PGS100 and PAS100
Gauge and absolute pressure transmitters
Measurement made easy
Engineered solutions for all applications

Standard overload resistance

Base accuracy
• ± 0.25 % (± 0.1 % on request)

Span limits
• 4 – 10000 kPa; 16 inH2O up to 1450 psi
• 4 – 10000 kPa abs; 30 mmHg up to 1450 psia

Proven sensor technology together with state-of-the-art digital technology
• Valuable turn down ratio of up to 10:1

Stainless steel housing
• Optimized for use in industrial process environments
• Extremely robust

New touch keypad technology
• allows quick and easy local configuration without opening the cover, even in hazardous classified locations
• backlight facility

Flexible configuration options
• Local configuration via setup button for upper and lower range values
• Local configuration via buttons on HMI
• Via handheld terminal or PC user interface

PED compliance
• Category III for PS > 20 MPa, 200 bar
• Sound Engineering Practice (SEP) for PS ≤ 20 MPa, 200 bar

Product in compliance with Directive 2011/65/UE (RoHS II)

In-built advanced diagnostics
---

**Functional – specification**

### Range and span limits

<table>
<thead>
<tr>
<th>Sensor code</th>
<th>Upper range limit (URL)</th>
<th>Lower range limit (LRL)</th>
<th>Minimum measuring span</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>40 kPa -40 kPa</td>
<td>4 kPa -4 kPa</td>
<td>Model PGS Gauge pressure</td>
</tr>
<tr>
<td></td>
<td>400 mbar -400 mbar</td>
<td>40 mbar -40 mbar</td>
<td>Model PAS Absolute pressure</td>
</tr>
<tr>
<td></td>
<td>160 inH2O -160 inH2O</td>
<td>16 inH2O -16 inH2O</td>
<td>30 mmHg</td>
</tr>
<tr>
<td>L</td>
<td>250 kPa -100 kPa</td>
<td>25 kPa -100 kPa</td>
<td>Model PGS Gauge pressure</td>
</tr>
<tr>
<td></td>
<td>2500 mbar -1 bar</td>
<td>250 mbar -1 bar</td>
<td>Model PAS Absolute pressure</td>
</tr>
<tr>
<td></td>
<td>1000 inH2O -14.5 psi</td>
<td>100 inH2O -14.5 psi</td>
<td>172.5 mmHg</td>
</tr>
<tr>
<td>D</td>
<td>1000 kPa -100 kPa</td>
<td>100 kPa -100 kPa</td>
<td>Model PGS Gauge pressure</td>
</tr>
<tr>
<td></td>
<td>10 bar -1 bar</td>
<td>1 bar -1 bar</td>
<td>Model PAS Absolute pressure</td>
</tr>
<tr>
<td></td>
<td>145 psi -14.5 psi</td>
<td>14.5 psi -14.5 psi</td>
<td>75 mmHg</td>
</tr>
<tr>
<td>K</td>
<td>4000 kPa -100 kPa</td>
<td>400 kPa -100 kPa</td>
<td>Model PGS Gauge pressure</td>
</tr>
<tr>
<td></td>
<td>40 bar -1 bar</td>
<td>4 bar -1 bar</td>
<td>Model PAS Absolute pressure</td>
</tr>
<tr>
<td></td>
<td>580 psi -14.5 psi</td>
<td>5.8 psi -5.8 psi</td>
<td>5.8 psi</td>
</tr>
<tr>
<td>R</td>
<td>10000 kPa -100 kPa</td>
<td>10000 kPa -100 kPa</td>
<td>Model PGS Gauge pressure</td>
</tr>
<tr>
<td></td>
<td>10 bar -1 bar</td>
<td>10 bar -1 bar</td>
<td>Model PAS Absolute pressure</td>
</tr>
<tr>
<td></td>
<td>1450 psi -14.5 psi</td>
<td>145 psi -145 psi</td>
<td>145 psi</td>
</tr>
</tbody>
</table>

**IMPORTANT (NOTE)**
The lower range limit (LRL) for model PAS is 0 absolute for all measuring ranges.

---

Maximum span = upper range limit (URL)

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

TURNDOWN = Upper range limit / set span

**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**

Configurable time constant between 0 and 60 s.

This is in addition to the sensor response time, and can be adjusted via the optional display, handheld terminal, or PC user interface.

**Warm-up time**

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

**Insulation resistance**

>100 MΩ at 500 V DC (between terminals and ground, according to EN61010-1 and EN62828-1 par 6.2.3.2).
Specification – operative limits

Pressure limits
Overpressure limits
Without damage to the transmitter
No damage will occur during transmitter operation, if they are used within the specifications and subject to the following limits:

<table>
<thead>
<tr>
<th>Sensor code</th>
<th>Overpressure limits, 0 abs to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>1 MPa, 10 bar, 145 psi</td>
</tr>
<tr>
<td>L</td>
<td>3 MPa, 30 bar, 435 psi</td>
</tr>
<tr>
<td>D</td>
<td>6 MPa, 60 bar, 870 psi</td>
</tr>
<tr>
<td>K</td>
<td>8 MPa, 80 bar, 1160 psi</td>
</tr>
<tr>
<td>R</td>
<td>20 MPa, 200 bar, 2900 psi</td>
</tr>
</tbody>
</table>

Test pressure
When carrying out the transmitter pressure test, it is essential to observe the overpressure limits.

Temperature limits °C (°F)
Ambient
This is the operating temperature.

<table>
<thead>
<tr>
<th>Model PGS, PAS</th>
<th>Ambient temperature limits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Operating temperature range</td>
</tr>
<tr>
<td></td>
<td>LCD display readability</td>
</tr>
</tbody>
</table>

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

Process

<table>
<thead>
<tr>
<th>Model PGS, PAS</th>
<th>Process temperature limits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Process temperature range</td>
</tr>
</tbody>
</table>

Storage

<table>
<thead>
<tr>
<th>Model PGS, PAS</th>
<th>Storage temperature limits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Storage temperature range</td>
</tr>
<tr>
<td></td>
<td>LCD display</td>
</tr>
</tbody>
</table>

Environmental limits
Electromagnetic compatibility (EMC)
The devices comply with the requirements and tests for EMC Directive 2014/30/EU to standards EN 61326-1 Table2 (industrial electromagnetic environment) concerning both emitted interference (CISPR11) and interference immunity.
- Burst test: up to 2 kV at 5 kHz and 100 kHz
- Surge test: up to 1 kV line-line and 2 kV line-ground
Radiated emission: Group 1 - class B according to CISPR11
- FCC 47 CFR part 18.305
- ICES 005 - Issue 4
Conducted emission: group 1 - class A according to CISPR11 and to CISPR32
- ICES 005 - Issue 4

Pressure equipment directive (PED)
Comply with 2014/68/EU to standards ANSI/ISA S82.03
- Category III Module H for PS > than 20 MPa, 200 bar
- Sound Engineering Practice (SEP) for PS ≤ 20 MPa, 200 bar.

Humidity
Relative humidity: up to 100 %
Condensation, icing: permissible

Vibration resistance
Acceleration at frequencies of
- 10 – 60 Hz with displacement of 0.7 mm
- 60 – 1000 Hz 5 g (50 m/s²)
(according to IEC 60068-2-6).

Shock resistance
Test Ea Half sine with 3 positive and 3 negative shocks for each axis
- Acceleration: 50 g
- Duration: 11 ms
Continuous test Ea half sine with 1000 positive and 1000 negative shocks for each axis
- Acceleration: 10 g
- Duration: 10 ms
(according to IEC 60068-2-27).

Wet and dust-laden atmospheres (IP degree of protection)
The transmitter is dust and sand–tight, and is protected against immersion effects as defined by the following standards:
- IEC EN60529 to IP66, IP67, IP68
- ISO 20653 to IP69K
- NEMA 4X
IP65 degree of protection with plug connection.

Tested ambient
The transmitter is suitable for class D1, non weather-protected locations, outdoor locations (according to IEC 60654-1)
Hazardous atmospheres
Without integral display

**INTRINSIC SAFETY Ex ia:**
- ATEX Europe (code HAM) approval
  II 1 G Ex ia IIC T4 Ga
  II 1/2 D Ex ia III C T135°C Da/Db
- IECEx (code HJM) approval
  Ex ia IIC T4 Ga
  Ex ia IIC T135°C Da/Db
  Ex ta/tb IIC T 135°C Da/Db;

**CSA Approvals (code HCM):**
- For US
  Class I, Zone 0, AEx ia IIC T4 Ga
  Class I Div 1 Gr. A, B, C, D T4 - IS
  Class II, Div 1 Gr. E, F, G 120 °C - IS
  Zone 20/21 AEx ia IIC T135°C Da/Db
  Zone 20/21 AEx ta/tb IIC T135°C Da/Db
  Class III, Div 1
- For Canada
  Ex ia IIC T4 Ga
  Class I Div 1 Gr. A, B, C, D T4
  Class II, Div 1 Gr. E, F, G 120 °C - IS
  Ex ia IIC T135°C Da/Db
  Ex ta/tb IIC T135°C Da/Db
  Class III, Div 1

Combined ATEX Europe, IECEx and CSA (US and Canada) approvals (code HMM):

With integral display

**INTRINSIC SAFETY Ex ia:**
- ATEX Europe (code HAM) approval
  II 1 G Ex ia IIC T4 Ga
- IECEx (code HJM) approval
  Ex ia IIC T4 Ga

**CSA Approvals (code HCM):**
- For US
  Class I, Zone 0, AEx ia IIC T4 Ga
  Class I Div 1 Gr. A, B, C, D T4
- For Canada
  Ex ia IIC T4 Ga
  Class I Div 1 Gr. A, B, C, D T4

**IMPORTANT (NOTE)**
For dust applications with process temperatures from 85°C to 120°C the installer shall ensure that the temperature at a particular location on the equipment does not exceed a specified value for any particular equipment installation. (i.e. 85 °C maximum for gaskets of filter and cover)

REFER TO CERTIFICATES FOR AMBIENT TEMPERATURE RANGES RELATED TO THE DIFFERENT TEMPERATURE CLASSES.
Specification - Electrical data and options

HART digital communication and 4 to 20 mA output

Power supply
The transmitter operates from 10.5 to 42 V DC with no load and is protected against reversed polarity (additional loads enable operation above 42 V DC).
Minimum operating voltage increases to 14.5 V DC with optional backlit LCD display.
For Ex ia and other intrinsically safe approval power supply must not exceed 30 V DC.

Ripple
Maximum permissible supply voltage ripple during communication complies with HART FSK “Physical Layer” specification rev. 8.1.

Load limitations
Total loop resistance at 4 to 20 mA and HART:

\[ R (\Omega) = \frac{22 \text{ mA}}{\text{Voltage supply- Minimum operating voltage (VDC)}} \]

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

Glass touch LCD display (optional)
Digital, graphic LCD display with 2-button keypad for customized visualization and configuration.
For 4 to 20 mA analog version
- visualization of output current in mA
- configuration of Zero (4mA) and Span (20mA) using the 2 buttons
For HART/4 to 20 mA version
- visualization of
  - gauge pressure/absolute pressure or
  - output current in mA or %, or
- HART output
  (freely assigned start/end values and unit)
  - diagnostic messages, alarms, errors and measuring range limits violations
  - QR code diagnostics (optional)
- configuration of
  - Zero (4mA) and Span (20mA) using the 2 buttons
- Easy setup configuration menu

Output signal
4 to 20 mA analog version
- Two–wire, 4 to 20 mA analog output signal
HART/4 to 20 mA version
- Two–wire, 4 to 20 mA analog output signal and digital process variables (% mA or engineering units) superimposed on the 4 to 20 mA signal with protocol based to Bell 202 FSK standard H.

Output current limits for 4 to 20 mA analog version
Overload condition
- Lower limit: 3.8 mA
- Upper limit: 20.5 mA
Default alarm current
- 21 mA

Output current limits for HART/4 to 20 mA version
(according to NAMUR NE 43 standard)
Overload condition
- Lower limit: 3.8 mA (settable from 3.8 to 4 mA)
- Upper limit: 20.5 mA (settable from 20 to 21 mA)
Alarm current
- Lower alarm value: 3.6 mA (settable from 3.6 to 4 mA)
- High alarm value: 21 mA (settable from 20 to 22.8 mA)
Default setting: high alarm current

NAMUR NE 43 defines as alarm limits the lower \( \leq 3.6 \text{ mA} \) and the upper \( \geq 21 \text{ mA} \).
Risk connected to any deviation from NAMUR NE43 thresholds of the alarm current limits falls under Customers' responsibility.

HART release
Revision 7.
## Specification - Performance

Reference conditions according to IEC 62828-1

- Ambient temperature constant in the range 15 – 25 °C (59 – 77 °F)
- Relative humidity constant in the range 50 – 70 %
- Ambient pressure constant in the range 860 – 1060 mbar
- Measuring span based on zero position
- Transmitter with AISI 316 L or Hastelloy C276 process isolating diaphragm
- Filling fluid: Silicone oil
- Supply voltage: 24 V DC ± 1 %
- Load with HART: 250 Ω
- Transmitter not grounded
- Characteristic setting: linear, 4 – 20 mA.

Unless otherwise specified, errors are quoted as % of calibrated 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.

### Ambient temperature

per 10K change between the limits of −10 °C to +60 °C (per 18 °F change between the limits of 14 °C to +140 °F):

<table>
<thead>
<tr>
<th>Sensor</th>
<th>for TD up to</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>10:1</td>
<td>± (0.15 % URL + 0.15 % span)</td>
</tr>
<tr>
<td>L, D, K, R</td>
<td>10:1</td>
<td>± (0.05 % URL + 0.05 % span)</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Sensor</th>
<th>for TD up to</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>10:1</td>
<td>± (0.20 % URL + 0.20 % span)</td>
</tr>
</tbody>
</table>

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):

<table>
<thead>
<tr>
<th>Sensor</th>
<th>for TD up to</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>10:1</td>
<td>± (0.10 % URL + 0.10 % span)</td>
</tr>
</tbody>
</table>

### 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.

### Load

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

### Mounting position

Nominal position: vertical; process connection at bottom. Mounting positions deviant from the standard position influence the output due to the filling liquid. This effect can be compensated by carrying out zero signal adjustment.

### Long-term stability

± 0.25 % of URL per year as standard

### Total performance

For a temperature change from −10 to 60 °C (14 to 140 °F) with TD 1:1:

- 0.42 % of calibrated span for extended accuracy
- 0.48 % of calibrated span for base accuracy

Total performance includes the measuring errors of

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

\[ E_{perf} = \sqrt{(E_{TS1} + E_{TS2})^2 + E_{lin}^2} \]

- \( E_{perf} = \) Base accuracy
- \( E_{TS1} = \) Effect of the ambient temperature on zero
- \( E_{TS2} = \) Effect of the ambient temperature on span
- \( E_{lin} = \) Accuracy rating
Specification - physical

Please refer to the ordering information to check the availability of different versions of the relevant model.

Materials

Process isolating diaphragms (*)
- AISI 316 L ss, Hastelloy C276,
- Diaflex (antiabrasion), H-Shield (for hydrogen permeation)

Process connection (*)
- AISI 316 L ss

Sensor filling fluid
- Silicone oil, inert fill (fluorocarbon)

Mounting bracket
- AISI 304 ss

Sensor housing, electronics housing and cover
- AISI 316 L ss

Filter for atmospheric ventilation
- Filter material: polyamide (PA)
- Filter housing: plastic (general purpose version), stainless steel (Ex certified versions)

Viewing window of display cover
- Glass

Cover O-ring
- EPDM for sensor O-ring and cover O-ring to glass;
- Silicon for cover O-ring to housing

Plates
- Nameplate, certification (if applicable) and tag (if requested) labels self-adhesive attached to the electronics housing.

Calibration
- Standard: 0 to upper range limit (URL)
- Optional: to specified measuring span

Optional extras

Mounting bracket (code BU)
- Universal for vertical and horizontal 60 mm (2 in) pipes or wall mounting

Display (code Dx)
- Can be rotated in 5° increments into 72 positions
  (suggested ± 180° clockwise/anticlockwise rotation)

Additional plate
- Self-adhesive label for tag (up to 32 characters - long) and calibration details (up to 32 characters: lower and upper range values and engineering unit) (code SC).
- AISI 316 ss wired-on plate with laser printed customized data (4 lines of 32 characters 4 mm/0.16 in high) (code LEW).

Cleaning procedure for oxygen service (code P1)

Certificates (test, design, characteristics, material traceability) (code Cx)

Approvals (code Gx)

Operating instruction language (code Mx)

Process connections
- 1/2 in - 14 NPT male/ 1/4 in - 18 NPT female or
- 1/2 in - 14 NPT female or DIN EN 837-1 G 1/2 B threads,
  or G 1/2 in front bonded diaphragm.

Electrical connections
- M16 x 1.5 threaded entry on housing.
- M20 x 1.5 or 1/2 in - 14 NPT threaded adapters available on request (supplied loose).

Terminals
- Two screw connections for signal / auxiliary power supply,
  for wire cross-sections from 0.5 – 1.5 mm² (16 AWG)

Grounding
- Both internal and external ground terminals for wire cross-
  sections up to 4 mm² (12 AWG).

Weight (without options)
- Approx. 950 g (2.1 lb)
- Additional 650 g (1.5 lb) for packaging

Packaging
- Carton with dimensions of approx. 180 x 160 x 130 mm
  (7.1 x 6.3 x 5.1 in)

(*) Wetted parts of the transmitter.
Configuration

Transmitter with HART communication and 4 – 20 mA

Standard configuration

Transmitters can be ordered optionally factory calibrated to customers specific range. The required calibrated range and tag will be printed on an additional tag plate. If a calibration range and tag is not required, the transmitter will be supplies as follows:

- Engineering Unit: kPa
- 4 mA: Zero
- 20 mA: Upper Range Limit (URL)
- Output: Linear
- Damping: 1 s
- Transmitter failure mode: Upscale
- Tag: Blank (up to 32 alphanumeric characters - long; only 8 visible on display - short)
- Optional display: 1 line display view of PV (in kPa for HART version; in mA for 4 to 20 mA version)
- Write protection: Disabled

Any or all the above configurable parameters, including lower and upper range values which must be the same unit of measure, can be easily changed using a HART hand-held communicator or by a PC running the configuration software with DD or FDI for PGS100/PAS100.
Mounting dimensions

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

Figure 1 Transmitter with 1/2 in NPT female connection and LCD digital display
Figure 2  Transmitter with ½ in NPT male / ¼ in NPT female connection on bracket
...Mounting dimensions

Figure 3  Transmitter with DIN-EN837-1 G 1/2 B connection

Figure 4  Transmitter with front bonded diaphragm connection
Electrical connections

HART version

HART communication requires a minimum loop resistance of 250 ohm. If this is less than 250 ohm, additional resistance should be added.
## Ordering Information

Basic ordering information PGS100 Gauge Pressure Transmitters and PAS100 Absolute Pressure Transmitters

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.

<table>
<thead>
<tr>
<th>Base model – 1st to 6th characters</th>
<th>PGS100</th>
<th>PAS100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gauge pressure transmitter, compact class, base accuracy 0.25 %</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Absolute pressure transmitter, compact class, base accuracy 0.25 %</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sensor range – 7th character</th>
<th>40 kPa</th>
<th>250 kPa</th>
<th>1000 kPa</th>
<th>4000 kPa</th>
<th>10000 kPa</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>40 mbar</td>
<td>160 mbar</td>
<td>10 bar</td>
<td>40 bar</td>
<td>100 bar</td>
</tr>
<tr>
<td>L</td>
<td>250 mbar</td>
<td>1000 mbar</td>
<td>145 psi</td>
<td>580 psi</td>
<td>1450 psi</td>
</tr>
<tr>
<td>D</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Maximum working pressure – 8th and 9th characters | Standard by design according to sensor range | 59 |
|---------------------------------------------------|------------------------------------------|

<table>
<thead>
<tr>
<th>Diaphragm material – 10th character</th>
<th>AISI 316 L ss</th>
<th>NACE</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hastelloy C-276</td>
<td>NACE</td>
<td></td>
<td>H</td>
</tr>
<tr>
<td>Diaflex antiabrasion coating on AISI 316 L ss</td>
<td>NACE</td>
<td>(Note 1)</td>
<td>F</td>
</tr>
<tr>
<td>Diaflex antiabrasion coating on Hastelloy C-276</td>
<td>NACE</td>
<td>(Note 1)</td>
<td>C</td>
</tr>
<tr>
<td>H-Shield coating on AISI 316 L ss for hydrogen permeation</td>
<td>NACE</td>
<td>(Note 2)</td>
<td>S</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fill fluid – 11th character</th>
<th>Silicone oil</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inert oil</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Process connection material – 12th character</th>
<th>AISI 316 L ss</th>
<th>NACE</th>
<th>A</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Process connection size – 13th character</th>
<th>1/2 in - 14 NPT female</th>
<th>NACE</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2 in - 14 NPT male / 1/4 in - 18 NPT female (adapter compatible)</td>
<td>NACE</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td>DIN EN 837-1 G 1/2 B (HP)</td>
<td>NACE</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Front bonded G 1/2 in</td>
<td>NACE</td>
<td>(Note 3)</td>
<td>P</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bolts and gaskets – 14th character</th>
<th>None</th>
<th>Y</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Housing material / Electrical connection – 15th character</th>
<th>AISI 316 L ss / M16 x 1.5 thread</th>
<th>U</th>
</tr>
</thead>
<tbody>
<tr>
<td>AISI 316 L ss / M20 x 1.5 female thread (through adapter - supplied loose)</td>
<td>U</td>
<td></td>
</tr>
<tr>
<td>AISI 316 L ss / 1/2 in-14 NPT female thread (through adapter - supplied loose)</td>
<td>S</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Protocol/Output – 16th characters</th>
<th>4 – 20 mA analog signal only (only zero/span settings are available)</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>HART digital communication and 4 – 20 mA (Easy setup menu is available for configuration settings)</td>
<td>H</td>
<td></td>
</tr>
</tbody>
</table>
**Additional ordering information model PGS100 Gauge Pressure Transmitters and PAS100 Absolute Pressure Transmitters**

Add one or more options code after the basic ordering information to select all required options.

<table>
<thead>
<tr>
<th>Display (NOTE)</th>
<th>XX</th>
<th>XX</th>
<th>XXX</th>
<th>XX</th>
<th>XX</th>
<th>XX</th>
<th>XX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glass touch LCD display with 2-button keypad</td>
<td>D3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Backlit glass touch LCD display with 2-button keypad</td>
<td>D4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Extended performances**

| ± 0.10 % extended base accuracy | E9 |

**Hazardous area certifications (see relevant paragraph for complete detailed markings)**

| ATEX Ex ia and Ex ta/tb | (Note 4) | HAM |
| CSA approvals (USA and Canada) IS (Gas and Dust) | (Note 4) | HCM |
| IECEx Ex ia and Ex ta/tb | (Note 4) | HJM |
| Combined ATEX, CSA approvals (USA and Canada) and IECEx (Gas and Dust) | (Note 4) | HMM |

**Approvals**

| CSA ordinary location (USA and Canada) | (Note 4) | GO |

**Physical application**

| Oxygen service cleaning, (only available with inert oil fill) | (Note 5) | P1 |
| Pmax =10 MPa for Galden; Tmax=60 °C/140 °F or max. working pressure |

**Accessories**

| External grounding terminal (fitted as standard if hazardous area certification code Hxx is selected) | AG |

**Mounting bracket**

| Universal for pipe or wall mounting / AISI 304 ss (1.4301) | BU |

**Software application**

| Calibration to specified measuring span and/or tag number (and printed on plastic label) | (Note 6) | SC |
| Alarm setting to low current of 3.6 mA | SA |
| Digital access diagnostics (requires backlit LCD display code D4) | SD |

**NOTE** - Refer to hazardous atmospheres paragraph for compliance of digital display
**...Ordering information**

**Additional ordering information model PGS100 Gauge Pressure Transmitters and PAS100 Absolute Pressure Transmitters**

<table>
<thead>
<tr>
<th>Inspection/compliance certificates</th>
<th>XX</th>
<th>XXX</th>
<th>XX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inspection certificate EN 10204–3.1 of calibration (5-point)</td>
<td>(Note 7) CF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inspection certificate EN 10204–3.1 of cleanliness stage</td>
<td>CC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inspection certificate EN 10204–3.1 of helium leakage test of the sensor module</td>
<td>CL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inspection certificate EN 10204–3.1 of the pressure test</td>
<td>CH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Certificate of compliance with the order EN 10204–2.1 of instrument design</td>
<td>CD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inspection certificate EN 10204–3.1 of process wetted parts</td>
<td>CM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Certificate of compliance with the order EN 10204–2.1 of pressure bearing and wetted parts</td>
<td>CW</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Labels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Label and display visualization in imperial units (Pressure = inH2O/ psi at 68 °F; Temperature = deg. F)</td>
</tr>
<tr>
<td>Supplemental wired–on stainless steel plate (4 lines, 32 characters each)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Manuals</th>
</tr>
</thead>
<tbody>
<tr>
<td>German</td>
</tr>
<tr>
<td>Italian</td>
</tr>
<tr>
<td>Spanish</td>
</tr>
<tr>
<td>French</td>
</tr>
<tr>
<td>English</td>
</tr>
<tr>
<td>Chinese</td>
</tr>
</tbody>
</table>

Note 1: Only available with Front bonded G 1/2 in process connection code P
Note 2: For 10000 kPa/100 bar/1450 psi sensor code R, H-Shield is only available with front bonded G 1/2 in process connection code P
Note 3: Not available with 40 kPa/400 mbar/160 inH2O/300 mmHg sensor code D
Note 4: Hazardous area certification and CSA / FM ordinary location options are mutually exclusive
Note 5: Not available with DIN EN 837-1 G 1/2 B (HP) process connection code C
Note 6: Option code SC has to be ordered if 0 to URL calibration record is required
Note 7: Option code CF provides an inspection certificate of calibration 0 to URL
   Option code SC should be also selected if the inspection certificate is required for calibration different from 0 to URL

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

- For general purpose applications (no Ex application certification)
- Buna O-ring for G 1/2 process connection, flush diaphragm
- No display, no mounting bracket
- Short-form leaflet instruction and labels in English
- 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.
Notes
Notes