self-configuration function of the changeable electronic enables field repairs to be carried out so that the instrument is back in operation within minutes.

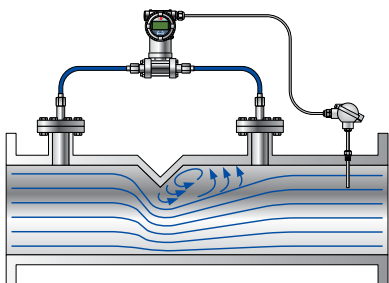
This short Mean Time To Repair (MTTR) combined with the high MTBF is the base for highest availability. The integrated "Plugged Impulse Line Detection" (PILD) function is another nice tool for an enhanced availability indicating a potential problem before it becomes a problem.

### Mass flow measurement

Mass flow of gas, steam, liquid and standard volume flow of gas in accordance with AGA3 or DIN EN ISO 5167.

Highest accuracy is achieved through:

- Dynamic flow correction with continuous calculation of Reynold's number and flow coefficient
- Correction of material-dependent thermal size changes
- Linearization of the primaries



### Shorten maintenance time

In case of changes in the process the "Easy Setup" feature, carried out with local indicator, Hand Held Terminal or Device Type Manager (DTM) allows to adapt the instrument within shortest possible time.

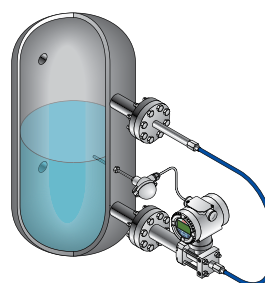
### Most served industry segments

- Oil and Gas
- Chemical
- Power



### Level measurement

- Improves the hydrostatic level measurement due to density correction
  - level in open tanks
  - level in pressurized tanks
  - boiler drum level
- volume of tanks with any shape
- tank content in mass units





# 2600T all-welded diaphragm seals

## Performance and reliability over time

### Flanged models

The ABB diaphragm seal portfolio includes rotating and fixed-flange models specifically designed to connect to flanged pipe fittings according to ASME, EN, ISO and JIS.



### Ring-Joint construction

This type of diaphragm seal, flanged according to ASME standard, has been designed for high pressure /high temperature conditions.



### Wafer / Pancake

Designed to connect to ASME and EN standard flanges the wafer diaphragm seal offers stable performance for a large number of applications. Joints and flushing rings complete the already wide offering. Wafer seals represent a cost-effective and reliable application solution.



### Off-line seal

Available with threaded or ASME/ EN flanged process connection, the Off-line model matches small process connections. Recommended for clean process fluid measurements.



### Sanitary models

Diaphragm seals developed according to the stringent 3-A requirements. Available with different process fittings (Triclamp, Cherry Burrel, Union Nut and Sanitary), this range demonstrates ABB's commitment to satisfy users needs by engineering solutions for the most demanding processes.



### Union connection

A screw thread process connection that provides a flush diaphragm for gauge pressure applications. Originally designed by Taylor Instrument this connection is combined with the "all welded" technology to provide a high integrity solution for arduous applications.



### Chemical Tee

Available only from ABB and designed for the chemical and Oil&Gas industries, the Chemical Tee remote seal is designed to connect to a Wedge Flow Element or to any process fitting with the appropriate dimensions.



### Button

Button seals are designed for accurate high pressure measurement with a small diaphragm size. This type of connection is especially suitable for plastic and resins production processes, at high pressure and high temperature conditions.



### In-line

In line seals are suitable for measuring the pressure of fluids in pipes. The pressure measuring diaphragm forms the pipe wall making this type of seal suitable for measuring the pressure of flowing fluids particularly those that are highly viscous or contain solids.



### Pulp & Paper

Designed especially for preventing process media from plugging the process connection, Pulp & Paper diaphragm seals can be manufactured with anti-stick coatings which remove the need for manual cleaning and therefore reduce costs.



### Urea service

This specialized remote seal is manufactured from materials which match the aggressively corrosive conditions when Urea is present in the process. The urea grade wetted materials ensure stable performances even in high temperature / high vacuum conditions. Huey test available as option.



### Socket & Saddle

These diaphragm seals have been developed to meet the requirements of users who require a directly welded process connection. Suited for highly viscous process fluids measurements.



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# Model 266HSH Gauge Model 266NSH Absolute

Measurement made easy

Engineered solutions for all applications



#### Base accuracy

- from 0.06 % of calibrated span (optional 0.04 %)

#### Reliable sensing system coupled with very latest digital technologies

- provides large turn down ratio up to 100:1

#### Comprehensive sensor choice

- optimize in-use total performance and stability

#### 10-year stability

- 0.15 % of URL

#### Flexible configuration facilities

- provided locally via local LCD keypad

#### New TTG (Through-The-Glass) keypad technology

- allows quick and easy local configuration without opening the cover, even in explosion proof environments

#### IEC 61508 certification

- version for SIL2 (1oo1) and SIL3 (1oo2) applications

#### PED compliance

- Category III for PS > 21 MPa, 210 bar
- Sound Engineering Practice (SEP) for PS ≤ 21 MPa, 210 bar

#### WirelessHART version

- the battery powered solution compliant to IEC 62591

#### Best-in-class battery life

- up to 10 years @ 32 s update time
- in-field replaceable



# Model 266HSH Gauge

# Model 266NSH Absolute

## Functional Specifications

### Range and span limits

| Sensor Code | Upper Range Limit (URL)             | Lower Range Limit (LRL)                                 | Minimum span                       |                                  |
|-------------|-------------------------------------|---|------------------------------------|----------------------------------|
|             |                                     |   | 266HSH (Δ)                         | 266NSH                           |
| E           | 16 kPa<br>160 mbar<br>64 inH2O      | -16 kPa<br>-160 mbar<br>-64 inH2O                       | 0.54 kPa<br>5.4 mbar<br>2.16 inH2O |                                  |
| G           | 65 kPa<br>650 mbar<br>260 inH2O     | -65 kPa<br>-650 mbar<br>-260 inH2O                      | 0.65 kPa<br>6.5 mbar<br>2.6 inH2O  | 1.1 kPa<br>11 mbar<br>8 mmHg     |
| H           | 160 kPa<br>1600 mbar<br>642 inH2O   | 0.07 kPa abs (\$)<br>0.7 mbar abs (\$)<br>0.5 mmHg (\$) | 1.6 kPa<br>16 mbar<br>6.4 inH2O    | 2.67 kPa<br>26.7 mbar<br>20 mmHg |
| M           | 600 kPa<br>6 bar<br>87 psi          | 0.07 kPa abs (\$)<br>0.7 mbar abs (\$)<br>0.5 mmHg (\$) | 6 kPa<br>0.06 bar<br>0.87 psi      | 10 kPa<br>0.1 bar<br>1.45 psi    |
| P           | 2400 kPa<br>24 bar<br>348 psi       | 0.07 kPa abs (\$)<br>0.7 mbar abs (\$)<br>0.5 mmHg (\$) | 24 kPa<br>0.24 bar<br>3.5 psi      | 40 kPa<br>0.4 bar<br>5.8 psi     |
| Q           | 8000 kPa<br>80 bar<br>1160 psi      | 0.07 kPa abs (\$)<br>0.7 mbar abs (\$)<br>0.5 mmHg (\$) | 80 kPa<br>0.8 bar<br>11.6 psi      | 134 kPa<br>1.34 bar<br>19.4 psi  |
| S           | 16000 kPa<br>160 bar<br>2320 psi    | 0.07 kPa abs (\$)<br>0.7 mbar abs (\$)<br>0.5 mmHg (\$) | 160 kPa<br>1.6 bar<br>23.2 psi     | 267 kPa<br>2.67 bar<br>38.7 psi  |
| V           | 60000 kPa<br>600 bar<br>8700 psi    | 0.07 kPa abs (\$)<br>0.7 mbar abs (\$)<br>0.5 mmHg (\$) | 600 kPa<br>6 bar<br>87 psi         |                                  |
| Z           | 105000 kPa<br>1050 bar<br>15225 psi | 0.07 kPa abs (\$)<br>0.7 mbar abs (\$)<br>0.5 mmHg (\$) | 10500 kPa<br>105 bar<br>1522 psi   |                                  |

(Δ) Lower Range Limit (LRL) for 266NSH is 0.07kPa abs, 0.7mbar abs, 0.5mmHg for all ranges.

(\$) Lower Range Limit is 0.135 kPa abs, 1.35 mbar abs, 1 mmHg for inert Galden or 0.4 kPa abs, 4 mbar abs, 3 mmHg for inert Halocarbon.

### Span limits

Maximum span = URL

IT IS RECOMMENDED TO SELECT THE TRANSMITTER SENSOR CODE PROVIDING THE TURNDOWN VALUE AS LOWEST AS POSSIBLE TO OPTIMIZE PERFORMANCE CHARACTERISTICS.

### Zero suppression and elevation

Zero and span can be adjusted to any value within the range limits detailed in the table as long as:

- calibrated span ≥ minimum span

### Damping (feature not available for WirelessHART version)

Selectable time constant : between 0 and 60 s

This is in addition to sensor response time.

### Turn on time

Operation within specification in less than 10 s with minimum damping.

### Insulation resistance

> 100 MΩ at 500 V DC (terminals to earth)

## Operative limits

### Pressure limits:

#### Overpressure limits

Without damage to the transmitter

| Sensors       | Fill fluid         | Overpressure limits  |
|---------------|--------------------|--|
| Sensor E to M | Silicone oil       | 0.07 kPa abs, 0.7 mbar abs, 0.5 mmHg and 14 MPa, 140 bar, 2030 psi           |
| Sensor P to S | Silicone oil       | 0.07 kPa abs, 0.7 mbar abs, 0.5 mmHg and 21 MPa, 210 bar, 3045 psi           |
| Sensor V      | Silicone oil       | 0.07 kPa abs, 0.7 mbar abs, 0.5 mmHg and 90 MPa, 900 bar, 13050 psi          |
| Sensor E to M | Inert (Galden)     | 0.135 kPa abs, 1.35 mbar abs, 1 mmHg and 14 MPa, 140 bar, 2030 psi           |
| Sensor P to S | Inert (Galden)     | 0.135 kPa abs, 1.35 mbar abs, 1 mmHg and 21 MPa, 210 bar, 3045 psi           |
| Sensor E to M | Inert (Halocarbon) | 0.4 kPa abs, 4 mbar abs, 3 mmHg and 14 MPa, 140 bar, 2030 psi <sup>(1)</sup> |
| Sensor P to S | Inert (Halocarbon) | 0.4 kPa abs, 4 mbar abs, 3 mmHg and 21 MPa, 210 bar, 3045 psi                |
| Sensor V      | Inert (Galden)     | 40 kPa abs, 400 mbar abs, 5.8 psia and 90 MPa, 900 bar, 13050 psi            |

| Sensors  | Connection   | Overpressure limits   |
|----------|--------------|---|
| Sensor Z | F250C        | 0.07 kPa abs, 0.7 mbar abs, 0.5 mmHg and 157.5 MPa, 1575 bar, 22837 psi |
| Sensor Z | 1/4 - 18 NPT | 0.07 kPa abs, 0.7 mbar abs, 0.5 mmHg and 135 MPa, 1350 bar, 19570 psi   |

#### Proof pressure

The transmitter can be exposed without leaking to line pressure of up to the following values:

| Sensors                          | Proof pressure                 |
|----------------------------------|--------------------------------|
| Sensor E, G, H, M                | 28 MPa, 280 bar, 4060 psi      |
| Sensor P, Q, S                   | 40.25 MPa, 402.5 bar, 5836 psi |
| Sensor V                         | 90 MPa, 900 bar, 13050 psi     |
| Sensor Z 1/4 - 18 NPT connection | 210.5 MPa, 2105 bar, 30522 psi |
| Sensor Z F250C connection        | 239,7 MPa, 2397 bar, 34763 psi |

Meet ANSI/ISA-S 82.03 hydrostatic test requirements.

## Temperature limits °C ( °F) :

### Ambient

is the operating temperature

| Models 266HSH - 266NSH               | Ambient temperature limits     |
|--------------------------------------|--------------------------------|
| Silicone oil for sensor E to V       | -40 and 85 °C (-40 and 185 °F) |
| Inert (Galden) for sensor E to S     | -20 and 85 °C (-4 and 185 °F)  |
| Inert (Halocarbon) for sensor E to S | -20 and 85 °C (-4 and 185 °F)  |
| Inert (Galden) for sensor V          | -40 and 85 °C (-40 and 185 °F) |
| Sensor Z without filling             | -40 and 85 °C (-40 and 185 °F) |

### IMPORTANT

For Hazardous Atmosphere applications see the temperature range specified on the certificate/approval relevant to the aimed type of protection

| Models 266HSH - 266NSH | Ambient temperature limits     |
|------------------------|--------------------------------|
| LCD integral display   | -40 and 85 °C (-40 and 185 °F) |

LCD display may not be clearly readable below -20 °C (-4 °F) or above +70 °C (+158 °F)

| Models 266HSH - 266NSH        | Ambient temperature limit     |
|-------------------------------|-------------------------------|
| Painted AISI 316 L ss housing | max 70 °C (158 °F) continuous |

### IMPORTANT

For Hazardous Atmosphere applications see the temperature range specified on the certificate/approval relevant to the aimed type of protection.

### Process

| Models 266HSH - 266NSH               | Process temperature limits                     |
|--------------------------------------|--|
| Silicone oil for sensor E to V       | -40 and 121 °C (-40 and 250 °F) <sup>(1)</sup> |
| Inert (Galden) for sensor E to S     | -20 and 100 °C (-4 and 212 °F) <sup>(2)</sup>  |
| Inert (Halocarbon) for sensor E to S | -20 and 100 °C (-4 and 212 °F) <sup>(2)</sup>  |
| Inert (Galden) for sensor V          | -40 and 121 °C (-40 and 250 °F)                |
| Sensor Z without filling             | -40 and 121 °C (-40 and 250 °F)                |

(1) 100 °C (212 °F) for application below atmospheric pressure

(2) 65 °C (150 °F) for application below atmospheric pressure

### Storage

| Models 266HSH - 266NSH | Storage temperature limits     |
|------------------------|--------------------------------|
| Storage limits         | -50 and 85 °C (-58 and 185 °F) |
| LCD integral display   | -40 and 85 °C (-40 and 185 °F) |

# Model 266HSH Gauge

# Model 266NSH Absolute

## Environmental limits

### Electromagnetic compatibility (EMC)

Comply with EN 61326 and NAMUR NE 21 (on request).  
Surge immunity level (with surge protector): 4 kV  
(according to IEC 1000-4-5 EN 61000-4-5)

### Pressure equipment directive (PED)

Comply with 97/23/EEC Category III Module H.

### Humidity

Relative humidity: up to 100 %  
Condensing, icing: admissible

### Vibration resistance

Accelerations up to 2 g at frequency up to 1000 Hz  
(according to IEC 60068-2-6)

### Shock resistance

Acceleration: 50 g  
Duration: 11 ms  
(according to IEC 60068-2-27)

### Wet and dust-laden atmospheres

The transmitter is dust and sand tight and protected against immersion effects as defined by IEC 60529 (2001) to IP 67 (IP 68 on request) or by NEMA Type 4X. IP65 with Harting Han connector.  
Aluminium and AISI housings as barrel version also comply to IP 66 as defined by IEC 60529 (2001).

## Hazardous atmospheres

### (FOR ALL VERSIONS EXCEPT WirelessHART)

With or without integral display

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#### INTRINSIC SAFETY:

ATEX Europe (code E1) approval

II 1 G Ex ia IIC T6/T5/T4 and II 1/2 G Ex ia IIC T6/T5/T4 and II 1 D Ex iaD 20 T85 °C and II 1/2 D Ex iaD 21 T85 °C; IP67.

IECEx (code E8) approval

Ex ia IIC T6/T5/T4 and Ex iaD 20 T85 °C and Ex iaD 21 T85 °C; IP67.

NEPSI China (code EY)

Ex ia IIC T4~T6, DIP A20TA, T4~T6.

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#### EXPLOSION PROOF:

ATEX Europe (code E2) approval

II 1/2 G Ex d IIC T6 and II 1/2 D Ex tD A21 IP67 T85 °C (Ta = -50 to +75 °C).

IECEx (code E9) approval

Ex d IIC T6 and Ex tD A21 IP67 T85 °C (Ta = -50 to +75 °C).

NEPSI China (code EZ)

Ex d IIC T6, DIP A21TA, T6.

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#### TYPE "N":

ATEX Europe (code E3) type examination

II 3 G Ex nL IIC T6/T5/T4 and II 3 D Ex tD A22 IP67 T85 °C; IP67.

IECEx (code ER) type examination

Ex nL IIC T6/T5/T4; IP67.

NEPSI China (code ES) type examination

Ex nL IIC T4~T6, DIP A22TA, T6.

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FM Approvals US (code E6) and FM Approvals Canada (code E4):

– Explosionproof (US): Class I, Div. 1, Groups A, B, C, D

– Explosionproof (Canada): Class I, Div. 1, Groups B, C, D

– Dust ignitionproof : Class II, Div. 1, Groups E, F, G

– Suitable for: Class II, Div. 2, Groups F, G; Class III, Div.1, 2

– Nonincendive: Class I, Div. 2, Groups A, B, C, D

– Intrinsically safe: Class I, II, III, Div. 1, Groups A, B, C, D, E, F, G

Class I, Zone 0 AEx ia IIC T6/T4, Zone 0 (FM US)

Class I, Zone 0 Ex ia IIC T6/T4, Zone 0 (FM Canada)

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COMBINED ATEX (code EW = E1 + E2 + E3), (code E7 = E1 + E2)

COMBINED ATEX, FM and IECEx Approvals (code EN = EW + E4 + E6+ EI)

COMBINED FM Approvals US and Canada

– Intrinsically safe (code EA)

– Explosionproof (code EB)

– Nonincendive (code EC)

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COMBINED IEC (code EH = E8 + E9), (code EI = E8 + E9 + ER)

COMBINED NEPSI (code EP = EY + EZ), (code EQ = EY + EZ + ES)

GOST (Russia), GOST (Kazakhstan), GOST (Belarus), Inmetro (Brazil),

Kosha (Korea).

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REFER TO CERTIFICATES FOR AMBIENT TEMPERATURE RANGES (WITHIN THE LIMITS OF -50 TO 85°C) RELATED TO THE DIFFERENT TEMPERATURE CLASSES

## Hazardous atmospheres

### (ONLY FOR WirelessHART VERSION)

With or without integral display

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#### INTRINSIC SAFETY:

ATEX Europe (code E1) approval

II 1 G Ex ia IIC T4 Ga and II 1/2 G Ex ia IIC T4 Ga/Gb; IP67.

IECEX (code E8) approval

Ex ia IIC T4; IP67.

NEPSI China (code EY)

Ex ia IIC T4~T6.

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#### TYPE "N":

ATEX Europe (code E3 ) type examination

II 3 G Ex nA IIC T6/T5/T4; IP67.

IECEX (code ER) type examination

Ex nA IIC T6/T5/T4; IP67.

NEPSI China (code ES) type examination

Ex nA IIC T4~T6.

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FM Approvals US and FM Approvals Canada:

— Nonincendive: Class I, Div. 2, Groups A, B, C, D (code EC)

— Intrinsically safe: Class I, Div. 1, Groups A, B, C, D (code EA)

Class I, Zone 0 AEx ia IIC T4, Zone 0 (FM US)

Class I, Zone 0 Ex ia IIC T4, Zone 0 (FM Canada)

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COMBINED ATEX (code ED = E1 + E3)

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COMBINED FM Approvals US and Canada (Code EE = EA + EC)

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COMBINED ATEX and FM Approvals US and Canada (Code EF = ED + EE)

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COMBINED IEC (code EM = E8 + ER)

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COMBINED NEPSI (code EG = EY + ES)

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REFER TO CERTIFICATES FOR AMBIENT TEMPERATURE RANGES (WITHIN THE LIMITS OF -50 TO 75°C) RELATED TO THE DIFFERENT TEMPERATURE CLASSES



# Model 266HSH Gauge Model 266NSH Absolute

## Electrical Characteristics and Options

### Optional indicators

#### Standard integral display

(code L9; only available with Standard HART)

Wide screen LCD, 128 x 64 pixel, 52.5 x 27.2 mm (2.06 x 1.07 in.) dot matrix. Multilanguage. Without keypad. User selectable application-specific visualizations. Totalized and instantaneous flow indication. Display may also indicate static pressure, sensor temperature and diagnostic messages and provides configuration facilities.



#### Integral display with integral keypad

(code L1; not available with Standard HART)

Wide screen LCD, 128 x 64 pixel, 52.5 x 27.2 mm (2.06 x 1.07 in.) dot matrix. Multilanguage. Four keys for configuration and management of device. Easy setup for quick commissioning. User selectable application-specific visualizations. Totalized and instantaneous flow indication. Display may also indicate static pressure, sensor temperature and diagnostic messages and provides configuration facilities.



#### Integral display with Through-The-Glass (TTG) activated keypad (code L5; not available with Standard HART)

As above integral display but equipped with the innovative TTG keypad allowing the activation of the configuration and management menus of the device without the need of removing the transmitter housing cover. TTG keypad is protected against accidental activations.



### Optional surge protection

Up to 4kV

- voltage 1.2  $\mu$ s rise time / 50  $\mu$ s delay time to half value
- current 8  $\mu$ s rise time / 20  $\mu$ s delay time to half value

### HART® digital communication and 4 to 20 mA output Standard and Advanced functionality

Device type: 1a06<sub>hex</sub> (listed with HCF)

### Power supply

The transmitter operates from 10.5 to 42 V DC with no load and is protected against reverse polarity connection (additional load allows operations over 42 V DC). For Ex ia and other intrinsically safe approval power supply must not exceed 30 V DC. Minimum operating voltage increase to 12.3 V DC with optional surge protector

### Ripple

20 mV max on a 250  $\Omega$  load as per HART specifications.

### Load limitations

4 to 20 mA and HART total loop resistance :

$$R \text{ (k}\Omega\text{)} = \frac{\text{Supply voltage} - \text{min. operating voltage (V DC)}}{22 \text{ mA}}$$

A minimum of 250  $\Omega$  is required for HART communication.

### Output signal

Two-wire 4 to 20 mA, user-selectable for linear or 22 points linearization table (i.e. for horizontal or spherical tank level measurement).

HART® communication provides digital process variable superimposed on 4 to 20 mA signal, with protocol based on Bell 202 FSK standard.

### Output current limits (to NAMUR NE 43 standard)

Overload condition

- Lower limit: 3.8 mA (configurable from 3.8 to 4 mA)
- Upper limit: 20.5 mA (configurable from 20 to 21 mA)

Alarm current

- Lower limit: 3.6 mA (configurable from 3.6 to 4 mA)
- Upper limit: 21 mA (configurable from 20 to 23 mA, limited to 22 mA for HART Safety; apply for electronics release 7.1.15 or later)

Factory setting: high alarm current

### Process diagnostics (PILD)

Plugged impulse line detection (PILD) generates a warning via HART communication. The device can also be configured to drive the analog output signal to the "Alarm current".

### IEC 62591 WirelessHART® output

Device type: 1a06<sub>hex</sub> (listed with HCF)

Network ID: ABB<sub>hex</sub> [2747<sub>dec</sub>]

Join keys: 57495245<sub>hex</sub> [1464422981] 4c455353<sub>hex</sub> [1279611731]  
4649454c<sub>hex</sub> [1179206988] 444b4559<sub>hex</sub> [1145783641]

### Power Supply

1x D-cell size lithium-thionyl chloride battery.

Battery life: 10 years at 32 sec. update time, 8 years at 16 sec. update time or 5 years at 8 sec. update time.

(at reference conditions of 25 ± 2 °C ambient temperature, data routed from 3 additional devices, LCD off).

THE BATTERY CAN BE REPLACED IN FIELD, ALSO IN HAZARDOUS CLASSIFIED AREA.

### Output signal

IEC 62591 WirelessHART Version 7.5 (IEEE 802.15.4-2006);

Frequency band: 2.4 GHz DSSS

Update rate: user selectable from 1 sec. to 60 min.

### Integrated adjustable omnidirectional antenna

— Output radio frequency: maximum 10 mW (10 dBm) EIRP

— Range: up to 300 m. (328 yds.)

Minimum distance between antenna and person is 0.2 m. (8 in.)

### Telecommunications directive

Every wireless measuring device must be certified in accordance with the telecommunications directive, in this case the frequency range. This certification is country-specific.

### European directives

Radio Equipment and Telecommunications Terminal

Equipment Directive 99/5/EC R&TTE

ETSI EN 300 328 V1.7.1 in accordance with Article 3.2

ETSI EN 301 489-17

In Europe, use of the 2400 - 2483.5 MHz frequency band is not harmonized. Country-specific regulations must be observed.

### Restrictions for Norway

Operation not permitted within a radius of 20 km around Ny-Alesund in Svalbard. For more information, see [www.npt.no](http://www.npt.no) Norway Posts and Telecommunications site

### USA / Canadian directives

FCC Part 15.247:2009 (USA)

IC RSS-210 and ICES-003 (Canada)

### PROFIBUS® PA output

#### Device type

Pressure transmitter compliant to Profiles 3.0.1

Identification number: 3450<sub>hex</sub>

#### Power supply

The transmitter operates from 9 to 32 V DC , polarity independent, with or without surge protector.

For Ex ia approval power supply must not exceed 17.5 V DC.

Intrinsic safety installation according to FISCO model.

#### Current consumption

operating (quiescent): 15 mA

fault current limiting: 20 mA max.

#### Output signal

Physical layer in compliance to IEC 1158-2/EN 61158-2 with transmission to Manchester II modulation, at 31.25 kbit/s.

#### Output interface

PROFIBUS PA communication according to Profibus DP50170 Part 2/DIN 19245 part 1-3.

#### Output update time

25 ms

#### Data blocks

3 analog input, 1 physical.

#### Additional blocks

1 Pressure with calibration transducer block

1 Advanced Diagnostics transducer block including Plugged Input Line Detection

1 Local Display transducer block

#### Transmitter failure mode

On gross transmitter failure condition, detected by self-diagnostics, the output signal can be driven to defined conditions, selectable by the user as safe, last valid or calculated value.

If electronic failure or short circuit occur the transmitter consumption is electronically limited at a defined value (20 mA approx), for safety of the network.

# Model 266HSH Gauge

## Model 266NSH Absolute

### FOUNDATION Fieldbus™ output

#### Device type

LINK MASTER DEVICE

Link Active Scheduler (LAS) capability implemented.

Manufacturer code: 000320<sub>hex</sub>

Device type code: 0007<sub>hex</sub>

#### Power supply

The transmitter operates from 9 to 32 V DC, polarity independent, with or without surge protector.

For Ex ia approval power supply must not exceed 24 V DC (entity certification) or 17.5 V DC (FISCO certification), according to FF-816.

#### Current consumption

operating (quiescent): 15 mA

fault current limiting: 20 mA max.

#### Output signal

Physical layer in compliance to IEC 1158-2/EN 61158-2 with transmission to Manchester II modulation, at 31.25 kbit/s.

#### Function blocks/execution period

3 enhanced Analog Input blocks/25 ms max (each)

1 enhanced PID block/40 ms max.

1 standard ARithmetic block/25 ms

1 standard Input Selector block/25 ms

1 standard Control Selector block/25 ms

1 standard Signal Characterization block/25 ms

1 standard Integrator/Totalizer block/25 ms

#### Additional blocks

1 enhanced Resource block,

1 custom Pressure with calibration transducer block

1 custom Advanced Diagnostics transducer block including Plugged Input Line Detection

1 custom Local Display transducer block

#### Number of link objects

35

#### Number of VCRs

35

### Output interface

FOUNDATION fieldbus digital communication protocol to standard H1, compliant to specification V. 1.7.

### Transmitter failure mode

The output signal is “frozen” to the last valid value on gross transmitter failure condition, detected by self-diagnostics which also indicate a BAD conditions. If electronic failure or short circuit occur the transmitter consumption is electronically limited at a defined value (20 mA approx), for safety of the network.

## Performance specifications

Stated at reference condition to IEC 60770 ambient temperature of 20 °C (68 °F), relative humidity of 65 %, atmospheric pressure of 1013 hPa (1013 mbar), mounting position with vertical diaphragm and zero based range for transmitter with isolating diaphragms in AISI 316 L ss or Hastelloy and silicone oil fill and HART digital trim values equal to 4 mA and to 20 mA span end points, in linear mode. Unless otherwise specified, errors are quoted as % of span. Some performance referring to the Upper Range Limit are affected by the actual turndown (TD) as ratio between Upper Range Limit (URL) and calibrated span.

IT IS RECOMMENDED TO SELECT THE TRANSMITTER SENSOR CODE PROVIDING THE TURNDOWN VALUE AS LOWEST AS POSSIBLE TO OPTIMIZE PERFORMANCE CHARACTERISTICS.

### Dynamic performance (according to IEC 61298-1 definition)

| Sensors                   | Time constant (63.2 % of total step change) |
|---------------------------|---|
| Sensor M to S             | ≤ 70 ms                                     |
| Sensor H                  | 100 ms                                      |
| Sensor G                  | 130 ms                                      |
| Sensor V                  | 150 ms                                      |
| Sensor Z                  | ≤ 80 ms                                     |
| Dead time for all sensors | 30 ms                                       |

Response time (total) = dead time + time constant.

See "Update Rate" for WirelessHART version.

### Accuracy rating

% of calibrated span, including combined effects of terminal based linearity, hysteresis and repeatability.

For fieldbus versions SPAN refer to analog input function block outscale range

| Model       | Sensor | for TD             |                            |
|-------------|--------|--------------------|----------------------------|
| 266HSH      | G to Q | from 1:1 to 10:1   | ± 0.06 %                   |
|             | G to Q | from 10:1 to 100:1 | ± (0.006 x TD) %           |
|             | S, V   | from 1:1 to 10:1   | ± 0.075 %                  |
|             | S, V   | from 10:1 to 100:1 | ± (0.0075 x TD) %          |
|             | E      | from 1:1 to 10:1   | ± 0.075 %                  |
|             | E      | from 10:1 to 30:1  | ± (0.0075 x TD) %          |
|             | Z      | from 1:1 to 5:1    | ± 0.15 %                   |
|             | Z      | from 5:1 to 10:1   | ± (0.03 x TD) %            |
| 266HSH      | G to Q | from 1:1 to 5:1    | ± 0.04 %                   |
| (option D2) | G to Q | from 5:1 to 100:1  | ± (0.0105 + 0.0059 x TD) % |
| 266NSH      | G to S | from 1:1 to 10:1   | ± 0.075 %                  |
|             | G to S | from 10:1 to 60:1  | ± (0.0075 x TD) %          |

### Ambient temperature

per 20K change between the limits of -40 °C to +85 °C (per 36 °F change between the limits of -40 to +185 °F):

| Model  | Sensor     | for TD up to |                               |
|--------|------------|--------------|-------------------------------|
| 266HSH | G to Q     | 10:1         | ± (0.03 % URL + 0.045 % span) |
|        | E, S and V | 10:1         | ± (0.04 % URL + 0.065 % span) |
|        | Z          | 10:1         | ± (0.06 % URL + 0.10 % span)  |
| 266NSH | G to Q     | 10:1         | ± (0.06 % URL + 0.09 % span)  |
|        | S          | 10:1         | ± (0.08 % URL + 0.13 % span)  |

for an ambient temperature change from -10 °C to +60 °C (+14 to +140 °F):

| Model  | Sensor     | for TD up to |                               |
|--------|------------|--------------|-------------------------------|
| 266HSH | G to Q     | 10:1         | ± (0.055 % URL + 0.08 % span) |
|        | E, S and V | 10:1         | ± (0.075 % URL + 0.11 % span) |
|        | Z          | 10:1         | ± (0.10 % URL + 0.15 % span)  |
| 266NSH | G to Q     | 10:1         | ± (0.11 % URL + 0.16 % span)  |
|        | S          | 10:1         | ± (0.15 % URL + 0.22 % span)  |

per 10K change between the limits of -40 °C to -10 °C or +60° to +85 °C (per 18 °F change between the limits of -40 to +14 °F or +140° to +185 °F):

| Model  | Sensor     | for TD up to |                               |
|--------|------------|--------------|-------------------------------|
| 266HSH | G to Q     | 10:1         | ± (0.03 % URL + 0.04 % span)  |
|        | E, S and V | 10:1         | ± (0.04 % URL + 0.055 % span) |
|        | Z          | 10:1         | ± (0.06 % URL + 0.10 % span)  |
| 266NSH | G to Q     | 10:1         | ± (0.055 % URL + 0.08 % span) |
|        | S          | 10:1         | ± (0.075 % URL + 0.11 % span) |



# Model 266HSH Gauge

# Model 266NSH Absolute

## Supply voltage

Within voltage/load specified limits the total effect is less than 0.005 % of URL per volt.

## Load

Within load/voltage specified limits the total effect is negligible.

## Electromagnetic field

Meets all the requirements of EN 61326 for surge immunity level (of NAMUR NE 21 on request).

## Common mode interference

No effect from 100Vrms @ 50Hz, or 50 V DC

## Mounting position

No effect for rotation on diaphragm plane. A tilt up to 90° from vertical causes a zero shifts up to 0.5 kPa, 5 mbar or 2 inH2O, which can be corrected with zero adjustment. No span effect.

## Stability

±0.15 % of URL over a ten years period for sensors E to V  
±0.45 % of URL over a three years period for sensor Z

## Maximum total performance

For temperature change of 28 °C (50 °F) for model 266HSH with accuracy option code D2 (± 0.04 %)

| Sensor | Span                       | Maximum total performance     |
|--------|----------------------------|-------------------------------|
| M      | 550 kPa, 5,5 bar, 80 psi   | ≤± 0.120 % of calibrated span |
| P      | 2000 kPa, 20 bar, 290 psi  |                               |
| Q      | 6900 kPa, 69 bar, 1000 psi |                               |

$$E_{Mperf} = \sqrt{(E_{\Delta Tz} + E_{\Delta Ts})^2 + E_{lin}^2}$$

$E_{Mperf}$  = Maximum total performance

$E_{\Delta Tz}$  = Effect of the ambient temperature on zero

$E_{\Delta Ts}$  = Effect of the ambient temperature on span

$E_{lin}$  = Accuracy rating (for terminal-based linearity 0.04 %)

## Total performance

similar to DIN 16086

Temperature change in the range from -10 to 60 °C (14 to 140 °F)

| Model             | Sensor | TD  | Total performance            |
|-------------------|--------|-----|------------------------------|
| 266HSH, D2 option | G to Q | 1:1 | ≤± 0.14 % of calibrated span |
| 266NSH            | G to Q | 1:1 | ≤± 0.28 % of calibrated span |

$$E_{perf} = \sqrt{(E_{\Delta Tz} + E_{\Delta Ts})^2 + E_{lin}^2}$$

$E_{perf}$  = Total Performance

$E_{\Delta Tz}$  = Effect of the ambient temperature on zero

$E_{\Delta Ts}$  = Effect of the ambient temperature on span

$E_{lin}$  = Accuracy rating (for terminal-based linearity 0.04 % or 0.075% as per model/sensor accuracy)

Maximum total performance and Total performance includes the measuring errors of

- non-linearity including hysteresis and non-reproducibility,
- thermal change of the ambient temperature as regards the zero signal and the calibrated span,

## Physical Specification

(Refer to ordering information sheets for variant availability related to specific model or versions code)

### Materials

#### Process isolating diaphragms (\*)

AISI 316 L ss; AISI 316 L ss gold plated;  
Monel 400®; Tantalum; Hastelloy® C-276;  
Hastelloy® C276 gold plated (sensors G to V).  
Inconel 718 (sensor Z).

#### Process connection (\*)

AISI 316 L ss; Hastelloy® C-276; Monel 400® (sensor G to V).  
Inconel® 718 (sensor Z) with cone in Inconel® 625 for F250C connection only.

#### Sensor fill fluid

Silicone oil; Inert fill (Halocarbon® 4.2 or Galden®).

#### Mounting bracket (\*\*)

Zinc plated carbon steel with chrome passivation; AISI 316 L ss.

#### Sensor housing

AISI 316 L ss.

### Electronic housing and covers

Aluminium alloy (copper content  $\leq 0.3$  %) with baked epoxy finish (colour RAL9002); AISI 316 L ss;  
AISI 316 L ss with two components epoxy mastic coated with acrylic epoxy finish (colour aluminium grey), with antistatic agents according to CEI EN 60079.

### Covers O-ring

Buna N.

### Local adjustments (zero, span and write protect)

For Standard HART version:

- Internal for zero and span (on communication board)
- External non-intrusive for zero, span and write protect in glass filled polyphenylene oxyde, removable (code R1).

For all other versions:

- External non-intrusive for zero, span and write protect in glass filled polyphenylene oxyde, removable.

### Plates

Transmitter nameplate: AISI 316 ss screwed to the electronics housing.

Certification plate and optional tag/calibration plate : self-adhesive attached to the electronics housing or AISI 316 ss fastened to the electronics housing with rivets or screws.

Optional wired-on customer data plate: AISI 316 ss.

Laser printing on metal or thermal printing on self-adhesive.

For AISI 316 L ss housing it is mandatory to select option I2 or I3 for plates in AISI 316 ss.

### Calibration

Standard: at maximum span, zero based range, ambient temperature and pressure;

Optional: at specified range and ambient conditions.

(\*) Wetted parts of the transmitter.

(\*\*) U-bolt material: high-strength alloy steel or AISI 316 L ss;  
bolts/nuts material: high-strength alloy steel or AISI 316 ss.

# Model 266HSH Gauge

## Model 266NSH Absolute

### Optional extras

#### Mounting brackets (code Bx)

For 60mm. (2in) pipes or wall mounting.

#### Display (code Lx)

4-position (at 90°) user orientable.

#### Optional plates (code Ix)

Code I2: AISI 316 ss plate with laser printed tag (up to 31 characters) and calibration details (up to 31 characters: lower and upper range values and engineering unit) fixed onto transmitter housing.

Code I1: AISI 316 ss wired-on plate with laser printed customized data (4 lines of 32 characters with 4 mm/0.16 in. height).

#### Surge protection (code S2)

#### Cleaning procedure for oxygen service (code P1)

#### Test Certificates (test, design, calibration, material traceability) (codes Cx and Hx)

#### Tag and manual language (codes Tx and Mx)

#### Communication connectors (code Ux)

#### Manifold mounting (code A1)

Factory mounting and pressure test of ABB M26 manifolds.

### Process connections

#### For sensors G to S

1/2 in. – 14 NPT male or female; DIN EN837-1 G 1/2 B; adapter straight (180°) entry; adapter angle (90°) entry.

#### For sensor V

1/2 in. – 14 NPT male or female; DIN EN837-1 G 1/2 B.

#### For sensor Z

1/4 in. – 18 NPT female; F250C (autoclave).

### Electrical connections

Two 1/2 in. – 14 NPT or M20x1.5 threaded conduit entries, direct on housing. Only M20x1.5 for WirelessHART with one port used for antenna.

Special communication connector (on request)

– HART: straight or angle Harting Han 8D connector and one plug.

– FOUNDATION Fieldbus, PROFIBUS PA: M12x1 or 7/8 in.

### Terminal block

HART version: three terminals for signal/external meter wiring up to 2.5 mm<sup>2</sup> (14 AWG), also connection points for test and communication purposes.

WirelessHART version: connection points for test and communication purposes; additional fast connection for external harvesting unit.

Fieldbus versions: two terminals for signal wiring (bus connection) up to 2.5 mm<sup>2</sup> (14 AWG)

### Grounding

Internal and external 6 mm<sup>2</sup> (10 AWG) ground termination points are provided.

### Mounting position

Transmitter can be mounted in any position.

Electronics housing may be rotated to any position. A positive stop prevents over travel.

### Mass (without options)

2.1 kg approx (4.6 lb); add 1.5 kg (3.3 lb) for AISI housing.

Add 650 g (1.5 lb) for packing.

### Packing

Carton 27 x 24 x 20 cm approx (11 x 10 x 8 in.);

Carton 28 x 28 x 24 cm approx (11 x 11 x 10 in.) for

WirelessHART version.

## Configuration

### Transmitter with HART communication and 4 to 20 mA Standard configuration

Transmitters are factory calibrated to customer's specified range. Calibrated range and tag number are stamped on the tag plate. If a calibration range and tag data are not specified, the transmitter will be supplied with the plate left blank and configured as follows:

|                                 |   |
|---------------------------------|---|
| Engineering Unit                | kPa   |
| 4 mA                            | Zero  |
| 20 mA                           | Upper Range Limit (URL)                               |
| Output                          | Linear  |
| Damping                         | 1 s   |
| Transmitter failure mode        | Upscale   |
| Software tag (8 characters max) | Blank   |
| Optional LCD display            | PV in kPa; output in mA and in percentage on bargraph |

Any or all the above configurable parameters, including Lower range-value and Upper range-value which must be the same unit of measure, can be easily changed using the HART hand-held communicator or by a PC running the configuration software with DTM for 266 models. The transmitter database is customized with specified flange type and material, O-ring and drain/vent materials and meter code option.

### Custom configuration (option N6)

The following data may be specified in addition to the standard configuration parameters:

|            |                            |
|------------|----------------------------|
| Descriptor | 16 alphanumeric characters |
| Message    | 32 alphanumeric characters |
| Date       | Day, month, year           |

For HART protocol available engineering units of pressure measure are :

Pa, kPa, MPa

inH<sub>2</sub>O@4 °C, mmH<sub>2</sub>O@4 °C, psi

inH<sub>2</sub>O@20 °C, ftH<sub>2</sub>O@20 °C, mmH<sub>2</sub>O@20 °C

inHg, mmHg, Torr

g/cm<sup>2</sup>, kg/cm<sup>2</sup>, atm

mbar, bar

These and others are available for PROFIBUS and FOUNDATION Fieldbus.

### Transmitter with WirelessHART communication Standard configuration

Transmitters are factory calibrated to customer's specified range. Calibrated range and tag number are stamped on the tag plate. If a calibration range and tag data are not specified, the transmitter will be supplied with the plate left blank and configured as follows:

|                                 |   |
|---------------------------------|---|
| Engineering Unit                | kPa   |
| Output scale 0 %                | Lower Range Limit (LRL)                     |
| Output scale 100 %              | Upper Range Limit (URL)                     |
| Output                          | Linear                                      |
| Update time                     | 16 s  |
| Software tag (8 characters max) | Blank                                       |
| Optional LCD display            | PV in kPa; output in percentage on bargraph |

Any or all the above configurable parameters, including Lower range-value and Upper range-value which must be the same unit of measure, can be easily changed using the HART hand-held communicator or by a PC running the configuration software with DTM for 266 models. The transmitter database is customized with specified flange type and material, O-ring and drain/vent materials and meter code option.

### Custom configuration (option N6)

The following data may be specified in addition to the standard configuration parameters:

|            |                            |
|------------|----------------------------|
| Descriptor | 16 alphanumeric characters |
| Message    | 32 alphanumeric characters |
| Date       | Day, month, year           |



# Model 266HSH Gauge

## Model 266NSH Absolute

### Transmitter with PROFIBUS PA communication

#### Standard configuration

Transmitters are factory calibrated to customer's specified range. Calibrated range and tag number are stamped on the tag plate. If a calibration range and tag data are not specified, the transmitter will be supplied with the plate left blank and configured as follows:

|                            |   |
|----------------------------|---|
| Measure Profile            | Pressure                                    |
| Engineering Unit           | kPa   |
| Output scale 0 %           | Lower Range Limit (LRL)                     |
| Output scale 100 %         | Upper Range Limit (URL)                     |
| Output                     | Linear                                      |
| Hi-Hi Limit                | Upper Range Limit (URL)                     |
| Hi Limit                   | Upper Range Limit (URL)                     |
| Low Limit                  | Lower Range Limit (LRL)                     |
| Low-Low Limit              | Lower Range Limit (LRL)                     |
| Limits hysteresis          | 0.5 % of output scale                       |
| PV filter                  | 0 s   |
| Address (set by local key) | 126   |
| Tag                        | 32 alphanumeric characters                  |
| Optional LCD display       | PV in kPa; output in percentage on bargraph |

Any or all the above configurable parameters, including the range values which must be the same unit of measure, can be easily changed by a PC running the configuration software with DTM for 266 models. The transmitter database is customized with specified flange type and material, O-ring and drain/vent materials and meter code option.

#### Custom configuration (option N6)

The following data may be specified in addition to the standard configuration parameters:

|            |                            |
|------------|----------------------------|
| Descriptor | 32 alphanumeric characters |
| Message    | 32 alphanumeric characters |
| Date       | Day, month, year           |

### Transmitter with FOUNDATION Fieldbus communication

#### Standard configuration

Transmitters are factory calibrated to customer's specified range. Calibrated range and tag number are stamped on the tag plate. If a calibration range and tag data are not specified, the transmitter will be supplied with the plate left blank and the analog input function block FB1 is configured as follows:

|                      |   |
|----------------------|---|
| Measure Profile      | Pressure                                    |
| Engineering Unit     | kPa   |
| Output scale 0 %     | Lower Range Limit (LRL)                     |
| Output scale 100 %   | Upper Range Limit (URL)                     |
| Output               | Linear                                      |
| Hi-Hi Limit          | Upper Range Limit (URL)                     |
| Hi Limit :           | Upper Range Limit (URL)                     |
| Low Limit            | Lower Range Limit (LRL)                     |
| Low-Low Limit        | Lower Range Limit (LRL)                     |
| Limits hysteresis    | 0.5 % of output scale                       |
| PV filter time       | 0 s   |
| Tag                  | 32 alphanumeric characters                  |
| Optional LCD display | PV in kPa; output in percentage on bargraph |

The analog input function block FB2 and FB3 are configured respectively for the sensor temperature measured in °C and for the static pressure measured in MPa.

Any or all the above configurable parameters, including the range values, can be changed using any host compliant to FOUNDATION fieldbus. The transmitter database is customized with specified flange type and material, O-ring and drain/vent materials and meter code option.

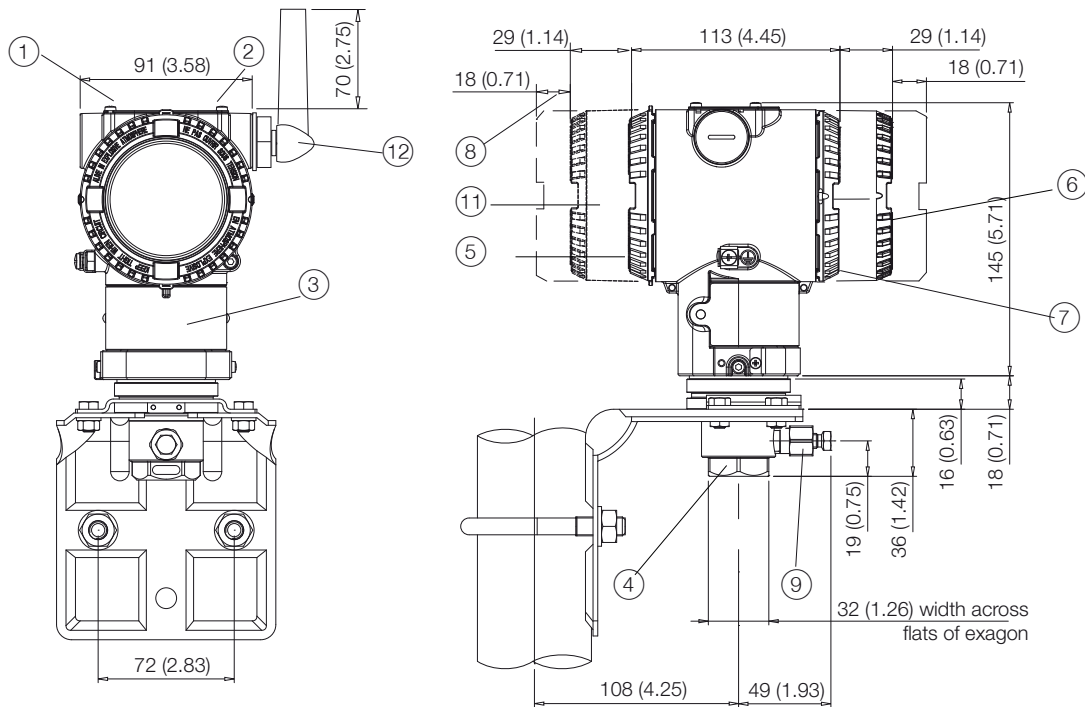
#### Custom configuration (option N6)

The following data may be specified in addition to the standard configuration parameters:

|            |                            |
|------------|----------------------------|
| Descriptor | 32 alphanumeric characters |
| Message    | 32 alphanumeric characters |
| Date       | Day, month, year           |

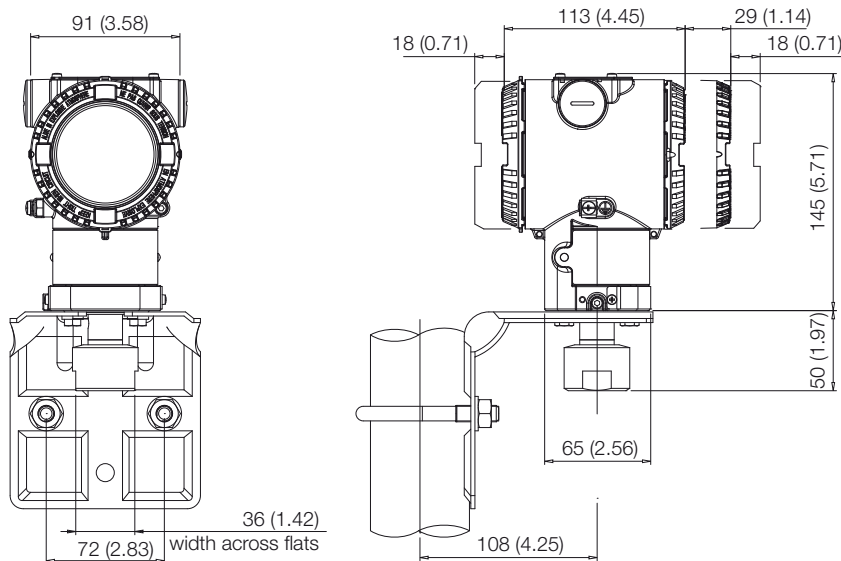
## MOUNTING DIMENSIONS (not for construction unless certified) – dimensions in mm. (in.)

### Transmitter with barrel housing - 1/2 in. NPT female connection for sensor E to S



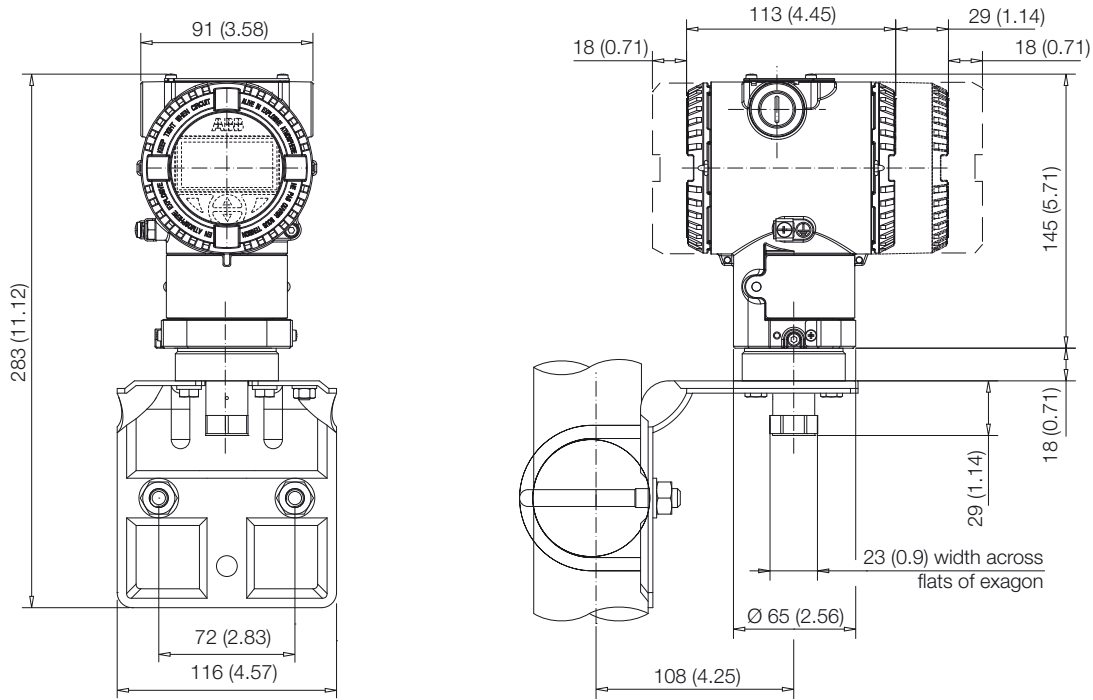
- ① Adjustments | ② Identification plate | ③ Certification plate | ④ Process connection | ⑤ Terminal side | ⑥ Integral display housing | ⑦ Electronic side | ⑧ Space for cover removal | ⑨ Drain/vent valve | ⑪ Battery housing of WirelessHART version | ⑫ Antenna of WirelessHART version

### Transmitter with barrel housing - 1/2 in. NPT female connection for sensor V

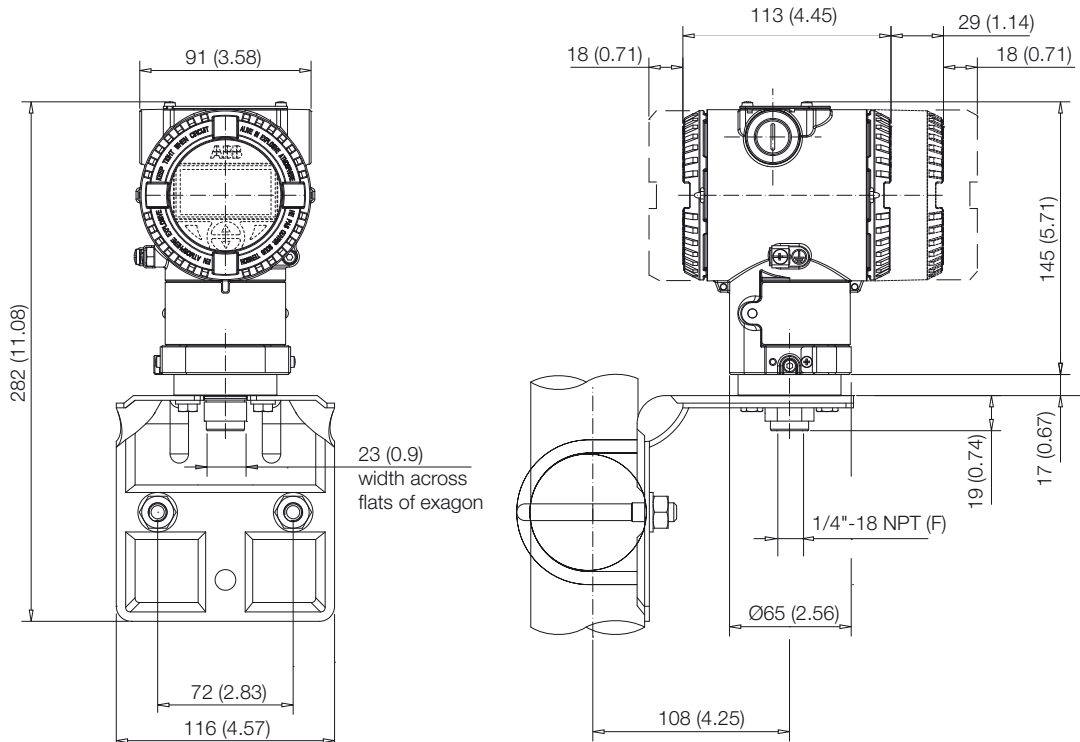


# Model 266HSH Gauge Model 266NSH Absolute

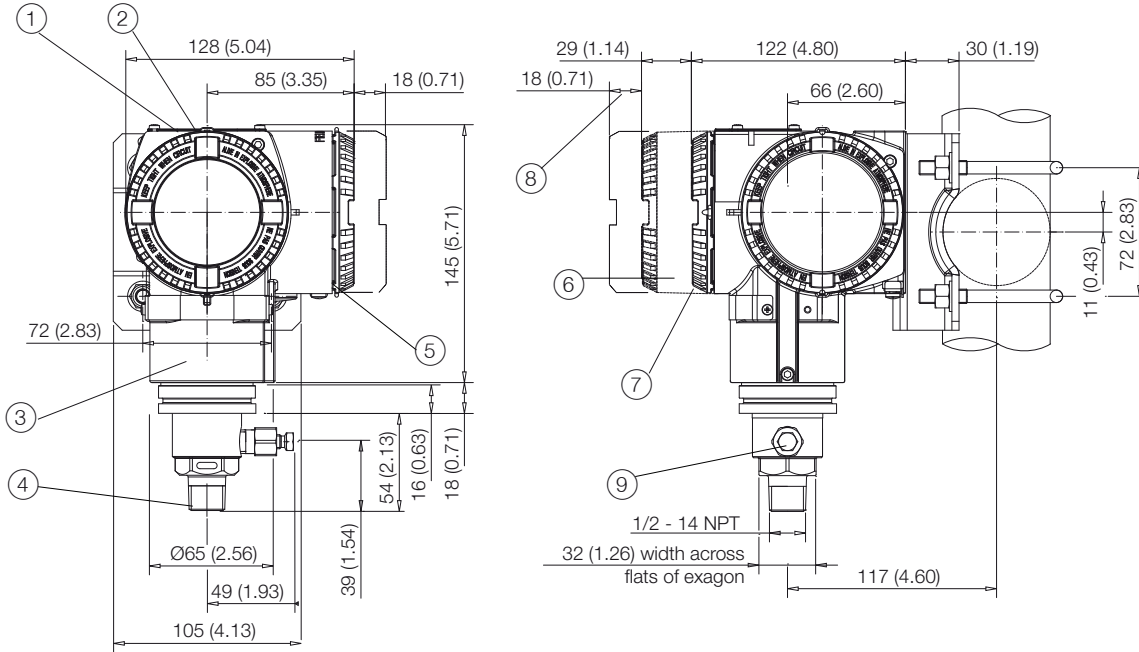
## Transmitter with barrel housing - F250C female connection for sensor Z



## Transmitter with barrel housing - 1/4 in. NPT female connection for sensor Z

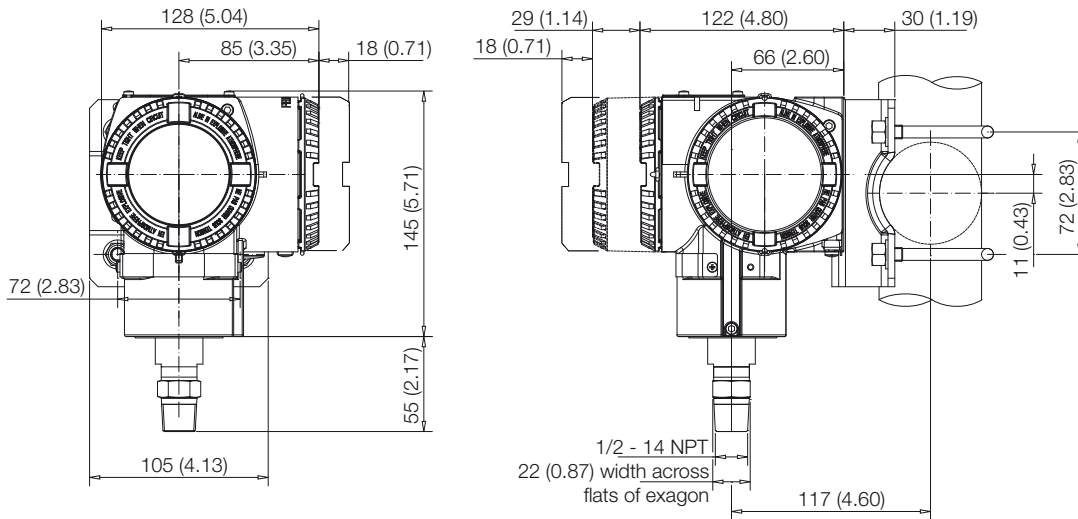


**Transmitter with DIN aluminium housing - 1/2 in. NPT male connection for sensor E to S**



- ① Adjustments | ② Identification plate | ③ Certification plate | ④ Process connection | ⑤ Terminal side | ⑥ Integral display housing | ⑦ Electronic side | ⑧ Space for cover removal | ⑨ Drain/vent valve

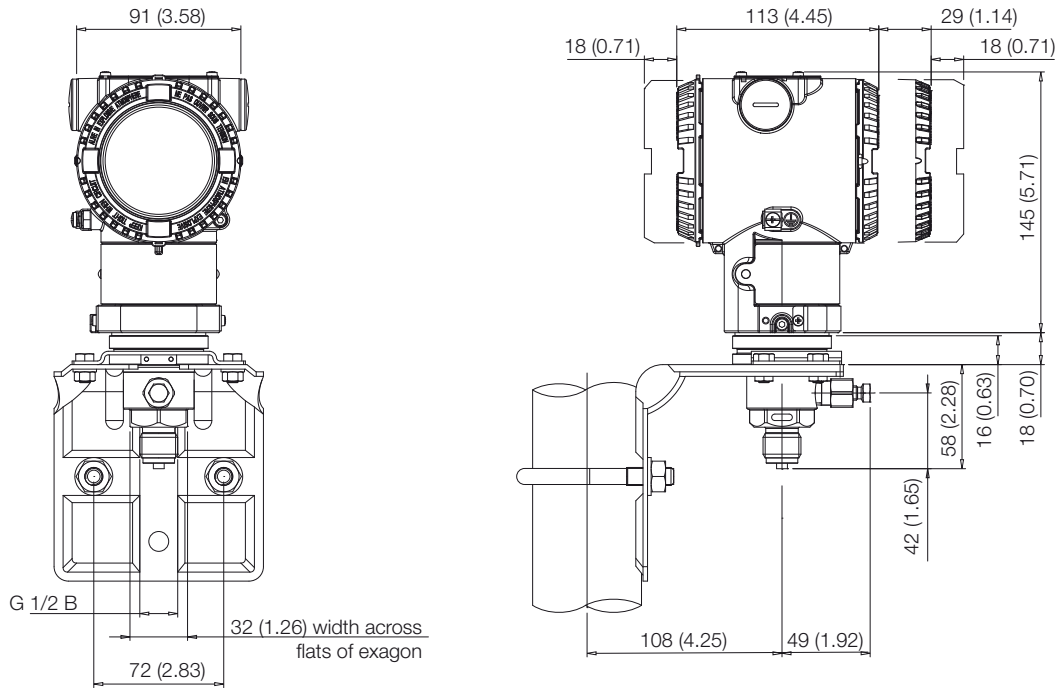
**Transmitter with DIN aluminium housing - 1/2 in. NPT male connection for sensor V**



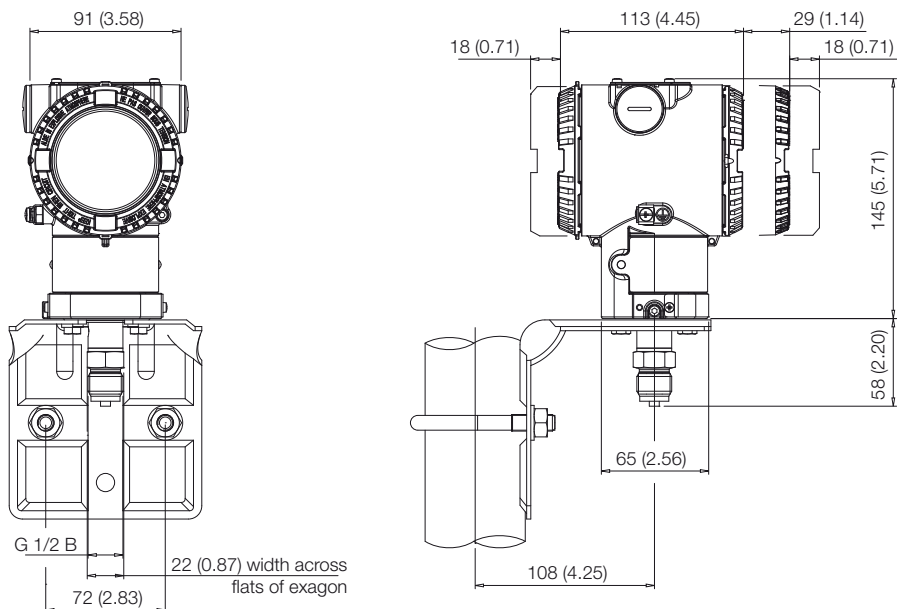


# Model 266HSH Gauge Model 266NSH Absolute

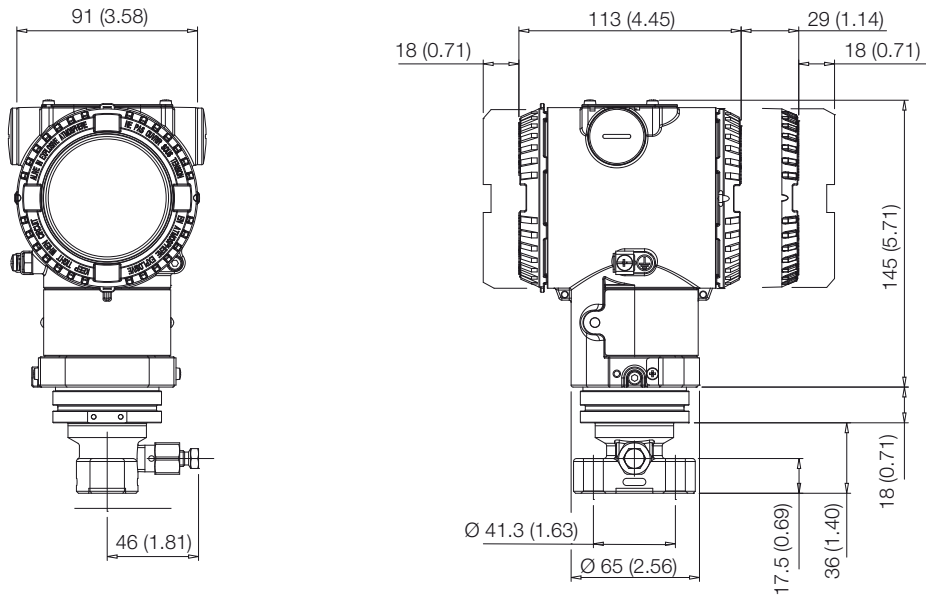
## Transmitter with barrel housing - DIN-EN837-1 G 1/2 B connection for sensor E to S



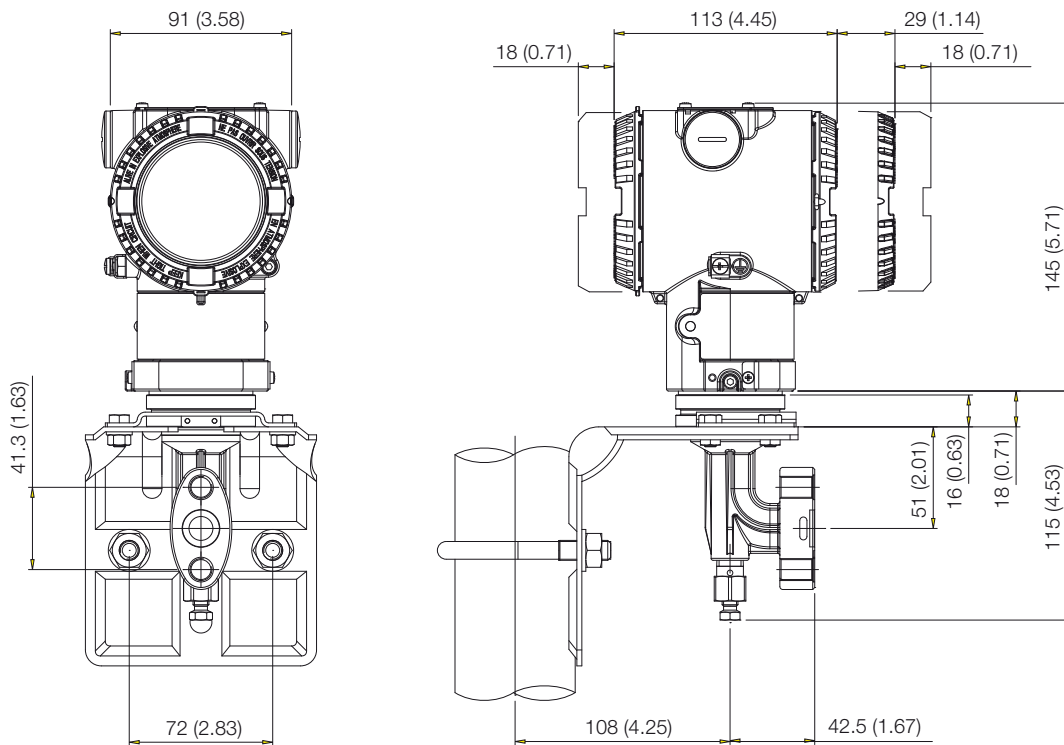
## Transmitter with barrel housing - DIN-EN837-1 G 1/2 B connection for sensor V



**Transmitter with barrel housing - adapter straight (180°) entry connection for sensor E to S**



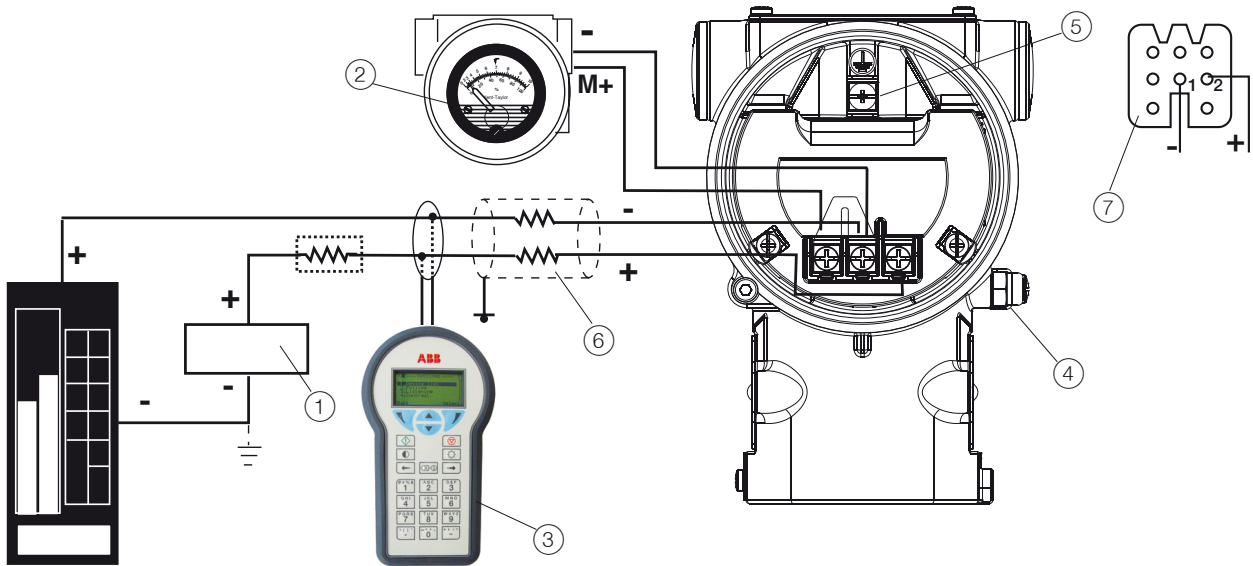
**Transmitter with barrel housing - adapter angle (90°) entry connection for sensor E to S**



# Model 266HSH Gauge Model 266NSH Absolute

## Electrical connections

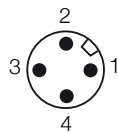
### HART Version



HART hand-held communicator may be connected at any wiring termination point in the loop, providing the minimum resistance is 250 ohm. If this is less than 250 ohm, additional resistance should be added to allow communications. Maximum voltage drop on external remote indicator is 0.7 VDC.

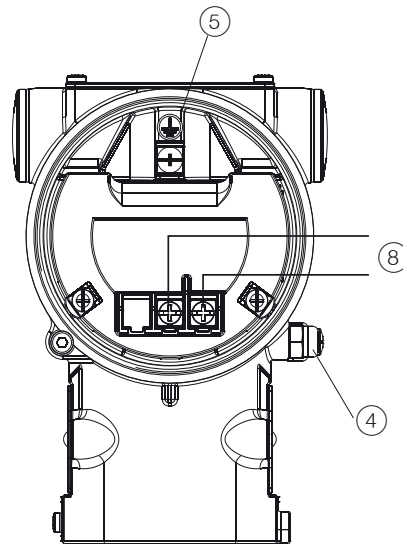
### FIELDBUS Versions

7/8 in connector      M12 x 1 connector



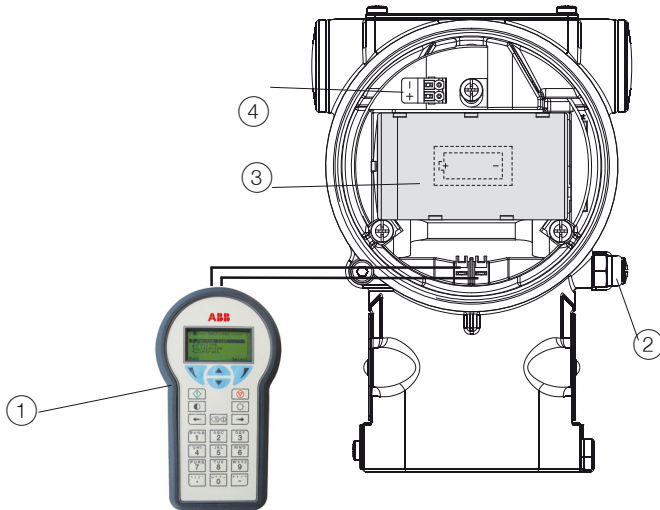
| PIN (male) IDENTIFICATION |                        |                |
|---------------------------|------------------------|----------------|
|                           | FOUNDATION<br>Fieldbus | PROFIBUS<br>PA |
| 1                         | DATA -                 | DATA +         |
| 2                         | DATA +                 | GROUND         |
| 3                         | SHIELD                 | DATA -         |
| 4                         | GROUND                 | SHIELD         |

CONNECTOR IS SUPPLIED LOOSE  
WITHOUT MATING FEMALE PLUG



- ① Power source | ② Remote indicator | ③ Handheld communicator | ④ External ground termination point | ⑤ Internal ground termination point |
- ⑥ Line load | ⑦ Harting Han 8D socket insert for mating plug (supplied loose) | ⑧ Fieldbus line (polarity independent)

## WirelessHART version



- ① Handheld communicator | ② External ground termination point | ③ Battery | ④ Fast connection for harvesting unit

# Model 266HSH Gauge Model 266NSH Absolute

## Ordering information

### BASIC ORDERING INFORMATION model 266HSH Gauge Pressure Transmitter

Select one character or set of characters from each category and specify complete catalog number.

Refer to additional ordering information and specify one or more codes for each transmitter if additional options are required.

| BASE MODEL - 1 <sup>st</sup> to 6 <sup>th</sup> characters                 |                          |                      |              | 2 | 6 | H | S | H | X    | X | X | X | X |
|--|--------------------------|----------------------|--------------|---|---|---|---|---|------|---|---|---|---|
| Gauge Pressure Transmitter – BASE ACCURACY 0.06 %                          |                          |                      |              |   |   |   |   |   |      |   |   |   |   |
| SENSOR - Span limits - 7 <sup>th</sup> character                           |                          |                      |              |   |   |   |   |   |      |   |   |   |   |
| 0.54 and 16 kPa  | 5.4 and 160 mbar         | 2.16 and 64 inH2O    |              |   |   |   |   |   | E    |   |   |   |   |
| 0.65 and 65 kPa  | 6.5 and 650 mbar         | 2.6 and 260 inH2O    |              |   |   |   |   |   | G    |   |   |   |   |
| 1.6 and 160 kPa  | 16 and 1600 mbar         | 6.4 and 642 inH2O    |              |   |   |   |   |   | H    |   |   |   |   |
| 6 and 600 kPa  | 0.06 and 6 bar           | 0.87 and 87 psi      |              |   |   |   |   |   | M    |   |   |   |   |
| 24 and 2400 kPa  | 0.24 and 24 bar          | 3.5 and 348 psi      |              |   |   |   |   |   | P    |   |   |   |   |
| 80 and 8000 kPa  | 0.8 and 80 bar           | 11.6 and 1160 psi    |              |   |   |   |   |   | Q    |   |   |   |   |
| 160 and 16000 kPa  | 1.6 and 160 bar          | 23.2 and 2320 psi    |              |   |   |   |   |   | S    |   |   |   |   |
| 600 and 60000 kPa  | 6 and 600 bar            | 87 and 8700 psi      |              |   |   |   |   |   | V    |   |   |   |   |
| 10500 and 105000 kPa   | 105 and 1050 bar         | 1522 and 15225 psi   |              |   |   |   |   |   | Z    |   |   |   |   |
| Diaphragm material / Fill fluid (wetted parts) - 8 <sup>th</sup> character |                          |                      |              |   |   |   |   |   |      |   |   |   |   |
| AISI 316 L ss  | Silicone oil             | (Notes 2, 16)        |              |   |   |   |   |   | NACE | S |   |   |   |
| Hastelloy® C-276   | Silicone oil             | (Note 16)            |              |   |   |   |   |   | NACE | K |   |   |   |
| Hastelloy® C-276 gold plated   | Silicone oil             | (Notes 3, 16)        |              |   |   |   |   |   | NACE | G |   |   |   |
| Monel 400®   | Silicone oil             | (Notes 2, 16)        |              |   |   |   |   |   | NACE | M |   |   |   |
| AISI 316 L ss gold plated  | Silicone oil             | (Notes 2, 15, 16)    |              |   |   |   |   |   | NACE | 8 |   |   |   |
| Tantalum   | Silicone oil             | (Notes 2, 16)        |              |   |   |   |   |   | NACE | T |   |   |   |
| AISI 316 L ss  | Inert fluid - Galden     | (Notes 1, 2, 16)     |              |   |   |   |   |   | NACE | A |   |   |   |
| Hastelloy® C-276   | Inert fluid - Galden     | (Notes 1, 16)        |              |   |   |   |   |   | NACE | F |   |   |   |
| Hastelloy® C-276 gold plated   | Inert fluid - Galden     | (Notes 1, 3, 16)     |              |   |   |   |   |   | NACE | E |   |   |   |
| Monel 400®   | Inert fluid - Galden     | (Notes 1, 2, 16)     |              |   |   |   |   |   | NACE | C |   |   |   |
| AISI 316 L ss gold plated  | Inert fluid - Galden     | (Notes 1, 2, 15, 16) |              |   |   |   |   |   | NACE | 9 |   |   |   |
| Tantalum   | Inert fluid - Galden     | (Notes 1, 2, 16)     |              |   |   |   |   |   | NACE | D |   |   |   |
| AISI 316 L ss  | Inert fluid - Halocarbon | (Notes 1, 2, 16)     |              |   |   |   |   |   | NACE | L |   |   |   |
| Hastelloy® C-276   | Inert fluid - Halocarbon | (Notes 1, 2, 16)     |              |   |   |   |   |   | NACE | P |   |   |   |
| Monel 400®   | Inert fluid - Halocarbon | (Notes 1, 2, 16)     |              |   |   |   |   |   | NACE | 4 |   |   |   |
| AISI 316 L ss gold plated  | Inert fluid - Halocarbon | (Notes 1, 2, 15, 16) |              |   |   |   |   |   | NACE | I |   |   |   |
| Tantalum   | Inert fluid - Halocarbon | (Notes 1, 2, 16)     |              |   |   |   |   |   | NACE | 5 |   |   |   |
| Inconel® 718   | No filling               | (for sensor Z ONLY)  | (Notes 2, 3) |   |   |   |   |   | NACE | N |   |   |   |

continued  
see next page



| BASIC ORDERING INFORMATION model 266HSH Gauge Pressure Transmitter            |  |                               |                     | 2 6 6 H S H X X | X | X | X |
|---|--|-------------------------------|---------------------|-----------------|---|---|---|
| <b>Process connection (wetted parts) - 9<sup>th</sup> character</b>           |  |                               |                     |                 |   |   |   |
| AISI 316 L ss   | 1/2 in. – 14 NPT female                                    | (Notes 4, 16)                 | NACE                | B               |   |   |   |
| AISI 316 L ss   | 1/2 in. – 14 NPT male                                      | (Notes 4, 16)                 | NACE                | T               |   |   |   |
| AISI 316 L ss   | DIN EN837-1 G 1/2 B  | (Notes 4, 16)                 | NACE                | P               |   |   |   |
| AISI 316 L ss   | Adapter straight (180°) entry (not available with bracket) | (Notes 2, 4, 16)              | NACE                | A               |   |   |   |
| AISI 316 L ss   | Adapter angle (90°) entry                                  | (Notes 2, 4, 16)              | NACE                | N               |   |   |   |
| Hastelloy <sup>®</sup> C-276  | 1/2 in. – 14 NPT female                                    | (Notes 5, 16)                 | NACE                | E               |   |   |   |
| Hastelloy <sup>®</sup> C-276  | 1/2 in. – 14 NPT male                                      | (Notes 5, 16)                 | NACE                | K               |   |   |   |
| Hastelloy <sup>®</sup> C-276  | DIN EN837-1 G 1/2 B  | (Notes 5, 16)                 | NACE                | D               |   |   |   |
| Hastelloy <sup>®</sup> C-276  | Adapter straight (180°) entry (not available with bracket) | (Notes 2, 5, 16)              | NACE                | F               |   |   |   |
| Hastelloy <sup>®</sup> C-276  | Adapter angle (90°) entry                                  | (Notes 2, 5, 16)              | NACE                | C               |   |   |   |
| Monel 400 <sup>®</sup>  | 1/2 in. – 14 NPT female                                    | (Notes 2, 6, 16)              | NACE                | 1               |   |   |   |
| Monel 400 <sup>®</sup>  | 1/2 in. – 14 NPT male                                      | (Notes 2, 6, 16)              | NACE                | 2               |   |   |   |
| Monel 400 <sup>®</sup>  | DIN EN837-1 G 1/2 B  | (Notes 2, 6, 16)              | NACE                | 3               |   |   |   |
| Inconel <sup>®</sup> 718  | F250C  | (for sensor Z ONLY)           | (Notes 2, 3)        | NACE            | 6 |   |   |
| Inconel <sup>®</sup> 718  | 1/4 in. – 18 NPT female                                    | (for sensor Z ONLY)           | (Notes 2, 3)        | NACE            | 7 |   |   |
| <b>Housing material and electrical connection - 10<sup>th</sup> character</b> |  |                               |                     |                 |   |   |   |
| Aluminium alloy (barrel version)  | 1/2 in. – 14 NPT   |                               | (Note 21)           | A               |   |   |   |
| Aluminium alloy (barrel version)  | M20 x 1.5 (CM 20)  | (TO BE USED for WirelessHART) |                     | B               |   |   |   |
| Aluminium alloy (barrel version)  | Harting Han 8D connector                                   | (general purpose only)        | (Notes 7, 21)       | E               |   |   |   |
| Aluminium alloy (barrel version)  | Fieldbus connector   | (general purpose only)        | (Notes 7, 21)       | G               |   |   |   |
| AISI 316 L ss (barrel version) (I2 or I3 required)                            | 1/2 in. – 14 NPT   |                               | (Note 21)           | S               |   |   |   |
| AISI 316 L ss (barrel version) (I2 or I3 required)                            | M20 x 1.5 (CM20)   | (TO BE USED for WirelessHART) |                     | T               |   |   |   |
| AISI 316 L ss (barrel version) (I2 or I3 required)                            | Fieldbus connector   | (general purpose only)        | (Notes 7, 21)       | Z               |   |   |   |
| AISI 316 L ss painted (barrel version) (I2 or I3 required)                    | 1/2 in. – 14 NPT   |                               | (Note 21)           | C               |   |   |   |
| AISI 316 L ss painted (barrel version) (I2 or I3 required)                    | M20 x 1.5 (CM20)   | (TO BE USED for WirelessHART) |                     | D               |   |   |   |
| AISI 316 L ss painted (barrel version) (I2 or I3 required)                    | Fieldbus connector   | (general purpose only)        | (Notes 7, 21)       | F               |   |   |   |
| Aluminium alloy (DIN version)   | M20 x 1.5 (CM20)   | (not Ex d or XP)              | (Note 21)           | J               |   |   |   |
| Aluminium alloy (DIN version)   | Harting Han 8D connector                                   | (general purpose only)        | (Notes 7, 21)       | K               |   |   |   |
| Aluminium alloy (DIN version)   | Fieldbus connector   | (general purpose only)        | (Notes 7, 21)       | W               |   |   |   |
| <b>Output/Additional options - 11<sup>th</sup> character</b>                  |  |                               |                     |                 |   |   |   |
| HART and 4 to 20 mA - Standard functionality                                  | No additional options                                      |                               | (Notes 2, 16, 8, 9) | L               |   |   |   |
| HART and 4 to 20 mA - Standard functionality                                  | Options requested by "Additional ordering code"            |                               | (Note 2, 16, 8)     | 7               |   |   |   |
| HART and 4 to 20 mA - Advanced functionality (includes option R1)             | No additional options                                      |                               | (Notes 8, 9)        | H               |   |   |   |
| HART and 4 to 20 mA - Advanced functionality (includes option R1)             | Options requested by "Additional ordering code"            |                               | (Note 8)            | 1               |   |   |   |
| PROFIBUS PA (includes option R1)  | No additional options                                      |                               | (Notes 8, 9)        | P               |   |   |   |
| PROFIBUS PA (includes option R1)  | Options requested by "Additional ordering code"            |                               | (Note 9)            | 2               |   |   |   |
| FOUNDATION Fieldbus (includes option R1)                                      | No additional options                                      |                               | (Notes 8, 9)        | F               |   |   |   |
| FOUNDATION Fieldbus (includes option R1)                                      | Options requested by "Additional ordering code"            |                               | (Note 9)            | 3               |   |   |   |
| HART and 4 to 20 mA Safety, certified to IEC 61508 (includes option R1)       | No additional options                                      |                               | (Notes 8, 9)        | T               |   |   |   |
| HART and 4 to 20 mA Safety, certified to IEC 61508 (includes option R1)       | Options requested by "Additional ordering code"            |                               | (Note 8)            | 8               |   |   |   |
| WirelessHART (includes option R1)   | No additional options                                      |                               | (Notes 2, 16, 20)   | W               |   |   |   |
| WirelessHART (includes option R1)   | Options requested by "Additional ordering code"            |                               | (Notes 2, 16, 20)   | 9               |   |   |   |

NOTE - Option R1 represents the external pushbuttons

# Model 266HSH Gauge

# Model 266NSH Absolute

## ADDITIONAL ORDERING INFORMATION for model 266HSH

Add one or more 2-digit code(s) after the basic ordering information to select all required options

|   |                   |                | XX                   | XX | XX |
|---|-------------------|----------------|----------------------|----|----|
| <b>Accuracy</b>   |                   |                |                      |    |    |
| 0.04 % accuracy for applicable ranges                                       |                   | (Notes 17, 21) | D2                   |    |    |
| <b>Drain/vent valve material (wetted parts)</b>                             |                   |                |                      |    |    |
| AISI 316 L ss   | (Notes 2, 10, 16) | NACE           |                      | VA |    |
| Hastelloy® C-276  | (Notes 2, 11, 16) | NACE           |                      | VB |    |
| Monel 400®  | (Notes 2, 12, 16) | NACE           |                      | VC |    |
| <b>Hazardous area certifications</b>  |                   |                |                      |    |    |
| ATEX Intrinsic Safety Ex ia   |                   |                | (Notes 8, 9)         |    | E1 |
| ATEX Explosion Proof Ex d   |                   |                | (Notes 8, 9, 13, 21) |    | E2 |
| ATEX Type „N“   |                   |                | (Notes 8, 9)         |    | E3 |
| Combined ATEX - Intrinsic Safety, Explosion Proof and Type „N“              |                   |                | (Notes 8, 9, 13, 21) |    | EW |
| Combined ATEX - Intrinsic Safety and Explosion Proof                        |                   |                | (Notes 8, 9, 13, 21) |    | E7 |
| Combined ATEX, IECEx, FM Approvals (USA) and FM Approvals (Canada)          |                   |                | (Notes 8, 9, 13, 21) |    | EN |
| FM Approvals (Canada) approval  |                   |                | (Notes 8, 9, 13, 21) |    | E4 |
| FM Approvals (USA) approval   |                   |                | (Notes 8, 9, 13, 21) |    | E6 |
| FM Approvals (USA and Canada) Intrinsic Safety                              |                   |                | (Notes 8, 9)         |    | EA |
| FM Approvals (USA and Canada) Explosion Proof                               |                   |                | (Notes 8, 9, 13, 21) |    | EB |
| FM Approvals (USA and Canada) Nonincendive                                  |                   |                | (Notes 8, 9)         |    | EC |
| IECEX Intrinsic Safety Ex ia  |                   |                | (Notes 8, 9)         |    | E8 |
| IECEX Explosion Proof Ex d  |                   |                | (Notes 8, 9, 13, 21) |    | E9 |
| IECEX Type „N“ Ex nL (Ex nA for WirelessHART)                               |                   |                | (Notes 8, 9)         |    | ER |
| Combined IECEX - Intrinsic Safety, Explosion Proof and Type „N“             |                   |                | (Notes 8, 9, 13, 21) |    | EI |
| Combined IECEX - Intrinsic Safety and Explosion Proof                       |                   |                | (Notes 8, 9, 13, 21) |    | EH |
| NEPSI Intrinsic Safety Ex ia  |                   |                | (Notes 8, 9)         |    | EY |
| NEPSI Explosion Proof Ex d  |                   |                | (Notes 8, 9, 13, 21) |    | EZ |
| NEPSI Type „N“  |                   |                | (Notes 8, 9)         |    | ES |
| Combined NEPSI - Intrinsic Safety, Explosion Proof and Type „N“             |                   |                | (Notes 8, 9, 13, 21) |    | EQ |
| Combined NEPSI - Intrinsic Safety and Explosion Proof                       |                   |                | (Notes 8, 9, 13, 21) |    | EP |
| Combined ATEX - Intrinsic Safety and Type „N“                               |                   |                | (Note 22)            |    | ED |
| Combined FM Approvals (USA and Canada) Intrinsic Safety and Nonincendive    |                   |                | (Note 22)            |    | EE |
| Combined ATEX - IS and Type „N“ and FM Approvals (USA and Canada) IS and NI |                   |                | (Note 22)            |    | EF |
| Combined NEPSI - Intrinsic Safety and Type „N“                              |                   |                | (Note 22)            |    | EG |
| Combined IECEX - Intrinsic Safety and Type „N“                              |                   |                | (Note 22)            |    | EM |

| ADDITIONAL ORDERING INFORMATION for model 266HSH  |                              | XX | XX | XX | XX | XX | XX |
|---|------------------------------|----|----|----|----|----|----|
| <b>Other hazardous area certifications (ONLY AS ALTERNATIVE TO BASIC CERTIFICATION CODE Ex)</b> |                              |    |    |    |    |    |    |
| GOST (Russia) Ex ia   | (Notes 8, 9, 16, 21)         | W1 |    |    |    |    |    |
| GOST (Russia) Ex d  | (Notes 8, 9, 13, 16, 21)     | W2 |    |    |    |    |    |
| GOST (Kazakhstan) Ex ia   | (Notes 8, 9, 16, 21)         | W3 |    |    |    |    |    |
| GOST (Kazakhstan) Ex d  | (Notes 8, 9, 13, 16, 21)     | W4 |    |    |    |    |    |
| Inmetro (Brazil) Ex ia  | (Notes 8, 9, 21)             | W5 |    |    |    |    |    |
| Inmetro (Brazil) Ex d   | (Notes 8, 9, 13, 21)         | W6 |    |    |    |    |    |
| Inmetro (Brazil) Ex nL  | (Notes 8, 9, 21)             | W7 |    |    |    |    |    |
| Combined Inmetro (Brazil) - Intrinsic Safety, Explosion Proof and Type „N“                      | (Notes 8, 9, 13, 21)         | W8 |    |    |    |    |    |
| GOST (Belarus) Ex ia  | (Notes 8, 9, 16, 21)         | WF |    |    |    |    |    |
| GOST (Belarus) Ex d   | (Notes 8, 9, 13, 16, 21)     | WG |    |    |    |    |    |
| Combined GOST (Belarus) - Intrinsic Safety and Explosion Proof                                  | (Notes 8, 9, 13, 16, 21)     | WH |    |    |    |    |    |
| Kosha (Korea) Intrinsic Safety Ex ia IIC T6, IP67   | (Notes 8, 9, 16, 18, 21)     | WM |    |    |    |    |    |
| Kosha (Korea) Explosion Proof Ex d IIC T6, IP67   | (Notes 8, 9, 13, 16, 18, 21) | WN |    |    |    |    |    |
| Combined Kosha (Korea) - Intrinsic Safety and Explosion Proof                                   | (Notes 8, 9, 13, 16, 18, 21) | WP |    |    |    |    |    |
| <b>Integral LCD</b>   |                              |    |    |    |    |    |    |
| Digital LCD integral display with integrated keypad   | (Note 18)                    | L1 |    |    |    |    |    |
| Digital LCD integral display with TTG (Through-The-Glass) activated keypad                      | (Note 18)                    | L5 |    |    |    |    |    |
| Standard Digital LCD integral display (ONLY SELECTABLE WITH OUTPUT CODE 7)                      |                              | L9 |    |    |    |    |    |
| <b>External non intrusive Z, S and WP pushbuttons</b>   |                              |    |    |    |    |    |    |
| Transmitters with external pushbutton (ONLY SELECTABLE WITH OUTPUT CODE 7)                      |                              |    |    |    |    | R1 |    |
| <b>Mounting bracket (shape and material)</b>  |                              |    |    |    |    |    |    |
| For pipe/wall mounting - Carbon steel (Not suitable for AISI housing)                           |                              |    |    |    |    |    | B6 |
| For pipe/wall mounting - AISI 316 L ss  |                              |    |    |    |    |    | B7 |
| <b>Surge</b>  |                              |    |    |    |    |    |    |
| Surge/Transient Protector   | (Note 21)                    |    |    |    |    |    | S2 |
| <b>Operating manual (multiple selection allowed)</b>  |                              |    |    |    |    |    |    |
| German (ONLY FOR HART and PROFIBUS VERSIONS)  |                              |    |    |    |    |    | M1 |
| Italian (ONLY FOR HART VERSION)   |                              |    |    |    |    |    | M2 |
| Spanish (ONLY FOR HART VERSION)   |                              |    |    |    |    |    | M3 |
| French (ONLY FOR HART VERSION)  |                              |    |    |    |    |    | M4 |
| English   |                              |    |    |    |    |    | M5 |
| Chinese (ONLY FOR HART VERSION)   |                              |    |    |    |    |    | M6 |
| Swedish (ONLY FOR HART VERSION)   |                              |    |    |    |    |    | M7 |
| Polish (ONLY FOR HART VERSION)  |                              |    |    |    |    |    | M9 |
| Portuguese (ONLY FOR HART VERSION)  |                              |    |    |    |    |    | MA |
| Danish (ONLY FOR HART VERSION)  |                              |    |    |    |    |    | MF |
| Turkish (ONLY FOR HART VERSION)   |                              |    |    |    |    |    | MT |

# Model 266HSH Gauge

## Model 266NSH Absolute

| ADDITIONAL ORDERING INFORMATION for model 266HSH  |    | XX | XX | XX | XX | XX                |
|---|----|----|----|----|----|-------------------|
| <b>Plates language</b>  |    |    |    |    |    |                   |
| German  | T1 |    |    |    |    |                   |
| Italian   | T2 |    |    |    |    |                   |
| Spanish   | T3 |    |    |    |    |                   |
| French  | T4 |    |    |    |    |                   |
| <b>Additional tag plate</b>   |    |    |    |    |    |                   |
| Supplemental wired-on stainless steel plate   | I1 |    |    |    |    |                   |
| Tag and certification stainless steel plates and laser printing of tag  | I2 |    |    |    |    |                   |
| Tag, certification and supplemental wired-on stainless steel plates and laser printing of tag                       | I3 |    |    |    |    |                   |
| <b>Configuration</b>  |    |    |    |    |    |                   |
| Standard – Pressure = inH2O/ psi at 68 °F; Temperature = deg. F   |    |    |    |    |    | N2                |
| Standard – Pressure = inH2O/ psi at 39.2 °F; Temperature = deg. F   |    |    |    |    |    | N3                |
| Standard – Pressure = inH2O/ psi at 20 °C; Temperature = deg. C   |    |    |    |    |    | N4                |
| Standard – Pressure = inH2O/ psi at 4 °C; Temperature = deg. C  |    |    |    |    |    | N5                |
| Custom  |    |    |    |    |    | N6                |
| <b>Preparation procedure</b>  |    |    |    |    |    |                   |
| Oxygen service cleaning (only available with inert fill)  |    |    |    |    |    | (Notes 16, 19) P1 |
| Pmax =12 MPa for Galden, 9 MPa for Halocarbon for sensors E to S; 21 MPa for Galden for sensor V; Tmax=60 °C/140 °F |    |    |    |    |    |                   |
| <b>Certificates (multiple selection allowed)</b>  |    |    |    |    |    |                   |
| Inspection certificate EN 10204–3.1 of calibration (9-point)  |    |    |    |    |    | C1                |
| Inspection certificate EN 10204–3.1 of the cleanliness stage  |    |    |    |    |    | C3                |
| Inspection certificate EN 10204–3.1 of helium leakage test of the sensor module                                     |    |    |    |    |    | C4                |
| Inspection certificate EN 10204–3.1 of the pressure test  |    |    |    |    |    | C5                |
| Certificate of compliance with the order EN 10204–2.1 of instrument design  |    |    |    |    |    | C6                |
| Printed record of configured data of transmitter  |    |    |    |    |    | CG                |
| PMI test of wetted parts (FOR SENSOR Z, APPLIES ONLY TO THE PROCESS CONNECTION)                                     |    |    |    |    |    | CT                |

| ADDITIONAL ORDERING INFORMATION FOR MODEL 266HSH   |  | XX                | XX | XX | XX | XX |
|--|--|-------------------|----|----|----|----|
| <b>Approvals</b>   |  |                   |    |    |    |    |
| GOST (Russia) without Ex   | (NOT APPLICABLE WITH ANY HAZARDOUS AREA CERTIFICATION) (Note 16) | Y1                |    |    |    |    |
| GOST (Kazakhstan) without Ex   | (NOT APPLICABLE WITH ANY HAZARDOUS AREA CERTIFICATION) (Note 16) | Y2                |    |    |    |    |
| GOST (Belarus) without Ex  | (NOT APPLICABLE WITH ANY HAZARDOUS AREA CERTIFICATION) (Note 16) | Y4                |    |    |    |    |
| Chinese pattern without Ex   | (NOT APPLICABLE WITH ANY HAZARDOUS AREA CERTIFICATION) (Note 16) | Y5                |    |    |    |    |
| DNV approval   | (Notes 16, 18, 21)   | YA                |    |    |    |    |
| Approval for Custody transfer (PENDING)  | (Notes 16, 18, 21)   | YC                |    |    |    |    |
| <b>Material traceability</b>   |  |                   |    |    |    |    |
| Certificate of compliance with the order EN 10204–2.1 of process wetted parts                                    |  |                   |    |    |    | H1 |
| Inspection certificate EN 10204–3.1 of process wetted parts  |  |                   |    |    |    | H3 |
| Test report EN 10204–2.2 of pressure bearing and process wetted parts  |  |                   |    |    |    | H4 |
| <b>Connector</b>   |  |                   |    |    |    |    |
| Fieldbus 7/8 in. (Recommended for FOUNDATION Fieldbus) - (supplied loose without mating female plug)             |  | (Notes 9, 14, 21) |    |    |    | U1 |
| Fieldbus M12x1 (Recommended for PROFIBUS PA) - (supplied loose without mating female plug)                       |  | (Notes 9, 14, 21) |    |    |    | U2 |
| Harting Han 8D – straight entry - (supplied loose)   |  | (Notes 8, 14, 21) |    |    |    | U3 |
| Harting Han 8D – angle entry - (supplied loose)  |  | (Notes 8, 14, 21) |    |    |    | U4 |
| <b>Accessory</b>   |  |                   |    |    |    |    |
| Manifold mounting and pressure test (NOT AVAILABLE WITH OXYGEN SERVICE CLEANING - PREPARATION PROCEDURE CODE P1) |  |                   |    |    |    | A1 |

- Note 1: Suitable for oxygen service  
Note 2: Not available with Sensor code V  
Note 3: Not available with sensor code E to S  
Note 4: Not available with diaphragm code M, T, C, D, 4, 5  
Note 5: Not available with diaphragm code S, A, L, M, C, 4, 8, 9, I  
Note 6: Not available with diaphragm code S, K, T, A, F, D, L, P, 5, E, G, 8, 9, I  
Note 7: Select type in additional ordering code  
Note 8: Not available with Housing code G, Z, W, F  
Note 9: Not available with Housing code E, K  
Note 10: Not available with Process connection code E, K, D, F, C, 1, 2, 3  
Note 11: Not available with Process connection code B, T, A, P, N, 1, 2, 3  
Note 12: Not available with Process connection code E, K, D, F, C, B, T, A, P, N  
Note 13: Not available with Housing code J, K, W  
Note 14: Not available with Housing code A, B, S, T, J  
Note 15: Not available with Sensor code E  
Note 16: Not available with Sensor code Z  
Note 17: Not available with Sensor code E, S, V, Z  
Note 18: Not available with Output code 7  
Note 19: Not available with Process connection code P, A, N, D, F, C, 3  
Note 20: Not available with Housing code A, E, G, S, Z, C, F, J, K, W  
Note 21: Not available with Output code 9  
Note 22: Not available with Output code 1, 2, 3, 7, 8

**Standard delivery items (can be differently specified by additional ordering code)**

- No drain/vent valves
- General purpose (no electrical certification)
- No display, no mounting bracket, no surge protection
- Multilanguage short-form operating instruction manual and labels in english (metal nameplate; self-adhesive certification and tag)
- Configuration with kPa and deg. C units
- No test, inspection or material traceability certificates

# Model 266HSH Gauge

## Model 266NSH Absolute

### BASIC ORDERING INFORMATION model 266NSH Absolute Pressure Transmitter

Select one character or set of characters from each category and specify complete catalog number.

Refer to additional ordering information and specify one or more codes for each transmitter if additional options are required.

|   |                          |                   |                    |          |          |          |          |                            |
|---|--------------------------|-------------------|--------------------|----------|----------|----------|----------|----------------------------|
| <b>BASE MODEL</b> - 1 <sup>st</sup> to 6 <sup>th</sup> characters                 |                          |                   | <b>2 6 6 N S H</b> | <b>X</b> | <b>X</b> | <b>X</b> | <b>X</b> | <b>X</b>                   |
| Absolute Pressure Transmitter – BASE ACCURACY 0.075 %                             |                          |                   |                    |          |          |          |          |                            |
| <b>SENSOR - Span limits</b> - 7 <sup>th</sup> character                           |                          |                   |                    |          |          |          |          | continued<br>see next page |
| 1.1 and 65 kPa  | 11 and 650 mbar          | 8 and 480 mmHg    |                    | G        |          |          |          |                            |
| 2.67 and 160 kPa  | 26.7 and 1600 mbar       | 20 and 1200 mmHg  |                    | H        |          |          |          |                            |
| 10 and 600 kPa  | 0.1 and 6 bar            | 1.45 and 87 psi   |                    | M        |          |          |          |                            |
| 40 and 2400 kPa   | 0.4 and 24 bar           | 5.8 and 348 psi   |                    | P        |          |          |          |                            |
| 134 and 8000 kPa  | 1.34 and 80 bar          | 19.4 and 1160 psi |                    | Q        |          |          |          |                            |
| 267 and 16000 kPa   | 2.67 and 160 bar         | 38.7 and 2320 psi |                    | S        |          |          |          |                            |
| <b>Diaphragm material / Fill fluid (wetted parts)</b> - 8 <sup>th</sup> character |                          |                   |                    |          |          |          |          |                            |
| AISI 316 L ss   | Silicone oil             |                   |                    | NACE     | S        |          |          |                            |
| Hastelloy® C-276  | Silicone oil             |                   |                    | NACE     | K        |          |          |                            |
| AISI 316 L ss   | Inert fluid - Galden     | (Note 1)          |                    | NACE     | A        |          |          |                            |
| Hastelloy® C-276  | Inert fluid - Galden     | (Note 1)          |                    | NACE     | F        |          |          |                            |
| AISI 316 L ss   | Inert fluid - Halocarbon | (Note 1)          |                    | NACE     | L        |          |          |                            |
| Hastelloy® C-276  | Inert fluid - Halocarbon | (Note 1)          |                    | NACE     | P        |          |          |                            |



| BASIC ORDERING INFORMATION model 266NSH Absolute Pressure Transmitter         |  |                               |      | 2 | 6 | N | S | H             | X | X | X |
|---|--|-------------------------------|------|---|---|---|---|---------------|---|---|---|
| <b>Process connection (wetted parts) - 9<sup>th</sup> character</b>           |  |                               |      |   |   |   |   |               |   |   |   |
| AISI 316 L ss   | 1/2 in. – 14 NPT female                                    |                               | NACE |   |   |   |   |               |   | B |   |
| AISI 316 L ss   | 1/2 in. – 14 NPT male                                      |                               | NACE |   |   |   |   |               |   | T |   |
| AISI 316 L ss   | DIN EN837-1 G 1/2 B  |                               | NACE |   |   |   |   |               |   | P |   |
| AISI 316 L ss   | Adapter straight (180°) entry (not available with bracket) |                               | NACE |   |   |   |   |               |   | A |   |
| AISI 316 L ss   | Adapter angle (90°) entry                                  |                               | NACE |   |   |   |   |               |   | N |   |
| Hastelloy® C-276  | 1/2 in. – 14 NPT female                                    | (Note 3)                      | NACE |   |   |   |   |               |   | E |   |
| Hastelloy® C-276  | 1/2 in. – 14 NPT male                                      | (Note 3)                      | NACE |   |   |   |   |               |   | K |   |
| Hastelloy® C-276  | DIN EN837-1 G 1/2 B  | (Note 3)                      | NACE |   |   |   |   |               |   | D |   |
| Hastelloy® C-276  | Adapter straight (180°) entry (not available with bracket) | (Note 3)                      | NACE |   |   |   |   |               |   | F |   |
| Hastelloy® C-276  | Adapter angle (90°) entry                                  | (Note 3)                      | NACE |   |   |   |   |               |   | C |   |
| <b>Housing material and electrical connection - 10<sup>th</sup> character</b> |  |                               |      |   |   |   |   |               |   |   |   |
| Aluminium alloy (barrel version)  | 1/2 in. – 14 NPT   |                               |      |   |   |   |   | (Note 14)     |   |   | A |
| Aluminium alloy (barrel version)  | M20 x 1.5 (CM 20)  | (TO BE USED for WirelessHART) |      |   |   |   |   |               |   |   | B |
| Aluminium alloy (barrel version)  | Harting Han 8D connector                                   | (general purpose only)        |      |   |   |   |   | (Notes 4, 14) |   |   | E |
| Aluminium alloy (barrel version)  | Fieldbus connector   | (general purpose only)        |      |   |   |   |   | (Notes 4, 14) |   |   | G |
| AISI 316 L ss (barrel version) (I2 or I3 required)                            | 1/2 in. – 14 NPT   |                               |      |   |   |   |   | (Note 14)     |   |   | S |
| AISI 316 L ss (barrel version) (I2 or I3 required)                            | M20 x 1.5 (CM20)   | (TO BE USED for WirelessHART) |      |   |   |   |   |               |   |   | T |
| AISI 316 L ss (barrel version) (I2 or I3 required)                            | Fieldbus connector   | (general purpose only)        |      |   |   |   |   | (Notes 4, 14) |   |   | Z |
| AISI 316 L ss painted (barrel version) (I2 or I3 required)                    | 1/2 in. – 14 NPT   |                               |      |   |   |   |   | (Note 14)     |   |   | C |
| AISI 316 L ss painted (barrel version) (I2 or I3 required)                    | M20 x 1.5 (CM20)   | (TO BE USED for WirelessHART) |      |   |   |   |   |               |   |   | D |
| AISI 316 L ss painted (barrel version) (I2 or I3 required)                    | Fieldbus connector   | (general purpose only)        |      |   |   |   |   | (Notes 4, 14) |   |   | F |
| Aluminium alloy (DIN version)   | M20 x 1.5 (CM20)   | (not Ex d or XP)              |      |   |   |   |   | (Note 14)     |   |   | J |
| Aluminium alloy (DIN version)   | Harting Han 8D connector                                   | (general purpose only)        |      |   |   |   |   | (Notes 4, 14) |   |   | K |
| Aluminium alloy (DIN version)   | Fieldbus connector   | (general purpose only)        |      |   |   |   |   | (Notes 4, 14) |   |   | W |
| <b>Output/Additional options - 11<sup>th</sup> character</b>                  |  |                               |      |   |   |   |   |               |   |   |   |
| HART and 4 to 20 mA - Standard functionality                                  | No additional options                                      |                               |      |   |   |   |   | (Notes 5, 6)  |   |   | L |
| HART and 4 to 20 mA - Standard functionality                                  | Options requested by "Additional ordering code"            |                               |      |   |   |   |   | (Note 5)      |   |   | 7 |
| HART and 4 to 20 mA - Advanced functionality (includes option R1)             | No additional options                                      |                               |      |   |   |   |   | (Notes 5, 6)  |   |   | H |
| HART and 4 to 20 mA - Advanced functionality (includes option R1)             | Options requested by "Additional ordering code"            |                               |      |   |   |   |   | (Note 5)      |   |   | 1 |
| PROFIBUS PA (includes option R1)  | No additional options                                      |                               |      |   |   |   |   | (Notes 5, 6)  |   |   | P |
| PROFIBUS PA (includes option R1)  | Options requested by "Additional ordering code"            |                               |      |   |   |   |   | (Note 6)      |   |   | 2 |
| FOUNDATION Fieldbus (includes option R1)                                      | No additional options                                      |                               |      |   |   |   |   | (Notes 5, 6)  |   |   | F |
| FOUNDATION Fieldbus (includes option R1)                                      | Options requested by "Additional ordering code"            |                               |      |   |   |   |   | (Note 6)      |   |   | 3 |
| HART and 4 to 20 mA Safety, certified to IEC 61508 (includes option R1)       | No additional options                                      |                               |      |   |   |   |   | (Notes 5, 6)  |   |   | T |
| HART and 4 to 20 mA Safety, certified to IEC 61508 (includes option R1)       | Options requested by "Additional ordering code"            |                               |      |   |   |   |   | (Note 5)      |   |   | 8 |
| WirelessHART (includes option R1)   | No additional options                                      |                               |      |   |   |   |   | (Note 13)     |   |   | W |
| WirelessHART (includes option R1)   | Options requested by "Additional ordering code"            |                               |      |   |   |   |   | (Note 13)     |   |   | 9 |

NOTE - Option R1 represents the external pushbuttons

# Model 266HSH Gauge

# Model 266NSH Absolute

## ADDITIONAL ORDERING INFORMATION for model 266NSH

Add one or more 2-digit code(s) after the basic ordering information to select all required options

|   |         |      | XX                  | XX |
|---|---------|------|---------------------|----|
| <b>Drain/vent valve material (wetted parts)</b>                             |         |      |                     |    |
| AISI 316 L ss   | (Note7) | NACE | VA                  |    |
| Hastelloy® C-276  | (Note8) | NACE | VB                  |    |
| <b>Hazardous area certifications</b>  |         |      |                     |    |
| ATEX Intrinsic Safety Ex ia   |         |      | (Notes 5, 6)        | E1 |
| ATEX Explosion Proof Ex d   |         |      | (Notes 5, 6, 9, 14) | E2 |
| ATEX Type „N“   |         |      | (Notes 5, 6)        | E3 |
| Combined ATEX - Intrinsic Safety, Explosion Proof and Type „N“              |         |      | (Notes 5, 6, 9, 14) | EW |
| Combined ATEX - Intrinsic Safety and Explosion Proof                        |         |      | (Notes 5, 6, 9, 14) | E7 |
| Combined ATEX, IECEx, FM Approvals (USA) and FM Approvals (Canada)          |         |      | (Notes 5, 6, 9, 14) | EN |
| FM Approvals (Canada) approval  |         |      | (Notes 5, 6, 9, 14) | E4 |
| FM Approvals (USA) approval   |         |      | (Notes 5, 6, 9, 14) | E6 |
| FM Approvals (USA and Canada) Intrinsic Safety                              |         |      | (Notes 5, 6)        | EA |
| FM Approvals (USA and Canada) Explosion Proof                               |         |      | (Notes 5, 6, 9, 14) | EB |
| FM Approvals (USA and Canada) Nonincendive                                  |         |      | (Notes 5, 6)        | EC |
| IECEX Intrinsic Safety Ex ia  |         |      | (Notes 5, 6)        | E8 |
| IECEX Explosion Proof Ex d  |         |      | (Notes 5, 6, 9, 14) | E9 |
| IECEX Type „N“ Ex nL (Ex nA for WirelessHART)                               |         |      | (Notes 5, 6)        | ER |
| Combined IECEX - Intrinsic Safety, Explosion Proof and Type „N“             |         |      | (Notes 5, 6, 9, 14) | EI |
| Combined IECEX - Intrinsic Safety and Explosion Proof                       |         |      | (Notes 5, 6, 9, 14) | EH |
| NEPSI Intrinsic Safety Ex ia  |         |      | (Notes 5, 6)        | EY |
| NEPSI Explosion Proof Ex d  |         |      | (Notes 5, 6, 9, 14) | EZ |
| NEPSI Type „N“  |         |      | (Notes 5, 6)        | ES |
| Combined NEPSI - Intrinsic Safety, Explosion Proof and Type „N“             |         |      | (Notes 5, 6, 9, 14) | EQ |
| Combined NEPSI - Intrinsic Safety and Explosion Proof                       |         |      | (Notes 5, 6, 9, 14) | EP |
| Combined ATEX - Intrinsic Safety and Type „N“                               |         |      | (Note 15)           | ED |
| Combined FM Approvals (USA and Canada) Intrinsic Safety and Nonincendive    |         |      | (Note 15)           | EE |
| Combined ATEX - IS and Type „N“ and FM Approvals (USA and Canada) IS and NI |         |      | (Note 15)           | EF |
| Combined NEPSI - Intrinsic Safety and Type „N“                              |         |      | (Note 15)           | EG |
| Combined IECEX - Intrinsic Safety and Type „N“                              |         |      | (Note 15)           | EM |

| <b>ADDITIONAL ORDERING INFORMATION for model 266NSH</b>   |                         | <b>XX</b> | <b>XX</b> | <b>XX</b> | <b>XX</b> | <b>XX</b> | <b>XX</b> |
|---|-------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| <b>Other hazardous area certifications (ONLY AS ALTERNATIVE TO BASIC CERTIFICATION CODE Ex)</b> |                         |           |           |           |           |           |           |
| GOST (Russia) Ex ia   | (Notes 5, 6, 14)        | W1        |           |           |           |           |           |
| GOST (Russia) Ex d  | (Notes 5, 6, 9, 14)     | W2        |           |           |           |           |           |
| GOST (Kazakhstan) Ex ia   | (Notes 5, 6, 14)        | W3        |           |           |           |           |           |
| GOST (Kazakhstan) Ex d  | (Notes 5, 6, 9, 14)     | W4        |           |           |           |           |           |
| Inmetro (Brazil) Ex ia  | (Notes 5, 6, 14)        | W5        |           |           |           |           |           |
| Inmetro (Brazil) Ex d   | (Notes 5, 6, 9, 14)     | W6        |           |           |           |           |           |
| Inmetro (Brazil) Ex nL  | (Notes 5, 6, 14)        | W7        |           |           |           |           |           |
| Combined Inmetro (Brazil) - Intrinsic Safety, Explosion Proof and Type „N“                      | (Notes 5, 6, 9, 14)     | W8        |           |           |           |           |           |
| GOST (Belarus) Ex ia  | (Notes 5, 6, 14)        | WF        |           |           |           |           |           |
| GOST (Belarus) Ex d   | (Notes 5, 6, 9, 14)     | WG        |           |           |           |           |           |
| Combined GOST (Belarus) - Intrinsic Safety and Explosion Proof                                  | (Notes 5, 6, 9, 14)     | WH        |           |           |           |           |           |
| Kosha (Korea) Intrinsic Safety Ex ia IIC T6, IP67   | (Notes 5, 6, 11, 14)    | WM        |           |           |           |           |           |
| Kosha (Korea) Explosion Proof Ex d IIC T6, IP67   | (Notes 5, 6, 9, 11, 14) | WN        |           |           |           |           |           |
| Combined Kosha (Korea) - Intrinsic Safety and Explosion Proof                                   | (Notes 5, 6, 9, 11, 14) | WP        |           |           |           |           |           |
| <b>Integral LCD</b>   |                         |           |           |           |           |           |           |
| Digital LCD integral display with integrated keypad   | (Note 11)               | L1        |           |           |           |           |           |
| Digital LCD integral display with TTG (Through-The-Glass) activated keypad                      | (Note 11)               | L5        |           |           |           |           |           |
| Standard Digital LCD integral display (ONLY SELECTABLE WITH OUTPUT CODE 7)                      |                         | L9        |           |           |           |           |           |
| <b>External non intrusive Z, S and WP pushbuttons</b>   |                         |           |           |           |           |           |           |
| Transmitters with external pushbutton (ONLY SELECTABLE WITH OUTPUT CODE 7)                      |                         |           |           |           |           | R1        |           |
| <b>Mounting bracket (shape and material)</b>  |                         |           |           |           |           |           |           |
| For pipe/wall mounting - Carbon steel (Not suitable for AISI housing)                           |                         |           |           |           |           |           | B6        |
| For pipe/wall mounting - AISI 316 L ss  |                         |           |           |           |           |           | B7        |
| <b>Surge</b>  |                         |           |           |           |           |           |           |
| Surge/Transient Protector   | (Note 14)               |           |           |           |           |           | S2        |
| <b>Operating manual (multiple selection allowed)</b>  |                         |           |           |           |           |           |           |
| German (ONLY FOR HART and PROFIBUS VERSIONS)  |                         |           |           |           |           |           | M1        |
| Italian (ONLY FOR HART VERSION)   |                         |           |           |           |           |           | M2        |
| Spanish (ONLY FOR HART VERSION)   |                         |           |           |           |           |           | M3        |
| French (ONLY FOR HART VERSION)  |                         |           |           |           |           |           | M4        |
| English   |                         |           |           |           |           |           | M5        |
| Chinese (ONLY FOR HART VERSION)   |                         |           |           |           |           |           | M6        |
| Swedish (ONLY FOR HART VERSION)   |                         |           |           |           |           |           | M7        |
| Polish (ONLY FOR HART VERSION)  |                         |           |           |           |           |           | M9        |
| Portuguese (ONLY FOR HART VERSION)  |                         |           |           |           |           |           | MA        |
| Danish (ONLY FOR HART VERSION)  |                         |           |           |           |           |           | MF        |
| Turkish (ONLY FOR HART VERSION)   |                         |           |           |           |           |           | MT        |

# Model 266HSH Gauge

## Model 266NSH Absolute

| ADDITIONAL ORDERING INFORMATION for model 266NSH  |    | XX | XX | XX        | XX | XX |
|---|----|----|----|-----------|----|----|
| <b>Plates language</b>  |    |    |    |           |    |    |
| German  | T1 |    |    |           |    |    |
| Italian   | T2 |    |    |           |    |    |
| Spanish   | T3 |    |    |           |    |    |
| French  | T4 |    |    |           |    |    |
| <b>Additional tag plate</b>   |    |    |    |           |    |    |
| Supplemental wired-on stainless steel plate   | I1 |    |    |           |    |    |
| Tag and certification stainless steel plates and laser printing of tag                        | I2 |    |    |           |    |    |
| Tag, certification and supplemental wired-on stainless steel plates and laser printing of tag | I3 |    |    |           |    |    |
| <b>Configuration</b>  |    |    |    |           |    |    |
| Standard – Pressure = inH2O/ psi at 68 °F; Temperature = deg. F                               |    |    |    |           |    | N2 |
| Standard – Pressure = inH2O/ psi at 39.2 °F; Temperature = deg. F                             |    |    |    |           |    | N3 |
| Standard – Pressure = inH2O/ psi at 20 °C; Temperature = deg. C                               |    |    |    |           |    | N4 |
| Standard – Pressure = inH2O/ psi at 4 °C; Temperature = deg. C                                |    |    |    |           |    | N5 |
| Custom  |    |    |    |           |    | N6 |
| <b>Preparation procedure</b>  |    |    |    |           |    |    |
| Oxygen service cleaning (only available with inert fill)                                      |    |    |    | (Note 12) |    | P1 |
| Pmax =12 MPa for Galden, 9 MPa for Halocarbon; Tmax=60 °C/140 °F                              |    |    |    |           |    |    |
| <b>Certificates (multiple selection allowed)</b>  |    |    |    |           |    |    |
| Inspection certificate EN 10204–3.1 of calibration (9-point)                                  |    |    |    |           |    | C1 |
| Inspection certificate EN 10204–3.1 of the cleanliness stage                                  |    |    |    |           |    | C3 |
| Inspection certificate EN 10204–3.1 of helium leakage test of the sensor module               |    |    |    |           |    | C4 |
| Inspection certificate EN 10204–3.1 of the pressure test                                      |    |    |    |           |    | C5 |
| Certificate of compliance with the order EN 10204–2.1 of instrument design                    |    |    |    |           |    | C6 |
| Printed record of configured data of transmitter  |    |    |    |           |    | CG |
| PMI test of wetted parts  |    |    |    |           |    | CT |

| ADDITIONAL ORDERING INFORMATION FOR MODEL 266NSH   |  |                   | XX | XX | XX | XX | XX |
|--|--|-------------------|----|----|----|----|----|
| <b>Approvals</b>   |  |                   |    |    |    |    |    |
| GOST (Russia) without Ex   | (NOT APPLICABLE WITH ANY HAZARDOUS AREA CERTIFICATION) | Y1                |    |    |    |    |    |
| GOST (Kazakhstan) without Ex   | (NOT APPLICABLE WITH ANY HAZARDOUS AREA CERTIFICATION) | Y2                |    |    |    |    |    |
| GOST (Belarus) without Ex  | (NOT APPLICABLE WITH ANY HAZARDOUS AREA CERTIFICATION) | Y4                |    |    |    |    |    |
| Chinese pattern without Ex   | (NOT APPLICABLE WITH ANY HAZARDOUS AREA CERTIFICATION) | Y5                |    |    |    |    |    |
| DNV approval   | (Notes 11, 14)   | YA                |    |    |    |    |    |
| Approval for Custody transfer (PENDING)  | (Notes 11, 14)   | YC                |    |    |    |    |    |
| <b>Material traceability</b>   |  |                   |    |    |    |    |    |
| Certificate of compliance with the order EN 10204–2.1 of process wetted parts                                    |  |                   |    |    |    |    | H1 |
| Inspection certificate EN 10204–3.1 of process wetted parts  |  |                   |    |    |    |    | H3 |
| Test report EN 10204–2.2 of pressure bearing and process wetted parts  |  |                   |    |    |    |    | H4 |
| <b>Connector</b>   |  |                   |    |    |    |    |    |
| Fieldbus 7/8 in. (Recommended for FOUNDATION Fieldbus) - (supplied loose without mating female plug)             |  | (Notes 6, 10, 14) |    |    |    |    | U1 |
| Fieldbus M12x1 (Recommended for PROFIBUS PA) - (supplied loose without mating female plug)                       |  | (Notes 6, 10, 14) |    |    |    |    | U2 |
| Harting Han 8D – straight entry - (supplied loose)   |  | (Notes 5, 10, 14) |    |    |    |    | U3 |
| Harting Han 8D – angle entry - (supplied loose)  |  | (Notes 5, 10, 14) |    |    |    |    | U4 |
| <b>Accessory</b>   |  |                   |    |    |    |    |    |
| Manifold mounting and pressure test (NOT AVAILABLE WITH OXYGEN SERVICE CLEANING - PREPARATION PROCEDURE CODE P1) |  |                   |    |    |    |    | A1 |

Note 1: Suitable for oxygen service

Note 2: NOT USED

Note 3: Not available with AISI 316 L ss diaphragm code S, A, L

Note 4: Select type in additional ordering code

Note 5: Not available with Housing code G, Z, W, F

Note 6: Not available with Housing code E, K

Note 7: Not available with Process connection code E, K, D, F, C

Note 8: Not available with Process connection code B, T, A, P, N

Note 9: Not available with Housing code J, K, W

Note 10: Not available with Housing code A, B, S, T, J

Note 11: Not available with Output code 7

Note 12: Not available with Process connection code P, A, N, D, F, C

Note 13: Not available with Housing code A, E, G, S, Z, C, F, J, K, W

Note 14: Not available with Output code 9

Note 15: Not available with Output code 1, 2, 3, 7, 8

### Standard delivery items (can be differently specified by additional ordering code)

- No drain/vent valves
- General purpose (no electrical certification)
- No display, no mounting bracket, no surge protection
- Multilanguage short-form operating instruction manual and labels in english (metal nameplate; self-adhesive certification and tag)
- Configuration with kPa and deg. C units
- No test, inspection or material traceability certificates

# Model 266HSH Gauge

## Model 266NSH Absolute

### **IMPORTANT REMARK FOR ALL MODELS**

THE SELECTION OF SUITABLE WETTED PARTS AND FILLING FLUID FOR COMPATIBILITY WITH THE PROCESS MEDIA IS A CUSTOMER'S RESPONSIBILITY, IF NOT OTHERWISE NOTIFIED BEFORE MANUFACTURING.

### **NACE COMPLIANCE INFORMATION**

- (1) The materials of constructions comply with metallurgical recommendations of NACE MR0175/ISO 15156 for sour oil field production environments. As specific environmental limits may apply to certain materials, please consult latest standard for further details. AISI 316/316 L, Hastelloy C-276, Monel 400 also conform to NACE MR0103 for sour refining environments.
- (2) NACE MR-01-75 addresses bolting requirements in two classes:
  - Exposed bolts: bolts directly exposed to the sour environment or buried, encapsulated or anyway not exposed to atmosphere
  - Non exposed bolts: the bolting must not be directly exposed to sour environments and must be directly exposed to the atmosphere at all times.

® Hastelloy is a registered trademark of Haynes International  
® Monel and Inconel are registered trademarks of Special Metals Corporation  
® Galden is a registered trademark of Solvay Group  
® Halocarbon is a registered trademark of Halocarbon Products Co.  
® HART and WirelessHART are registered trademarks of HART Communication Foundation  
® PROFIBUS is a registered trademark of Profibus International  
™ FOUNDATION Fieldbus is a trademark of Fieldbus Foundation





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3KXP200015R1001



Sales



Service



Software

# Model 266DSH Differential

Measurement made easy

Engineered solutions for all applications



#### Base accuracy

- from 0.06 % of calibrated span (optional 0.04 %)

#### Reliable sensing system coupled with very latest digital technologies

- provides large turn down ratio up to 100:1

#### Comprehensive sensor choice

- optimize in-use total performance and stability

#### 10-year stability

- 0.15 % of URL

#### Flexible configuration facilities

- provided locally via local LCD keypad

#### New TTG (Through-The-Glass) keypad technology

- allows quick and easy local configuration without opening the cover, even in explosion proof environments

#### IEC 61508 certification

- version for SIL2 (1oo1) and SIL3 (1oo2) applications

#### PED compliance

- Category III for PS > 21 MPa, 210 bar
- Sound Engineering Practice (SEP) for PS ≤ 21 MPa, 210 bar

#### WirelessHART version

- the battery powered solution compliant to IEC 62591

#### Best-in-class battery life

- up to 10 years @ 32 s update time
- in-field replaceable

# Model 266DSH Differential

## Functional Specifications

### Range and span limits

| Sensor Code | Upper Range Limit (URL) | Lower Range Limit (LRL) | Minimum span            |
|-------------|-------------------------|-------------------------|-------------------------|
| A           | 1 kPa                   | -1 kPa                  | 0.05 kPa                |
|             | 10 mbar                 | -10 mbar                | 0.5 mbar                |
|             | 4 inH <sub>2</sub> O    | -4 inH <sub>2</sub> O   | 0.2 inH <sub>2</sub> O  |
| B           | 4 kPa                   | -4 kPa                  | 0.2 kPa                 |
|             | 40 mbar                 | -40 mbar                | 2 mbar                  |
|             | 16 inH <sub>2</sub> O   | -16 inH <sub>2</sub> O  | 0.8 inH <sub>2</sub> O  |
| E           | 16 kPa                  | -16 kPa                 | 0.54 kPa                |
|             | 160 mbar                | -160 mbar               | 5.4 mbar                |
|             | 64 inH <sub>2</sub> O   | -64 inH <sub>2</sub> O  | 2.16 inH <sub>2</sub> O |
| F           | 40 kPa                  | -40 kPa                 | 0.4 kPa                 |
|             | 400 mbar                | -400 mbar               | 4 mbar                  |
|             | 160 inH <sub>2</sub> O  | -160 inH <sub>2</sub> O | 1.6 inH <sub>2</sub> O  |
| G           | 65 kPa                  | -65 kPa                 | 0.65 kPa                |
|             | 650 mbar                | -650 mbar               | 6.5 mbar                |
|             | 260 inH <sub>2</sub> O  | -260 inH <sub>2</sub> O | 2.6 inH <sub>2</sub> O  |
| H           | 160 kPa                 | -160 kPa                | 1.6 kPa                 |
|             | 1600 mbar               | -1600 mbar              | 16 mbar                 |
|             | 642 inH <sub>2</sub> O  | -642 inH <sub>2</sub> O | 6.4 inH <sub>2</sub> O  |
| M           | 600 kPa                 | -600 kPa                | 6 kPa                   |
|             | 6 bar                   | -6 bar                  | 0.06 bar                |
|             | 87 psi                  | -87 psi                 | 0.87 psi                |
| P           | 2400 kPa                | -2400 kPa               | 24 kPa                  |
|             | 24 bar                  | -24 bar                 | 0.24 bar                |
|             | 348 psi                 | -348 psi                | 3.5 psi                 |
| Q           | 8000 kPa                | -8000 kPa               | 80 kPa                  |
|             | 80 bar                  | -80 bar                 | 0.8 bar                 |
|             | 1160 psi                | -1160 psi               | 11.6 psi                |
| S           | 16000 kPa               | -16000 kPa              | 160 kPa                 |
|             | 160 bar                 | -160 bar                | 1.6 bar                 |
|             | 2320 psi                | -2320 psi               | 23.2 psi                |

(§) Lower Range Limit is 0.135 kPa abs, 1.35 mbar abs, 1 mmHg for inert Galden or 0.4 kPa abs, 4 mbar abs, 3 mmHg for inert Halocarbon.

### Span limits

Maximum span = URL (can be further adjusted up to  $\pm$  URL (TD = 0.5) for differential models, within the range limits)  
IT IS RECOMMENDED TO SELECT THE TRANSMITTER SENSOR CODE PROVIDING THE TURNDOWN VALUE AS LOWEST AS POSSIBLE TO OPTIMIZE PERFORMANCE CHARACTERISTICS.

### Zero suppression and elevation

Zero and span can be adjusted to any value within the range limits detailed in the table as long as:  
– calibrated span  $\geq$  minimum span

### Recommendation for square root function

At least 10% of Upper Range Limit (URL)

### Damping (feature not available for WirelessHART version)

Selectable time constant : between 0 and 60 s  
This is in addition to sensor response time.

### Turn on time

Operation within specification in less than 10 s with minimum damping.

### Insulation resistance

> 100 M $\Omega$  at 500 V DC (terminals to earth)

## Operative limits

### Pressure limits:

#### Overpressure limits

Without damage to the transmitter

| Sensors                             | Fill fluid            | Overpressure limits  |
|-------------------------------------|-----------------------|--|
| Sensor F to S                       | Silicone oil          | 0.07 kPa abs, 0.7 mbar abs, 0.5 mmHg and 21 MPa, 210 bar, 3045 psi <sup>(1)</sup> <sup>(2)</sup> |
| Sensor F to Q<br>266DSH High Static | Silicone oil          | 0.07 kPa abs, 0.7 mbar abs, 0.5 mmHg and 42 MPa, 420 bar, 6090 psi                               |
| Sensor E                            | Silicone oil          | 0.07 kPa abs, 0.7 mbar abs, 0.5 mmHg and 16 MPa, 160 bar, 2320 psi <sup>(1)</sup>                |
| Sensor B                            | Silicone oil          | 0.07 kPa abs, 0.7 mbar abs, 0.5 mmHg and 7 MPa, 70 bar, 1015 psi <sup>(1)</sup>                  |
| Sensor A                            | Silicone oil          | 0.07 kPa abs, 0.7 mbar abs, 0.5 mmHg and 2 MPa, 20 bar, 290 psi <sup>(1)</sup>                   |
| Sensor F to S                       | Inert<br>(Galden)     | 0.135 kPa abs, 1.35 mbar abs, 1 mmHg and 21 MPa, 210 bar, 3045 psi <sup>(1)</sup> <sup>(2)</sup> |
| Sensor E                            | Inert<br>(Galden)     | 0.135 kPa abs, 1.35 mbar abs, 1 mmHg and 16 MPa, 160 bar, 2320 psi <sup>(1)</sup>                |
| Sensor F to S                       | Inert<br>(Halocarbon) | 0.4 kPa abs, 4 mbar abs, 3 mmHg and 21 MPa, 210 bar, 3045 psi <sup>(1)</sup> <sup>(2)</sup>      |
| Sensor F to Q<br>266DSH High Static | Inert<br>(Halocarbon) | 0.4 kPa abs, 4 mbar abs, 3 mmHg and 42 MPa, 420 bar, 6090 psi                                    |
| Sensor E                            | Inert<br>(Halocarbon) | 0.4 kPa abs, 4 mbar abs, 3 mmHg and 16 MPa, 160 bar, 2320 psi <sup>(1)</sup>                     |

(1) 1 MPa, 10 bar, 145 psi for Kynar-PVDF

(2) 16 MPa, 160 bar, 2320 psi for AISI 316 ss NACE bolting or for specific flange variant

### Static pressure limits

Transmitters for differential pressure model 266DSH operates within specifications between the following limits:

| Sensors                             | Static pressure limits   |
|-------------------------------------|--|
| Sensor F to S                       | 1.3 kPa abs, 13 mbar abs, 0.2 psia and 21 MPa, 210 bar, 3045 psi <sup>(1)</sup> <sup>(2)</sup> |
| Sensor F to Q<br>266DSH High Static | 1.3 kPa abs, 13 mbar abs, 0.2 psia and 42 MPa, 420 bar, 6090 psi                               |
| Sensor E                            | 1.3 kPa abs, 13 mbar abs, 0.2 psia and 16 MPa, 160 bar, 2320 psi <sup>(1)</sup>                |
| Sensor B                            | 1.3 kPa abs, 13 mbar abs, 0.2 psia and 7 MPa, 70 bar, 1015 psi <sup>(1)</sup>                  |
| Sensor A                            | 1.3 kPa abs, 13 mbar abs, 0.2 psia and 2 MPa, 20 bar, 290 psi <sup>(1)</sup>                   |

(1) 1 MPa, 10 bar, 145 psi for Kynar-PVDF

(2) 16 MPa, 160 bar, 2320 psi for AISI 316 ss NACE bolting or for specific flange variant

### Proof pressure

The transmitter can be exposed without leaking to line pressure of up to

— 48 MPa, 480 bar, 6960 psi

— 77 MPa, 770 bar, 11165 psi for 266DSH high static version.

Meet ANSI/ISA-S 82.03 hydrostatic test requirements.

# Model 266DSH Differential

## Temperature limits °C ( °F ) :

### Ambient

is the operating temperature

| Models 266DSH                        | Ambient temperature limits     |
|--------------------------------------|--------------------------------|
| Silicone oil for sensor F to S       | -40 and 85 °C (-40 and 185 °F) |
| Silicone oil for sensor A to E       | -25 and 85 °C (-13 and 185 °F) |
| Inert (Galden) for sensor F to S     | -20 and 85 °C (-4 and 185 °F)  |
| Inert (Galden) for sensor E          | -10 and 85 °C (14 and 185 °F)  |
| Inert (Halocarbon) for sensor F to S | -20 and 85 °C (-4 and 185 °F)  |
| Inert (Halocarbon) for sensor E      | -10 and 85 °C (14 and 185 °F)  |

| Models 266DSH  | Ambient temperature limits     |
|--|--------------------------------|
| LCD integral display   | -40 and 85 °C (-40 and 185 °F) |
| LCD display may not be clearly readable below -20 °C (-4 °F) or above +70 °C (+158 °F) |                                |

| Models 266DSH                 | Ambient temperature limit     |
|-------------------------------|-------------------------------|
| Painted AISI 316 L ss housing | max 70 °C (158 °F) continuous |

### IMPORTANT

For Hazardous Atmosphere applications see the temperature range specified on the certificate/approval relevant to the aimed type of protection

### Process

| Models 266DSH                        | Process temperature limits                     |
|--------------------------------------|--|
| Silicone oil for sensor F to S       | -40 and 121 °C (-40 and 250 °F) <sup>(1)</sup> |
| Silicone oil for sensor A to E       | -25 and 121 °C (-13 and 250 °F) <sup>(1)</sup> |
| Inert (Galden) for sensor F to S     | -20 and 100 °C (-4 and 212 °F) <sup>(2)</sup>  |
| Inert (Galden) for sensor E          | -10 and 100 °C (14 and 212 °F) <sup>(2)</sup>  |
| Inert (Halocarbon) for sensor F to S | -20 and 100 °C (-4 and 212 °F) <sup>(2)</sup>  |
| Inert (Halocarbon) for sensor E      | -10 and 100 °C (14 and 212 °F) <sup>(2)</sup>  |

(1) 100 °C (212 °F) for application below atmospheric pressure

(2) 65 °C (150 °F) for application below atmospheric pressure

| Models 266DSH | Process temperature limits     |
|---------------|--------------------------------|
| Viton gasket  | -20 and 121 °C (-4 and 250 °F) |

### Storage

| Models 266DSH        | Storage temperature limits     |
|----------------------|--------------------------------|
| Storage limits       | -50 and 85 °C (-58 and 185 °F) |
| LCD integral display | -40 and 85 °C (-40 and 185 °F) |

## Environmental limits

### Electromagnetic compatibility (EMC)

Comply with EN 61326 and NAMUR NE 21 (on request).

Surge immunity level (with surge protector): 4 kV  
(according to IEC 1000-4-5 EN 61000-4-5)

### Pressure equipment directive (PED)

Comply with 97/23/EEC

- Category III Module H for PS ≥ than 21 MPa, 210 bar
- Sound Engineering Practice (SEP) for PS < 21 MPa, 210 bar

### Humidity

Relative humidity: up to 100 %

Condensing, icing: admissible

### Vibration resistance

Accelerations up to 2 g at frequency up to 1000 Hz

(according to IEC 60068-2-6)

### Shock resistance

Acceleration: 50 g

Duration: 11 ms

(according to IEC 60068-2-27)

### Wet and dust-laden atmospheres

The transmitter is dust and sand tight and protected against immersion effects as defined by IEC 60529 (2001) to IP 67 (IP 68 on request) or by NEMA Type 4X.

IP65 with Harting Han connector.

Aluminium and AISI housings as barrel version also comply to IP 66 as defined by IEC 60529 (2001).



## Hazardous atmospheres (FOR ALL VERSIONS EXCEPT WirelessHART)

With or without integral display

### INTRINSIC SAFETY:

ATEX Europe (code E1) approval

II 1 G Ex ia IIC T6/T5/T4 and II 1/2 G Ex ia IIC T6/T5/T4 and

II 1 D Ex iaD 20 T85 °C and II 1/2 D Ex iaD 21 T85 °C; IP67.

IECEX (code E8) approval

Ex ia IIC T6/T5/T4 and Ex iaD 20 T85 °C and Ex iaD 21 T85 °C; IP67.

NEPSI China (code EY)

Ex ia IIC T4~T6, DIP A20TA, T4~T6.

### EXPLOSION PROOF:

ATEX Europe (code E2) approval

II 1/2 G Ex d IIC T6 and II 1/2 D Ex tD A21 IP67 T85 °C (Ta = -50 to +75 °C).

IECEX (code E9) approval

Ex d IIC T6 and Ex tD A21 IP67 T85 °C (Ta = -50 to +75 °C).

NEPSI China (code EZ)

Ex d IIC T6, DIP A21TA, T6.

### TYPE "N":

ATEX Europe (code E3 ) type examination

II 3 G Ex nL IIC T6/T5/T4 and II 3 D Ex tD A22 IP67 T85 °C; IP67.

IECEX (code ER) type examination

Ex nL IIC T6/T5/T4; IP67.

NEPSI China (code ES) type examination

Ex nL IIC T4~T6, DIP A22TA, T6.

FM Approvals US (code E6) and FM Approvals Canada (code E4):

- Explosionproof (US): Class I, Div. 1, Groups A, B, C, D
- Explosionproof (Canada): Class I, Div. 1, Groups B, C, D
- Dust ignitionproof : Class II, Div. 1, Groups E, F, G
- Suitable for: Class II, Div. 2, Groups F, G; Class III, Div.1, 2
- Nonincendive: Class I, Div. 2, Groups A, B, C, D
- Intrinsically safe: Class I, II, III, Div. 1, Groups A, B, C, D, E, F, G
  - Class I, Zone 0 AEx ia IIC T6/T4, Zone 0 (FM US)
  - Class I, Zone 0 Ex ia IIC T6/T4, Zone 0 (FM Canada)

COMBINED ATEX (code EW = E1 + E2 + E3), (code E7 = E1 + E2)

COMBINED ATEX, FM and IECEX Approvals (code EN = EW + E4 + E6+ E1)

COMBINED FM Approvals US and Canada

- Intrinsically safe (code EA)
- Explosionproof (code EB)
- Nonincendive (code EC)

COMBINED IECEX (code EH = E8 + E9), (code EI = E8 + E9 + ER)

COMBINED NEPSI (code EP = EY + EZ), (code EQ = EY + EZ + ES)

GOST (Russia), GOST (Kazakhstan), GOST (Belarus), Inmetro (Brazil),  
Kosha (Korea).

REFER TO CERTIFICATES FOR AMBIENT TEMPERATURE RANGES (WITHIN THE LIMITS OF -50 TO 85°C) RELATED TO THE DIFFERENT TEMPERATURE CLASSES

## Hazardous atmospheres (ONLY FOR WirelessHART VERSION)

With or without integral display

### INTRINSIC SAFETY:

ATEX Europe (code E1) approval

II 1 G Ex ia IIC T4 Ga and II 1/2 G Ex ia IIC T4 Ga/Gb; IP67.

IECEX (code E8) approval

Ex ia IIC T4; IP67.

NEPSI China (code EY)

Ex ia IIC T4~T6.

### TYPE "N":

ATEX Europe (code E3 ) type examination

II 3 G Ex nA IIC T6/T5/T4; IP67.

IECEX (code ER) type examination

Ex nA IIC T6/T5/T4; IP67.

NEPSI China (code ES) type examination

Ex nA IIC T4~T6.

FM Approvals US and FM Approvals Canada:

- Nonincendive: Class I, Div. 2, Groups A, B, C, D (code EC)
- Intrinsically safe: Class I, Div. 1, Groups A, B, C, D (code EA)
  - Class I, Zone 0 AEx ia IIC T4, Zone 0 (FM US)
  - Class I, Zone 0 Ex ia IIC T4, Zone 0 (FM Canada)

COMBINED ATEX (code ED = E1 + E3)

COMBINED FM Approvals US and Canada (Code EE = EA + EC)

COMBINED ATEX and FM Approvals US and Canada (Code EF = ED + EE)

COMBINED IEC (code EM = E8 + ER)

COMBINED NEPSI (code EG = EY + ES)

REFER TO CERTIFICATES FOR AMBIENT TEMPERATURE RANGES (WITHIN THE LIMITS OF -50 TO 75°C) RELATED TO THE DIFFERENT TEMPERATURE CLASSES

# Model 266DSH Differential

## Electrical Characteristics and Options

### Optional indicators

#### Standard integral display

(code L9; only available with Standard HART)

Wide screen LCD, 128 x 64 pixel, 52.5 x 27.2 mm (2.06 x 1.07 in.) dot matrix. Multilanguage. Without keypad.

User selectable application-specific visualizations.

Totalized and instantaneous flow indication. Display may also indicate static pressure, sensor temperature and diagnostic messages and provides configuration facilities.



#### Integral display with integral keypad

(code L1; not available with Standard HART)

Wide screen LCD, 128 x 64 pixel, 52.5 x 27.2 mm (2.06 x 1.07 in.) dot matrix. Multilanguage.

Four keys for configuration and management of device.

Easy setup for quick commissioning.

User selectable application-specific visualizations.

Totalized and instantaneous flow indication.

Display may also indicate static pressure, sensor temperature and diagnostic messages and provides configuration facilities.



#### Integral display with Through-The-Glass (TTG) activated keypad (code L5; not available with Standard HART)

As above integral display but equipped with the innovative TTG keypad allowing the activation of the configuration and management menus of the device without the need of removing the transmitter housing cover.

TTG keypad is protected against accidental activations.



### Optional surge protection

Up to 4kV

- voltage 1.2  $\mu$ s rise time / 50  $\mu$ s delay time to half value
- current 8  $\mu$ s rise time / 20  $\mu$ s delay time to half value

### HART® digital communication and 4 to 20 mA output Standard and Advanced functionality

Device type: 1a07<sub>hex</sub> (listed with HCF)

### Power supply

The transmitter operates from 10.5 to 42 V DC with no load and is protected against reverse polarity connection (additional load allows operations over 42 V DC).

For Ex ia and other intrinsically safe approval power supply must not exceed 30 V DC. Minimum operating voltage increase to 12.3 V DC with optional surge protector

### Ripple

20 mV max on a 250  $\Omega$  load as per HART specifications.

### Load limitations

4 to 20 mA and HART total loop resistance :

$$R \text{ (k}\Omega\text{)} = \frac{\text{Supply voltage} - \text{min. operating voltage (V DC)}}{22 \text{ mA}}$$

A minimum of 250  $\Omega$  is required for HART communication.

### Output signal

Two-wire 4 to 20 mA, user-selectable for linear or square root output, power of  $3/2$  or  $5/2$ , square root for bidirectional flow, 22 points linearization table (i.e. for horizontal or spherical tank level measurement). HART® communication provides digital process variable superimposed on 4 to 20 mA signal, with protocol based on Bell 202 FSK standard.

### Output current limits (to NAMUR NE 43 standard)

Overload condition

- Lower limit: 3.8 mA (configurable from 3.8 to 4 mA)
- Upper limit: 20.5 mA (configurable from 20 to 21 mA)

Alarm current

- Lower limit: 3.6 mA (configurable from 3.6 to 4 mA)
- Upper limit: 21 mA (configurable from 20 to 23 mA, limited to 22 mA for HART Safety; apply for electronics release 7.1.15 or later)

Factory setting: high alarm current

### Process diagnostics (PILD)

Plugged impulse line detection (PILD) generates a warning via HART communication. The device can also be configured to drive the analog output signal to the "Alarm current".

### IEC 62591 WirelessHART® output

Device type: 1a06<sub>hex</sub> (listed with HCF)  
Network ID: ABB<sub>hex</sub> (2747 decimal)  
Join keys: 57495245<sub>hex</sub> (1464422981) 4c455353<sub>hex</sub> (1279611731)  
4649454c<sub>hex</sub> (1179206988) 444b4559<sub>hex</sub> (1145783641).

### Power Supply

1x D-cell size lithium-thionyl chloride battery.  
Battery life: 10 years at 32 sec. update time, 8 years at 16 sec. update time or 5 years at 8 sec. update time.  
(at reference conditions of 25 ± 2 °C ambient temperature, data routed from 3 additional devices, LCD off).  
THE BATTERY CAN BE REPLACED IN FIELD, ALSO IN HAZARDOUS CLASSIFIED AREA.

### Output signal

IEC 62591 WirelessHART Version 7.5 (IEEE 802.15.4-2006);  
Frequency band: 2.4 GHz DSSS  
Update rate: user selectable from 1 sec. to 60 min.

### Integrated adjustable omnidirectional antenna

— Output radio frequency: maximum 10 mW (10 dBm) EIRP  
— Range: up to 300 m. (328 yds.)  
Minimum distance between antenna and person is 0.2 m. (8 in.)

### Telecommunications directive

Every wireless measuring device must be certified in accordance with the telecommunications directive, in this case the frequency range. This certification is country-specific.

### European directives

Radio Equipment and Telecommunications Terminal Equipment Directive 99/5/EC R&TTE  
ETSI EN 300 328 V1.7.1 in accordance with Article 3.2  
ETSI EN 301 489-17  
In Europe, use of the 2400 - 2483.5 MHz frequency band is not harmonized. Country-specific regulations must be observed.

### Restrictions for Norway

Operation not permitted within a radius of 20 km around Ny-Alesund in Svalbard. For more information, see [www.npt.no](http://www.npt.no) Norway Posts and Telecommunications site

### USA / Canadian directives

FCC Part 15.247:2009 (USA)  
IC RSS-210 and ICES-003 (Canada)

### PROFIBUS® PA output

#### Device type

Pressure transmitter compliant to Profiles 3.0.1  
Identification number: 3450 (hex)

#### Power supply

The transmitter operates from 9 to 32 V DC , polarity independent, with or without surge protector.  
For Ex ia approval power supply must not exceed 17.5 V DC.  
Intrinsic safety installation according to FISCO model.

#### Current consumption

operating (quiescent): 15 mA  
fault current limiting: 20 mA max.

#### Output signal

Physical layer in compliance to IEC 1158-2/EN 61158-2 with transmission to Manchester II modulation, at 31.25 kbit/s.

#### Output interface

PROFIBUS PA communication according to Profibus DP50170 Part 2/DIN 19245 part 1-3.

#### Output update time

25 ms

#### Data blocks

3 analog input, 1 physical.

#### Additional blocks

1 Pressure with calibration transducer block  
1 Advanced Diagnostics transducer block including Plugged Input Line Detection  
1 Local Display transducer block

#### Transmitter failure mode

On gross transmitter failure condition, detected by self-diagnostics, the output signal can be driven to defined conditions, selectable by the user as safe, last valid or calculated value.  
If electronic failure or short circuit occur the transmitter consumption is electronically limited at a defined value (20 mA approx), for safety of the network.

# Model 266DSH Differential

## FOUNDATION Fieldbus™ output

### Device type

LINK MASTER DEVICE

Link Active Scheduler (LAS) capability implemented.

Manufacturer code: 000320<sub>hex</sub>

Device type code: 0007<sub>hex</sub>

### Power supply

The transmitter operates from 9 to 32 V DC, polarity independent, with or without surge protector.

For Ex ia approval power supply must not exceed 24 V DC (entity certification) or 17.5 V DC (FISCO certification), according to FF-816.

### Current consumption

operating (quiescent): 15 mA

fault current limiting: 20 mA max.

### Output signal

Physical layer in compliance to IEC 1158-2/EN 61158-2 with transmission to Manchester II modulation, at 31.25 kbit/s.

### Function blocks/execution period

3 enhanced Analog Input blocks/25 ms max (each)

1 enhanced PID block/40 ms max.

1 standard ARithmetic block/25 ms

1 standard Input Selector block/25 ms

1 standard Control Selector block/25 ms

1 standard Signal Characterization block/25 ms

1 standard Integrator/Totalizer block/25 ms

### Additional blocks

1 enhanced Resource block,

1 custom Pressure with calibration transducer block

1 custom Advanced Diagnostics transducer block including Plugged Input Line Detection

1 custom Local Display transducer block

### Number of link objects

35

### Number of VCRs

35

## Output interface

FOUNDATION fieldbus digital communication protocol to standard H1, compliant to specification V. 1.7.

## Transmitter failure mode

The output signal is “frozen” to the last valid value on gross transmitter failure condition, detected by self-diagnostics which also indicate a BAD conditions. If electronic failure or short circuit occur the transmitter consumption is electronically limited at a defined value (20 mA approx), for safety of the network.

## Performance specifications

Stated at reference condition to IEC 60770 ambient temperature of 20 °C (68 °F), relative humidity of 65 %, atmospheric pressure of 1013 hPa (1013 mbar), mounting position with vertical diaphragm and zero based range for transmitter with isolating diaphragms in AISI 316 L ss or Hastelloy and silicone oil fill and HART digital trim values equal to 4 mA and to 20 mA span end points, in linear mode. Unless otherwise specified, errors are quoted as % of span. Some performance referring to the Upper Range Limit are affected by the actual turndown (TD) as ratio between Upper Range Limit (URL) and calibrated span.

IT IS RECOMMENDED TO SELECT THE TRANSMITTER SENSOR CODE PROVIDING THE TURNDOWN VALUE AS LOWEST AS POSSIBLE TO OPTIMIZE PERFORMANCE CHARACTERISTICS.

### Dynamic performance (according to IEC 61298–1 definition)

| Sensors                   | Time constant (63.2 % of total step change) |
|---------------------------|---|
| Sensor M to S             | ≤ 70 ms                                     |
| Sensor H                  | 100 ms                                      |
| Sensor G                  | 130 ms                                      |
| Sensor F                  | 180 ms                                      |
| Dead time for all sensors | 30 ms                                       |

Response time (total) = dead time + time constant

See “Update rate” for WirelessHART version.

### Accuracy rating

% of calibrated span, including combined effects of terminal based linearity, hysteresis and repeatability. For fieldbus versions SPAN refer to analog input function block outscale range

| Model  | Sensor  | for TD             |                            |
|--|---------|--------------------|----------------------------|
| 266DSH standard static and for gauge application | F to P  | from 1:1 to 10:1   | ± 0.06 %                   |
|  | F to P  | from 10:1 to 100:1 | ± (0.006 x TD) %           |
|  | E, Q, S | from 1:1 to 10:1   | ± 0.075 %                  |
|  | Q and S | from 10:1 to 100:1 | ± (0.0075 x TD) %          |
|  | E       | from 10:1 to 30:1  | ± (0.0075 x TD) %          |
|  | B       | from 1:1 to 10:1   | ± 0.10 %                   |
|  | B       | from 10:1 to 20:1  | ± (0.01 x TD) %            |
|  | A       | from 1:1 to 4:1    | ± 0.10 %                   |
| 266DSH (option D2)                               | A       | from 4:1 to 20:1   | ± (0.025 x TD) %           |
|  | F to Q  | from 1:1 to 5:1    | ± 0.04 %                   |
|  | F to P  | from 5:1 to 100:1  | ± (0.0105 + 0.0059 x TD) % |
| 266DSH high static                               | Q       | from 5:1 to 100:1  | ± (0.003 + 0.0074 x TD) %  |
|  | F to Q  | from 1:1 to 10:1   | ± 0.075 %                  |
|  | F to Q  | from 10:1 to 100:1 | ± (0.0075 x TD) %          |

### Ambient temperature

per 20K change between the limits of –40 °C to +85 °C (per 36 °F change between the limits of –40 to +185 °F):

| Model  | Sensor  | for TD up to |                               |
|--------|---------|--------------|-------------------------------|
| 266DSH | F to Q  | 10:1         | ± (0.03 % URL + 0.045 % span) |
|        | E and S | 10:1         | ± (0.04 % URL + 0.065 % span) |
|        | B       | 10:1         | ± (0.06 % URL + 0.10 % span)  |
|        | A       | 4:1          | ± (0.10 % URL + 0.10 % span)  |

for an ambient temperature change from –10 °C to +60 °C (+14 to +140 °F):

| Model  | Sensor  | for TD up to |                               |
|--------|---------|--------------|-------------------------------|
| 266DSH | F to Q  | 10:1         | ± (0.055 % URL + 0.08 % span) |
|        | E and S | 10:1         | ± (0.075 % URL + 0.11 % span) |
|        | B       | 10:1         | ± (0.11 % URL + 0.18 % span)  |
|        | A       | 4:1          | ± (0.18 % URL + 0.18 % span)  |

per 10K change between the limits of –40 °C to –10 °C or +60° to +85 °C (per 18 °F change between the limits of –40 to +14 °F or +140° to +185 °F):

| Model  | Sensor  | for TD up to |                               |
|--------|---------|--------------|-------------------------------|
| 266DSH | F to Q  | 10:1         | ± (0.03 % URL + 0.04 % span)  |
|        | E and S | 10:1         | ± (0.04 % URL + 0.055 % span) |
|        | B       | 10:1         | ± (0.055 % URL + 0.09 % span) |
|        | A       | 4:1          | ± (0.09 % URL + 0.09 % span)  |

### Static pressure

(zero errors can be calibrated out at line pressure)

per 0.5 MPa, 5 bar or 72.5 psi (sensor A)

per 2 MPa, 20 bar or 290 psi (sensor B)

per 3.5 MPa, 35 bar or 500 psi (sensor E)

per 7 MPa, 70 bar or 1015 psi (sensor F to S)

Model 266DSH standard static

– zero error: ±0.05 % of URL for sensor F to S

±0.08 % of URL for sensor A, B and E

– span error: ±0.08 % of reading.

Model 266DSH high static

– zero error: ±0.08 % of URL for sensor F to Q

– span error: ±0.20 % of reading.

# Model 266DSH Differential

## Supply voltage

Within voltage/load specified limits the total effect is less than 0.005 % of URL per volt.

## Load

Within load/voltage specified limits the total effect is negligible.

## Electromagnetic field

Meets all the requirements of EN 61326 for surge immunity level (of NAMUR NE 21 on request).

## Common mode interference

No effect from 100Vrms @ 50Hz, or 50 V DC

## Mounting position

No effect for rotation on diaphragm plane. A tilt up to 90° from vertical causes a zero shifts up to 0.5 kPa, 5 mbar or 2 inH2O, which can be corrected with zero adjustment. No span effect.

## Stability

±0.15 % of URL over a ten years period  
 (±0.25 % of URL over a ten years period for sensor A and B)  
 0.15 % of URL over a five years period for 266DSH high static.

## Maximum total performance

For temperature change of 28 °C (50 °F), static pressure change of 5,1 MPa, 51 bar, 740 psi, for model 266DSH with accuracy option code D2 (± 0.04 %)

| Sensor | Span                        | Maximum total performance     |
|--------|-----------------------------|-------------------------------|
| F      | 35 kPa, 350 mbar, 140 inH2O | ≤± 0.125 % of calibrated span |
| H      | 150 kPa, 1,5 bar, 600 inH2O |                               |
| M      | 550 kPa, 5,5 bar, 80 psi    |                               |

$$E_{\text{Mperf}} = \sqrt{(E_{\Delta Tz} + E_{\Delta Ts})^2 + E_{\Delta Ps}^2 + E_{\text{lin}}^2}$$

$E_{\text{Mperf}}$  = Maximum total performance

$E_{\Delta Tz}$  = Effect of the ambient temperature on zero

$E_{\Delta Ts}$  = Effect of the ambient temperature on span

$E_{\Delta Ps}$  = Effect of the static pressure on span

$E_{\text{lin}}$  = Accuracy rating (for terminal-based linearity 0.04 %)

## Total performance

similar to DIN 16086

Temperature change in the range from -10 to 60 °C (14 to 140 °F), static pressure change (266DSH) 10 MPa, 100 bar, 1450 psi

| Model                         | Sensor | TD  | Total performance            |
|-------------------------------|--------|-----|------------------------------|
| 266DSH std. static, D2 option | F to Q | 1:1 | ≤± 0.16 % of calibrated span |

$$E_{\text{perf}} = \sqrt{(E_{\Delta Tz} + E_{\Delta Ts})^2 + E_{\Delta Ps}^2 + E_{\text{lin}}^2}$$

$E_{\text{perf}}$  = Total Performance

$E_{\Delta Tz}$  = Effect of the ambient temperature on zero

$E_{\Delta Ts}$  = Effect of the ambient temperature on span

$E_{\Delta Ps}$  = Effect of the static pressure on span (266DSH only)

$E_{\text{lin}}$  = Accuracy rating (for terminal-based linearity 0.04 % or 0.075% as per model/sensor accuracy)

Maximum total performance and Total performance includes the measuring errors of

- non-linearity including hysteresis and non-reproducibility,
- thermal change of the ambient temperature as regards the zero signal and the calibrated span,
- effect of static pressure change on the calibrated span, with transmitter re-zeroed at line pressure

## Physical Specification

(Refer to ordering information sheets for variant availability related to specific model or versions code)

### Materials

#### Process isolating diaphragms (\*)

AISI 316 L ss; AISI 316 L ss gold plated; Monel 400®; Tantalum; Hastelloy® C-276; Hastelloy® C-276 on AISI 316L ss gasket seat.

#### Process flanges, adapters, plugs and drain/vent valves (\*)

AISI 316 L ss <sup>(1)</sup>; Hastelloy® C-276 <sup>(2)</sup>; Monel 400® <sup>(3)</sup>; Kynar® (PVDF insert in AISI 316 ss flange).

#### Sensor fill fluid

Silicone oil; Inert fill (Halocarbon® 4.2 or Galden®).

#### Mounting bracket (\*\*)

Zinc plated carbon steel with chrome passivation; AISI 316 ss; AISI 316 L ss.

#### Gaskets (\*)

Viton®; PTFE.

#### Sensor housing

AISI 316 L ss.

#### Bolts and nuts

AISI 316 ss bolts Class A4–80 and nuts Class A4–70 per UNI 7323 (ISO 3506);

AISI 316 ss bolts and nuts Class A4–50 per UNI 7323 (ISO 3506), in compliance with NACE MR0175 Class II (std. static only).

Plated alloy steel bolts per ASTM-A-193-77a grade B7M and nuts per ASTM A194/A 194 M-90 grade 2HM, in compliance with NACE MR0175 Class II.

Stainless steel per ASTM-A-453 grade 660D, in compliance with NACE MR0175 Class II (high static only).

### Electronic housing and covers

Aluminium alloy (copper content  $\leq 0.3$  %) with baked epoxy finish (colour RAL9002); AISI 316 L ss; AISI 316 L ss with two components epoxy mastic coated with acrylic epoxy finish (colour aluminium grey), with antistatic agents according to CEI EN 60079.

### Covers O-ring

Buna N.

### Local adjustments (zero, span and write protect)

For Standard HART version:

- Internal for zero and span (on communication board)
- External non-intrusive for zero, span and write protect in glass filled polyphenylene oxyde, removable (code R1).

For all other versions:

- External non-intrusive for zero, span and write protect in glass filled polyphenylene oxyde, removable.

### Plates

Transmitter nameplate: AISI 316 ss screwed to the electronics housing.

Certification plate and optional tag/calibration plate : self-adhesive attached to the electronics housing or AISI 316 ss fastened to the electronics housing with rivets or screws.

Optional wired-on customer data plate: AISI 316 ss.

Laser printing on metal or thermal printing on self-adhesive.

For AISI 316 L ss housing it is mandatory to select option I2 or I3 for plates in AISI 316 ss.

### Calibration

Standard: at maximum span, zero based range, ambient temperature and pressure;

Optional: at specified range and ambient conditions.

(\*)Wetted parts of the transmitter.

(\*\*) U-bolt material: high-strength alloy steel or AISI 316 L ss; bolts/nuts material: high-strength alloy steel or AISI 316 ss.

<sup>(1)</sup> Supplied as AISI 316 L or as ASTM A351 Grade CF-3M

<sup>(2)</sup> Supplied as Hastelloy C-276 or as ASTM A494 alloy CW-12MW

<sup>(3)</sup> Supplied as Monel 400 or as ASTM A494 Grade M-35-1



# Model 266DSH Differential

## Optional extras

### Mounting brackets (code Bx)

For vertical and horizontal 60mm. (2in) pipes or wall mounting. (EXCEPT U-BOLT ASSEMBLY WHICH IS NOT SUPPLIED FOR WALL MOUNTING, PARTS ARE THE SAME FOR PIPE AND WALL BRACKET OPTIONS, AS PER RELEVANT MATERIALS).

### Display (code Lx)

4-position (at 90°) user orientable.

### Optional plates (code Ix)

Code I2: AISI 316 ss plate with laser printed tag (up to 31 characters) and calibration details (up to 31 characters: lower and upper range values and engineering unit) fixed onto transmitter housing.

Code I1: AISI 316 ss wired-on plate with laser printed customized data (4 lines of 32 characters with 4 mm/0.16 in. height).

### Surge protection (code S2)

### Cleaning procedure for oxygen service (code P1)

### Test Certificates (test, design, calibration, material traceability) (codes Cx and Hx)

### Tag and manual language (codes Tx and Mx)

### Communication connectors (code Ux)

### Manifold mounting (code A1)

Factory mounting and pressure test of ABB M26 manifolds.

## Process connections

on flanges :  $\frac{1}{4}$  in. – 18 NPT on process axis

on adapters :  $\frac{1}{2}$  in. – 14 NPT on process axis

centre distance (266DSH): 54 mm. (2.13 in.) on flange;

51, 54 or 57 mm. (2.01, 2.13 or 2.24 in.) as per adapters fittings

fixing threads:  $\frac{7}{16}$  in. – 20 UNF at 41.3 mm centre distance

## Electrical connections

Two  $\frac{1}{2}$  in. – 14 NPT or M20x1.5 threaded conduit entries, direct on housing. Only M20x1.5 for WirelessHART with one port used for antenna.

Special communication connector (on request)

– HART: straight or angle Harting Han 8D connector and one plug.

– FOUNDATION Fieldbus, PROFIBUS PA: M12x1 or 7/8 in.

## Terminal block

HART version: three terminals for signal/external meter wiring up to 2.5 mm<sup>2</sup> (14 AWG), also connection points for test and communication purposes.

WirelessHART version: connection points for test and communication purposes; additional fast connection for external harvesting unit.

Fieldbus versions: two terminals for signal wiring (bus connection) up to 2.5 mm<sup>2</sup> (14 AWG)

## Grounding

Internal and external 6 mm<sup>2</sup> (10 AWG) ground termination points are provided.

## Mounting position

Transmitter can be mounted in any position.

Electronics housing may be rotated to any position. A positive stop prevents over travel.

## Mass (without options)

4 kg approx (8.8 lb);

4.35 kg approx (9.6 lb) for 266DSH high static version;

add 1.5 kg (3.3 lb) for AISI housing.

Add 650 g (1.5 lb) for packing.

## Packing

Carton 27 x 24 x 20 cm approx (11 x 10 x 8 in.);

Carton 28 x 28 x 24 cm approx (11 x 11 x 10 in.) for

WirelessHART version.

## Configuration

### Transmitter with HART communication and 4 to 20 mA Standard configuration

Transmitters are factory calibrated to customer's specified range. Calibrated range and tag number are stamped on the tag plate. If a calibration range and tag data are not specified, the transmitter will be supplied with the plate left blank and configured as follows:

|                                 |   |
|---------------------------------|---|
| Engineering Unit                | kPa   |
| 4 mA                            | Zero  |
| 20 mA                           | Upper Range Limit (URL)                               |
| Output                          | Linear  |
| Damping                         | 1 s   |
| Transmitter failure mode        | Upscale   |
| Software tag (8 characters max) | Blank   |
| Optional LCD display            | PV in kPa; output in mA and in percentage on bargraph |

Any or all the above configurable parameters, including Lower range-value and Upper range-value which must be the same unit of measure, can be easily changed using the HART hand-held communicator or by a PC running the configuration software with DTM for 266 models. The transmitter database is customized with specified flange type and material, O-ring and drain/vent materials and meter code option.

### Custom configuration (option N6)

The following data may be specified in addition to the standard configuration parameters:

|            |                            |
|------------|----------------------------|
| Descriptor | 16 alphanumeric characters |
| Message    | 32 alphanumeric characters |
| Date       | Day, month, year           |

For HART protocol available engineering units of pressure measure are :

Pa, kPa, MPa

inH<sub>2</sub>O@4 °C, mmH<sub>2</sub>O@4 °C, psi

inH<sub>2</sub>O@20 °C, ftH<sub>2</sub>O@20 °C, mmH<sub>2</sub>O@20 °C

inHg, mmHg, Torr

g/cm<sup>2</sup>, kg/cm<sup>2</sup>, atm

mbar, bar

These and others are available for PROFIBUS and FOUNDATION Fieldbus.

### Transmitter with WirelessHART communication Standard configuration

Transmitters are factory calibrated to customer's specified range. Calibrated range and tag number are stamped on the tag plate. If a calibration range and tag data are not specified, the transmitter will be supplied with the plate left blank and configured as follows:

|                                 |   |
|---------------------------------|---|
| Engineering Unit                | kPa   |
| Output scale 0 %                | Lower Range Limit (LRL)                     |
| Output scale 100 %              | Upper Range Limit (URL)                     |
| Output                          | Linear                                      |
| Update time                     | 16 s  |
| Software tag (8 characters max) | Blank                                       |
| Optional LCD display            | PV in kPa; output in percentage on bargraph |

Any or all the above configurable parameters, including Lower range-value and Upper range-value which must be the same unit of measure, can be easily changed using the HART hand-held communicator or by a PC running the configuration software with DTM for 266 models. The transmitter database is customized with specified flange type and material, O-ring and drain/vent materials and meter code option.

### Custom configuration (option N6)

The following data may be specified in addition to the standard configuration parameters:

|            |                            |
|------------|----------------------------|
| Descriptor | 16 alphanumeric characters |
| Message    | 32 alphanumeric characters |
| Date       | Day, month, year           |

# Model 266DSH Differential

## Transmitter with PROFIBUS PA communication

### Standard configuration

Transmitters are factory calibrated to customer's specified range. Calibrated range and tag number are stamped on the tag plate. If a calibration range and tag data are not specified, the transmitter will be supplied with the plate left blank and configured as follows:

|                            |   |
|----------------------------|---|
| Measure Profile            | Pressure                                    |
| Engineering Unit           | kPa   |
| Output scale 0 %           | Lower Range Limit (LRL)                     |
| Output scale 100 %         | Upper Range Limit (URL)                     |
| Output                     | Linear                                      |
| Hi-Hi Limit                | Upper Range Limit (URL)                     |
| Hi Limit                   | Upper Range Limit (URL)                     |
| Low Limit                  | Lower Range Limit (LRL)                     |
| Low-Low Limit              | Lower Range Limit (LRL)                     |
| Limits hysteresis          | 0.5 % of output scale                       |
| PV filter                  | 0 s   |
| Address (set by local key) | 126   |
| Tag                        | 32 alphanumeric characters                  |
| Optional LCD display       | PV in kPa; output in percentage on bargraph |

Any or all the above configurable parameters, including the range values which must be the same unit of measure, can be easily changed by a PC running the configuration software with DTM for 266 models. The transmitter database is customized with specified flange type and material, O-ring and drain/vent materials and meter code option.

### Custom configuration (option N6)

The following data may be specified in addition to the standard configuration parameters:

|            |                            |
|------------|----------------------------|
| Descriptor | 32 alphanumeric characters |
| Message    | 32 alphanumeric characters |
| Date       | Day, month, year           |

## Transmitter with FOUNDATION Fieldbus communication

### Standard configuration

Transmitters are factory calibrated to customer's specified range. Calibrated range and tag number are stamped on the tag plate. If a calibration range and tag data are not specified, the transmitter will be supplied with the plate left blank and the analog input function block FB1 is configured as follows:

|                      |   |
|----------------------|---|
| Measure Profile      | Pressure                                    |
| Engineering Unit     | kPa   |
| Output scale 0 %     | Lower Range Limit (LRL)                     |
| Output scale 100 %   | Upper Range Limit (URL)                     |
| Output               | Linear                                      |
| Hi-Hi Limit          | Upper Range Limit (URL)                     |
| Hi Limit :           | Upper Range Limit (URL)                     |
| Low Limit            | Lower Range Limit (LRL)                     |
| Low-Low Limit        | Lower Range Limit (LRL)                     |
| Limits hysteresis    | 0.5 % of output scale                       |
| PV filter time       | 0 s   |
| Tag                  | 32 alphanumeric characters                  |
| Optional LCD display | PV in kPa; output in percentage on bargraph |

The analog input function block FB2 and FB3 are configured respectively for the sensor temperature measured in °C and for the static pressure measured in MPa.

Any or all the above configurable parameters, including the range values, can be changed using any host compliant to FOUNDATION fieldbus. The transmitter database is customized with specified flange type and material, O-ring and drain/vent materials and meter code option.

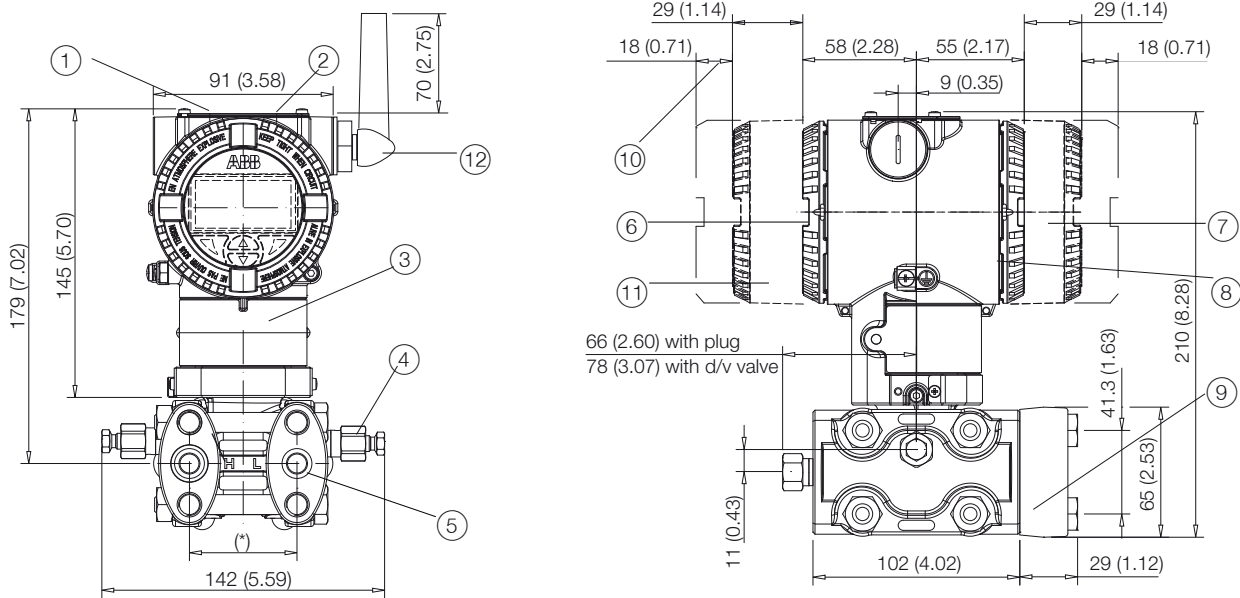
### Custom configuration (option N6)

The following data may be specified in addition to the standard configuration parameters:

|            |                            |
|------------|----------------------------|
| Descriptor | 32 alphanumeric characters |
| Message    | 32 alphanumeric characters |
| Date       | Day, month, year           |

## Mounting dimensions (not for construction unless certified) – dimensions in mm. (in.)

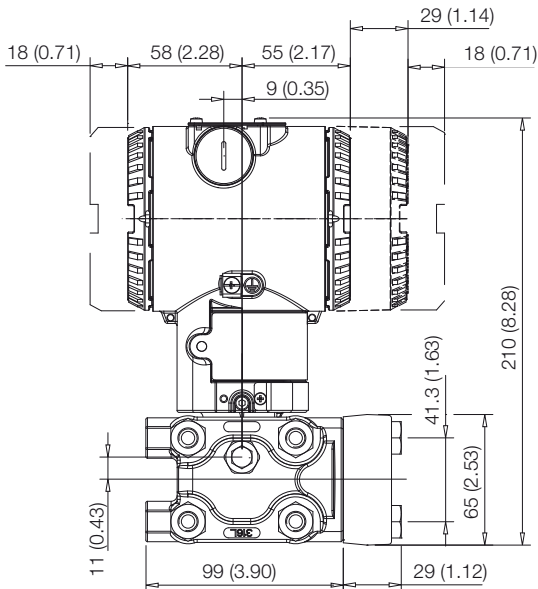
### Standard static transmitter with barrel housing - horizontal flanges



(\*) FOR MODEL 266DSH: 54 (2.13) mm (in) on 1/4 – 18 NPT process flange; 51 (2.01), 54 (2.13) or 57 (2.24) mm (in) according to 1/2 – 14 NPT adapters fitting

- ① Adjustments | ② Identification plate | ③ Certification plate | ④ Drain/vent valve | ⑤ Process connection | ⑥ Terminal side |
- ⑦ Integral display housing | ⑧ Electronic side | ⑨ Adapter | ⑩ Space for cover removal | ⑪ Battery housing of WirelessHART version |
- ⑫ Antenna of WirelessHART version

### Standard static transmitter with barrel housing - horizontal flanges with MWP= 16 MPa



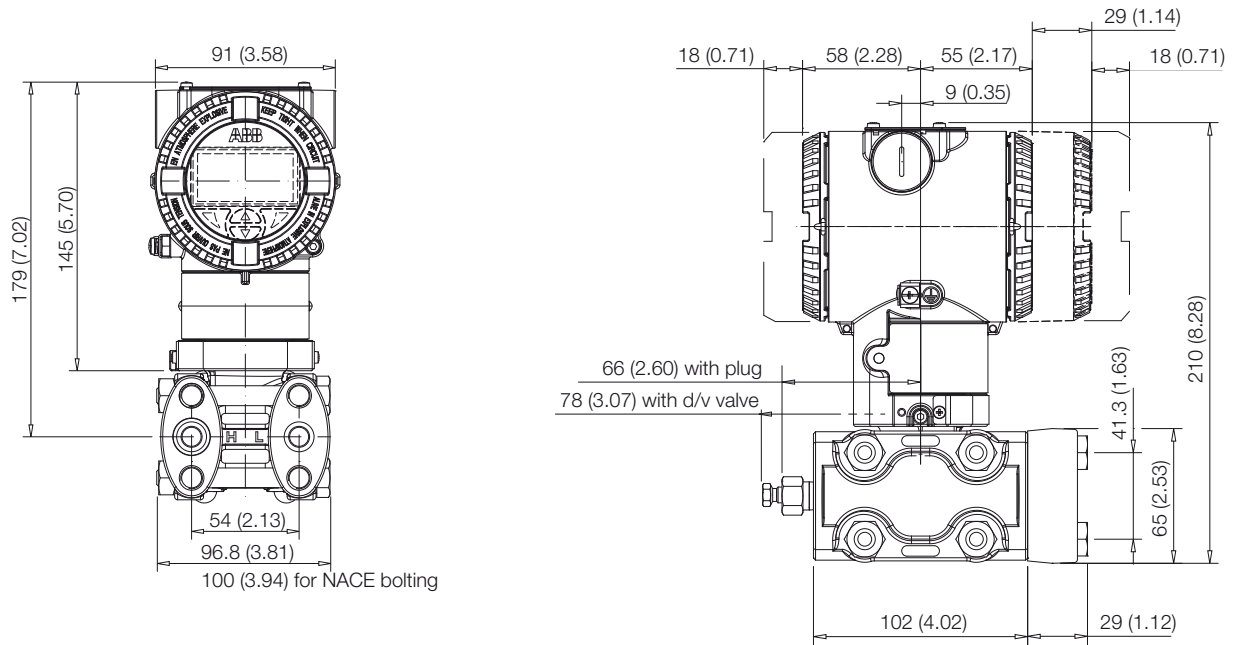
#### NOTE

Process connection, gasket groove and gaskets are in accordance with IEC 61518.

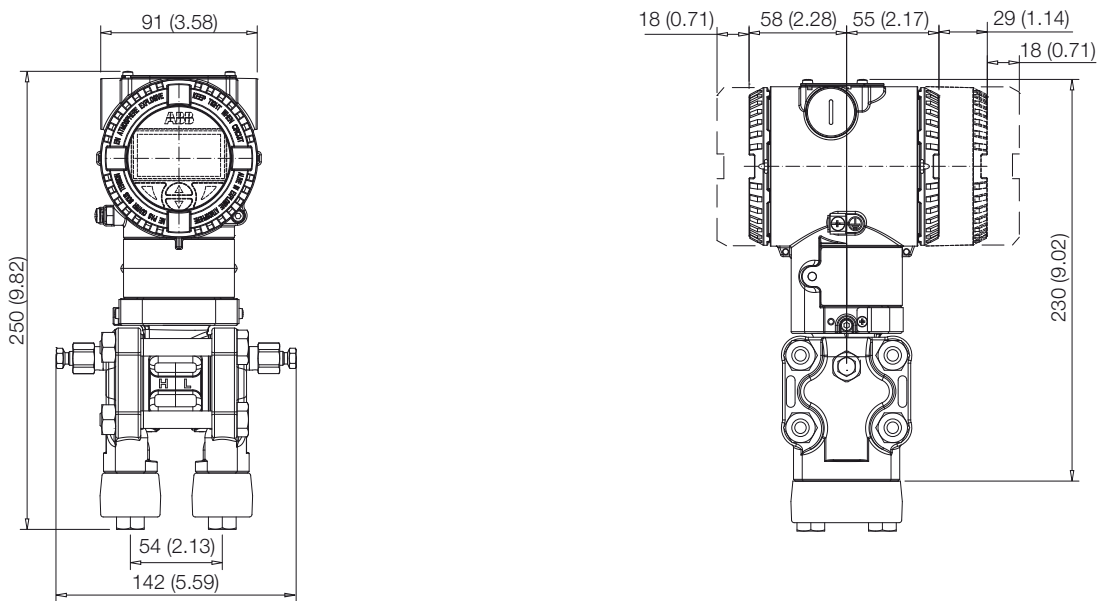
Bolting threads for fixing adapter or other devices (i.e. manifold etc.) on process flange is  $\frac{7}{16}$  – 20 UNF.

# Model 266DSH Differential

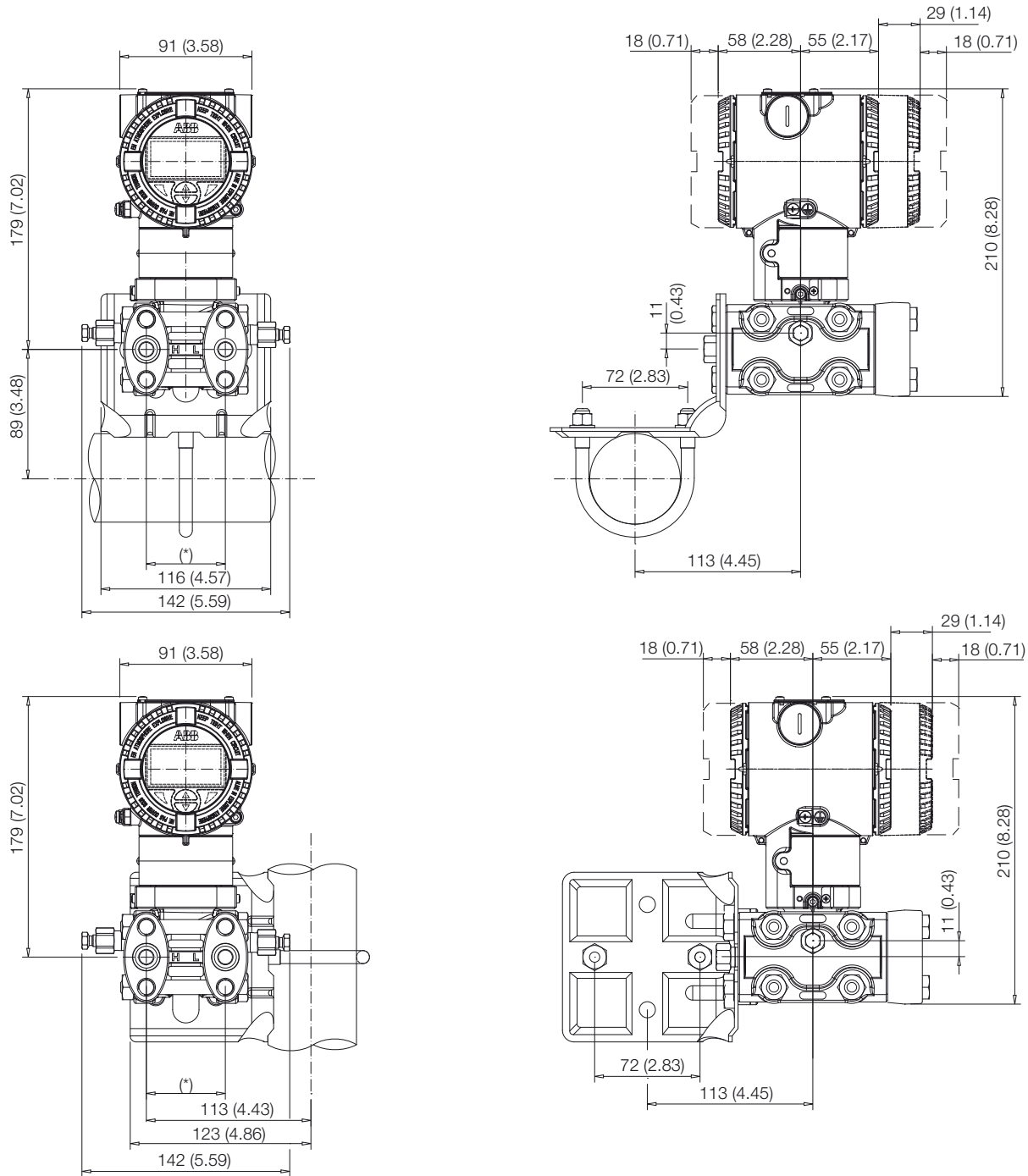
## High static transmitter with barrel housing - horizontal flanges



## Standard static transmitter with barrel housing - vertical flanges

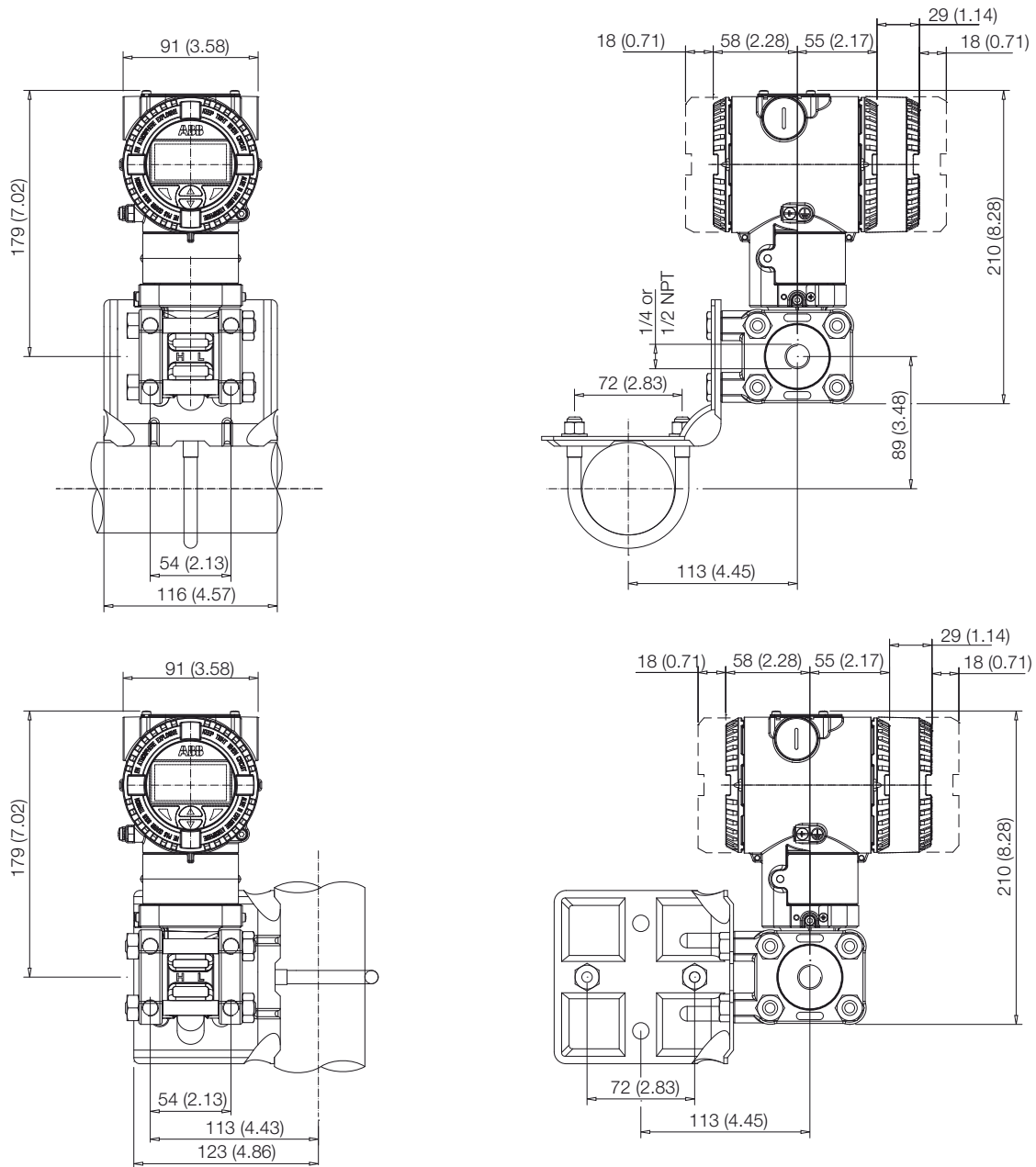


Transmitter on bracket for vertical or horizontal 60 mm. (2 in.) pipe mounting



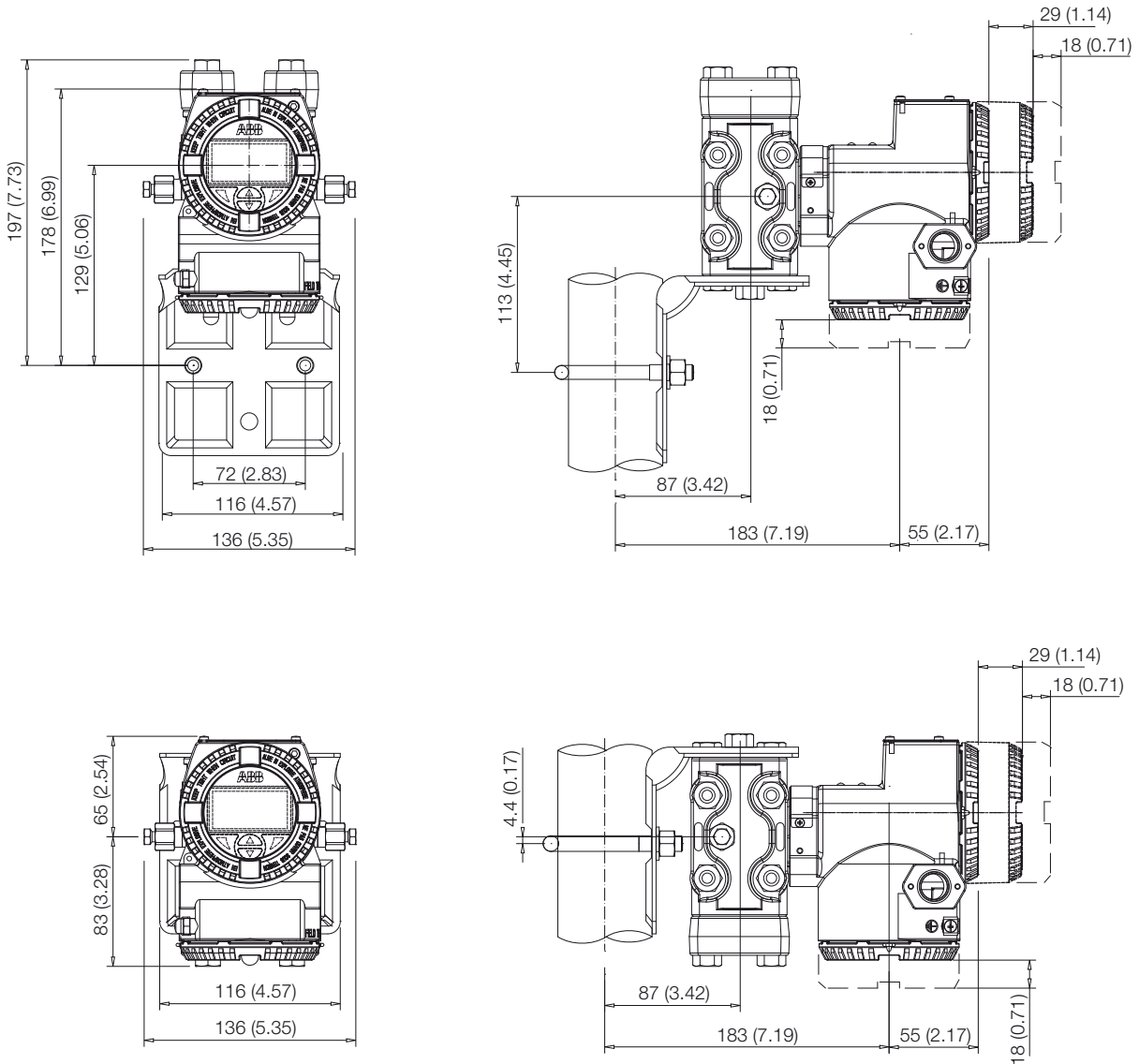
# Model 266DSH Differential

Transmitter with Kynar flanges on bracket for vertical or horizontal 60 mm. (2 in.) pipe mounting



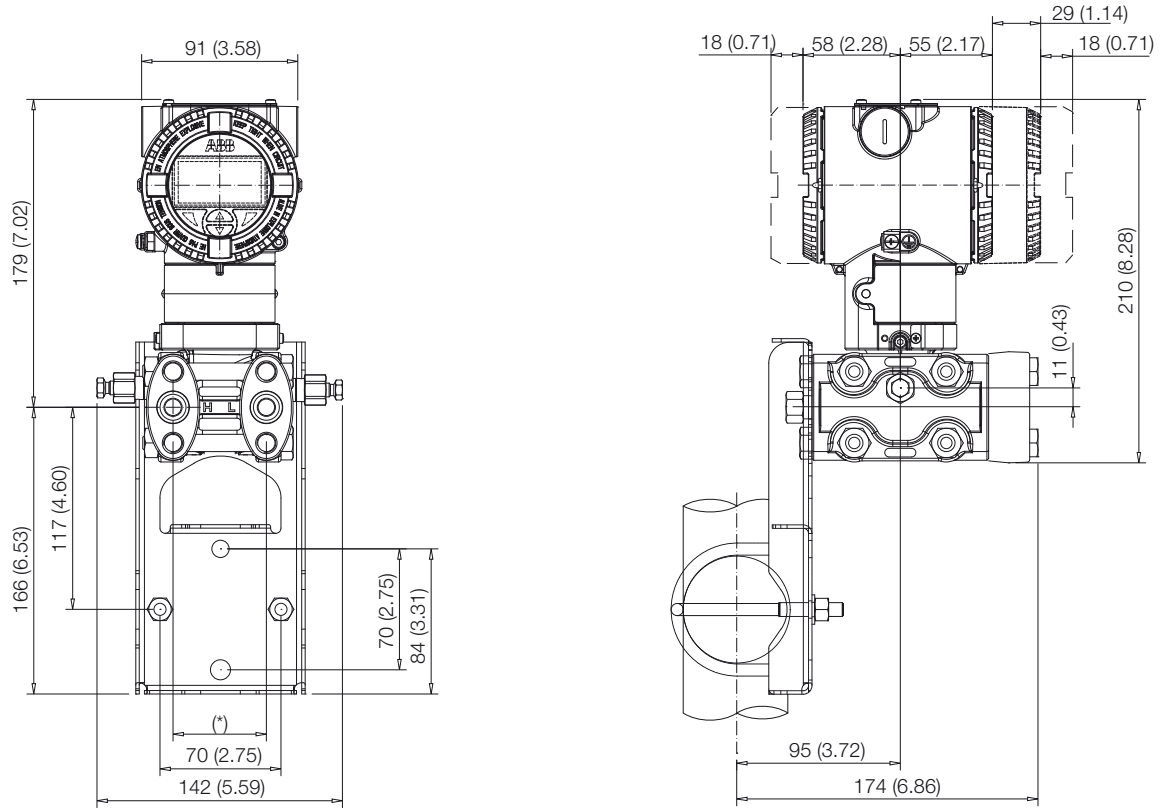


**Transmitter with DIN aluminium housing - horizontal flanges on bracket for vertical or horizontal 60 mm. (2 in.) pipe mounting**

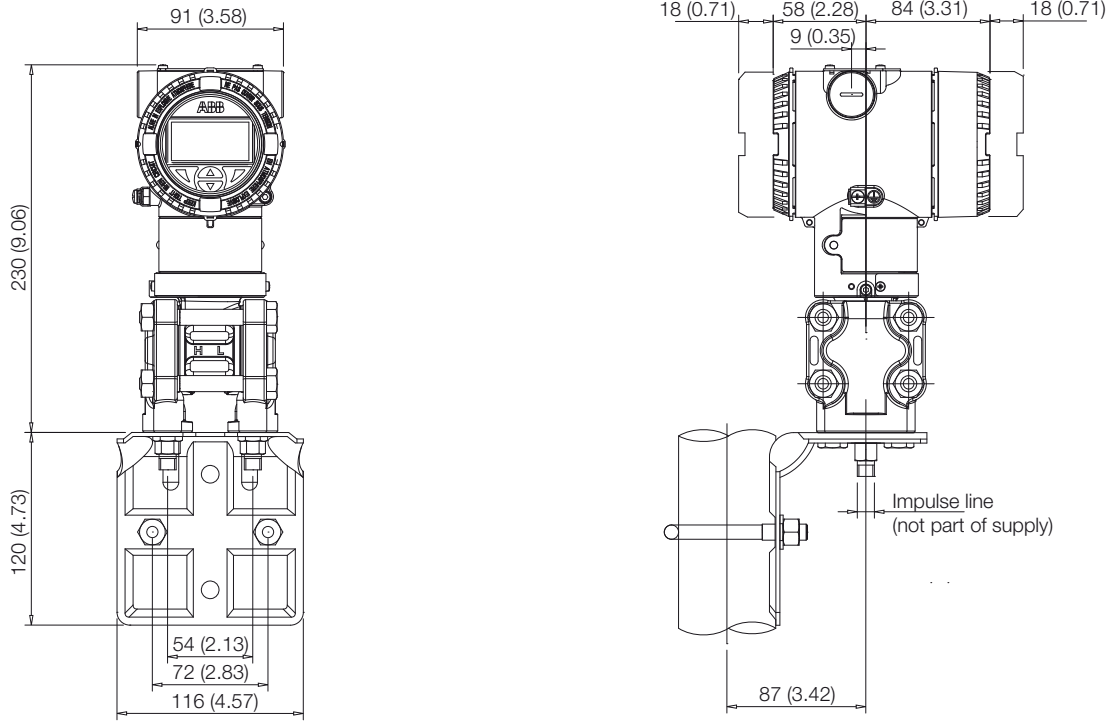


# Model 266DSH Differential

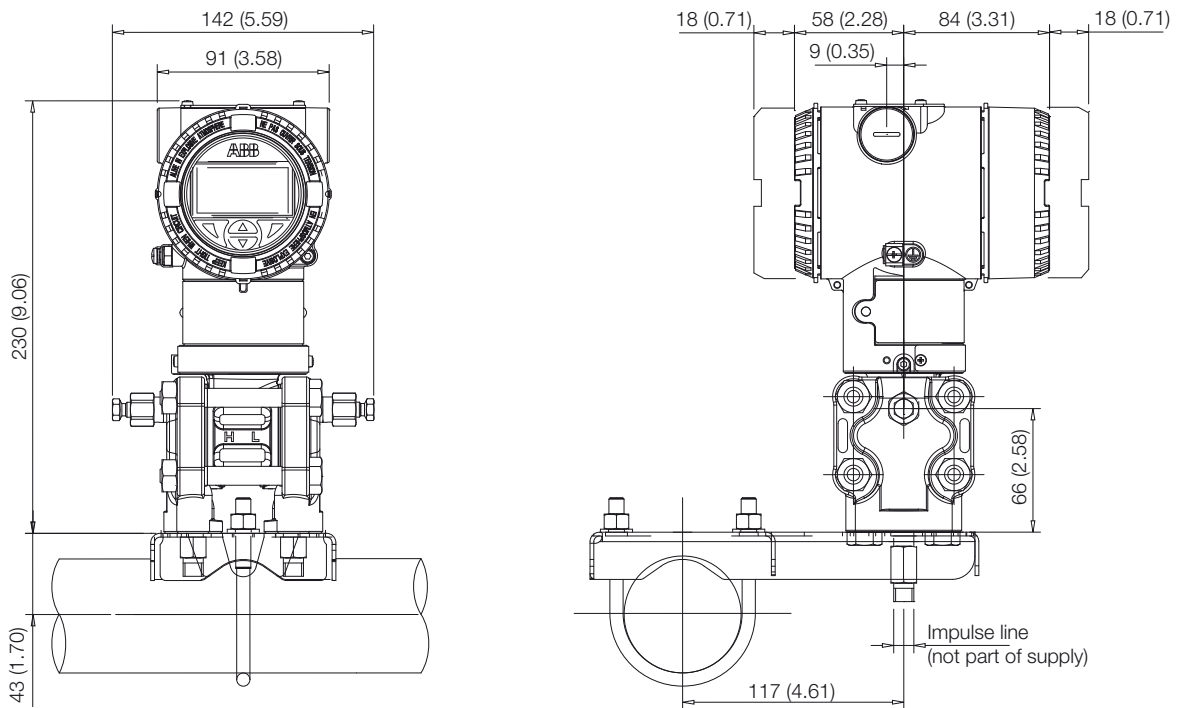
Transmitter with horizontal flanges on flat bracket for vertical or horizontal 60 mm. (2 in.) pipe mounting



**Transmitter with vertical flanges on bracket for vertical or horizontal 60 mm. (2 in.) pipe mounting**



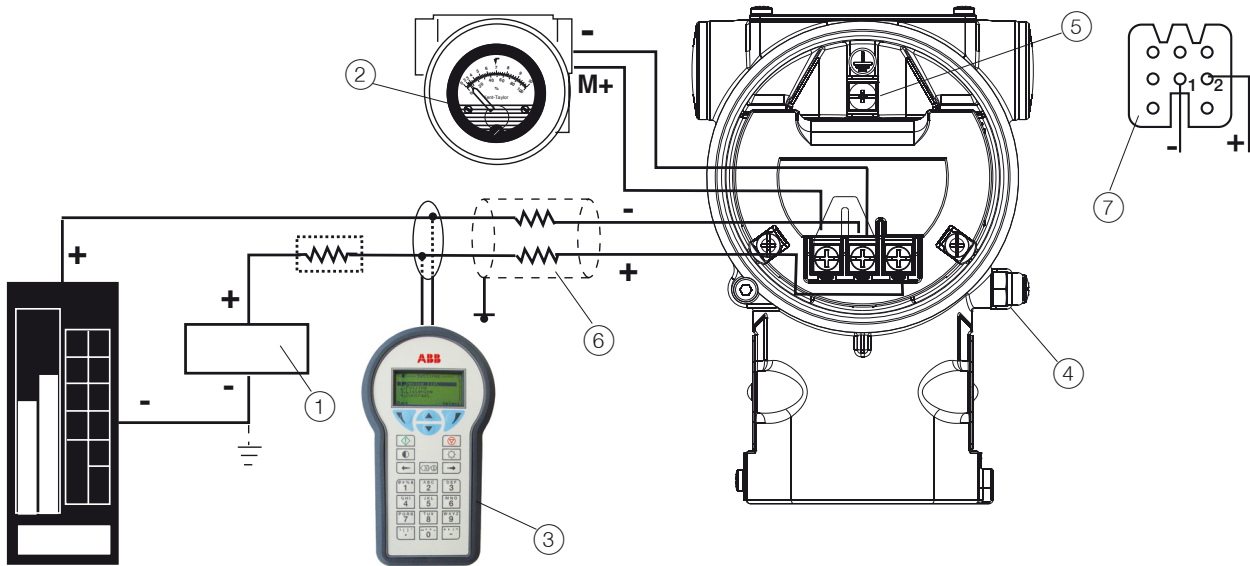
**Transmitter with vertical flanges on flat bracket for vertical or horizontal 60 mm. (2 in.) pipe mounting**



# Model 266DSH Differential

## Electrical connections

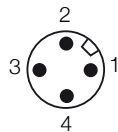
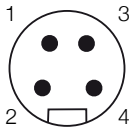
### HART Version



HART hand-held communicator may be connected at any wiring termination point in the loop, providing the minimum resistance is 250 ohm. If this is less than 250 ohm, additional resistance should be added to allow communications. Maximum voltage drop on external remote indicator is 0.7 V DC.

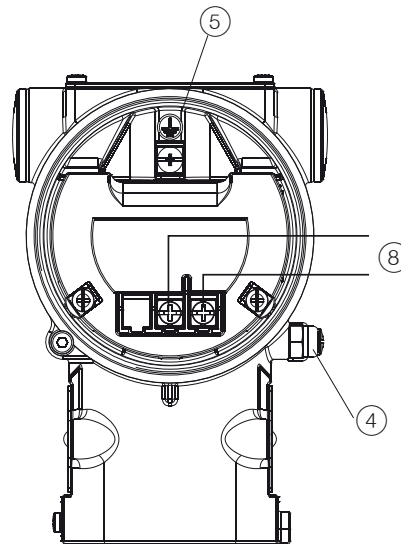
### FIELDBUS Versions

7/8 in connector      M12 x 1 connector



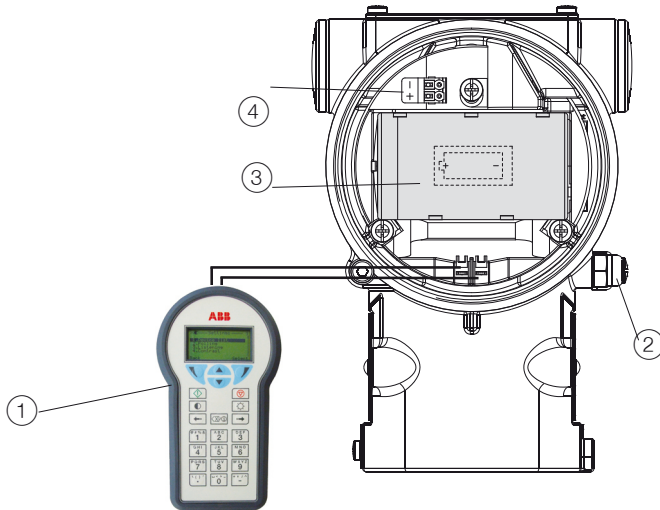
| PIN (male) IDENTIFICATION |                        |                |
|---------------------------|------------------------|----------------|
|                           | FOUNDATION<br>Fieldbus | PROFIBUS<br>PA |
| 1                         | DATA -                 | DATA +         |
| 2                         | DATA +                 | GROUND         |
| 3                         | SHIELD                 | DATA -         |
| 4                         | GROUND                 | SHIELD         |

CONNECTOR IS SUPPLIED LOOSE  
WITHOUT MATING FEMALE PLUG



- ① Power source | ② Remote indicator | ③ Handheld communicator | ④ External ground termination point | ⑤ Internal ground termination point | ⑥ Line load | ⑦ Harting Han 8D socket insert for mating plug (supplied loose) | ⑧ Fieldbus line (polarity independent)

WirelessHART version



- ① Handheld communicator | ② External ground termination point | ③ Battery | ④ Fast connection for harvesting unit

# Model 266DSH Differential

## Ordering information

### BASIC ORDERING INFORMATION model 266DSH Differential Pressure Transmitter

Select one character or set of characters from each category and specify complete catalog number.

Refer to additional ordering information and specify one or more codes for each transmitter if additional options are required.

| BASE MODEL - 1st to 6th characters                             |                  |                          |                  | 2 6 6 D S H | X | X | X | X | X | X | X |
|--|------------------|--------------------------|------------------|-------------|---|---|---|---|---|---|---|
| Differential Pressure Transmitter – BASE ACCURACY 0.06 %       |                  |                          |                  |             |   |   |   |   |   |   |   |
| SENSOR - Span limits - 7th character                           |                  |                          |                  |             |   |   |   |   |   |   |   |
| 0.05 and 1 kPa   | 0.5 and 10 mbar  | 0.2 and 4 inH2O          | (Note 21)        | A           |   |   |   |   |   |   |   |
| 0.2 and 4 kPa  | 2 and 40 mbar    | 0.8 and 16 inH2O         | (Note 21)        | B           |   |   |   |   |   |   |   |
| 0.54 and 16 kPa  | 5.4 and 160 mbar | 2.16 and 64 inH2O        | (Note 21)        | E           |   |   |   |   |   |   |   |
| 0.4 and 40 kPa   | 4 and 400 mbar   | 1.6 and 160 inH2O        |                  | F           |   |   |   |   |   |   |   |
| 0.65 and 65 kPa  | 6.5 and 650 mbar | 2.6 and 260 inH2O        |                  | G           |   |   |   |   |   |   |   |
| 1.6 and 160 kPa  | 16 and 1600 mbar | 6.4 and 642 inH2O        |                  | H           |   |   |   |   |   |   |   |
| 6 and 600 kPa  | 0.06 and 6 bar   | 0.87 and 87 psi          |                  | M           |   |   |   |   |   |   |   |
| 24 and 2400 kPa  | 0.24 and 24 bar  | 3.5 and 348 psi          |                  | P           |   |   |   |   |   |   |   |
| 80 and 8000 kPa  | 0.8 and 80 bar   | 11.6 and 1160 psi        |                  | Q           |   |   |   |   |   |   |   |
| 160 and 16000 kPa  | 1.6 and 160 bar  | 23.2 and 2320 psi        | (Note 21)        | S           |   |   |   |   |   |   |   |
| Application - 8th character                                    |                  |                          |                  |             |   |   |   |   |   |   |   |
| Differential measurement at standard static pressure           |                  |                          |                  |             |   |   |   |   |   |   | S |
| Differential measurement at high static pressure               |                  |                          |                  |             |   |   |   |   |   |   | H |
| Gauge measurement  |                  |                          |                  |             |   |   |   |   |   |   | P |
| Diaphragm material / Fill fluid (wetted parts) - 9th character |                  |                          |                  |             |   |   |   |   |   |   |   |
| AISI 316 L ss  |                  | Silicone oil             | (Note 2)         | NACE        |   |   |   |   |   |   | S |
| Hastelloy® C-276 (on AISI seat)                                |                  | Silicone oil             | (Note 20, 21)    | NACE        |   |   |   |   |   |   | H |
| Hastelloy® C-276   |                  | Silicone oil             |                  | NACE        |   |   |   |   |   |   | K |
| Monel 400®   |                  | Silicone oil             | (Notes 2, 21)    | NACE        |   |   |   |   |   |   | M |
| AISI 316 L ss gold plated                                      |                  | Silicone oil             | (Notes 2, 21)    | NACE        |   |   |   |   |   |   | 8 |
| Tantalum   |                  | Silicone oil             | (Notes 2, 21)    | NACE        |   |   |   |   |   |   | T |
| AISI 316 L ss  |                  | Inert fluid - Galden     | (Notes 1, 2, 21) | NACE        |   |   |   |   |   |   | A |
| Hastelloy® C-276   |                  | Inert fluid - Galden     | (Notes 1, 2, 21) | NACE        |   |   |   |   |   |   | F |
| Monel 400®   |                  | Inert fluid - Galden     | (Notes 1, 2, 21) | NACE        |   |   |   |   |   |   | C |
| AISI 316 L ss gold plated                                      |                  | Inert fluid - Galden     | (Notes 1, 2, 21) | NACE        |   |   |   |   |   |   | 9 |
| Tantalum   |                  | Inert fluid - Galden     | (Notes 1, 2, 21) | NACE        |   |   |   |   |   |   | D |
| AISI 316 L ss  |                  | Inert fluid - Halocarbon | (Notes 1, 2)     | NACE        |   |   |   |   |   |   | L |
| Hastelloy® C-276   |                  | Inert fluid - Halocarbon | (Notes 1, 2)     | NACE        |   |   |   |   |   |   | P |
| Monel 400v   |                  | Inert fluid - Halocarbon | (Notes 1, 2, 21) | NACE        |   |   |   |   |   |   | 4 |
| AISI 316 L ss gold plated                                      |                  | Inert fluid - Halocarbon | (Notes 1, 2, 21) | NACE        |   |   |   |   |   |   | I |
| Tantalum   |                  | Inert fluid - Halocarbon | (Notes 1, 2, 21) | NACE        |   |   |   |   |   |   | 5 |

continued  
see next page

| <b>BASIC ORDERING INFORMATION model 266DSH Differential Pressure Transmitter</b>                   |   |                   |                 | <b>2</b> | <b>6</b> | <b>D</b> | <b>S</b> | <b>H</b> | <b>X</b> | <b>X</b> | <b>X</b> | <b>X</b> |
|--|---|-------------------|-----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| <b>Process flanges/adapters material and connection (wetted parts) - 10<sup>th</sup> character</b> |   |                   |                 |          |          |          |          |          |          |          |          |          |
| AISI 316 L ss (Horizontal connection)  | 1/4 in. – 18 NPT-f direct               |                   |                 | NACE     |          |          |          |          |          | A        |          |          |
| AISI 316 L ss (Horizontal connection)  | 1/2 in. – 14 NPT-f through adapter      |                   |                 | NACE     |          |          |          |          |          | B        |          |          |
| Hastelloy® C-276 (Horizontal connection)   | 1/4 in. – 18 NPT-f direct               | (Notes 3, 21)     |                 | NACE     |          |          |          |          |          | D        |          |          |
| Hastelloy® C-276 (Horizontal connection)   | 1/2 in. – 14 NPT-f through adapter      | (Notes 3, 21)     |                 | NACE     |          |          |          |          |          | E        |          |          |
| AISI 316 L ss (Horizontal connection) - MWP= 16 MPa  | 1/4 in. – 18 NPT-f direct               | (Notes 4, 21, 27) |                 | NACE     |          |          |          |          |          | Y        |          |          |
| AISI 316 L ss (Horizontal connection) - MWP= 16 MPa  | 1/2 in. – 14 NPT-f through adapter      | (Notes 4, 21, 27) |                 | NACE     |          |          |          |          |          | W        |          |          |
| Monel 400® (Horizontal connection)   | 1/4 in. – 18 NPT-f direct               | (Notes 3, 4, 21)  |                 | NACE     |          |          |          |          |          | G        |          |          |
| Monel 400® (Horizontal connection)   | 1/2 in. – 14 NPT-f through adapter      | (Notes 3, 4, 21)  |                 | NACE     |          |          |          |          |          | H        |          |          |
| AISI 316 L ss (Vertical connection)  | 1/4 in. – 18 NPT-f direct               | (Note 21)         |                 | NACE     |          |          |          |          |          | Q        |          |          |
| AISI 316 L ss (Vertical connection)  | 1/2 in. – 14 NPT-f through adapter      | (Note 21)         |                 | NACE     |          |          |          |          |          | T        |          |          |
| Hastelloy® C-276 (Vertical connection)   | 1/4 in. – 18 NPT-f direct               | (Notes 3, 21)     |                 | NACE     |          |          |          |          |          | M        |          |          |
| Hastelloy® C-276 (Vertical connection)   | 1/2 in. – 14 NPT-f through adapter      | (Notes 3, 21)     |                 | NACE     |          |          |          |          |          | S        |          |          |
| Monel 400® (Vertical connection)   | 1/4 in. – 18 NPT-f direct               | (Notes 3, 4, 21)  |                 | NACE     |          |          |          |          |          | U        |          |          |
| Monel 400® (Vertical connection)   | 1/2 in. – 14 NPT-f through adapter      | (Notes 3, 4, 21)  |                 | NACE     |          |          |          |          |          | V        |          |          |
| PVDF Kynar® insert on AISI 316 ss flange side  | 1/4 in. – 18 NPT-f direct               | (Notes 5, 6, 21)  |                 |          |          |          |          |          |          | P        |          |          |
| PVDF Kynar® insert on AISI 316 ss flange side  | 1/2 in. – 14 NPT-f direct               | (Notes 5, 6, 21)  |                 |          |          |          |          |          |          | Z        |          |          |
| <b>Bolts/Gasket (wetted parts) - 11<sup>th</sup> character</b>                                     |   |                   |                 |          |          |          |          |          |          |          |          |          |
| For standard static, high static and gauge versions  | AISI 316 ss                             | Viton®            | (Notes 4, 7)    |          |          |          |          |          |          |          |          | 1        |
|  | AISI 316 ss                             | PTFE              | (Notes 1, 4, 7) |          |          |          |          |          |          |          |          | 2        |
| For standard static and gauge versions   | AISI 316 ss – MWP = 16 MPa              | Viton®            | (Note 7)        |          |          |          | NACE     |          |          |          |          | 3        |
|  | AISI 316 ss – MWP = 16 MPa              | PTFE              | (Notes 1, 7)    |          |          |          | NACE     |          |          |          |          | 4        |
| For high static version  | Stainless steel – MWP = 42 MPa          | Viton®            | (Note 7)        |          |          |          | NACE     |          |          |          |          | 3        |
|  | Stainless steel – MWP = 42 MPa          | PTFE              | (Notes 1, 7)    |          |          |          | NACE     |          |          |          |          | 4        |
| For standard static, high static and gauge versions  | Alloy steel                             | Viton®            | (Notes 4, 7)    |          |          |          | NACE     |          |          |          |          | 8        |
|  | Alloy steel                             | PTFE              | (Notes 1, 4, 7) |          |          |          | NACE     |          |          |          |          | 9        |
| For PVDF Kynar process connection  | AISI 316 ss spring loaded – MWP = 1 MPa |                   | (Note 8)        |          |          |          |          |          |          |          |          | N        |



# Model 266DSH Differential

| <b>BASIC ORDERING INFORMATION model 266DSH Differential Pressure Transmitter</b> |                          |   |                   | <b>2 6 6 D S H X X X X X</b> | <b>X</b> | <b>X</b> |
|--|--------------------------|---|-------------------|------------------------------|----------|----------|
| <b>Housing material and electrical connection - 12<sup>th</sup> character</b>    |                          |   |                   |                              |          |          |
| Aluminium alloy ( barrel version)  | 1/2 – 14 NPT             |   | (Note 25)         |                              | A        |          |
| Aluminium alloy ( barrel version)  | M20 x 1.5 (CM 20)        | (TO BE USED for WirelessHART)                   |                   |                              | B        |          |
| Aluminium alloy ( barrel version)  | Harting Han 8D connector | (general purpose only)                          | (Notes 9, 25)     |                              | E        |          |
| Aluminium alloy ( barrel version)  | Fieldbus connector       | (general purpose only)                          | (Notes 9, 25)     |                              | G        |          |
| AISI 316 L ss ( barrel version) (I2 or I3 required)                              | 1/2 – 14 NPT             |   | (Note 25)         |                              | S        |          |
| AISI 316 L ss ( barrel version) (I2 or I3 required)                              | M20 x 1.5 (CM20)         | (TO BE USED for WirelessHART)                   |                   |                              | T        |          |
| AISI 316 L ss ( barrel version) (I2 or I3 required)                              | Fieldbus connector       | (general purpose only)                          | (Notes 9, 25)     |                              | Z        |          |
| AISI 316 L ss painted( barrel version) (I2 or I3 required)                       | 1/2 – 14 NPT             |   | (Note 25)         |                              | C        |          |
| AISI 316 L ss painted ( barrel version) (I2 or I3 required)                      | M20 x 1.5 (CM20)         | (TO BE USED for WirelessHART)                   |                   |                              | D        |          |
| AISI 316 L ss painted ( barrel version) (I2 or I3 required)                      | Fieldbus connector       | (general purpose only)                          | (Notes 9, 25)     |                              | F        |          |
| Aluminium alloy (DIN version)  | M20 x 1.5 (CM20)         | (not Ex d or XP)                                | (Notes 25, 28)    |                              | J        |          |
| Aluminium alloy (DIN version)  | Harting Han 8D connector | (general purpose only)                          | (Notes 9, 25, 28) |                              | K        |          |
| Aluminium alloy (DIN version)  | Fieldbus connector       | (general purpose only)                          | (Notes 9, 25, 28) |                              | W        |          |
| <b>Output/Additional options - 13<sup>th</sup> character</b>                     |                          |   |                   |                              |          |          |
| HART and 4 to 20 mA - Standard functionality                                     |                          | No additional options                           | (Notes 10, 11)    |                              | L        |          |
| HART and 4 to 20 mA - Standard functionality                                     |                          | Options requested by “Additional ordering code” | (Note 10)         |                              | 7        |          |
| HART and 4 to 20 mA - Advanced functionality (includes option R1)                |                          | No additional options                           | (Notes 10, 11)    |                              | H        |          |
| HART and 4 to 20 mA - Advanced functionality (includes option R1)                |                          | Options requested by “Additional ordering code” | (Note 10)         |                              | 1        |          |
| PROFIBUS PA (includes option R1)   |                          | No additional options                           | (Notes 10, 11)    |                              | P        |          |
| PROFIBUS PA (includes option R1)   |                          | Options requested by “Additional ordering code” | (Note 11)         |                              | 2        |          |
| FOUNDATION Fieldbus (includes option R1)   |                          | No additional options                           | (Notes 10, 11)    |                              | F        |          |
| FOUNDATION Fieldbus (includes option R1)   |                          | Options requested by “Additional ordering code” | (Note 11)         |                              | 3        |          |
| HART and 4 to 20 mA Safety, certified to IEC 61508 (includes option R1)          |                          | No additional options                           | (Notes 10, 11)    |                              | T        |          |
| HART and 4 to 20 mA Safety, certified to IEC 61508 (includes option R1)          |                          | Options requested by “Additional ordering code” | (Note 10)         |                              | 8        |          |
| WirelessHART (includes option R1)  |                          | No additional options                           | (Note 24)         |                              | W        |          |
| WirelessHART (includes option R1)  |                          | Options requested by “Additional ordering code” | (Note 24)         |                              | 9        |          |

NOTE - Option R1 represents the external pushbuttons

## ADDITIONAL ORDERING INFORMATION for model 266DSH

Add one or more 2-digit code(s) after the basic ordering information to select all required options

|   |                       |                   |      | XX                     | XX | XX |
|---|-----------------------|-------------------|------|------------------------|----|----|
| <b>Accuracy</b>   |                       |                   |      |                        |    |    |
| 0.04 % accuracy for applicable ranges                                       |                       |                   |      | (Notes 7, 21, 22, 25)  | D2 |    |
| <b>Drain/vent valve (material and position) (wetted parts)</b>              |                       |                   |      |                        |    |    |
| AISI 316 L ss   | on process axis       | (Notes 7, 12)     | NACE |                        |    | V1 |
| AISI 316 L ss   | on flange side top    | (Notes 7, 13, 21) | NACE |                        |    | V2 |
| AISI 316 L ss   | on flange side bottom | (Notes 7, 13, 21) | NACE |                        |    | V3 |
| Hastelloy® C-276  | on process axis       | (Notes 7, 14)     | NACE |                        |    | V4 |
| Hastelloy® C-276  | on flange side top    | (Notes 7, 15, 21) | NACE |                        |    | V5 |
| Hastelloy® C-276  | on flange side bottom | (Notes 7, 15, 21) | NACE |                        |    | V6 |
| Monel 400®  | on process axis       | (Notes 7, 16, 21) | NACE |                        |    | V7 |
| Monel 400®  | on flange side top    | (Notes 7, 17, 21) | NACE |                        |    | V8 |
| Monel 400®  | on flange side bottom | (Notes 7, 17, 21) | NACE |                        |    | V9 |
| <b>Hazardous area certifications</b>  |                       |                   |      |                        |    |    |
| ATEX Intrinsic Safety Ex ia   |                       |                   |      | (Notes 10, 11)         |    | E1 |
| ATEX Explosion Proof Ex d   |                       |                   |      | (Notes 10, 11, 18, 25) |    | E2 |
| ATEX Type „N“   |                       |                   |      | (Notes 10, 11)         |    | E3 |
| Combined ATEX - Intrinsic Safety, Explosion Proof and Type „N“              |                       |                   |      | (Notes 10, 11, 18, 25) |    | EW |
| Combined ATEX - Intrinsic Safety and Explosion Proof                        |                       |                   |      | (Notes 10, 11, 18, 25) |    | E7 |
| Combined ATEX, IECEx, FM Approvals (USA) and FM Approvals (Canada)          |                       |                   |      | (Notes 10, 11, 18, 25) |    | EN |
| FM Approvals (Canada) approval  |                       |                   |      | (Notes 10, 11, 18, 25) |    | E4 |
| FM Approvals (USA) approval   |                       |                   |      | (Notes 10, 11, 18, 25) |    | E6 |
| FM Approvals (USA and Canada) Intrinsic Safety                              |                       |                   |      | (Notes 10, 11)         |    | EA |
| FM Approvals (USA and Canada) Explosion Proof                               |                       |                   |      | (Notes 10, 11, 18, 25) |    | EB |
| FM Approvals (USA and Canada) Nonincendive                                  |                       |                   |      | (Notes 10, 11)         |    | EC |
| IECEX Intrinsic Safety Ex ia  |                       |                   |      | (Notes 10, 11)         |    | E8 |
| IECEX Explosion Proof Ex d  |                       |                   |      | (Notes 10, 11, 18, 25) |    | E9 |
| IECEX Type „N“ Ex nL (Ex nA for WirelessHART)                               |                       |                   |      | (Notes 10, 11)         |    | ER |
| Combined IECEx - Intrinsic Safety, Explosion Proof and Type „N“             |                       |                   |      | (Notes 10, 11, 18, 25) |    | EI |
| Combined IECEx - Intrinsic Safety and Explosion Proof                       |                       |                   |      | (Notes 10, 11, 18, 25) |    | EH |
| NEPSI Intrinsic Safety Ex ia  |                       |                   |      | (Notes 10, 11)         |    | EY |
| NEPSI Explosion Proof Ex d  |                       |                   |      | (Notes 10, 11, 18, 25) |    | EZ |
| NEPSI Type „N“  |                       |                   |      | (Notes 10, 11)         |    | ES |
| Combined NEPSI - Intrinsic Safety, Explosion Proof and Type „N“             |                       |                   |      | (Notes 10, 11, 18, 25) |    | EQ |
| Combined NEPSI - Intrinsic Safety and Explosion Proof                       |                       |                   |      | (Notes 10, 11, 18, 25) |    | EP |
| Combined ATEX - Intrinsic Safety and Type „N“                               |                       |                   |      | (Note 26)              |    | ED |
| Combined FM Approvals (USA and Canada) Intrinsic Safety and Nonincendive    |                       |                   |      | (Note 26)              |    | EE |
| Combined ATEX - IS and Type „N“ and FM Approvals (USA and Canada) IS and NI |                       |                   |      | (Note 26)              |    | EF |
| Combined NEPSI - Intrinsic Safety and Type „N“                              |                       |                   |      | (Note 26)              |    | EG |
| Combined IECEx - Intrinsic Safety and Type „N“                              |                       |                   |      | (Note 26)              |    | EM |

# Model 266DSH Differential

| ADDITIONAL ORDERING INFORMATION for model 266DSH  |                                 | XX | XX | XX | XX | XX | XX |
|---|---------------------------------|----|----|----|----|----|----|
| <b>Other hazardous area certifications (ONLY AS ALTERNATIVE TO BASIC CERTIFICATION CODE Ex)</b> |                                 |    |    |    |    |    |    |
| GOST (Russia) Ex ia   | (Notes 10, 11, 25)              | W1 |    |    |    |    |    |
| GOST (Russia) Ex d  | (Notes 10, 11, 18, 25)          | W2 |    |    |    |    |    |
| GOST (Kazakhstan) Ex ia   | (Notes 10, 11, 25)              | W3 |    |    |    |    |    |
| GOST (Kazakhstan) Ex d  | (Notes 10, 11, 18, 25)          | W4 |    |    |    |    |    |
| Inmetro (Brazil) Ex ia  | (Notes 10, 11, 25)              | W5 |    |    |    |    |    |
| Inmetro (Brazil) Ex d   | (Notes 10, 11, 18, 25)          | W6 |    |    |    |    |    |
| Inmetro (Brazil) Ex nL  | (Notes 10, 11, 25)              | W7 |    |    |    |    |    |
| Combined Inmetro (Brazil) - Intrinsic Safety, Explosion Proof and Type „N“                      | (Notes 10, 11, 18, 25)          | W8 |    |    |    |    |    |
| GOST (Belarus) Ex ia  | (Notes 10, 11, 25)              | WF |    |    |    |    |    |
| GOST (Belarus) Ex d   | (Notes 10, 11, 18, 25)          | WG |    |    |    |    |    |
| Combined GOST (Belarus) - Intrinsic Safety and Explosion Proof                                  | (Notes 10, 11, 18, 25)          | WH |    |    |    |    |    |
| Kosha (Korea) Intrinsic Safety Ex ia IIC T6, IP67   | (Notes 10, 11, 23, 25)          | WM |    |    |    |    |    |
| Kosha (Korea) Explosion Proof Ex d IIC T6, IP67   | (Notes 10, 11, 18, 23, 25)      | WN |    |    |    |    |    |
| Combined Kosha (Korea) - Intrinsic Safety and Explosion Proof                                   | (Notes 10, 11, 18, 23, 25)      | WP |    |    |    |    |    |
| <b>Integral LCD</b>   |                                 |    |    |    |    |    |    |
| Digital LCD integral display with integrated keypad   | (Note 23)                       | L1 |    |    |    |    |    |
| Digital LCD integral display with TTG (Through-The-Glass) activated keypad                      | (Note 23)                       | L5 |    |    |    |    |    |
| Standard Digital LCD integral display (ONLY SELECTABLE WITH OUTPUT CODE 7)                      |                                 | L9 |    |    |    |    |    |
| <b>External non intrusive Z, S and WP pushbuttons</b>   |                                 |    |    |    |    |    |    |
| Transmitters with external pushbutton (ONLY SELECTABLE WITH OUTPUT CODE 7)                      |                                 |    |    |    |    | R1 |    |
| <b>Mounting bracket (shape and material)</b>  |                                 |    |    |    |    |    |    |
| For pipe mounting - Carbon steel  | (Not suitable for AISI housing) |    |    |    |    |    | B1 |
| For pipe mounting - AISI 316 L ss   |                                 |    |    |    |    |    | B2 |
| For wall mounting - Carbon steel  | (Not suitable for AISI housing) |    |    |    |    |    | B3 |
| For wall mounting - AISI 316 L ss   |                                 |    |    |    |    |    | B4 |
| Flat type for box - AISI 316 ss   |                                 |    |    |    |    |    | B5 |
| <b>Surge</b>  |                                 |    |    |    |    |    |    |
| Surge/Transient Protector   | (Note 25)                       |    |    |    |    |    | S2 |
| <b>Operating manual (multiple selection allowed)</b>  |                                 |    |    |    |    |    |    |
| German (ONLY FOR HART and PROFIBUS VERSIONS)  |                                 |    |    |    |    |    | M1 |
| Italian (ONLY FOR HART VERSION)   |                                 |    |    |    |    |    | M2 |
| Spanish (ONLY FOR HART VERSION)   |                                 |    |    |    |    |    | M3 |
| French (ONLY FOR HART VERSION)  |                                 |    |    |    |    |    | M4 |
| English   |                                 |    |    |    |    |    | M5 |
| Chinese (ONLY FOR HART VERSION)   |                                 |    |    |    |    |    | M6 |
| Swedish (ONLY FOR HART VERSION)   |                                 |    |    |    |    |    | M7 |
| Polish (ONLY FOR HART VERSION)  |                                 |    |    |    |    |    | M9 |
| Portuguese (ONLY FOR HART VERSION)  |                                 |    |    |    |    |    | MA |
| Danish (ONLY FOR HART VERSION)  |                                 |    |    |    |    |    | MF |
| Turkish (ONLY FOR HART VERSION)   |                                 |    |    |    |    |    | MT |

| ADDITIONAL ORDERING INFORMATION for model 266DSH  |    | XX | XX | XX        | XX | XX |
|---|----|----|----|-----------|----|----|
| <b>Plates language</b>  |    |    |    |           |    |    |
| German  | T1 |    |    |           |    |    |
| Italian   | T2 |    |    |           |    |    |
| Spanish   | T3 |    |    |           |    |    |
| French  | T4 |    |    |           |    |    |
| <b>Additional tag plate</b>   |    |    |    |           |    |    |
| Supplemental wired-on stainless steel plate   | I1 |    |    |           |    |    |
| Tag and certification stainless steel plates and laser printing of tag                        | I2 |    |    |           |    |    |
| Tag, certification and supplemental wired-on stainless steel plates and laser printing of tag | I3 |    |    |           |    |    |
| <b>Configuration</b>  |    |    |    |           |    |    |
| Standard – Pressure = inH2O/ psi at 68 °F; Temperature = deg. F                               |    |    |    |           | N2 |    |
| Standard – Pressure = inH2O/ psi at 39.2 °F; Temperature = deg. F                             |    |    |    |           | N3 |    |
| Standard – Pressure = inH2O/ psi at 20 °C; Temperature = deg. C                               |    |    |    |           | N4 |    |
| Standard – Pressure = inH2O/ psi at 4 °C; Temperature = deg. C                                |    |    |    |           | N5 |    |
| Custom  |    |    |    |           | N6 |    |
| <b>Preparation procedure</b>  |    |    |    |           |    |    |
| Oxygen service cleaning (only available with inert fill and PTFE gasket)                      |    |    |    | (Note 21) |    | P1 |
| Pmax =12 MPa for Galden, 9 MPa for Halocarbon; Tmax=60 °C/140 °F                              |    |    |    |           |    |    |
| <b>Certificates (multiple selection allowed)</b>  |    |    |    |           |    |    |
| Inspection certificate EN 10204–3.1 of calibration (9-point)                                  |    |    |    |           |    | C1 |
| Inspection certificate EN 10204–3.1 of the cleanliness stage                                  |    |    |    |           |    | C3 |
| Inspection certificate EN 10204–3.1 of helium leakage test of the sensor module               |    |    |    |           |    | C4 |
| Inspection certificate EN 10204–3.1 of the pressure test                                      |    |    |    |           |    | C5 |
| Certificate of compliance with the order EN 10204–2.1 of instrument design                    |    |    |    |           |    | C6 |
| Printed record of configured data of transmitter  |    |    |    |           |    | CG |
| PMI test of wetted parts  |    |    |    |           |    | CT |

# Model 266DSH Differential

| ADDITIONAL ORDERING INFORMATION FOR MODEL 266DSH  |  | XX                 | XX | XX | XX | XX |
|---|--|--------------------|----|----|----|----|
| <b>Approvals</b>  |  |                    |    |    |    |    |
| GOST (Russia) without Ex  | (NOT APPLICABLE WITH ANY HAZARDOUS AREA CERTIFICATION) | Y1                 |    |    |    |    |
| GOST (Kazakhstan) without Ex  | (NOT APPLICABLE WITH ANY HAZARDOUS AREA CERTIFICATION) | Y2                 |    |    |    |    |
| GOST (Belarus) without Ex   | (NOT APPLICABLE WITH ANY HAZARDOUS AREA CERTIFICATION) | Y4                 |    |    |    |    |
| Chinese pattern without Ex  | (NOT APPLICABLE WITH ANY HAZARDOUS AREA CERTIFICATION) | Y5                 |    |    |    |    |
| DNV approval  | (Notes 23, 25)   |                    | YA |    |    |    |
| Approval for Custody transfer (PENDING)   | (Notes 23, 25)   |                    | YC |    |    |    |
| <b>Material traceability</b>  |  |                    |    |    |    |    |
| Certificate of compliance with the order EN 10204–2.1 of process wetted parts   |  |                    |    |    |    | H1 |
| Inspection certificate EN 10204–3.1 of process wetted parts   |  |                    |    |    |    | H3 |
| Test report EN 10204–2.2 of pressure bearing and process wetted parts   |  |                    |    |    |    | H4 |
| <b>Connector</b>  |  |                    |    |    |    |    |
| Fieldbus 7/8 in. (Recommended for FOUNDATION Fieldbus) - (supplied loose without mating female plug)  |  | (Notes 11, 19, 25) |    |    |    | U1 |
| Fieldbus M12x1 (Recommended for PROFIBUS PA) - (supplied loose without mating female plug)  |  | (Notes 11, 19, 25) |    |    |    | U2 |
| Harting Han 8D – straight entry - (supplied loose)  |  | (Notes 10, 19, 25) |    |    |    | U3 |
| Harting Han 8D – angle entry - (supplied loose)   |  | (Notes 10, 19, 25) |    |    |    | U4 |
| <b>Accessory</b>  |  |                    |    |    |    |    |
| Manifold mounting and pressure test (NOT AVAILABLE WITH OXYGEN SERVICE CLEANING - PREPARATION PROCEDURE CODE P1<br>or WITH VERTICAL FLANGES WHEN SELECTED WITH BRACKET CODE Bx) |  | (Note 29)          |    |    |    | A1 |

- Note 1: Suitable for oxygen service  
 Note 2: Not available with sensor code A and B  
 Note 3: Not available with AISI 316L ss or Hastelloy C-276 (on AISI seat) diaphragms code S, H, A, L  
 Note 4: Not available with sensor code A  
 Note 5: Not available with Diaphragm material/Fill fluid code S, H, K, M, A, F, C, L, P, 4  
 Note 6: Not available with sensor code A, Q, S  
 Note 7: Not available with Process Flanges/Adapters material/connection code P, Z  
 Note 8: Not available with Process Flanges/Adapters material/connection code A, B, D, E, G, H, Q, T, M, S, U, V, Y, W  
 Note 9: Select type in additional ordering code  
 Note 10: Not available with Housing code G, Z, W, F  
 Note 11: Not available with Housing code E, K  
 Note 12: Not available with Process flanges/adapters material/connection code D, E, G, H, Q, T, M, S, U, V, Y, W  
 Note 13: Not available with Process flanges/adapters material/connection code D, E, G, H, M, S, U, V  
 Note 14: Not available with Process flanges/adapters material/connection code A, B, G, H, Q, T, M, S, U, V, Y, W  
 Note 15: Not available with Process flanges/adapters material/connection code A, B, G, H, Q, T, U, V, Y, W  
 Note 16: Not available with Process flanges/adapters material/connection code A, B, D, E, Q, T, M, S, U, V, Y, W  
 Note 17: Not available with Process flanges/adapters material/connection code A, B, D, E, Q, T, M, S, Y, W  
 Note 18: Not available with Housing code J, K, W  
 Note 19: Not available with Housing code A, B, S, T, J  
 Note 20: Not available with sensor code E, F, G, H, M, P, Q, and S  
 Note 21: Not available with high static pressure code H  
 Note 22: Not available with sensor code A, B, E, S  
 Note 23: Not available with Output code 7  
 Note 24: Not available with Housing code A, E, G, S, Z, C, F, J, K, W  
 Note 25: Not available with Output code 9  
 Note 26: Not available with Output code 1, 2, 3, 7, 8  
 Note 27: Not available with sensor code S  
 Note 28: Not available with Process flanges/adapters material/connection code Y, W  
 Note 29: Not available with Process Flanges/Adapters material/connection code B, E, W, H, T, S, V,

### **Standard delivery items (can be differently specified by additional ordering code)**

- Adapters supplied loose
- Plug on axis of horizontal connection flange or on side bottom for horizontal connection flange with MWP= 16 MPa; nothing for PVDF Kynar insert or for vertical connection flange (no drain/vent valves)
- General purpose (no electrical certification)
- No display, no mounting bracket, no surge protection
- Multilanguage short-form operating instruction manual and labels in english (metal nameplate; self-adhesive certification and tag)
- Configuration with kPa and deg. C units
- No test, inspection or material traceability certificates

### **IMPORTANT REMARK FOR ALL MODELS**

THE SELECTION OF SUITABLE WETTED PARTS AND FILLING FLUID FOR COMPATIBILITY WITH THE PROCESS MEDIA IS A CUSTOMER'S RESPONSIBILITY, IF NOT OTHERWISE NOTIFIED BEFORE MANUFACTURING.

### **NACE COMPLIANCE INFORMATION**

- (1) The materials of constructions comply with metallurgical recommendations of NACE MR0175/ISO 15156 for sour oil field production environments. As specific environmental limits may apply to certain materials, please consult latest standard for further details. AISI 316/316 L, Hastelloy C-276, Monel 400 also conform to NACE MR0103 for sour refining environments.
  - (2) NACE MR-01-75 addresses bolting requirements in two classes:
    - Exposed bolts: bolts directly exposed to the sour environment or buried, encapsulated or anyway not exposed to atmosphere
    - Non exposed bolts: the bolting must not be directly exposed to sour environments and must be directly exposed to the atmosphere at all times.
- 266DSH bolting identified by "NACE" are in compliance with requirements of NACE MR0175 when considered "exposed bolting".

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3KXP300007R1001



Sales



Service



Software



# Model 266CSH/CST Multivariable Model 266JSH/JST Multivariable

Measurement made easy

2600T series  
pressure transmitters

Engineered solutions  
for all applications



#### Base accuracy

- 0.075 % of calibrated span (266CSH, 266JSH)
- 0.04 % of calibrated span (266CST, 266JST)

#### 266CSH/CST mass flow measurement with compensation, fill level measurement with compensation for gases, steam, and liquids

- Dynamic compensation of pressure and temperature changes

#### 266JSH/JST high-performance transmitter for measuring differential pressure, absolute pressure, and process temperature in a single device

#### Proven sensor technology together with state-of-the-art digital technology

- Large turn down ratio of up to 100:1

#### Comprehensive range of functions

- Integrated counting function
- Binary output as pulse / frequency output or limit monitor

#### 10-year stability

- 0.15 % of URL

#### Flexible configuration options

- Local configuration via keys on LCD indicator

#### New TTG (through-the-glass) key technology

- Enables quick and easy local configuration without the need to open the cover - even in potentially explosive environments

#### Full compliance with Pressure Equipment Directive (PED) category III

# Model 266CSH/CST Multivariable Model 266JSH/JST Multivariable

## Introduction

### 266CSH / 266CST

Thanks to their multisensor technology, these transmitters are capable of measuring three separate process variables at the same time and offer the option of calculating the following values:

- Mass flow for gases, steam, and liquids by means of dynamic compensation
- Standard volume flow for gases by means of dynamic compensation
- Heat flow for water and steam
- Drum water level and measurement of liquid fill levels with density compensation

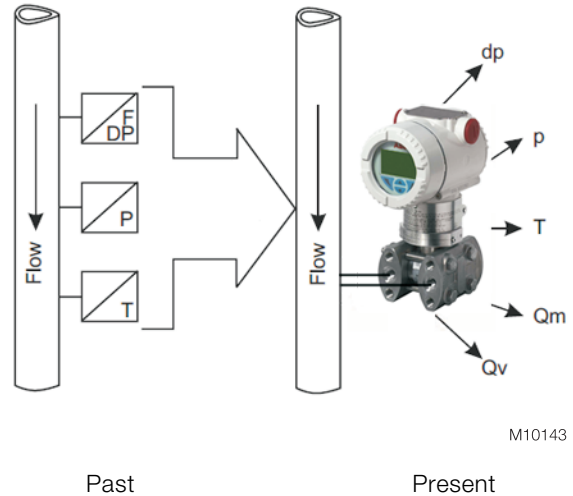
The differential pressure and absolute pressure are measured by two integrated sensors. The process temperature is measured by an external standard Pt100 resistance thermometer.

### Flow calculation

The flow calculation carried out by these transmitters includes compensation of pressure and / or temperature as well as more complex variables such as discharge coefficient, thermal expansion, Reynolds number, and compressibility factor.

The 266CXX pressure transmitters include flow equations for superheated steam, saturated steam, gases, and liquids - so you only need one device for your system.

Multivariable transmitters represent a more economical solution than the designs that have been used for this type of measuring point up to now, in which three different transmitters for differential pressure, absolute pressure, and temperature report their values to a DCS, PLC, or flow computer.



M10143

**Fig. 1: Flow measurement - past and present**

The dynamic mass flow of the 266CXX is calculated using the following equation:

$$Q_m \approx \frac{C}{\sqrt{1-\beta^4}} \cdot \varepsilon \cdot d^2 \cdot \sqrt{\rho_1 \cdot dp}$$

- $Q_m$  = Mass flow
- $C$  = Discharge coefficient
- $\beta$  = Diameter ratio
- $\varepsilon$  = Gas expansion factor
- $d$  = Inside diameter of the differential flow sensor
- $dp$  = Differential pressure
- $\rho$  = Density

The flow calculation process is based on the following standards:

- AGA 3
- DIN EN ISO 5167

### Flow coefficient

The discharge coefficient is defined as the actual flow divided by the theoretical flow. It corrects the theoretical equation for the effect on the velocity profile (Reynolds number), assuming that no energy is lost between the pressure taps and pressure tap location.

It is dependent on the differential flow sensor, the diameter ratio, and the Reynolds number.

Compensation for the discharge coefficient ensures a high level of measuring accuracy for flow measurement with primary elements.

### Gas expansion factor

The gas expansion factor corrects for density differences between pressure taps due to expansion of compressible media. It does not apply to liquids which are essentially non-compressible.

The gas expansion factor is dependent on the diameter ratio, the isentropic exponent, the differential pressure, and the static pressure of the medium.

### Diameter ratio

The diameter ratio is dependent on the inside diameter of the differential flow sensor and the pipe diameter, which in turn are subject to temperature functions.

If the temperature of the medium being measured changes, the material of the process pipe and differential flow sensor expands or contracts.

The thermal expansion coefficients are dependent on the material of the pipe and differential flow sensor, and are used for calculating the change in diameters. This ensures a high level of flow accuracy in applications with low and high temperatures.

### Medium density

The medium density has a direct effect on the flow calculation. The 266CXX pressure transmitters compensate for the medium density resulting from changes in temperature and / or pressure as follows:

- Gases as a function of p and T based on gas laws, taking compressibility factors into account; for natural gas, based on AGA 8 or SGERG
- Superheated steam as a function of p and T based on steam tables
- Saturated steam as a function of p based on steam tables
- Liquids as a function of T

### Mass flow calculations

With the 266CXX pressure transmitters, mass flow calculations can be configured for the following differential flow sensors:

- Orifice corner pressure taps, ISO
- Orifice flange pressure taps, ISO
- Orifice D and D/2 pressure taps, ISO
- Orifice corner pressure taps, ASME
- Orifice flange pressure taps, ASME
- Orifice D and D/2 pressure taps, ASME
- Orifice flange pressure taps, AGA 3
- Orifice 2.5D and 8D pressure taps
- Small bore orifice, flange pressure taps
- Small bore orifice, corner pressure taps
- ISA 1932 nozzle
- Long radius nozzle wall pressure taps, ISO
- Long radius nozzle wall pressure taps, ASME
- Standard Venturi pipe, rough-cast inlet, ISO
- Standard Venturi pipe, machined inlet, ISO
- Standard Venturi pipe, welded inlet, ISO
- Standard Venturi pipe, rough-cast inlet, ASME
- Standard Venturi pipe, machined inlet, ASME
- Standard Venturi pipe, welded inlet, ASME
- Venturi, nozzle, ISO
- Pitot tube
- Wedge element
- Plus all non-standard flow sensors

# Model 266CSH/CST Multivariable

# Model 266JSH/JST Multivariable

ABB offers a complete range of differential flow sensors. We provide the full testing and documentation that your application needs. Whether the requirement is a single orifice plate with a simple Certificate of Conformity or a project requiring full material inspection, traceability, third-party verification, calibration and comprehensive data dossiers – ABB can satisfy all of the requirements.

In addition compact solutions are available, OriMaster, a compact orifice flowmeter, and PitoMaster, a compact pitot flowmeter.

## **Level measurement**

The following functions are available for level measuring with pressure and temperature compensation:

- Level measuring with temperature compensation, on open tank
- Level measurement with pressure and temperature compensation, on closed tank, with and without diaphragm seal
- Volume measurement by means of tank shape specification
- Drum water level measurement

All of the functions, including all the data required for the compensated mass flow or for level measurement, are configured entirely using the PC-based DTM 266-MV. A simplified setting method, which uses the (optional) LCD indicator, is available for flow and level calculation. EDD-based systems such as handheld terminals are also supported.

## **266JSH / 266JST**

This intelligent transmitter provides the user with precise measurements of differential pressure, absolute pressure, and process temperature (the latter by means of an externally connected Pt100 resistance thermometer), in just one device.

## Functional specification

### Measuring range limits and span limits

#### Differential pressure sensor

| Sensor code | Upper range limit<br>(URL)                      | Lower range limit (LRL) |  | Minimum measuring span                         |  |
|-------------|---|-------------------------|--|--|--|
|             |   | Models 266CSH/CST       | Models 266JSH/JST                                  | Models 266CSH/CST                              | Models 266JSH/JST                              |
| A           | 1 kPa<br>10 mbar<br>4 inH <sub>2</sub> O        | 0                       | -1 kPa<br>-10 mbar<br>-4 inH <sub>2</sub> O        | 0.05 kPa<br>0.5 mbar<br>0.2 inH <sub>2</sub> O | 0.05 kPa<br>0.5 mbar<br>0.2 inH <sub>2</sub> O |
| C           | 6 kPa<br>60 mbar<br>24 inH <sub>2</sub> O       | 0                       | -6 kPa<br>-60 mbar<br>-24 inH <sub>2</sub> O       | 0.2 kPa<br>2 mbar<br>0.8 inH <sub>2</sub> O    | 0.2 kPa<br>2 mbar<br>0.8 inH <sub>2</sub> O    |
| F           | 40 kPa<br>400 mbar<br>160 inH <sub>2</sub> O    | 0                       | -40 kPa<br>-400 mbar<br>-160 inH <sub>2</sub> O    | 0.4 kPa<br>4 mbar<br>1.6 inH <sub>2</sub> O    | 0.4 kPa<br>4 mbar<br>1.6 inH <sub>2</sub> O    |
| L           | 250 kPa<br>2500 mbar<br>1000 inH <sub>2</sub> O | 0                       | -250 kPa<br>-2500 mbar<br>-1000 inH <sub>2</sub> O | 2.5 kPa<br>25 mbar<br>10 inH <sub>2</sub> O    | 2.5 kPa<br>25 mbar<br>10 inH <sub>2</sub> O    |
| N           | 2000 kPa<br>20 bar<br>290 psi                   | 0                       | -2000 kPa<br>-20 bar<br>-290 psi                   | 20 kPa<br>0.2 bar<br>2.9 psi                   | 20 kPa<br>0.2 bar<br>2.9 psi                   |
| R           | 10000 kPa<br>100 bar<br>1450 psi                | -                       | -10000 kPa<br>-100 bar<br>-1450 psi                | -  | 100 kPa<br>1 bar<br>14.5 psi                   |

#### Absolute pressure sensor (second sensor)

| Sensor code | Upper range limit<br>(URL)       | Lower range limit (LRL) | Minimum measuring span         |
|-------------|----------------------------------|-------------------------|--------------------------------|
| 1           | 600 kPa<br>6 bar<br>87 psi       | 0 abs                   | 6 kPa<br>0.06 bar<br>0.87 psi  |
| 2           | 2000 kPa<br>20 bar<br>290 psi    | 0 abs                   | 20 kPa<br>0.2 bar<br>2.9 psi   |
| 3           | 10000 kPa<br>100 bar<br>1450 psi | 0 abs                   | 100 kPa<br>1 bar<br>14.5 psi   |
| 4           | 41000 kPa<br>410 bar<br>5945 psi | 0 abs                   | 410 kPa<br>4.1 bar<br>59.5 psi |

# Model 266CSH/CST Multivariable

# Model 266JSH/JST Multivariable

## Span limits

Maximum measuring span = URL  
(can be adjusted up to  $\pm$  URL (TD = 0.5) within the measuring range limits for differential pressure measurements)

## IMPORTANT (NOTE)

To optimize performance characteristics, it is recommended that you select the transmitter sensor code with the lowest turn down ratio.

## Recommendation for square root function

At least 10 % of upper measuring range limit (URL)

## Zero position suppression and elevation

The zero position and span can be set to any value within the measuring range limits listed in the table if:

- set span  $\geq$  lowest span

## Temperature input

Process temperature range -200 ... 850 °C (-328 ... 1562 °F)  
with external resistance thermometer (Pt100) in four-wire circuit

## Damping

Configurable time constant between 0 and 60 s  
This is in addition to the sensor response time

## Warm-up time

Ready for operation as per specifications in less than 10 s with minimum damping

## Insulation resistance

> 100 M $\Omega$  at 500 V DC (between terminals and ground)

## Operating limits

### Pressure limits

#### Overpressure limits

The transmitter models 266CSX/JSX can operate without damage within the following overpressure limits:

| Sensors | Filling fluid         | Overpressure limits  |
|---------|-----------------------|--|
| A       | Silicone oil          | 0.5 kPa abs., 5 mbar abs., 0.07 psia and 0.6 MPa, 6 bar, 87 psi or 2 MPa, 20 bar, 290 psi depending on code variant selected <sup>1)</sup>                                   |
| A       | Fluorocarbon (Galden) | 17.5 kPa abs., 175 mbar abs., 2.5 psia and 0.6 MPa, 6 bar, 87 psi or 2 MPa, 20 bar, 290 psi depending on code variant selected <sup>1)</sup>                                 |
| C to R  | Silicone oil          | 0.5 kPa abs., 5 mbar abs., 0.07 psia and 2 MPa, 20 bar, 290 psi or 10 MPa, 100 bar, 1450 psi or 41 MPa, 410 bar, 5945 psi depending on code variant selected <sup>1)</sup>   |
| C to R  | Fluorocarbon (Galden) | 17.5 kPa abs., 175 mbar abs., 2.5 psia and 2 MPa, 20 bar, 290 psi or 10 MPa, 100 bar, 1450 psi or 41 MPa, 410 bar, 5945 psi depending on code variant selected <sup>1)</sup> |

1) 1 MPa, 10 bar, 145 psi for Kynar PVDF

### Static pressure limits

The transmitter models 266CSX/JSX can operate within the specifications with the following limits:

| Sensors | Filling fluid         | Static pressure limits   |
|---------|-----------------------|--|
| A       | Silicone oil          | 3.5 kPa abs., 35 mbar abs., 0.5 psia and 0.6 MPa, 6 bar, 87 psi or 2 MPa, 20 bar, 290 psi depending on code variant selected <sup>1)</sup>                                   |
| A       | Fluorocarbon (Galden) | 17.5 kPa abs., 175 mbar abs., 2.5 psia and 0.6 MPa, 6 bar, 87 psi or 2 MPa, 20 bar, 290 psi depending on code variant selected <sup>1)</sup>                                 |
| C to R  | Silicone oil          | 3.5 kPa abs., 35 mbar abs., 0.5 psia and 2 MPa, 20 bar, 290 psi or 10 MPa, 100 bar, 1450 psi or 41 MPa, 410 bar, 5945 psi depending on code variant selected <sup>1)</sup>   |
| C to R  | Fluorocarbon (Galden) | 17.5 kPa abs., 175 mbar abs., 2.5 psia and 2 MPa, 20 bar, 290 psi or 10 MPa, 100 bar, 1450 psi or 41 MPa, 410 bar, 5945 psi depending on code variant selected <sup>1)</sup> |

1) 1 MPa, 10 bar, 145 psi for Kynar PVDF

### Test pressure

The transmitters can withstand a pressure test with the following line pressure without leaking:

| Model        | Test pressure   |
|--------------|---|
| 266CSX / JSX | 1.5 x nominal pressure (static pressure limit) applied to both sides simultaneously <sup>1)</sup> |

1) Meets hydrostatic test requirements of ANSI/ISA-S 82.03.

# Model 266CSH/CST Multivariable

# Model 266JSH/JST Multivariable

## Temperature limits °C (°F)

### Environment

This is the operating temperature.

| All models            | Ambient temperature limits     |
|-----------------------|--------------------------------|
| Silicone oil          | -40 and 85 °C (-40 and 185 °F) |
| Fluorocarbon (Galden) | -40 and 85 °C (-40 and 185 °F) |

| All models                                     | Ambient temperature limits     |
|--|--------------------------------|
| Integrated digital display (LCD) <sup>1)</sup> | -40 and 85 °C (-40 and 185 °F) |
| Viton gasket                                   | -20 and 85 °C (-4 and 185 °F)  |
| PTFE gasket                                    | -20 and 85 °C (-4 and 185 °F)  |

1) Below -20 °C (-4 °F) and above 70 °C (158 °F), it may no longer be possible to read the digital display (LCD) clearly.

### IMPORTANT (NOTE)

For applications in potentially explosive environments, the temperature specified on the certificate / approval applies dependent upon the degree of protection sought.

## Process

| All models            | Process temperature limits                    |
|-----------------------|---|
| Silicone oil          | -40 and 121 °C (-40 and 250 °F) <sup>1)</sup> |
| Fluorocarbon (Galden) | -40 and 121 °C (-40 and 250 °F) <sup>2)</sup> |
| Viton gasket          | -20 and 121 °C (-4 and 250 °F)                |
| PTFE gasket           | -20 and 85 °C (-4 and 185 °F)                 |

1) 85 °C (185 °F) for applications under 10 kPa, 100 mbar abs., 1.45 psia up to 3.5 kPa abs., 35 mbar abs., 0.5 psia

2) 85 °C (185 °F) for applications below atmospheric pressure up to 17.5 kPa abs., 175 mbar abs., 2.5 psia

## Storage

| Models 266XRT                    | Storage temperature range      |
|----------------------------------|--------------------------------|
| Storage temperature              | -50 and 85 °C (-58 and 185 °F) |
| Integrated digital display (LCD) | -40 and 85 °C (-40 and 185 °F) |

|                   | Humidity during storage |
|-------------------|-------------------------|
| Relative humidity | Up to 75 %              |



## Environmental limits

### Electromagnetic compatibility (EMC)

Meets requirements of EN 61326

Overtoltage strength (with surge protection): 4 kV  
(in acc. with IEC 1000-4-5 EN 61000-4-5)

### Pressure Equipment Directive (PED)

Instruments with a maximum operating pressure of 41 MPa, 410 bar, 5,945 psi comply with Directive 97/23/EC category III, module H.

### Humidity

Relative humidity: Up to 100 %  
Condensation, icing: Permissible

### Vibration resistance

Acceleration up to 2 g at frequencies of up to 1,000 Hz  
(according to IEC 60068-2-6).

### Shock resistance

Acceleration: 50 g  
Duration: 11 ms  
(according to IEC 60068-2-27).

### Humid and dusty atmospheres (degree of protection)

The transmitter is dust and sand-proof and protected against immersion effects as defined by EN 60529 (1989) to IP 67 (IP 68 on request), by NEMA to 4X, or by JIS C0920.

### Hazardous atmospheres

With or without integrated digital display

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"Intrinsic Safety" type of protection:

Approval acc. to ATEX Europa (code E1) and IEC Ex (code E8)

II 1 G Ex ia IIC T6/T5/T4 and

II 1/2 G Ex ia IIC T6/T5/T4; IP67.

II 1 D Ex iaD 20 T85 °C and

II 1/2 D Ex iaD 21 T85 °C; IP67.

NEPSI China (Code EY)

Ex ia IIC T4~T6, DIP A20T<sub>A</sub>, T4~T6.

---

"Flameproof Enclosure" type of protection:

Approval acc. to ATEX Europa (code E2) and IEC Ex (code E9)

II 1/2 G Ex d IIC T6 and

II 1/2 D Ex tD A21 T85 °C (-50 °C ≤ Ta ≤ 75 °C); IP67.

NEPSI China (Code EZ)

Ex d IIC T6, DIP A21T<sub>A</sub>, T6.

---

"nL" type of protection:

ATEX Europa (code E3) and IEC Ex (code ER)

Declaration of conformity

II 3 G Ex nL IIC T6/T5/T4 and

II 3 D Ex tD A22 T85 °C; IP67.

NEPSI China (code EY) declaration of conformity

Ex nL IIC T4~T6, DIP A22T<sub>A</sub>, T6.

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FM approvals for USA (code E6) and

FM approvals for Canada (code E4):

- Explosionproof (US): Class I, Div. 1, Groups A, B, C, D
  - Explosionproof (Canada): Class I, Div. 1, Groups B, C, D
  - Dust ignitionproof : Class II, Div. 1, Groups E, F, G
  - Suitable for: Class II, Div. 2, Groups F, G; Class III, Div.1, 2
  - Nonincendive: Class I, Div. 2, Groups A, B, C, D
  - Intrinsically safe: Class I, II, III, Div. 1, Groups A, B, C, D, E, F, G  
Class I, Zone 0 AEx ia IIC T6/T4, Zone 0 (FM US)  
Class I, Zone 0 Ex ia IIC T6/T4, Zone 0 (FM Canada)
- 

ATEX combined (code EW = E1 + E2 + E3), (code E7 = E1 + E2)

ATEX combined and FM approvals (code EN = EW + E4 + E6)

---

Combined FM approvals for USA and Canada

- Intrinsic safety (code EA)
  - Flameproof enclosure (code EB)
  - Non-incendive (code EC)
- 

IEC combined (code EH = E8 + E9), (code EI = E8 + E9 + ER)

NEPSI combined (code EP = EY + EZ), (code EQ = EY + EZ + ES)

---

- GOST (Russia), GOST (Kazakhstan), Inmetro (Brazil) based on ATEX
- 

At ambient temperatures of -40 ... 85 °C (-40 ... 185 °F), the specifications relating to the temperature classes on the relevant certificates must be observed.

The temperature sensor circuit (Pt100) and the digital output (pulse / limit value output) must be connected in accordance with the requirements of the Ex certificate.

# Model 266CSH/CST Multivariable Model 266JSH/JST Multivariable

## Electrical data and options

### Power supply

The transmitter operates from 10.5 ... 42 V DC with no load and is protected against reversed polarity (additional loads enable operation above 42 V DC).

During use in Ex ia zones and in other intrinsically safe applications, the power supply must not exceed 30 V DC. Minimum operating voltage with "surge protection" option: 12.3 V DC

### Ripple

Max. 20 mV over a 250 Ω load as per HART specifications.

### Load limitations

Total measurement circuit resistance at 4 ... 20 mA and HART:

$$R \text{ (k}\Omega\text{)} = \frac{\text{Voltage supply} - \text{Minimum operating voltage (V DC)}}{22 \text{ mA}}$$

A minimum resistance of 250 Ω is required for HART communication.

### Displays (optional)

#### Integrated LCD display (code L1)

Widescreen LCD display, 128 x 64 pixels, 52.5 x 27.2 mm (2.06 x 1.07 in.) dot matrix. Multilanguage. Four keys for device configuration and management. Easy setup for quick commissioning. Customized visualizations which the user can select. Totalized and actual value flow indication. The LCD display can also be used to show static pressure, sensor temperature, and diagnostics messages, as well as make configuration settings.

#### Integrated LCD display with TTG operation (code L5)

As with the integrated LCD display above, but featuring an innovative TTG (through-the-glass) keypad which can be used to activate the device's configuration and management menus without having to remove the transmitter housing cover. The TTG keys are protected against accidental activation.



M10142

Fig. 2: Integrated LCD display with TTG operation

#### Surge protection (optional)

Up to 4 kV

- Voltage: 1.2 μs rise time / 50 μs delay time at half value
- Current: 8 μs rise time / 20 μs delay time at half value

#### Output signal

Two-wire output, 266CXX:

4 ... 20 mA related to mass / standard volume flow or fill level, full compensation of all pressure (P) and temperature (T) effects

Two-wire output, 266JXX:

4 ... 20 mA related to differential pressure, pressure, or temperature

HART communication provides the digital process variables of differential pressure, absolute pressure, and process temperature, which are superimposed on the 4 ... 20 mA signal (protocol according to Bell 202 FSK standard).

### Digital output (pulse / limit output)

This digital output can be set as a pulse or limit output (transistor output) by making parameter changes using the software.

NPN transistor with open-collector output

|                            |                                |
|----------------------------|--------------------------------|
| Contact switching capacity | 10 ... 30 V, maximum 120 mA DC |
| Low-level output voltage   | 0 ... 2 V                      |
| High-level output voltage  | Maximum 30 V                   |
| Quiescent current          | 500 $\mu$ A                    |

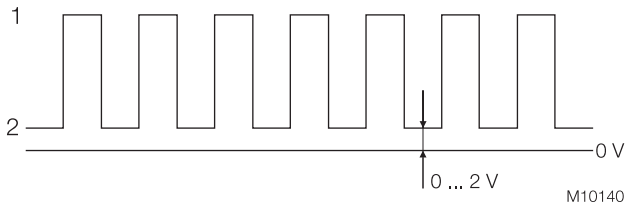


Fig. 3: High and low level (pulse output)  
1 High level | 2 Low level

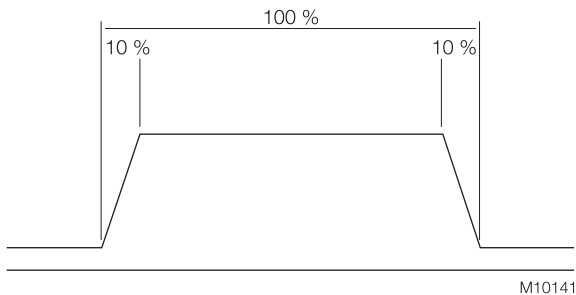


Fig. 4: Edge steepness

### Pulse output

The scaled, electrically isolated pulse output can be used for flow measurement by means of an external totalizer.

|  |                                      |
|--|--------------------------------------|
| Pulse output frequency with 100 % output | Maximum 10 kHz                       |
| Duty cycle                               | 50 % $\pm$ 10 % @ 0.1 Hz to 10 kHz   |
| Minimum pulse width                      | 50 $\mu$ s at 10 kHz, duty cycle 1:1 |

### Binary output

The output is set to a static high or low signal when configured thresholds are exceeded.

### Output function, model 266CXX

The 4 ... 20 mA output signal is not linear; instead, it corresponds to the compensated flow or level.

### Output function, model 266JXX

The 4 ... 20 mA output signal corresponds to the differential pressure, pressure, or temperature, depending on the configuration.

### Output current limits (according to NAMUR standard)

Overload condition

- Lower limit: 3.8 mA (configurable from 3.8 ... 4 mA)
- Upper limit: 20.5 mA (configurable from 20 ... 21 mA)

### Alarm current

- Minimum alarm current: 3.6 mA (configurable from 3.6 ... 4 mA)
- Maximum alarm current: 21 mA (configurable from 20 ... 22 mA)

Default setting: High alarm current (max. alarm current)

### Process diagnostics (PILD)

Plugged impulse line detection (PILD) generates a warning via HART communication. The device can also be configured to drive the analog output signal to the "alarm current".

# Model 266CSH/CST Multivariable Model 266JSH/JST Multivariable

## Measuring accuracy

Stated at reference condition to IEC 60770 ambient temperature of 20 °C (68 °F), relative humidity of 65 %, atmospheric pressure of 1013 hPa (1013 mbar), mounting position with vertical diaphragm and zero based range for transmitter with isolating diaphragms in AISI 316 L ss or Hastelloy and silicone oil fill and HART digital trim values equal to 4 and to 20 mA span end points.

Unless otherwise specified, errors are quoted as % of span. Some performance referring to the Upper Range Limit are affected by the actual turndown (TD) as ratio between Upper Range Limit (URL) and calibrated span.

IT IS RECOMMENDED TO SELECT THE TRANSMITTER SENSOR CODE PROVIDING THE TURNDOWN VALUE AS LOWEST AS POSSIBLE TO OPTIMIZE PERFORMANCE CHARACTERISTICS.

## Dynamic response (according to IEC 61298-1)

| Sensors                               | Time constant<br>(63.2 % of total step response) |
|---------------------------------------|--|
| Sensors F to R                        | 150 ms   |
| Sensor C                              | 400 ms   |
| Sensor A                              | 1,000 ms   |
| 266CXX: Reaction time for all sensors | 70 ms  |
| 266JXX: Reaction time for all sensors | 40 ms  |

Response time (total) = reaction time + time constant

## Measuring error

% of calibrated span, consisting of terminal-based non-linearity, hysteresis, and non-repeatability.

| Model  | DP sensor            | For TD range       | Measuring error                 |
|--------|----------------------|--------------------|---------------------------------|
| 266CSH | A to R <sup>1)</sup> | From 1:1 to 10:1   | ± 0.075 %                       |
| 266JSH | A                    | From 10:1 to 20:1  | ± (0.075 + 0.005 x TD - 0.05) % |
|        | C                    | From 10:1 to 30:1  | ± (0.075 + 0.005 x TD - 0.05) % |
|        | F to R <sup>1)</sup> | From 10:1 to 100:1 | ± (0.075 + 0.005 x TD - 0.05) % |
| 266CST | A to R <sup>1)</sup> | From 1:1 to 10:1   | ± 0.04 %                        |
| 266JST | A                    | From 10:1 to 20:1  | ± (0.04 + 0.005 x TD - 0.05) %  |
|        | C                    | From 10:1 to 30:1  | ± (0.04 + 0.005 x TD - 0.05) %  |
|        | F to R <sup>1)</sup> | From 10:1 to 100:1 | ± (0.04 + 0.005 x TD - 0.05) %  |

1) Sensor R not with model 266CSH/CST

## Recommendation for square root function

At least 10 % of upper measuring range limit (URL)

| Model            | Pabs sensor (second sensor) | Measuring error |
|------------------|-----------------------------|-----------------|
| 266CXX<br>266JXX | 1 to 4                      | ± 0.1 %         |

| Model            | Process temperature measurement<br>(Pt100) in acc. with IEC 60751 | Measuring error -<br>Transmitter<br>component |
|------------------|---|---|
| 266CXX<br>266JXX | -200 ... 850 °C (-328 ... 1,562 °F)                               | ± 0.3 K (0.54 °F)                             |

266CXX: The accuracy of the mass or standard volume flow is not affected by the accuracy of the dp, p, and T measurement alone; rather, it also depends upon the primary device used (flow coefficient), the pressure and temperature range to be compensated, as well as other parameters.

In typical applications, the flow measurement accuracy (without the primary device accuracy) is ± 0.7 ... 0.9 % of the mass flow.

### Ambient temperature

Per 20 K change within the limits of -40 to 85 °C  
(per 36 °F change within the limits of  
-40 to 185 °F):

| Model  | Sensor               | For TD range |   |
|--------|----------------------|--------------|---|
| 266CSH | A                    | 10:1         | ± (0.08 % URL + 0.06 % measuring span)  |
| 266JSH | C to R <sup>1)</sup> | 10:1         | ± (0.04 % URL + 0.06 % measuring span)  |
| 266CST | A                    | 10:1         | ± (0,06 % URL + 0,045 % measuring span) |
| 266JST | C to R <sup>1)</sup> | 10:1         | ± (0.03 % URL + 0.045 % measuring span) |

1) Sensor R not with model 266CSH/CST

for an ambient temperature change from  
-10 °C to 60 °C (14 to 140 °F):

| Model  | Sensor               | For TD range |   |
|--------|----------------------|--------------|---|
| 266CSH | A                    | 10:1         | ± (0.16 % URL + 0.065 % measuring span) |
| 266JSH | C to R <sup>1)</sup> | 10:1         | ± (0.08 % URL + 0.065 % measuring span) |
| 266CST | A                    | 10:1         | ± (0.12 % URL + 0.05 % measuring span)  |
| 266JST | C to R <sup>1)</sup> | 10:1         | ± (0.06 % URL + 0.05 % measuring span)  |

1) Sensor R not with model 266CSH/CST

Per 10 K change within the limits of -40 to -10 °C or  
60 to 85 °C  
(per 18 °F change within the limits of -40 to 14 °F or  
140° to 185 °F):

| Model  | Sensor               | For TD range |   |
|--------|----------------------|--------------|---|
| 266CSH | A                    | 10:1         | ± (0.066 % URL + 0.04 % measuring span) |
| 266JSH | C to R <sup>1)</sup> | 10:1         | ± (0.033 % URL + 0.04 % measuring span) |
| 266CST | A                    | 10:1         | ± (0.05 % URL + 0.03 % measuring span)  |
| 266JST | C to R <sup>1)</sup> | 10:1         | ± (0.025 % URL + 0.03 % measuring span) |

1) Sensor R not with model 266CSH/CST

### Absolute pressure sensor

± (0.08 % URL + 0.08 % measuring span):  
Limited to ± (0.1 % URL + 0.1 % measuring span) for the  
entire temperature range of 125 K within the limits  
of -40 ... 85 °C (-40 to 185 °F).

### Static pressure

(zero signal errors may be calibrated out at operating  
pressure)

| Measuring range   | Sensor A                                   | Sensors C, F, L, N                               | Sensor R  |
|-------------------|--|--|---|
| Zero signal error | Up to 2 bar:<br>0.05 % URL                 | Up to 100 bar:<br>0.05 % URL                     | Up to 100 bar:<br>0.1 % URL                     |
|                   | > 2 bar: 0.05 %<br>URL/bar                 | > 100 bar: 0.05 %<br>URL/100 bar                 | > 100 bar: 0.1 %<br>URL/100 bar                 |
| Span error        | Up to 2 bar:<br>0.05 %<br>measuring span   | Up to 100 bar:<br>0.05 % measuring<br>span       | Up to 100 bar:<br>0.1 % measuring<br>span       |
|                   | > 2 bar: 0.05 %<br>measuring span /<br>bar | > 100 bar: 0.05 %<br>measuring span /<br>100 bar | > 100 bar: 0.1 %<br>measuring span /<br>100 bar |

### Power supply

Within the specified limits for the voltage / load, the total  
influence is less than 0.005 % of the upper measuring range  
limit per volt.

# Model 266CSH/CST Multivariable

# Model 266JSH/JST Multivariable

## Load

Within the specified load / voltage limits, the total influence is negligible.

## Electromagnetic field

Meets all requirements of EN 61326

## Common-mode interference

No influence from 100 V rms @ 50 Hz, or 50 V DC

## Mounting position

No effect for rotation on diaphragm plane. A tilt up to 90° from vertical causes a zero shifts up to 0.35 kPa, 3.5 mbar or 1.4 inH<sub>2</sub>O, which can be corrected with zero adjustment. No span effect.

## Long-term stability

Sensors C to R:

± 0.15 % of URL over a period of 10 years

(± 0.05 % URL/year)

Sensor A:

± 0.3 % of URL over a period of 10 years (± 0.2 % URL/year)

## Total performance

Only for differential pressure measurement; similar to DIN 16086.

Within an ambient temperature change range of -10 to 60 °C (14 to 140 °F),

up to 10 MPa, 100 bar, 1,450 psi static pressure

| Model          | Sensor | For TD range | Total performance (DP)      |
|----------------|--------|--------------|-----------------------------|
| 266CSH, 266JSH | C to N | 1:1          | ± 0.17 % of calibrated span |
| 266CST, 266JST | C to N | 1:1          | ± 0.14 % of calibrated span |

The total performance includes the measuring error (non-linearity including hysteresis and non-repeatability), the thermal change in the ambient temperature as regards the zero signal and measuring span, as well as the effect of the static pressure on the zero signal and measuring span.

$$E_{\text{perf}} = \sqrt{(E_{\Delta\text{TZ}} + E_{\Delta\text{TS}})^2 + E_{\Delta\text{PZ}}^2 + E_{\Delta\text{PS}}^2 + E_{\text{lin}}^2}$$

$E_{\text{perf}}$  = Total performance

$E_{\Delta\text{TZ}}$  = Effect of the ambient temperature on the zero signal

$E_{\Delta\text{TS}}$  = Effect of the ambient temperature on the measuring span

$E_{\Delta\text{PZ}}$  = Effect of the static pressure on the zero signal

$E_{\Delta\text{PS}}$  = Effect of the static pressure on the measuring span

$E_{\text{lin}}$  = Measuring error

## Technical specification

(Please refer to the order information to check the availability of different versions of the relevant model)

### Materials

#### Process separation diaphragms<sup>1)</sup>

Stainless steel 1.4435 (AISI 316L);  
Hastelloy C276;  
Monel 400; Monel 400, gold-plated; tantalum

#### Process flanges, adapters, screw plugs, and vent / drain valves<sup>1)</sup>

Stainless steel 1.4404 / 1.4408 (AISI 316L);  
Hastelloy C276; Monel 400; Kynar (flange made from stainless steel AISI 316L with PVDF insert)

#### Sensor filling fluid

Silicone oil, fluorocarbon (Galden)

#### Mounting bracket<sup>2)</sup>

Galvanized C steel with chromium passivation;  
stainless steel AISI 316, AISI 316 L

#### Gaskets<sup>1)</sup>

Viton (FPM); Buna (NBR); EPDM; PTFE or FEP-coated Viton (only for PVDF Kynar process connection); graphite

#### Sensor housing

Stainless steel 1.4404 (AISI 316L)

#### Screws and nuts

Screws and nuts made from stainless steel AISI 316, class A4-70 as per UNI 7323 (ISO 3506) in compliance with NACE MR0175 Class II

#### Electronics housing and cover

Aluminum alloy (copper content  $\leq 0.3$  %) with baked epoxy finish (color: RAL 9002); stainless steel AISI 316L.

#### O-ring cover

Buna N (Perbunan)

1) Transmitter parts that come into contact with fluid

2) U-bolt material: stainless steel AISI 400;  
screw material: high-strength alloy steel or stainless steel AISI 316

### Local zero position, measuring span, and write protection settings

Fiber glass-reinforced polyphenylene oxide (removable)

### Plates

Stainless steel AISI 316 for transmitter name plate, certification plate, optional measuring point tag plate / settings plate attached to electronics housing, and optional tag plate with customer data. All plates laser-labeled.

### Calibration

Standard:

- 0 to measuring range upper limit, for ambient temperature and atmospheric pressure

Optional:

- To specified measuring span

### Optional extras

#### Mounting bracket

For vertical and horizontal 60 mm (2 in.) pipes or wall mounting

#### LCD display

Can be rotated in 90° increments into 4 positions

#### Additional tag plates

Code I2: For measuring point tag (up to 30 characters) and calibration specifications (up to 30 characters: lower and upper value plus unit), attached to transmitter housing.  
Code I1: For customer data (4 lines with 30 characters each), attached to transmitter housing with wire.

#### Surge protector

#### Cleaning stage for oxygen applications (O2)

#### Certificates (test, design, characteristics, material traceability )

#### Name plate and operating instruction language

# Model 266CSH/CST Multivariable

# Model 266JSH/JST Multivariable

## Process connections

Flanges: 1/4-18 NPT on the process axis

Adapters: 1/2-14 NPT on the process axis

Center distance:

54 mm (2.13 in.) between flanges; 51 mm, 54 mm, or 57 mm (2.01 in., 2.13 in., or 2.24 in.) between adapters

Fastening screw threads:

7/16–20 UNF with 41.3 mm center distance

or with process flange code C:

M10 with operating pressures of up to 10 MPa, 100 bar, 1450 psi

M12 with higher operating pressures of up to 41 MPa, 410 bar, 5945 psi

## Electrical connections

Two 1/2-14 NPT or M20 x 1.5 threaded bores for cable glands, directly on housing.

## Terminals

Three connections for signal / external display, four connections for a Pt100 resistance thermometer with 4-wire technology, and two connections for the digital output (pulse / alarm output). For wire cross sections of up to 2.5 mm<sup>2</sup> (14 AWG) and connection points for testing and communication purposes.

## Grounding

Internal and external ground terminals are provided for 6 mm<sup>2</sup> (10 AWG) wire cross sections.

## Mounting position

The transmitters can be installed in any position.

The electronic housing can be rotated into any position. A stop is provided to prevent overturning.

## Weight

(without options)

Approximately 3.8 kg (8.4 lb); add 1.5 kg (3.3 lb) for housings made from stainless steel.

Add 650 g (1.5 lb) for packaging

## Packaging

Carton with dimensions of approx.

28 x 23 x 24 cm (11 x 9 x 9 in.)



## Configuration

### Standard configuration

Transmitters are calibrated at the factory to the customer's specified measuring range. The calibrated range and measuring point number are specified on a tag plate. If this data has not been specified, the transmitter will be delivered with the plate left blank and the following configuration:

|                                  |  |
|----------------------------------|--|
| Physical unit                    | kPa  |
| 4 mA                             | Zero   |
| 20 mA                            | Upper range limit (URL)                          |
| Output                           | 266CXX: Square root<br>266JXX: Linear            |
| Damping                          | 1 s  |
| Transmitter                      |  |
| Failure mode                     | High alarm                                       |
| Software tag (max. 8 characters) | Blank  |
| Optional LCD display             | PV in kPa; output in percent as bargraph display |

Any or all of the configurable parameters listed above - including the lower and upper range values (with the same unit of measurement) - can easily be changed using a portable HART handheld communicator or a PC running the configuration software with the DTM for 266 models. Specifications concerning the flange type and materials, O-ring and vent / drain valve materials, and additional device options are stored in the transmitter database.

### Customer-specific configuration (optional)

The following information can be specified in addition to the standard configuration parameters:

|                           |                            |
|---------------------------|----------------------------|
| Description               | 16 alphanumeric characters |
| Supplementary information | 32 alphanumeric characters |
| Date                      | Day, month, year           |

# Model 266CSH/CST Multivariable Model 266JSH/JST Multivariable

## Mounting dimensions

(not design data) - dimensions in mm (inch)

Transmitter with barrel housing - Horizontal flanges

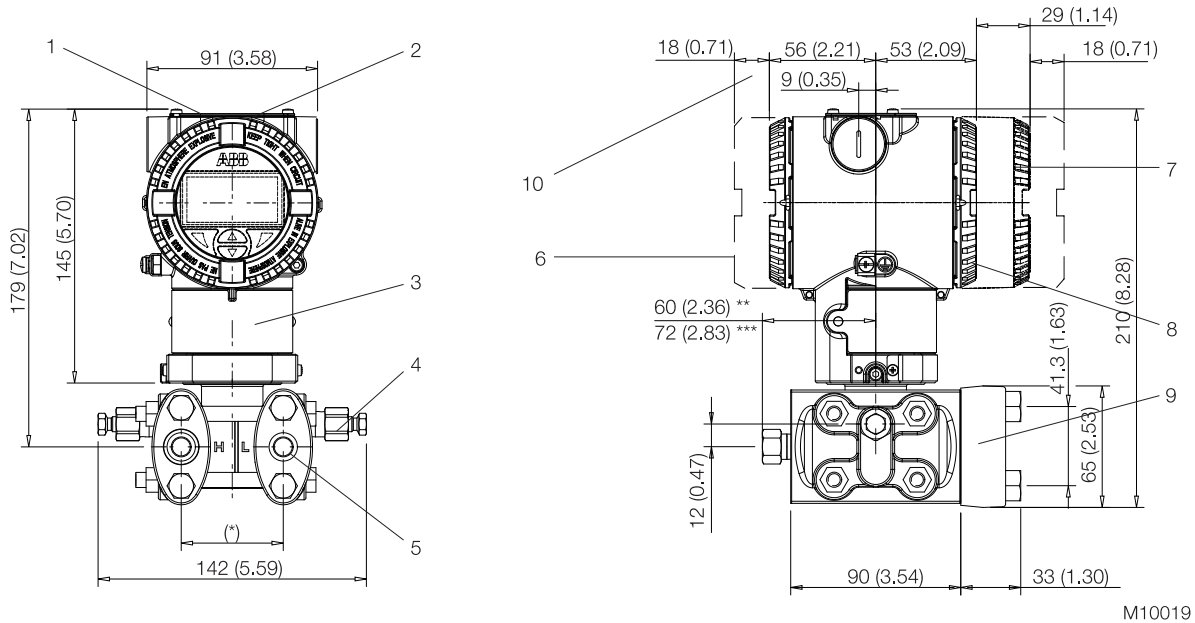


Fig. 5: Barrel housing - Horizontal flanges

1 Settings | 2 Name plate | 3 Certification plate | 4 Vent / drain valve | 5 Process connection |  
6 Terminal side | 7 LCD display housing cover | 8 Electronics side | 9 Process flange adapter | 10 Space for removing the cover

\* 54 (2.13) mm (in.) via 1/4 - 18 NPT process flanges

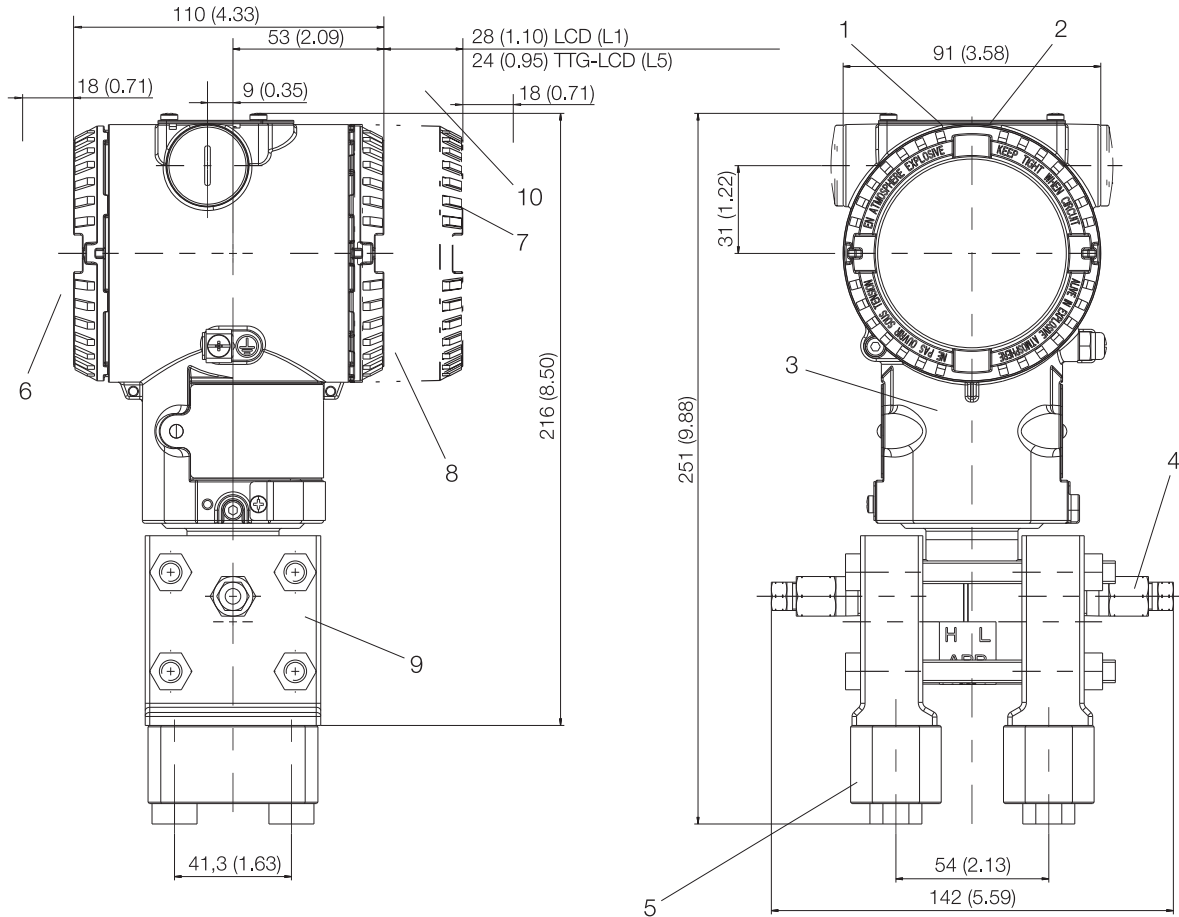
51 (2.01), 54 (2.13), or 57 (2.24) mm (in) via 1/2 - 14 NPT adapter flanges.

Note: Process connection and gasket groove comply with IEC 61518. Thread for attaching adapter flanges or other components (e.g., manifold) to process flange: 7/16 -20 UNF.

\*\* With screw plug

\*\*\* With vent/ drain valve

**Transmitter with barrel housing - Vertical flanges**



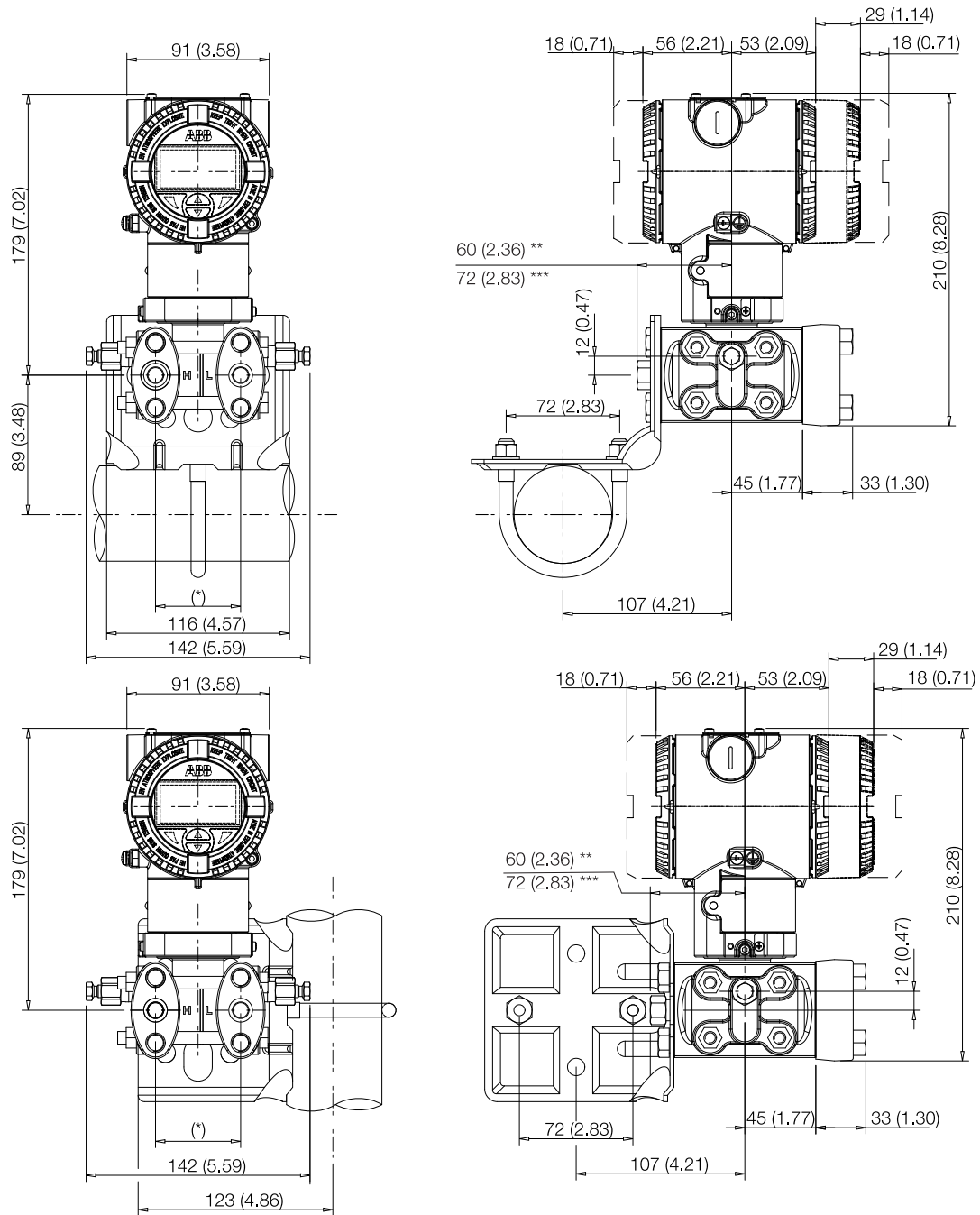
M10139

**Fig. 6: Barrel housing - Vertical flanges**

- 1 Settings | 2 Name plate | 3 Certification plate | 4 Vent / drain valve | 5 Process connection |  
 6 Terminal side | 7 LCD display housing cover | 8 Electronics side | 9 Process flange adapter | 10 Space for removing the cover

# Model 266CSH/CST Multivariable Model 266JSH/JST Multivariable

Transmitter with mounting bracket, for vertical or horizontal mounting on 60 mm (2 in.) pipe



M10020

Fig. 7: Pipe mounting - Barrel housing

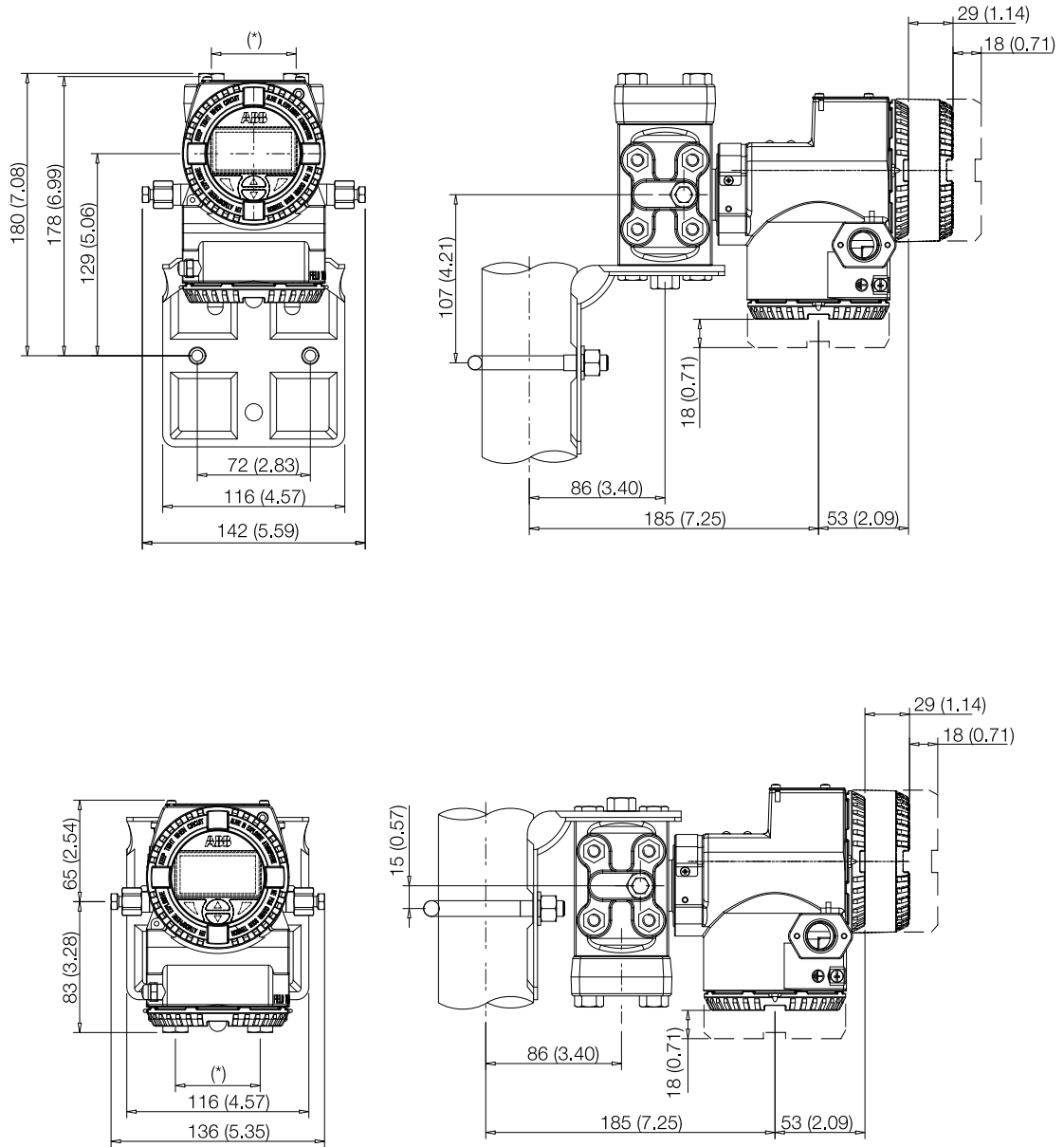
\* 54 (2.13) mm (in.) via 1/4 - 18 NPT process flanges  
51 (2.01), 54 (2.13), or 57 (2.24) mm (in) via 1/2 - 14 NPT adapter flanges.

Note: Process connection and gasket groove comply with IEC 61518. Thread for attaching adapter flanges or other components (e.g., manifold) to process flange: 7/16 -20 UNF.

\*\* With screw plug

\*\*\* With vent / drain valve

**Transmitter with DIN aluminum housing - horizontal flanges with mounting bracket for vertical or horizontal mounting on 60 mm (2 in.) pipe**



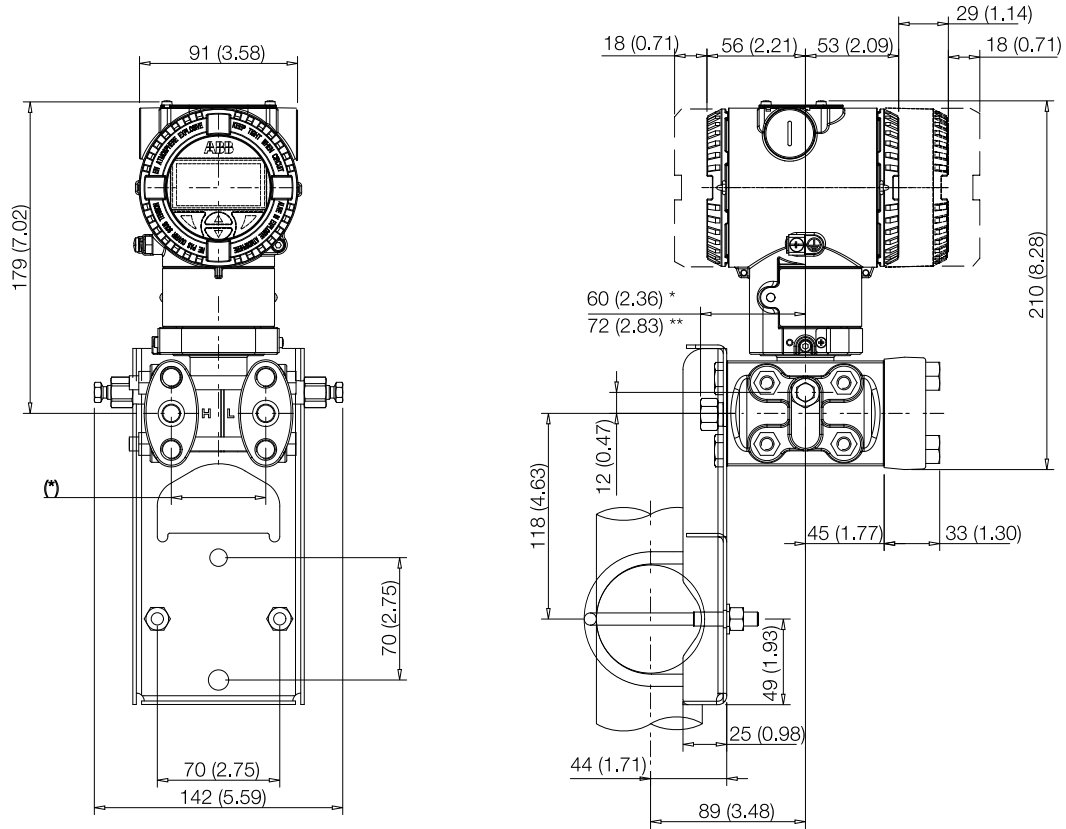
M10021

**Fig. 8: Pipe mounting - DIN housing**

- \* 54 (2.13) mm (in.) via 1/4 - 18 NPT process flanges
  - 51 (2.01), 54 (2.13), or 57 (2.24) mm (in) via 1/2 - 14 NPT adapter flanges.
- Note: Process connection and gasket groove comply with IEC 61518. Thread for attaching adapter flanges or other components (e.g., manifold) to process flange: 7/16 -20 UNF.

# Model 266CSH/CST Multivariable Model 266JSH/JST Multivariable

Transmitter with flat bracket, for vertical or horizontal mounting on 60 mm (2 in.) pipe

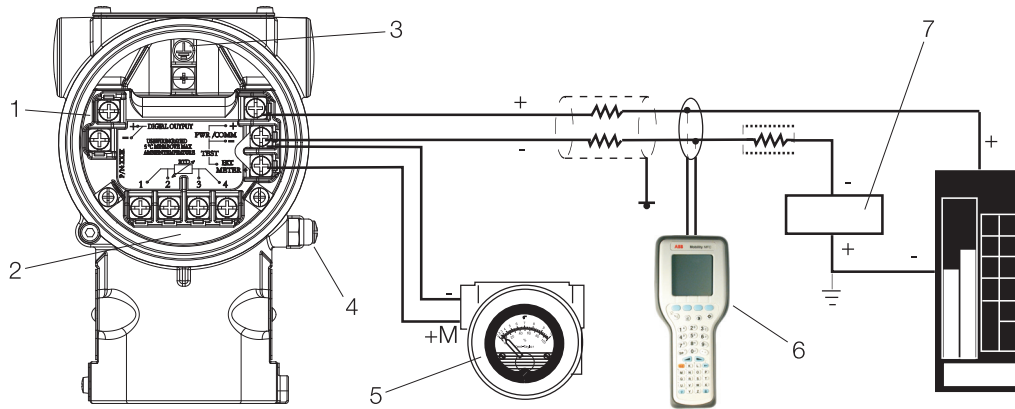


M10022

Fig. 9: Flat bracket for pipe mounting - Barrel housing

- \* With screw plug
- \*\* With vent / drain valve

## Electrical connections



M10137

**Fig. 10: Electrical connections**

**1 Digital output | 2 Connection for Pt100 resistance thermometer | 3 Internal ground connection | 4 External ground connection | 5 Remote display | 6 Handheld communicator | 7 Power supply**

The HART handheld terminal can be connected to any wiring termination point in the loop, provided there is a minimum resistance of  $250\ \Omega$  between the handheld terminal and transmitter supply. If this is less than  $250\ \Omega$ , additional resistance needs to be incorporated in order to enable communication.

# Model 266CSH/CST Multivariable

# Model 266JSH/JST Multivariable

## Ordering information

### Basic ordering information model 266CSH Multivariable transmitter for mass flow and level,

Select one character or set of characters from each category and specify complete catalog number.

Refer to additional ordering information and specify one or more codes for each transmitter if additional options are required.

| Base model – 1 <sup>st</sup> to 6 <sup>th</sup> characters                             |   |                                   |                                       | 266CSH | X      | X | X | X | X | X | X                          |
|--|---|-----------------------------------|---------------------------------------|--------|--------|---|---|---|---|---|----------------------------|
| Multivariable transmitter for mass flow and level, base accuracy 0.075 %               |   |                                   |                                       |        |        |   |   |   |   |   |                            |
| <b>Sensor Span Limits</b> – 7 <sup>th</sup> character                                  |   |                                   |                                       |        |        |   |   |   |   |   | continued<br>see next page |
| 0.05 and 1 kPa   | (0.5 and 10 mbar  | 0.2 and 4 in. H <sub>2</sub> O)   | (Note: 1)                             |        | A      |   |   |   |   |   |                            |
| 0.2 and 6 kPa  | (2 and 60 mbar  | 0.8 and 24 in. H <sub>2</sub> O)  |                                       |        | C      |   |   |   |   |   |                            |
| 0.4 and 40 kPa   | (4 and 400 mbar   | 1.6 and 160 in. H <sub>2</sub> O) |                                       |        | F      |   |   |   |   |   |                            |
| 2.5 and 250 kPa  | (25 and 2500 mbar   | 10 and 1000 in. H <sub>2</sub> O) |                                       |        | L      |   |   |   |   |   |                            |
| 20 and 2000 kPa  | (0.2 and 20 bar   | 2.9 and 290 psi)                  |                                       |        | N      |   |   |   |   |   |                            |
| <b>Maximum Working Pressure</b> – 8 <sup>th</sup> character                            |   |                                   |                                       |        |        |   |   |   |   |   |                            |
| 0 and 0.6 MPa  | 0 and 6 bar   | 0 and 87 psi                      | (only with Sensor Span Limits code A) |        |        |   |   |   | 1 |   |                            |
| 0 and 2 MPa  | 0 and 20 bar  | 0 and 290 psi                     |                                       |        |        |   |   |   | 2 |   |                            |
| 0 and 10 MPa   | 0 and 100 bar   | 0 and 1450 psi                    | (not with Sensor Span Limits code A)  |        |        |   |   |   | 3 |   |                            |
| 0 and 41 MPa   | 0 and 410 bar   | 0 and 5945 psi                    | (not with Sensor Span Limits code A)  |        |        |   |   |   | 4 |   |                            |
| <b>Diaphragm Material / Fill Fluid</b> – 9 <sup>th</sup> character                     |   |                                   |                                       |        |        |   |   |   |   |   |                            |
| AISI 316L SST (1.4435) / Silicone oil  |   | (NACE)                            |                                       |        |        |   |   |   |   | S |                            |
| Hastelloy C-276 / Silicone oil   |   | (NACE)                            |                                       |        |        |   |   |   |   | K |                            |
| Monel 400 / Silicone oil   |   | (NACE)                            |                                       |        |        |   |   |   |   | M |                            |
| Monel 400 gold-plated / Silicone oil   |   | (NACE)                            |                                       |        |        |   |   |   |   | V |                            |
| Tantalum / Silicone oil  |   | (NACE)                            |                                       |        |        |   |   |   |   | T |                            |
| AISI 316L SST (1.4435) / Inert fluid - Galden (Suitable for oxygen applications)       |   | (NACE)                            | (Note 2)                              |        |        |   |   |   |   | A |                            |
| Hastelloy C-276 / Inert fluid - Galden (Suitable for oxygen applications)              |   | (NACE)                            | (Note 2)                              |        |        |   |   |   |   | F |                            |
| Monel 400 / Inert fluid - Galden (Suitable for oxygen applications)                    |   | (NACE)                            | (Note 2)                              |        |        |   |   |   |   | C |                            |
| Monel 400 gold-plated / Inert fluid - Galden (Suitable for oxygen applications)        |   | (NACE)                            | (Note 2)                              |        |        |   |   |   |   | Y |                            |
| Tantalum / Inert fluid - Galden (Suitable for oxygen applications)                     |   | (NACE)                            | (Note 2)                              |        |        |   |   |   |   | D |                            |
| <b>Process Flanges and Adapters Material / Connection</b> – 10 <sup>th</sup> character |   |                                   |                                       |        |        |   |   |   |   |   |                            |
| AISI 316L SST (1.4404 / 1.4408)  | 1/4-18 NPT female direct                                  | (horizontal connection)           |                                       |        | (NACE) |   |   |   |   |   | A                          |
| AISI 316L SST (1.4404 / 1.4408)  | 1/2-14 NPT female through adapter                         | (horizontal connection)           |                                       |        | (NACE) |   |   |   |   |   | B                          |
| AISI 316L SST (1.4404 / 1.4408)  | 1/4-18 NPT female direct (DIN 19213)                      | (horizontal connection)           |                                       |        | (NACE) |   |   |   |   |   | C                          |
| Hastelloy C-276  | 1/4-18 NPT female direct                                  | (horizontal connection)           |                                       |        | (NACE) |   |   |   |   |   | D                          |
| Hastelloy C-276  | 1/2-14 NPT female through adapter                         | (horizontal connection)           |                                       |        | (NACE) |   |   |   |   |   | E                          |
| Monel 400  | 1/4-18 NPT female direct                                  | (horizontal connection)           |                                       |        | (NACE) |   |   |   |   |   | G                          |
| Monel 400  | 1/2-14 NPT female through adapter                         | (horizontal connection)           |                                       |        | (NACE) |   |   |   |   |   | H                          |
| Kynar (PVDF)   | 1/4-18 NPT female direct (MWP = 1 MPa / 10 bar / 145 psi) | (insert on side of flange)        |                                       |        |        |   |   |   |   |   | P                          |
| AISI 316L SST (1.4404 / 1.4408)  | 1/4-18 NPT female direct                                  | (vertical connection)             |                                       |        | (NACE) |   |   |   |   |   | Q                          |



| Basic ordering information model 266CSH Multivariable transmitter                              |            |   | X | X | X |
|--|------------|---|---|---|---|
| <b>Bolts Material / Gaskets Material</b> – 11 <sup>th</sup> character                          |            |   |   |   |   |
| AISI 316L SST (NACE - non exposed) / Viton (Suitable for oxygen applications)                  | (Note 2)   |   | 3 |   |   |
| AISI 316L SST (NACE - non exposed) / PTFE (Max. 25 MPa / 250 bar / 3625 psi)                   |            |   | 4 |   |   |
| AISI 316L SST (NACE - non exposed) / EPDM  |            |   | 5 |   |   |
| AISI 316L SST (NACE - non exposed) / Perbunan  |            |   | 6 |   |   |
| AISI 316L SST (NACE - non exposed) / Graphite  |            |   | 7 |   |   |
| AISI 316L SST (NACE - non exposed) / FEP (only available with Kynar [PVDF] process connection) |            |   | T |   |   |
| <b>Housing Material / Electrical Connection</b> – 12 <sup>th</sup> character                   |            |   |   |   |   |
| Aluminium alloy (Barrel type)  | 1/2-14 NPT |   |   | A |   |
| Aluminium alloy (Barrel type)  | M20 x 1.5  |   |   | B |   |
| AISI 316L SST (Barrel type)  | 1/2-14 NPT |   |   | S |   |
| AISI 316L SST (Barrel type)  | M20 x 1.5  |   |   | T |   |
| Aluminium alloy (DIN type)   | M20 x 1.5  |   |   | J |   |
| <b>Output</b> – 13 <sup>th</sup> character   |            |   |   |   |   |
| HART digital communication and 4 ... 20 mA   |            | (No additional options)                           |   |   | H |
| HART digital communication and 4 ... 20 mA   |            | (Options requested by "Additional ordering code") |   |   | 1 |

# Model 266CSH/CST Multivariable

# Model 266JSH/JST Multivariable

## Additional ordering information for model 266CSH

Add one or more 2-digit code(s) after the basic ordering information to select all required options.

|   | XX | XX |
|---|----|----|
| <b>Vent and Drain Valve Material / Position</b>   |    |    |
| AISI 316L SST (1.4404) On process axis (NACE)   | V1 |    |
| AISI 316L SST (1.4404) On flanges side top (NACE)   | V2 |    |
| AISI 316L SST (1.4404) On flanges side bottom (NACE)  | V3 |    |
| Hastelloy C-276 On process axis (NACE)  | V4 |    |
| Hastelloy C-276 On flanges side top (NACE)  | V5 |    |
| Hastelloy C-276 On flanges side bottom (NACE)   | V6 |    |
| Monel 400 On process axis (NACE)  | V7 |    |
| Monel 400 On flanges side top (NACE)  | V8 |    |
| Monel 400 On flanges side bottom (NACE)   | V9 |    |
| <b>Explosion Protection Certification</b>   |    |    |
| ATEX Group II Category 1 GD - Intrinsic Safety Ex ia  |    | E1 |
| ATEX Group II Category 1/2 GD - Flameproof Ex d (Note: 3)   |    | E2 |
| ATEX Group II Category 3 GD - Type of protection "N" Ex nL design compliance  |    | E3 |
| FM approval (Canada, CSA) Class I, II, Div. 1, 2, Group A to F (XP, IS, NI)<br>(only available with 1/2-14 NPT or M20 electrical connections) (Note: 3) |    | E4 |
| FM approval (USA) Class I, II, Div. 1, 2, Group A to F (XP, IS, NI)<br>(only available with 1/2-14 NPT or M20 electrical connections) (Note: 3)         |    | E6 |
| Combined ATEX Ex ia and Ex d (Note: 3)  |    | E7 |
| Combined ATEX - Intrinsic Safety, Flameproof and Type "N" (Note: 3)   |    | EW |
| FM approvals (USA and Canada) Intrinsic Safety  |    | EA |
| FM approvals (USA and Canada) Explosion-proof (Note: 3)   |    | EB |
| FM approvals (USA and Canada) Non-incendive   |    | EC |
| Combined ATEX, FM and CSA (only available with 1/2-14 NPT or M20 electrical connections) (Note: 3)  |    | EN |
| IEC Approval Group II Category 1 GD - Intrinsic Safety Ex ia  |    | E8 |
| IEC Approval Group II Category 1/2 GD - Flameproof Ex d (Note: 3)   |    | E9 |
| IEC Approval Group II Category 3 GD - Type of protection "N" Ex nL design compliance  |    | ER |
| Combined IEC Approval Ex ia and Ex d (Note: 3)  |    | EH |
| Combined IEC Approval Ex ia, Ex d and Ex nL (Note: 3)   |    | EI |
| NEPSI IIC Ex ia   |    | EY |
| NEPSI IIC Ex d (Note: 3)  |    | EZ |
| NEPSI IIC Ex nL   |    | ES |
| Combined NEPSI Ex ia and Ex d (Note: 3)   |    | EP |
| Combined NEPSI Ex ia, Ex d and Ex nL (Note: 3)  |    | EQ |

| Additional ordering information for model 266CSH                          | XX | XX | XX | XX | XX | XX | XX |
|---|----|----|----|----|----|----|----|
| <b>Integral LCD</b>   |    |    |    |    |    |    |    |
| With integral LCD display   | L1 |    |    |    |    |    |    |
| TTG (Through The Glass) integral digital LCD display                      | L5 |    |    |    |    |    |    |
| <b>Mounting Bracket Shape / Material</b>                                  |    |    |    |    |    |    |    |
| For pipe mounting / Carbon steel (not suitable for AISI housing)          | B1 |    |    |    |    |    |    |
| For pipe mounting / AISI 316 SST (1.4401) (not suitable for AISI housing) | B2 |    |    |    |    |    |    |
| For wall mounting / Carbon steel (not suitable for AISI housing)          | B3 |    |    |    |    |    |    |
| For wall mounting / AISI 316 SST (1.4401) (not suitable for AISI housing) | B4 |    |    |    |    |    |    |
| Flat type bracket / AISI 316 SST (1.4401) (suitable for AISI housing)     | B5 |    |    |    |    |    |    |
| <b>Surge / Transient Protector</b>  |    |    |    |    |    |    |    |
| With integral surge / transient protector                                 |    |    |    |    | S2 |    |    |
| <b>Operating Instruction Language</b>                                     |    |    |    |    |    |    |    |
| German  |    |    |    |    |    | M1 |    |
| Italian   |    |    |    |    |    | M2 |    |
| Spanish   |    |    |    |    |    | M3 |    |
| French  |    |    |    |    |    | M4 |    |
| English   |    |    |    |    |    | M5 |    |
| <b>Label and Tag Language</b>   |    |    |    |    |    |    |    |
| German  |    |    |    |    |    |    | T1 |
| Italian   |    |    |    |    |    |    | T2 |
| Spanish   |    |    |    |    |    |    | T3 |
| French  |    |    |    |    |    |    | T4 |
| <b>Additional Tag Plate</b>   |    |    |    |    |    |    |    |
| Supplemental wired-on stainless steel plate (4 lines, 32 characters each) |    |    |    |    |    |    | I1 |
| Laser printing of tag on stainless steel plate                            |    |    |    |    |    |    | I2 |
| Stainless steel tag, certification and wire-on plates                     |    |    |    |    |    |    | I3 |
| <b>Configuration</b>  |    |    |    |    |    |    |    |
| Standard pressure = in. H2O / psi at 68 °F                                |    |    |    |    |    |    | N2 |
| Standard pressure = in. H2O / psi at 39.2 °F                              |    |    |    |    |    |    | N3 |
| Standard pressure = in. H2O / psi at 20 °C                                |    |    |    |    |    |    | N4 |
| Standard pressure = in. H2O / psi at 4 °C                                 |    |    |    |    |    |    | N5 |
| Custom  |    |    |    |    |    |    | N6 |

# Model 266CSH/CST Multivariable

# Model 266JSH/JST Multivariable

| Additional ordering information for model 266CSH   | XX | XX | XX | XX | XX |
|--|----|----|----|----|----|
| <b>Preparation Procedure</b>   |    |    |    |    |    |
| Oxygen service cleaning, Pmax = 12 MPa (120 bar, 1740 psi) or maximum working pressure (lower value),<br>Tmax = 60 °C / 140 °F (only available with inert fill and Viton gasket) | P1 |    |    |    |    |
| Hydrogen service preparation   | P2 |    |    |    |    |
| <b>Certificates</b>  |    |    |    |    |    |
| Inspection certificate 3.1 acc. EN 10204 of calibration  |    | C1 |    |    |    |
| Inspection certificate 3.1 acc. EN 10204 of cleanliness stage  |    | C3 |    |    |    |
| Inspection certificate 3.1 acc. EN 10204 of helium leakage test of the sensor module   |    | C4 |    |    |    |
| Inspection certificate 3.1 acc. EN 10204 of pressure test  |    | C5 |    |    |    |
| Declaration of compliance with the order 2.1 acc. EN 10204 for instrument design   |    | C6 |    |    |    |
| Separate calibration record  |    | CC |    |    |    |
| Printed record of configured data of transmitter   |    | CG |    |    |    |
| PMI test on wetted parts   |    | CT |    |    |    |
| <b>Material Traceability</b>   |    |    |    |    |    |
| Certificate of compliance with the order 2.1 acc. EN 10204 for process wetted parts  |    |    | H1 |    |    |
| Inspection certificate 3.1 acc. EN 10204 of pressure-bearing and process wetted parts<br>with analysis certificates as material verification (Note 4)                            |    |    | H3 |    |    |
| Material certificate 2.2 acc. EN 10204 of the pressure bearing and process wetted parts  |    |    | H4 |    |    |
| <b>Connector</b>   |    |    |    |    |    |
| With cable gland M20 x 1.5   |    |    |    |    | U8 |
| <b>Housing Accessories</b>   |    |    |    |    |    |
| Integral mount manifold (price adder just for assembling, not for manifold)  |    |    |    |    | A1 |
| Four-wire add-on unit: Power supply 24 V UC / output signal 0 ... 20 mA (Note 5)   |    |    |    |    | A4 |
| Four-wire add-on unit: Power supply 24 V UC / output signal 4 ... 20 mA (Note 5)   |    |    |    |    | A6 |
| Four-wire add-on unit: Power supply 230 V AC / output signal 0 ... 20 mA (Note 5)  |    |    |    |    | A5 |
| Four-wire add-on unit: Power supply 230 V AC / output signal 4 ... 20 mA (Note 5)  |    |    |    |    | A7 |
| Plug upside welded   |    |    |    |    | A8 |
| Plug bottom welded   |    |    |    |    | A9 |

- Note 1: Not available with Diaphragm Material code M, V, T, C, Y, D  
 Note 2: Suitable for Oxygen service  
 Note 3: Not available with Housing Material / Electrical Connection code J  
 Note 4: Minor Parts with Factory Certificate acc. to EN 10204  
 Note 5: Only available with Housing Material / Electrical Connection code J (DIN housing)

### Standard delivery scope (changes possible with additional ordering code)

- Adapters supplied loose
- Sealing plugs for horizontal connection flanges on the process axis; not for PVDF Kynar insert or for vertical connection flanges (no vent / drain valves)
- For standard applications (without explosion protection)
- No display, no mounting bracket, no surge protector
- Multilanguage short operating instruction and English labeling
- Configuration with kPa and °C units
- No test, inspection, or material certificates

**Basic ordering information model 266CST Multivariable transmitter for mass flow and level**

Select one character or set of characters from each category and specify complete catalog number.

Refer to additional ordering information and specify one or more codes for each transmitter if additional options are required.

| Base model – 1 <sup>st</sup> to 6 <sup>th</sup> characters                            |                   |  |                                       | 266CST   | X | X | X | X      | X | X | X                          |
|---|-------------------|--|---------------------------------------|----------|---|---|---|--------|---|---|----------------------------|
| Multivariable transmitter for mass flow and level base accuracy 0.04 %                |                   |  |                                       |          |   |   |   |        |   |   |                            |
| <b>Sensor Span Limits – 7<sup>th</sup> character</b>                                  |                   |  |                                       |          |   |   |   |        |   |   | continued<br>see next page |
| 0.05 and 1 kPa  | (0.5 and 10 mbar  | 0.2 and 4 in. H2O)                     | (Note: 1)                             |          |   |   |   |        |   | A |                            |
| 0.2 and 6 kPa   | (2 and 60 mbar    | 0.8 and 24 in. H2O)                    |                                       |          |   |   |   |        |   | C |                            |
| 0.4 and 40 kPa  | (4 and 400 mbar   | 1.6 and 160 in. H2O)                   |                                       |          |   |   |   |        |   | F |                            |
| 2.5 and 250 kPa   | (25 and 2500 mbar | 10 and 1000 in. H2O)                   |                                       |          |   |   |   |        |   | L |                            |
| 20 and 2000 kPa   | (0.2 and 20 bar   | 2.9 and 290 psi)                       |                                       |          |   |   |   |        |   | N |                            |
| <b>Maximum Working Pressure – 8<sup>th</sup> character</b>                            |                   |  |                                       |          |   |   |   |        |   |   |                            |
| 0 and 0.6 MPa   | 0 and 6 bar       | 0 and 87 psi                           | (only with Sensor Span Limits code A) |          |   |   |   |        |   | 1 |                            |
| 0 and 2 MPa   | 0 and 20 bar      | 0 and 290 psi                          |                                       |          |   |   |   |        |   | 2 |                            |
| 0 and 10 MPa  | 0 and 100 bar     | 0 and 1450 psi                         | (not with Sensor Span Limits code A)  |          |   |   |   |        |   | 3 |                            |
| 0 and 41 MPa  | 0 and 410 bar     | 0 and 5945 psi                         | (not with Sensor Span Limits code A)  |          |   |   |   |        |   | 4 |                            |
| <b>Diaphragm Material / Fill Fluid – 9<sup>th</sup> character</b>                     |                   |  |                                       |          |   |   |   |        |   |   |                            |
| AISI 316L SST (1.4435) / Silicone oil   |                   |  | (NACE)                                |          |   |   |   |        |   | S |                            |
| Hastelloy C-276 / Silicone oil  |                   |  | (NACE)                                |          |   |   |   |        |   | K |                            |
| Monel 400 / Silicone oil  |                   |  | (NACE)                                |          |   |   |   |        |   | M |                            |
| Monel 400 gold-plated / Silicone oil  |                   |  | (NACE)                                |          |   |   |   |        |   | V |                            |
| Tantalum / Silicone oil   |                   |  | (NACE)                                |          |   |   |   |        |   | T |                            |
| AISI 316L SST (1.4435) / Inert fluid - Galden (Suitable for oxygen applications)      |                   |  | (NACE)                                | (Note 2) |   |   |   |        |   | A |                            |
| Hastelloy C-276 / Inert fluid - Galden (Suitable for oxygen applications)             |                   |  | (NACE)                                | (Note 2) |   |   |   |        |   | F |                            |
| Monel 400 / Inert fluid - Galden (Suitable for oxygen applications)                   |                   |  | (NACE)                                | (Note 2) |   |   |   |        |   | C |                            |
| Monel 400 gold-plated / Inert fluid - Galden (Suitable for oxygen applications)       |                   |  | (NACE)                                | (Note 2) |   |   |   |        |   | Y |                            |
| Tantalum / Inert fluid - Galden (Suitable for oxygen applications)                    |                   |  | (NACE)                                | (Note 2) |   |   |   |        |   | D |                            |
| <b>Process Flanges and Adapters Material / Connection – 10<sup>th</sup> character</b> |                   |  |                                       |          |   |   |   |        |   |   |                            |
| AISI 316L SST (1.4404 / 1.4408)   |                   | 1/4-18 NPT female direct               | (horizontal connection)               |          |   |   |   | (NACE) |   | A |                            |
| AISI 316L SST (1.4404 / 1.4408)   |                   | 1/2-14 NPT female through adapter      | (horizontal connection)               |          |   |   |   | (NACE) |   | B |                            |
| AISI 316L SST (1.4404 / 1.4408)   |                   | 1/4-18 NPT female direct (DIN 19213)   | (horizontal connection)               |          |   |   |   | (NACE) |   | C |                            |
| Hastelloy C-276   |                   | 1/4-18 NPT female direct               | (horizontal connection)               |          |   |   |   | (NACE) |   | D |                            |
| Hastelloy C-276   |                   | 1/2-14 NPT female through adapter      | (horizontal connection)               |          |   |   |   | (NACE) |   | E |                            |
| Monel 400   |                   | 1/4-18 NPT female direct               | (horizontal connection)               |          |   |   |   | (NACE) |   | G |                            |
| Monel 400   |                   | 1/2-14 NPT female through adapter      | (horizontal connection)               |          |   |   |   | (NACE) |   | H |                            |
| Kynar (PVDF)  |                   | 1/4-18 NPT female direct (MWP = 1 MPa) | (insert on side of flange)            |          |   |   |   |        |   | P |                            |
| AISI 316L SST (1.4404 / 1.4408)   |                   | 1/4-18 NPT female direct               | (vertical connection)                 |          |   |   |   | (NACE) |   | Q |                            |

# Model 266CSH/CST Multivariable

# Model 266JSH/JST Multivariable

| Basic ordering information model 266CST Multivariable transmitter                              |   | X | X | X |
|--|---|---|---|---|
| <b>Bolts Material / Gaskets Material</b> – 11 <sup>th</sup> character                          |   |   |   |   |
| AISI 316L SST (NACE - non exposed) / Viton (Suitable for oxygen applications)                  | (Note 2)  | 3 |   |   |
| AISI 316L SST (NACE - non exposed) / PTFE (Max. 25 MPa / 250 bar / 3625 psi)                   |   | 4 |   |   |
| AISI 316L SST (NACE - non exposed) / EPDM  |   | 5 |   |   |
| AISI 316L SST (NACE - non exposed) / Perbunan  |   | 6 |   |   |
| AISI 316L SST (NACE - non exposed) / Graphite  |   | 7 |   |   |
| AISI 316L SST (NACE - non exposed) / FEP (only available with Kynar [PVDF] process connection) |   | T |   |   |
| <b>Housing Material / Electrical Connection</b> – 12 <sup>th</sup> character                   |   |   |   |   |
| Aluminium alloy (Barrel type)  | 1/2-14 NPT  |   | A |   |
| Aluminium alloy (Barrel type)  | M20 x 1.5   |   | B |   |
| AISI 316L SST (Barrel type)  | 1/2-14 NPT  |   | S |   |
| AISI 316L SST (Barrel type)  | M20 x 1.5   |   | T |   |
| Aluminium alloy (DIN type)   | M20 x 1.5   |   | J |   |
| <b>Output</b> – 13 <sup>th</sup> character   |   |   |   |   |
| HART digital communication and 4 ... 20 mA   | (No additional options)                           |   |   | H |
| HART digital communication and 4 ... 20 mA   | (Options requested by "Additional ordering code") |   |   | 1 |

### Additional ordering information for model 266CST

Add one or more 2-digit code(s) after the basic ordering information to select all required options.

|   | XX | XX |
|---|----|----|
| <b>Vent and Drain Valve Material / Position</b>   |    |    |
| AISI 316L SST (1.4404) On process axis (NACE)   | V1 |    |
| AISI 316L SST (1.4404) On flanges side top (NACE)   | V2 |    |
| AISI 316L SST (1.4404) On flanges side bottom (NACE)  | V3 |    |
| Hastelloy C-276 On process axis (NACE)  | V4 |    |
| Hastelloy C-276 On flanges side top (NACE)  | V5 |    |
| Hastelloy C-276 On flanges side bottom (NACE)   | V6 |    |
| Monel 400 On process axis (NACE)  | V7 |    |
| Monel 400 On flanges side top (NACE)  | V8 |    |
| Monel 400 On flanges side bottom (NACE)   | V9 |    |
| <b>Explosion Protection Certification</b>   |    |    |
| ATEX Group II Category 1 GD - Intrinsic Safety Ex ia  |    | E1 |
| ATEX Group II Category 1/2 GD - Flameproof Ex d (Note: 3)   |    | E2 |
| ATEX Group II Category 3 GD - Type of protection "N" Ex nL design compliance  |    | E3 |
| FM approval (Canada, CSA) Class I, II, Div. 1, 2, Group A to F (XP, IS, NI)<br>(only available with 1/2-14 NPT or M20 electrical connections) (Note: 3) |    | E4 |
| FM approval (USA) Class I, II, Div. 1, 2, Group A to F (XP, IS, NI)<br>(only available with 1/2-14 NPT or M20 electrical connections) (Note: 3)         |    | E6 |
| Combined ATEX Ex ia and Ex d (Note: 3)  |    | E7 |
| Combined ATEX - Intrinsic Safety, Flameproof and Type "N" (Note: 3)   |    | EW |
| FM approvals (USA and Canada) Intrinsic Safety  |    | EA |
| FM approvals (USA and Canada) Explosion-proof (Note: 3)   |    | EB |
| FM approvals (USA and Canada) Non-incendive   |    | EC |
| Combined ATEX, FM and CSA (only available with 1/2-14 NPT or M20 electrical connections) (Note: 3)  |    | EN |
| IEC Approval Group II Category 1 GD - Intrinsic Safety Ex ia  |    | E8 |
| IEC Approval Group II Category 1/2 GD - Flameproof Ex d (Note: 3)   |    | E9 |
| IEC Approval Group II Category 3 GD - Type of protection "N" Ex nL design compliance  |    | ER |
| Combined IEC Approval Ex ia and Ex d (Note: 3)  |    | EH |
| Combined IEC Approval Ex ia, Ex d and Ex nL (Note: 3)   |    | EI |
| NEPSI IIC Ex ia   |    | EY |
| NEPSI IIC Ex d (Note: 3)  |    | EZ |
| NEPSI IIC Ex nL   |    | ES |
| Combined NEPSI Ex ia and Ex d (Note: 3)   |    | EP |
| Combined NEPSI Ex ia, Ex d and Ex nL (Note: 3)  |    | EQ |

# Model 266CSH/CST Multivariable

# Model 266JSH/JST Multivariable

| Additional ordering information for model 266CST                          | XX | XX | XX | XX | XX | XX | XX |
|---|----|----|----|----|----|----|----|
| <b>Integral LCD</b>   |    |    |    |    |    |    |    |
| With integral LCD display   | L1 |    |    |    |    |    |    |
| TTG (Through The Glass) integral digital LCD display                      | L5 |    |    |    |    |    |    |
| <b>Mounting Bracket Shape / Material</b>                                  |    |    |    |    |    |    |    |
| For pipe mounting / Carbon steel (not suitable for AISI housing)          |    | B1 |    |    |    |    |    |
| For pipe mounting / AISI 316 SST (1.4401) (not suitable for AISI housing) |    | B2 |    |    |    |    |    |
| For wall mounting / Carbon steel (not suitable for AISI housing)          |    | B3 |    |    |    |    |    |
| For wall mounting / AISI 316 SST (1.4401) (not suitable for AISI housing) |    | B4 |    |    |    |    |    |
| Flat type bracket / AISI 316 SST (1.4401) (suitable for AISI housing)     |    | B5 |    |    |    |    |    |
| <b>Surge / Transient Protector</b>  |    |    |    |    |    |    |    |
| With integral surge / transient protector                                 |    |    |    | S2 |    |    |    |
| <b>Operating Instruction Language</b>                                     |    |    |    |    |    |    |    |
| German  |    |    |    |    | M1 |    |    |
| Italian   |    |    |    |    | M2 |    |    |
| Spanish   |    |    |    |    | M3 |    |    |
| French  |    |    |    |    | M4 |    |    |
| English   |    |    |    |    | M5 |    |    |
| <b>Label and Tag Language</b>   |    |    |    |    |    |    |    |
| German  |    |    |    |    |    | T1 |    |
| Italian   |    |    |    |    |    | T2 |    |
| Spanish   |    |    |    |    |    | T3 |    |
| French  |    |    |    |    |    | T4 |    |
| <b>Additional Tag Plate</b>   |    |    |    |    |    |    |    |
| Supplemental wired-on stainless steel plate (4 lines, 30 characters each) |    |    |    |    |    |    | I1 |
| Laser printing of tag on stainless steel plate                            |    |    |    |    |    |    | I2 |
| Stainless steel tag, certification and wire-on plates                     |    |    |    |    |    |    | I3 |
| <b>Configuration</b>  |    |    |    |    |    |    |    |
| Standard pressure = in. H2O / psi at 68 °F                                |    |    |    |    |    |    | N2 |
| Standard pressure = in. H2O / psi at 39.2 °F                              |    |    |    |    |    |    | N3 |
| Standard pressure = in. H2O / psi at 20 °C                                |    |    |    |    |    |    | N4 |
| Standard pressure = in. H2O / psi at 4 °C                                 |    |    |    |    |    |    | N5 |
| Custom  |    |    |    |    |    |    | N6 |



| Additional ordering information for model 266CST  |          | XX | XX | XX | XX | XX |
|---|----------|----|----|----|----|----|
| <b>Preparation Procedure</b>  |          |    |    |    |    |    |
| Oxygen service cleaning, Pmax = 12 MPa (120 bar, 1740 psi) or maximum working pressure (lower value), Tmax = 60 °C / 140 °F (only available with inert fill and Viton gasket) | P1       |    |    |    |    |    |
| Hydrogen service preparation  | P2       |    |    |    |    |    |
| <b>Certificates</b>   |          |    |    |    |    |    |
| Inspection certificate 3.1 acc. EN 10204 of calibration   |          | C1 |    |    |    |    |
| Inspection certificate 3.1 acc. EN 10204 of the cleanliness stage   |          | C3 |    |    |    |    |
| Inspection certificate 3.1 acc. EN 10204 of helium leakage test of the sensor module  |          | C4 |    |    |    |    |
| Inspection certificate 3.1 acc. EN 10204 of the pressure test   |          | C5 |    |    |    |    |
| Declaration of compliance with the order 2.1 acc. EN 10204 for instrument design  |          | C6 |    |    |    |    |
| Separate calibration record   |          | CC |    |    |    |    |
| Printed record of configured data of transmitter  |          | CG |    |    |    |    |
| PMI test on wetted parts  |          | CT |    |    |    |    |
| <b>Material Traceability</b>  |          |    |    |    |    |    |
| Certificate of compliance with the order 2.1 acc. EN 10204 for process wetted parts   |          |    |    | H1 |    |    |
| Inspection certificate 3.1 acc. EN 10204 of pressure-bearing and process wetted parts with analysis certificates as material verification                                     | (Note 4) |    |    | H3 |    |    |
| Material certificate 2.2 acc. EN 10204 of the pressure bearing and process wetted parts   |          |    |    | H4 |    |    |
| <b>Connector</b>  |          |    |    |    |    |    |
| With cable gland M20 x 1.5  |          |    |    |    |    | U8 |
| <b>Housing Accessories</b>  |          |    |    |    |    |    |
| Integral mount manifold (price adder just for assembling, not for manifold)   |          |    |    |    |    | A1 |
| Four-wire add-on unit: Power supply 24 V UC / output signal 0 ... 20 mA   | (Note 5) |    |    |    |    | A4 |
| Four-wire add-on unit: Power supply 24 V UC / output signal 4 ... 20 mA   | (Note 5) |    |    |    |    | A6 |
| Four-wire add-on unit: Power supply 230 V AC / output signal 0 ... 20 mA  | (Note 5) |    |    |    |    | A5 |
| Four-wire add-on unit: Power supply 230 V AC / output signal 4 ... 20 mA  | (Note 5) |    |    |    |    | A7 |
| Plug upside welded  |          |    |    |    |    | A8 |
| Plug bottom welded  |          |    |    |    |    | A9 |

- Note 1: Not available with Diaphragm Material code M, V, T, C, Y, D  
Note 2: Suitable for Oxygen service  
Note 3: Not available with Housing Material / Electrical Connection code J  
Note 4: Minor Parts with Factory Certificate acc. to EN 10204  
Note 5: Only available with Housing Material / Electrical Connection code J (DIN housing)

### Standard delivery scope (changes possible with additional ordering code)

- Adapters supplied loose
- Sealing plugs for horizontal connection flanges on the process axis; not for PVDF Kynar insert or for vertical connection flanges (no vent / drain valves)
- For standard applications (without explosion protection)
- No display, no mounting bracket, no surge protector
- Multilanguage short operating instruction and English labeling
- Configuration with kPa and °C units
- No test, inspection, or material certificates

# Model 266CSH/CST Multivariable

# Model 266JSH/JST Multivariable

## Basic ordering information model 266JSH Multivariable transmitter, for differential pressure, absolute pressure and temperature measurement

Select one character or set of characters from each category and specify complete catalog number.

Refer to additional ordering information and specify one or more codes for each transmitter if additional options are required.

| Base model – 1 <sup>st</sup> to 6 <sup>th</sup> characters   |  |                      |                                       | 266JSH   | X | X | X | X | X | X | X                          |
|--|--|----------------------|---------------------------------------|----------|---|---|---|---|---|---|----------------------------|
| Multivariable transmitter, for differential pressure, absolute pressure and temperature measurement, base accuracy 0.075 % |  |                      |                                       |          |   |   |   |   |   |   |                            |
| <b>Sensor Span Limits – 7<sup>th</sup> character</b>   |  |                      |                                       |          |   |   |   |   |   |   | continued<br>see next page |
| 0.05 and 1 kPa   | (0.5 and 10 mbar                       | 0.2 and 4 in. H2O)   | (Note: 1)                             |          | A |   |   |   |   |   |                            |
| 0.2 and 6 kPa  | (2 and 60 mbar                         | 0.8 and 24 in. H2O)  |                                       |          | C |   |   |   |   |   |                            |
| 0.4 and 40 kPa   | (4 and 400 mbar                        | 1.6 and 160 in. H2O) |                                       |          | F |   |   |   |   |   |                            |
| 2.5 and 250 kPa  | (25 and 2500 mbar                      | 10 and 1000 in. H2O) |                                       |          | L |   |   |   |   |   |                            |
| 20 and 2000 kPa  | (0.2 and 20 bar                        | 2.9 and 290 psi)     |                                       |          | N |   |   |   |   |   |                            |
| 100 and 10000 kPa  | (1 and 100 bar                         | 14.5 and 1450 psi)   |                                       |          | R |   |   |   |   |   |                            |
| <b>Maximum Working Pressure – 8<sup>th</sup> character</b>   |  |                      |                                       |          |   |   |   |   |   |   |                            |
| 0 and 0.6 MPa  | 0 and 6 bar                            | 0 and 87 psi         | (only with Sensor Span Limits code A) |          |   |   |   |   |   | 1 |                            |
| 0 and 2 MPa  | 0 and 20 bar                           | 0 and 290 psi        | (not with Sensor Span Limits code R)  |          |   |   |   |   |   | 2 |                            |
| 0 and 10 MPa   | 0 and 100 bar                          | 0 and 1450 psi       | (not with Sensor Span Limits code A)  |          |   |   |   |   |   | 3 |                            |
| 0 and 41 MPa   | 0 and 410 bar                          | 0 and 5945 psi       | (not with Sensor Span Limits code A)  |          |   |   |   |   |   | 4 |                            |
| <b>Diaphragm Material / Fill Fluid – 9<sup>th</sup> character</b>  |  |                      |                                       |          |   |   |   |   |   |   |                            |
| AISI 316L SST (1.4435) / Silicone oil  |  |                      | (NACE)                                |          |   |   |   |   |   |   | S                          |
| Hastelloy C-276 / Silicone oil   |  |                      | (NACE)                                |          |   |   |   |   |   |   | K                          |
| Monel 400 / Silicone oil   |  |                      | (NACE)                                |          |   |   |   |   |   |   | M                          |
| Monel 400 gold-plated / Silicone oil   |  |                      | (NACE)                                |          |   |   |   |   |   |   | V                          |
| Tantalum / Silicone oil  |  |                      | (NACE)                                |          |   |   |   |   |   |   | T                          |
| AISI 316L SST (1.4435) / Inert fluid - Galden (Suitable for oxygen applications)   |  |                      | (NACE)                                | (Note 2) |   |   |   |   |   |   | A                          |
| Hastelloy C-276 / Inert fluid - Galden (Suitable for oxygen applications)  |  |                      | (NACE)                                | (Note 2) |   |   |   |   |   |   | F                          |
| Monel 400 / Inert fluid - Galden (Suitable for oxygen applications)  |  |                      | (NACE)                                | (Note 2) |   |   |   |   |   |   | C                          |
| Monel 400 gold-plated / Inert fluid - Galden (Suitable for oxygen applications)  |  |                      | (NACE)                                | (Note 2) |   |   |   |   |   |   | Y                          |
| Tantalum / Inert fluid - Galden (Suitable for oxygen applications)   |  |                      | (NACE)                                | (Note 2) |   |   |   |   |   |   | D                          |
| <b>Process Flanges and Adapters Material / Connection – 10<sup>th</sup> character</b>                                      |  |                      |                                       |          |   |   |   |   |   |   |                            |
| AISI 316L SST (1.4404 / 1.4408)  | 1/4-18 NPT female direct               |                      | (horizontal connection)               |          |   |   |   |   |   |   | (NACE) A                   |
| AISI 316L SST (1.4404 / 1.4408)  | 1/2-14 NPT female through adapter      |                      | (horizontal connection)               |          |   |   |   |   |   |   | (NACE) B                   |
| AISI 316L SST (1.4404 / 1.4408)  | 1/4-18 NPT female direct (DIN 19213)   |                      | (horizontal connection)               |          |   |   |   |   |   |   | (NACE) C                   |
| Hastelloy C-276  | 1/4-18 NPT female direct               |                      | (horizontal connection)               |          |   |   |   |   |   |   | (NACE) D                   |
| Hastelloy C-276  | 1/2-14 NPT female through adapter      |                      | (horizontal connection)               |          |   |   |   |   |   |   | (NACE) E                   |
| Monel 400  | 1/4-18 NPT female direct               |                      | (horizontal connection)               |          |   |   |   |   |   |   | (NACE) G                   |
| Monel 400  | 1/2-14 NPT female through adapter      |                      | (horizontal connection)               |          |   |   |   |   |   |   | (NACE) H                   |
| Kynar (PVDF)   | 1/4-18 NPT female direct (MWP = 1 MPa) |                      | (insert on side of flange)            |          |   |   |   |   |   |   | P                          |
| AISI 316L SST (1.4404 / 1.4408)  | 1/4-18 NPT female direct               |                      | (vertical connection)                 |          |   |   |   |   |   |   | (NACE) Q                   |

| Basic ordering information model 266JSH Multivariable transmitter                              |   | X | X | X |
|--|---|---|---|---|
| <b>Bolts Material / Gaskets Material</b> – 11 <sup>th</sup> character                          |   |   |   |   |
| AISI 316L SST (NACE - non exposed) / Viton (Suitable for oxygen applications)                  | (Note 2)  | 3 |   |   |
| AISI 316L SST (NACE - non exposed) / PTFE (Max. 25 MPa / 250 bar / 3625 psi)                   |   | 4 |   |   |
| AISI 316L SST (NACE - non exposed) / EPDM  |   | 5 |   |   |
| AISI 316L SST (NACE - non exposed) / Perbunan  |   | 6 |   |   |
| AISI 316L SST (NACE - non exposed) / Graphite  |   | 7 |   |   |
| AISI 316L SST (NACE - non exposed) / FEP (only available with Kynar [PVDF] process connection) |   | T |   |   |
| <b>Housing Material / Electrical Connection</b> – 12 <sup>th</sup> character                   |   |   |   |   |
| Aluminium alloy (Barrel type)  | 1/2-14 NPT  |   | A |   |
| Aluminium alloy (Barrel type)  | M20 x 1.5   |   | B |   |
| AISI 316L SST (Barrel type)  | 1/2-14 NPT  |   | S |   |
| AISI 316L SST (Barrel type)  | M20 x 1.5   |   | T |   |
| Aluminium alloy (DIN type)   | M20 x 1.5   |   | J |   |
| <b>Output</b> – 13 <sup>th</sup> character   |   |   |   |   |
| HART digital communication and 4 ... 20 mA   | (No additional options)                           |   |   | H |
| HART digital communication and 4 ... 20 mA   | (Options requested by "Additional ordering code") |   |   | 1 |

# Model 266CSH/CST Multivariable

# Model 266JSH/JST Multivariable

## Additional ordering information for model 266JSH

Add one or more 2-digit code(s) after the basic ordering information to select all required options.

|   |                        |           | XX | XX |
|---|------------------------|-----------|----|----|
| <b>Vent and Drain Valve Material / Position</b>   |                        |           |    |    |
| AISI 316L SST (1.4404)  | On process axis        | (NACE)    | V1 |    |
| AISI 316L SST (1.4404)  | On flanges side top    | (NACE)    | V2 |    |
| AISI 316L SST (1.4404)  | On flanges side bottom | (NACE)    | V3 |    |
| Hastelloy C-276   | On process axis        | (NACE)    | V4 |    |
| Hastelloy C-276   | On flanges side top    | (NACE)    | V5 |    |
| Hastelloy C-276   | On flanges side bottom | (NACE)    | V6 |    |
| Monel 400   | On process axis        | (NACE)    | V7 |    |
| Monel 400   | On flanges side top    | (NACE)    | V8 |    |
| Monel 400   | On flanges side bottom | (NACE)    | V9 |    |
| <b>Explosion Protection Certification</b>   |                        |           |    |    |
| ATEX Group II Category 1 GD - Intrinsic Safety Ex ia  |                        |           |    | E1 |
| ATEX Group II Category 1/2 GD - Flameproof Ex d   |                        | (Note: 3) |    | E2 |
| ATEX Group II Category 3 GD - Type of protection "N" Ex nL design compliance  |                        |           |    | E3 |
| FM approval (Canada, CSA) Class I, II, Div. 1, 2, Group A to F (XP, IS, NI)<br>(only available with 1/2-14 NPT or M20 electrical connections) |                        | (Note: 3) |    | E4 |
| FM approval (USA) Class I, II, Div. 1, 2, Group A to F (XP, IS, NI)<br>(only available with 1/2-14 NPT or M20 electrical connections)         |                        | (Note: 3) |    | E6 |
| Combined ATEX Ex ia and Ex d  |                        | (Note: 3) |    | E7 |
| Combined ATEX - Intrinsic Safety, Flameproof and Type "N"   |                        | (Note: 3) |    | EW |
| FM approvals (USA and Canada) Intrinsic Safety  |                        |           |    | EA |
| FM approvals (USA and Canada) Explosion-proof   |                        | (Note: 3) |    | EB |
| FM approvals (USA and Canada) Non-incendive   |                        |           |    | EC |
| Combined ATEX, FM and CSA (only available with 1/2-14 NPT or M20 electrical connections)  |                        | (Note: 3) |    | EN |
| IEC Approval Group II Category 1 GD - Intrinsic Safety Ex ia  |                        |           |    | E8 |
| IEC Approval Group II Category 1/2 GD - Flameproof Ex d   |                        | (Note: 3) |    | E9 |
| IEC Approval Group II Category 3 GD - Type of protection "N" Ex nL design compliance  |                        |           |    | ER |
| Combined IEC Approval Ex ia and Ex d  |                        | (Note: 3) |    | EH |
| Combined IEC Approval Ex ia, Ex d and Ex nL   |                        | (Note: 3) |    | EI |
| NEPSI IIC Ex ia   |                        |           |    | EY |
| NEPSI IIC Ex d  |                        | (Note: 3) |    | EZ |
| NEPSI IIC Ex nL   |                        |           |    | ES |
| Combined NEPSI Ex ia and Ex d   |                        | (Note: 3) |    | EP |
| Combined NEPSI Ex ia, Ex d and Ex nL  |                        | (Note: 3) |    | EQ |

| Additional ordering information for model 266JSH                          | XX | XX | XX | XX | XX | XX | XX |
|---|----|----|----|----|----|----|----|
| <b>Integral LCD</b>   |    |    |    |    |    |    |    |
| With integral LCD display   | L1 |    |    |    |    |    |    |
| TTG (Through The Glass) integral digital LCD display                      | L5 |    |    |    |    |    |    |
| <b>Mounting Bracket Shape / Material</b>                                  |    |    |    |    |    |    |    |
| For pipe mounting / Carbon steel (not suitable for AISI housing)          | B1 |    |    |    |    |    |    |
| For pipe mounting / AISI 316 SST (1.4401) (not suitable for AISI housing) | B2 |    |    |    |    |    |    |
| For wall mounting / Carbon steel (not suitable for AISI housing)          | B3 |    |    |    |    |    |    |
| For wall mounting / AISI 316 SST (1.4401) (not suitable for AISI housing) | B4 |    |    |    |    |    |    |
| Flat type bracket / AISI 316 SST (1.4401) (suitable for AISI housing)     | B5 |    |    |    |    |    |    |
| <b>Surge / Transient Protector</b>  |    |    |    |    |    |    |    |
| With integral surge / transient protector                                 |    |    |    |    | S2 |    |    |
| <b>Operating Instruction Language</b>                                     |    |    |    |    |    |    |    |
| German  |    |    |    |    |    | M1 |    |
| Italian   |    |    |    |    |    | M2 |    |
| Spanish   |    |    |    |    |    | M3 |    |
| French  |    |    |    |    |    | M4 |    |
| English   |    |    |    |    |    | M5 |    |
| <b>Label and Tag Language</b>   |    |    |    |    |    |    |    |
| German  |    |    |    |    |    |    | T1 |
| Italian   |    |    |    |    |    |    | T2 |
| Spanish   |    |    |    |    |    |    | T3 |
| French  |    |    |    |    |    |    | T4 |
| <b>Additional Tag Plate</b>   |    |    |    |    |    |    |    |
| Supplemental wired-on stainless steel plate (4 lines, 32 characters each) |    |    |    |    |    |    | I1 |
| Laser printing of tag on stainless steel plate                            |    |    |    |    |    |    | I2 |
| Stainless steel tag, certification and wire-on plates                     |    |    |    |    |    |    | I3 |
| <b>Configuration</b>  |    |    |    |    |    |    |    |
| Standard pressure = in. H2O / psi at 68 °F                                |    |    |    |    |    |    | N2 |
| Standard pressure = in. H2O / psi at 39.2 °F                              |    |    |    |    |    |    | N3 |
| Standard pressure = in. H2O / psi at 20 °C                                |    |    |    |    |    |    | N4 |
| Standard pressure = in. H2O / psi at 4 °C                                 |    |    |    |    |    |    | N5 |
| Custom  |    |    |    |    |    |    | N6 |

# Model 266CSH/CST Multivariable

# Model 266JSH/JST Multivariable

| Additional ordering information for model 266JSH   | XX | XX | XX | XX | XX |
|--|----|----|----|----|----|
| <b>Preparation Procedure</b>   |    |    |    |    |    |
| Oxygen service cleaning, Pmax = 12 MPa (120 bar, 1740 psi) or maximum working pressure (lower value),<br>Tmax = 60 °C / 140 °F (only available with inert fill and Viton gasket) | P1 |    |    |    |    |
| Hydrogen service preparation   | P2 |    |    |    |    |
| <b>Certificates</b>  |    |    |    |    |    |
| Inspection certificate 3.1 acc. EN 10204 of calibration  |    | C1 |    |    |    |
| Inspection certificate 3.1 acc. EN 10204 of cleanliness stage  |    | C3 |    |    |    |
| Inspection certificate 3.1 acc. EN 10204 of helium leakage test of the sensor module   |    | C4 |    |    |    |
| Inspection certificate 3.1 acc. EN 10204 of pressure test  |    | C5 |    |    |    |
| Declaration of compliance with the order 2.1 acc. EN 10204 for instrument design   |    | C6 |    |    |    |
| Separate calibration record  |    | CC |    |    |    |
| Printed record of configured data of transmitter   |    | CG |    |    |    |
| PMI test on wetted parts   |    | CT |    |    |    |
| <b>Material Traceability</b>   |    |    |    |    |    |
| Certificate of compliance with the order 2.1 acc. EN 10204 for process wetted parts  |    |    | H1 |    |    |
| Inspection certificate 3.1 acc. EN 10204 of pressure-bearing and process wetted parts<br>with analysis certificates as material verification (Note 4)                            |    |    | H3 |    |    |
| Material certificate 2.2 acc. EN 10204 of the pressure bearing and process wetted parts  |    |    | H4 |    |    |
| <b>Connector</b>   |    |    |    |    |    |
| With cable gland M20 x 1.5   |    |    |    | U8 |    |
| <b>Housing Accessories</b>   |    |    |    |    |    |
| Integral mount manifold (price adder just for assembling, not for manifold)  |    |    |    |    | A1 |
| Four-wire add-on unit: Power supply 24 V UC / output signal 0 ... 20 mA (Note 5)   |    |    |    |    | A4 |
| Four-wire add-on unit: Power supply 24 V UC / output signal 4 ... 20 mA (Note 5)   |    |    |    |    | A6 |
| Four-wire add-on unit: Power supply 230 V AC / output signal 0 ... 20 mA (Note 5)  |    |    |    |    | A5 |
| Four-wire add-on unit: Power supply 230 V AC / output signal 4 ... 20 mA (Note 5)  |    |    |    |    | A7 |
| Plug upside welded   |    |    |    |    | A8 |
| Plug bottom welded   |    |    |    |    | A9 |

- Note 1: Not available with Diaphragm Material code M, V, T, C, Y, D  
 Note 2: Suitable for Oxygen service  
 Note 3: Not available with Housing Material / Electrical Connection code J  
 Note 4: Minor Parts with Factory Certificate acc. to EN 10204  
 Note 5: Only available with Housing Material / Electrical Connection code J (DIN housing)

### Standard delivery scope (changes possible with additional ordering code)

- Adapters supplied loose
- Sealing plugs for horizontal connection flanges on the process axis; not for PVDF Kynar insert or for vertical connection flanges (no vent / drain valves)
- For standard applications (without explosion protection)
- No display, no mounting bracket, no surge protector
- Multilanguage short operating instruction and English labeling
- Configuration with kPa and °C units
- No test, inspection, or material certificates

**Basic ordering information model 266JST Multivariable transmitter, for differential pressure, absolute pressure and temperature measurement**

Select one character or set of characters from each category and specify complete catalog number.

Refer to additional ordering information and specify one or more codes for each transmitter if additional options are required.

| Base model – 1 <sup>st</sup> to 6 <sup>th</sup> characters  |  |                            |                                       | 266JST   | X | X | X | X | X | X | X                          |
|---|--|----------------------------|---------------------------------------|----------|---|---|---|---|---|---|----------------------------|
| Multivariable transmitter, for differential pressure, absolute pressure and temperature measurement, base accuracy 0.04 % |  |                            |                                       |          |   |   |   |   |   |   |                            |
| <b>Sensor Span Limits – 7<sup>th</sup> character</b>  |  |                            |                                       |          |   |   |   |   |   |   | continued<br>see next page |
| 0.05 and 1 kPa  | (0.5 and 10 mbar                       | 0.2 and 4 in. H2O)         | (Note: 1)                             |          |   |   |   |   |   | A |                            |
| 0.2 and 6 kPa   | (2 and 60 mbar                         | 0.8 and 24 in. H2O)        |                                       |          |   |   |   |   |   | C |                            |
| 0.4 and 40 kPa  | (4 and 400 mbar                        | 1.6 and 160 in. H2O)       |                                       |          |   |   |   |   |   | F |                            |
| 2.5 and 250 kPa   | (25 and 2500 mbar                      | 10 and 1000 in. H2O)       |                                       |          |   |   |   |   |   | L |                            |
| 20 and 2000 kPa   | (0.2 and 20 bar                        | 2.9 and 290 psi)           |                                       |          |   |   |   |   |   | N |                            |
| 100 and 10000 kPa   | (1 and 100 bar                         | 14.5 and 1450 psi)         |                                       |          |   |   |   |   |   | R |                            |
| <b>Maximum Working Pressure – 8<sup>th</sup> character</b>  |  |                            |                                       |          |   |   |   |   |   |   |                            |
| 0 and 0.6 MPa   | 0 and 6 bar                            | 0 and 87 psi               | (only with Sensor Span Limits code A) |          |   |   |   |   |   | 1 |                            |
| 0 and 2 MPa   | 0 and 20 bar                           | 0 and 290 psi              | (not with Sensor Span Limits code R)  |          |   |   |   |   |   | 2 |                            |
| 0 and 10 MPa  | 0 and 100 bar                          | 0 and 1450 psi             | (not with Sensor Span Limits code A)  |          |   |   |   |   |   | 3 |                            |
| 0 and 41 MPa  | 0 and 410 bar                          | 0 and 5945 psi             | (not with Sensor Span Limits code A)  |          |   |   |   |   |   | 4 |                            |
| <b>Diaphragm Material / Fill Fluid – 9<sup>th</sup> character</b>   |  |                            |                                       |          |   |   |   |   |   |   |                            |
| AISI 316L SST (1.4435) / Silicone oil   |  |                            | (NACE)                                |          |   |   |   |   |   | S |                            |
| Hastelloy C-276 / Silicone oil  |  |                            | (NACE)                                |          |   |   |   |   |   | K |                            |
| Monel 400 / Silicone oil  |  |                            | (NACE)                                |          |   |   |   |   |   | M |                            |
| Monel 400 gold-plated / Silicone oil  |  |                            | (NACE)                                |          |   |   |   |   |   | V |                            |
| Tantalum / Silicone oil   |  |                            | (NACE)                                |          |   |   |   |   |   | T |                            |
| AISI 316L SST (1.4435) / Inert fluid - Galden (Suitable for oxygen applications)  |  |                            | (NACE)                                | (Note 2) |   |   |   |   |   | A |                            |
| Hastelloy C-276 / Inert fluid - Galden (Suitable for oxygen applications)   |  |                            | (NACE)                                | (Note 2) |   |   |   |   |   | F |                            |
| Monel 400 / Inert fluid - Galden (Suitable for oxygen applications)   |  |                            | (NACE)                                | (Note 2) |   |   |   |   |   | C |                            |
| Monel 400 gold-plated / Inert fluid - Galden (Suitable for oxygen applications)   |  |                            | (NACE)                                | (Note 2) |   |   |   |   |   | Y |                            |
| Tantalum / Inert fluid - Galden (Suitable for oxygen applications)  |  |                            | (NACE)                                | (Note 2) |   |   |   |   |   | D |                            |
| <b>Process Flanges and Adapters Material / Connection – 10<sup>th</sup> character</b>                                     |  |                            |                                       |          |   |   |   |   |   |   |                            |
| AISI 316L SST (1.4404 / 1.4408)   | 1/4-18 NPT female direct               | (horizontal connection)    | (NACE)                                |          |   |   |   |   |   | A |                            |
| AISI 316L SST (1.4404 / 1.4408)   | 1/2-14 NPT female through adapter      | (horizontal connection)    | (NACE)                                |          |   |   |   |   |   | B |                            |
| AISI 316L SST (1.4404 / 1.4408)   | 1/4-18 NPT female direct (DIN 19213)   | (horizontal connection)    | (NACE)                                |          |   |   |   |   |   | C |                            |
| Hastelloy C-276   | 1/4-18 NPT female direct               | (horizontal connection)    | (NACE)                                |          |   |   |   |   |   | D |                            |
| Hastelloy C-276   | 1/2-14 NPT female through adapter      | (horizontal connection)    | (NACE)                                |          |   |   |   |   |   | E |                            |
| Monel 400   | 1/4-18 NPT female direct               | (horizontal connection)    | (NACE)                                |          |   |   |   |   |   | G |                            |
| Monel 400   | 1/2-14 NPT female through adapter      | (horizontal connection)    | (NACE)                                |          |   |   |   |   |   | H |                            |
| Kynar (PVDF)  | 1/4-18 NPT female direct (MWP = 1 MPa) | (insert on side of flange) |                                       |          |   |   |   |   |   | P |                            |
| AISI 316L SST (1.4404 / 1.4408)   | 1/4-18 NPT female direct               | (vertical connection)      | (NACE)                                |          |   |   |   |   |   | Q |                            |

# Model 266CSH/CST Multivariable

# Model 266JSH/JST Multivariable

| Basic ordering information model 266JST Multivariable transmitter                              |   | X | X | X |
|--|---|---|---|---|
| <b>Bolts Material / Gaskets Material</b> – 11 <sup>th</sup> character                          |   |   |   |   |
| AISI 316L SST (NACE - non exposed) / Viton (Suitable for oxygen applications)                  | (Note 2)  | 3 |   |   |
| AISI 316L SST (NACE - non exposed) / PTFE (Max. 25 MPa / 250 bar / 3625 psi)                   |   | 4 |   |   |
| AISI 316L SST (NACE - non exposed) / EPDM  |   | 5 |   |   |
| AISI 316L SST (NACE - non exposed) / Perbunan  |   | 6 |   |   |
| AISI 316L SST (NACE - non exposed) / Graphite  |   | 7 |   |   |
| AISI 316L SST (NACE - non exposed) / FEP (only available with Kynar [PVDF] process connection) |   | T |   |   |
| <b>Housing Material / Electrical Connection</b> – 12 <sup>th</sup> character                   |   |   |   |   |
| Aluminium alloy (Barrel type)  | 1/2-14 NPT  |   | A |   |
| Aluminium alloy (Barrel type)  | M20 x 1.5   |   | B |   |
| AISI 316L SST (Barrel type)  | 1/2-14 NPT  |   | S |   |
| AISI 316L SST (Barrel type)  | M20 x 1.5   |   | T |   |
| Aluminium alloy (DIN type)   | M20 x 1.5   |   | J |   |
| <b>Output</b> – 13 <sup>th</sup> character   |   |   |   |   |
| HART digital communication and 4 ... 20 mA   | (No additional options)                           |   |   | H |
| HART digital communication and 4 ... 20 mA   | (Options requested by "Additional ordering code") |   |   | 1 |



### Additional ordering information for model 266JST

Add one or more 2-digit code(s) after the basic ordering information to select all required options.

|   | XX | XX |
|---|----|----|
| <b>Vent and Drain Valve Material / Position</b>   |    |    |
| AISI 316L SST (1.4404) On process axis (NACE)   | V1 |    |
| AISI 316L SST (1.4404) On flanges side top (NACE)   | V2 |    |
| AISI 316L SST (1.4404) On flanges side bottom (NACE)  | V3 |    |
| Hastelloy C-276 On process axis (NACE)  | V4 |    |
| Hastelloy C-276 On flanges side top (NACE)  | V5 |    |
| Hastelloy C-276 On flanges side bottom (NACE)   | V6 |    |
| Monel 400 On process axis (NACE)  | V7 |    |
| Monel 400 On flanges side top (NACE)  | V8 |    |
| Monel 400 On flanges side bottom (NACE)   | V9 |    |
| <b>Explosion Protection Certification</b>   |    |    |
| ATEX Group II Category 1 GD - Intrinsic Safety Ex ia  |    | E1 |
| ATEX Group II Category 1/2 GD - Flameproof Ex d (Note: 3)   |    | E2 |
| ATEX Group II Category 3 GD - Type of protection "N" Ex nL design compliance  |    | E3 |
| FM approval (Canada, CSA) Class I, II, Div. 1, 2, Group A to F (XP, IS, NI)<br>(only available with 1/2-14 NPT or M20 electrical connections) (Note: 3) |    | E4 |
| FM approval (USA) Class I, II, Div. 1, 2, Group A to F (XP, IS, NI)<br>(only available with 1/2-14 NPT or M20 electrical connections) (Note: 3)         |    | E6 |
| Combined ATEX Ex ia and Ex d (Note: 3)  |    | E7 |
| Combined ATEX - Intrinsic Safety, Flameproof and Type "N" (Note: 3)   |    | EW |
| FM approvals (USA and Canada) Intrinsic Safety  |    | EA |
| FM approvals (USA and Canada) Explosion-proof (Note: 3)   |    | EB |
| FM approvals (USA and Canada) Non-incendive   |    | EC |
| Combined ATEX, FM and CSA (only available with 1/2-14 NPT or M20 electrical connections) (Note: 3)  |    | EN |
| IEC Approval Group II Category 1 GD - Intrinsic Safety Ex ia  |    | E8 |
| IEC Approval Group II Category 1/2 GD - Flameproof Ex d (Note: 3)   |    | E9 |
| IEC Approval Group II Category 3 GD - Type of protection "N" Ex nL design compliance  |    | ER |
| Combined IEC Approval Ex ia and Ex d (Note: 3)  |    | EH |
| Combined IEC Approval Ex ia, Ex d and Ex nL (Note: 3)   |    | EI |
| NEPSI IIC Ex ia   |    | EY |
| NEPSI IIC Ex d (Note: 3)  |    | EZ |
| NEPSI IIC Ex nL   |    | ES |
| Combined NEPSI Ex ia and Ex d (Note: 3)   |    | EP |
| Combined NEPSI Ex ia, Ex d and Ex nL (Note: 3)  |    | EQ |

# Model 266CSH/CST Multivariable

# Model 266JSH/JST Multivariable

| Additional ordering information for model 266JST                          | XX | XX | XX | XX | XX | XX | XX |
|---|----|----|----|----|----|----|----|
| <b>Integral LCD</b>   |    |    |    |    |    |    |    |
| With integral LCD display   | L1 |    |    |    |    |    |    |
| TTG (Through The Glass) integral digital LCD display                      | L5 |    |    |    |    |    |    |
| <b>Mounting Bracket Shape / Material</b>                                  |    |    |    |    |    |    |    |
| For pipe mounting / Carbon steel (not suitable for AISI housing)          |    | B1 |    |    |    |    |    |
| For pipe mounting / AISI 316 SST (1.4401) (not suitable for AISI housing) |    | B2 |    |    |    |    |    |
| For wall mounting / Carbon steel (not suitable for AISI housing)          |    | B3 |    |    |    |    |    |
| For wall mounting / AISI 316 SST (1.4401) (not suitable for AISI housing) |    | B4 |    |    |    |    |    |
| Flat type bracket / AISI 316 SST (1.4401) (suitable for AISI housing)     |    | B5 |    |    |    |    |    |
| <b>Surge / Transient Protector</b>  |    |    |    |    |    |    |    |
| With integral surge / transient protector                                 |    |    |    | S2 |    |    |    |
| <b>Operating Instruction Language</b>                                     |    |    |    |    |    |    |    |
| German  |    |    |    |    | M1 |    |    |
| Italian   |    |    |    |    | M2 |    |    |
| Spanish   |    |    |    |    | M3 |    |    |
| French  |    |    |    |    | M4 |    |    |
| English   |    |    |    |    | M5 |    |    |
| <b>Label and Tag Language</b>   |    |    |    |    |    |    |    |
| German  |    |    |    |    |    | T1 |    |
| Italian   |    |    |    |    |    | T2 |    |
| Spanish   |    |    |    |    |    | T3 |    |
| French  |    |    |    |    |    | T4 |    |
| <b>Additional Tag Plate</b>   |    |    |    |    |    |    |    |
| Supplemental wired-on stainless steel plate (4 lines, 32 characters each) |    |    |    |    |    |    | I1 |
| Laser printing of tag on stainless steel plate                            |    |    |    |    |    |    | I2 |
| Stainless steel tag, certification and wire-on plates                     |    |    |    |    |    |    | I3 |
| <b>Configuration</b>  |    |    |    |    |    |    |    |
| Standard pressure = in. H2O / psi at 68 °F                                |    |    |    |    |    |    | N2 |
| Standard pressure = in. H2O / psi at 39.2 °F                              |    |    |    |    |    |    | N3 |
| Standard pressure = in. H2O / psi at 20 °C                                |    |    |    |    |    |    | N4 |
| Standard pressure = in. H2O / psi at 4 °C                                 |    |    |    |    |    |    | N5 |
| Custom  |    |    |    |    |    |    | N6 |

| Additional ordering information for model 266JST   |    | XX | XX | XX | XX | XX |
|--|----|----|----|----|----|----|
| <b>Preparation Procedure</b>   |    |    |    |    |    |    |
| Oxygen service cleaning, Pmax = 12 MPa (120 bar, 1740 psi) or maximum working pressure (lower value),<br>Tmax = 60 °C / 140 °F (only available with inert fill and Viton gasket) | P1 |    |    |    |    |    |
| Hydrogen service preparation   | P2 |    |    |    |    |    |
| <b>Certificates</b>  |    |    |    |    |    |    |
| Inspection certificate 3.1 acc. EN 10204 of calibration  |    | C1 |    |    |    |    |
| Inspection certificate 3.1 acc. EN 10204 of cleanliness stage  |    | C3 |    |    |    |    |
| Inspection certificate 3.1 acc. EN 10204 of helium leakage test of the sensor module   |    | C4 |    |    |    |    |
| Inspection certificate 3.1 acc. EN 10204 of pressure test  |    | C5 |    |    |    |    |
| Declaration of compliance with the order 2.1 acc. EN 10204 for instrument design   |    | C6 |    |    |    |    |
| Separate calibration record  |    | CC |    |    |    |    |
| Printed record of configured data of transmitter   |    | CG |    |    |    |    |
| PMI test on wetted parts   |    | CT |    |    |    |    |
| <b>Material Traceability</b>   |    |    |    |    |    |    |
| Certificate of compliance with the order 2.1 acc. EN 10204 for process wetted parts  |    |    |    | H1 |    |    |
| Inspection certificate 3.1 acc. EN 10204 of pressure-bearing and process wetted parts<br>with analysis certificates as material verification (Note 4)                            |    |    |    | H3 |    |    |
| Material certificate 2.2 acc. EN 10204 of the pressure bearing and process wetted parts  |    |    |    | H4 |    |    |
| <b>Connector</b>   |    |    |    |    |    |    |
| With cable gland M20 x 1.5   |    |    |    |    |    | U8 |
| <b>Housing Accessories</b>   |    |    |    |    |    |    |
| Integral mount manifold (price adder just for assembling, not for manifold)  |    |    |    |    |    | A1 |
| Four-wire add-on unit: Power supply 24 V UC / output signal 0 ... 20 mA (Note 5)   |    |    |    |    |    | A4 |
| Four-wire add-on unit: Power supply 24 V UC / output signal 4 ... 20 mA (Note 5)   |    |    |    |    |    | A6 |
| Four-wire add-on unit: Power supply 230 V AC / output signal 0 ... 20 mA (Note 5)  |    |    |    |    |    | A5 |
| Four-wire add-on unit: Power supply 230 V AC / output signal 4 ... 20 mA (Note 5)  |    |    |    |    |    | A7 |
| Plug upside welded   |    |    |    |    |    | A8 |
| Plug bottom welded   |    |    |    |    |    | A9 |

- Note 1: Not available with Diaphragm Material code M, V, T, C, Y, D  
Note 2: Suitable for Oxygen service  
Note 3: Not available with Housing Material / Electrical Connection code J  
Note 4: Minor Parts with Factory Certificate acc. to EN 10204  
Note 5: Only available with Housing Material / Electrical Connection code J (DIN housing)

### Standard delivery scope (changes possible with additional ordering code)

- Adapters supplied loose
- Sealing plugs for horizontal connection flanges on the process axis; not for PVDF Kynar insert or for vertical connection flanges (no vent / drain valves)
- For standard applications (without explosion protection)
- No display, no mounting bracket, no surge protector
- Multilanguage short operating instruction and English labeling
- Configuration with kPa and °C units
- No test, inspection, or material certificates

# Model 266CSH/CST Multivariable

# Model 266JSH/JST Multivariable

## Important remark for all models

The selection of suitable wetted parts and filling fluid for compatibility with the process media is a customer's responsibility, if not otherwise notified before manufacturing.

## NACE compliance information

- 1 The materials of constructions comply with metallurgical recommendations of NACE MR0175/ISO 15156 for sour oil field production environments. As specific environmental limits may apply to certain materials, please consult latest standard for further details. Materials AISI 316 / AISI 316L, Hastelloy C-276, Monel 400 also conform to NACE MR0103 for sour refining environments.
- 2 NACE MR0175 addresses bolting requirements in two classes:
  - **Exposed bolts:** bolts directly exposed to the sour environment or buried, encapsulated or anyway not exposed to atmosphere.
  - **Non exposed bolts:** the bolting must not be directly exposed to sour environments, and must be directly exposed to the atmosphere at all times.

266CSH, 266CST, 266JSH, 266JST bolting identified by "NACE" are in compliance to the requirements of NACE MR0175 when considered "non exposed bolting".

## Trademarks

™ Hastelloy C-276 is a Cabot Corporation trademark

™ Monel is an International Nickel Co. trademark

™ Viton is a DuPont de Nemours trademark

™ Galden is a Montefluos trademark

™ Kynar is an Elf Atochem North America Inc. trademark

# Notes

# Notes

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# Contact us

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# Model S26 seals for remote and direct mount

Measurement made easy

Engineered solutions for all  
applications



**All welded constructions**

combine an economically feasible and technically sound solution ensuring total reliability at line pressure down to full vacuum

**Large selection of options, materials and fill fluids**

meet nearly all process requirements

**Wide range of remote seal types**

allow optimum design for each application without compromise of performance

**Special designed remote seals for individual process solutions**

add flexibility for most demanding services

# Model S26 seals for remote and direct mount

## Remote Seals Overview

The S26 seals are used in combination with 2600T transmitters, allowing differential, gauge or absolute pressure measurements.

Connection of the seal(s) to the relevant transmitter can be achieved as follows :

- directly mounted with a short capillary connecting the „integral“ seal to the transmitter sensor;
- through a capillary system which link the transmitter sensor to a „remote“ seal of any version.

Using remote seal the transmitter can be selected with

- two seals using same fill fluid, capillary and diaphragm size
- one seal having the other side configured with a process flange for wet/dry leg connection or a blind flange providing vacuum or atmospheric reference.

Model 264HR/NR transmitters have always one remote seal only, with a selectable reference to atmosphere or vacuum respectively for gauge or absolute pressure measurements. The S26 Series Seal System is a protective device used to isolate 2600T series transmitters from the process fluid.

The seal system provides a flexible diaphragm seal between the process fluid and a liquid filled capillary tube connected to the body of the transmitter. The diaphragm isolates the process fluid while the filled capillary tube hydraulically transmits the process pressure to the transmitter sensor. The capillary of remote seal is corrosion-resistant with robust construction in stainless steel with spiral armour protection, also PVC jacket; PVC protection is always recommended except for high temperature application, where stainless steel armour is suggested. The all welded construction assures reliable operation over the widest range of operating temperature and under vacuum conditions.

For certain applications, use of seal is necessary to prevent the process fluid from leaving its enclosure, due to reasons such as :

- the process fluid has solids in suspension or is highly viscous and can foul impulse lines.
- the process fluid can solidify in impulse lines or the transmitter.
- the process fluid is too hazardous to enter the control area where the transmitter is located.
- the process temperature exceeds the recommended limits for the transmitter.
- the application is interface level or density measurement. Remote seals offer the required constant and equal specific gravity of the pressure transfer fluid on the high and low sides of the transmitter.
- the transmitter must be located away from the process for easier maintenance.

The S26 series is available with process connections for ASME, EN or JIS pipe flanges, wedge flow elements, chemical tees, and threaded pipe fittings. Extended diaphragm remote seals, suitable for connection to 2in - 3in or 4in flanged tank nozzles or flanged tees, permit the seal diaphragm to be located flush with the inside of a tank or pipe. Sanitary type seals meet the stringent requirements of sanitary food, dairy, pharmaceutical and BioTech applications, offering FDA approved fillings and compliance with 3-A Sanitary Standards. Fill fluids with FDA are defined as food fills and are Generally Recognized As Safe (GRAS) by the US Food and Drug Administration (FDA).

## Seal system selection criteria

Application of an S26 system in direct mount or remote seal configuration to 2600T transmitters affects performances of original devices. Effects are evident in:

- Accuracy
- Temperature effects
- Dynamic response

Accuracy is only marginally affected when seal diaphragm stiffness is relevant compared with sensor stiffness.

This is the only characteristic of the S26 system which has role on accuracy performance. High stiffness of diaphragm associated with low URL might produce increased errors of linearity, hysteresis, and long term stability; when diaphragm stiffness is accuracy related also temperature effects are significantly affected.

Some basic considerations on diaphragm stiffness help understanding effects introduced by S26 system associated with transmitters. This is physically defined by the ratio between the pressure variation applied to the diaphragm and the corresponding volume variation. The stiffness is not linear along the whole diaphragm volumetric displacement, but the S26 design is such to maintain the system linear within the service conditions of the transmitter such as:

- Operating pressure range
- Operating static pressure (for differential transmitters)
- Ambient and process temperature limits

Diaphragm stiffness is a function of material and thickness (elastic coefficient), diameter (type), convolution shape and geometry (design defined).

S26 system has effect on temperature performance of the complete transmitter. This effect is mostly on zero of the instrument and is produced by the expansion of the fill fluid into the closed volume formed by the transmitter flange cavity the capillary volume and the remote seal volume. This volume filled with a fluid with specific expansion coefficient; change in temperature of the measuring device produce a volume variation which is absorbed by the remote diaphragm, whose stiffness produces a change in the fluid pressure: this is the zero error. In real application the transmitter/seal system is not the same and stable temperature.

Therefore the errors referred in this document for each type of diaphragm and different fluids should be taken as a reference for qualitative evaluation and not a true behaviour in normal application conditions. Should again be recognized that the stiffness of diaphragm and in this case, the thermal coefficient of fluid are the parameter to take into account.

Application of S26 seal to transmitters increases the original time response. The amount of the increase depends from the number of elements and condition of the instrument as follow:

- transmitter sensor range
- physical configuration (i.e. a remote seal on other side)
- type of measure/number of seal (one or two)
- fill fluid viscosity of the S26 system applied
- ambient temperature (affects the transmitter and the capillary) and process temperature on the seal diaphragm
- capillary length

The delay introduced by the seal may be considered as an added constant time to the one of the associated transmitter.

For obtaining the best application solution :

- choose sensor code with URL closest to application SPAN
- select largest diameter diaphragm seal related to URL.
- keep the capillary length as short as possible
- select the fill fluid that suits the most extreme process conditions expected (highest temperature and lowest pressure) and it is compatible with the process fluid.
- In vacuum application, choose always the all welded version and mount the transmitter primary 30 cm/12 inches or more below the bottom seal connection.
- In a two-seal system use the same diaphragm size, capillary length and fill fluid on each side of the transmitter

### Ordering Information

The transmitter and each seal system are each identified by a product code number. These code numbers are stamped on the transmitter nameplate and each character identifies specific product features. Refer to ordering information for a detailed explanation of the product code numbers.

Industrial application in chemical, sanitary, food and any other process industries may require seal configurations and/or process connection different from those reported in this document. Each “special” should be evaluated by ABB to check the correctness and its level of functionality. Ask for the “S26 series seal form” to define precisely the measuring problem and application requirements.

ABB can also cooperate with you by developing a special remote seal for problems requiring individual solutions.

PLEASE CONTACT YOUR LOCAL ABB OFFICE OR REPRESENTATIVE FOR ADDITIONAL INFORMATION, SPECIFIC SEAL DATA AND APPLICABILITY.

# Model S26 seals for remote and direct mount

The following table shows the types of standard seals considered in this leaflet, detailing the MAXIMUM CAPILLARY LENGTH according to the combination SEAL/TRANSMITTER SENSOR.

The mnemonics will be used as shortest cross references with the transmitter data sheet which should be read in conjunction with this data sheet.

| Seal model                       | Seal type  | Seal diaphragm size (thickness) [flange type] | Two seals construction |   |   |    |     |    |     |     |    |   | One seal construction |   |    |     |     |     |     |    |    |    | Mnemonic |      |      |    |
|----------------------------------|--|---|------------------------|---|---|----|-----|----|-----|-----|----|---|-----------------------|---|----|-----|-----|-----|-----|----|----|----|----------|------|------|----|
|                                  |  |   | SENSOR                 |   |   |    |     |    |     |     |    |   | SENSOR                |   |    |     |     |     |     |    |    |    |          |      |      |    |
|                                  |  |   | B-C                    | E | F | G  | H-L | M  | N-P | Q-R | S  | C | E                     | F | G  | H-L | D-M | U-P | Q-R | S  | V  | Z  |          |      |      |    |
| S26WA<br>S26WE                   | Wafer<br>(ASME and EN standards)                           | 1.5 in. /DN 40                                | -                      | - | - | -  | 4   | 5  | 5   | 5   | 5  | - | -                     | - | -  | 3   | 5   | 5   | 5   | 5  | 5  | 5  | 5        | 5    | P1.5 |    |
|                                  |  | 2 in. / DN 50                                 | -                      | - | 3 | 3  | 8   | 8  | 8   | 8   | 8  | - | -                     | 2 | 2  | 6   | 8   | 8   | 8   | 8  | 8  | 8  | 8        | 8    | P2   |    |
|                                  |  | 3 in. / DN 80                                 | 1.5                    | 3 | 6 | 6  | 8   | 16 | 16  | 16  | 16 | - | 1                     | 4 | 4  | 10  | 10  | 10  | 10  | 10 | 10 | 10 | 10       | 10   | P3   |    |
|                                  |  | 1.5 in. /DN 40 (low)                          | -                      | - | - | 3  | 6   | 6  | 6   | 6   | 6  | - | -                     | - | -  | 4   | 6   | 6   | 6   | 6  | 6  | -  | -        | -    | F1.5 |    |
|                                  |  | 2 in. / DN 50 (low)                           | 1                      | 2 | 4 | 4  | 8   | 12 | 16  | 16  | 16 | 1 | -                     | 3 | 3  | 8   | 12  | 16  | 16  | 16 | 16 | 16 | -        | -    | -    | F2 |
|                                  |  | 3 in. / DN 80 (low)                           | 2                      | 5 | 8 | 8  | 10  | 16 | 16  | 16  | 16 | 2 | 2                     | 6 | 6  | 10  | 16  | 16  | 16  | 16 | 16 | 16 | -        | -    | -    | F3 |
| S26FA<br>S26FE<br>S26RA<br>S26RE | Flanged flush diaphragm<br>(ASME and EN standards)         | 2 in. / DN 50                                 | -                      | - | 3 | 3  | 8   | 8  | 8   | 8   | 8  | - | -                     | 2 | 2  | 6   | 8   | 8   | 8   | 8  | 8  | 8  | 8        | P2   |      |    |
|                                  |  | 3 in. / DN 80                                 | 1.5                    | 3 | 6 | 6  | 8   | 16 | 16  | 16  | 16 | - | 1                     | 4 | 4  | 10  | 10  | 10  | 10  | 10 | 10 | 10 | 10       | P3   |      |    |
|                                  |  | 4 in. / DN 100                                | 1.5                    | 3 | 6 | 6  | 8   | 16 | 16  | 16  | 16 | - | 1                     | 4 | 4  | 10  | 10  | 10  | 10  | 10 | 10 | 10 | 10       | P3   |      |    |
|                                  |  | 2 in. / DN 50 (low)                           | 1                      | 2 | 4 | 4  | 8   | 12 | 16  | 16  | 16 | 1 | -                     | 3 | 3  | 8   | 12  | 16  | 16  | 16 | 16 | 16 | -        | -    | F2   |    |
|                                  | 3 in. / DN 80 (low)  | 2   | 5                      | 8 | 8 | 10 | 16  | 16 | 16  | 16  | 2  | 2 | 6                     | 6 | 10 | 16  | 16  | 16  | 16  | 16 | 16 | -  | -        | F3   |      |    |
|                                  | 4 in. / DN 100 (low)                                       | 2   | 5                      | 8 | 8 | 10 | 16  | 16 | 16  | 16  | 2  | 2 | 6                     | 6 | 10 | 16  | 16  | 16  | 16  | 16 | 16 | -  | -        | F3   |      |    |
| S26RR                            | Flanged extended diaphragm (ASME and EN standards)         | 2 in. / DN 50                                 | -                      | - | 3 | 3  | 6   | 6  | 6   | 6   | -  | - | -                     | - | 4  | 6   | 6   | 6   | -   | -  | -  | -  | -        | E2   |      |    |
|                                  |  | 3 in. / DN 80                                 | 1                      | 2 | 4 | 4  | 8   | 12 | 12  | 12  | -  | - | -                     | 3 | 3  | 8   | 10  | 10  | 10  | -  | -  | -  | -        | -    | E3   |    |
|                                  |  | 4 in. / DN 100                                | 1.5                    | 3 | 6 | 6  | 8   | 16 | 16  | 16  | 16 | - | 1                     | 4 | 4  | 10  | 10  | 10  | 10  | 10 | 10 | -  | -        | -    | P3   |    |
|                                  |  | 2 in. / DN 50 [fixed]                         | -                      | - | - | 3  | 6   | 6  | 6   | 6   | 6  | - | -                     | - | -  | 4   | 6   | 6   | 6   | 6  | -  | -  | -        | -    | F1.5 |    |
|                                  |  | 3 in. / DN 80 [fixed]                         | 2                      | 5 | 8 | 8  | 10  | 12 | 12  | 12  | 12 | - | 2                     | 6 | 6  | 10  | 12  | 12  | 12  | 12 | -  | -  | -        | -    | F2.5 |    |
|                                  |  | 4 in. / DN100 [fixed]                         | 2                      | 5 | 8 | 8  | 10  | 12 | 12  | 12  | 12 | - | 2                     | 6 | 6  | 10  | 12  | 12  | 12  | 12 | -  | -  | -        | -    | F2.5 |    |
| S26RJ                            | Flanged flush diaphragm<br>(JIS standards)                 | A 50  | -                      | - | 3 | 3  | 8   | 8  | 8   | 8   | 8  | - | -                     | 2 | 2  | 6   | 8   | 8   | 8   | 8  | 8  | 8  | 8        | P2   |      |    |
|                                  |  | A 80  | 1.5                    | 3 | 6 | 6  | 8   | 16 | 16  | 16  | 16 | - | 1                     | 4 | 4  | 10  | 10  | 10  | 10  | 10 | 10 | 10 | 10       | P3   |      |    |
|                                  |  | A 100   | 1.5                    | 3 | 6 | 6  | 8   | 16 | 16  | 16  | 16 | - | 1                     | 4 | 4  | 10  | 10  | 10  | 10  | 10 | 10 | 10 | 10       | P3   |      |    |
| S26RR                            | Flanged flush diaphragm (Ring Joint ASME standard)         | 1.5 in.                                       | -                      | - | - | -  | 4   | 5  | 5   | 5   | 5  | - | -                     | - | -  | 3   | 5   | 5   | 5   | 5  | 5  | 5  | 5        | P1.5 |      |    |
|                                  |  | 2 in.   | -                      | - | 3 | 3  | 8   | 8  | 8   | 8   | 8  | - | -                     | 2 | 2  | 6   | 8   | 8   | 8   | 8  | 8  | 8  | 8        | P2   |      |    |
|                                  |  | 3 in.   | 1.5                    | 3 | 6 | 6  | 8   | 16 | 16  | 16  | 16 | - | 1                     | 4 | 4  | 10  | 10  | 10  | 10  | 10 | 10 | 10 | 10       | P3   |      |    |
| S26RH                            | Flanged to ISO 10423 flush diaphragm (API)                 | 1 13/16 in.                                   | -                      | - | - | -  | -   | -  | -   | -   | -  | - | -                     | - | -  | -   | -   | -   | -   | -  | 5  | 5  | H1.5     |      |      |    |
|                                  |  | 2 1/16 in.                                    | -                      | - | - | -  | -   | -  | -   | -   | -  | - | -                     | - | -  | -   | -   | -   | -   | -  | -  | 5  | 5        | P1.5 |      |    |
| S26CN                            | Flanged Chemical Tee                                       | 3 in.   | 1.5                    | 3 | 6 | 6  | 8   | 8  | 8   | 8   | 8  | - | 1                     | 4 | 4  | 8   | 8   | 8   | 8   | 8  | 8  | -  | -        | P3   |      |    |
| S26TT                            | Threaded off-line flanged                                  | 2 1/2 in.                                     | 1                      | 2 | 3 | 3  | 8   | 12 | 12  | 12  | 12 | - | 2                     | 3 | 3  | 8   | 8   | 8   | 8   | 8  | 8  | -  | -        | T2.5 |      |    |
| S26MA<br>S26ME                   | Off-line flanged (ASME and EN standards)                   | 2 1/2 in.                                     | 1                      | 2 | 3 | 3  | 8   | 12 | 12  | 12  | 12 | - | 2                     | 3 | 3  | 8   | 8   | 8   | 8   | 8  | 8  | -  | -        | T2.5 |      |    |
| S26SS                            | Union nut, Triclamp<br>Cherry Burrel,<br>Sanitary, Aseptic | 2 in. / F50                                   | -                      | - | 1 | 1  | 3   | 6  | 6   | 6   | -  | - | -                     | 1 | 1  | 3   | 6   | 6   | 6   | -  | -  | -  | -        | S2   |      |    |
|                                  |  | 3 in. / F80                                   | 1.5                    | 3 | 6 | 6  | 10  | 10 | 10  | 10  | -  | - | 3                     | 6 | 6  | 10  | 10  | 10  | 10  | -  | -  | -  | -        | S3   |      |    |
|                                  |  | 4 in.   | 1.5                    | 3 | 6 | 6  | 10  | 10 | 10  | 10  | -  | - | 3                     | 6 | 6  | 10  | 10  | 10  | 10  | -  | -  | -  | -        | S3   |      |    |
| S26VN                            | Saddle and Socket  | 2 1/2 in.                                     | -                      | - | - | -  | 4   | 5  | 5   | 5   | 5  | - | -                     | - | -  | 3   | 5   | 5   | 5   | 5  | 5  | 5  | P1.5     |      |      |    |
| S26UN                            | Union connection type                                      | 1 1/2 in.                                     | -                      | - | - | -  | -   | -  | -   | -   | -  | - | -                     | - | 3  | 5   | 5   | 5   | 5   | -  | -  | -  | Z1.5     |      |      |    |
| S26BN                            | Button type  | 1 in.   | -                      | - | - | -  | -   | -  | -   | -   | -  | - | -                     | - | -  | -   | -   | 3   | 3   | 3  | -  | -  | B1       |      |      |    |
| S26PN                            | Urea service<br>flanged                                    | 1 1/2 in.                                     | -                      | - | - | -  | -   | -  | -   | -   | -  | - | -                     | - | 5  | 5   | 5   | 5   | 5   | 5  | -  | -  | U1.5     |      |      |    |
|                                  |  | 2 1/2 in.                                     | -                      | - | 3 | 3  | 6   | 6  | 6   | 6   | 6  | - | -                     | 3 | 3  | 6   | 6   | 6   | 6   | 6  | 6  | -  | -        | U2.5 |      |    |

## Functional Specifications

The following table show characteristics of fill fluids when used in transmitters with remote seal(s).

### FILL FLUID CHARACTERISTICS

| Fill fluid (application)                                   | Process temperature and pressure limits |                            |                           |                 | Specifications @ 25 °C (77°F)   |                                 |                                      |
|--|---|----------------------------|---------------------------|-----------------|---------------------------------|---------------------------------|--------------------------------------|
|  | Tmax °C (°F)<br>@ Pabs<br>> of          | Pmin<br>mbar abs<br>(mmHg) | Tmax<br>°C (°F)<br>@ Pmin | Tmin<br>°C (°F) | Specific<br>gravity<br>(kg/dm3) | Kinematic<br>viscosity<br>(cst) | Thermal<br>expansion<br>(x 10-3 /°C) |
| Silicone oil PMX 200 10 cSt                                | 250 (480)<br>@ 385 mbar                 | 0.7<br>(0.5)               | 130<br>(266)              | -40<br>(-40)    | 0.934                           | 10                              | 1.08                                 |
| Silicone oil Baysilone PD5 5 cSt                           | 250 (480)<br>@ 900 mbar                 | 0.7<br>(0.5)               | 45<br>(113)               | -85<br>(-121)   | 0.923                           | 5                               | 0.98                                 |
| Inert oil Galden G5 (oxygen service)                       | 160 (320)<br>@ 1 bar                    | 2.1<br>(1.52)              | 60<br>(140)               | -20<br>(-4)     | 1.82                            | 4.4                             | 1.1                                  |
| Inert oil Halocarbon 4.2 (oxygen service)                  | 180 (356)<br>@ 425 mbar                 | 4<br>(3)                   | 70<br>(158)               | -20<br>(-4)     | 1.87                            | 6.3                             | 0.864                                |
| Silicone polymer Syltherm XLT (cryogenic service)          | 100 (212)<br>@ 118 mbar                 | 2.1<br>(1.52)              | 20<br>(68)                | -100<br>(-148)  | 0.852                           | 1.4                             | 1                                    |
| Silicone oil for high temperature                          | 375 (707)<br>@ 1 bar                    | 0.7<br>(0.5)               | 220<br>(428)              | -10<br>(14)     | 1.07                            | 39                              | 0.77                                 |
| Vegetable oil Neobee M-20 (food - sanitary) FDA approved   | 200 (390)<br>@ 1 bar                    | 10<br>(7.2)                | 20<br>(68)                | -18<br>(0)      | 0.92                            | 9.8                             | 1.2                                  |
| Mineral oil Esso Marcol 122 (food - sanitary) FDA approved | 250 (480)<br>@ 630 mbar                 | 0.7<br>(0.5)               | 110<br>(230)              | -6<br>(21)      | 0.849                           | 34.2                            | 0.79                                 |
| Glycerin Water 70% (food - sanitary) FDA approved          | 93 (200)<br>@ 1 bar                     | 1000<br>(760)              | 93<br>(200)               | -7<br>(20)      | 1.08                            | 2                               | 0.36                                 |

Absolute viscosity (cP) = Kinematic Viscosity (cSt) x Specific gravity at specified temperature.

The absolute viscosity value is used for response time calculation.

SEALS DIMENSIONS ON FOLLOWING PAGES ARE IN mm (in)

# Model S26 seals for remote and direct mount

## S26WA, S26WE Model Wafer remote diaphragm seal

The wafer remote seal is designed to be clamped between two ASME or EN raised face flanges.

The diaphragm side of the seal faces the process flange and a blind back-up flange is used on the other side of the seal.

### Pressure limits

#### Seal model S26WA to ASME B16.5

up to 41.37 MPa, 413.7 bar, 6000 psi

#### Seal model S26WE to EN 1092-1

|         |                           |
|---------|---------------------------|
| Form B1 | 40 MPa, 400 bar, 5800 psi |
| Form D  | 16 MPa, 160 bar 2320 psi  |
| Form E  | 10 MPa, 100 bar, 1450 psi |

but not greater than rating of mounting flange (NOT SUPPLIED)

### Vacuum service

Full vacuum subject to fill fluid limits.

Refer to FILL FLUID CHARACTERISTICS table. Minimum pressure with tantalum diaphragm is 1 kPa abs, 10 mbar abs, 0.15 psia.

| Flushing ring<br>gasket material | Process limits               |                                      |                       |
|----------------------------------|------------------------------|--------------------------------------|-----------------------|
|                                  | Pressure (max.)              | Temperature                          | P x T                 |
| Garlock                          | 6.9 MPa, 69 bar,<br>1000 psi | -73 and 204 °C<br>(-100 and 400 °F)  | 250000<br>( °F x psi) |
| Graphite                         | 2.5 MPa, 25 bar,<br>362 psi  | -100 and 380 °C<br>(-148 and 716 °F) |                       |
| PTFE                             | 6 MPa, 60 bar,<br>870 psi    | -100 and 250 °C<br>(-148 and 482 °F) |                       |

### Process temperature limits

Refer to FILL FLUID CHARACTERISTICS table and as follows for specific variants.

| Material                                  |                 |
|---|-----------------|
| Tantalum diaphragm                        | 260 °C (500 °F) |
| PFA anti-stick coating                    | 204 °C (400 °F) |
| PFA anti-corrosion and anti-stick coating | 250 °C (482 °F) |
| AISI gold plated diaphragm                | 320 °C (608 °F) |

### Gasket seat finish

Smooth (ASME or EN): 0.8 µm (Ra)

Serrated (ASME): 3.2 to 6.3 µm (Ra)

Serrated (EN 1092-1 Type B1): 3.2 to 12.5 µm (Ra)

Serrated (EN 1092-1 Type D and E): according to standard

### Temperature effect

The following table shows temperature effect per 20 K (36 °F) change, detailed separately for

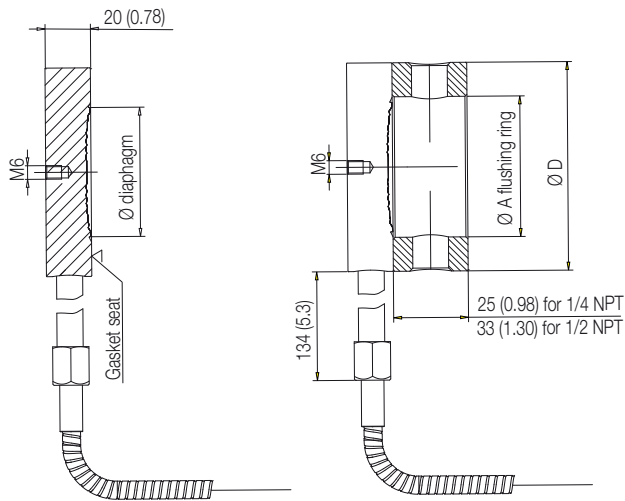
- the seal (one element), as process temperature error
- the capillary per meter
- the system (transmitter sensor when combined with a seal of specific size/type, either direct mount or remote) referred to silicone oil (PMX 200) filling and AISI 316 L ss diaphragm materials.

For filling different from silicone oil (PMX 200) the errors can be multiplied by ratio between the thermal expansion coefficients of the selected filling divided by the one of PMX 200, listed in the fill fluid characteristics table.

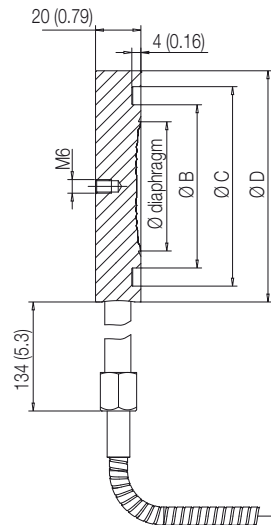
THE ERRORS IN TABLE CAN BE CONSIDERED DIVIDED BY 4 FOR TRANSMITTERS USING SAME REMOTE SEAL ON THE TWO SIDES

| S26W wafer<br>seal size - Mnemonic | Sensor URL                   | Seal error (process) | Remote mount<br>error (ambient) | 1 metre capillary<br>error (ambient) |
|------------------------------------|------------------------------|----------------------|---------------------------------|--------------------------------------|
| 1 1/2 in. / DN 40 - P1.5           | ≥ 160 kPa, 642 inH2O         | 0.74 kPa, 3 inH2O    | 0.62 kPa, 2.48 inH2O            | 0.31 kPa, 1.24 inH2O                 |
| 1 1/2 in. / DN 40 - F1.5           | 65 kPa, 260 inH2O            | 0.15 kPa, 0.6 inH2O  | 0.15 kPa, 0.6 inH2O             | 0.12 kPa, 0.48 inH2O                 |
| 1 1/2 in. / DN 40 - F1.5           | ≥ 160 kPa, 642 inH2O         | 0.15 kPa, 0.6 inH2O  | 0.15 kPa, 0.6 inH2O             | 0.08 kPa, 0.32 inH2O                 |
| 2 in. / DN 50 - P2                 | 40 - 65 kPa, 160 - 260 inH2O | 0.23 kPa, 0.92 inH2O | 0.14 kPa, 0.56 inH2O            | 0.11 kPa, 0.44 inH2O                 |
| 2 in. / DN 50 - P2                 | ≥160 kPa, 642 inH2O          | 0.23 kPa, 0.92 inH2O | 0.14 kPa, 0.56 inH2O            | 0.07 kPa, 0.28 inH2O                 |
| 2 in. / DN 50 - F2                 | ≥ 4 kPa, 16 inH2O            | 0.05 kPa, 0.2 inH2O  | 0.04 kPa, 0.16 inH2O            | 0.03 kPa, 0.12 inH2O                 |
| 3 in. / DN 80 - P3                 | 4 - 16 kPa, 16 - 64 inH2O    | 0.08 kPa, 0.32 inH2O | 0.02 kPa, 0.08 inH2O            | 0.02 kPa, 0.08 inH2O                 |
| 3 in. / DN 80 - P3                 | ≥ 40 kPa, 160 inH2O          | 0.08 kPa, 0.32 inH2O | 0.02 kPa, 0.08 inH2O            | 0.03 kPa, 0.12 inH2O                 |
| 3 in. / DN 80 - F3                 | ≥ 4 kPa, 16 inH2O            | 0.02 kPa, 0.08 inH2O | 0.02 kPa, 0.08 inH2O            | 0.01 kPa, 0.04 inH2O                 |

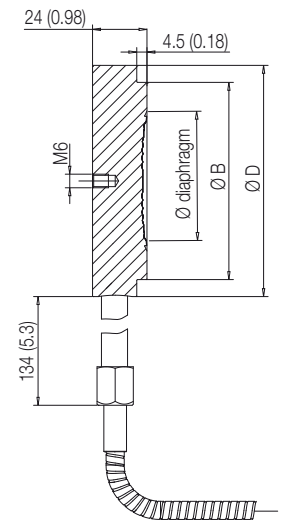
MULTIPLY BY 10 THE kPa VALUES TO OBTAIN mbar.



ASME and EN 1092-1 Form B1 smooth and serrated (flushing ring as option)



EN 1092-1 Form D



EN 1092-1 Form E

| Size/Rating             | Dimensions mm. (in.) for S26W |               |                 |            |            |            |
|-------------------------|-------------------------------|---------------|-----------------|------------|------------|------------|
|                         | diaphragm (dia)               |               | A flushing ring | B (dia)    | C (dia)    | D (dia)    |
|                         | std. thickness                | low thickness | internal dia    |            |            |            |
| 1 1/2 in. ASME B16.5    | 47 (1.85)                     | 47 (1.85)     | 52 (2.05)       | NA         | NA         | 73 (2.87)  |
| 2 in. ASME B16.5        | 60 (2.36)                     | 58 (2.28)     | 62 (2.44)       | NA         | NA         | 92 (3.62)  |
| 3 in. ASME B16.5        | 89 (3.5)                      | 75 (2.95)     | 92 (3.62)       | NA         | NA         | 127 (5)    |
| DN 40 EN 1092-1 Form B1 | 47 (1.85)                     | 47 (1.85)     | 52 (2.05)       | NA         | NA         | 88 (3.46)  |
| DN 50 EN 1092-1 Form B1 | 60 (2.36)                     | 58 (2.28)     | 62 (2.44)       | NA         | NA         | 102 (4.02) |
| DN 80 EN 1092-1 Form B1 | 89 (3.5)                      | 75 (2.95)     | 92 (3.62)       | NA         | NA         | 138 (5.43) |
| DN 40 EN 1092-1 Form D  | 47 (1.85)                     | 47 (1.85)     | NA              | 60 (2.36)  | 76 (2.99)  | 88 (3.46)  |
| DN 50 EN 1092-1 Form D  | 60 (2.36)                     | 58 (2.28)     | NA              | 72 (2.83)  | 88 (3.46)  | 102 (4.02) |
| DN 80 EN 1092-1 Form D  | 89 (3.5)                      | 75 (2.95)     | NA              | 105 (4.13) | 121 (4.76) | 138 (5.43) |
| DN 40 EN 1092-1 Form E  | 47 (1.85)                     | 47 (1.85)     | NA              | 75 (2.95)  | NA         | 88 (3.46)  |
| DN 50 EN 1092-1 Form E  | 60 (2.36)                     | 58 (2.28)     | NA              | 87 (3.42)  | NA         | 102 (4.02) |
| DN 80 EN 1092-1 Form E  | 89 (3.5)                      | 75 (2.95)     | NA              | 120 (4.72) | NA         | 138 (5.43) |

# Model S26 seals for remote and direct mount

## BASIC ORDERING INFORMATION model S26WA Wafer diaphragm seal to ASME B16.5

Select one character or set of characters from each category and specify complete catalog number.

| BASE MODEL - 1 <sup>st</sup> to 5 <sup>th</sup> characters                            | S | 2 | 6 | W | A | X | XX | X | XX | X | X | X | X | X          |
|---|---|---|---|---|---|---|----|---|----|---|---|---|---|------------|
| Wafer diaphragm seal to ASME B16.5  |   |   |   |   |   |   |    |   |    |   |   |   |   |            |
| <b>Transmitter Side of Connection</b> - 6 <sup>th</sup> character                     |   |   |   |   |   |   |    |   |    |   |   |   |   |            |
| High pressure side  |   |   |   |   |   | H |    |   |    |   |   |   |   |            |
| Low pressure side   |   |   |   |   |   | L |    |   |    |   |   |   |   |            |
| <b>Mounting Flange Rating / Size</b> - 7 <sup>th</sup> and 8 <sup>th</sup> characters |   |   |   |   |   |   |    |   |    |   |   |   |   |            |
| ASME 1 1/2 in.  |   |   |   |   |   |   |    |   |    |   |   |   |   |            |
| ASME 2 in.  |   |   |   |   |   |   |    |   |    |   |   |   |   |            |
| ASME 3 in.  |   |   |   |   |   |   |    |   |    |   |   |   |   |            |
| <b>Extensions Length and Material</b> - 9 <sup>th</sup> character                     |   |   |   |   |   |   |    |   |    |   |   |   |   |            |
| Flush   |   |   |   |   |   |   |    |   |    |   |   |   |   | F          |
| <b>Diaphragm Material</b> - 10 <sup>th</sup> and 11 <sup>th</sup> characters          |   |   |   |   |   |   |    |   |    |   |   |   |   |            |
| AISI 316 L ss   |   |   |   |   |   |   |    |   |    |   |   |   |   | NACE SM    |
| AISI 316 L ss - Low thickness   |   |   |   |   |   |   |    |   |    |   |   |   |   | NACE SL    |
| Hastelloy C-276   |   |   |   |   |   |   |    |   |    |   |   |   |   | NACE HM    |
| Hastelloy C-276 - Low thickness   |   |   |   |   |   |   |    |   |    |   |   |   |   | NACE HL    |
| Hastelloy C-2000  |   |   |   |   |   |   |    |   |    |   |   |   |   | NACE MM    |
| Inconel 625   |   |   |   |   |   |   |    |   |    |   |   |   |   | NACE LM    |
| Tantalum  |   |   |   |   |   |   |    |   |    |   |   |   |   | NACE TM    |
| AISI 316 L ss gold plated   |   |   |   |   |   |   |    |   |    |   |   |   |   | NACE NM    |
| AISI 316 L ss with PFA anti-stick coating   |   |   |   |   |   |   |    |   |    |   |   |   |   | NACE KM    |
| Hastelloy C-276 with PFA anti-stick coating   |   |   |   |   |   |   |    |   |    |   |   |   |   | NACE YM    |
| AISI 316 L ss with PFA coating anti-corrosion and anti-stick                          |   |   |   |   |   |   |    |   |    |   |   |   |   | NACE WM    |
| Diaflex (AISI with anti-abrasion treatment)   |   |   |   |   |   |   |    |   |    |   |   |   |   | NACE FM    |
| Superduplex ss (UNS S32750 to ASTM SA479)   |   |   |   |   |   |   |    |   |    |   |   |   |   | NACE EM    |
| Monel   |   |   |   |   |   |   |    |   |    |   |   |   |   | NACE GM    |
| <b>Seal Surface Finish</b> - 12 <sup>th</sup> character                               |   |   |   |   |   |   |    |   |    |   |   |   |   |            |
| Serrated  |   |   |   |   |   |   |    |   |    |   |   |   |   | (Note 1) 1 |
| Smooth  |   |   |   |   |   |   |    |   |    |   |   |   |   | 2          |
| <b>Capillary Protection</b> - 13 <sup>th</sup> character                              |   |   |   |   |   |   |    |   |    |   |   |   |   |            |
| AISI 316 L ss armour  |   |   |   |   |   |   |    |   |    |   |   |   |   | A          |
| AISI 316 L ss armour with PVC protective cover  |   |   |   |   |   |   |    |   |    |   |   |   |   | B          |

continued  
see next page



**BASIC ORDERING INFORMATION model S26WA**

**S 2 6 W A X XX X XX X X**

**X**

**X**

**X**

**X**

**X**

**Capillary Length m (Feet) - 14<sup>th</sup> character**

|          |   |
|----------|---|
| 1 (3)    | A |
| 1.5 (5)  | B |
| 2 (7)    | C |
| 2.5 (8)  | D |
| 3 (10)   | E |
| 3.5 (12) | F |
| 4 (13)   | G |
| 4.5 (15) | H |
| 5 (17)   | J |
| 5.5 (18) | K |
| 6 (20)   | L |
| 6.5 (22) | M |
| 7 (23.5) | N |
| 7.5 (25) | P |
| 8 (27)   | Q |
| 9 (30)   | R |
| 10 (33)  | S |
| 12 (40)  | T |
| 14 (47)  | U |
| 16 (53)  | V |

continued  
see next page

**Fill Fluid - 15th character**

|                                   |                                  |          |   |
|-----------------------------------|----------------------------------|----------|---|
| Silicone oil PMX 200 10 cSt       | (-40 to 250 °C; -40 to 480 °F)   |          | S |
| Silicone oil Baysilone PD5 5 cSt  | (-85 to 250 °C; -121 to 480 °F)  |          | P |
| Inert oil - Galden G5             | (Oxygen service)                 | (Note 2) | N |
| Inert oil - Halocarbon 4.2        | (Oxygen service)                 | (Note 2) | D |
| Silicone oil for high temperature | (-10 to 375 °C; 14 to 707 °F)    |          | G |
| Silicone polymer Syltherm XLT     | (-100 to 100 °C; -148 to 212 °F) |          | C |
| Mineral oil Esso Marcol 122       | (FDA approved)                   | (Note 3) | W |
| Vegetable oil Neobee M-20         | (FDA approved)                   | (Note 3) | A |
| Glycerin-water 70%                | (FDA approved)                   | (Note 3) | B |

# Model S26 seals for remote and direct mount

| BASIC ORDERING INFORMATION model S26WA                             |  |              | S | 2 | 6 | W | A | X    | XX | XX | XX | XX | X | X | X |   |
|--|--|--------------|---|---|---|---|---|------|----|----|----|----|---|---|---|---|
| <b>Flushing Ring: Hole and Thread</b> - 16 <sup>th</sup> character |  |              |   |   |   |   |   |      |    |    |    |    |   |   |   |   |
| None   |  |              |   |   |   |   |   |      |    |    |    |    |   | N |   |   |
| 1 hole - 1/2 in. NPT   |  |              |   |   |   |   |   |      |    |    |    |    |   | 2 |   |   |
| 2 holes - 1/2 in. NPT  |  |              |   |   |   |   |   |      |    |    |    |    |   | 3 |   |   |
| 1 hole - 1/4 in. NPT   |  |              |   |   |   |   |   |      |    |    |    |    |   | 4 |   |   |
| 2 holes - 1/4 in. NPT  |  |              |   |   |   |   |   |      |    |    |    |    |   | 5 |   |   |
| <b>Flushing Ring Material</b> - 17 <sup>th</sup> character         |  |              |   |   |   |   |   |      |    |    |    |    |   |   |   |   |
| None   |  | (Note 4)     |   |   |   |   |   |      |    |    |    |    |   |   | N |   |
| AISI 316 L ss  |  | (Note 5)     |   |   |   |   |   | NACE |    |    |    |    |   |   | A |   |
| Hastelloy C-276  |  | (Notes 5, 6) |   |   |   |   |   | NACE |    |    |    |    |   |   | H |   |
| <b>Flushing Ring: Plug and Gasket</b> - 18 <sup>th</sup> character |  |              |   |   |   |   |   |      |    |    |    |    |   |   |   |   |
| No plug - No gasket  |  |              |   |   |   |   |   |      |    |    |    |    |   |   |   | N |
| No plug - garlock  |  | (Note 5)     |   |   |   |   |   |      |    |    |    |    |   |   |   | A |
| No plug - PTFE   |  | (Note 5)     |   |   |   |   |   |      |    |    |    |    |   |   |   | B |
| No plug - graphite   |  | (Note 5)     |   |   |   |   |   |      |    |    |    |    |   |   |   | C |
| AISI 316 L ss - no gasket  |  | (Notes 5, 7) |   |   |   |   |   | NACE |    |    |    |    |   |   |   | D |
| AISI 316 L ss - garlock  |  | (Notes 5, 7) |   |   |   |   |   | NACE |    |    |    |    |   |   |   | E |
| AISI 316 L ss - PTFE   |  | (Notes 5, 7) |   |   |   |   |   | NACE |    |    |    |    |   |   |   | F |
| AISI 316 L ss - graphite   |  | (Notes 5, 7) |   |   |   |   |   | NACE |    |    |    |    |   |   |   | G |
| Hastelloy C-276 - no gasket  |  | (Notes 5, 8) |   |   |   |   |   | NACE |    |    |    |    |   |   |   | H |
| Hastelloy C-276 - garlock  |  | (Notes 5, 8) |   |   |   |   |   | NACE |    |    |    |    |   |   |   | L |
| Hastelloy C-276 - PTFE   |  | (Notes 5, 8) |   |   |   |   |   | NACE |    |    |    |    |   |   |   | M |
| Hastelloy C-276 - graphite   |  | (Notes 5, 8) |   |   |   |   |   | NACE |    |    |    |    |   |   |   | P |

Note 1: Not available with diaphragm material code MM, LM, TM, NM, KM, YM, WM

Note 2: Suitable for oxygen service

Note 3: Suitable for food application

Note 4: Not available with Flushing ring: hole and thread code 2, 3, 4, 5

Note 5: Not available with Flushing ring: hole and thread code N

Note 6: Not available with Seal surface finish code 1

Note 7: Not available with Hastelloy C-276 flushing ring material code H

Note 8: Not available with AISI 316 L flushing ring material code A

**BASIC ORDERING INFORMATION model S26WE Wafer diaphragm seal to EN 1092-1**

Select one character or set of characters from each category and specify complete catalog number.

| BASE MODEL - 1 <sup>st</sup> to 5 <sup>th</sup> characters                            | S | 2 | 6 | W | E | X    | XX       | X | XX | X | X | X | X | X                          |
|---|---|---|---|---|---|------|----------|---|----|---|---|---|---|----------------------------|
| Wafer diaphragm seal to EN 1092-1   |   |   |   |   |   |      |          |   |    |   |   |   |   |                            |
| <b>Transmitter Side of Connection</b> - 6 <sup>th</sup> character                     |   |   |   |   |   |      |          |   |    |   |   |   |   | continued<br>see next page |
| High pressure side  |   |   |   |   |   | H    |          |   |    |   |   |   |   |                            |
| Low pressure side   |   |   |   |   |   | L    |          |   |    |   |   |   |   |                            |
| <b>Mounting Flange Rating / Size</b> - 7 <sup>th</sup> and 8 <sup>th</sup> characters |   |   |   |   |   |      |          |   |    |   |   |   |   |                            |
| EN 1092-1 DN 40   |   |   |   |   |   |      | M5       |   |    |   |   |   |   |                            |
| EN 1092-1 DN 50   |   |   |   |   |   |      | N5       |   |    |   |   |   |   |                            |
| EN 1092-1 DN 80   |   |   |   |   |   |      | P5       |   |    |   |   |   |   |                            |
| <b>Extensions Length and Material</b> - 9 <sup>th</sup> character                     |   |   |   |   |   |      |          |   |    |   |   |   |   |                            |
| Flush   |   |   |   |   |   |      |          | F |    |   |   |   |   |                            |
| <b>Diaphragm Material</b> - 10 <sup>th</sup> and 11 <sup>th</sup> characters          |   |   |   |   |   |      |          |   |    |   |   |   |   |                            |
| AISI 316 L ss   |   |   |   |   |   | NACE |          |   | SM |   |   |   |   |                            |
| AISI 316 L ss - Low thickness   |   |   |   |   |   | NACE |          |   | SL |   |   |   |   |                            |
| Hastelloy C-276   |   |   |   |   |   | NACE |          |   | HM |   |   |   |   |                            |
| Hastelloy C-276 - Low thickness   |   |   |   |   |   | NACE |          |   | HL |   |   |   |   |                            |
| Hastelloy C-2000  |   |   |   |   |   | NACE |          |   | MM |   |   |   |   |                            |
| Inconel 625   |   |   |   |   |   | NACE |          |   | LM |   |   |   |   |                            |
| Tantalum  |   |   |   |   |   |      |          |   | TM |   |   |   |   |                            |
| AISI 316 L ss gold plated   |   |   |   |   |   | NACE |          |   | NM |   |   |   |   |                            |
| AISI 316 L ss with PFA anti-stick coating   |   |   |   |   |   | NACE |          |   | KM |   |   |   |   |                            |
| Hastelloy C-276 with PFA anti-stick coating   |   |   |   |   |   | NACE |          |   | YM |   |   |   |   |                            |
| AISI 316 L ss with PFA coating anti-corrosion and anti-stick                          |   |   |   |   |   | NACE |          |   | WM |   |   |   |   |                            |
| Diaflex (AISI with anti-abrasion treatment)   |   |   |   |   |   | NACE |          |   | FM |   |   |   |   |                            |
| Superduplex ss (UNS S32750 to ASTM SA479)   |   |   |   |   |   | NACE |          |   | EM |   |   |   |   |                            |
| Monel   |   |   |   |   |   | NACE |          |   | GM |   |   |   |   |                            |
| <b>Seal Surface Finish</b> - 12 <sup>th</sup> character                               |   |   |   |   |   |      |          |   |    |   |   |   |   |                            |
| Serrated  |   |   |   |   |   |      | (Note 1) |   |    |   |   |   | 1 |                            |
| Smooth  |   |   |   |   |   |      |          |   |    |   |   |   | 2 |                            |
| Form E - Spigot type  |   |   |   |   |   |      | (Note 2) |   |    |   |   |   | 4 |                            |
| Form D - Groove type  |   |   |   |   |   |      | (Note 3) |   |    |   |   |   | 6 |                            |
| <b>Capillary Protection</b> - 13 <sup>th</sup> character                              |   |   |   |   |   |      |          |   |    |   |   |   |   |                            |
| AISI 316 L ss armour  |   |   |   |   |   |      |          |   |    |   |   |   |   | A                          |
| AISI 316 L ss armour with PVC protective cover  |   |   |   |   |   |      |          |   |    |   |   |   |   | B                          |

# Model S26 seals for remote and direct mount

| BASIC ORDERING INFORMATION model S26WE                        |  |  | S | 2 | 6 | W | E | X | XX | XX       | XX | X | X | X | X | X |                            |  |  |
|---|--|--|---|---|---|---|---|---|----|----------|----|---|---|---|---|---|----------------------------|--|--|
| <b>Capillary Length m (Feet)</b> - 14 <sup>th</sup> character |  |  |   |   |   |   |   |   |    |          |    |   |   |   |   |   |                            |  |  |
| 1 (3)   |  |  |   |   |   |   |   |   |    |          |    | A |   |   |   |   | continued<br>see next page |  |  |
| 1.5 (5)   |  |  |   |   |   |   |   |   |    |          |    | B |   |   |   |   |                            |  |  |
| 2 (7)   |  |  |   |   |   |   |   |   |    |          |    | C |   |   |   |   |                            |  |  |
| 2.5 (8)   |  |  |   |   |   |   |   |   |    |          |    | D |   |   |   |   |                            |  |  |
| 3 (10)  |  |  |   |   |   |   |   |   |    |          |    | E |   |   |   |   |                            |  |  |
| 3.5 (12)  |  |  |   |   |   |   |   |   |    |          |    | F |   |   |   |   |                            |  |  |
| 4 (13)  |  |  |   |   |   |   |   |   |    |          |    | G |   |   |   |   |                            |  |  |
| 4.5 (15)  |  |  |   |   |   |   |   |   |    |          |    | H |   |   |   |   |                            |  |  |
| 5 (17)  |  |  |   |   |   |   |   |   |    |          |    | J |   |   |   |   |                            |  |  |
| 5.5 (18)  |  |  |   |   |   |   |   |   |    |          |    | K |   |   |   |   |                            |  |  |
| 6 (20)  |  |  |   |   |   |   |   |   |    |          |    | L |   |   |   |   |                            |  |  |
| 6.5 (22)  |  |  |   |   |   |   |   |   |    |          |    | M |   |   |   |   |                            |  |  |
| 7 (23.5)  |  |  |   |   |   |   |   |   |    |          |    | N |   |   |   |   |                            |  |  |
| 7.5 (25)  |  |  |   |   |   |   |   |   |    |          |    | P |   |   |   |   |                            |  |  |
| 8 (27)  |  |  |   |   |   |   |   |   |    |          |    | Q |   |   |   |   |                            |  |  |
| 9 (30)  |  |  |   |   |   |   |   |   |    |          |    | R |   |   |   |   |                            |  |  |
| 10 (33)   |  |  |   |   |   |   |   |   |    |          |    | S |   |   |   |   |                            |  |  |
| 12 (40)   |  |  |   |   |   |   |   |   |    |          |    | T |   |   |   |   |                            |  |  |
| 14 (47)   |  |  |   |   |   |   |   |   |    |          |    | U |   |   |   |   |                            |  |  |
| 16 (53)   |  |  |   |   |   |   |   |   |    |          |    | V |   |   |   |   |                            |  |  |
| <b>Fill Fluid</b> - 15 <sup>th</sup> character                |  |  |   |   |   |   |   |   |    |          |    |   |   |   |   |   |                            |  |  |
| Silicone oil PMX 200 10 cSt                                   |  |  |   |   |   |   |   |   |    |          |    |   |   |   |   |   | S                          |  |  |
| Silicone oil Baysilone PD5 5 cSt                              |  |  |   |   |   |   |   |   |    |          |    |   |   |   |   |   | P                          |  |  |
| Inert oil - Galden G5   |  |  |   |   |   |   |   |   |    | (Note 4) |    |   |   |   |   |   | N                          |  |  |
| Inert oil - Halocarbon 4.2                                    |  |  |   |   |   |   |   |   |    | (Note 4) |    |   |   |   |   |   | D                          |  |  |
| Silicone oil for high temperature                             |  |  |   |   |   |   |   |   |    |          |    |   |   |   |   |   | G                          |  |  |
| Silicone polymer Syltherm XLT                                 |  |  |   |   |   |   |   |   |    |          |    |   |   |   |   |   | C                          |  |  |
| Mineral oil Esso Marcol 122                                   |  |  |   |   |   |   |   |   |    | (Note 5) |    |   |   |   |   |   | W                          |  |  |
| Vegetable oil Neobee M-20                                     |  |  |   |   |   |   |   |   |    | (Note 5) |    |   |   |   |   |   | A                          |  |  |
| Glycerin-water 70%  |  |  |   |   |   |   |   |   |    | (Note 5) |    |   |   |   |   |   | B                          |  |  |

| BASIC ORDERING INFORMATION model S26WE                             |               |      | S 2 6 W E X XX X XX X X X X X | X | X | X |
|--|---------------|------|-------------------------------|---|---|---|
| <b>Flushing Ring: Hole and Thread</b> - 16 <sup>th</sup> character |               |      |                               |   |   |   |
| None   |               |      |                               | N |   |   |
| 1 hole - 1/2 in. NPT   | (Note 6)      |      |                               | 2 |   |   |
| 2 holes - 1/2 in. NPT  | (Note 6)      |      |                               | 3 |   |   |
| 1 hole - 1/4 in. NPT   | (Note 6)      |      |                               | 4 |   |   |
| 2 holes - 1/4 in. NPT  | (Note 6)      |      |                               | 5 |   |   |
| <b>Flushing Ring Material</b> - 17 <sup>th</sup> character         |               |      |                               |   |   |   |
| None   | (Note 7)      |      |                               |   | N |   |
| AISI 316 L ss  | (Note 8)      | NACE |                               |   | A |   |
| Hastelloy C-276  | (Notes 8, 9)  | NACE |                               |   | H |   |
| <b>Flushing Ring: Plug and Gasket</b> - 18 <sup>th</sup> character |               |      |                               |   |   |   |
| No plug - No gasket  |               |      |                               |   |   | N |
| No plug - garlock  | (Note 8)      |      |                               |   |   | A |
| No plug - PTFE   | (Note 8)      |      |                               |   |   | B |
| No plug - graphite   | (Note 8)      |      |                               |   |   | C |
| AISI 316 L ss - no gasket  | (Notes 8, 10) | NACE |                               |   |   | D |
| AISI 316 L ss - garlock  | (Notes 8, 10) | NACE |                               |   |   | E |
| AISI 316 L ss - PTFE   | (Notes 8, 10) | NACE |                               |   |   | F |
| AISI 316 L ss - graphite   | (Notes 8, 10) | NACE |                               |   |   | G |
| Hastelloy C-276 - no gasket  | (Notes 8, 11) | NACE |                               |   |   | H |
| Hastelloy C-276 - garlock  | (Notes 8, 11) | NACE |                               |   |   | L |
| Hastelloy C-276 - PTFE   | (Notes 8, 11) | NACE |                               |   |   | M |
| Hastelloy C-276 - graphite   | (Notes 8, 11) | NACE |                               |   |   | P |

- Note 1: Not available with diaphragm material code MM, LM, TM, NM, KM, YM, WM  
Note 2: Not available with diaphragm material code SM, HM, MM, LM, TM, NM, KM, YM, WM, FM, EM  
Note 3: Not available with diaphragm material code SM, HM, HL, MM, LM, TM, NM, KM, YM, WM, FM, EM  
Note 4: Suitable for oxygen service  
Note 5: Suitable for food application  
Note 6: Not available with Seal surface finish code 4, 6  
Note 7: Not available with Flushing ring: hole and thread code 2, 3, 4, 5  
Note 8: Not available with Flushing ring: hole and thread code N  
Note 9: Not available with Seal surface finish code 1  
Note 10: Not available with Hastelloy C-276 flushing ring material code H  
Note 11: Not available with AISI 316 L flushing ring material code A

# Model S26 seals for remote and direct mount

## S26CN Model Chemical Tee remote diaphragm seal

The chemical tee remote seal is designed to connect to a Wedge Flow Element or to any process fitting with appropriate mating condition. Chemical tee elements cannot be connected to a standard ASME pipe flange.

### Pressure limits

#### Seal model S26C

2 MPa, 20 bar, 290 psi

### Vacuum service

Full vacuum subject to fill fluid limits.

Refer to FILL FLUID CHARACTERISTICS table.

### Process temperature limits

Refer to FILL FLUID CHARACTERISTICS table and as follows for specific variants.

| Material                                  |                                      |
|---|--------------------------------------|
| PFA anti-stick coating                    | 204 °C (400 °F)                      |
| PFA anti-corrosion and anti-stick coating | 250 °C (482 °F)                      |
| PTFE gasket                               | -100 and 260 °C<br>(-148 and 500 °F) |
| graphite gasket                           | -100 and 340 °C<br>(-148 and 644 °F) |

### Temperature effect

The following table shows temperature effect per 20 K (36 °F) change, detailed separately for

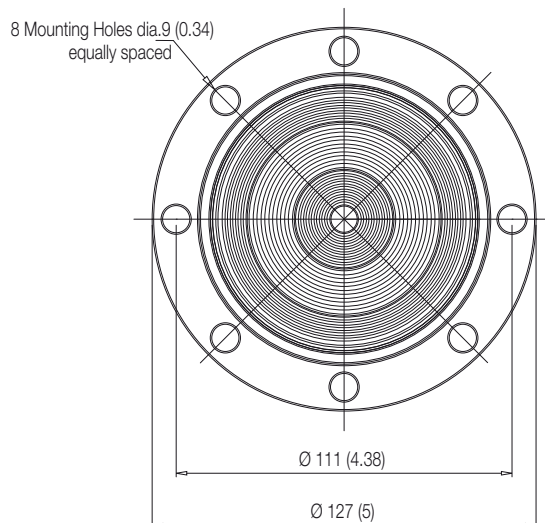
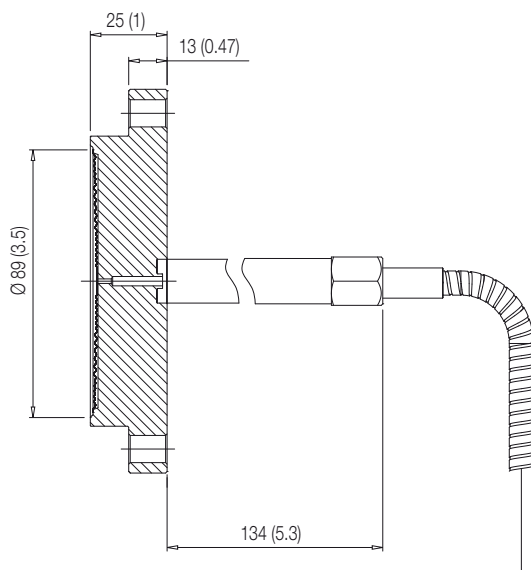
- the seal (one element), as process temperature error
- the capillary per meter
- the system (transmitter sensor when combined with a seal of specific size/type, either direct mount or remote) referred to silicone oil (PMX 200) filling and AISI 316 L ss diaphragm materials.

For filling different from silicone oil (PMX 200) the errors can be multiplied by ratio between the thermal expansion coefficients of the selected filling divided by the one of PMX 200, listed in the fill fluid characteristics table.

THE ERRORS IN TABLE CAN BE CONSIDERED DIVIDED BY 4 FOR TRANSMITTERS USING SAME REMOTE SEAL ON THE TWO SIDES

| S26C Chemical Tee seal size - Mnemonic | Sensor URL                | Seal error (process) | Remote system error (ambient) | 1 metre capillary error (ambient) |
|--|---------------------------|----------------------|-------------------------------|-----------------------------------|
| 3 in. - P3                             | 4 - 16 kPa, 16 - 64 inH2O | 0.08 kPa, 0.32 inH2O | 0.02 kPa, 0.08 inH2O          | 0.02 kPa, 0.08 inH2O              |
| 3 in. - P3                             | ≥ 40 kPa, 160 inH2O       | 0.08 kPa, 0.32 inH2O | 0.02 kPa, 0.08 inH2O          | 0.03 kPa, 0.12 inH2O              |

MULTIPLY BY 10 THE kPa VALUES TO OBTAIN mbar.



**BASIC ORDERING INFORMATION model S26CN Chemical Tee diaphragm seal**

Select one character or set of characters from each category and specify complete catalog number.

|   |                                  |          |           |           |          |          |          |          |
|---|----------------------------------|----------|-----------|-----------|----------|----------|----------|----------|
| <b>BASE MODEL</b> - 1 <sup>st</sup> to 5 <sup>th</sup> characters                     | <b>S 2 6 C N</b>                 | <b>X</b> | <b>XX</b> | <b>XX</b> | <b>X</b> | <b>X</b> | <b>X</b> | <b>X</b> |
| Chemical Tee seal   |                                  |          |           |           |          |          |          |          |
| <b>Transmitter Side of Connection</b> - 6 <sup>th</sup> character                     |                                  |          |           |           |          |          |          |          |
| High pressure side  |                                  | H        |           |           |          |          |          |          |
| Low pressure side   |                                  | L        |           |           |          |          |          |          |
| <b>Mounting Flange Rating / Size</b> - 7 <sup>th</sup> and 8 <sup>th</sup> characters |                                  |          |           |           |          |          |          |          |
| Integral with seal / 3 in. Proprietary  |                                  |          |           | GP        |          |          |          |          |
| <b>Diaphragm Material</b> - 9 <sup>th</sup> and 10 <sup>th</sup> characters           |                                  |          |           |           |          |          |          |          |
| AISI 316 L ss   | NACE                             |          |           | SM        |          |          |          |          |
| Hastelloy C-276   | NACE                             |          |           | HM        |          |          |          |          |
| AISI 316 L ss with PFA anti-stick coating   | NACE                             |          |           | KM        |          |          |          |          |
| Hastelloy C-276 with PFA anti-stick coating   | NACE                             |          |           | YM        |          |          |          |          |
| AISI 316 L ss with PFA coating anti-corrosion and anti-stick                          | NACE                             |          |           | WM        |          |          |          |          |
| Diaflex (AISI with anti-abrasion treatment)   | NACE                             |          |           | FM        |          |          |          |          |
| <b>Capillary Protection</b> - 11 <sup>th</sup> character                              |                                  |          |           |           |          |          |          |          |
| AISI 316 L ss armour  |                                  |          |           |           |          |          | A        |          |
| AISI 316 L ss armour with PVC protective cover  |                                  |          |           |           |          |          | B        |          |
| <b>Capillary Length m (Feet)</b> - 12 <sup>th</sup> character                         |                                  |          |           |           |          |          |          |          |
| 1 (3)   |                                  |          |           |           |          |          |          | A        |
| 1.5 (5)   |                                  |          |           |           |          |          |          | B        |
| 2 (7)   |                                  |          |           |           |          |          |          | C        |
| 2.5 (8)   |                                  |          |           |           |          |          |          | D        |
| 3 (10)  |                                  |          |           |           |          |          |          | E        |
| 3.5 (12)  |                                  |          |           |           |          |          |          | F        |
| 4 (13)  |                                  |          |           |           |          |          |          | G        |
| 4.5 (15)  |                                  |          |           |           |          |          |          | H        |
| 5 (17)  |                                  |          |           |           |          |          |          | J        |
| 6 (20)  |                                  |          |           |           |          |          |          | L        |
| 7 (23.5)  |                                  |          |           |           |          |          |          | N        |
| 8 (27)  |                                  |          |           |           |          |          |          | Q        |
| <b>Fill Fluid</b> - 13 <sup>th</sup> character  |                                  |          |           |           |          |          |          |          |
| Silicone oil PMX 200 10 cSt   | (-40 to 250 °C; -40 to 480 °F)   |          |           |           |          |          |          | S        |
| Silicone oil Baysilone PD5 5 cSt  | (-85 to 250 °C; -121 to 480 °F)  |          |           |           |          |          |          | P        |
| Inert oil - Galden G5   | (Oxygen service)                 | (Note 1) |           |           |          |          |          | N        |
| Inert oil - Halocarbon 4.2  | (Oxygen service)                 | (Note 1) |           |           |          |          |          | D        |
| Silicone oil for high temperature   | (-10 to 375 °C; 14 to 707 °F)    |          |           |           |          |          |          | G        |
| Silicone polymer Syltherm XLT   | (-100 to 100 °C; -148 to 212 °F) |          |           |           |          |          |          | C        |
| Mineral oil Esso Marcol 122   | (FDA approved)                   | (Note 2) |           |           |          |          |          | W        |
| Vegetable oil Neobee M-20   | (FDA approved)                   | (Note 2) |           |           |          |          |          | A        |
| Glycerin-water 70%  | (FDA approved)                   | (Note 2) |           |           |          |          |          | B        |
| <b>Gasket</b> - 14 <sup>th</sup> character  |                                  |          |           |           |          |          |          |          |
| None  |                                  |          |           |           |          |          |          | 1        |
| PTFE with silica filler   |                                  |          |           |           |          |          |          | 6        |
| Graphite  |                                  |          |           |           |          |          |          | 7        |

Note 1: Suitable for oxygen service  
 Note 2: Suitable for food application

# Model S26 seals for remote and direct mount

## S26RA, S26RE, S26RJ Rotating flange diaphragm seals (flush and extended)

These extended and flush diaphragm seal are designed to connect to flanged pipe fitting, according to ASME, EN or JIS standards. For liquid level measurement installations, the seal connects to a flanged tank nozzle, compliant to relevant standard. The sealing is provided by a selectable gasket seat surface finish. The mounting flange is of rotating type.

### Pressure limits

| Seal model S26RA<br>to ASME B16.5 | Carbon Steel flange<br>@ 100 °F (38 °C) | AISI 316 ss flange<br>@ 100 °F (38 °C) |
|-----------------------------------|---|--|
| Class 150                         | 285 psi                                 | 275 psi                                |
| Class 300                         | 740 psi                                 | 720 psi                                |
| Class 600                         | 1480 psi                                | 1440 psi                               |
| Class 900                         | 2220 psi                                | 2160 psi                               |
| Class 1500                        | 3705 psi                                | 3600 psi                               |

| Seal model S26RE<br>to EN 1092-1 | Carbon steel flange<br>@ 120 °C | AISI 316 ss flange<br>@ 20 °C |
|----------------------------------|---------------------------------|-------------------------------|
| PN 16                            | 16 bar                          | 16 bar                        |
| PN 40                            | 40 bar                          | 40 bar                        |
| PN 63                            | 63 bar                          | 63 bar                        |
| PN 100                           | 100 bar                         | 100 bar                       |

| Seal model S26RJ<br>to JIS B 2220 | Carbon steel flange<br>@ 120 °C | AISI 316 ss flange<br>@ 120 °C |
|-----------------------------------|---------------------------------|--------------------------------|
| 10K                               | 14 bar                          | 14 bar                         |
| 20K                               | 36 bar                          | 36 bar                         |
| 40K                               | 68 bar                          | 68 bar                         |

The pressure limit decreases with increasing temperature above the specified limit, according to the referred standards.

### Vacuum service

Full vacuum subject to fill fluid limits.

Refer to FILL FLUID CHARACTERISTICS table. Minimum pressure with tantalum diaphragm is 1 kPa abs, 10 mbar abs, 0.15 psia.

| Flushing ring<br>gasket material | Process limits               |                                      |                       |
|----------------------------------|------------------------------|--------------------------------------|-----------------------|
|                                  | Pressure (max.)              | Temperature                          | P x T                 |
| Garlock                          | 6.9 MPa, 69 bar,<br>1000 psi | -73 and 204 °C<br>(-100 and 400 °F)  | 250000<br>( °F x psi) |
| Graphite                         | 2.5 MPa, 25 bar,<br>362 psi  | -100 and 380 °C<br>(-148 and 716 °F) |                       |
| PTFE                             | 6 MPa, 60 bar,<br>870 psi    | -100 and 250 °C<br>(-148 and 482 °F) |                       |

### Process temperature limits

Refer to FILL FLUID CHARACTERISTICS table and as follows for specific variants.

| Material                                  |                 |
|---|-----------------|
| Tantalum diaphragm                        | 260 °C (500 °F) |
| PFA anti-stick coating                    | 204 °C (400 °F) |
| PFA anti-corrosion and anti-stick coating | 250 °C (482 °F) |
| AISI gold plated diaphragm                | 320 °C (608 °F) |

### Gasket seat finish

Smooth (ASME or EN): 0.8 µm (Ra)

Serrated (ASME): 3.2 to 6.3 µm (Ra)

Serrated (EN 1092-1 Type B1): 3.2 to 12.5 µm (Ra)



### Temperature effect

The following table shows temperature effect per 20 K (36 °F) change, detailed separately for

- a) the seal (one element), as process temperature error
- b) the capillary per meter
- c) the system (transmitter sensor when combined with a seal of specific size/type, either direct mount or remote) referred to silicone oil (PMX 200) filling and AISI 316 L ss diaphragm materials.

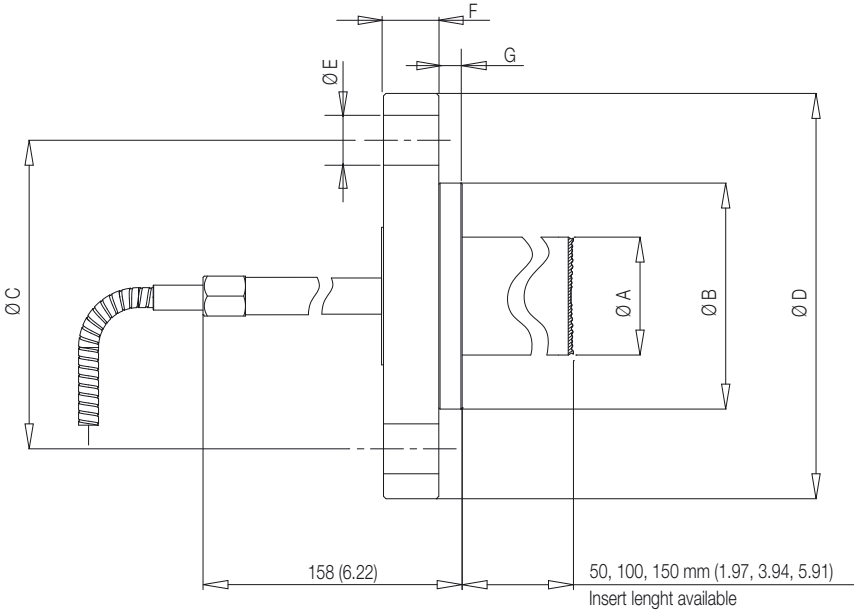
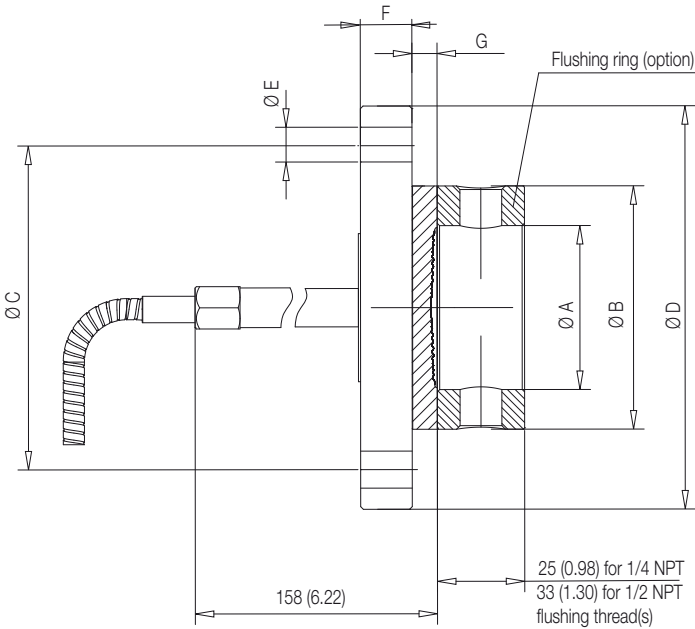
For filling different from silicone oil (PMX 200) the errors can be multiplied by ratio between the thermal expansion coefficients of the selected filling divided by the one of PMX 200, listed in the fill fluid characteristics table.

THE ERRORS IN TABLE CAN BE CONSIDERED DIVIDED BY 4 FOR TRANSMITTERS USING SAME REMOTE SEAL ON THE TWO SIDES

| <b>S26RA, S26RE, S26RJ<br/>rotating flange<br/>seal size - Mnemonic</b> | <b>Sensor URL</b>            | <b>Seal error (process)</b> | <b>Direct mount system<br/>error (ambient)</b> | <b>Remote system error<br/>(ambient)</b> | <b>1 metre capillary<br/>error (ambient)</b> |
|---|------------------------------|-----------------------------|--|--|--|
| 2 in. / DN 50 / A50 - P2  | 40 - 65 kPa, 160 - 260 inH2O | 0.23 kPa, 0.92 inH2O        | 0.16 kPa, 0.64 inH2O                           | 0.14 kPa, 0.56 inH2O                     | 0.11 kPa, 0.44 inH2O                         |
| 2 in. / DN 50 / A50 - P2  | ≥160 kPa, 642 inH2O          | 0.23 kPa, 0.92 inH2O        | 0.16 kPa, 0.64 inH2O                           | 0.14 kPa, 0.56 inH2O                     | 0.07 kPa, 0.28 inH2O                         |
| 2 in. / DN 50 - F2  | ≥ 4 kPa, 16 inH2O            | 0.05 kPa, 0.2 inH2O         | 0.04 kPa, 0.16 inH2O                           | 0.04 kPa, 0.16 inH2O                     | 0.03 kPa, 0.12 inH2O                         |
| 2 in. / DN 50 - E2  | 40 - 65 kPa, 160 - 260 inH2O | 0.25 kPa, 1 inH2O           | 0.21 kPa, 0.84 inH2O                           | 0.20 kPa, 0.80 inH2O                     | 0.15 kPa, 0.60 inH2O                         |
| 2 in. / DN 50 - E2  | ≥160 kPa, 642 inH2O          | 0.25 kPa, 1 inH2O           | 0.21 kPa, 0.84 inH2O                           | 0.20 kPa, 0.80 inH2O                     | 0.10 kPa, 0.40 inH2O                         |
| 3 / 4 in. / DN 80 / 100<br>A80 / 100 - P3                               | 4 - 16 kPa, 16 - 64 inH2O    | 0.08 kPa, 0.32 inH2O        | 0.02 kPa, 0.08 inH2O                           | 0.02 kPa, 0.08 inH2O                     | 0.02 kPa, 0.08 inH2O                         |
| 3 / 4 in. / DN 80 / 100<br>A80 / 100 - P3                               | ≥ 40 kPa, 160 inH2O          | 0.08 kPa, 0.32 inH2O        | 0.02 kPa, 0.08 inH2O                           | 0.02 kPa, 0.08 inH2O                     | 0.03 kPa, 0.12 inH2O                         |
| 3 / 4 in. / DN 80 / 100 - F3  | ≥ 4 kPa, 16 inH2O            | 0.02 kPa, 0.08 inH2O        | 0.02 kPa, 0.08 inH2O                           | 0.02 kPa, 0.08 inH2O                     | 0.01 kPa, 0.04 inH2O                         |
| 3 in. / DN 80 - E3  | ≥ 4 kPa, 16 inH2O            | 0.14 kPa, 0.56 inH2O        | 0.05 kPa, 0.20 inH2O                           | 0.05 kPa, 0.20 inH2O                     | 0.04 kPa, 0.16 inH2O                         |

MULTIPLY BY 10 THE kPa VALUES TO OBTAIN mbar.

# Model S26 seals for remote and direct mount



| Size/Rating        | Dimensions mm. (in.) for S26RA |                         |                               |                               |             |               |              |              |               |            |                |
|--------------------|--------------------------------|-------------------------|-------------------------------|-------------------------------|-------------|---------------|--------------|--------------|---------------|------------|----------------|
|                    | A (dia)                        |                         |                               |                               | B (dia)     | C (dia)       | D (dia)      | E (dia)      | F<br>(Note 1) | G          | N° of<br>holes |
|                    | extended<br>diaphragm          | flush diaphragm<br>std. | flush diaphragm<br>low thick. | flushing ring<br>internal dia |             |               |              |              |               |            |                |
| 2 in. ASME CL 150  | 48 (1.9)                       | 60 (2.36)               | 58 (2.28)                     | 62 (2.44)                     | 92 (3.62)   | 120.65 (4.75) | 152.4 (6)    | 19.1 (0.79)  | 17.5 (0.6)    | 9.5 (0.37) | 4              |
| 2 in. ASME CL 300  | 48 (1.9)                       | 60 (2.36)               | 58 (2.28)                     | 62 (2.44)                     | 92 (3.62)   | 127 (5)       | 165.1 (6.5)  | 19.1 (0.79)  | 20.8 (0.8)    | 9.5 (0.37) | 8              |
| 2 in. ASME CL 600  | NA                             | 60 (2.36)               | 58 (2.28)                     | 62 (2.44)                     | 92 (3.62)   | 127 (5)       | 165.1 (6.5)  | 19.1 (0.79)  | 25.4 (1)      | 9.5 (0.37) | 8              |
| 2 in. ASME CL 900  | NA                             | 60 (2.36)               | 58 (2.28)                     | 62 (2.44)                     | 92 (3.62)   | 165 (6.5)     | 215.9 (8.5)  | 26 (1.02)    | 38.1 (1.5)    | 9.5 (0.37) | 8              |
| 2 in. ASME CL 1500 | NA                             | 60 (2.36)               | 58 (2.28)                     | 62 (2.44)                     | 92 (3.62)   | 165 (6.5)     | 215.9 (8.5)  | 26 (1.02)    | 38.1 (1.5)    | 9.5 (0.37) | 8              |
| 3 in. ASME CL 150  | 72 (2.83)                      | 89 (3.5)                | 75 (2.95)                     | 92 (3.62)                     | 127 (5)     | 152.4 (6)     | 190.5 (7.5)  | 19.1 (0.79)  | 22.4 (0.88)   | 9.5 (0.37) | 4              |
| 3 in. ASME CL 300  | 72 (2.83)                      | 89 (3.5)                | 75 (2.95)                     | 92 (3.62)                     | 127 (5)     | 168.15 (6.62) | 209.6 (8.25) | 22.4 (0.88)  | 26.9 (1.1)    | 9.5 (0.37) | 8              |
| 3 in. ASME CL 600  | NA                             | 89 (3.5)                | 75 (2.95)                     | 92 (3.62)                     | 127 (5)     | 168.15 (6.62) | 209.6 (8.25) | 22.4 (0.88)  | 31.8 (1.3)    | 9.5 (0.37) | 8              |
| 3 in. ASME CL 900  | NA                             | 89 (3.5)                | 75 (2.95)                     | 92 (3.62)                     | 127 (5)     | 190.5 (7.5)   | 241 (9.48)   | 26 (1.02)    | 38.1 (1.5)    | 9.5 (0.37) | 8              |
| 3 in. ASME CL1500  | NA                             | 89 (3.5)                | 75 (2.95)                     | 92 (3.62)                     | 127 (5)     | 203.2 (8)     | 266.7 (10.5) | 31.75 (1.25) | 47.7 (1.88)   | 9.5 (0.37) | 8              |
| 4 in. ASME CL 150  | 94 (3.7)                       | 89 (3.5)                | 75 (2.95)                     | 92 (3.62)                     | 157.2 (6.2) | 190.5 (7.5)   | 228.6 (9)    | 19.1 (0.79)  | 22.4 (0.88)   | 9.5 (0.37) | 8              |
| 4 in. ASME CL 300  | 94 (3.7)                       | 89 (3.5)                | 75 (2.95)                     | 92 (3.62)                     | 157.2 (6.2) | 200.2 (7.88)  | 254 (10)     | 22 (0.86)    | 30.2 (1.19)   | 9.5 (0.37) | 8              |

| Size/Rating     | Dimensions mm. (in.) for S26RE |                         |                               |                               |            |            |            |           |               |            |                |
|-----------------|--------------------------------|-------------------------|-------------------------------|-------------------------------|------------|------------|------------|-----------|---------------|------------|----------------|
|                 | A (dia)                        |                         |                               |                               | B (dia)    | C (dia)    | D (dia)    | E (dia)   | F<br>(Note 2) | G          | N° of<br>holes |
|                 | extended<br>diaphragm          | flush diaphragm<br>std. | flush diaphragm<br>low thick. | flushing ring<br>internal dia |            |            |            |           |               |            |                |
| DN 50 EN PN 16  | 48 (1.9)                       | 60 (2.36)               | 58 (2.28)                     | 62 (2.44)                     | 102 (4.02) | 125 (4.92) | 165 (6.5)  | 18 (0.71) | 15 (0.58)     | 9.5 (0.37) | 4              |
| DN 50 EN PN 40  | 48 (1.9)                       | 60 (2.36)               | 58 (2.28)                     | 62 (2.44)                     | 102 (4.02) | 125 (4.92) | 165 (6.5)  | 18 (0.71) | 18 (0.71)     | 9.5 (0.37) | 4              |
| DN 50 EN PN 63  | NA                             | 60 (2.36)               | 58 (2.28)                     | 62 (2.44)                     | 102 (4.02) | 135 (5.31) | 180 (7.08) | 22 (0.86) | 23 (0.9)      | 9.5 (0.37) | 4              |
| DN 50 EN PN 100 | NA                             | 60 (2.36)               | 58 (2.28)                     | 62 (2.44)                     | 102 (4.02) | 145 (5.71) | 195 (7.67) | 26 (1.02) | 27 (1.06)     | 9.5 (0.37) | 4              |
| DN 80 EN PN 16  | 72 (2.83)                      | 89 (3.5)                | 75 (2.95)                     | 92 (3.62)                     | 138 (5.43) | 160 (6.3)  | 200 (7.87) | 18 (0.71) | 17 (0.67)     | 9.5 (0.37) | 8              |
| DN 80 EN PN 40  | 72 (2.83)                      | 89 (3.5)                | 75 (2.95)                     | 92 (3.62)                     | 138 (5.43) | 160 (6.3)  | 200 (7.87) | 18 (0.71) | 21 (0.83)     | 9.5 (0.37) | 8              |
| DN 80 EN PN 63  | NA                             | 89 (3.5)                | 75 (2.95)                     | 92 (3.62)                     | 138 (5.43) | 170 (6.7)  | 215 (8.46) | 22 (0.86) | 25 (0.98)     | 9.5 (0.37) | 8              |
| DN 80 EN PN 100 | NA                             | 89 (3.5)                | 75 (2.95)                     | 92 (3.62)                     | 138 (5.43) | 180 (7.08) | 230 (9.05) | 26 (1.02) | 33 (1.3)      | 9.5 (0.37) | 8              |
| DN 100 EN PN 16 | 94 (3.7)                       | 89 (3.5)                | 75 (2.95)                     | 92 (3.62)                     | 158 (6.22) | 180 (7.08) | 220 (8.66) | 18 (0.71) | 17 (0.67)     | 9.5 (0.37) | 8              |
| DN 100 EN PN 40 | 94 (3.7)                       | 89 (3.5)                | 75 (2.95)                     | 92 (3.62)                     | 162 (6.38) | 190 (7.48) | 235 (9.25) | 22 (0.86) | 21 (0.83)     | 9.5 (0.37) | 8              |

| Size/Rating    | Dimensions mm. (in.) for S26RJ |              |            |            |           |               |            |                |
|----------------|--------------------------------|--------------|------------|------------|-----------|---------------|------------|----------------|
|                | A (dia)<br>flush diaphragm     | B (dia)      | C (dia)    | D (dia)    | E (dia)   | F<br>(Note 3) | G          | N° of<br>holes |
| A50 Class 10K  | 60 (2.36)                      | 96 (3.78)    | 120 (4.72) | 155 (6.1)  | 19 (0.75) | 16 (0.63)     | 9.5 (0.37) | 4              |
| A50 Class 20K  | 60 (2.36)                      | 96 (3.78)    | 120 (4.72) | 155 (6.1)  | 19 (0.75) | 18 (0.71)     | 9.5 (0.37) | 8              |
| A50 Class 40K  | 60 (2.36)                      | 104.3 (4.11) | 130 (5.12) | 165 (6.5)  | 19 (0.75) | 26 (1.02)     | 9.5 (0.37) | 8              |
| A80 Class 10K  | 89 (3.5)                       | 126 (4.96)   | 150 (5.91) | 185 (7.28) | 19 (0.75) | 18 (0.71)     | 9.5 (0.37) | 8              |
| A80 Class 20K  | 89 (3.5)                       | 132 (5.2)    | 160 (6.3)  | 200 (7.87) | 23 (0.91) | 22 (0.87)     | 9.5 (0.37) | 8              |
| A80 Class 40K  | 89 (3.5)                       | 139.4 (5.49) | 170 (6.69) | 210 (8.27) | 23 (0.91) | 32 (1.26)     | 9.5 (0.37) | 8              |
| A100 Class 10K | 89 (3.5)                       | 151 (5.94)   | 175 (6.89) | 210 (8.27) | 19 (0.75) | 18 (0.71)     | 9.5 (0.37) | 8              |
| A100 Class 20K | 89 (3.5)                       | 160 (6.3)    | 185 (7.28) | 225 (8.86) | 23 (0.91) | 24 (0.94)     | 9.5 (0.37) | 8              |

Note 1 - Flange thickness tolerance is +3.0 / -0.0 mm. (+0.12 / -0.0 in.).

Note 2 - Flange thickness tolerance is +1.0 / -1.3 mm. (+0.04 / -0.05 in.) up to 18 mm. or ±1.5 mm. (±0.06 in.) from 18 to 50 mm.

Note 3 - Flange thickness tolerance is +1.5 / -0.0 mm. (+0.06 / -0.0 in.) up to Class 20K or +2.0 / -0.0 mm. (+0.08 / -0.0 in.) from Class 20K to Class 50K.

# Model S26 seals for remote and direct mount

## BASIC ORDERING INFORMATION model S26RA Rotating flange diaphragm seals (flush and extended) to ASME B16.5

Select one character or set of characters from each category and specify complete catalog number.

| BASE MODEL - 1 <sup>st</sup> to 5 <sup>th</sup> characters                            | S | 2 | 6 | R | A | X               | XX       | X    | X | XX | X | X | X | X  |
|---|---|---|---|---|---|-----------------|----------|------|---|----|---|---|---|----|
| Rotating flange diaphragm seal (Raised face flush and extended) to ASME B16.5         |   |   |   |   |   |                 |          |      |   |    |   |   |   |    |
| <b>Transmitter Side of Connection</b> - 6 <sup>th</sup> character                     |   |   |   |   |   |                 |          |      |   |    |   |   |   |    |
| High pressure side  |   |   |   |   |   | H               |          |      |   |    |   |   |   |    |
| Low pressure side   |   |   |   |   |   | L               |          |      |   |    |   |   |   |    |
| <b>Mounting Flange Rating / Size</b> - 7 <sup>th</sup> and 8 <sup>th</sup> characters |   |   |   |   |   |                 |          |      |   |    |   |   |   |    |
| ASME CL 150 / 2 in.   |   |   |   |   |   |                 |          |      |   |    |   |   |   |    |
| ASME CL 300 / 2 in.   |   |   |   |   |   |                 |          |      |   |    |   |   |   |    |
| ASME CL 600 / 2 in.   |   |   |   |   |   |                 |          |      |   |    |   |   |   |    |
| ASME CL 900-1500 / 2 in.  |   |   |   |   |   |                 |          |      |   |    |   |   |   |    |
| ASME CL 150 / 3 in.   |   |   |   |   |   |                 |          |      |   |    |   |   |   |    |
| ASME CL 300 / 3 in.   |   |   |   |   |   |                 |          |      |   |    |   |   |   |    |
| ASME CL 600 / 3 in.   |   |   |   |   |   |                 |          |      |   |    |   |   |   |    |
| ASME CL 900 / 3 in.   |   |   |   |   |   |                 |          |      |   |    |   |   |   |    |
| ASME CL 1500 / 3 in.  |   |   |   |   |   |                 |          |      |   |    |   |   |   |    |
| ASME CL 150 / 4 in.   |   |   |   |   |   |                 |          |      |   |    |   |   |   |    |
| ASME CL 300 / 4 in.   |   |   |   |   |   |                 |          |      |   |    |   |   |   |    |
| <b>Mounting Flange Material</b> - 9 <sup>th</sup> character                           |   |   |   |   |   |                 |          |      |   |    |   |   |   |    |
| Carbon steel  |   |   |   |   |   |                 |          |      |   |    |   |   |   |    |
| AISI 316 ss   |   |   |   |   |   |                 |          |      |   |    |   |   |   |    |
| <b>Extensions Length and Material</b> - 10 <sup>th</sup> character                    |   |   |   |   |   |                 |          |      |   |    |   |   |   |    |
| Flush   |   |   |   |   |   |                 |          |      |   |    |   |   |   | F  |
| 50 mm (2 in.)   |   |   |   |   |   | AISI 316 L ss   | (Note 1) |      |   |    |   |   |   | 1  |
| 50 mm (2 in.)   |   |   |   |   |   | Hastelloy C-276 | (Note 1) |      |   |    |   |   |   | 2  |
| 100 mm (4 in.)  |   |   |   |   |   | AISI 316 L ss   | (Note 1) |      |   |    |   |   |   | 3  |
| 100 mm (4 in.)  |   |   |   |   |   | Hastelloy C-276 | (Note 1) |      |   |    |   |   |   | 4  |
| 150 mm (6 in.)  |   |   |   |   |   | AISI 316 L ss   | (Note 1) |      |   |    |   |   |   | 5  |
| 150 mm (6 in.)  |   |   |   |   |   | Hastelloy C-276 | (Note 1) |      |   |    |   |   |   | 6  |
| <b>Diaphragm Material</b> - 11 <sup>th</sup> and 12 <sup>th</sup> characters          |   |   |   |   |   |                 |          |      |   |    |   |   |   |    |
| AISI 316 L ss   |   |   |   |   |   |                 | (Note 2) | NACE |   |    |   |   |   | SM |
| AISI 316 L ss - Low thickness (not for extended diaphragm)                            |   |   |   |   |   |                 | (Note 3) | NACE |   |    |   |   |   | SL |
| Hastelloy C-276   |   |   |   |   |   |                 |          | NACE |   |    |   |   |   | HM |
| Hastelloy C-276 - Low thickness (not for extended diaphragm)                          |   |   |   |   |   |                 | (Note 3) | NACE |   |    |   |   |   | HL |
| Hastelloy C-2000 (not for extended diaphragm)   |   |   |   |   |   |                 | (Note 3) | NACE |   |    |   |   |   | MM |
| Hastelloy C-2000 diaphragm and body (not for extended diaphragm)                      |   |   |   |   |   |                 | (Note 3) | NACE |   |    |   |   |   | ZM |
| Inconel 625 (not for extended diaphragm)  |   |   |   |   |   |                 | (Note 3) | NACE |   |    |   |   |   | LM |
| Tantalum (not for extended diaphragm)   |   |   |   |   |   |                 | (Note 3) |      |   |    |   |   |   | TM |
| AISI 316 L ss gold plated (not for extended diaphragm)                                |   |   |   |   |   |                 | (Note 3) | NACE |   |    |   |   |   | NM |
| AISI 316 L ss with PFA anti-stick coating   |   |   |   |   |   |                 | (Note 2) | NACE |   |    |   |   |   | KM |
| Hastelloy C-276 with PFA anti-stick coating   |   |   |   |   |   |                 |          | NACE |   |    |   |   |   | YM |
| AISI 316 L ss with PFA coating anti-corrosion and anti-stick                          |   |   |   |   |   |                 | (Note 2) | NACE |   |    |   |   |   | WM |
| Diaflex (AISI with anti-abrasion treatment)   |   |   |   |   |   |                 | (Note 2) | NACE |   |    |   |   |   | FM |
| Superduplex ss (UNS S32750 to ASTM SA479) (not for extended diaphragm)                |   |   |   |   |   |                 | (Note 3) | NACE |   |    |   |   |   | EM |
| Monel (not for extended diaphragm)  |   |   |   |   |   |                 | (Note 3) | NACE |   |    |   |   |   | GM |

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| BASIC ORDERING INFORMATION model S26RA                        |                                  |          | S | 2 | R | A | X | XX | X | X | XX | X | X | X | X | X | X |
|---|----------------------------------|----------|---|---|---|---|---|----|---|---|----|---|---|---|---|---|---|
| <b>Seal Surface Finish</b> - 13 <sup>th</sup> character       |                                  |          |   |   |   |   |   |    |   |   |    |   |   |   |   |   |   |
| Serrated  | (Note 4)                         | 1        |   |   |   |   |   |    |   |   |    |   |   |   |   |   |   |
| Smooth  | (Note 15)                        | 2        |   |   |   |   |   |    |   |   |    |   |   |   |   |   |   |
| <b>Capillary Protection</b> - 14 <sup>th</sup> character      |                                  |          |   |   |   |   |   |    |   |   |    |   |   |   |   |   |   |
| AISI 316 L ss armour  |                                  |          |   |   |   |   |   |    |   |   |    |   |   |   |   |   |   |
| AISI 316 L ss armour with PVC protective cover                |                                  |          |   |   |   |   |   |    |   |   |    |   |   |   |   |   |   |
| Extension tube for direct mount seal                          | (Note 5)                         |          |   |   |   |   |   |    |   |   |    |   |   |   |   |   |   |
| <b>Capillary Length m (Feet)</b> - 15 <sup>th</sup> character |                                  |          |   |   |   |   |   |    |   |   |    |   |   |   |   |   |   |
| Direct-mount construction                                     | (Note 6)                         |          |   |   |   |   |   |    |   |   |    |   |   |   |   |   |   |
| 1 (3)   | (Note 7)                         |          |   |   |   |   |   |    |   |   |    |   |   |   |   |   |   |
| 1.5 (5)   | (Note 7)                         |          |   |   |   |   |   |    |   |   |    |   |   |   |   |   |   |
| 2 (7)   | (Note 7)                         |          |   |   |   |   |   |    |   |   |    |   |   |   |   |   |   |
| 2.5 (8)   | (Note 7)                         |          |   |   |   |   |   |    |   |   |    |   |   |   |   |   |   |
| 3 (10)  | (Note 7)                         |          |   |   |   |   |   |    |   |   |    |   |   |   |   |   |   |
| 3.5 (12)  | (Note 7)                         |          |   |   |   |   |   |    |   |   |    |   |   |   |   |   |   |
| 4 (13)  | (Note 7)                         |          |   |   |   |   |   |    |   |   |    |   |   |   |   |   |   |
| 4.5 (15)  | (Note 7)                         |          |   |   |   |   |   |    |   |   |    |   |   |   |   |   |   |
| 5 (17)  | (Note 7)                         |          |   |   |   |   |   |    |   |   |    |   |   |   |   |   |   |
| 5.5 (18)  | (Note 7)                         |          |   |   |   |   |   |    |   |   |    |   |   |   |   |   |   |
| 6 (20)  | (Note 7)                         |          |   |   |   |   |   |    |   |   |    |   |   |   |   |   |   |
| 6.5 (22)  | (Note 7)                         |          |   |   |   |   |   |    |   |   |    |   |   |   |   |   |   |
| 7 (23.5)  | (Note 7)                         |          |   |   |   |   |   |    |   |   |    |   |   |   |   |   |   |
| 7.5 (25)  | (Note 7)                         |          |   |   |   |   |   |    |   |   |    |   |   |   |   |   |   |
| 8 (27)  | (Note 7)                         |          |   |   |   |   |   |    |   |   |    |   |   |   |   |   |   |
| 9 (30)  | (Note 7)                         |          |   |   |   |   |   |    |   |   |    |   |   |   |   |   |   |
| 10 (33)   | (Note 7)                         |          |   |   |   |   |   |    |   |   |    |   |   |   |   |   |   |
| 12 (40)   | (Note 7)                         |          |   |   |   |   |   |    |   |   |    |   |   |   |   |   |   |
| 14 (47)   | (Note 7)                         |          |   |   |   |   |   |    |   |   |    |   |   |   |   |   |   |
| 16 (53)   | (Note 7)                         |          |   |   |   |   |   |    |   |   |    |   |   |   |   |   |   |
| <b>Fill Fluid</b> - 16 <sup>th</sup> character                |                                  |          |   |   |   |   |   |    |   |   |    |   |   |   |   |   |   |
| Silicone oil PMX 200 10 cSt                                   | (-40 to 250 °C; -40 to 480 °F)   |          |   |   |   |   |   |    |   |   |    |   |   |   |   |   |   |
| Silicone oil Baysilone PD5 5 cSt                              | (-85 to 250 °C; -121 to 480 °F)  |          |   |   |   |   |   |    |   |   |    |   |   |   |   |   |   |
| Inert oil - Galden G5   | (Oxygen service)                 | (Note 8) |   |   |   |   |   |    |   |   |    |   |   |   |   |   |   |
| Inert oil - Halocarbon 4.2                                    | (Oxygen service)                 | (Note 8) |   |   |   |   |   |    |   |   |    |   |   |   |   |   |   |
| Silicone oil for high temperature                             | (-10 to 375 °C; 14 to 707 °F)    |          |   |   |   |   |   |    |   |   |    |   |   |   |   |   |   |
| Silicone polymer Syltherm XLT                                 | (-100 to 100 °C; -148 to 212 °F) |          |   |   |   |   |   |    |   |   |    |   |   |   |   |   |   |
| Mineral oil Esso Marcol 122                                   | (FDA approved)                   | (Note 9) |   |   |   |   |   |    |   |   |    |   |   |   |   |   |   |
| Vegetable oil Neobee M-20                                     | (FDA approved)                   | (Note 9) |   |   |   |   |   |    |   |   |    |   |   |   |   |   |   |
| Glycerin-water 70%  | (FDA approved)                   | (Note 9) |   |   |   |   |   |    |   |   |    |   |   |   |   |   |   |

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see next page

# Model S26 seals for remote and direct mount

| BASIC ORDERING INFORMATION model S26RA                             |                |      | S 2 6 R A X XX X X XX X X X X | X | X | X |
|--|----------------|------|-------------------------------|---|---|---|
| <b>Flushing Ring: Hole and Thread</b> - 17 <sup>th</sup> character |                |      |                               |   |   |   |
| None (TO BE SELECTED FOR EXTENDED VERSIONS)                        |                |      |                               | N |   |   |
| 1 hole - 1/2 in. NPT   | (Note 3)       |      |                               | 2 |   |   |
| 2 holes - 1/2 in. NPT  | (Note 3)       |      |                               | 3 |   |   |
| 1 hole - 1/4 in. NPT   | (Note 3)       |      |                               | 4 |   |   |
| 2 holes - 1/4 in. NPT  | (Note 3)       |      |                               | 5 |   |   |
| <b>Flushing Ring Material</b> - 18 <sup>th</sup> character         |                |      |                               |   |   |   |
| None   | (Note 10)      |      |                               |   | N |   |
| AISI 316 L ss  | (Note 11)      | NACE |                               |   | A |   |
| Hastelloy C-276  | (Notes 11, 12) | NACE |                               |   | H |   |
| <b>Flushing Ring: Plug and Gasket</b> - 19 <sup>th</sup> character |                |      |                               |   |   |   |
| No plug - No gasket  |                |      |                               |   |   | N |
| No plug - garlock  | (Note 11)      |      |                               |   |   | A |
| No plug - PTFE   | (Note 11)      |      |                               |   |   | B |
| No plug - graphite   | (Note 11)      |      |                               |   |   | C |
| AISI 316 L ss - no gasket  | (Notes 11, 13) | NACE |                               |   |   | D |
| AISI 316 L ss - garlock  | (Notes 11, 13) | NACE |                               |   |   | E |
| AISI 316 L ss - PTFE   | (Notes 11, 13) | NACE |                               |   |   | F |
| AISI 316 L ss - graphite   | (Notes 11, 13) | NACE |                               |   |   | G |
| Hastelloy C-276 - no gasket  | (Notes 11, 14) | NACE |                               |   |   | H |
| Hastelloy C-276 - garlock  | (Notes 11, 14) | NACE |                               |   |   | L |
| Hastelloy C-276 - PTFE   | (Notes 11, 14) | NACE |                               |   |   | M |
| Hastelloy C-276 - graphite   | (Notes 11, 14) | NACE |                               |   |   | P |

- Note 1: Not available with mounting flange rating code E3, E5, G3, G4, G5  
 Note 2: Not available with extensions length and material code 2, 4, 6  
 Note 3: Not available with extensions length and material code 1, 2, 3, 4, 5, 6  
 Note 4: Not available with diaphragm material code MM, LM, TM, NM, KM, YM, WM  
 Note 5: Not available with transmitter side of connection code L  
 Note 6: Not available with capillary protection code A, B  
 Note 7: Not available with capillary protection code N  
 Note 8: Suitable for oxygen service  
 Note 9: Suitable for food application  
 Note 10: Not available with Flushing ring: hole and thread code 2, 3, 4, 5  
 Note 11: Not available with Flushing ring: hole and thread code N  
 Note 12: Not available with Seal surface finish code 1  
 Note 13: Not available with Hastelloy C-276 flushing ring material code H  
 Note 14: Not available with AISI 316 L flushing ring material code A  
 Note 15: Not available with diaphragm material code ZM

**BASIC ORDERING INFORMATION model S26RE Rotating flange diaphragm seals (flush and extended) to EN 1092-1**

Select one character or set of characters from each category and specify complete catalog number.

| BASE MODEL - 1 <sup>st</sup> to 5 <sup>th</sup> characters                            | S | 2 | 6 | R | E | X               | XX       | X | X | XX   | X | X | X | X  |
|---|---|---|---|---|---|-----------------|----------|---|---|------|---|---|---|----|
| Rotating flange diaphragm seal (flush and extended) to EN 1092-1                      |   |   |   |   |   |                 |          |   |   |      |   |   |   |    |
| <b>Transmitter Side of Connection</b> - 6 <sup>th</sup> character                     |   |   |   |   |   |                 |          |   |   |      |   |   |   |    |
| High pressure side  |   |   |   |   |   | H               |          |   |   |      |   |   |   |    |
| Low pressure side   |   |   |   |   |   | L               |          |   |   |      |   |   |   |    |
| <b>Mounting Flange Rating / Size</b> - 7 <sup>th</sup> and 8 <sup>th</sup> characters |   |   |   |   |   |                 |          |   |   |      |   |   |   |    |
| PN 16 - 40 / DN 50  |   |   |   |   |   |                 |          |   |   |      |   |   |   |    |
| PN 63 / DN 50   |   |   |   |   |   |                 |          |   |   |      |   |   |   |    |
| PN 100 / DN 50  |   |   |   |   |   |                 |          |   |   |      |   |   |   |    |
| PN 16 / DN 80   |   |   |   |   |   |                 |          |   |   |      |   |   |   |    |
| PN 40 / DN 80   |   |   |   |   |   |                 |          |   |   |      |   |   |   |    |
| PN 63 / DN 80   |   |   |   |   |   |                 |          |   |   |      |   |   |   |    |
| PN 100 / DN 80  |   |   |   |   |   |                 |          |   |   |      |   |   |   |    |
| PN 16 / DN 100  |   |   |   |   |   |                 |          |   |   |      |   |   |   |    |
| PN 40 / DN 100  |   |   |   |   |   |                 |          |   |   |      |   |   |   |    |
| <b>Mounting Flange Material</b> - 9 <sup>th</sup> character                           |   |   |   |   |   |                 |          |   |   |      |   |   |   |    |
| Carbon steel  |   |   |   |   |   |                 |          |   |   |      |   |   |   |    |
| AISI 316 ss   |   |   |   |   |   |                 |          |   |   |      |   |   |   |    |
| <b>Extensions Length and Material</b> - 10 <sup>th</sup> character                    |   |   |   |   |   |                 |          |   |   |      |   |   |   |    |
| Flush   |   |   |   |   |   |                 |          |   |   |      |   |   |   | F  |
| 50 mm (2 in.)   |   |   |   |   |   | AISI 316 L ss   | (Note 1) |   |   |      |   |   |   | 1  |
| 50 mm (2 in.)   |   |   |   |   |   | Hastelloy C-276 | (Note 1) |   |   |      |   |   |   | 2  |
| 100 mm (4 in.)  |   |   |   |   |   | AISI 316 L ss   | (Note 1) |   |   |      |   |   |   | 3  |
| 100 mm (4 in.)  |   |   |   |   |   | Hastelloy C-276 | (Note 1) |   |   |      |   |   |   | 4  |
| 150 mm (6 in.)  |   |   |   |   |   | AISI 316 L ss   | (Note 1) |   |   |      |   |   |   | 5  |
| 150 mm (6 in.)  |   |   |   |   |   | Hastelloy C-276 | (Note 1) |   |   |      |   |   |   | 6  |
| <b>Diaphragm Material</b> - 11 <sup>th</sup> and 12 <sup>th</sup> characters          |   |   |   |   |   |                 |          |   |   |      |   |   |   |    |
| AISI 316 L ss   |   |   |   |   |   |                 | (Note 2) |   |   | NACE |   |   |   | SM |
| AISI 316 L ss - Low thickness (not for extended diaphragm)                            |   |   |   |   |   |                 | (Note 3) |   |   | NACE |   |   |   | SL |
| Hastelloy C-276   |   |   |   |   |   |                 |          |   |   | NACE |   |   |   | HM |
| Hastelloy C-276 - Low thickness (not for extended diaphragm)                          |   |   |   |   |   |                 | (Note 3) |   |   | NACE |   |   |   | HL |
| Hastelloy C-2000 (not for extended diaphragm)   |   |   |   |   |   |                 | (Note 3) |   |   | NACE |   |   |   | MM |
| Inconel 625 (not for extended diaphragm)  |   |   |   |   |   |                 | (Note 3) |   |   | NACE |   |   |   | LM |
| Tantalum (not for extended diaphragm)   |   |   |   |   |   |                 | (Note 3) |   |   |      |   |   |   | TM |
| AISI 316 L ss gold plated (not for extended diaphragm)                                |   |   |   |   |   |                 | (Note 3) |   |   | NACE |   |   |   | NM |
| AISI 316 L ss with PFA anti-stick coating   |   |   |   |   |   |                 | (Note 2) |   |   | NACE |   |   |   | KM |
| Hastelloy C-276 with PFA anti-stick coating   |   |   |   |   |   |                 |          |   |   | NACE |   |   |   | YM |
| AISI 316 L ss with PFA coating anti-corrosion and anti-stick                          |   |   |   |   |   |                 | (Note 2) |   |   | NACE |   |   |   | WM |
| Diaflex (AISI with anti-abrasion treatment)   |   |   |   |   |   |                 | (Note 2) |   |   | NACE |   |   |   | FM |
| Superduplex ss (UNS S32750 to ASTM SA479) (not for extended diaphragm)                |   |   |   |   |   |                 | (Note 3) |   |   | NACE |   |   |   | EM |
| Monel   |   |   |   |   |   |                 | (Note 3) |   |   | NACE |   |   |   | GM |

continued  
see next page

# Model S26 seals for remote and direct mount

| BASIC ORDERING INFORMATION model S26RE                        |                                  | S        | 2 | R | E | X | XX | X | XX | X | X | X | X | X | X |   |
|---|----------------------------------|----------|---|---|---|---|----|---|----|---|---|---|---|---|---|---|
| <b>Seal Surface Finish</b> - 13 <sup>th</sup> character       |                                  |          |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| Serrated  | (Note 4)                         |          |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| Smooth  |                                  |          |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| <b>Capillary Protection</b> - 14 <sup>th</sup> character      |                                  |          |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| AISI 316 L ss armour  |                                  |          |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| AISI 316 L ss armour with PVC protective cover                |                                  |          |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| Extension tube for direct mount seal                          | (Note 5)                         |          |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| <b>Capillary Length m (Feet)</b> - 15 <sup>th</sup> character |                                  |          |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| Direct-mount construction                                     | (Note 6)                         |          |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| 1 (3)   | (Note 7)                         |          |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| 1.5 (5)   | (Note 7)                         |          |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| 2 (7)   | (Note 7)                         |          |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| 2.5 (8)   | (Note 7)                         |          |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| 3 (10)  | (Note 7)                         |          |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| 3.5 (12)  | (Note 7)                         |          |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| 4 (13)  | (Note 7)                         |          |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| 4.5 (15)  | (Note 7)                         |          |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| 5 (17)  | (Note 7)                         |          |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| 5.5 (18)  | (Note 7)                         |          |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| 6 (20)  | (Note 7)                         |          |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| 6.5 (22)  | (Note 7)                         |          |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| 7 (23.5)  | (Note 7)                         |          |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| 7.5 (25)  | (Note 7)                         |          |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| 8 (27)  | (Note 7)                         |          |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| 9 (30)  | (Note 7)                         |          |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| 10 (33)   | (Note 7)                         |          |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| 12 (40)   | (Note 7)                         |          |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| 14 (47)   | (Note 7)                         |          |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| 16 (53)   | (Note 7)                         |          |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| <b>Fill Fluid</b> - 16 <sup>th</sup> character                |                                  |          |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| Silicone oil PMX 200 10 cSt                                   | (-40 to 250 °C; -40 to 480 °F)   |          |   |   |   |   |    |   |    |   |   |   |   |   |   | S |
| Silicone oil Baysilone PD5 5 cSt                              | (-85 to 250 °C; -121 to 480 °F)  |          |   |   |   |   |    |   |    |   |   |   |   |   |   | P |
| Inert oil - Galden G5   | (Oxygen service)                 | (Note 8) |   |   |   |   |    |   |    |   |   |   |   |   |   | N |
| Inert oil - Halocarbon 4.2                                    | (Oxygen service)                 | (Note 8) |   |   |   |   |    |   |    |   |   |   |   |   |   | D |
| Silicone oil for high temperature                             | (-10 to 375 °C; 14 to 707 °F)    |          |   |   |   |   |    |   |    |   |   |   |   |   |   | G |
| Silicone polymer Syltherm XLT                                 | (-100 to 100 °C; -148 to 212 °F) |          |   |   |   |   |    |   |    |   |   |   |   |   |   | C |
| Mineral oil Esso Marcol 122                                   | (FDA approved)                   | (Note 9) |   |   |   |   |    |   |    |   |   |   |   |   |   | W |
| Vegetable oil Neobee M-20                                     | (FDA approved)                   | (Note 9) |   |   |   |   |    |   |    |   |   |   |   |   |   | A |
| Glycerin-water 70%  | (FDA approved)                   | (Note 9) |   |   |   |   |    |   |    |   |   |   |   |   |   | B |

continued  
see next page



| BASIC ORDERING INFORMATION model S26RE                             |                | S 2 6 R E X XX X X XX X X X X |      |  | X | X | X |
|--|----------------|-------------------------------|------|--|---|---|---|
| <b>Flushing Ring: Hole and Thread</b> - 17 <sup>th</sup> character |                |                               |      |  |   |   |   |
| None (TO BE SELECTED FOR EXTENDED VERSIONS)                        |                |                               |      |  | N |   |   |
| 1 hole - 1/2 in. NPT   | (Note 3)       |                               |      |  | 2 |   |   |
| 2 holes - 1/2 in. NPT  | (Note 3)       |                               |      |  | 3 |   |   |
| 1 hole - 1/4 in. NPT   | (Note 3)       |                               |      |  | 4 |   |   |
| 2 holes - 1/4 in. NPT  | (Note 3)       |                               |      |  | 5 |   |   |
| <b>Flushing Ring Material</b> - 18 <sup>th</sup> character         |                |                               |      |  |   |   |   |
| None   | (Note 10)      |                               |      |  |   | N |   |
| AISI 316 L ss  | (Note 11)      |                               | NACE |  |   |   | A |
| Hastelloy C-276  | (Notes 11, 12) |                               | NACE |  |   |   | H |
| <b>Flushing Ring: Plug and Gasket</b> - 19 <sup>th</sup> character |                |                               |      |  |   |   |   |
| No plug - No gasket  |                |                               |      |  |   |   | N |
| No plug - garlock  | (Note 11)      |                               |      |  |   |   | A |
| No plug - PTFE   | (Note 11)      |                               |      |  |   |   | B |
| No plug - graphite   | (Note 11)      |                               |      |  |   |   | C |
| AISI 316 L ss - no gasket  | (Notes 11, 13) |                               | NACE |  |   |   | D |
| AISI 316 L ss - garlock  | (Notes 11, 13) |                               | NACE |  |   |   | E |
| AISI 316 L ss - PTFE   | (Notes 11, 13) |                               | NACE |  |   |   | F |
| AISI 316 L ss - graphite   | (Notes 11, 13) |                               | NACE |  |   |   | G |
| Hastelloy C-276 - no gasket  | (Notes 11, 14) |                               | NACE |  |   |   | H |
| Hastelloy C-276 - garlock  | (Notes 11, 14) |                               | NACE |  |   |   | L |
| Hastelloy C-276 - PTFE   | (Notes 11, 14) |                               | NACE |  |   |   | M |
| Hastelloy C-276 - graphite   | (Notes 11, 14) |                               | NACE |  |   |   | P |

- Note 1: Not available with mounting flange rating code N3, N4, P3, P4
- Note 2: Not available with extensions length and material code 2, 4, 6
- Note 3: Not available with extensions length and material code 1, 2, 3, 4, 5, 6
- Note 4: Not available with diaphragm material code MM, LM, TM, NM, KM, YM, WM
- Note 5: Not available with transmitter side of connection code L
- Note 6: Not available with capillary protection code A, B
- Note 7: Not available with capillary protection code N
- Note 8: Suitable for oxygen service
- Note 9: Suitable for food application
- Note 10: Not available with Flushing ring: hole and thread code 2, 3, 4, 5
- Note 11: Not available with Flushing ring: hole and thread code N
- Note 12: Not available with Seal surface finish code 1
- Note 13: Not available with Hastelloy C-276 flushing ring material code H
- Note 14: Not available with AISI 316 L flushing ring material code A

# Model S26 seals for remote and direct mount

## BASIC ORDERING INFORMATION model S26RJ Rotating flange diaphragm seals (flush) to JIS

Select one character or set of characters from each category and specify complete catalog number.

|   |                  |          |           |          |          |           |          |          |          |          |          |          |          |            |
|---|------------------|----------|-----------|----------|----------|-----------|----------|----------|----------|----------|----------|----------|----------|------------|
| <b>BASE MODEL</b> - 1 <sup>st</sup> to 5 <sup>th</sup> characters                     | <b>S 2 6 R J</b> | <b>X</b> | <b>XX</b> | <b>X</b> | <b>X</b> | <b>XX</b> | <b>X</b> | <b>X</b> | <b>X</b> | <b>X</b> | <b>X</b> | <b>X</b> | <b>X</b> | <b>X</b>   |
| Rotating flange diaphragm seal (flush) to JIS   |                  |          |           |          |          |           |          |          |          |          |          |          |          |            |
| <b>Transmitter Side of Connection</b> - 6 <sup>th</sup> character                     |                  |          |           |          |          |           |          |          |          |          |          |          |          |            |
| High pressure side  |                  |          |           |          |          |           |          |          |          |          |          |          |          |            |
| Low pressure side   |                  |          |           |          |          |           |          |          |          |          |          |          |          |            |
| <b>Mounting Flange Rating / Size</b> - 7 <sup>th</sup> and 8 <sup>th</sup> characters |                  |          |           |          |          |           |          |          |          |          |          |          |          |            |
| 10K / A50   |                  |          |           |          |          |           |          |          |          |          |          |          |          |            |
| 20K / A50   |                  |          |           |          |          |           |          |          |          |          |          |          |          |            |
| 40K / A50   |                  |          |           |          |          |           |          |          |          |          |          |          |          |            |
| 10K / A80   |                  |          |           |          |          |           |          |          |          |          |          |          |          |            |
| 20K / A80   |                  |          |           |          |          |           |          |          |          |          |          |          |          |            |
| 40K / A80   |                  |          |           |          |          |           |          |          |          |          |          |          |          |            |
| 10K / A100  |                  |          |           |          |          |           |          |          |          |          |          |          |          |            |
| 20K / A100  |                  |          |           |          |          |           |          |          |          |          |          |          |          |            |
| <b>Mounting Flange Material</b> - 9 <sup>th</sup> character                           |                  |          |           |          |          |           |          |          |          |          |          |          |          |            |
| Carbon steel  |                  |          |           |          |          |           |          |          |          |          |          |          |          |            |
| AISI 316 ss   |                  |          |           |          |          |           |          |          |          |          |          |          |          |            |
| <b>Extensions Length</b> - 10 <sup>th</sup> character                                 |                  |          |           |          |          |           |          |          |          |          |          |          |          |            |
| Flush   |                  |          |           |          |          |           |          |          |          |          |          |          |          |            |
| <b>Diaphragm Material</b> - 11 <sup>th</sup> and 12 <sup>th</sup> characters          |                  |          |           |          |          |           |          |          |          |          |          |          |          |            |
| AISI 316 L ss   |                  |          |           |          |          |           |          |          |          |          |          |          |          |            |
| Hastelloy C-276   |                  |          |           |          |          |           |          |          |          |          |          |          |          |            |
| Hastelloy C-2000  |                  |          |           |          |          |           |          |          |          |          |          |          |          |            |
| Inconel 625   |                  |          |           |          |          |           |          |          |          |          |          |          |          |            |
| Tantalum  |                  |          |           |          |          |           |          |          |          |          |          |          |          |            |
| AISI 316 L ss gold plated   |                  |          |           |          |          |           |          |          |          |          |          |          |          |            |
| AISI 316 L ss with PFA anti-stick coating   |                  |          |           |          |          |           |          |          |          |          |          |          |          |            |
| Hastelloy C-276 with PFA anti-stick coating   |                  |          |           |          |          |           |          |          |          |          |          |          |          |            |
| AISI 316 L ss with PFA coating anti-corrosion and anti-stick                          |                  |          |           |          |          |           |          |          |          |          |          |          |          |            |
| Superduplex ss (UNS S32750 to ASTM SA479)   |                  |          |           |          |          |           |          |          |          |          |          |          |          |            |
| <b>Seal Surface Finish</b> - 13 <sup>th</sup> character                               |                  |          |           |          |          |           |          |          |          |          |          |          |          |            |
| Serrated  |                  |          |           |          |          |           |          |          |          |          |          |          |          | 1          |
| Smooth  |                  |          |           |          |          |           |          |          |          |          |          |          |          | 2          |
| <b>Capillary Protection</b> - 14 <sup>th</sup> character                              |                  |          |           |          |          |           |          |          |          |          |          |          |          |            |
| AISI 316 L ss armour  |                  |          |           |          |          |           |          |          |          |          |          |          |          | A          |
| AISI 316 L ss armour with PVC protective cover  |                  |          |           |          |          |           |          |          |          |          |          |          |          | B          |
| Extension tube for direct mount seal  |                  |          |           |          |          |           |          |          |          |          |          |          |          | (Note 2) N |

continued  
see next page

| BASIC ORDERING INFORMATION model S26RJ                             |                                  |          | S | 2 | R | J | X | X | X | X | X | X | X | X |
|--|----------------------------------|----------|---|---|---|---|---|---|---|---|---|---|---|---|
| <b>Capillary Length m (Feet)</b> - 15 <sup>th</sup> character      |                                  |          |   |   |   |   |   |   |   |   |   |   |   |   |
| Direct-mount construction  | (Note 3)                         |          |   |   |   |   |   |   |   |   |   |   |   |   |
| 1 (3)  | (Note 4)                         |          |   |   |   |   |   |   |   |   |   |   |   |   |
| 1.5 (5)  | (Note 4)                         |          |   |   |   |   |   |   |   |   |   |   |   |   |
| 2 (7)  | (Note 4)                         |          |   |   |   |   |   |   |   |   |   |   |   |   |
| 2.5 (8)  | (Note 4)                         |          |   |   |   |   |   |   |   |   |   |   |   |   |
| 3 (10)   | (Note 4)                         |          |   |   |   |   |   |   |   |   |   |   |   |   |
| 3.5 (12)   | (Note 4)                         |          |   |   |   |   |   |   |   |   |   |   |   |   |
| 4 (13)   | (Note 4)                         |          |   |   |   |   |   |   |   |   |   |   |   |   |
| 4.5 (15)   | (Note 4)                         |          |   |   |   |   |   |   |   |   |   |   |   |   |
| 5 (17)   | (Note 4)                         |          |   |   |   |   |   |   |   |   |   |   |   |   |
| 5.5 (18)   | (Note 4)                         |          |   |   |   |   |   |   |   |   |   |   |   |   |
| 6 (20)   | (Note 4)                         |          |   |   |   |   |   |   |   |   |   |   |   |   |
| 6.5 (22)   | (Note 4)                         |          |   |   |   |   |   |   |   |   |   |   |   |   |
| 7 (23.5)   | (Note 4)                         |          |   |   |   |   |   |   |   |   |   |   |   |   |
| 7.5 (25)   | (Note 4)                         |          |   |   |   |   |   |   |   |   |   |   |   |   |
| 8 (27)   | (Note 4)                         |          |   |   |   |   |   |   |   |   |   |   |   |   |
| 9 (30)   | (Note 4)                         |          |   |   |   |   |   |   |   |   |   |   |   |   |
| 10 (33)  | (Note 4)                         |          |   |   |   |   |   |   |   |   |   |   |   |   |
| 12 (40)  | (Note 4)                         |          |   |   |   |   |   |   |   |   |   |   |   |   |
| 14 (47)  | (Note 4)                         |          |   |   |   |   |   |   |   |   |   |   |   |   |
| 16 (53)  | (Note 4)                         |          |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Fill Fluid</b> - 16 <sup>th</sup> character                     |                                  |          |   |   |   |   |   |   |   |   |   |   |   |   |
| Silicone oil PMX 200 10 cSt  | (-40 to 250 °C; -40 to 480 °F)   |          |   |   |   |   |   |   |   |   |   |   |   | S |
| Silicone oil Baysilone PD5 5 cSt                                   | (-85 to 250 °C; -121 to 480 °F)  |          |   |   |   |   |   |   |   |   |   |   |   | P |
| Inert oil - Galden G5  | (Oxygen service)                 | (Note 5) |   |   |   |   |   |   |   |   |   |   |   | N |
| Inert oil - Halocarbon 4.2   | (Oxygen service)                 | (Note 5) |   |   |   |   |   |   |   |   |   |   |   | D |
| Silicone oil for high temperature                                  | (-10 to 375 °C; 14 to 707 °F)    |          |   |   |   |   |   |   |   |   |   |   |   | G |
| Silicone polymer Syltherm XLT                                      | (-100 to 100 °C; -148 to 212 °F) |          |   |   |   |   |   |   |   |   |   |   |   | C |
| Mineral oil Esso Marcol 122  | (FDA approved)                   | (Note 6) |   |   |   |   |   |   |   |   |   |   |   | W |
| Vegetable oil Neobee M-20  | (FDA approved)                   | (Note 6) |   |   |   |   |   |   |   |   |   |   |   | A |
| Glycerin-water 70%   | (FDA approved)                   | (Note 6) |   |   |   |   |   |   |   |   |   |   |   | B |
| <b>Flushing Ring: Hole and Thread</b> - 17 <sup>th</sup> character |                                  |          |   |   |   |   |   |   |   |   |   |   |   |   |
| None   |                                  |          |   |   |   |   |   |   |   |   |   |   |   | N |
| <b>Flushing Ring Material</b> - 18 <sup>th</sup> character         |                                  |          |   |   |   |   |   |   |   |   |   |   |   |   |
| None   |                                  |          |   |   |   |   |   |   |   |   |   |   |   | N |
| <b>Flushing Ring: Plug and Gasket</b> - 19 <sup>th</sup> character |                                  |          |   |   |   |   |   |   |   |   |   |   |   |   |
| None   |                                  |          |   |   |   |   |   |   |   |   |   |   |   | N |

Note 1: Not available with diaphragm material code HM, MM, LM, TN, NM, KM, YM, WM  
Note 2: Not available with transmitter side of connection code L  
Note 3: Not available with capillary protection code A, B  
Note 4: Not available with capillary protection code N  
Note 5: Suitable for oxygen service  
Note 6: Suitable for food application

# Model S26 seals for remote and direct mount

## S26RR Rotating flange diaphragm seals - Ring Joint (RJ)

This flush diaphragm seal is designed to connect to ASME flanged pipe fitting, the sealing is provided by a metal ring in the provided groove. For liquid level measurement installations the seal connects to an ASME flanged tank nozzle.

### Pressure limits

| Seal model S26RR to ASME B16.5 | Carbon Steel flange @ 100 °F (38 °C) | AISI 316 ss flange @ 100 °F (38 °C) |
|--------------------------------|--------------------------------------|-------------------------------------|
| Class 150                      | 285 psi                              | 275 psi                             |
| Class 300                      | 740 psi                              | 720 psi                             |
| Class 600                      | 1480 psi                             | 1440 psi                            |
| Class 900                      | 2220 psi                             | 2160 psi                            |
| Class 1500                     | 3705 psi                             | 3600 psi                            |
| Class 2500                     | 6170 psi                             | 6000 psi                            |

The pressure limit decreases with increasing temperature above 100 °F (38 °C), according to ASME B16.5 standards.

### Vacuum service

Full vacuum subject to fill fluid limits.  
Refer to FILL FLUID CHARACTERISTICS table.

### Process temperature limits

Refer to FILL FLUID CHARACTERISTICS table

| S26RR flanged RJ seal size - Mnemonic | Sensor URL                   | Seal error (process) | Direct mount system error (ambient) | Remote mount error (ambient) | 1 metre capillary error (ambient) |
|---------------------------------------|------------------------------|----------------------|-------------------------------------|------------------------------|-----------------------------------|
| 1 1/2 in. - P1.5                      | ≥ 160 kPa, 642 inH2O         | 0.74 kPa, 3 inH2O    | 0.67 kPa, 2.68 inH2O                | 0.62 kPa, 2.48 inH2O         | 0.31 kPa, 1.24 inH2O              |
| 2 in. - P2                            | 40 - 65 kPa, 160 - 260 inH2O | 0.23 kPa, 0.92 inH2O | 0.16 kPa, 0.64 inH2O                | 0.14 kPa, 0.56 inH2O         | 0.11 kPa, 0.44 inH2O              |
| 2 in. - P2                            | ≥160 kPa, 642 inH2O          | 0.23 kPa, 0.92 inH2O | 0.16 kPa, 0.64 inH2O                | 0.14 kPa, 0.56 inH2O         | 0.07 kPa, 0.28 inH2O              |
| 3 in. - P3                            | 4 - 16 kPa, 16 - 64 inH2O    | 0.08 kPa, 0.32 inH2O | 0.02 kPa, 0.08 inH2O                | 0.02 kPa, 0.08 inH2O         | 0.02 kPa, 0.08 inH2O              |
| 3 in. - P3                            | ≥ 40 kPa, 160 inH2O          | 0.08 kPa, 0.32 inH2O | 0.02 kPa, 0.08 inH2O                | 0.02 kPa, 0.08 inH2O         | 0.03 kPa, 0.12 inH2O              |

MULTIPLY BY 10 THE kPa VALUES TO OBTAIN mbar.

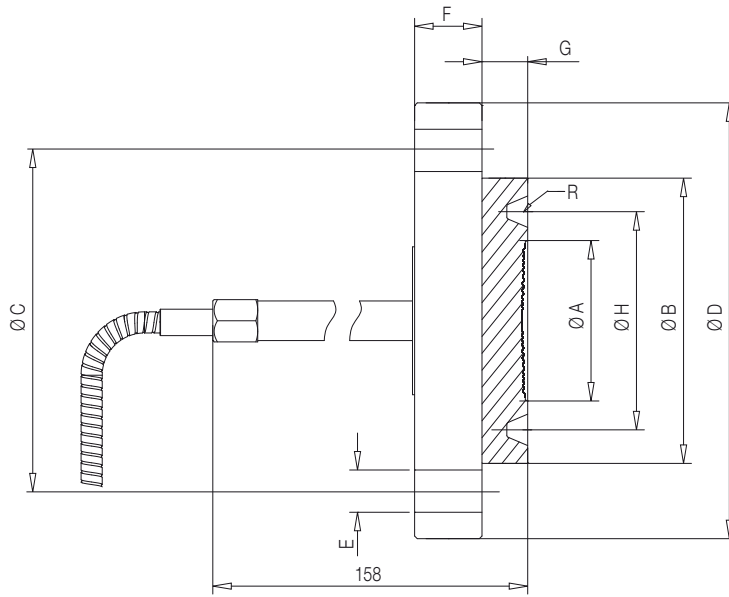
### Temperature effect

The following table shows temperature effect per 20 K (36 °F) change, detailed separately for

- the seal (one element), as process temperature error
- the capillary per meter
- the system (transmitter sensor when combined with a seal of specific size/type, either direct mount or remote) referred to silicone oil (PMX 200) filling and AISI 316 L ss diaphragm materials.

For filling different from silicone oil (PMX 200) the errors can be multiplied by ratio between the thermal expansion coefficients of the selected filling divided by the one of PMX 200, listed in the fill fluid characteristics table.

THE ERRORS IN TABLE CAN BE CONSIDERED DIVIDED BY 4 FOR TRANSMITTERS USING SAME REMOTE SEAL ON THE TWO SIDES



| Size/Rating                | Dimensions mm. (in.) for S26RR |            |               |               |              |              |             |              |     |             |
|----------------------------|--------------------------------|------------|---------------|---------------|--------------|--------------|-------------|--------------|-----|-------------|
|                            | A (dia)                        | B (dia)    | C (dia)       | D (dia)       | E (dia)      | F            | G           | H (dia)      | R   | N° of holes |
| 1-1/2 in. ASME CL 150      | 48 (1.89)                      | 83 (3.27)  | 98.6 (3.88)   | 127 (5)       | 15.75 (0.62) | 17.5 (0.69)  | 17.3 (0.68) | 65.1 (2.56)  | R19 | 4           |
| 1-1/2 in. ASME CL 300      | 48 (1.89)                      | 90 (3.54)  | 114.3 (4.5)   | 155.5 (6.12)  | 22.35 (0.88) | 20.6 (0.81)  | 17.3 (0.68) | 68.3 (2.69)  | R20 | 4           |
| 1-1/2 in. ASME CL 600      | 48 (1.89)                      | 90 (3.54)  | 114.3 (4.5)   | 155.5 (6.12)  | 22.35 (0.88) | 22.4 (0.88)  | 17.3 (0.68) | 68.3 (2.69)  | R20 | 4           |
| 1-1/2 in. ASME CL 900/1500 | 48 (1.89)                      | 92 (3.62)  | 124 (4.88)    | 177.8 (7)     | 28.45 (1.12) | 31.8 (1.25)  | 20.8 (0.82) | 68.3 (2.69)  | R20 | 4           |
| 1-1/2 in. ASME CL 2500     | 48 (1.89)                      | 114 (4.49) | 146.1 (5.75)  | 203.2 (8)     | 31.75 (1.25) | 44.5 (1.75)  | 20.8 (0.82) | 82.6 (3.25)  | R23 | 4           |
| 2 in. ASME CL 150          | 60 (2.36)                      | 102 (4.02) | 120.65 (4.75) | 152.4 (6)     | 19.05 (0.75) | 19.05 (0.75) | 17.3 (0.68) | 82.6 (3.25)  | R22 | 4           |
| 2 in. ASME CL 300          | 60 (2.36)                      | 108 (4.25) | 127 (5)       | 165.1 (6.5)   | 19.05 (0.75) | 22.35 (0.88) | 17.3 (0.68) | 82.6 (3.25)  | R23 | 8           |
| 2 in. ASME CL 600          | 60 (2.36)                      | 108 (4.25) | 127 (5)       | 165.1 (6.5)   | 19.05 (0.75) | 25.4 (1)     | 17.3 (0.68) | 82.6 (3.25)  | R23 | 8           |
| 2 in. ASME CL 900/1500     | 60 (2.36)                      | 124 (4.88) | 165 (6.5)     | 215.9 (8.5)   | 25.4 (1)     | 38.1 (1.5)   | 20.8 (0.82) | 95.3 (3.75)  | R24 | 8           |
| 2 in. ASME CL 2500         | 60 (2.36)                      | 133 (5.24) | 171.5 (6.75)  | 235 (9.25)    | 28.45 (1.12) | 50.8 (2)     | 20.8 (0.82) | 101.6 (4)    | R26 | 8           |
| 3 in. ASME CL 150          | 89 (3.5)                       | 133 (5.24) | 152.4 (6)     | 190.5 (7.5)   | 19.05 (0.75) | 23.87 (0.94) | 17.3 (0.68) | 114.3 (4.5)  | R29 | 4           |
| 3 in. ASME CL 300          | 89 (3.5)                       | 146 (5.75) | 168.15 (6.62) | 209.55 (8.25) | 22.35 (0.88) | 28.44 (1.12) | 17.3 (0.68) | 123.8 (4.87) | R31 | 8           |
| 3 in. ASME CL 600          | 89 (3.5)                       | 146 (5.75) | 168.15 (6.62) | 209.55 (8.25) | 22.35 (0.88) | 31.75 (1.25) | 17.3 (0.68) | 123.8 (4.87) | R31 | 8           |
| 3 in. ASME CL 900          | 89 (3.5)                       | 155 (6.10) | 190.5 (7.5)   | 241.3 (9.5)   | 25.4 (1)     | 38.1 (1.50)  | 20.8 (0.82) | 123.8 (4.87) | R31 | 8           |
| 3 in. ASME CL 1500         | 89 (3.5)                       | 168 (6.61) | 203.2 (8)     | 266.7 (10.5)  | 31.75 (1.25) | 47.8 (1.88)  | 20.8 (0.82) | 136.5 (5.37) | R35 | 8           |
| 3 in. ASME CL 2500         | 89 (3.5)                       | 168 (6.61) | 228.6 (9)     | 304.8 (12)    | 35.05 (1.38) | 66.5 (2.62)  | 20.8 (0.82) | 127 (5)      | R32 | 8           |

# Model S26 seals for remote and direct mount

## BASIC ORDERING INFORMATION model S26RR Rotating flange diaphragm seals (flush) - Ring Joint

Select one character or set of characters from each category and specify complete catalog number.

|   |                  |          |           |          |          |           |          |          |          |          |          |          |          |          |
|---|------------------|----------|-----------|----------|----------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|
| <b>BASE MODEL</b> - 1 <sup>st</sup> to 5 <sup>th</sup> characters                     | <b>S 2 6 R R</b> | <b>X</b> | <b>XX</b> | <b>X</b> | <b>X</b> | <b>XX</b> | <b>X</b> | <b>X</b> | <b>X</b> | <b>X</b> | <b>X</b> | <b>X</b> | <b>X</b> | <b>X</b> |
| Rotating flange diaphragm seal (flush) Ring Joint to ASME B16.5                       |                  |          |           |          |          |           |          |          |          |          |          |          |          |          |
| <b>Transmitter Side of Connection</b> - 6 <sup>th</sup> character                     |                  |          |           |          |          |           |          |          |          |          |          |          |          |          |
| High pressure side  |                  | H        |           |          |          |           |          |          |          |          |          |          |          |          |
| Low pressure side   |                  | L        |           |          |          |           |          |          |          |          |          |          |          |          |
| <b>Mounting Flange Rating / Size</b> - 7 <sup>th</sup> and 8 <sup>th</sup> characters |                  |          |           |          |          |           |          |          |          |          |          |          |          |          |
| ASME CL 150 / 1 1/2 in.   |                  |          | D1        |          |          |           |          |          |          |          |          |          |          |          |
| ASME CL 300 / 1 1/2 in.   |                  |          | D2        |          |          |           |          |          |          |          |          |          |          |          |
| ASME CL 600 / 1 1/2 in.   |                  |          | D3        |          |          |           |          |          |          |          |          |          |          |          |
| ASME CL 900-1500 / 1 1/2 in.  |                  |          | D5        |          |          |           |          |          |          |          |          |          |          |          |
| ASME CL 2500 / 1 1/2 in.  |                  |          | D6        |          |          |           |          |          |          |          |          |          |          |          |
| ASME CL 150 / 2 in.   |                  |          | E1        |          |          |           |          |          |          |          |          |          |          |          |
| ASME CL 300 / 2 in.   |                  |          | E2        |          |          |           |          |          |          |          |          |          |          |          |
| ASME CL 600 / 2 in.   |                  |          | E3        |          |          |           |          |          |          |          |          |          |          |          |
| ASME CL 900-1500 / 2 in.  |                  |          | E5        |          |          |           |          |          |          |          |          |          |          |          |
| ASME CL 2500 / 2 in.  |                  |          | E6        |          |          |           |          |          |          |          |          |          |          |          |
| ASME CL 150 / 3 in.   |                  |          | G1        |          |          |           |          |          |          |          |          |          |          |          |
| ASME CL 300 / 3 in.   |                  |          | G2        |          |          |           |          |          |          |          |          |          |          |          |
| ASME CL 600 / 3 in.   |                  |          | G3        |          |          |           |          |          |          |          |          |          |          |          |
| ASME CL 900 / 3 in.   |                  |          | G4        |          |          |           |          |          |          |          |          |          |          |          |
| ASME CL 1500 / 3 in.  |                  |          | G5        |          |          |           |          |          |          |          |          |          |          |          |
| ASME CL 2500 / 3 in.  |                  |          | G6        |          |          |           |          |          |          |          |          |          |          |          |
| <b>Mounting Flange Material</b> - 9 <sup>th</sup> character                           |                  |          |           |          |          |           |          |          |          |          |          |          |          |          |
| Carbon steel  |                  |          |           |          |          | C         |          |          |          |          |          |          |          |          |
| AISI 316 ss   |                  |          |           |          |          | S         |          |          |          |          |          |          |          |          |
| <b>Extensions Length</b> - 10 <sup>th</sup> character                                 |                  |          |           |          |          |           |          |          |          |          |          |          |          |          |
| Flush   |                  |          |           |          |          |           | F        |          |          |          |          |          |          |          |
| <b>Diaphragm Material</b> - 11 <sup>th</sup> and 12 <sup>th</sup> characters          |                  |          |           |          |          |           |          |          |          |          |          |          |          |          |
| AISI 316 L ss   |                  |          |           |          |          | NACE      |          | SM       |          |          |          |          |          |          |
| Hastelloy C-276   |                  |          |           |          |          | NACE      |          | HM       |          |          |          |          |          |          |
| Inconel 625   |                  |          |           |          |          | NACE      |          | LM       |          |          |          |          |          |          |
| <b>Seal Surface Finish</b> - 13 <sup>th</sup> character                               |                  |          |           |          |          |           |          |          |          |          |          |          |          |          |
| Ring joint  |                  |          |           |          |          |           |          |          | 3        |          |          |          |          |          |
| <b>Capillary Protection</b> - 14 <sup>th</sup> character                              |                  |          |           |          |          |           |          |          |          |          |          |          |          |          |
| AISI 316 L ss armour  |                  |          |           |          |          |           |          |          |          |          |          |          | A        |          |
| AISI 316 L ss armour with PVC protective cover  |                  |          |           |          |          |           |          |          |          |          |          |          |          | B        |
| Extension tube for direct mount seal (Note 1)   |                  |          |           |          |          |           |          |          |          |          |          |          |          | N        |

continued  
see next page

| BASIC ORDERING INFORMATION model S26RR                             |                                  | S | 2 | 6 | R | R | X        | X | X | X | X | X | X | X | X |
|--|----------------------------------|---|---|---|---|---|----------|---|---|---|---|---|---|---|---|
| <b>Capillary Length m (Feet)</b> - 15 <sup>th</sup> character      |                                  |   |   |   |   |   |          |   |   |   |   |   |   |   |   |
| Direct-mount construction  | (Note 2)                         |   |   |   |   |   |          |   |   |   |   |   |   |   | 1 |
| 1 (3)  | (Note 3)                         |   |   |   |   |   |          |   |   |   |   |   |   |   | A |
| 1.5 (5)  | (Note 3)                         |   |   |   |   |   |          |   |   |   |   |   |   |   | B |
| 2 (7)  | (Note 3)                         |   |   |   |   |   |          |   |   |   |   |   |   |   | C |
| 2.5 (8)  | (Note 3)                         |   |   |   |   |   |          |   |   |   |   |   |   |   | D |
| 3 (10)   | (Note 3)                         |   |   |   |   |   |          |   |   |   |   |   |   |   | E |
| 3.5 (12)   | (Note 3)                         |   |   |   |   |   |          |   |   |   |   |   |   |   | F |
| 4 (13)   | (Note 3)                         |   |   |   |   |   |          |   |   |   |   |   |   |   | G |
| 4.5 (15)   | (Note 3)                         |   |   |   |   |   |          |   |   |   |   |   |   |   | H |
| 5 (17)   | (Note 3)                         |   |   |   |   |   |          |   |   |   |   |   |   |   | J |
| 5.5 (18)   | (Note 3)                         |   |   |   |   |   |          |   |   |   |   |   |   |   | K |
| 6 (20)   | (Note 3)                         |   |   |   |   |   |          |   |   |   |   |   |   |   | L |
| 6.5 (22)   | (Note 3)                         |   |   |   |   |   |          |   |   |   |   |   |   |   | M |
| 7 (23.5)   | (Note 3)                         |   |   |   |   |   |          |   |   |   |   |   |   |   | N |
| 7.5 (25)   | (Note 3)                         |   |   |   |   |   |          |   |   |   |   |   |   |   | P |
| 8 (27)   | (Note 3)                         |   |   |   |   |   |          |   |   |   |   |   |   |   | Q |
| 9 (30)   | (Note 3)                         |   |   |   |   |   |          |   |   |   |   |   |   |   | R |
| 10 (33)  | (Note 3)                         |   |   |   |   |   |          |   |   |   |   |   |   |   | S |
| 12 (40)  | (Note 3)                         |   |   |   |   |   |          |   |   |   |   |   |   |   | T |
| 14 (47)  | (Note 3)                         |   |   |   |   |   |          |   |   |   |   |   |   |   | U |
| 16 (53)  | (Note 3)                         |   |   |   |   |   |          |   |   |   |   |   |   |   | V |
| <b>Fill Fluid</b> - 16 <sup>th</sup> character                     |                                  |   |   |   |   |   |          |   |   |   |   |   |   |   |   |
| Silicone oil PMX 200 10 cSt  | (-40 to 250 °C; -40 to 480 °F)   |   |   |   |   |   |          |   |   |   |   |   |   |   | S |
| Silicone oil Baysilone PD5 5 cSt                                   | (-85 to 250 °C; -121 to 480 °F)  |   |   |   |   |   |          |   |   |   |   |   |   |   | P |
| Inert oil - Galden G5  | (Oxygen service)                 |   |   |   |   |   | (Note 4) |   |   |   |   |   |   |   | N |
| Inert oil - Halocarbon 4.2   | (Oxygen service)                 |   |   |   |   |   | (Note 4) |   |   |   |   |   |   |   | D |
| Silicone oil for high temperature                                  | (-10 to 375 °C; 14 to 707 °F)    |   |   |   |   |   |          |   |   |   |   |   |   |   | G |
| Silicone polymer Syltherm XLT                                      | (-100 to 100 °C; -148 to 212 °F) |   |   |   |   |   |          |   |   |   |   |   |   |   | C |
| Mineral oil Esso Marcol 122  | (FDA approved)                   |   |   |   |   |   | (Note 5) |   |   |   |   |   |   |   | W |
| Vegetable oil Neobee M-20  | (FDA approved)                   |   |   |   |   |   | (Note 5) |   |   |   |   |   |   |   | A |
| Glycerin-water 70%   | (FDA approved)                   |   |   |   |   |   | (Note 5) |   |   |   |   |   |   |   | B |
| <b>Flushing Ring: Hole and Thread</b> - 17 <sup>th</sup> character |                                  |   |   |   |   |   |          |   |   |   |   |   |   |   |   |
| None   |                                  |   |   |   |   |   |          |   |   |   |   |   |   |   | N |
| <b>Flushing Ring Material</b> - 18 <sup>th</sup> character         |                                  |   |   |   |   |   |          |   |   |   |   |   |   |   |   |
| None   |                                  |   |   |   |   |   |          |   |   |   |   |   |   |   | N |
| <b>Flushing Ring: Plug and Gasket</b> - 19 <sup>th</sup> character |                                  |   |   |   |   |   |          |   |   |   |   |   |   |   |   |
| None   |                                  |   |   |   |   |   |          |   |   |   |   |   |   |   | N |

Note 1: Not available with transmitter side of connection code L and not available with CL 2500 mounting flange rating / size code D6, E6, G6  
Note 2: Not available with capillary protection code A, B  
Note 3: Not available with capillary protection code N  
Note 4: Suitable for oxygen service  
Note 5: Suitable for food application

# Model S26 seals for remote and direct mount

## S26RH Rotating flange diaphragm seals according to ISO 10423 (based on API 6A specification)

This flush diaphragm seal is designed to connect to ISO 10423 flanged pipe fitting, the sealing is provided by a metal ring in the provided groove. For liquid level measurement installations the seal connects to proper flanged tank nozzle. This seal type is mainly dedicated to applications asking for high pressure/high temperature conditions.

### Pressure limits

| S26RH seal<br>flange rating | AISI 316 ss flange             |                     |
|-----------------------------|--------------------------------|---------------------|
|                             | -29 ... 38 °C (-20 ... 100 °F) | @ 93 °C (200 °C)    |
| API 10000                   | 69.5 MPa, 10000 psi            | 60 MPa, 8687 psi    |
| API 15000                   | 103.5 MPa, 15000 psi           | 89.2 MPa, 12937 psi |

The pressure limit decreases with increasing temperature.

### Vacuum service

Full vacuum subject to fill fluid limits.  
Refer to FILL FLUID CHARACTERISTICS table.

### Process temperature limits

Refer to FILL FLUID CHARACTERISTICS table

### Temperature effect

The following table shows temperature effect per 20 K (36 °F) change, detailed separately for

- the seal (one element), as process temperature error
- the capillary per meter
- the system (transmitter sensor when combined with a seal of specific size/type, either direct mount or remote) referred to silicone oil (PMX 200) filling and AISI 316 L ss diaphragm materials.

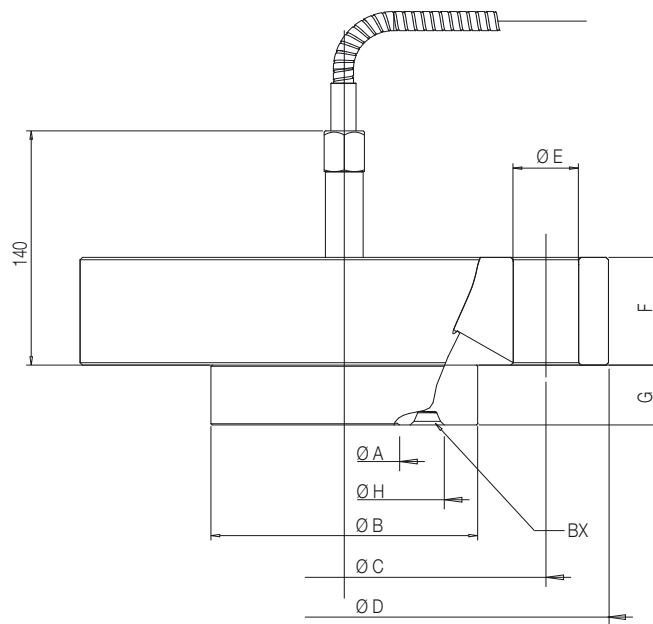
For filling different from silicone oil (PMX 200) the errors can be multiplied by ratio between the thermal expansion coefficients of the selected filling divided by the one of PMX 200, listed in the fill fluid characteristics table.

THE ERRORS IN TABLE CAN BE CONSIDERED DIVIDED BY 4 FOR TRANSMITTERS USING SAME REMOTE SEAL ON THE TWO SIDES

| S26RH flanged seal<br>size - Mnemonic | Sensor URL            | Seal error (process) | Direct mount system<br>error (ambient) | Remote mount<br>error (ambient) | 1 metre capillary<br>error (ambient) |
|---------------------------------------|-----------------------|----------------------|--|---------------------------------|--------------------------------------|
| 1 13/16 in. - H1.5                    | ≥ 60000 kPa, 8700 psi | 0.74 kPa, 3 inH2O    | 0.67 kPa, 2.68 inH2O                   | 0.62 kPa, 2.48 inH2O            | 0.31 kPa, 1.24 inH2O                 |
| 2 1/16 in. - P1.5                     | ≥ 60000 kPa, 8700 psi | 0.64 kPa, 2.56 inH2O | 1.25 kPa, 5.0 inH2O                    | 1.14 kPa, 0.08 inH2O            | 0.38 kPa, 1.52 inH2O                 |

MULTIPLY BY 10 THE kPa VALUES TO OBTAIN mbar.





| Size/Rating           | Dimensions mm. (in.) for S26RH |              |              |            |           |             |           |              |        |             |
|-----------------------|--------------------------------|--------------|--------------|------------|-----------|-------------|-----------|--------------|--------|-------------|
|                       | A (dia)                        | B (dia)      | C (dia)      | D (dia)    | E (dia)   | F           | G         | H (dia)      | BX     | N° of holes |
| 1 13/16 in. API 10000 | 40 (1.57)                      | 105.5 (4.15) | 146.1 (5.75) | 185 (7.28) | 23 (0.91) | 42.1 (1.66) | 25 (0.98) | 77.77 (3.06) | BX 151 | 8           |
| 1 13/16 in. API 15000 | 40 (1.57)                      | 105.5 (4.15) | 160.3 (6.31) | 210 (8.27) | 26 (1.02) | 45 (1.77)   | 25 (0.98) | 77.77 (3.06) | BX 151 | 8           |
| 2 1/16 in. API 10000  | 50 (1.97)                      | 112.5 (4.43) | 158.8 (6.25) | 200 (7.87) | 23 (0.91) | 44.1 (1.74) | 25 (0.98) | 86.23 (3.40) | BX 152 | 8           |
| 2 1/16 in. API 15000  | 50 (1.97)                      | 112.5 (4.43) | 174.6 (6.87) | 220 (8.66) | 26 (1.02) | 50.8 (2.00) | 25 (0.98) | 86.23 (3.40) | BX 152 | 8           |

# Model S26 seals for remote and direct mount

## BASIC ORDERING INFORMATION model S26RH Rotating flange diaphragm seals (flush) to ISO 10423 (API standards)

Select one character or set of characters from each category and specify complete catalog number.

|  |                  |          |           |          |          |           |          |          |          |          |          |          |          |          |
|--|------------------|----------|-----------|----------|----------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|
| <b>BASE MODEL</b> - 1 <sup>st</sup> to 5 <sup>th</sup> characters            | <b>S 2 6 R H</b> | <b>X</b> | <b>XX</b> | <b>X</b> | <b>X</b> | <b>XX</b> | <b>X</b> | <b>X</b> | <b>X</b> | <b>X</b> | <b>X</b> | <b>X</b> | <b>X</b> | <b>X</b> |
| Rotating flange diaphragm seal (flush) to ISO 10423                          |                  |          |           |          |          |           |          |          |          |          |          |          |          |          |
| <b>Transmitter Side of Connection</b> - 6 <sup>th</sup> character            |                  |          |           |          |          |           |          |          |          |          |          |          |          |          |
| High pressure side   |                  | H        |           |          |          |           |          |          |          |          |          |          |          |          |
| Low pressure side  |                  | L        |           |          |          |           |          |          |          |          |          |          |          |          |
| <b>Size / Rating</b> - 7 <sup>th</sup> and 8 <sup>th</sup> characters        |                  |          |           |          |          |           |          |          |          |          |          |          |          |          |
| ISO 10423 1 13/16 in. / API 10000 (69 MPa)                                   |                  |          |           |          |          | R1        |          |          |          |          |          |          |          |          |
| ISO 10423 1 13/16 in. / API 15000 (103.5 MPa)                                |                  |          |           |          |          | R2        |          |          |          |          |          |          |          |          |
| ISO 10423 2 1/16 in. / API 10000 (69 MPa)                                    |                  |          |           |          |          | S1        |          |          |          |          |          |          |          |          |
| ISO 10423 2 1/16 in. / API 15000 (103.5 MPa)                                 |                  |          |           |          |          | S2        |          |          |          |          |          |          |          |          |
| <b>Mounting Flange Material</b> - 9 <sup>th</sup> character                  |                  |          |           |          |          |           |          |          |          |          |          |          |          |          |
| AISI 316 ss  |                  |          |           |          |          |           | S        |          |          |          |          |          |          |          |
| <b>Extensions Length</b> - 10 <sup>th</sup> character                        |                  |          |           |          |          |           |          |          |          |          |          |          |          |          |
| Flush  |                  |          |           |          |          |           |          | F        |          |          |          |          |          |          |
| <b>Diaphragm Material</b> - 11 <sup>th</sup> and 12 <sup>th</sup> characters |                  |          |           |          |          |           |          |          |          |          |          |          |          |          |
| AISI 316 L ss  |                  |          |           |          |          |           | NACE     |          | SM       |          |          |          |          |          |
| Hastelloy C-276  |                  |          |           |          |          |           | NACE     |          | HM       |          |          |          |          |          |
| Inconel 625  |                  |          |           |          |          |           | NACE     |          | LM       |          |          |          |          |          |
| <b>Seal Surface Finish</b> - 13 <sup>th</sup> character                      |                  |          |           |          |          |           |          |          |          |          |          |          |          |          |
| According to ISO 10423   |                  |          |           |          |          |           |          |          |          | H        |          |          |          |          |
| <b>Capillary Protection</b> - 14 <sup>th</sup> character                     |                  |          |           |          |          |           |          |          |          |          |          |          |          |          |
| AISI 316 L ss armour   |                  |          |           |          |          |           |          |          |          |          |          |          |          | A        |
| AISI 316 L ss armour with PVC protective cover                               |                  |          |           |          |          |           |          |          |          |          |          |          |          | B        |
| Extension tube for direct mount seal (Note 1)                                |                  |          |           |          |          |           |          |          |          |          |          |          |          | N        |

continued  
see next page

| BASIC ORDERING INFORMATION model S26RH                             |                                  | S | 2 | 6 | R | R | X | X | X | X | X | X | X | X |
|--|----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <b>Capillary Length m (Feet)</b> - 15 <sup>th</sup> character      |                                  |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Direct-mount construction  | (Note 2)                         |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 1 (3)  | (Note 3)                         |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 1.5 (5)  | (Note 3)                         |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 2 (7)  | (Note 3)                         |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 2.5 (8)  | (Note 3)                         |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 3 (10)   | (Note 3)                         |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 3.5 (12)   | (Note 3)                         |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 4 (13)   | (Note 3)                         |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 4.5 (15)   | (Note 3)                         |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 5 (17)   | (Note 3)                         |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Fill Fluid</b> - 16 <sup>th</sup> character                     |                                  |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Silicone oil PMX 200 10 cSt  | (-40 to 250 °C; -40 to 480 °F)   |   |   |   |   |   |   |   |   |   |   |   |   | S |
| Silicone oil Baysilone PD5 5 cSt                                   | (-85 to 250 °C; -121 to 480 °F)  |   |   |   |   |   |   |   |   |   |   |   |   | P |
| Inert oil - Galden G5  | (Oxygen service)                 |   |   |   |   |   |   |   |   |   |   |   |   | N |
| Inert oil - Halocarbon 4.2   | (Oxygen service)                 |   |   |   |   |   |   |   |   |   |   |   |   | D |
| Silicone oil for high temperature                                  | (-10 to 375 °C; 14 to 707 °F)    |   |   |   |   |   |   |   |   |   |   |   |   | G |
| Silicone polymer Syltherm XLT                                      | (-100 to 100 °C; -148 to 212 °F) |   |   |   |   |   |   |   |   |   |   |   |   | C |
| <b>Flushing Ring: Hole and Thread</b> - 17 <sup>th</sup> character |                                  |   |   |   |   |   |   |   |   |   |   |   |   |   |
| None   |                                  |   |   |   |   |   |   |   |   |   |   |   |   | N |
| <b>Flushing Ring Material</b> - 18 <sup>th</sup> character         |                                  |   |   |   |   |   |   |   |   |   |   |   |   |   |
| None   |                                  |   |   |   |   |   |   |   |   |   |   |   |   | N |
| <b>Flushing Ring: Plug and Gasket</b> - 19 <sup>th</sup> character |                                  |   |   |   |   |   |   |   |   |   |   |   |   |   |
| None   |                                  |   |   |   |   |   |   |   |   |   |   |   |   | N |

Note 1: Not available with transmitter side of connection code L  
Note 2: Not available with capillary protection code A, B  
Note 3: Not available with capillary protection code N  
Note 4: Suitable for oxygen service  
Note 5: Suitable for food application

# Model S26 seals for remote and direct mount

## S26FA, S26FE Fixed flange diaphragm seals

These flush or extended diaphragm seal are designed to connect to flanged pipe fitting, according to ASME or EN standards. For liquid level measurement installations, the seal connects to a flanged tank nozzle, compliant to relevant standard. The sealing is provided by a selectable gasket seat surface finish. The „fixed“ mounting flange is integral with the seal.

### Pressure limits

| Seal model S26FA to ASME B16.5 | AISI 316 L ss flange @ 100 °F (38 °C) |
|--------------------------------|---------------------------------------|
| Class 150                      | 230 psi                               |
| Class 300                      | 600 psi                               |
| Class 600                      | 1200 psi                              |

| Seal model S26FE to EN 1092-1 | AISI 316 L ss flange @ 20 °C |
|-------------------------------|------------------------------|
| PN 16                         | 16 bar                       |
| PN 40                         | 40 bar                       |
| PN 63                         | 63 bar                       |
| PN 100                        | 100 bar                      |

The pressure limit decreases with increasing temperature above the specified limit, according to the referred standards.

### Vacuum service

Full vacuum subject to fill fluid limits.

| Flushing ring<br>gasket material | Process limits               |                                      |                       |
|----------------------------------|------------------------------|--------------------------------------|-----------------------|
|                                  | Pressure (max.)              | Temperature                          | P x T                 |
| Garlock                          | 6.9 MPa, 69 bar,<br>1000 psi | -73 and 204 °C<br>(-100 and 400 °F)  | 250000<br>( °F x psi) |
| Graphite                         | 2.5 MPa, 25 bar,<br>362 psi  | -100 and 380 °C<br>(-148 and 716 °F) |                       |
| PTFE                             | 6 MPa, 60 bar,<br>870 psi    | -100 and 250 °C<br>(-148 and 482 °F) |                       |

### Process temperature limits

Refer to FILL FLUID CHARACTERISTICS table.

### Gasket seat finish

Smooth (ASME or EN): 0.8 µm (Ra)

Serrated (ASME): 3.2 to 6.3 µm (Ra)

Serrated (EN 1092-1 Type B1): 3.2 to 12.5 µm (Ra)

Serrated (EN 1092-1 Type D and E): according to standard

### Temperature effect

The following table shows temperature effect per 20 K (36 °F) change, detailed separately for

- a) the seal (one element), as process temperature error
- b) the capillary per meter
- c) the system (transmitter sensor when combined with a seal of specific size/type, either direct mount or remote) referred to silicone oil (PMX 200) filling and AISI 316 L ss diaphragm materials.

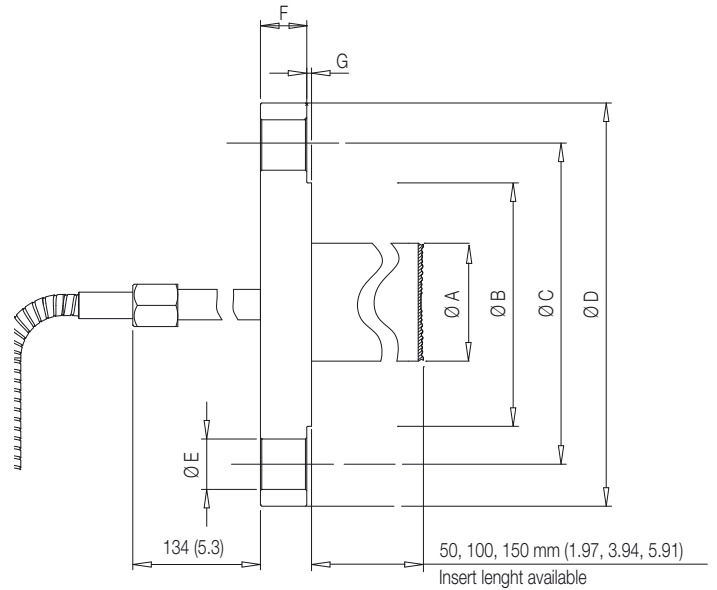
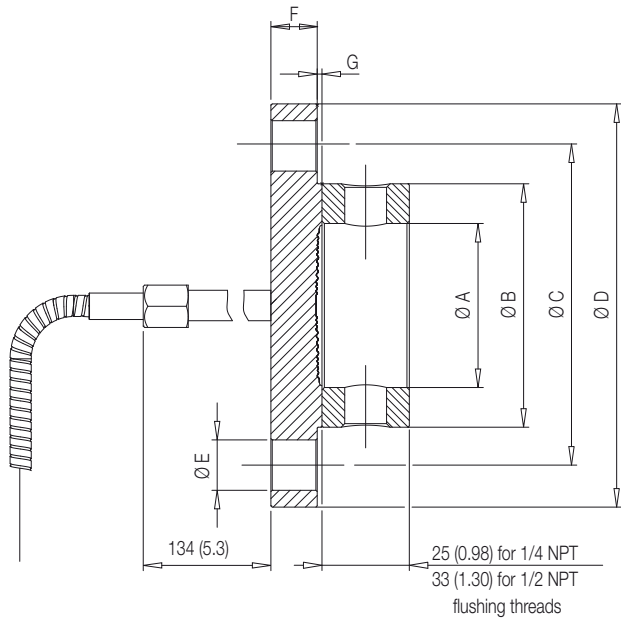
For filling different from silicone oil (PMX 200) the errors can be multiplied by ratio between the thermal expansion coefficients of the selected filling divided by the one of PMX 200, listed in the fill fluid characteristics table.

THE ERRORS IN TABLE CAN BE CONSIDERED DIVIDED BY 4 FOR TRANSMITTERS USING SAME REMOTE SEAL ON THE TWO SIDES

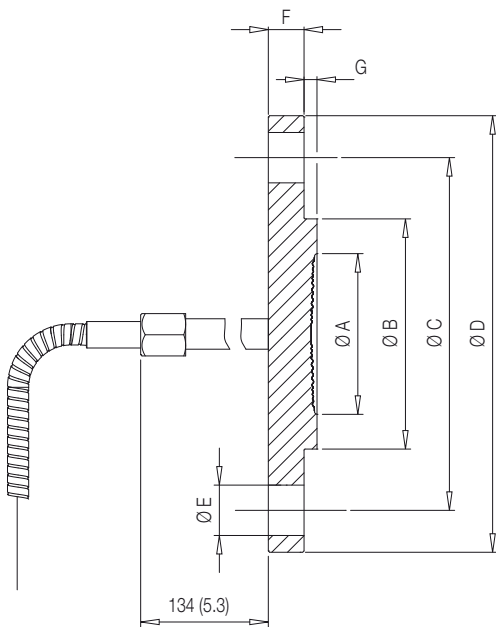
| <b>S26FA, S26FE<br/>fixed flange flush<br/>seal size - Mnemonic</b>    | <b>Sensor URL</b>            | <b>Seal error (process)</b> | <b>Direct mount system<br/>error (ambient)</b> | <b>Remote system<br/>error (ambient)</b> | <b>1 metre capillary<br/>error (ambient)</b> |
|--|------------------------------|-----------------------------|--|--|--|
| 2 in. / DN 50 - P2   | 40 - 65 kPa, 160 - 260 inH2O | 0.23 kPa, 0.92 inH2O        | 0.16 kPa, 0.64 inH2O                           | 0.14 kPa, 0.56 inH2O                     | 0.11 kPa, 0.44 inH2O                         |
| 2 in. / DN 50 - P2   | ≥160 kPa, 642 inH2O          | 0.23 kPa, 0.92 inH2O        | 0.16 kPa, 0.64 inH2O                           | 0.14 kPa, 0.56 inH2O                     | 0.07 kPa, 0.28 inH2O                         |
| 2 in. / DN 50 - F2   | ≥ 4 kPa, 16 inH2O            | 0.05 kPa, 0.2 inH2O         | 0.04 kPa, 0.16 inH2O                           | 0.04 kPa, 0.16 inH2O                     | 0.03 kPa, 0.12 inH2O                         |
| 3 / 4 in. / DN 80 / 100 - P3   | 4 - 16 kPa, 16 - 64 inH2O    | 0.08 kPa, 0.32 inH2O        | 0.02 kPa, 0.08 inH2O                           | 0.02 kPa, 0.08 inH2O                     | 0.02 kPa, 0.08 inH2O                         |
| 3 / 4 in. / DN 80 / 100 - P3   | ≥ 40 kPa, 160 inH2O          | 0.08 kPa, 0.32 inH2O        | 0.02 kPa, 0.08 inH2O                           | 0.02 kPa, 0.08 inH2O                     | 0.03 kPa, 0.12 inH2O                         |
| 3 / 4 in. / DN 80 / 100 - F3   | ≥ 4 kPa, 16 inH2O            | 0.02 kPa, 0.08 inH2O        | 0.02 kPa, 0.08 inH2O                           | 0.02 kPa, 0.08 inH2O                     | 0.01 kPa, 0.04 inH2O                         |
| <b>S26FA, S26FE<br/>fixed flange extended<br/>seal size - Mnemonic</b> | <b>Sensor URL</b>            | <b>Seal error (process)</b> | <b>Direct mount system<br/>error (ambient)</b> | <b>Remote system<br/>error (ambient)</b> | <b>1 metre capillary<br/>error (ambient)</b> |
| 2 in. / DN 50 - F1.5   | 65 kPa, 260 inH2O            | 0.15 kPa, 0.60 inH2O        | 0.36 kPa, 1.44 inH2O                           | 0.36 kPa, 1.44 inH2O                     | 0.12 kPa, 0.48 inH2O                         |
| 2 in. / DN 50 - F1.5   | ≥160 kPa, 642 inH2O          | 0.15 kPa, 0.60 inH2O        | 0.36 kPa, 1.44 inH2O                           | 0.36 kPa, 1.44 inH2O                     | 0.08 kPa, 0.32 inH2O                         |
| 3 / 4 in. / DN 80 / 100 - F2.5   | ≥ 40 kPa, 160 inH2O          | 0.03 kPa, 0.12 inH2O        | 0.02 kPa, 0.08 inH2O                           | 0.02 kPa, 0.08 inH2O                     | 0.015 kPa, 0.06 inH2O                        |
| 3 / 4 in. / DN 80 / 100 - F2.5   | ≥ 4 kPa, 16 inH2O            | 0.03 kPa, 0.12 inH2O        | 0.02 kPa, 0.08 inH2O                           | 0.02 kPa, 0.08 inH2O                     | 0.015 kPa, 0.06 inH2O                        |

MULTIPLY BY 10 THE kPa VALUES TO OBTAIN mbar.

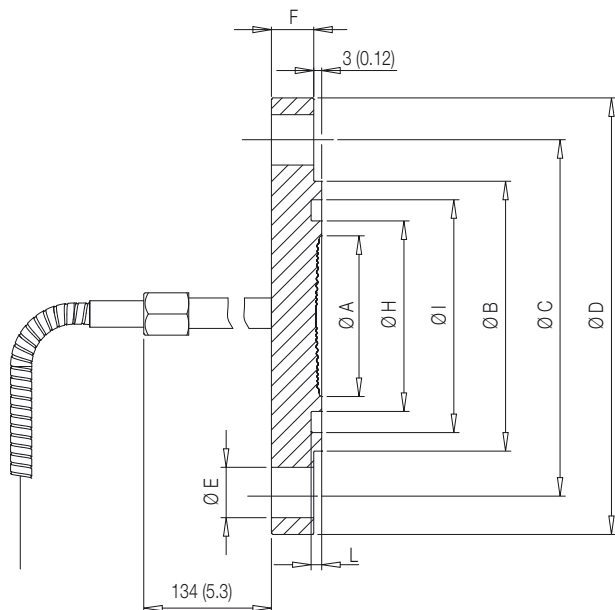
# Model S26 seals for remote and direct mount



ASME and EN 1092-1 smooth and Form B1 (flushing ring as option, only for flush version)



EN 1092-1 Form E



EN 1092-1 Form D

Note 1 - Flange thickness tolerance is +3.0 / -0.0 mm (+0.12 / -0.0 in.).

Note 2 - Flange thickness tolerance is +1.0 / -1.3 mm (+0.04 / -0.05 in.) up to 18 mm or ±1.5 mm (±0.06 in.) from 18 to 50 mm from 18 to 50 mm.

| Size/Rating       | Dimensions mm. (in.) for S26FA |                 |           |           |                               |               |              |             |             |            |   |                |
|-------------------|--------------------------------|-----------------|-----------|-----------|-------------------------------|---------------|--------------|-------------|-------------|------------|---|----------------|
|                   | A (dia)                        |                 |           |           | flushing ring<br>internal dia | B (dia)       | C (dia)      | D (dia)     | E (dia)     | F (Note 1) | G | N° of<br>holes |
|                   | extended<br>diaphragm          | flush diaphragm |           | std.      |                               |               |              |             |             |            |   |                |
| 2 in. ASME CL 150 | 48 (1.9)                       | 60 (2.36)       | 58 (2.28) | 62 (2.44) | 92 (3.62)                     | 120.65 (4.75) | 152.4 (6)    | 19.1 (0.79) | 17.5 (0.6)  | 2 (0.08)   | 4 |                |
| 2 in. ASME CL 300 | 48 (1.9)                       | 60 (2.36)       | 58 (2.28) | 62 (2.44) | 92 (3.62)                     | 127 (5)       | 165.1 (6.5)  | 19.1 (0.79) | 20.8 (0.8)  | 2 (0.08)   | 8 |                |
| 2 in. ASME CL 600 | 48 (1.9)                       | 60 (2.36)       | 58 (2.28) | 62 (2.44) | 92 (3.62)                     | 127 (5)       | 165.1 (6.5)  | 19.1 (0.79) | 25.4 (1)    | 7 (0.27)   | 8 |                |
| 3 in. ASME CL 150 | 72 (2.83)                      | 89 (3.5)        | 75 (2.95) | 92 (3.62) | 127 (5)                       | 152.4 (6)     | 190.5 (7.5)  | 19.1 (0.79) | 22.4 (0.88) | 2 (0.08)   | 4 |                |
| 3 in. ASME CL 300 | 72 (2.83)                      | 89 (3.5)        | 75 (2.95) | 92 (3.62) | 127 (5)                       | 168.15 (6.62) | 209.6 (8.25) | 22.4 (0.86) | 26.9 (1.1)  | 2 (0.08)   | 8 |                |
| 3 in. ASME CL 600 | 72 (2.83)                      | 89 (3.5)        | 75 (2.95) | 92 (3.62) | 127 (5)                       | 168.15 (6.62) | 209.6 (8.25) | 22.4 (0.86) | 31.8 (1.3)  | 7 (0.27)   | 8 |                |
| 4 in. ASME CL 150 | 94 (3.7)                       | 89 (3.5)        | 75 (2.95) | 92 (3.62) | 157.2 (6.2)                   | 190.5 (7.5)   | 228.6 (9)    | 19.1 (0.79) | 22.4 (0.88) | 2 (0.08)   | 8 |                |

| Size/Rating     | Dimensions mm. (in.) for S26FE smooth and Form B1 |                 |           |           |                               |            |            |           |           |            |   |                |
|-----------------|---|-----------------|-----------|-----------|-------------------------------|------------|------------|-----------|-----------|------------|---|----------------|
|                 | A (dia)   |                 |           |           | flushing ring<br>internal dia | B (dia)    | C (dia)    | D (dia)   | E (dia)   | F (Note 2) | G | N° of<br>holes |
|                 | extended<br>diaphragm                             | flush diaphragm |           | std.      |                               |            |            |           |           |            |   |                |
| DN 50 EN PN 16  | 48 (1.9)  | 60 (2.36)       | 58 (2.28) | 62 (2.44) | 102 (4.02)                    | 125 (4.92) | 165 (6.5)  | 18 (0.71) | 15 (0.58) | 3 (0.12)   | 4 |                |
| DN 50 EN PN 40  | 48 (1.9)  | 60 (2.36)       | 58 (2.28) | 62 (2.44) | 102 (4.02)                    | 125 (4.92) | 165 (6.5)  | 18 (0.71) | 18 (0.67) | 3 (0.12)   | 4 |                |
| DN 50 EN PN 63  | 48 (1.9)  | 60 (2.36)       | 58 (2.28) | 62 (2.44) | 102 (4.02)                    | 135 (5.31) | 180 (7.08) | 22 (0.86) | 23 (0.9)  | 3 (0.12)   | 4 |                |
| DN 50 EN PN 100 | 48 (1.9)  | 60 (2.36)       | 58 (2.28) | 62 (2.44) | 102 (4.02)                    | 145 (5.71) | 195 (7.67) | 26 (1.02) | 27 (1.06) | 3 (0.12)   | 4 |                |
| DN 80 EN PN 16  | 72 (2.83)   | 89 (3.5)        | 75 (2.95) | 92 (3.62) | 138 (5.43)                    | 160 (6.3)  | 200 (7.87) | 18 (0.71) | 17 (0.67) | 3 (0.12)   | 8 |                |
| DN 80 EN PN 40  | 72 (2.83)   | 89 (3.5)        | 75 (2.95) | 92 (3.62) | 138 (5.43)                    | 160 (6.3)  | 200 (7.87) | 18 (0.71) | 21 (0.83) | 3 (0.12)   | 8 |                |
| DN 80 EN PN 63  | 72 (2.83)   | 89 (3.5)        | 75 (2.95) | 92 (3.62) | 138 (5.43)                    | 170 (6.7)  | 215 (8.46) | 22 (0.86) | 25 (0.98) | 3 (0.12)   | 8 |                |
| DN 80 EN PN 100 | 72 (2.83)   | 89 (3.5)        | 75 (2.95) | 92 (3.62) | 138 (5.43)                    | 180 (7.08) | 230 (9.05) | 26 (1.02) | 33 (1.3)  | 3 (0.12)   | 8 |                |
| DN 100 EN PN 16 | 94 (3.7)  | 89 (3.5)        | 75 (2.95) | 92 (3.62) | 158 (6.22)                    | 180 (7.08) | 220 (8.66) | 18 (0.71) | 17 (0.67) | 3 (0.12)   | 8 |                |

| Size/Rating     | Dimensions mm. (in.) for S26FE Form E |               |            |            |            |           |               |            |                |  |
|-----------------|---------------------------------------|---------------|------------|------------|------------|-----------|---------------|------------|----------------|--|
|                 | diaphragm A (dia)                     |               | B (dia)    | C (dia)    | D (dia)    | E (dia)   | F<br>(Note 2) | G          | N° of<br>holes |  |
|                 | std. thickness                        | low thickness |            |            |            |           |               |            |                |  |
| DN 50 EN PN 16  | 60 (2.36)                             | 58 (2.28)     | 87 (3.42)  | 125 (4.92) | 165 (6.5)  | 18 (0.71) | 13.5 (0.53)   | 4.5 (0.18) | 4              |  |
| DN 50 EN PN 40  | 60 (2.36)                             | 58 (2.28)     | 87 (3.42)  | 125 (4.92) | 165 (6.5)  | 18 (0.71) | 15.5 (0.61)   | 4.5 (0.18) | 4              |  |
| DN 50 EN PN 63  | 60 (2.36)                             | 58 (2.28)     | 87 (3.42)  | 135 (5.31) | 180 (7.08) | 22 (0.86) | 21.5 (0.85)   | 4.5 (0.18) | 4              |  |
| DN 50 EN PN 100 | 60 (2.36)                             | 58 (2.28)     | 87 (3.42)  | 145 (5.71) | 195 (7.67) | 26 (1.02) | 25.5 (1)      | 4.5 (0.18) | 4              |  |
| DN 80 EN PN 16  | 89 (3.5)                              | 75 (2.95)     | 120 (4.72) | 160 (6.3)  | 200 (7.87) | 18 (0.71) | 15.5 (0.61)   | 4.5 (0.18) | 8              |  |
| DN 80 EN PN 40  | 89 (3.5)                              | 75 (2.95)     | 120 (4.72) | 160 (6.3)  | 200 (7.87) | 18 (0.71) | 19.5 (0.77)   | 4.5 (0.18) | 8              |  |
| DN 80 EN PN 63  | 89 (3.5)                              | 75 (2.95)     | 120 (4.72) | 170 (6.7)  | 215 (8.46) | 22 (0.86) | 23.5 (0.92)   | 4.5 (0.18) | 8              |  |
| DN 80 EN PN 100 | 89 (3.5)                              | 75 (2.95)     | 120 (4.72) | 180 (7.08) | 230 (9.05) | 26 (1.02) | 31.5 (1.24)   | 4.5 (0.18) | 8              |  |
| DN 100 EN PN 16 | 89 (3.5)                              | 75 (2.95)     | 149 (5.87) | 180 (7.08) | 220 (8.66) | 18 (0.71) | 15 (0.59)     | 5 (0.20)   | 8              |  |

| Size/Rating     | Dimensions mm (in) for S26FE Form D |               |            |            |            |           |               |            |            |            |                |
|-----------------|-------------------------------------|---------------|------------|------------|------------|-----------|---------------|------------|------------|------------|----------------|
|                 | diaphragm A (dia)                   |               | B (dia)    | C (dia)    | D (dia)    | E (dia)   | F<br>(Note 2) | H (dia)    | I (dia)    | L          | N° of<br>holes |
|                 | std. thickness                      | low thickness |            |            |            |           |               |            |            |            |                |
| DN 50 EN PN 16  | 60 (2.36)                           | 58 (2.28)     | 102 (4.02) | 125 (4.92) | 165 (6.5)  | 18 (0.71) | 15 (0.59)     | 72 (2.83)  | 88 (3.46)  | 4 (0.16)   | 4              |
| DN 50 EN PN 40  | 60 (2.36)                           | 58 (2.28)     | 102 (4.02) | 125 (4.92) | 165 (6.5)  | 18 (0.71) | 18 (0.71)     | 72 (2.83)  | 88 (3.46)  | 4 (0.16)   | 4              |
| DN 50 EN PN 63  | 60 (2.36)                           | 58 (2.28)     | 102 (4.02) | 135 (5.31) | 180 (7.08) | 22 (0.86) | 23 (0.91)     | 72 (2.83)  | 88 (3.46)  | 4 (0.16)   | 4              |
| DN 50 EN PN 100 | 60 (2.36)                           | 58 (2.28)     | 102 (4.02) | 145 (5.71) | 195 (7.67) | 26 (1.02) | 27 (1.06)     | 72 (2.83)  | 88 (3.46)  | 4 (0.16)   | 4              |
| DN 80 EN PN 16  | 89 (3.5)                            | 75 (2.95)     | 138 (5.43) | 160 (6.3)  | 200 (7.87) | 18 (0.71) | 17 (0.67)     | 105 (4.13) | 121 (4.76) | 4 (0.16)   | 8              |
| DN 80 EN PN 40  | 89 (3.5)                            | 75 (2.95)     | 138 (5.43) | 160 (6.3)  | 200 (7.87) | 18 (0.71) | 21 (0.83)     | 105 (4.13) | 121 (4.76) | 4 (0.16)   | 8              |
| DN 80 EN PN 63  | 89 (3.5)                            | 75 (2.95)     | 138 (5.43) | 170 (6.7)  | 215 (8.46) | 22 (0.86) | 25 (0.92)     | 105 (4.13) | 121 (4.76) | 4 (0.16)   | 8              |
| DN 80 EN PN 100 | 89 (3.5)                            | 75 (2.95)     | 138 (5.43) | 180 (7.08) | 230 (9.05) | 26 (1.02) | 33 (1.3)      | 105 (4.13) | 121 (4.76) | 4 (0.16)   | 8              |
| DN 100 EN PN 16 | 89 (3.5)                            | 75 (2.95)     | 158 (6.22) | 180 (7.08) | 220 (8.66) | 18 (0.71) | 17 (0.67)     | 128 (5.04) | 149 (5.91) | 4.5 (0.18) | 8              |

# Model S26 seals for remote and direct mount

## BASIC ORDERING INFORMATION model S26FA Fixed flange diaphragm seals (flush) to ASME B16.5

Select one character or set of characters from each category and specify complete catalog number.

|   |           |   |    |               |   |      |   |   |   |   |    |   |
|---|-----------|---|----|---------------|---|------|---|---|---|---|----|---|
| <b>BASE MODEL</b> - 1 <sup>st</sup> to 5 <sup>th</sup> characters                     | S 2 6 F A | X | XX | X             | X | XX   | X | X | X | X | X  | X |
| Fixed flange diaphragm seal (flush and extended) to ASME B16.5                        |           |   |    |               |   |      |   |   |   |   |    |   |
| <b>Transmitter Side of Connection</b> - 6 <sup>th</sup> character                     |           |   |    |               |   |      |   |   |   |   |    |   |
| High pressure side  |           | H |    |               |   |      |   |   |   |   |    |   |
| Low pressure side   |           | L |    |               |   |      |   |   |   |   |    |   |
| <b>Mounting Flange Rating / Size</b> - 7 <sup>th</sup> and 8 <sup>th</sup> characters |           |   |    |               |   |      |   |   |   |   |    |   |
| ASME CL 150 / 2 in.   |           |   |    |               |   | E1   |   |   |   |   |    |   |
| ASME CL 300 / 2 in.   |           |   |    |               |   | E2   |   |   |   |   |    |   |
| ASME CL 600 / 2 in.   |           |   |    |               |   | E3   |   |   |   |   |    |   |
| ASME CL 150 / 3 in.   |           |   |    |               |   | G1   |   |   |   |   |    |   |
| ASME CL 300 / 3 in.   |           |   |    |               |   | G2   |   |   |   |   |    |   |
| ASME CL 600 / 3 in.   |           |   |    |               |   | G3   |   |   |   |   |    |   |
| ASME CL 150 / 4 in.   |           |   |    |               |   | H1   |   |   |   |   |    |   |
| <b>Mounting Flange Material</b> - 9 <sup>th</sup> character                           |           |   |    |               |   |      |   |   |   |   |    |   |
| AISI 316 L ss   |           |   |    |               |   |      | S |   |   |   |    |   |
| <b>Extensions Length and Material</b> - 10 <sup>th</sup> character                    |           |   |    |               |   |      |   |   |   |   |    |   |
| Flush   |           |   |    |               |   |      |   |   | F |   |    |   |
| 50 mm (2 in.)   |           |   |    | AISI 316 L ss |   |      |   |   |   | 1 |    |   |
| 100 mm (4 in.)  |           |   |    | AISI 316 L ss |   |      |   |   |   | 3 |    |   |
| 150 mm (6 in.)  |           |   |    | AISI 316 L ss |   |      |   |   |   | 5 |    |   |
| <b>Diaphragm Material</b> - 11 <sup>th</sup> and 12 <sup>th</sup> characters          |           |   |    |               |   |      |   |   |   |   |    |   |
| AISI 316 L ss   |           |   |    |               |   | NACE |   |   |   |   | SM |   |
| AISI 316 L ss - Low thickness   |           |   |    | (Note 1)      |   | NACE |   |   |   |   | SL |   |
| Hastelloy C-276   |           |   |    |               |   | NACE |   |   |   |   | HM |   |
| Hastelloy C-276 - Low thickness   |           |   |    | (Note 1)      |   | NACE |   |   |   |   | HL |   |
| Hastelloy C-2000  |           |   |    | (Note 1)      |   | NACE |   |   |   |   | MM |   |
| Inconel 625   |           |   |    | (Note 1)      |   | NACE |   |   |   |   | LM |   |

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| BASIC ORDERING INFORMATION model S26FA                        |                                  | S | 2 | F | A | X | XX | X | XX | X | X | X | X | X | X | X |
|---|----------------------------------|---|---|---|---|---|----|---|----|---|---|---|---|---|---|---|
| <b>Seal Surface Finish</b> - 13 <sup>th</sup> character       |                                  |   |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| Serrated  | (Note 2)                         |   |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| Smooth  |                                  |   |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| <b>Capillary Protection</b> - 14 <sup>th</sup> character      |                                  |   |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| AISI 316 L ss armour  |                                  |   |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| AISI 316 L ss armour with PVC protective cover                |                                  |   |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| Extension tube for direct mount seal                          | (Note 3)                         |   |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| <b>Capillary Length m (Feet)</b> - 15 <sup>th</sup> character |                                  |   |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| Direct-mount construction                                     | (Note 4)                         |   |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| 1 (3)   | (Note 5)                         |   |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| 1.5 (5)   | (Note 5)                         |   |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| 2 (7)   | (Note 5)                         |   |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| 2.5 (8)   | (Note 5)                         |   |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| 3 (10)  | (Note 5)                         |   |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| 3.5 (12)  | (Note 5)                         |   |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| 4 (13)  | (Note 5)                         |   |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| 4.5 (15)  | (Note 5)                         |   |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| 5 (17)  | (Note 5)                         |   |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| 5.5 (18)  | (Note 5)                         |   |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| 6 (20)  | (Note 5)                         |   |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| 6.5 (22)  | (Note 5)                         |   |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| 7 (23.5)  | (Note 5)                         |   |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| 7.5 (25)  | (Note 5)                         |   |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| 8 (27)  | (Note 5)                         |   |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| 9 (30)  | (Note 5)                         |   |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| 10 (33)   | (Note 5)                         |   |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| 12 (40)   | (Note 5)                         |   |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| 14 (47)   | (Notes1, 5)                      |   |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| 16 (53)   | (Notes1, 5)                      |   |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| <b>Fill Fluid</b> - 16 <sup>th</sup> character                |                                  |   |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| Silicone oil PMX 200 10 cSt                                   | (-40 to 250 °C; -40 to 480 °F)   |   |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| Silicone oil Baysilone PD5 5 cSt                              | (-85 to 250 °C; -121 to 480 °F)  |   |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| Inert oil - Galden G5   | (Oxygen service)                 |   |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| Inert oil - Halocarbon 4.2                                    | (Oxygen service)                 |   |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| Silicone oil for high temperature                             | (-10 to 375 °C; 14 to 707 °F)    |   |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| Silicone polymer Syltherm XLT                                 | (-100 to 100 °C; -148 to 212 °F) |   |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| Mineral oil Esso Marcol 122                                   | (FDA approved)                   |   |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| Vegetable oil Neobee M-20                                     | (FDA approved)                   |   |   |   |   |   |    |   |    |   |   |   |   |   |   |   |
| Glycerin-water 70%  | (FDA approved)                   |   |   |   |   |   |    |   |    |   |   |   |   |   |   |   |

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# Model S26 seals for remote and direct mount

| BASIC ORDERING INFORMATION model S26FA                             |               |  | S 2 6 F A X XX X X XX X X X X | X | X | X |
|--|---------------|--|-------------------------------|---|---|---|
| <b>Flushing Ring: Hole and Thread</b> - 17 <sup>th</sup> character |               |  |                               |   |   |   |
| None   |               |  |                               | N |   |   |
| 1 hole - 1/2 in. NPT   | (Note 1)      |  |                               | 2 |   |   |
| 2 holes - 1/2 in. NPT  | (Note 1)      |  |                               | 3 |   |   |
| 1 hole - 1/4 in. NPT   | (Note 1)      |  |                               | 4 |   |   |
| 2 holes - 1/4 in. NPT  | (Note 1)      |  |                               | 5 |   |   |
| <b>Flushing Ring Material</b> - 18 <sup>th</sup> character         |               |  |                               |   |   |   |
| None   | (Note 8)      |  |                               |   | N |   |
| AISI 316 L ss  | (Note 9)      |  | NACE                          |   | A |   |
| Hastelloy C-276  | (Notes 9, 10) |  | NACE                          |   | H |   |
| <b>Flushing Ring: Plug and Gasket</b> - 19 <sup>th</sup> character |               |  |                               |   |   |   |
| No plug - No gasket  |               |  |                               |   |   | N |
| No plug - garlock  | (Note 9)      |  |                               |   |   | A |
| No plug - PTFE   | (Note 9)      |  |                               |   |   | B |
| No plug - graphite   | (Note 9)      |  |                               |   |   | C |
| AISI 316 L ss - no gasket  | (Notes 9, 11) |  | NACE                          |   |   | D |
| AISI 316 L ss - garlock  | (Notes 9, 11) |  | NACE                          |   |   | E |
| AISI 316 L ss - PTFE   | (Notes 9, 11) |  | NACE                          |   |   | F |
| AISI 316 L ss - graphite   | (Notes 9, 11) |  | NACE                          |   |   | G |
| Hastelloy C-276 - no gasket  | (Notes 9, 12) |  | NACE                          |   |   | H |
| Hastelloy C-276 - garlock  | (Notes 9, 12) |  | NACE                          |   |   | L |
| Hastelloy C-276 - PTFE   | (Notes 9, 12) |  | NACE                          |   |   | M |
| Hastelloy C-276 - graphite   | (Notes 9, 12) |  | NACE                          |   |   | P |

- Note 1: Not available with extensions length and material code 1, 3, 5  
 Note 2: Not available with diaphragm material code MM, LM  
 Note 3: Not available with transmitter side of connection code L  
 Note 4: Not available with capillary protection code A, B  
 Note 5: Not available with capillary protection code N  
 Note 6: Suitable for oxygen service  
 Note 7: Suitable for food application  
 Note 8: Not available with Flushing ring: hole and thread code 2, 3, 4, 5  
 Note 9: Not available with Flushing ring: hole and thread code N  
 Note 10: Not available with Seal surface finish code 1  
 Note 11: Not available with Hastelloy C-276 flushing ring material code H  
 Note 12: Not available with AISI 316 L flushing ring material code A

**BASIC ORDERING INFORMATION model S26FE Fixed flange diaphragm seals (flush) to EN 1092-1**

Select one character or set of characters from each category and specify complete catalog number.

|   |           |   |               |          |   |      |   |   |   |    |   |
|---|-----------|---|---------------|----------|---|------|---|---|---|----|---|
| <b>BASE MODEL</b> - 1 <sup>st</sup> to 5 <sup>th</sup> characters                     | S 2 6 F E | X | XX            | X        | X | XX   | X | X | X | X  |   |
| Fixed flange diaphragm seal (flush) to EN 1092-1                                      |           |   |               |          |   |      |   |   |   |    |   |
| <b>Transmitter Side of Connection</b> - 6 <sup>th</sup> character                     |           |   |               |          |   |      |   |   |   |    |   |
| High pressure side  |           | H |               |          |   |      |   |   |   |    |   |
| Low pressure side   |           | L |               |          |   |      |   |   |   |    |   |
| <b>Mounting Flange Rating / Size</b> - 7 <sup>th</sup> and 8 <sup>th</sup> characters |           |   |               |          |   |      |   |   |   |    |   |
| PN 16 / DN 50   |           |   |               |          |   | N1   |   |   |   |    |   |
| PN 40 / DN 50   |           |   |               |          |   | N2   |   |   |   |    |   |
| PN 63 / DN 50   |           |   |               |          |   | N3   |   |   |   |    |   |
| PN 100 / DN 50  |           |   |               |          |   | N4   |   |   |   |    |   |
| PN 16 / DN 80   |           |   |               |          |   | P1   |   |   |   |    |   |
| PN 40 / DN 80   |           |   |               |          |   | P2   |   |   |   |    |   |
| PN 63 / DN 80   |           |   |               |          |   | P3   |   |   |   |    |   |
| PN 100 / DN 80  |           |   |               |          |   | P4   |   |   |   |    |   |
| PN 16 / DN 100  |           |   |               |          |   | Q1   |   |   |   |    |   |
| <b>Mounting Flange Material</b> - 9 <sup>th</sup> character                           |           |   |               |          |   |      |   |   |   |    |   |
| AISI 316 L ss   |           |   |               |          |   |      | S |   |   |    |   |
| <b>Extensions Length</b> - 10 <sup>th</sup> character                                 |           |   |               |          |   |      |   |   |   |    |   |
| Flush   |           |   |               |          |   |      |   | F |   |    |   |
| 50 mm (2 in.)   |           |   | AISI 316 L ss |          |   |      |   |   | 1 |    |   |
| 100 mm (4 in.)  |           |   | AISI 316 L ss |          |   |      |   |   |   | 3  |   |
| 150 mm (6 in.)  |           |   | AISI 316 L ss |          |   |      |   |   |   |    | 5 |
| <b>Diaphragm Material</b> - 11 <sup>th</sup> and 12 <sup>th</sup> characters          |           |   |               |          |   |      |   |   |   |    |   |
| AISI 316 L ss   |           |   |               |          |   | NACE |   |   |   | SM |   |
| AISI 316 L ss - Low thickness (not for extended diaphragm)                            |           |   |               | (Note 1) |   | NACE |   |   |   | SL |   |
| Hastelloy C-276   |           |   |               |          |   | NACE |   |   |   | HM |   |
| Hastelloy C-276 - Low thickness (not for extended diaphragm)                          |           |   |               | (Note 1) |   | NACE |   |   |   | HL |   |
| Hastelloy C-2000 (not for extended diaphragm)   |           |   |               | (Note 1) |   | NACE |   |   |   | MM |   |
| Inconel 625 (not for extended diaphragm)  |           |   |               | (Note 1) |   | NACE |   |   |   | LM |   |

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# Model S26 seals for remote and direct mount

| BASIC ORDERING INFORMATION model S26FE                        |                                  | S | 2 | 6 | F | E | X | XX | X | XX | X | X | X | X | X | X        |   |
|---|----------------------------------|---|---|---|---|---|---|----|---|----|---|---|---|---|---|----------|---|
| <b>Seal Surface Finish</b> - 13 <sup>th</sup> character       |                                  |   |   |   |   |   |   |    |   |    |   |   |   |   |   |          |   |
| Serrated  | (Note 2)                         |   |   |   |   |   |   |    |   |    |   |   |   |   |   |          | 1 |
| Smooth  |                                  |   |   |   |   |   |   |    |   |    |   |   |   |   |   |          | 2 |
| Form E - Spigot type  | (Notes 1, 3)                     |   |   |   |   |   |   |    |   |    |   |   |   |   |   |          | 4 |
| Form D - Groove type  | (Notes 1, 3, 4)                  |   |   |   |   |   |   |    |   |    |   |   |   |   |   |          | 6 |
| <b>Capillary Protection</b> - 14 <sup>th</sup> character      |                                  |   |   |   |   |   |   |    |   |    |   |   |   |   |   |          |   |
| AISI 316 L ss armour  |                                  |   |   |   |   |   |   |    |   |    |   |   |   |   |   |          | A |
| AISI 316 L ss armour with PVC protective cover                |                                  |   |   |   |   |   |   |    |   |    |   |   |   |   |   |          | B |
| Extension tube for direct mount seal                          | (Note 5)                         |   |   |   |   |   |   |    |   |    |   |   |   |   |   |          | N |
| <b>Capillary Length m (Feet)</b> - 15 <sup>th</sup> character |                                  |   |   |   |   |   |   |    |   |    |   |   |   |   |   |          |   |
| Direct-mount construction                                     | (Note 6)                         |   |   |   |   |   |   |    |   |    |   |   |   |   |   |          | 1 |
| 1 (3)   | (Note 7)                         |   |   |   |   |   |   |    |   |    |   |   |   |   |   |          | A |
| 1.5 (5)   | (Note 7)                         |   |   |   |   |   |   |    |   |    |   |   |   |   |   |          | B |
| 2 (7)   | (Note 7)                         |   |   |   |   |   |   |    |   |    |   |   |   |   |   |          | C |
| 2.5 (8)   | (Note 7)                         |   |   |   |   |   |   |    |   |    |   |   |   |   |   |          | D |
| 3 (10)  | (Note 7)                         |   |   |   |   |   |   |    |   |    |   |   |   |   |   |          | E |
| 3.5 (12)  | (Note 7)                         |   |   |   |   |   |   |    |   |    |   |   |   |   |   |          | F |
| 4 (13)  | (Note 7)                         |   |   |   |   |   |   |    |   |    |   |   |   |   |   |          | G |
| 4.5 (15)  | (Note 7)                         |   |   |   |   |   |   |    |   |    |   |   |   |   |   |          | H |
| 5 (17)  | (Note 7)                         |   |   |   |   |   |   |    |   |    |   |   |   |   |   |          | J |
| 5.5 (18)  | (Note 7)                         |   |   |   |   |   |   |    |   |    |   |   |   |   |   |          | K |
| 6 (20)  | (Note 7)                         |   |   |   |   |   |   |    |   |    |   |   |   |   |   |          | L |
| 6.5 (22)  | (Note 7)                         |   |   |   |   |   |   |    |   |    |   |   |   |   |   |          | M |
| 7 (23.5)  | (Note 7)                         |   |   |   |   |   |   |    |   |    |   |   |   |   |   |          | N |
| 7.5 (25)  | (Note 7)                         |   |   |   |   |   |   |    |   |    |   |   |   |   |   |          | P |
| 8 (27)  | (Note 7)                         |   |   |   |   |   |   |    |   |    |   |   |   |   |   |          | Q |
| 9 (30)  | (Note 7)                         |   |   |   |   |   |   |    |   |    |   |   |   |   |   |          | R |
| 10 (33)   | (Note 7)                         |   |   |   |   |   |   |    |   |    |   |   |   |   |   |          | S |
| 12 (40)   | (Note 7)                         |   |   |   |   |   |   |    |   |    |   |   |   |   |   |          | T |
| 14 (47)   | (Notes 1, 7)                     |   |   |   |   |   |   |    |   |    |   |   |   |   |   |          | U |
| 16 (53)   | (Notes 1, 7)                     |   |   |   |   |   |   |    |   |    |   |   |   |   |   |          | V |
| <b>Fill Fluid</b> - 16 <sup>th</sup> character                |                                  |   |   |   |   |   |   |    |   |    |   |   |   |   |   |          |   |
| Silicone oil PMX 200 10 cSt                                   | (-40 to 250 °C; -40 to 480 °F)   |   |   |   |   |   |   |    |   |    |   |   |   |   |   |          | S |
| Silicone oil Baysilone PD5 5 cSt                              | (-85 to 250 °C; -121 to 480 °F)  |   |   |   |   |   |   |    |   |    |   |   |   |   |   |          | P |
| Inert oil - Galden G5   | (Oxygen service)                 |   |   |   |   |   |   |    |   |    |   |   |   |   |   | (Note 8) | N |
| Inert oil - Halocarbon 4.2                                    | (Oxygen service)                 |   |   |   |   |   |   |    |   |    |   |   |   |   |   | (Note 8) | D |
| Silicone oil for high temperature                             | (-10 to 375 °C; 14 to 707 °F)    |   |   |   |   |   |   |    |   |    |   |   |   |   |   |          | G |
| Silicone polymer Syltherm XLT                                 | (-100 to 100 °C; -148 to 212 °F) |   |   |   |   |   |   |    |   |    |   |   |   |   |   |          | C |
| Mineral oil Esso Marcol 122                                   | (FDA approved)                   |   |   |   |   |   |   |    |   |    |   |   |   |   |   | (Note 9) | W |
| Vegetable oil Neobee M-20                                     | (FDA approved)                   |   |   |   |   |   |   |    |   |    |   |   |   |   |   | (Note 9) | A |
| Glycerin-water 70%  | (FDA approved)                   |   |   |   |   |   |   |    |   |    |   |   |   |   |   | (Note 9) | B |

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**BASIC ORDERING INFORMATION model S26FE**

**S 2 6 F E X XX X X XX X X X X X X X X X X X X X**

**Flushing Ring: Hole and Thread - 17<sup>th</sup> character**

|                       |               |  |  |   |  |  |
|-----------------------|---------------|--|--|---|--|--|
| None                  |               |  |  | N |  |  |
| 1 hole - 1/2 in. NPT  | (Notes 1, 10) |  |  | 2 |  |  |
| 2 holes - 1/2 in. NPT | (Notes 1, 10) |  |  | 3 |  |  |
| 1 hole - 1/4 in. NPT  | (Notes 1, 10) |  |  | 4 |  |  |
| 2 holes - 1/4 in. NPT | (Notes 1, 10) |  |  | 5 |  |  |

**Flushing Ring Material - 18<sup>th</sup> character**

|                 |                |  |      |  |   |   |
|-----------------|----------------|--|------|--|---|---|
| None            | (Note 11)      |  |      |  | N |   |
| AISI 316 L ss   | (Note 12)      |  | NACE |  |   | A |
| Hastelloy C-276 | (Notes 12, 13) |  | NACE |  |   | H |

**Flushing Ring: Plug and Gasket - 19<sup>th</sup> character**

|                             |                |  |      |  |  |   |
|-----------------------------|----------------|--|------|--|--|---|
| No plug - No gasket         |                |  |      |  |  | N |
| No plug - garlock           | (Note 12)      |  |      |  |  | A |
| No plug - PTFE              | (Note 12)      |  |      |  |  | B |
| No plug - graphite          | (Note 12)      |  |      |  |  | C |
| AISI 316 L ss - no gasket   | (Notes 12, 14) |  | NACE |  |  | D |
| AISI 316 L ss - garlock     | (Notes 12, 14) |  | NACE |  |  | E |
| AISI 316 L ss - PTFE        | (Notes 12, 14) |  | NACE |  |  | F |
| AISI 316 L ss - graphite    | (Notes 12, 14) |  | NACE |  |  | G |
| Hastelloy C-276 - no gasket | (Notes 12, 15) |  | NACE |  |  | H |
| Hastelloy C-276 - garlock   | (Notes 12, 15) |  | NACE |  |  | L |
| Hastelloy C-276 - PTFE      | (Notes 12, 15) |  | NACE |  |  | M |
| Hastelloy C-276 - graphite  | (Notes 12, 15) |  | NACE |  |  | P |

- Note 1: Not available with extensions length and material code 1, 3, 5
- Note 2: Not available with diaphragm material code MM, LM
- Note 3: Not available with DN 100 size code Q1
- Note 4: Not available with diaphragm material code HM, HL, MM, LM
- Note 5: Not available with transmitter side of connection code L
- Note 6: Not available with capillary protection code A, B
- Note 7: Not available with capillary protection code N
- Note 8: Suitable for oxygen service
- Note 9: Suitable for food application
- Note 10: Not available with Seal surface finish code 4, 6
- Note 11: Not available with Flushing ring: hole and thread code 2, 3, 4, 5
- Note 12: Not available with Flushing ring: hole and thread code N
- Note 13: Not available with Seal surface finish code 1
- Note 14: Not available with Hastelloy C-276 flushing ring material code H
- Note 15: Not available with AISI 316 L flushing ring material code A

# Model S26 seals for remote and direct mount

## S26TT Model off-line threaded diaphragm seal

The off-line threaded connection seals are designed to connect directly to a process pipe via the NPT connection in the lower housing. These elements are available with a flushing connection, on request, in the lower housing.

### Pressure limits

| Seal model           | Temperature range                | Pressure limit            |
|----------------------|----------------------------------|---------------------------|
| <b>S26TT bolting</b> |                                  |                           |
| AISI 316 ss or       | 0 ... 100 °C (32 ... 212 °F)     | 21 MPa, 210 bar, 3045 psi |
| Carbon steel         | -60 ... 0 °C (-76 ... 32 °F)     | 16 MPa, 160 bar, 2320 psi |
|                      | 100 ... 360 °C (212 ... 680 °F)  | 16 MPa, 160 bar, 2320 psi |
| Alloy steel          | 0 ... 37.8 °C (32 ... 100 °F)    | 21 MPa, 210 bar, 3045 psi |
|                      | -48.3 ... 0 °C (-55 ... 32 °F)   | 16 MPa, 160 bar, 2320 psi |
|                      | 37.8 ... 360 °C (100 ... 680 °F) | 13 MPa, 130 bar, 1885 psi |

### Vacuum service

Full vacuum subject to fill fluid limits.

Refer to FILL FLUID CHARACTERISTICS table. Minimum pressure with tantalum diaphragm is 1 kPa abs, 10 mbar abs, 0.15 psia.

### Process temperature limits

Refer to FILL FLUID CHARACTERISTICS table and as follows for specific variants.

| Material                   |                                      |
|----------------------------|--------------------------------------|
| Tantalum diaphragm         | 260 °C (500 °F)                      |
| AISI gold plated diaphragm | 320 °C (608 °F)                      |
| PTFE gasket                | -100 and 260 °C<br>(-148 and 500 °F) |
| Viton gasket               | -20 and 260 °C<br>(-4 and 500 °F)    |
| graphite gasket            | -100 and 360 °C<br>(-148 and 680 °F) |

| S26T off-line threaded seal size - Mnemonic | Sensor URL        | Seal error (process) | Direct mount system error (ambient) | Remote system error (ambient) | 1 metre capillary error (ambient) |
|---|-------------------|----------------------|-------------------------------------|-------------------------------|-----------------------------------|
| 2 1/2 in. - T2.5                            | ≥ 4 kPa, 16 inH2O | 0.26 kPa, 1.04 inH2O | 0.11 kPa, 0.44 inH2O                | 0.1 kPa, 0.4 inH2O            | 0.08 kPa, 0.32 inH2O              |

MULTIPLY BY 10 THE kPa VALUES TO OBTAIN mbar.

### Bolts

AISI 316 ss bolts Class A4-80 and nuts Class A4-70 per EN ISO 3506;

Carbon steel bolts Class 8.8 per EN ISO 4014 and nuts Class 8 per EN ISO 898/2;

Alloy steel bolts per ASTM-A-193-77a grade B7M and nuts per ASTM A194/A 194 M-90 grade 2HM, in compliance with NACEMR0175 Class II.

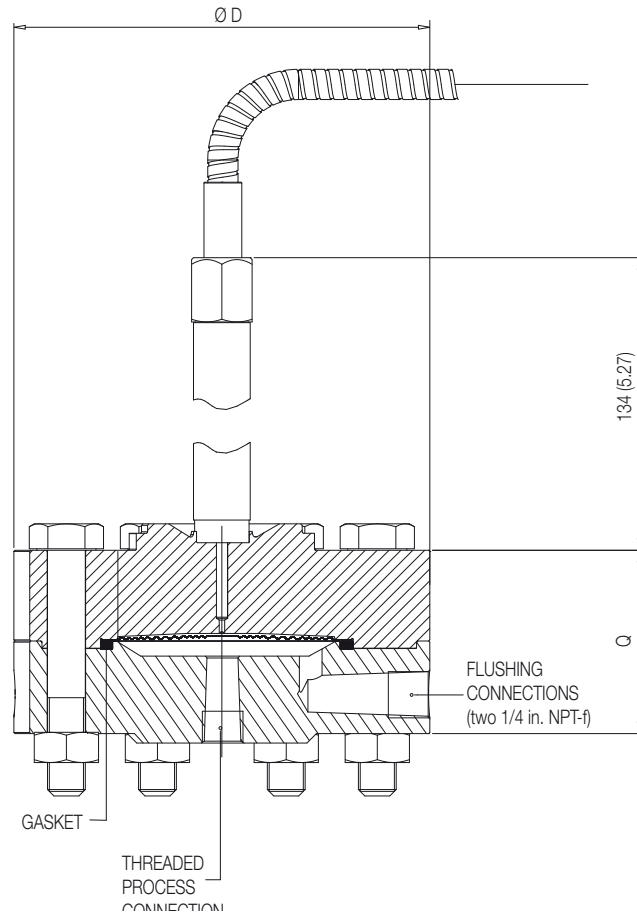
### Temperature effect

The following table shows temperature effect per 20 K (36 °F) change, detailed separately for

- the seal (one element), as process temperature error
- the capillary per meter
- the system (transmitter sensor when combined with a seal of specific size/type, either direct mount or remote) referred to silicone oil (PMX 200) filling and AISI 316 L ss diaphragm materials.

For filling different from silicone oil (PMX 200) the errors can be multiplied by ratio between the thermal expansion coefficients of the selected filling divided by the one of PMX 200, listed in the fill fluid characteristics table.

THE ERRORS IN TABLE CAN BE CONSIDERED DIVIDED BY 4 FOR TRANSMITTERS USING SAME REMOTE SEAL ON THE TWO SIDES



| Size (thread) | Dimensions mm. (in.) for S26TT |            |
|---------------|--------------------------------|------------|
|               | D (dia)                        | Q          |
| 1/4 in. NPT   | 109.2 (4.3)                    | 53.3 (2.1) |
| 1/2 in. NPT   | 109.2 (4.3)                    | 53.3 (2.1) |
| 3/4 in. NPT   | 109.2 (4.3)                    | 63.5 (2.5) |
| 1 in. NPT     | 109.2 (4.3)                    | 63.5 (2.5) |
| 1 1/2 in. NPT | 109.2 (4.3)                    | 63.5 (2.5) |

# Model S26 seals for remote and direct mount

## BASIC ORDERING INFORMATION model S26TT Off-line threaded diaphragm seals

Select one character or set of characters from each category and specify complete catalog number.

|  |           |   |   |   |   |    |   |   |   |   |
|--|-----------|---|---|---|---|----|---|---|---|---|
| <b>BASE MODEL</b> - 1 <sup>st</sup> to 5 <sup>th</sup> characters            | S 2 6 T T | X | X | X | X | XX | X | X | X | X |
| Off-line threaded diaphragm seal   |           |   |   |   |   |    |   |   |   |   |
| <b>Transmitter Side of Connection</b> - 6 <sup>th</sup> character            |           |   |   |   |   |    |   |   |   |   |
| High pressure side   |           | H |   |   |   |    |   |   |   |   |
| Low pressure side  |           | L |   |   |   |    |   |   |   |   |
| <b>Size</b> - 7 <sup>th</sup> character                                      |           |   |   |   |   |    |   |   |   |   |
| 1/4 in. NPT-f  |           |   |   |   |   |    |   |   |   |   |
| 1/2 in. NPT-f  |           |   |   |   |   |    |   |   |   |   |
| 3/4 in. NPT-f  |           |   |   |   |   |    |   |   |   |   |
| 1 in. NPT-f  |           |   |   |   |   |    |   |   |   |   |
| 1 1/2 in. NPT-f  |           |   |   |   |   |    |   |   |   |   |
| <b>Bolts material</b> - 8 <sup>th</sup> character                            |           |   |   |   |   |    |   |   |   |   |
| AISI 316 ss  |           |   |   |   |   |    |   |   |   |   |
| Carbon steel   |           |   |   |   |   |    |   |   |   |   |
| Alloy steel  |           |   |   |   |   |    |   |   |   |   |
| <b>Mounting Flange Material</b> - 9 <sup>th</sup> character                  |           |   |   |   |   |    |   |   |   |   |
| AISI 316 ss  |           |   |   |   |   |    |   |   |   |   |
| Hastelloy C-276  |           |   |   |   |   |    |   |   |   |   |
| <b>Diaphragm Material</b> - 10 <sup>th</sup> and 11 <sup>th</sup> characters |           |   |   |   |   |    |   |   |   |   |
| AISI 316 L ss  |           |   |   |   |   |    |   |   |   |   |
| Hastelloy C-276  |           |   |   |   |   |    |   |   |   |   |
| Hastelloy C-2000   |           |   |   |   |   |    |   |   |   |   |
| Inconel 625  |           |   |   |   |   |    |   |   |   |   |
| Tantalum   |           |   |   |   |   |    |   |   |   |   |
| AISI 316 L ss gold plated  |           |   |   |   |   |    |   |   |   |   |
| <b>Capillary Protection</b> - 12 <sup>th</sup> character                     |           |   |   |   |   |    |   |   |   |   |
| AISI 316 L ss armour   |           |   |   |   |   |    |   |   |   | A |
| AISI 316 L ss armour with PVC protective cover                               |           |   |   |   |   |    |   |   |   | B |
| Extension tube for direct mount seal (Note 1)                                |           |   |   |   |   |    |   |   |   | N |

continued  
see next page



**BASIC ORDERING INFORMATION model S26TT**

**S 2 6 T T X XX X XX X X X X**

| Capillary Length m (Feet) - 13 <sup>th</sup> character |                                  |          | X | X | X | X |
|--|----------------------------------|----------|---|---|---|---|
| Direct-mount construction                              | (Note 2)                         |          | 1 |   |   |   |
| 1 (3)  | (Note 3)                         |          | A |   |   |   |
| 1.5 (5)  | (Note 3)                         |          | B |   |   |   |
| 2 (7)  | (Note 3)                         |          | C |   |   |   |
| 2.5 (8)  | (Note 3)                         |          | D |   |   |   |
| 3 (10)   | (Note 3)                         |          | E |   |   |   |
| 3.5 (12)   | (Note 3)                         |          | F |   |   |   |
| 4 (13)   | (Note 3)                         |          | G |   |   |   |
| 4.5 (15)   | (Note 3)                         |          | H |   |   |   |
| 5 (17)   | (Note 3)                         |          | J |   |   |   |
| 5.5 (18)   | (Note 3)                         |          | K |   |   |   |
| 6 (20)   | (Note 3)                         |          | L |   |   |   |
| 6.5 (22)   | (Note 3)                         |          | M |   |   |   |
| 7 (23.5)   | (Note 3)                         |          | N |   |   |   |
| 7.5 (25)   | (Note 3)                         |          | P |   |   |   |
| 8 (27)   | (Note 3)                         |          | Q |   |   |   |
| 9 (30)   | (Note 3)                         |          | R |   |   |   |
| 10 (33)  | (Note 3)                         |          | S |   |   |   |
| 12 (40)  | (Note 3)                         |          | T |   |   |   |
| Fill Fluid - 14 <sup>th</sup> character                |                                  |          |   |   |   |   |
| Silicone oil PMX 200 10 cSt                            | (-40 to 250 °C; -40 to 480 °F)   |          |   |   | S |   |
| Silicone oil Baysilone PD5 5 cSt                       | (-85 to 250 °C; -121 to 480 °F)  |          |   |   | P |   |
| Inert oil - Galden G5                                  | (Oxygen service)                 | (Note 4) |   |   | N |   |
| Inert oil - Halocarbon 4.2                             | (Oxygen service)                 | (Note 4) |   |   | D |   |
| Silicone oil for high temperature                      | (-10 to 375 °C; 14 to 707 °F)    |          |   |   | G |   |
| Silicone polymer Syltherm XLT                          | (-100 to 100 °C; -148 to 212 °F) |          |   |   | C |   |
| Mineral oil Esso Marcol 122                            | (FDA approved)                   | (Note 5) |   |   | W |   |
| Vegetable oil Neobee M-20                              | (FDA approved)                   | (Note 5) |   |   | A |   |
| Glycerin-water 70%                                     | (FDA approved)                   | (Note 5) |   |   | B |   |
| Flushing Connections - 15 <sup>th</sup> character      |                                  |          |   |   |   |   |
| Not required   |                                  |          |   |   |   | 1 |
| Provided (2 off)                                       |                                  | (Note 6) |   |   |   | Q |
| Gasket - 16 <sup>th</sup> character                    |                                  |          |   |   |   |   |
| PTFE   |                                  |          |   |   |   | 2 |
| Viton  |                                  |          |   |   |   | 3 |
| Graphite   |                                  |          |   |   |   | 7 |

Note 1: Not available with transmitter side of connection code L  
 Note 2: Not available with capillary protection code A, B  
 Note 3: Not available with capillary protection code N  
 Note 4: Suitable for oxygen service  
 Note 5: Suitable for food application  
 Note 6: Not available with size code 5

# Model S26 seals for remote and direct mount

## S26MA, S26ME Model off-line flanged diaphragm seal

The off-line flanged connection remote seals are designed to connect directly to ASME or EN flanged tank nozzles. These elements are available with a flushing connection in the lower housing, selectable on request in the ordering code.

### Pressure limits

| Seal model S26ME to EN 1092-1 | AISI 316 ss or Hastelloy C flange |
|-------------------------------|-----------------------------------|
| PN 16 / 40                    | 34 bar @ 25 °C (77 °F)            |

| Seal model S26MA to ASME B16.5 | AISI 316 L ss flange @ 25 °C (77 °F) | Hastelloy C flange @ 25 °C (77 °F) |
|--------------------------------|--------------------------------------|------------------------------------|
| Class 150                      | 230 psi                              | 290 psi                            |
| Class 300                      | 600 psi                              | 750 psi                            |

The pressure limit decreases with increasing temperature above to the specified values as defined for the material, respectively for EN 1092-1 or ASME B16.5 standards.

### Vacuum service

Full vacuum subject to fill fluid limits. Refer to FILL FLUID CHARACTERISTICS table. Minimum pressure with tantalum diaphragm is 1 kPa abs, 10 mbar abs, 0.15 psia.

### Process temperature limits

Refer to FILL FLUID CHARACTERISTICS table and as follows for specific variants.

| Material                   |                                      |
|----------------------------|--------------------------------------|
| Tantalum diaphragm         | 260 °C (500 °F)                      |
| AISI gold plated diaphragm | 320 °C (608 °F)                      |
| PTFE gasket                | -100 and 260 °C<br>(-148 and 500 °F) |
| Viton gasket               | -20 and 260 °C<br>(-4 and 500 °F)    |
| graphite gasket            | -100 and 360 °C<br>(-148 and 680 °F) |

| S26MA, S26ME off-line flange seal size - Mnemonic | Sensor URL        | Seal error (process) | Direct mount system error (ambient) | Remote system error (ambient) | 1 metre capillary error (ambient) |
|---|-------------------|----------------------|-------------------------------------|-------------------------------|-----------------------------------|
| 2 1/2 in. - T2.5                                  | ≥ 4 kPa, 16 inH2O | 0.26 kPa, 1.04 inH2O | 0.11 kPa, 0.44 inH2O                | 0.1 kPa, 0.4 inH2O            | 0.08 kPa, 0.32 inH2O              |

MULTIPLY BY 10 THE kPa VALUES TO OBTAIN mbar.

### Bolts

Bolts (seal / flange): AISI 316 ss Class A4-70 per EN ISO 3506; studs with nuts (flange / process): AISI 3xx per ASTM-SA-193/194 grade B8C or B8T

### Gasket seat finish

Serrated (ASME): 3.2 to 6.3 µm (Ra)  
Serrated (EN 1092-1 Type B1): 3.2 to 12.5 µm (Ra)

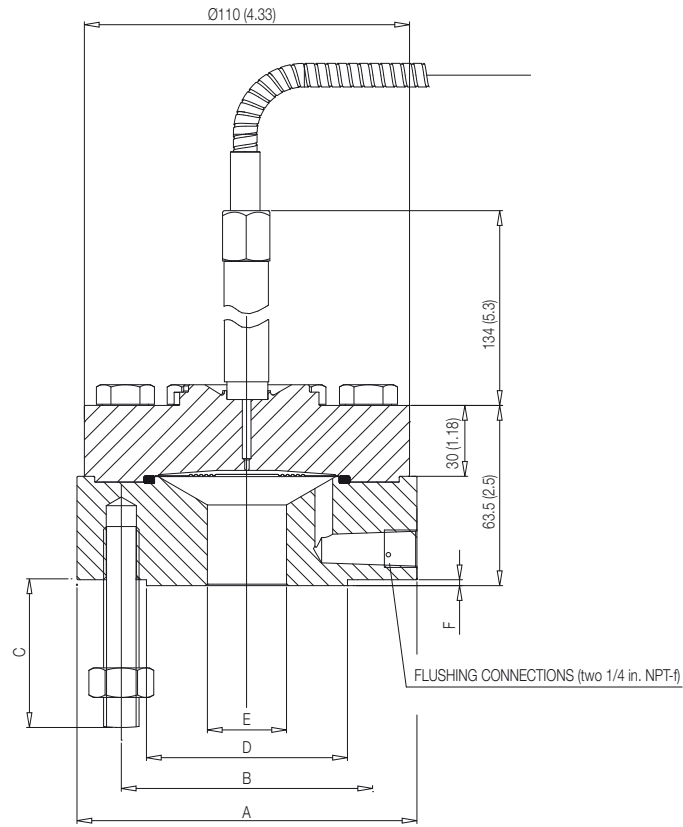
### Temperature effect

The following table shows temperature effect per 20 K (36 °F) change, detailed separately for

- the seal (one element), as process temperature error
- the capillary per meter
- the system (transmitter sensor when combined with a seal of specific size/type, either direct mount or remote) referred to silicone oil (PMX 200) filling and AISI 316 L ss diaphragm materials.

For filling different from silicone oil (PMX 200) the errors can be multiplied by ratio between the thermal expansion coefficients of the selected filling divided by the one of PMX 200, listed in the fill fluid characteristics table.

THE ERRORS IN TABLE CAN BE CONSIDERED DIVIDED BY 4 FOR TRANSMITTERS USING SAME REMOTE SEAL ON THE TWO SIDES



| Size/Rating           | Dimensions mm. (in.) for S26MA and S26ME |             |             |                  |             |             |            |
|-----------------------|--|-------------|-------------|------------------|-------------|-------------|------------|
|                       | A (dia)                                  | B (dia)     | C (4 studs) |                  | D (dia)     | E (dia)     | F          |
|                       |  |             | Length      | Thread           |             |             |            |
| 1/2 in. ASME CL 150   | 110 (4.33)                               | 60.5 (2.38) | 39 (1.53)   | 1/2 in. – 13 UNC | 35.1 (1.38) | 15.8 (0.62) | 1.6 (0.06) |
| 1/2 in. ASME CL 300   | 110 (4.33)                               | 66.5 (2.62) | 39 (1.53)   | 1/2 in. – 13 UNC | 35.1 (1.38) | 15.8 (0.62) | 1.6 (0.06) |
| 1 in. ASME CL 150     | 110 (4.33)                               | 79.4 (3.12) | 39 (1.53)   | 1/2 in. – 13 UNC | 50.8 (2)    | 26.7 (1.05) | 1.6 (0.06) |
| 1 in. ASME CL 300     | 124 (4.88)                               | 88.9 (3.5)  | 51 (2)      | 5/8 in. – 11 UNC | 50.8 (2)    | 26.7 (1.05) | 1.6 (0.06) |
| 1 1/2 in. ASME CL 150 | 127 (5)                                  | 98.4 (3.87) | 39 (1.53)   | 1/2 in. – 13 UNC | 73 (2.87)   | 41 (1.61)   | 1.6 (0.06) |
| 1 1/2 in. ASME CL 300 | 155 (6.1)                                | 114.3 (4.5) | 57 (2.24)   | 3/4 in. – 10 UNC | 73 (2.87)   | 41 (1.61)   | 1.6 (0.06) |
| DN 25 PN 16-40        | 115 (4.52)                               | 85 (3.34)   | 42 (1.65)   | M12              | 68 (2.67)   | 28.5 (1.12) | 2 (0.08)   |
| DN 40 PN 16-40        | 150 (5.9)                                | 110 (4.33)  | 48 (1.89)   | M16              | 88 (3.46)   | 43.1 (1.69) | 3 (0.12)   |

# Model S26 seals for remote and direct mount

## BASIC ORDERING INFORMATION model S26MA Off-line flange diaphragm seals

Select one character or set of characters from each category and specify complete catalog number.

|   |                  |          |           |          |           |          |          |          |          |          |          |          |
|---|------------------|----------|-----------|----------|-----------|----------|----------|----------|----------|----------|----------|----------|
| <b>BASE MODEL</b> - 1 <sup>st</sup> to 5 <sup>th</sup> characters                     | <b>S 2 6 M A</b> | <b>X</b> | <b>XX</b> | <b>X</b> | <b>XX</b> | <b>X</b> | <b>X</b> | <b>X</b> | <b>X</b> | <b>X</b> | <b>X</b> | <b>X</b> |
| Off-line flange diaphragm seal to ASME B16.5  |                  |          |           |          |           |          |          |          |          |          |          |          |
| <b>Transmitter Side of Connection</b> - 6 <sup>th</sup> character                     |                  |          |           |          |           |          |          |          |          |          |          |          |
| High pressure side  |                  |          |           |          |           |          |          |          |          |          |          |          |
| Low pressure side   |                  |          |           |          |           |          |          |          |          |          |          |          |
| <b>Mounting Flange Rating / Size</b> - 7 <sup>th</sup> and 8 <sup>th</sup> characters |                  |          |           |          |           |          |          |          |          |          |          |          |
| ASME CL 150 / 1/2 in.   |                  |          |           |          |           |          |          |          |          |          |          |          |
| ASME CL 300 / 1/2 in.   |                  |          |           |          |           |          |          |          |          |          |          |          |
| ASME CL 150 / 1 in.   |                  |          |           |          |           |          |          |          |          |          |          |          |
| ASME CL 300 / 1 in.   |                  |          |           |          |           |          |          |          |          |          |          |          |
| ASME CL 150 / 1 1/2 in.   |                  |          |           |          |           |          |          |          |          |          |          |          |
| ASME CL 300 / 1 1/2 in.   |                  |          |           |          |           |          |          |          |          |          |          |          |
| <b>Mounting Flange Material / Seat Form</b> - 9 <sup>th</sup> character               |                  |          |           |          |           |          |          |          |          |          |          |          |
| AISI 316 ss / Form RF (raised face) - serrated finish                                 | NACE             | (Note 6) |           |          |           |          |          |          |          |          |          |          |
| Hastelloy C-276 / Form RF (raised face) - serrated finish                             | NACE             | (Note 6) |           |          |           |          |          |          |          |          |          |          |
| Hastelloy C-2000 / Form RF (raised face) - serrated finish                            | NACE             | (Note 7) |           |          |           |          |          |          |          |          |          |          |
| <b>Diaphragm Material</b> - 10 <sup>th</sup> and 11 <sup>th</sup> characters          |                  |          |           |          |           |          |          |          |          |          |          |          |
| AISI 316 L ss   | NACE             |          |           |          |           |          |          |          |          |          |          | SM       |
| Hastelloy C-276   | NACE             |          |           |          |           |          |          |          |          |          |          | HM       |
| Hastelloy C-2000  | NACE             |          |           |          |           |          |          |          |          |          |          | MM       |
| Hastelloy C-2000 diaphragm and body   | NACE             |          |           |          |           |          |          |          |          |          |          | ZM       |
| Inconel 625   | NACE             |          |           |          |           |          |          |          |          |          |          | LM       |
| Tantalum  |                  |          |           |          |           |          |          |          |          |          |          | TM       |
| AISI 316 L ss gold plated   | NACE             |          |           |          |           |          |          |          |          |          |          | NM       |
| <b>Capillary Protection</b> - 12 <sup>th</sup> character                              |                  |          |           |          |           |          |          |          |          |          |          |          |
| AISI 316 L ss armour  |                  |          |           |          |           |          |          |          |          |          |          | A        |
| AISI 316 L ss armour with PVC protective cover  |                  |          |           |          |           |          |          |          |          |          |          | B        |
| Extension tube for direct mount seal  |                  | (Note 1) |           |          |           |          |          |          |          |          |          | N        |

continued  
see next page

| BASIC ORDERING INFORMATION model S26MA                        |                                  |          | S | 2 | M | A | X | XX | X | XX | X | X | X | X |  |
|---|----------------------------------|----------|---|---|---|---|---|----|---|----|---|---|---|---|--|
| <b>Capillary Length m (Feet)</b> - 13 <sup>th</sup> character |                                  |          |   |   |   |   |   |    |   |    |   |   |   |   |  |
| Direct-mount construction                                     | (Note 2)                         |          |   |   |   |   |   |    |   |    |   | 1 |   |   |  |
| 1 (3)   | (Note 3)                         |          |   |   |   |   |   |    |   |    |   | A |   |   |  |
| 1.5 (5)   | (Note 3)                         |          |   |   |   |   |   |    |   |    |   | B |   |   |  |
| 2 (7)   | (Note 3)                         |          |   |   |   |   |   |    |   |    |   | C |   |   |  |
| 2.5 (8)   | (Note 3)                         |          |   |   |   |   |   |    |   |    |   | D |   |   |  |
| 3 (10)  | (Note 3)                         |          |   |   |   |   |   |    |   |    |   | E |   |   |  |
| 3.5 (12)  | (Note 3)                         |          |   |   |   |   |   |    |   |    |   | F |   |   |  |
| 4 (13)  | (Note 3)                         |          |   |   |   |   |   |    |   |    |   | G |   |   |  |
| 4.5 (15)  | (Note 3)                         |          |   |   |   |   |   |    |   |    |   | H |   |   |  |
| 5 (17)  | (Note 3)                         |          |   |   |   |   |   |    |   |    |   | J |   |   |  |
| 5.5 (18)  | (Note 3)                         |          |   |   |   |   |   |    |   |    |   | K |   |   |  |
| 6 (20)  | (Note 3)                         |          |   |   |   |   |   |    |   |    |   | L |   |   |  |
| 6.5 (22)  | (Note 3)                         |          |   |   |   |   |   |    |   |    |   | M |   |   |  |
| 7 (23.5)  | (Note 3)                         |          |   |   |   |   |   |    |   |    |   | N |   |   |  |
| 7.5 (25)  | (Note 3)                         |          |   |   |   |   |   |    |   |    |   | P |   |   |  |
| 8 (27)  | (Note 3)                         |          |   |   |   |   |   |    |   |    |   | Q |   |   |  |
| 9 (30)  | (Note 3)                         |          |   |   |   |   |   |    |   |    |   | R |   |   |  |
| 10 (33)   | (Note 3)                         |          |   |   |   |   |   |    |   |    |   | S |   |   |  |
| 12 (40)   | (Note 3)                         |          |   |   |   |   |   |    |   |    |   | T |   |   |  |
| <b>Fill Fluid</b> - 14 <sup>th</sup> character                |                                  |          |   |   |   |   |   |    |   |    |   |   |   |   |  |
| Silicone oil PMX 200 10 cSt                                   | (-40 to 250 °C; -40 to 480 °F)   |          |   |   |   |   |   |    |   |    |   |   | S |   |  |
| Silicone oil Baysilone PD5 5 cSt                              | (-85 to 250 °C; -121 to 480 °F)  |          |   |   |   |   |   |    |   |    |   |   | P |   |  |
| Inert oil - Galden G5   | (Oxygen service)                 | (Note 4) |   |   |   |   |   |    |   |    |   |   | N |   |  |
| Inert oil - Halocarbon 4.2                                    | (Oxygen service)                 | (Note 4) |   |   |   |   |   |    |   |    |   |   | D |   |  |
| Silicone oil for high temperature                             | (-10 to 375 °C; 14 to 707 °F)    |          |   |   |   |   |   |    |   |    |   |   | G |   |  |
| Silicone polymer Syltherm XLT                                 | (-100 to 100 °C; -148 to 212 °F) |          |   |   |   |   |   |    |   |    |   |   | C |   |  |
| Mineral oil Esso Marcol 122                                   | (FDA approved)                   | (Note 5) |   |   |   |   |   |    |   |    |   |   | W |   |  |
| Vegetable oil Neobee M-20                                     | (FDA approved)                   | (Note 5) |   |   |   |   |   |    |   |    |   |   | A |   |  |
| Glycerin-water 70%  | (FDA approved)                   | (Note 5) |   |   |   |   |   |    |   |    |   |   | B |   |  |
| <b>Flushing Connections</b> - 15 <sup>th</sup> character      |                                  |          |   |   |   |   |   |    |   |    |   |   |   |   |  |
| Not required  |                                  |          |   |   |   |   |   |    |   |    |   |   |   | 1 |  |
| Provided (2 off)  |                                  |          |   |   |   |   |   |    |   |    |   |   |   | Q |  |
| <b>Gasket</b> - 16 <sup>th</sup> character                    |                                  |          |   |   |   |   |   |    |   |    |   |   |   |   |  |
| PTFE  |                                  |          |   |   |   |   |   |    |   |    |   |   |   | 2 |  |
| Viton   | (Note 6)                         |          |   |   |   |   |   |    |   |    |   |   |   | 3 |  |
| Graphite  | (Note 6)                         |          |   |   |   |   |   |    |   |    |   |   |   | 7 |  |

Note 1: Not available with transmitter side of connection code L  
Note 2: Not available with capillary protection code A, B  
Note 3: Not available with capillary protection code N  
Note 4: Suitable for oxygen service  
Note 5: Suitable for food application  
Note 6: Not available with diaphragm material code ZM  
Note 7: Not available with diaphragm material code SM, HM, MM, LM, TM, NM

# Model S26 seals for remote and direct mount

## BASIC ORDERING INFORMATION model S26ME Off-line flange diaphragm seals

Select one character or set of characters from each category and specify complete catalog number.

| BASE MODEL - 1 <sup>st</sup> to 5 <sup>th</sup> characters                            | S | 2 | 6 | M | E    | X | XX | X  | XX | X | X  | X | X | X |
|---|---|---|---|---|------|---|----|----|----|---|----|---|---|---|
| Off-line flange diaphragm seal to EN 1092-1   |   |   |   |   |      |   |    |    |    |   |    |   |   |   |
| <b>Transmitter Side of Connection</b> - 6 <sup>th</sup> character                     |   |   |   |   |      |   |    |    |    |   |    |   |   |   |
| High pressure side  |   |   |   |   |      | H |    |    |    |   |    |   |   |   |
| Low pressure side   |   |   |   |   |      | L |    |    |    |   |    |   |   |   |
| <b>Mounting Flange Rating / Size</b> - 7 <sup>th</sup> and 8 <sup>th</sup> characters |   |   |   |   |      |   |    |    |    |   |    |   |   |   |
| PN 16 - 40 / DN 25  |   |   |   |   |      |   |    | L2 |    |   |    |   |   |   |
| PN 16 - 40 / DN 40  |   |   |   |   |      |   |    | M2 |    |   |    |   |   |   |
| <b>Mounting Flange Material / Seat Form</b> - 9 <sup>th</sup> character               |   |   |   |   |      |   |    |    |    |   |    |   |   |   |
| AISI 316 ss / Form B1 - serrated finish   |   |   |   |   | NACE |   |    |    |    | S |    |   |   |   |
| Hastelloy C-276 / Form B1 - serrated finish   |   |   |   |   | NACE |   |    |    |    | H |    |   |   |   |
| <b>Diaphragm Material</b> - 10 <sup>th</sup> and 11 <sup>th</sup> characters          |   |   |   |   |      |   |    |    |    |   |    |   |   |   |
| AISI 316 L ss   |   |   |   |   | NACE |   |    |    |    |   | SM |   |   |   |
| Hastelloy C-276   |   |   |   |   | NACE |   |    |    |    |   | HM |   |   |   |
| Hastelloy C-2000  |   |   |   |   | NACE |   |    |    |    |   | MM |   |   |   |
| Inconel 625   |   |   |   |   | NACE |   |    |    |    |   | LM |   |   |   |
| Tantalum  |   |   |   |   |      |   |    |    |    |   | TM |   |   |   |
| AISI 316 L ss gold plated   |   |   |   |   | NACE |   |    |    |    |   | NM |   |   |   |
| <b>Capillary Protection</b> - 12 <sup>th</sup> character                              |   |   |   |   |      |   |    |    |    |   |    |   |   |   |
| AISI 316 L ss armour  |   |   |   |   |      |   |    |    |    |   |    |   |   | A |
| AISI 316 L ss armour with PVC protective cover  |   |   |   |   |      |   |    |    |    |   |    |   |   | B |
| Extension tube for direct mount seal (Note 1)   |   |   |   |   |      |   |    |    |    |   |    |   |   | N |

continued  
see next page

| BASIC ORDERING INFORMATION model S26ME                        |                                  |          | S | 2 | 6 | E | X | XX | X | XX | X | X | X | X |  |
|---|----------------------------------|----------|---|---|---|---|---|----|---|----|---|---|---|---|--|
| <b>Capillary Length m (Feet)</b> - 13 <sup>th</sup> character |                                  |          |   |   |   |   |   |    |   |    |   |   |   |   |  |
| Direct-mount construction                                     | (Note 2)                         |          |   |   |   |   |   |    |   |    |   | 1 |   |   |  |
| 1 (3)   | (Note 3)                         |          |   |   |   |   |   |    |   |    |   | A |   |   |  |
| 1.5 (5)   | (Note 3)                         |          |   |   |   |   |   |    |   |    |   | B |   |   |  |
| 2 (7)   | (Note 3)                         |          |   |   |   |   |   |    |   |    |   | C |   |   |  |
| 2.5 (8)   | (Note 3)                         |          |   |   |   |   |   |    |   |    |   | D |   |   |  |
| 3 (10)  | (Note 3)                         |          |   |   |   |   |   |    |   |    |   | E |   |   |  |
| 3.5 (12)  | (Note 3)                         |          |   |   |   |   |   |    |   |    |   | F |   |   |  |
| 4 (13)  | (Note 3)                         |          |   |   |   |   |   |    |   |    |   | G |   |   |  |
| 4.5 (15)  | (Note 3)                         |          |   |   |   |   |   |    |   |    |   | H |   |   |  |
| 5 (17)  | (Note 3)                         |          |   |   |   |   |   |    |   |    |   | J |   |   |  |
| 5.5 (18)  | (Note 3)                         |          |   |   |   |   |   |    |   |    |   | K |   |   |  |
| 6 (20)  | (Note 3)                         |          |   |   |   |   |   |    |   |    |   | L |   |   |  |
| 6.5 (22)  | (Note 3)                         |          |   |   |   |   |   |    |   |    |   | M |   |   |  |
| 7 (23.5)  | (Note 3)                         |          |   |   |   |   |   |    |   |    |   | N |   |   |  |
| 7.5 (25)  | (Note 3)                         |          |   |   |   |   |   |    |   |    |   | P |   |   |  |
| 8 (27)  | (Note 3)                         |          |   |   |   |   |   |    |   |    |   | Q |   |   |  |
| 9 (30)  | (Note 3)                         |          |   |   |   |   |   |    |   |    |   | R |   |   |  |
| 10 (33)   | (Note 3)                         |          |   |   |   |   |   |    |   |    |   | S |   |   |  |
| 12 (40)   | (Note 3)                         |          |   |   |   |   |   |    |   |    |   | T |   |   |  |
| <b>Fill Fluid</b> - 14 <sup>th</sup> character                |                                  |          |   |   |   |   |   |    |   |    |   |   |   |   |  |
| Silicone oil PMX 200 10 cSt                                   | (-40 to 250 °C; -40 to 480 °F)   |          |   |   |   |   |   |    |   |    |   |   | S |   |  |
| Silicone oil Baysilone PD5 5 cSt                              | (-85 to 250 °C; -121 to 480 °F)  |          |   |   |   |   |   |    |   |    |   |   | P |   |  |
| Inert oil - Galden G5   | (Oxygen service)                 | (Note 4) |   |   |   |   |   |    |   |    |   |   | N |   |  |
| Inert oil - Halocarbon 4.2                                    | (Oxygen service)                 | (Note 4) |   |   |   |   |   |    |   |    |   |   | D |   |  |
| Silicone oil for high temperature                             | (-10 to 375 °C; 14 to 707 °F)    |          |   |   |   |   |   |    |   |    |   |   | G |   |  |
| Silicone polymer Syltherm XLT                                 | (-100 to 100 °C; -148 to 212 °F) |          |   |   |   |   |   |    |   |    |   |   | C |   |  |
| Mineral oil Esso Marcol 122                                   | (FDA approved)                   | (Note 5) |   |   |   |   |   |    |   |    |   |   | W |   |  |
| Vegetable oil Neobee M-20                                     | (FDA approved)                   | (Note 5) |   |   |   |   |   |    |   |    |   |   | A |   |  |
| Glycerin-water 70%  | (FDA approved)                   | (Note 5) |   |   |   |   |   |    |   |    |   |   | B |   |  |
| <b>Flushing Connections</b> - 15 <sup>th</sup> character      |                                  |          |   |   |   |   |   |    |   |    |   |   |   |   |  |
| Not required  |                                  |          |   |   |   |   |   |    |   |    |   |   |   | 1 |  |
| Provided  |                                  |          |   |   |   |   |   |    |   |    |   |   |   | Q |  |
| <b>Gasket</b> - 16 <sup>th</sup> character                    |                                  |          |   |   |   |   |   |    |   |    |   |   |   |   |  |
| PTFE  |                                  |          |   |   |   |   |   |    |   |    |   |   |   | 2 |  |
| Viton   |                                  |          |   |   |   |   |   |    |   |    |   |   |   | 3 |  |
| Graphite  |                                  |          |   |   |   |   |   |    |   |    |   |   |   | 7 |  |

Note 1: Not available with transmitter side of connection code L  
Note 2: Not available with capillary protection code A, B  
Note 3: Not available with capillary protection code N  
Note 4: Suitable for oxygen service  
Note 5: Suitable for food application

# Model S26 seals for remote and direct mount

## S26SS Model sanitary and food diaphragm seal

Sanitary diaphragm seals have been specifically developed for food, sanitary, chemical and pharmaceutical applications, complying with the stringent 3-A requirements.

Available with different process fittings (Triclamp, Cherry Burrell, Union Nut and Sanitary), this model highlights ABB's commitment to satisfy users needs approaching even the most demanding processes successfully.

### Pressure limits

| Seal model S26SS                   | Pressure limit           |
|------------------------------------|--------------------------|
| Triclamp 2 in.                     | 3.8 MPa, 38 bar, 550 psi |
| Triclamp 3 in.                     | 2.4 MPa, 24 bar, 350 psi |
| Triclamp 4 in.                     | 1.7 MPa, 17 bar, 250 psi |
| Union nut F50                      | 2.5 MPa, 25 bar, 360 psi |
| Union nut F80                      | 2.5 MPa, 25 bar, 360 psi |
| Cherry Burrell 2 in.               | 1.9 MPa, 19 bar, 275 psi |
| Cherry Burrell 3 in.               | 1.9 MPa, 19 bar, 275 psi |
| Cherry Burrell 4 in.               | 1.9 MPa, 19 bar, 275 psi |
| Sanitary flush 4 in.               | 1.9 MPa, 19 bar, 275 psi |
| Sanitary extended 4 in.            | 1.9 MPa, 19 bar, 275 psi |
| Beverage bolted type 1 1/2 in.     | 4 MPa, 40 bar, 580 psi   |
| V-band clamp option                | 1 MPa, 10 bar, 145 psi   |
| 4in schedule 5 V-band clamp option | 0.7MPa, 7bar, 100psi     |

### Vacuum service

Full vacuum subject to fill fluid limits.

Refer to FILL FLUID CHARACTERISTICS table.

### Process temperature limits

Refer to FILL FLUID CHARACTERISTICS table and as follows for specific variants.

| Material                |                  |
|-------------------------|------------------|
| Ethylene Propylene      | -40 and 121 °C   |
| EPDM 3-A 18-03 Class II | (-40 and 250 °F) |
| Ethylene Propylene      | -40 and 149 °C   |
|                         | (-40 and 300 °F) |

### Temperature effect

The following table shows temperature effect per 20 K (36 °F) change, detailed separately for

- the seal (one element), as process temperature error
- the capillary per meter
- the system (transmitter sensor when combined with a seal of specific size/type, either direct mount or remote) referred to silicone oil (PMX 200) filling and AISI 316 L ss diaphragm materials.

For filling different from silicone oil (PMX 200) the errors can be multiplied by ratio between the thermal expansion coefficients of the selected filling divided by the one of PMX 200, listed in the fill fluid characteristics table.

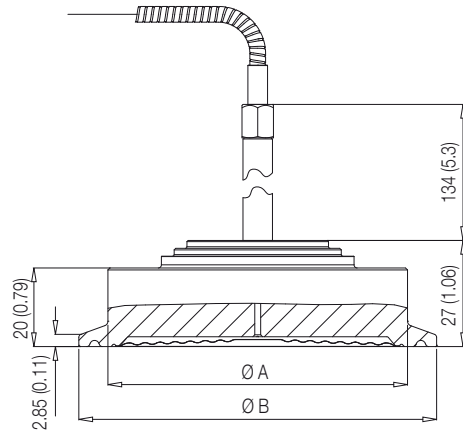
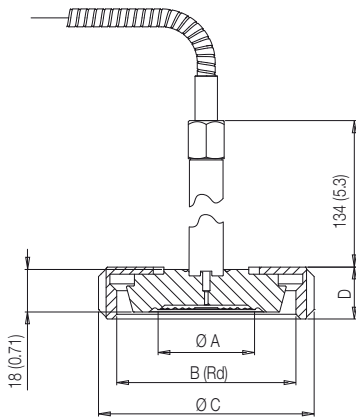
THE ERRORS IN TABLE CAN BE CONSIDERED DIVIDED BY 4 FOR TRANSMITTERS USING SAME REMOTE SEAL ON THE TWO SIDES

| S26SS sanitary and food-seal size - Mnemonic | Sensor URL                   | Seal error (process) | Direct mount system error (ambient) | Remote system error (ambient) | 1 metre capillary error (ambient) |
|--|------------------------------|----------------------|-------------------------------------|-------------------------------|-----------------------------------|
| 2 in. / F50 - S2                             | 40 - 65 kPa, 160 - 260 inH2O | 0.7 kPa, 2.8 inH2O   | 0.93 kPa, 3.72 inH2O                | 0.87 kPa, 3.48 inH2O          | 0.68 kPa, 2.72 inH2O              |
| 2 in. / F50 - S2                             | ≥160 kPa, 642 inH2O          | 0.7 kPa, 2.8 inH2O   | 0.93 kPa, 3.72 inH2O                | 0.87 kPa, 3.48 inH2O          | 0.44 kPa, 1.76 inH2O              |
| 3 / 4 in. / F80 - S3                         | 4 - 16 kPa, 16 - 64 inH2O    | 0.06 kPa, 0.24 inH2O | 0.02 kPa, 0.08 inH2O                | 0.02 kPa, 0.08 inH2O          | 0.01 kPa, 0.04 inH2O              |
| 3 / 4 in. / F80 - S3                         | ≥ 40 kPa, 160 inH2O          | 0.06 kPa, 0.24 inH2O | 0.02 kPa, 0.08 inH2O                | 0.02 kPa, 0.08 inH2O          | 0.03 kPa, 0.12 inH2O              |
| 1 1/2 in. - K1.5                             | ≥ 65 kPa, 260 inH2O          | 0.2 kPa, 0.8 inH2O   | 0.5 kPa, 2 inH2O                    | NA                            | NA                                |

MULTIPLY BY 10 THE kPa VALUES TO OBTAIN mbar.



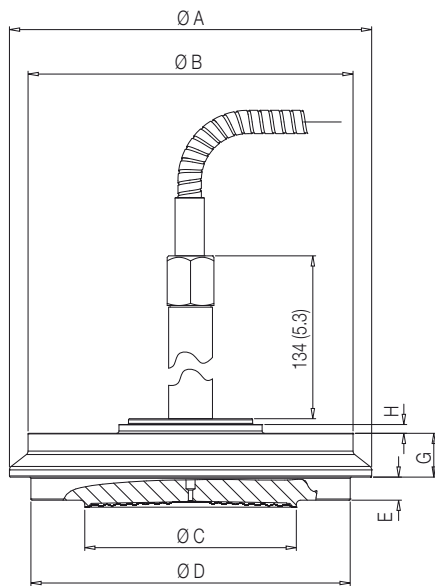
The Union Nut and Triclamp seals are designed for connection by Union Nut according to DIN 11851 - F50 or F80 and 2 in, 3 in, 4 in Triclamp sanitary fittings. A variety of gaskets and clamp rings for the seals are available.



| Dimensions mm. (in.) for S26SS Union Nut to DIN 11851 |           |            |           |           |
|---|-----------|------------|-----------|-----------|
| Size  | A (dia)   | B (Rd)     | C (dia)   | D         |
| F50   | 42 (1.65) | 78 (3.07)  | 92 (3.62) | 22 (0.87) |
| F80   | 72 (2.83) | 110 (4.33) | 127 (5)   | 29 (1.14) |

| Dimensions mm. (in.) for S26SS Triclamp |              |            |
|---|--------------|------------|
| Size                                    | A (dia)      | B (dia)    |
| 2 in.                                   | 56.3 (2.2)   | 64 (2.5)   |
| 3 in.                                   | 83 (3.26)    | 91 (3.58)  |
| 4 in.                                   | 110.3 (4.34) | 119 (4.68) |

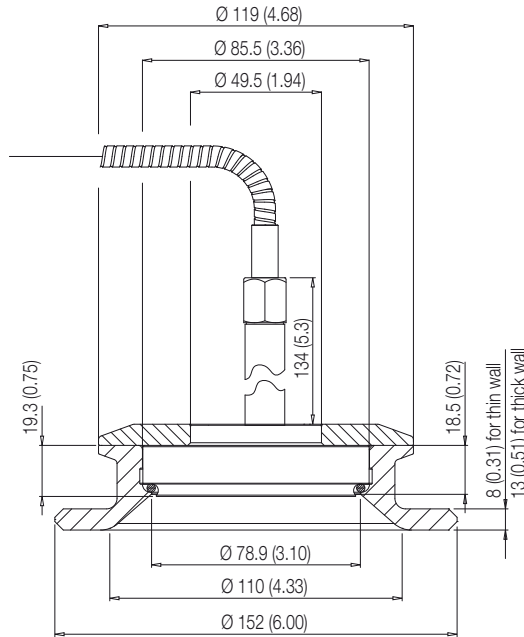
The Cherry Burrell seals are designed for connection to 2in, 3in or 4in Cherry Burrell I-Line sanitary fittings. A 4in V-band clamp is optionally available for the 4in variant.



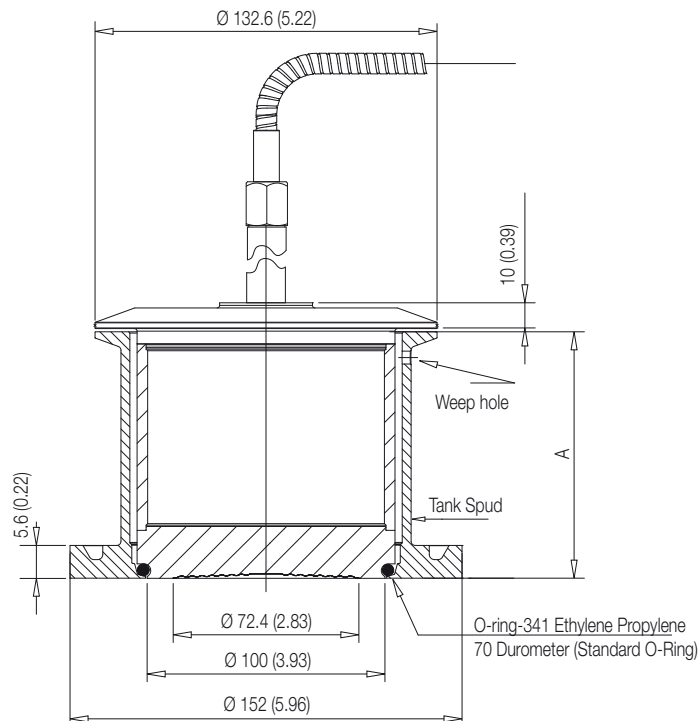
| Dimensions mm. (in.) for S26SS Cherry Burrell |             |               |              |             |            |            |             |          |
|---|-------------|---------------|--------------|-------------|------------|------------|-------------|----------|
| Size  | A (dia)     | B (dia)       | C (dia)      | D (dia)     | E          | F          | G           | H        |
| 2 in.   | 67 (2.64)   | 56 (2.2)      | 42 (1.65)    | 57 (2.24)   | 3.2 (0.13) | 6.5 (0.26) | 12.5 (0.49) | 3 (0.12) |
| 3 in.   | 98.4 (3.87) | 81 (3.19)     | 72.42 (2.85) | 83.8 (3.3)  | 2.4 (0.09) | 7.9 (0.31) | 15 (0.59)   | 3 (0.12) |
| 4 in.   | 124 (4.88)  | 111.25 (4.38) | 72.42 (2.85) | 109.3 (4.3) | 2.4 (0.09) | 7.9 (0.31) | 15 (0.59)   | 3 (0.12) |

# Model S26 seals for remote and direct mount

The sanitary seal with flush diaphragm is designed to connect to a 4in sanitary tank spud. The tank spud and process gasket are available as options with the seal suitable V-band clamp is also available on request.



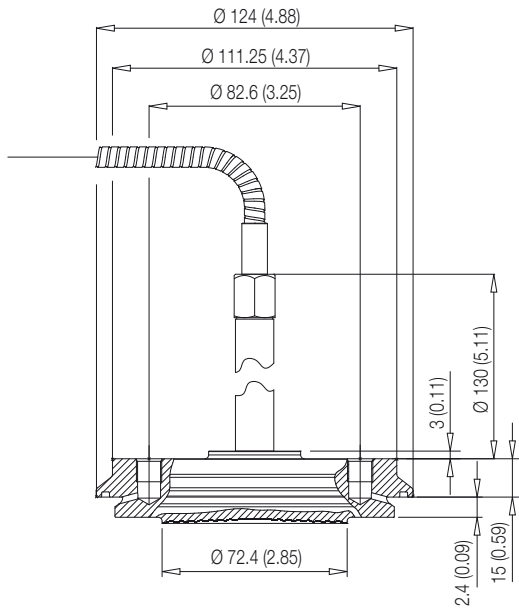
The sanitary seal with extended diaphragm is designed to connect to a 4in sanitary tank spud. The tank spud and process gasket are available with the seal.



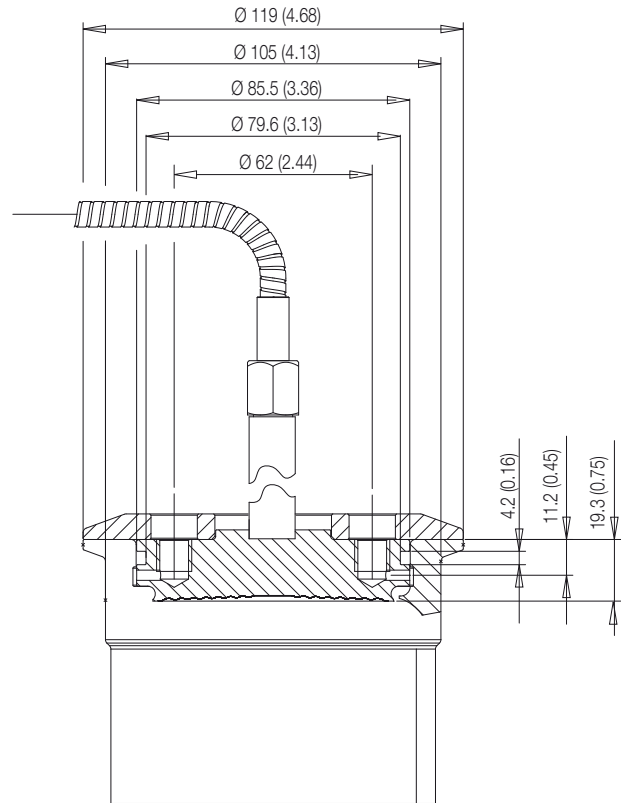
NOTE: The tank spud required for connection of this seal element must be welded to the process vessel prior to connecting the seal, following a recommended welding and pressure testing procedure.

The sanitary aseptic remote seal is designed to connect to a 4in sanitary fitting: either an aseptic tank spud or a 4in Cherry Burrell aseptic ferrule. The tank spud, gaskets and V-band clamp are available option with the seal element.

NOTE: The tank spud or ferrule required for connection of this seal element must be welded to the process vessel prior to connecting the element, following recommended welding and pressure testing procedure. Weld the Cherry Burrell ferrule to the process vessel in accordance with manufacturers recommendations.



4 in. Cherry Burrell Aseptic



4 in. Aseptic Flanged Connection

# Model S26 seals for remote and direct mount

## BASIC ORDERING INFORMATION model S26S Sanitary and food diaphragm seals

Select one character or set of characters from each category and specify complete catalog number.

| BASE MODEL - 1 <sup>st</sup> to 5 <sup>th</sup> characters                                    | S | 2 | 6 | S | S | X | X | XX | X | X | X | X | X  |
|---|---|---|---|---|---|---|---|----|---|---|---|---|----|
| Sanitary and food diaphragm seal  |   |   |   |   |   |   |   |    |   |   |   |   |    |
| <b>Transmitter Side of Connection</b> - 6 <sup>th</sup> character                             |   |   |   |   |   |   |   |    |   |   |   |   |    |
| High pressure side  |   |   |   |   |   | H |   |    |   |   |   |   |    |
| Low pressure side   |   |   |   |   |   | L |   |    |   |   |   |   |    |
| <b>Mounting connection</b> - 7 <sup>th</sup> character  |   |   |   |   |   |   |   |    |   |   |   |   |    |
| Union nut DIN 11851 – F50 (not 3-A authorized)  |   |   |   |   |   |   |   |    |   |   |   |   |    |
| Union nut DIN 11851 – F80 (not 3-A authorized)  |   |   |   |   |   |   |   |    |   |   |   |   |    |
| 2 in. Triclamp  |   |   |   |   |   |   |   |    |   |   |   |   |    |
| 3 in. Triclamp  |   |   |   |   |   |   |   |    |   |   |   |   |    |
| 4 in. Triclamp  |   |   |   |   |   |   |   |    |   |   |   |   |    |
| 2 in. Cherry Burrell  |   |   |   |   |   |   |   |    |   |   |   |   |    |
| 3 in. Cherry Burrell  |   |   |   |   |   |   |   |    |   |   |   |   |    |
| 4 in. Cherry Burrell  |   |   |   |   |   |   |   |    |   |   |   |   |    |
| 4 in. Sanitary flush diaphragm  |   |   |   |   |   |   |   |    |   |   |   |   |    |
| 4 in. Sanitary extended (2 in.) diaphragm   |   |   |   |   |   |   |   |    |   |   |   |   |    |
| 4 in. Sanitary extended (4 in.) diaphragm   |   |   |   |   |   |   |   |    |   |   |   |   |    |
| 4 in. Sanitary extended (6 in.) diaphragm   |   |   |   |   |   |   |   |    |   |   |   |   |    |
| 4in Cherry Burrell aseptic - ONLY REMOTE MOUNT  |   |   |   |   |   |   |   |    |   |   |   |   |    |
| 4in aseptic flanged connection - ONLY REMOTE MOUNT  |   |   |   |   |   |   |   |    |   |   |   |   |    |
| Beverage application bolted seal (not 3-A authorized) - ONLY DIRECT MOUNT WITH 266HDH, 266NDH |   |   |   |   |   |   |   |    |   |   |   |   |    |
| <b>Diaphragm Material</b> - 8 <sup>th</sup> and 9 <sup>th</sup> characters                    |   |   |   |   |   |   |   |    |   |   |   |   |    |
| AISI 316 L ss   |   |   |   |   |   |   |   |    |   |   |   |   | SM |
| <b>Capillary Protection</b> - 10 <sup>th</sup> character                                      |   |   |   |   |   |   |   |    |   |   |   |   |    |
| AISI 316 L ss armour (Note 1)   |   |   |   |   |   |   |   |    |   |   |   |   | A  |
| AISI 316 L ss armour with PVC protective cover (Note 1)                                       |   |   |   |   |   |   |   |    |   |   |   |   | B  |
| Extension tube for direct mount seal (Note 2)   |   |   |   |   |   |   |   |    |   |   |   |   | N  |
| <b>Capillary Length m (Feet)</b> - 11 <sup>th</sup> character                                 |   |   |   |   |   |   |   |    |   |   |   |   |    |
| Direct-mount construction (Note 3)  |   |   |   |   |   |   |   |    |   |   |   |   | 1  |
| 1 (3) (Note 4)  |   |   |   |   |   |   |   |    |   |   |   |   | A  |
| 1.5 (5) (Note 4)  |   |   |   |   |   |   |   |    |   |   |   |   | B  |
| 2 (7) (Note 4)  |   |   |   |   |   |   |   |    |   |   |   |   | C  |
| 2.5 (8) (Note 4)  |   |   |   |   |   |   |   |    |   |   |   |   | D  |
| 3 (10) (Note 4)   |   |   |   |   |   |   |   |    |   |   |   |   | E  |
| 3.5 (12) (Note 4)   |   |   |   |   |   |   |   |    |   |   |   |   | F  |
| 4 (13) (Note 4)   |   |   |   |   |   |   |   |    |   |   |   |   | G  |
| 4.5 (15) (Note 4)   |   |   |   |   |   |   |   |    |   |   |   |   | H  |
| 5 (17) (Note 4)   |   |   |   |   |   |   |   |    |   |   |   |   | J  |
| 5.5 (18) (Note 4)   |   |   |   |   |   |   |   |    |   |   |   |   | K  |
| 6 (20) (Note 4)   |   |   |   |   |   |   |   |    |   |   |   |   | L  |
| 6.5 (22) (Note 4)   |   |   |   |   |   |   |   |    |   |   |   |   | M  |
| 7 (23.5) (Note 4)   |   |   |   |   |   |   |   |    |   |   |   |   | N  |
| 7.5 (25) (Note 4)   |   |   |   |   |   |   |   |    |   |   |   |   | P  |
| 8 (27) (Note 4)   |   |   |   |   |   |   |   |    |   |   |   |   | Q  |
| 9 (30) (Note 4)   |   |   |   |   |   |   |   |    |   |   |   |   | R  |
| 10 (33) (Note 4)  |   |   |   |   |   |   |   |    |   |   |   |   | S  |

continued  
see next page

| BASIC ORDERING INFORMATION model S26SS  |                                  |          | S | 2 | 6 | S | S | X | X | XX | XX | X | X | X |
|---|----------------------------------|----------|---|---|---|---|---|---|---|----|----|---|---|---|
| <b>Fill Fluid</b> - 12th character  |                                  |          |   |   |   |   |   |   |   |    |    |   |   |   |
| Silicone oil PMX 200 10 cSt   | (-40 to 250 °C; -40 to 480 °F)   |          | S |   |   |   |   |   |   |    |    |   |   |   |
| Inert oil - Halocarbon 4.2  | (-40 to 250 °C; -40 to 480 °F)   | (Note 5) | D |   |   |   |   |   |   |    |    |   |   |   |
| Silicone polymer Syltherm XLT   | (-100 to 100 °C; -148 to 212 °F) |          | C |   |   |   |   |   |   |    |    |   |   |   |
| Mineral oil Esso Marcol 122   | (FDA approved)                   | (Note 6) | W |   |   |   |   |   |   |    |    |   |   |   |
| Vegetable oil Neobee M-20   | (FDA approved)                   | (Note 6) | A |   |   |   |   |   |   |    |    |   |   |   |
| Glycerin-water 70%  | (FDA approved)                   | (Note 6) | B |   |   |   |   |   |   |    |    |   |   |   |
| <b>Clamp/Fittings</b> - 13th character  |                                  |          |   |   |   |   |   |   |   |    |    |   |   |   |
| None  |                                  |          |   |   |   |   |   |   |   |    |    |   | 1 |   |
| 2 in. V-band Clamp (for 2 in. Triclamp)   |                                  |          |   |   |   |   |   |   |   |    |    |   | A |   |
| 3 in. V-band Clamp (for 3 in. Triclamp)   |                                  |          |   |   |   |   |   |   |   |    |    |   | B |   |
| 4 in. V-band Clamp (for 4 in. Triclamp, 4 in. Cherry Burrell, 4 in. Sanitary flush and 4 in. aseptic flanged) |                                  |          |   |   |   |   |   |   |   |    |    |   | C |   |
| 4 in. Tank spud, tank wall up to 4.7mm (0.18) and 4 in. V-band Clamp (for 4 in. Sanitary flush seal)          |                                  |          |   |   |   |   |   |   |   |    |    |   | D |   |
| 4 in. Tank spud, tank wall up to 9.5mm (0.37) and 4 in. V-band Clamp (for 4 in. Sanitary flush seal)          |                                  |          |   |   |   |   |   |   |   |    |    |   | E |   |
| 4 in. schedule 5 V-band clamp (for 4 in. Sanitary extended seal)  |                                  |          |   |   |   |   |   |   |   |    |    |   | F |   |
| Tank spud for 2 in. extension and 4 in. schedule 5 V-band clamp (for 4 in. Sanitary extended 2 in. seal)      |                                  |          |   |   |   |   |   |   |   |    |    |   | G |   |
| Tank spud for 4 in. extension and 4 in. schedule 5 V-band clamp (for 4 in. Sanitary extended 4 in. seal)      |                                  |          |   |   |   |   |   |   |   |    |    |   | H |   |
| Tank spud for 6 in. extension and 4 in. schedule 5 V-band clamp (for 4 in. Sanitary extended 6 in. seal)      |                                  |          |   |   |   |   |   |   |   |    |    |   | J |   |
| Aseptic tank spud (for 4 in. aseptic flanged seal)  |                                  |          |   |   |   |   |   |   |   |    |    |   | P |   |
| Flanged tank spud with 6 holes (for 1 1/2 in. beverage seal)  |                                  |          |   |   |   |   |   |   |   |    |    |   | K |   |
| <b>Gasket</b> - 14th character  |                                  |          |   |   |   |   |   |   |   |    |    |   |   |   |
| None  |                                  |          |   |   |   |   |   |   |   |    |    |   |   | 1 |
| Ethylene propylene gasket DN100 (for 4 in. Sanitary extended seal) - (EPDM 3-A 18-03 Class II)                |                                  |          |   |   |   |   |   |   |   |    |    |   |   | A |
| Ethylene propylene gasket (for 1 1/2 in. beverage seal)   |                                  |          |   |   |   |   |   |   |   |    |    |   |   | B |
| Ethylene propylene gasket DN50 (for F50 Union nut seal)   |                                  |          |   |   |   |   |   |   |   |    |    |   |   | C |
| Ethylene propylene gasket DN80 (for F80 Union nut seal)   |                                  |          |   |   |   |   |   |   |   |    |    |   |   | D |
| Ethylene propylene gasket (for 4 in. Sanitary flush and 4 in. aseptic) - (EPDM 3-A 18-03 Class II)            |                                  |          |   |   |   |   |   |   |   |    |    |   |   | G |

Note 1: Not available with beverage bolted seal connection code T  
Note 2: Not available with transmitter side of connection code L or aseptic seals code W, J  
Note 3: Not available with capillary protection code A, B  
Note 4: Not available with capillary protection code N  
Note 5: Suitable for oxygen service  
Note 6: Suitable for food application

# Model S26 seals for remote and direct mount

## S26PN Model urea service remote diaphragm seal

### Pressure limits

| Seal model S26P                 |                           |
|---------------------------------|---------------------------|
| 3 in. ASME 600 integral flange  | 8 MPa, 80 bar, 1160 psi   |
| 2 in. ASME 2500 threaded flange | 32 MPa, 320 bar, 4640 psi |

### Vacuum service

Full vacuum subject to fill fluid limits.  
Refer to FILL FLUID CHARACTERISTICS table.

### Process temperature limits

Refer to FILL FLUID CHARACTERISTICS table.

### Temperature effect

The following table shows temperature effect per 20 K (36 °F) change, detailed separately for

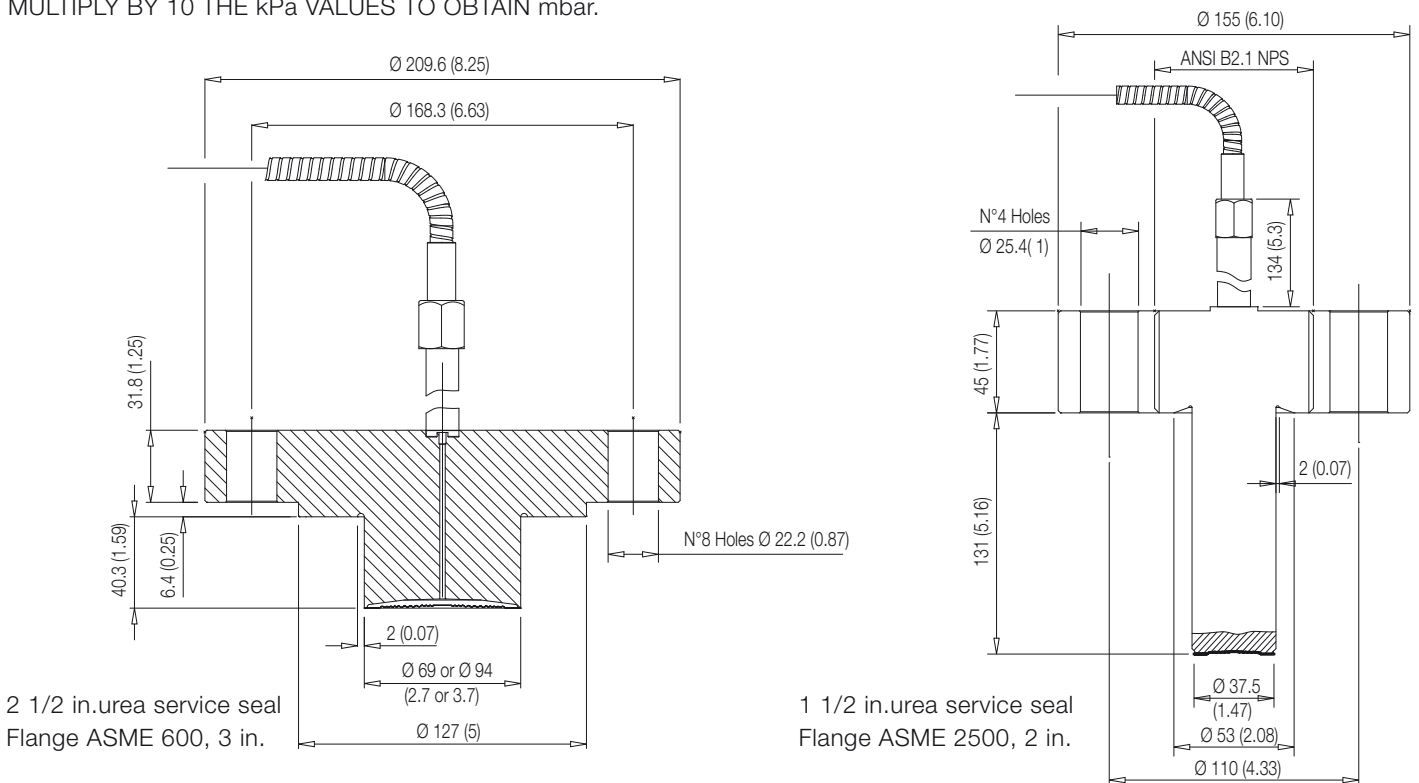
- the seal (one element), as process temperature error
- the capillary per meter
- the system (transmitter sensor when combined with a seal of specific size/type, either direct mount or remote) referred to silicone oil (PMX 200) filling and AISI 316 L ss diaphragm materials.

For filling different from silicone oil (PMX 200) the errors can be multiplied by ratio between the thermal expansion coefficients of the selected filling divided by the one of PMX 200, listed in the fill fluid characteristics table.

THE ERRORS IN TABLE CAN BE CONSIDERED DIVIDED BY 4 FOR TRANSMITTERS USING SAME REMOTE SEAL ON THE TWO SIDES

| S26PN urea service seal size - Mnemonic | Sensor URL           | Seal error (process) | Remote system error (ambient) | 1 metre capillary error (ambient) |
|---|----------------------|----------------------|-------------------------------|-----------------------------------|
| 1 1/2 in. - U1.5 (2 in. flange)         | ≥ 160 kPa, 642 inH2O | 0.86 kPa, 3.44 inH2O | 1.1 kPa, 4.4 inH2O            | 0.54 kPa, 2.16 inH2O              |
| 2 1/2 in. - U2.5 (3 in. flange)         | ≥ 40 kPa, 160 inH2O  | 0.18 kPa, 0.72 inH2O | 0.06 kPa, 0.24 inH2O          | 0.11 kPa, 0.44 inH2O              |

MULTIPLY BY 10 THE kPa VALUES TO OBTAIN mbar.



**BASIC ORDERING INFORMATION model S26PN urea service remote diaphragm seals**

Select one character or set of characters from each category and specify complete catalog number.

|   |                  |          |          |          |           |          |          |          |          |
|---|------------------|----------|----------|----------|-----------|----------|----------|----------|----------|
| <b>BASE MODEL</b> - 1 <sup>st</sup> to 5 <sup>th</sup> characters           | <b>S 2 6 P N</b> | <b>X</b> | <b>X</b> | <b>X</b> | <b>XX</b> | <b>X</b> | <b>X</b> | <b>X</b> | <b>X</b> |
| Urea service remote diaphragm seal  |                  |          |          |          |           |          |          |          |          |
| <b>Transmitter Side of Connection</b> - 6 <sup>th</sup> character           |                  |          |          |          |           |          |          |          |          |
| High pressure side  |                  | H        |          |          |           |          |          |          |          |
| Low pressure side   |                  | L        |          |          |           |          |          |          |          |
| <b>Size / Mounting Flange Rating / Material</b> - 7 <sup>th</sup> character |                  |          |          |          |           |          |          |          |          |
| 3 in. / ASME 600 RF integral flange / AISI 316 L ss Urea Grade              |                  |          | H        |          |           |          |          |          |          |
| 2 in. / ASME 2500 threaded flange / Carbon steel                            |                  |          | J        |          |           |          |          |          |          |
| <b>Extension length / diameter</b> - 8 <sup>th</sup> character              |                  |          |          |          |           |          |          |          |          |
| 40.3 mm (1.59 in.) / 69 mm (2.71 in.)                                       | (Note 1)         |          |          |          | R         |          |          |          |          |
| 40.3 mm (1.59 in.) / 94 mm (3.7 in.)  | (Note 1)         |          |          |          | S         |          |          |          |          |
| 131 mm (5.16 in.) / 37.5 mm (1.47 in.)                                      | (Note 2)         |          |          |          | T         |          |          |          |          |
| <b>Diaphragm Material</b> - 9 <sup>th</sup> and 10 <sup>th</sup> characters |                  |          |          |          |           |          |          |          |          |
| AISI 316 L ss Urea Grade  |                  |          |          |          |           | SM       |          |          |          |
| <b>Capillary Protection</b> - 11 <sup>th</sup> character                    |                  |          |          |          |           |          |          |          |          |
| AISI 316 L ss armour  |                  |          |          |          |           |          | A        |          |          |
| AISI 316 L ss armour with PVC protective cover                              |                  |          |          |          |           |          | B        |          |          |
| <b>Capillary Length m (Feet)</b> - 12 <sup>th</sup> character               |                  |          |          |          |           |          |          |          |          |
| 1 (3)   |                  |          |          |          |           |          |          | A        |          |
| 1.5 (5)   |                  |          |          |          |           |          |          | B        |          |
| 2 (7)   |                  |          |          |          |           |          |          | C        |          |
| 2.5 (8)   |                  |          |          |          |           |          |          | D        |          |
| 3 (10)  |                  |          |          |          |           |          |          | E        |          |
| 3.5 (12)  |                  |          |          |          |           |          |          | F        |          |
| 4 (13)  |                  |          |          |          |           |          |          | G        |          |
| 4.5 (15)  |                  |          |          |          |           |          |          | H        |          |
| 5 (17)  |                  |          |          |          |           |          |          | J        |          |
| 5.5 (18)  | (Note 1)         |          |          |          |           |          |          | K        |          |
| 6 (20)  | (Note 1)         |          |          |          |           |          |          | L        |          |
| <b>Fill Fluid</b> - 13 <sup>th</sup> character                              |                  |          |          |          |           |          |          |          |          |
| Silicone oil PMX 200 10 cSt (-40 to 250 °C; -40 to 480 °F)                  |                  |          |          |          |           |          |          |          | S        |
| Silicone oil for high temperature (-10 to 375 °C; 14 to 707 °F)             |                  |          |          |          |           |          |          |          | G        |
| <b>Certification</b> - 14 <sup>th</sup> character                           |                  |          |          |          |           |          |          |          |          |
| None  |                  |          |          |          |           |          |          |          | 1        |
| Huey test   |                  |          |          |          |           |          |          |          | 3        |

Note 1: Not available with Size/Mounting flange code J  
 Note 2: Not available with Size/Mounting flange code H

# Model S26 seals for remote and direct mount

## S26BN Model Button type remote diaphragm seal

These remote seals are designed to connect directly to a process pipe via the NPT threaded connection or to match pipe fitting with an interface suitable for the provided mating flange. The button seals, due to their design, are dedicated for measurement with medium/high calibrated span (2 MPa/20 bar/290 psi approx. or greater).

### Pressure limits

| Seal model S26BN    | Temp limits 20 and 120 °C (68 and 248 °F) |
|---------------------|---|
| Types 89, 90 and 92 | 42 MPa, 420 bar, 6090 psi                 |
| Types 91            | 35 MPa, 350 bar, 5075 psi                 |

### Vacuum service

Full vacuum subject to fill fluid limits.  
Refer to FILL FLUID CHARACTERISTICS table.

### Process temperature limits

Refer to FILL FLUID CHARACTERISTICS table.

### Temperature effect

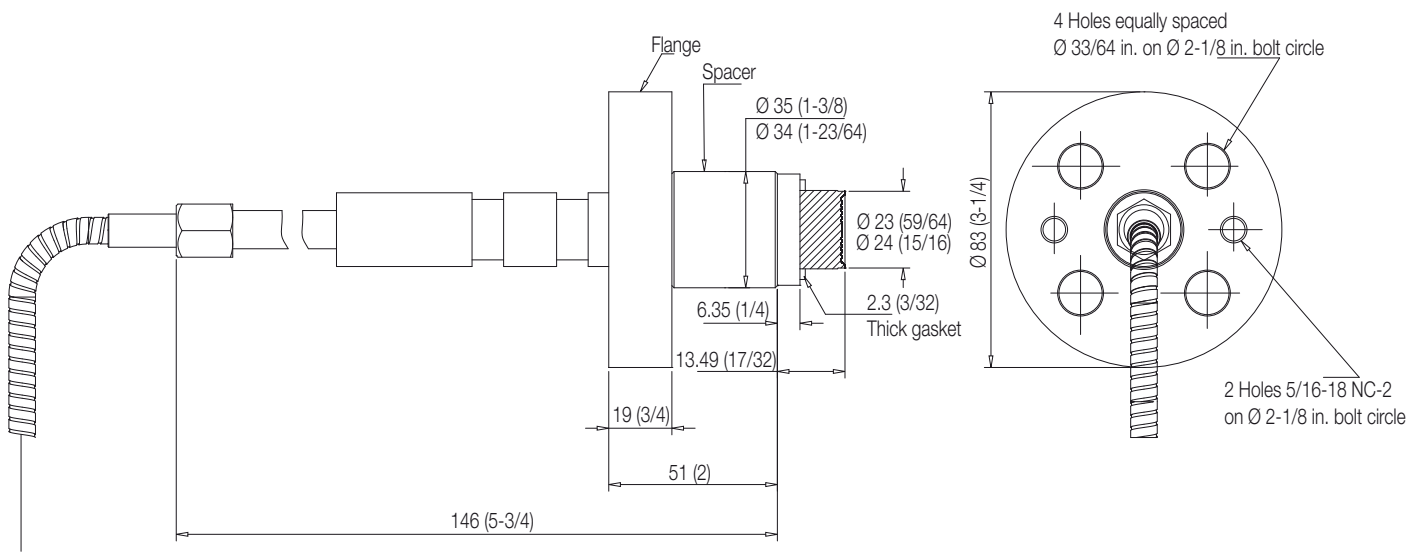
The following table shows temperature effect per 20 K (36 °F) change, detailed separately for

- the seal (one element), as process temperature error
- the capillary per meter
- the system (transmitter sensor when combined with a seal of specific size/type, either direct mount or remote) referred to silicone oil (PMX 200) filling and AISI 316 L ss diaphragm materials.

For filling different from silicone oil (PMX 200) the errors can be multiplied by ratio between the thermal expansion coefficients of the selected filling divided by the one of PMX 200, listed in the fill fluid characteristics table.

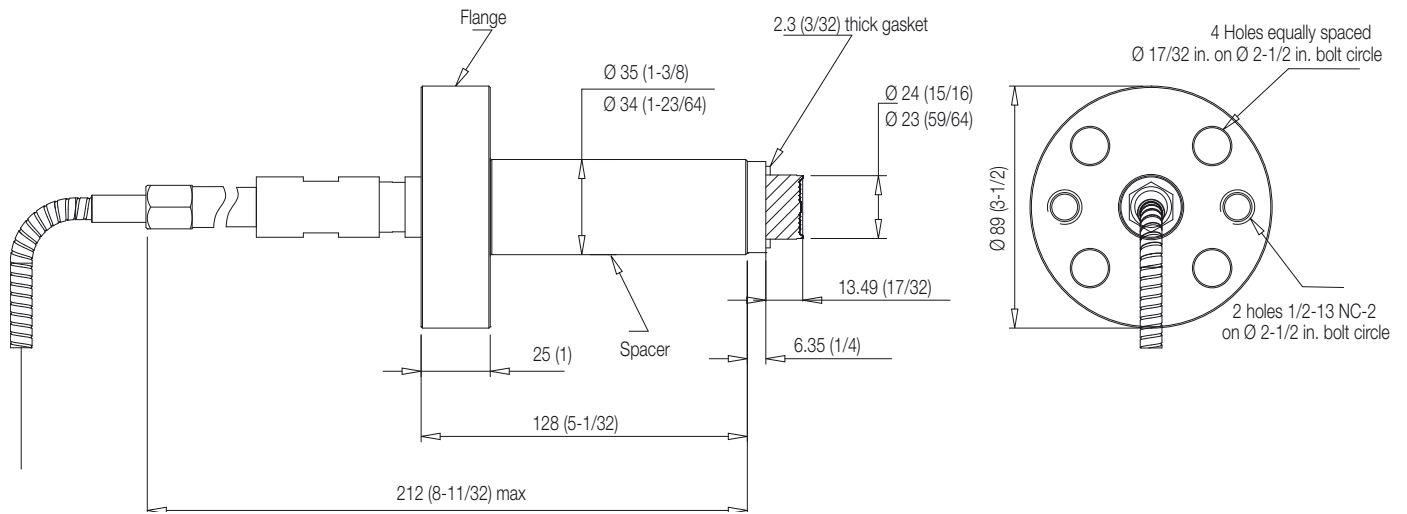
| S26BN Button type seal size - Mnemonic | Sensor URL        | Seal error (process) | Remote system error (ambient) | 1 metre capillary error (ambient) |
|--|-------------------|----------------------|-------------------------------|-----------------------------------|
| 1 in. - B1                             | ≥ 8 MPa, 1160 psi | 1.3 kPa, 5.2 inH2O   | 6.5 kPa, 26 inH2O             | 1.9 kPa, 7.6 inH2O                |

MULTIPLY BY 10 THE kPa VALUES TO OBTAIN mbar.

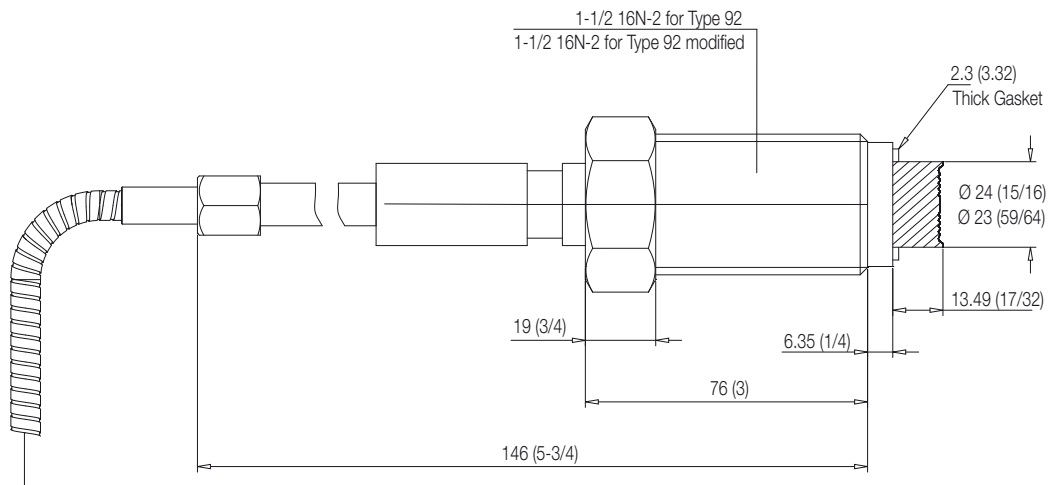


3 1/4 in. flange extended - type 91



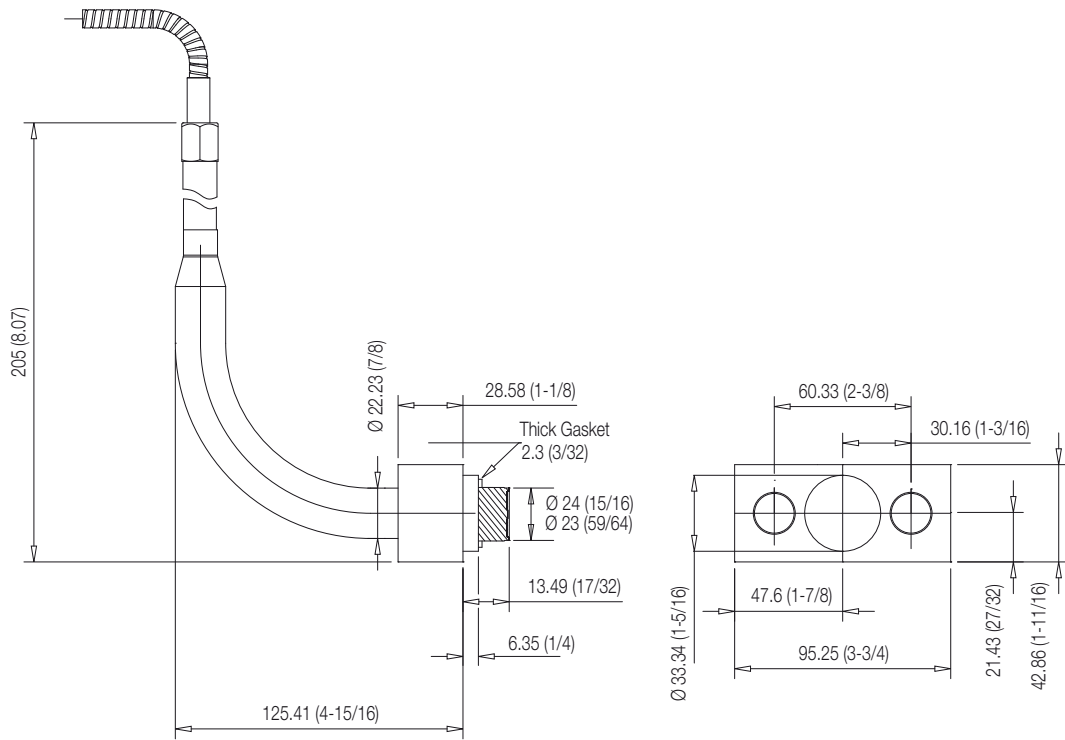


3 1/2 in. flange extended - type 91 modified

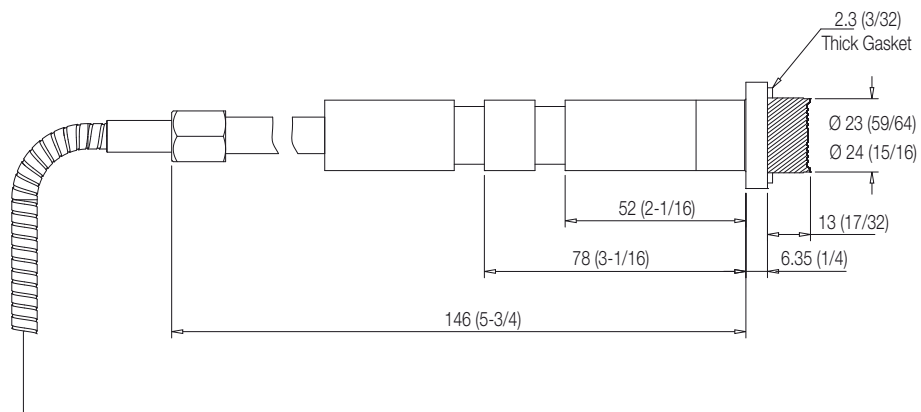


1 1/2 in. threaded union type 92/92 modified

# Model S26 seals for remote and direct mount



Bracket – type 89



Universal- type 90

**BASIC ORDERING INFORMATION model S26BN Button type remote diaphragm seals**

Select one character or set of characters from each category and specify complete catalog number.

|   |           |   |   |   |    |   |   |   |   |   |
|---|-----------|---|---|---|----|---|---|---|---|---|
| <b>BASE MODEL</b> - 1 <sup>st</sup> to 5 <sup>th</sup> characters           | S 2 6 B N | X | X | X | XX | X | X | X | X | X |
| Button type remote diaphragm seal   |           |   |   |   |    |   |   |   |   |   |
| <b>Transmitter Side of Connection</b> - 6 <sup>th</sup> character           |           | H |   |   |    |   |   |   |   |   |
| High pressure side  |           |   |   |   |    |   |   |   |   |   |
| <b>Size</b> - 7 <sup>th</sup> character                                     |           |   | M |   |    |   |   |   |   |   |
| 1 in.   |           |   |   |   |    |   |   |   |   |   |
| <b>Mounting connection type</b> - 8 <sup>th</sup> character                 |           |   |   |   |    |   |   |   |   |   |
| 3 1/4 in. flange extended – type 91   |           |   |   |   |    |   |   |   |   |   |
| 3 1/2 in. flange extended – type 91 modified                                |           |   |   |   |    |   |   |   |   |   |
| 1 1/2 in. 16N-2 threaded union – type 92                                    |           |   |   |   |    |   |   |   |   |   |
| Bracket – type 89   |           |   |   |   |    |   |   |   |   |   |
| Universal – type 90   |           |   |   |   |    |   |   |   |   |   |
| 1 1/2 in. 12NF threaded union – type 92 modified                            |           |   |   |   |    |   |   |   |   |   |
| <b>Diaphragm Material</b> - 9 <sup>th</sup> and 10 <sup>th</sup> characters |           |   |   |   |    |   |   |   |   |   |
| Hastelloy C-276   |           |   |   |   |    |   |   |   |   |   |
| NACE  |           |   |   |   |    |   |   |   |   |   |
| HL  |           |   |   |   |    |   |   |   |   |   |
| <b>Capillary Protection</b> - 11 <sup>th</sup> character                    |           |   |   |   |    |   |   |   |   |   |
| AISI 316 L ss armour  |           |   |   |   |    |   |   |   |   |   |
| AISI 316 L ss armour with PVC protective cover                              |           |   |   |   |    |   |   |   |   |   |
| <b>Capillary Length m (Feet)</b> - 12 <sup>th</sup> character               |           |   |   |   |    |   |   |   |   |   |
| 1 (3)   |           |   |   |   |    |   |   |   |   |   |
| 1.5 (5)   |           |   |   |   |    |   |   |   |   |   |
| 2 (7)   |           |   |   |   |    |   |   |   |   |   |
| 2.5 (8)   |           |   |   |   |    |   |   |   |   |   |
| 3 (10)  |           |   |   |   |    |   |   |   |   |   |
| <b>Fill Fluid</b> - 13 <sup>th</sup> character                              |           |   |   |   |    |   |   |   |   |   |
| Silicone oil PMX 200 10 cSt (-40 to 250 °C; -40 to 480 °F)                  |           |   |   |   |    |   |   |   |   |   |
| Silicone oil for high temperature (-10 to 375 °C; 14 to 707 °F)             |           |   |   |   |    |   |   |   |   |   |
| Mineral oil Esso Marcol 122 (FDA approved) (Note 1)                         |           |   |   |   |    |   |   |   |   |   |
| <b>Option</b> - 14 <sup>th</sup> character                                  |           |   |   |   |    |   |   |   |   |   |
| None  |           |   |   |   |    |   |   |   |   |   |
| Jack out collar for seal removal for process (not for type 89) (Note 2)     |           |   |   |   |    |   |   |   |   |   |
| <b>Gasket</b> - 15 <sup>th</sup> character                                  |           |   |   |   |    |   |   |   |   |   |
| None  |           |   |   |   |    |   |   |   |   |   |
| Aluminium   |           |   |   |   |    |   |   |   |   |   |
| AISI 316 ss   |           |   |   |   |    |   |   |   |   |   |

Note 1: Suitable for food application

Note 2: Not available with mounting connection types code D

# Model S26 seals for remote and direct mount

## S26VN Model saddle and socket diaphragm seal

The saddle and socket seal are the best solution when the diaphragm need to be as closest as possible to the process media. These are typically installed by welding to the process pipes with fluid at high viscosity. Saddle and socket process connection fittings are available as option selection, available only in AISI 316 L ss.

### Pressure limits

| Seal model<br>S26VN bolting | Temperature range                | Pressure limit            |
|-----------------------------|----------------------------------|---------------------------|
| Alloy steel                 | 0 ... 37.8 °C (32 ... 100 °F)    | 16 MPa, 160 bar, 2320 psi |
|                             | -48.3 ... 0 °C (-55 ... 32 °F)   | 10 MPa, 100 bar, 1450 psi |
|                             | 37.8 ... 360 °C (100 ... 680 °F) | 10 MPa, 100 bar, 1450 psi |

### Vacuum service

Full vacuum subject to fill fluid limits.  
Refer to FILL FLUID CHARACTERISTICS table.

### Process temperature limits

Refer to FILL FLUID CHARACTERISTICS table and as follows for specific variants.

| Seals model S26VN | Process temperature limits        |
|-------------------|-----------------------------------|
| PTFE gasket       | -100 and 260 °C (-148 and 500 °F) |
| Graphite gasket   | -100 and 360 °C (-148 and 680 °F) |

### Temperature effect

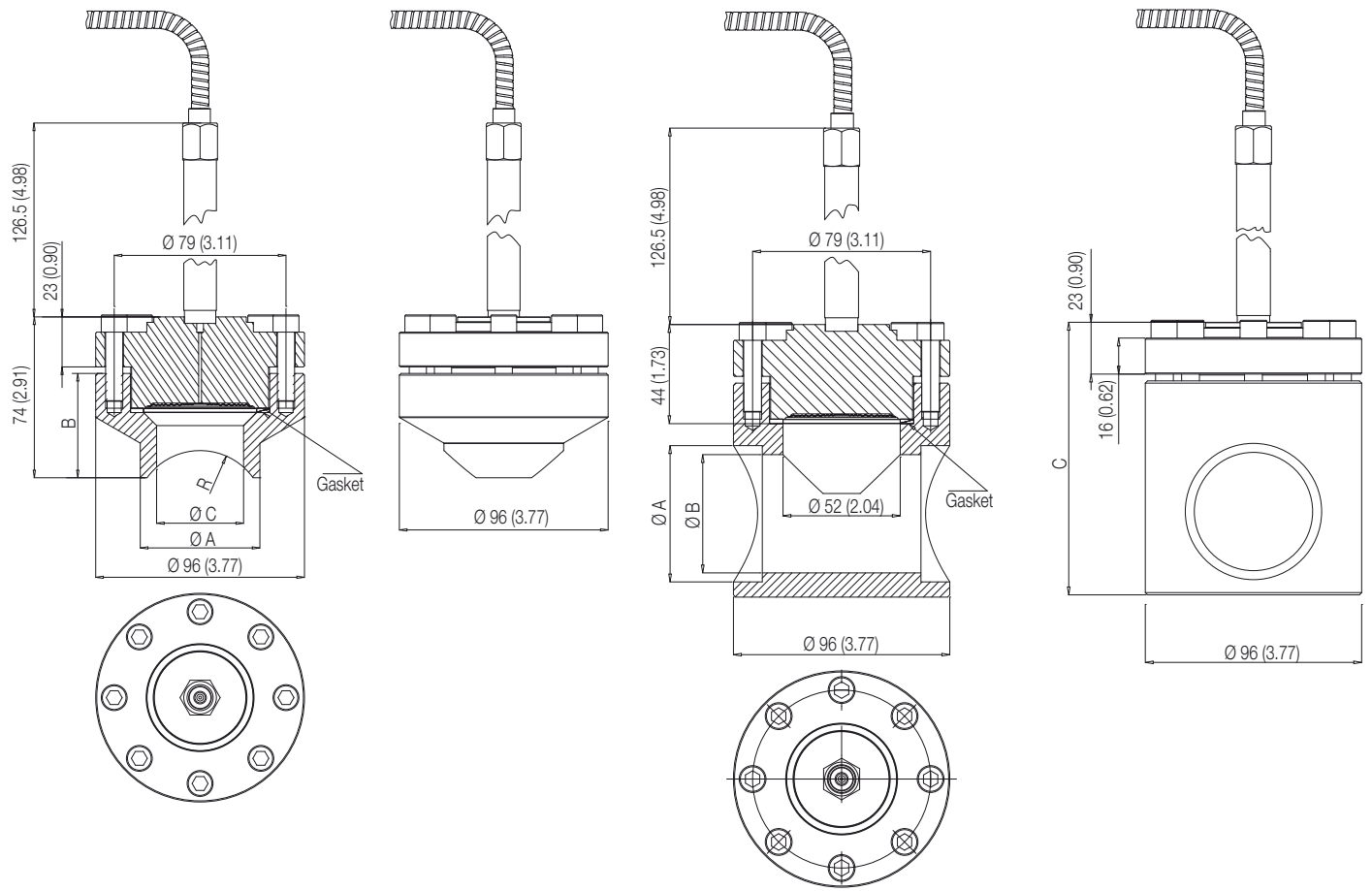
The following table shows temperature effect per 20 K (36 °F) change, detailed separately for  
a) the seal (one element), as process temperature error  
b) the capillary per meter  
c) the system (transmitter sensor when combined with a seal of specific size/type, either direct mount or remote) referred to silicone oil (PMX 200) filling and AISI 316 L ss diaphragm materials.

For filling different from silicone oil (PMX 200) the errors can be multiplied by ratio between the thermal expansion coefficients of the selected filling divided by the one of PMX 200, listed in the fill fluid characteristics table.

THE ERRORS IN TABLE CAN BE CONSIDERED DIVIDED BY 4 FOR TRANSMITTERS USING SAME REMOTE SEAL ON THE TWO SIDES

| S26VN saddle & socket seal size - Mnemonic | Sensor URL           | Seal error (process) | Direct mount system error (ambient) | Remote mount error (ambient) | 1 metre capillary error (ambient) |
|--|----------------------|----------------------|-------------------------------------|------------------------------|-----------------------------------|
| 1 1/2 in. - P1.5                           | ≥ 160 kPa, 642 inH2O | 0.74 kPa, 3 inH2O    | 0.67 kPa, 2.68 inH2O                | 0.62 kPa, 2.48 inH2O         | 0.31 kPa, 1.24 inH2O              |

MULTIPLY BY 10 THE kPa VALUES TO OBTAIN mbar.



| Fitting connection<br>Size | Dimensions mm. (in.) for S26VN- saddle type |           |           |    |
|----------------------------|---|-----------|-----------|----|
|                            | A (dia)                                     | B         | C (dia)   | R  |
| Saddle 2 in.               | 55 (2.17)                                   | 48 (1.89) | 40 (1.57) | 30 |
| Saddle 2 1/2 in.           | 76 (3.0)                                    | 45 (1.77) | 52 (2.05) | 45 |
| Saddle 3 in.               | 76 (3.0)                                    | 45 (1.77) | 50 (1.97) | 45 |
| Saddle 4 in.               | 76 (3.0)                                    | 41 (1.61) | 50 (1.97) | 57 |
| Saddle 5 in.               | 76 (3.0)                                    | 40 (1.57) | 50 (1.97) | 70 |
| Saddle 6 in.               | 76 (3.0)                                    | 36 (1.42) | 50 (1.97) | 85 |

| Fitting connection<br>Size | Dimensions mm. (in.) for S26VN- socket type |             |            |
|----------------------------|---|-------------|------------|
|                            | A (dia)                                     | B           | C          |
| Socket 1/2 in.             | 21.8 (0.86)                                 | 15.9 (0.63) | 86 (3.39)  |
| Socket 3/4 in.             | 27 (1.06)                                   | 21.2 (0.83) | 96 (3.78)  |
| Socket 1 in.               | 33.6 (1.32)                                 | 26.8 (1.06) | 101 (3.98) |
| Socket 1 1/2 in.           | 48.5 (1.91)                                 | 41 (1.61)   | 121 (4.76) |
| Socket 2 in.               | 60.5 (2.38)                                 | 52.5 (2.07) | 121 (4.76) |

# Model S26 seals for remote and direct mount

## BASIC ORDERING INFORMATION model S26VN Socket and saddle diaphragm seals

Select one character or set of characters from each category and specify complete catalog number.

| BASE MODEL - 1 <sup>st</sup> to 5 <sup>th</sup> characters                 | S 2 6 V N | X | XX | X | X | X | X | X |
|--|-----------|---|----|---|---|---|---|---|
| Socket and saddle diaphragm seal   |           |   |    |   |   |   |   |   |
| <b>Transmitter Side of Connection</b> - 6 <sup>th</sup> character          |           |   |    |   |   |   |   |   |
| High pressure side   |           | H |    |   |   |   |   |   |
| Low pressure side  |           | L |    |   |   |   |   |   |
| <b>Diaphragm Material</b> - 7 <sup>th</sup> and 8 <sup>th</sup> characters |           |   |    |   |   |   |   |   |
| AISI 316 L ss  | NACE      |   | SM |   |   |   |   |   |
| Hastelloy C-276  | NACE      |   | HM |   |   |   |   |   |
| Hastelloy C-2000   | NACE      |   | MM |   |   |   |   |   |
| Inconel 625  | NACE      |   | LM |   |   |   |   |   |
| Tantalum   |           |   | TM |   |   |   |   |   |
| AISI 316 L ss gold plated  | NACE      |   | NM |   |   |   |   |   |
| Superduplex ss (UNS S32750 to ASTM SA479)                                  | NACE      |   | EM |   |   |   |   |   |
| <b>Capillary Protection</b> - 9 <sup>th</sup> character                    |           |   |    |   |   |   |   |   |
| AISI 316 L ss armour   |           |   |    |   |   |   | A |   |
| AISI 316 L ss armour with PVC protective cover                             |           |   |    |   |   |   | B |   |
| Extension tube for direct mount seal (Note 1)                              |           |   |    |   |   |   | N |   |

continued  
see next page

| BASIC ORDERING INFORMATION model S26VN                          |                                  | S | 2 | V | N | X        | X | X | X |
|---|----------------------------------|---|---|---|---|----------|---|---|---|
| <b>Capillary Length m (Feet)</b> - 10 <sup>th</sup> character   |                                  |   |   |   |   |          |   |   |   |
| Direct-mount construction                                       | (Note 2)                         |   |   |   |   |          |   | 1 |   |
| 1 (3)   | (Note 3)                         |   |   |   |   |          |   | A |   |
| 1.5 (5)   | (Note 3)                         |   |   |   |   |          |   | B |   |
| 2 (7)   | (Note 3)                         |   |   |   |   |          |   | C |   |
| 2.5 (8)   | (Note 3)                         |   |   |   |   |          |   | D |   |
| 3 (10)  | (Note 3)                         |   |   |   |   |          |   | E |   |
| 3.5 (12)  | (Note 3)                         |   |   |   |   |          |   | F |   |
| 4 (13)  | (Note 3)                         |   |   |   |   |          |   | G |   |
| 4.5 (15)  | (Note 3)                         |   |   |   |   |          |   | H |   |
| 5 (17)  | (Note 3)                         |   |   |   |   |          |   | J |   |
| <b>Fill Fluid</b> - 11 <sup>th</sup> character                  |                                  |   |   |   |   |          |   |   |   |
| Silicone oil PMX 200 10 cSt                                     | (-40 to 250 °C; -40 to 480 °F)   |   |   |   |   |          |   |   | S |
| Silicone oil Baysilone PD5 5 cSt                                | (-85 to 250 °C; -121 to 480 °F)  |   |   |   |   |          |   |   | P |
| Inert oil - Galden G5   | (Oxygen service)                 |   |   |   |   | (Note 4) |   |   | N |
| Inert oil - Halocarbon 4.2                                      | (Oxygen service)                 |   |   |   |   | (Note 4) |   |   | D |
| Silicone oil for high temperature                               | (-10 to 375 °C; 14 to 707 °F)    |   |   |   |   |          |   |   | G |
| Silicone polymer Syltherm XLT                                   | (-100 to 100 °C; -148 to 212 °F) |   |   |   |   |          |   |   | C |
| Mineral oil Esso Marcol 122                                     | (FDA approved)                   |   |   |   |   | (Note 5) |   |   | W |
| Vegetable oil Neobee M-20                                       | (FDA approved)                   |   |   |   |   | (Note 5) |   |   | A |
| Glycerin-water 70%  | (FDA approved)                   |   |   |   |   | (Note 5) |   |   | B |
| <b>Process Fitting Connections</b> - 12 <sup>th</sup> character |                                  |   |   |   |   |          |   |   |   |
| Not required  |                                  |   |   |   |   |          |   |   | N |
| Saddle 2 in.  |                                  |   |   |   |   |          |   |   | 1 |
| Saddle 2 1/2 in.  |                                  |   |   |   |   |          |   |   | 2 |
| Saddle 3 in.  |                                  |   |   |   |   |          |   |   | 3 |
| Saddle 4 in.  |                                  |   |   |   |   |          |   |   | 4 |
| Saddle 5 in.  |                                  |   |   |   |   |          |   |   | 5 |
| Saddle 6 in.  |                                  |   |   |   |   |          |   |   | 6 |
| Socket 1/2 in.  |                                  |   |   |   |   |          |   |   | A |
| Socket 3/4 in.  |                                  |   |   |   |   |          |   |   | B |
| Socket 1 in.  |                                  |   |   |   |   |          |   |   | C |
| Socket 1 1/2 in.  |                                  |   |   |   |   |          |   |   | D |
| Socket 2 in.  |                                  |   |   |   |   |          |   |   | E |
| <b>Gasket</b> - 13 <sup>th</sup> character                      |                                  |   |   |   |   |          |   |   |   |
| PTFE  |                                  |   |   |   |   |          |   |   | 2 |
| Graphite  |                                  |   |   |   |   |          |   |   | 7 |

Note 1: Not available with transmitter side of connection code L  
Note 2: Not available with capillary protection code A, B  
Note 3: Not available with capillary protection code N  
Note 4: Suitable for oxygen service  
Note 5: Suitable for food application

# Model S26 seals for remote and direct mount

## S26UN Model Union connection remote diaphragm seal

The union connection remote seal are used exclusively for pressure measurement with gauge pressure transmitter. The seal is available with an optional weld bushing, or with an optional chemical tee flange. The remote seal with a weld bushing, includes a bushing which provides the mating surface for the seal element. The union connection seal with a chemical tee flange, is designed to connect to any process fitting which accepts a chemical tee seal element (refer to Chemical Tee Seal for more information). The union seal connects to the chemical tee flange which serves as an adaptor to permit connection of the union seal to a chemical tee type fitting.

### Pressure limits

| Seal model S26UN         |                             |
|--------------------------|-----------------------------|
| Union Connection)        | 10.3 MPa, 103 bar, 1500 psi |
| With Chemical Tee Flange | 2 MPa, 20 bar, 300 psi      |

### Vacuum service

Full vacuum subject to fill fluid limits.  
Refer to FILL FLUID CHARACTERISTICS table.

### Process temperature limits

Refer to FILL FLUID CHARACTERISTICS table and as follows for specific variants.

| Material               |                                      |
|------------------------|--------------------------------------|
| Silicone rubber gasket | -50 and 204 °C<br>(-58 and 400 °F)   |
| PTFE gasket            | -100 and 260 °C<br>(-148 and 500 °F) |

### Temperature effect

The following table shows temperature effect per 20 K (36 °F) change, detailed separately for

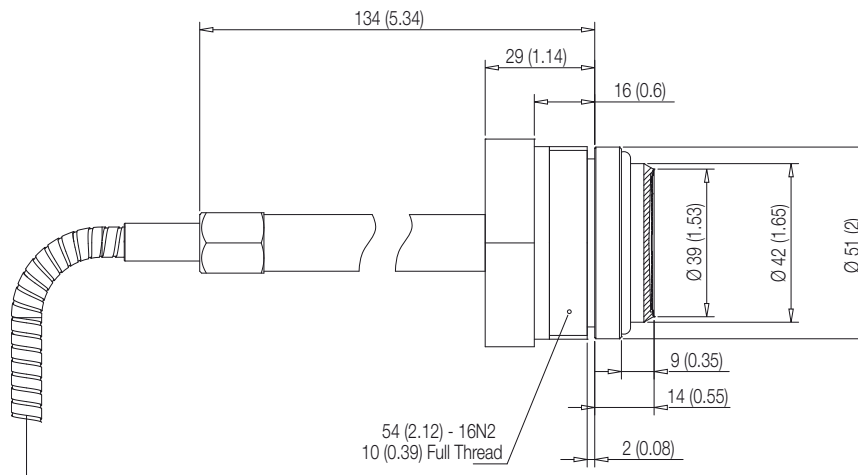
- the seal (one element), as process temperature error
- the capillary per meter
- the system (transmitter sensor when combined with a seal of specific size/type, either direct mount or remote) referred to silicone oil (PMX 200) filling and AISI 316 L ss diaphragm materials.

For filling different from silicone oil (PMX 200) the errors can be multiplied by ratio between the thermal expansion coefficients of the selected filling divided by the one of PMX 200, listed in the fill fluid characteristics table.

THE ERRORS IN TABLE CAN BE CONSIDERED DIVIDED BY 4 FOR TRANSMITTERS USING SAME REMOTE SEAL ON THE TWO SIDES

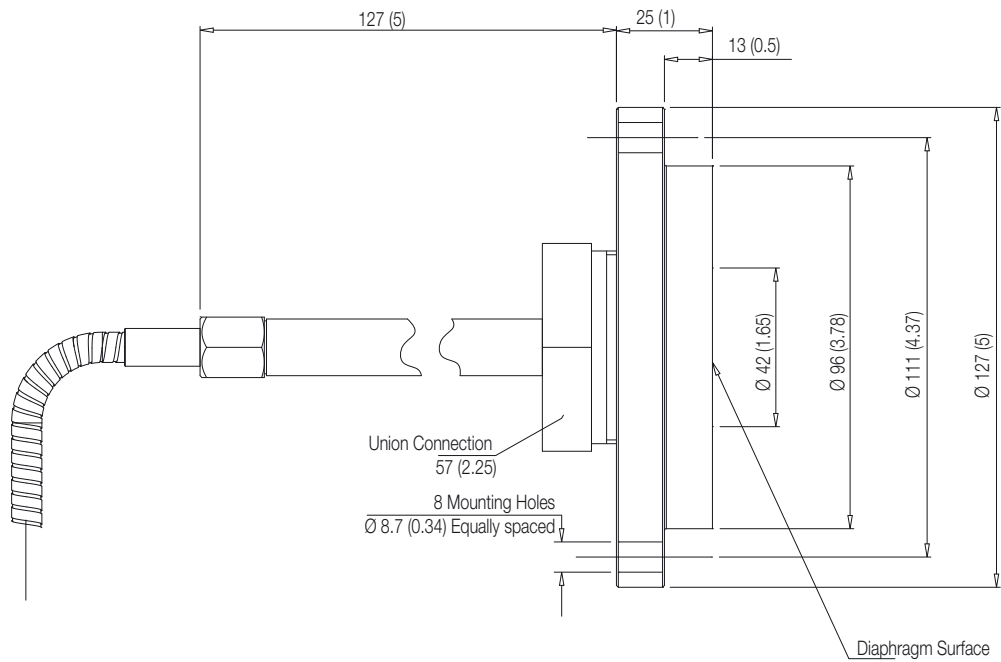
| S26UN Union connectin seal size - Mnemonic | Sensor URL           | Seal error (process) | Remote system error (ambient) | 1 metre capillary error (ambient) |
|--|----------------------|----------------------|-------------------------------|-----------------------------------|
| 1 1/2 in. - Z1.5                           | ≥ 160 kPa, 642 inH2O | 0.29 kPa, 1.16 inH2O | 0.62 kPa, 2.48 inH2O          | 0.31 kPa, 1.24 inH2O              |

MULTIPLY BY 10 THE kPa VALUES TO OBTAIN mbar.

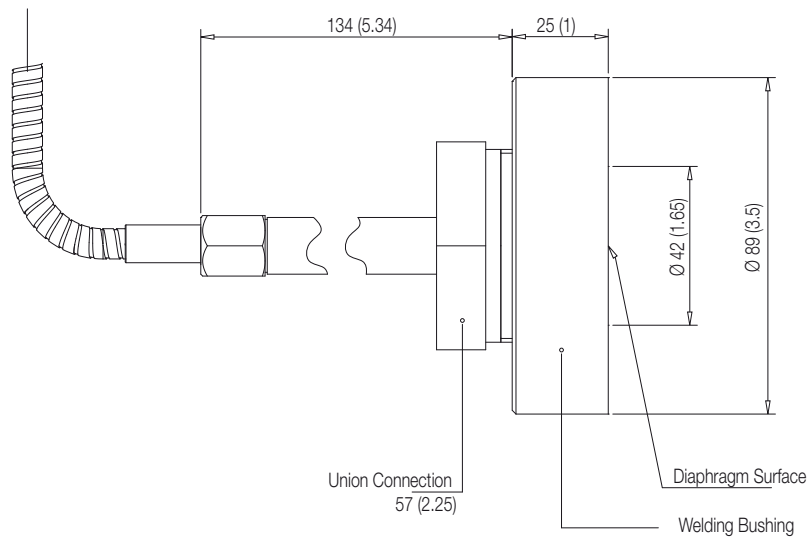


Union connection remote seal - basic version





Union connection remote seal with Chemical Tee flange



Union connection remote seal with weld bushing

# Model S26 seals for remote and direct mount

## BASIC ORDERING INFORMATION model S26UN Union connection remote diaphragm seals

Select one character or set of characters from each category and specify complete catalog number.

|  |   |   |   |   |      |   |   |    |   |   |   |   |   |
|--|---|---|---|---|------|---|---|----|---|---|---|---|---|
| <b>BASE MODEL</b> - 1 <sup>st</sup> to 5 <sup>th</sup> characters          | S | 2 | 6 | U | N    | X | X | XX | X | X | X | X | X |
| Union connection remote diaphragm seal                                     |   |   |   |   |      |   |   |    |   |   |   |   |   |
| <b>Transmitter Side of Connection</b> - 6 <sup>th</sup> character          |   |   |   |   |      | H |   |    |   |   |   |   |   |
| High pressure side   |   |   |   |   |      |   |   |    |   |   |   |   |   |
| <b>Size</b> - 7 <sup>th</sup> character                                    |   |   |   |   |      |   |   |    |   |   |   |   |   |
| 1 1/2 in.  |   |   |   |   |      |   |   | L  |   |   |   |   |   |
| <b>Diaphragm Material</b> - 8 <sup>th</sup> and 9 <sup>th</sup> characters |   |   |   |   |      |   |   |    |   |   |   |   |   |
| AISI 316 L ss  |   |   |   |   | NACE |   |   | SL |   |   |   |   |   |
| Hastelloy C-276  |   |   |   |   | NACE |   |   | HL |   |   |   |   |   |
| <b>Capillary Protection</b> - 10 <sup>th</sup> character                   |   |   |   |   |      |   |   |    |   |   |   |   |   |
| AISI 316 L ss armour   |   |   |   |   |      |   |   |    |   |   |   | A |   |
| AISI 316 L ss armour with PVC protective cover                             |   |   |   |   |      |   |   |    |   |   |   | B |   |
| <b>Capillary Length m (Feet)</b> - 11 <sup>th</sup> character              |   |   |   |   |      |   |   |    |   |   |   |   |   |
| 1 (3)  |   |   |   |   |      |   |   |    |   |   |   |   | A |
| 1.5 (5)  |   |   |   |   |      |   |   |    |   |   |   |   | B |
| 2 (7)  |   |   |   |   |      |   |   |    |   |   |   |   | C |
| 2.5 (8)  |   |   |   |   |      |   |   |    |   |   |   |   | D |
| 3 (10)   |   |   |   |   |      |   |   |    |   |   |   |   | E |
| 3.5 (12)   |   |   |   |   |      |   |   |    |   |   |   |   | F |
| 4 (13)   |   |   |   |   |      |   |   |    |   |   |   |   | G |
| 4.5 (15)   |   |   |   |   |      |   |   |    |   |   |   |   | H |
| 5 (17)   |   |   |   |   |      |   |   |    |   |   |   |   | J |
| <b>Fill Fluid</b> - 12 <sup>th</sup> character                             |   |   |   |   |      |   |   |    |   |   |   |   |   |
| Silicone oil PMX 200 10 cSt (-40 to 250 °C; -40 to 480 °F)                 |   |   |   |   |      |   |   |    |   |   |   |   | S |
| Silicone oil Baysilone PD5 5 cSt (-85 to 250 °C; -121 to 480 °F)           |   |   |   |   |      |   |   |    |   |   |   |   | P |
| Inert oil - Galden G5 (Oxygen service) (Note 1)                            |   |   |   |   |      |   |   |    |   |   |   |   | N |
| Inert oil - Halocarbon 4.2 (Oxygen service) (Note 1)                       |   |   |   |   |      |   |   |    |   |   |   |   | D |
| Silicone oil for high temperature (-10 to 375 °C; 14 to 707 °F)            |   |   |   |   |      |   |   |    |   |   |   |   | G |
| Silicone polymer Syltherm XLT (-100 to 100 °C; -148 to 212 °F)             |   |   |   |   |      |   |   |    |   |   |   |   | C |
| Mineral oil Esso Marcol 122 (FDA approved) (Note 2)                        |   |   |   |   |      |   |   |    |   |   |   |   | W |
| Vegetable oil Neobee M-20 (FDA approved) (Note 2)                          |   |   |   |   |      |   |   |    |   |   |   |   | A |
| Glycerin-water 70% (FDA approved) (Note 2)                                 |   |   |   |   |      |   |   |    |   |   |   |   | B |
| <b>Process Fitting Connections</b> - 13 <sup>th</sup> character            |   |   |   |   |      |   |   |    |   |   |   |   |   |
| Not required   |   |   |   |   |      |   |   |    |   |   |   |   | 1 |
| AISI 316 ss weld bushing   |   |   |   |   |      |   |   |    |   |   |   |   | 3 |
| Chemical tee flange  |   |   |   |   |      |   |   |    |   |   |   |   | 4 |
| <b>Gasket</b> - 14 <sup>th</sup> character                                 |   |   |   |   |      |   |   |    |   |   |   |   |   |
| Not required   |   |   |   |   |      |   |   |    |   |   |   |   | 1 |
| Silicone rubber  |   |   |   |   |      |   |   |    |   |   |   |   | 5 |
| PTFE   |   |   |   |   |      |   |   |    |   |   |   |   | 8 |

Note 1: Suitable for oxygen service  
Note 2: Suitable for food application

- ® Hastelloy is a registered trademark of Haynes International
- ® Monel is a registered trademark of Special Metals Corporation
- ® Viton is a registered trademark of E.I. DuPont de Nemour
- ® PMX 200 and Syltherm are registered trademarks of Dow Corning Corporation
- ® Galden is a registered trademark of Solvay Group
- ® Halocarbon is a registered trademark of Halocarbon Products Co.
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