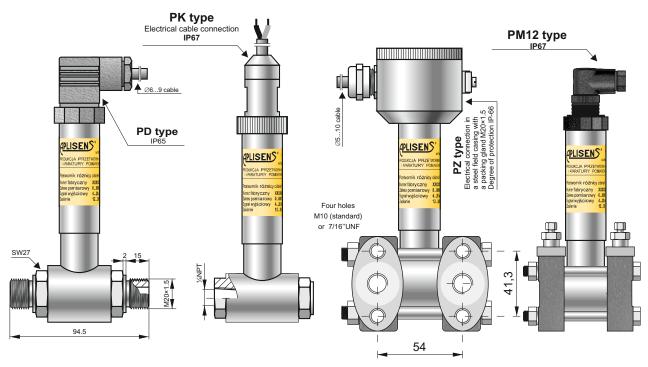


DIFFERENTIAL PRESSURE TRANSMITTER PRE-28

- ✓ Overloads up to 413 bar total static pressure
- ✓ Accuracy 0,25%
- ✓ Any range from 0...16 mbar up to 0...25 bar
- ✓ Intrinsic safety certificate (ATEX, IECEx)
- ✓ Marine certificate DNV, BV



Transmitter **PRE-28**Process connection **P type**Static pressure limit 40 bar

Transmitter **PRE-28**Version with **PN type** process connection.
Static pressure limit 40 bar

Transmitter PRE-28 – version with type C and CH process connection to be mounted together with a valve manifold.

Static pressure limit 250, 320 or 413 bar

Application

The PRE-28 transmitter is applicable to the measurement of dofferential pressure of gases, vapours and liquids.

Construction

The active element is a piezoresistance silicon sensor separated from the medium by separating diaphragm and a specially selected type of manometric fluid. The special desing of theactive sensing element ensures withstanding the pressure surges and overloads of up to 413bar. The electronics is placed in a casing with a degree of protection IP65, IP67, depending on the type of electrical connection applied.

Calibration

Potentiometers can be used to shift the zero position and the range by up to 10%, without altering the settings.

Installation

The transmitter with P type process connection is not heavy, so it can be installed directly onto impulse lines. For fitting in any desired position on a $\oslash 25$ pipe the Aplisens mounting bracket (FI25 mounting bracket, page IV/ 5) is recommended.

The version with C type process connection can be fitted directly to a 3- or 5-valve manifold. The factory-mounted transmitters with VM type valve manifold (page IV/ 2) are recommended. A transmitter without a valve manifold can be fitted in any position on a 2" pipe or on a wall using the C-2" mounting bracket (page IV/ 5).

When the special process connections are required for the measurement of levels and pressures (e.g. at food and chemical industries), the transmitter is provided with an Aplisens diaphragm seal. The differential pressure transmitters with diaphragm seals are described in detail in the further part of the catalogue.

Technical data

Materials: Wetted parts: SS316L Casing SS304 (Option: SS316) $\begin{array}{ll} \mbox{Hysteresis, repeatability} & 0.05\% \\ \mbox{Thermal compensation range:} & 0\div70^{\circ}\mbox{C} \\ \mbox{Operating temperature range:} & -25\div80^{\circ}\mbox{C} \end{array}$

Medium temperature range: -25÷120°C (direct measurement)

Over 120°C – measurement with use an impulse line or diaphragm seals

CAUTION: the medium must not be allowed to freeze in the impulse line or close to the process connection of the transmitter.



Technical data

Any measuring range 0...16 mbar ÷ 0...25 bar

| | Measuring Range | | | | | | | | |
|---|--|--|--|-------------|--------|--|--|--|--|
| | 25 mbar | 100 mbar | 1 bar | 2 bar | 25 bar | | | | |
| Overpressure Limit Static Pressure Limit (repeated, without hysteresis) | 250 bar (option 413 bar) (40 bar for P type process connection) | | | | | | | | |
| Accuracy | 0,4% | 0,4% | | | | | | | |
| Long term stability | 0,6% / year | 0,2% / year | | 0,1% / year | | | | | |
| Thermal error | Typically 0,6% / 10°C max 1% / 10°C | Typically 0,3% / 10°C max 0,4% / 10°C | Typically 0,2% / 10°C max 0,3% / 10°C | | | | | | |
| Zero shift error for static pressure* | 0,1% / 10 bar | | | | | | | | |

^{*} Zeroing the transmitter in conditions of static pressure can eliminate this error.

Output signal 4...20 mA, two wire transmission Load resistance (for current output)

 $R[\Omega] \le \frac{U_{sup}[V] - 85V}{2}$ 0,02A

0...10 V, three wire transmission

Load resistance (for supply output)

R≥ 20*k*Ω

Power supply

output 4..20 mA:

8...36 VDC (Ex 9...28 VDC) version TR: 10,5...36 VDC (Ex 12...28 VDC) 13...30 VDC

output 0..10 V:

Error due to supply voltage changes 0,005% (FSO) / V

Ordering procedure

| Model | Code | | | e | Description | | | |
|--|----------------------------------|-------------------|---|---|--|---|--|--|
| PRE-28 | | | | | Differential pressure transmitter | | | |
| | | | | | €x> | II 1/2G Ex ia IIC T4/T5/T6 Ga/Gb II 1D Ex ia IIIC T110°C Da I M1 Ex ia I Ma | For PM12, PKD version: Il 1/2G Ex ia IIC T4/T5/T6 Ga/Gb IECEx Ex ia IIC T4/T5/T6 Ga/Gb | |
| Versions, certificates | | | | | IECEx | Ex ia IIC T4/T5/T6 Ga/Gb Ex ia IIIC T110°C Da Ex ia I Ma | For ALW, ALM version: II 1/2G Ex ia IIIC T4 Ga/Gb II 1/D Ex ia IIIC T110°C Da Ex ia IIIC T4 Ga/Gb Ex ia IIIC T110°C Da | |
| | /MR | | | | Marine certificate – DNV, BV (not available in ALW and ALM version) | | | |
| more than one ontion | | | | | For oxygen service (sensor filled with Fluorolube fluid) | | | |
| is available | /TR | | | | Response time <30ms; only 420mA output | | | |
| /NACE | | | | | NACE MR-01-75 certificate (process connections: C) | | | |
| Measuring range | suring range /÷ [required units] | | | Measuring range in relation to 4mA and 20mA (or 0 and 10V) output. | | | | |
| Analogue output signal (without marking) /0+10V | | | 420mA / power supply 10,536VDC (Ex 1228VDC) 010VDC /power supply 1330VDC | | | | | |
| Measuring set range /÷ [required units] | | | quired units] | Calibrated range in relation to 4mA and 20mA (or 0V and 10V) output | | | | |
| | | / | PD | | Housing IP65 with DIN EN 175301-803 connector | | | |
| | | / | PZ | | 304SS h | nousing, IP66, packing gland M20x ² | 1,5 | |
| | | / | /PZ316 | | 316SS housing, IP66, packing gland M20x1,5 | | | |
| Casing, electrical connec | tion | / | /PM12 | | 304SS housing, IP67 with thread M12x1 and connector with cable (3 m in standard) | | | |
| | | / | PK12. | PK12 | | 304SS housing, IP67, cable electrical connection (3 m of cable in standard) | | |
| /ALW */ALM * | | | ALW * | | Aluminum housing, local display, IP65, DIN43650 connector | | | |
| | | | | | | | | |
| /C | | | | Thread 1/4NPT F on the cover flanges cover flanges material SS316. Allows mounting with a valve manifold. Process connection of cover flange: M10 (option /C(7/16) - 7/16"UNF acc. to IEC 61518), wetted parts material: SS316L | | | | |
| Process connections | | | /CH | | C-type process connection rotated 90° | | | |
| | | | /P | | Thread M20x1,5 (male), wetted parts material: SS316L | | | |
| | | /PN | | Thread 1/4"NPT (female), wetted parts material: SS316L | | | | |
| | | | /code of diaphragm seal | | Diaphragm seal (see chapter of diaphragm seals) mounted on Hi side of transmitter, Lo side 1/4NPT Female | | | |
| Gasket (refers only to C, CR process connection) | | (without marking) | | FPM Vit | on | | | |
| | | , | ''' /NBR | | NBR | | | |
| | | | /PTFE | PTFE | PTFE | | | |
| | | | | /C-2" | | g bracket for 2" pipe (to C process | | |
| , | | | /C-2"(SS) | Mounting bracket for 2" pipe (to C process conn.), mat. Stainless Steel | | | | |
| /C-2*B(SS)/Fl25 | | | /C-2"B | Mounting bracket for 2" pipe (to C(7/16) process conn.), mat. zinced steel | | | | |
| | | | Mounting bracket for 2" pipe (to C(7/16) process conn.), mat. Stainless Steel | | | | | |
| | | | Mounting bracket for 1" pipe (to P process conn.), mat. Stainless Steel | | | | | |
| /RedSpaw P/ /RedSpaw C/ /Red d/P 1/2" | | | | /RedSpaw P | Connector to weld impulse pipes dia. 12 and 14 mm, material 15HM(SO) or SS316(S). | | | |
| | | | | /RedSpaw C | Only process connection P type Connector to weld impulse pipes dia. 12 and 14 mm, material 15HM. Only process connection C type. | | | |
| | | | | /Red d/P 1/2" | Adapter for differential pressure transmitters with C type process connection, output thread 1/2NPT F. Material SS316L | | | |
| Other specification / | | | 1 | | | | | |