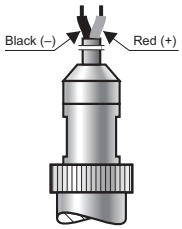
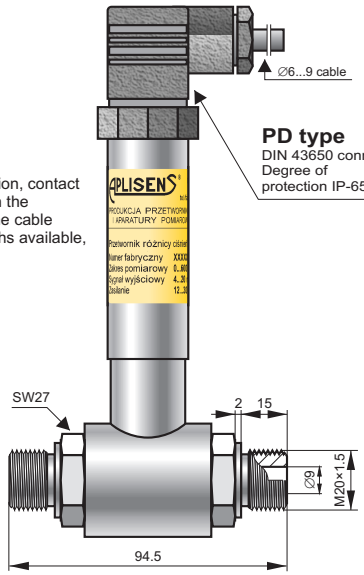
DIFFERENTIAL PRESSURE TRANSMITTER PRE-28

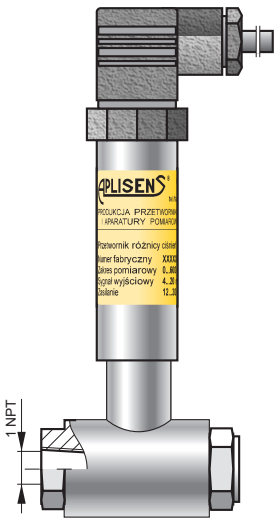


PK type
Electrical cable connection
Degree of protection **IP-67**
The cable electrical connection, contact with the atmosphere through the capillary inside the cable. The cable length 3m (other cable lengths available, if required)

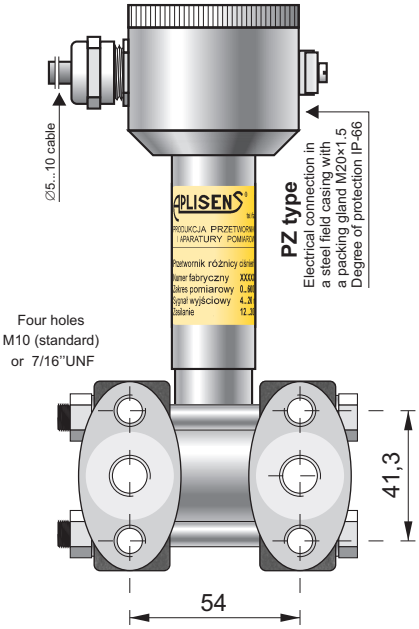


PD type
DIN 43650 connector
Degree of protection IP-65

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



PZ type
Electrical connection in a steel field casing with a packing gland M20×1.5
Degree of protection IP-66

Transmitter PRE-28 – version with **type C** process connection to be mounted together with a valve manifold. Static pressure limit 250 or 320 bar

- ✓ **Overloads up to 420 bar total static pressure**
- ✓ **Accuracy 0.25%**
- ✓ **Any range from 0…16 mbar up to 0…25 bar**
- ✓ **ATEX Intrinsic safety (Gas and Dust)**
- ✓ **Marine certificate DNV**

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 320bar. 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 ∅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: type P process conn. 316Lss
type C process conn. 316ss
Diaphragm 316Lss
Casing 304ss
Option: 316ss

Hysteresis, repeatability	0.05%
Thermal compensation range:	0÷ 70 C
Operating temperature range:	-25÷80 C
Medium temperature range:	-25÷120 C (direct measurement) Over 120C – measurement with the use of 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			
	100 mbar	**1 bar**	**2 bar**	**25 bar**
Overpressure Limit Static Pressure Limit (repeated, without hysteresis)	250 bar (option 420 bar) (40 bar for P type process connection)			
Accuracy	0.4%	0.25%		
Long term stability	0.2% / year	0.1% / year		
Thermal error	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
0…10 V, three wire transmission

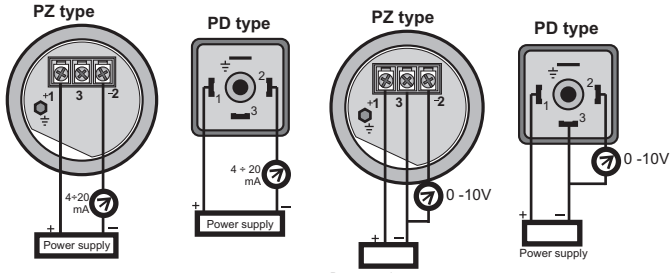
Power supply 10.5...36 V DC (EEx 12...28 V)
– two wire transmission
15…30 V DC – three wire transmission

Error due to supply voltage changes 0.005% (FSO) / V

Load resistance (for current output) $R[\Omega] \le \frac{U_{sup}[V] - 10.5\,V}{0.02\,A}$ 0.85

Load resistance (for supply output) $R \ge 5\,k\Omega$

Electrical diagrams



Ordering procedure

Model	Code	Description
PRE-28		Differential pressure transmitter.
Versions * *) more than one option is available	/EExia…… /Tlen…… /MR……	Ex II 1/2G Ex ia IIC T4/T5/T6 Ga/Gb, I M1 Ex ia I Ma, II 1D Ex ia IIIC T105C Da (only for transmitters with 4..20mA output) version for oxygen service (sensor filled with Fluorolube fluid). Marine Certificate DNV
Measuring range	/.....÷..... [required units]	Measuring range in relation to 4mA and 20mA (or 0 and 10V) output. Units: bar, MPa, kPa, etc.
Output signal ÷	*(without marking)*..... /0...10V..... /(other).....	4...20mA (power supply 10,5÷36VDC) 0..10V DC (power supply 15÷30VDC) other output signal and power supply (e.g for NE or NN version)
Casing, Electrical connection, ÷	/PD…… PZ…… PZ/316…… PK ..... (if other length of cable is required, please specify it /K=....[m])	Housing IP65 with DIN43650 connector PG-11 packing gland. 304SS housing, Ip66, packing gland M20x1,5. 316SS housing, Ip66, packing gland M20x1,5. Housing IP67 with thread M12x1 and connector 304SS housing, IP67, cable electrical connection, 3m of cable
Process connections ÷	/C…… /C(H)..... /P..... /PN..... /code of diaphragm seal.....	Thread 1/4NPT F on the cover flanges, wetted parts material SS316L Allows mounting with a valve manifold. Process connection of cover flange: M10(standard)/ 7/16UNF(option)-C(7/16) Thread 1/4NPT F on the cover flanges, diaphragms material Hastelloy C276, cover flanges material SS316. Allows mounting with a valve manifold. Process connection of cover flange: M10(standard)/ 7/16UNF(option)-C(H,7/16) Thread M20x1,5 (male) with Ø9hole wetted parts material SS316L Thread 1/4"NPT (female), wetted parts material SS316L Diaphragm seal (see chapter of diaphragm seals) mounted on Hi side of transmitter, Lo side 1/4NPT Female
Accessories ÷	/C-2"..... /FI25..... /RedSpaw P…… /RedSpaw C…… /Red d/P ½"……	Mounting bracket for 2" pipe (to C process conn.), mat. zinced steel Mounting bracket for 2" pipe (to P process conn.), mat. stainless steel Connector to weld impulse pipes dia. 12 and 14 mm, material 15HM(SO) or SS 316(S) . Only process connection P type, Connector to weld impulse pipes dia. 12 and 14 mm, material 15HM. Only process connection C type. Adapter for differential pressure transmitters with C type process connection, output thread 1/2NPT F. Material 316 LSS
Other specification	/.....	Description of required parameters
The most typical specification is marked by "÷ " mark.		

Example: Differential pressure transmitter, version EExia, measuring range 0..160mbar, output signal 4..20mA, C type process connection, electrical process connection with DIN43650 connector **PRE-28/EExia/0÷160mbar/PD/C**