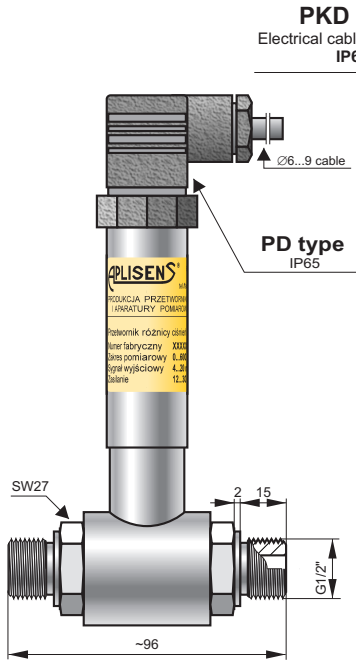
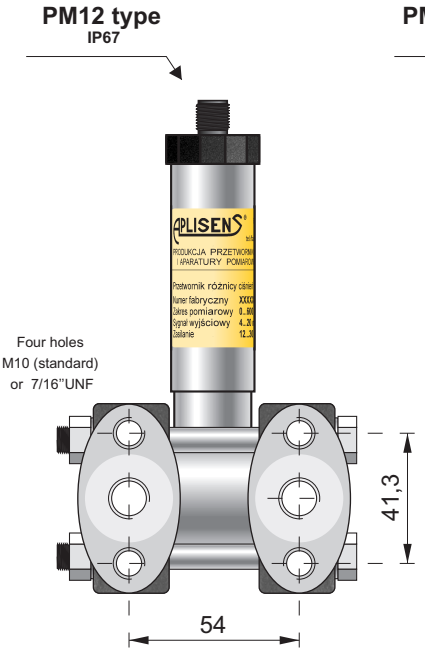
DIFFERENTIAL PRESSURE TRANSMITTER PRE-28

- ✓ **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**

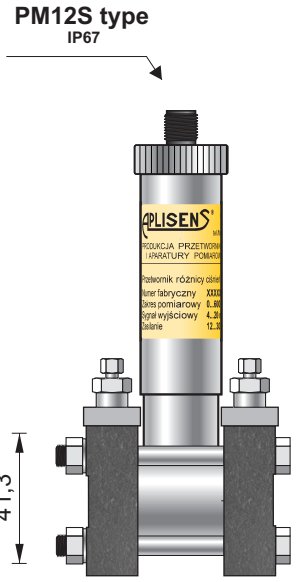


Transmitter **PRE-28**
Process connection **GP type.**

Transmitter **PRE-28**
Process connection **PN type**.



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



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

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 GP 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: SS316L
Casing SS304 (Option: SS316)

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 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 GP type process connection)				
Accuracy	0,4%	0,4%	0,25%		
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
0…10 V, three wire transmission

Load resistance (for current output) $R[\Omega] \leq \frac{U_{sup}[V] - 85V}{0{,}02A}$

Load resistance (for supply output) $R \geq 20k\Omega$

Power supply

output 4..20 mA: 8…36 VDC (Ex 9...28 VDC)
version TR: 10,5…36 VDC (Ex 12...28 VDC)

output 0..10 V: 13…30 VDC

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

Ordering procedure

Model	Code	Description
PRE-28		Differential pressure transmitter
Versions, certificates	/Exia……....	Ex: 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 IECEx: Ex ia IIC T4/T5/T6 Ga/Gb Ex ia IIIC T110°C Da Ex ia I Ma Only for transmitters with 4…20mA output For PM12, PKD version: Ex: II 1/2G Ex ia IIC T4/T5/T6 Ga/Gb IECEx: Ex ia IIC T4/T5/T6 Ga/Gb For ALW, ALM version: Ex: II 1/2G Ex ia IIC T4 Ga/Gb II 1D Ex ia IIIC T110°C Da IECEx: Ex ia IIC T4 Ga/Gb Ex ia IIIC T110°C Da
more than one option is available	/MR……..……..…….	Marine certificate – DNV, BV (not available in ALW and ALM version)
	/Tlen……..……..……..…….	For oxygen service (sensor filled with Fluorolube fluid)
	/TR……..	Response time <30ms; only 4..20mA output
	/NACE……..	NACE MR-01-75 certificate (process connections: C)
Measuring range	/…÷… [required units]	Measuring range in relation to 4mA and 20mA (or 0 and 10V) output.
Analogue output signal	*(without marking)*	4...20mA / power supply 10,5...36VDC (Ex 12…28VDC)
	/0÷10V……....	0...10VDC /power supply 13...30VDC
Measuring set range	/…÷… [required units]	Calibrated range in relation to 4mA and 20mA (or 0V and 10V) output
Casing, electrical connection	/PD……..	Housing IP65 with DIN EN 175301-803 connector
	/PM12……..	304SS housing, IP67 with thread M12x1
	/PM12S……..	304SS housing, IP67 with thread M12x1, stainless steel version
	/PKD……..	304SS housing, IP67, cable electrical connection (3 m of cable in standard)
	/ALW……..	Aluminum housing, local display, IP65, DIN43650 connector (4…20mA version only)
	/ALM……..	Aluminum housing, local display, IP65, DIN43650 connector (4…20mA version only)
Process connections	/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
	/CH……..	C-type process connection rotated 90°
	/GP……....	Thread G1/2" (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, CH process connection)	(without marking)…….	FPM Viton
	/NBR……....	NBR
	/PTFE……..	PTFE
Accessories	/C-2"……....	Mounting bracket for 2" pipe (to C process conn.), mat. zinced steel
	/C-2"(SS)……....	Mounting bracket for 2" pipe (to C process conn.), mat. ss304
	/C-2"(SS316)……....	Mounting bracket for 2" pipe (to C process conn.), mat. ss316
	/C-2"B……....	Mounting bracket for 2" pipe (to C(7/16) process conn.), mat. zinced steel
	/C-2"B(SS)……....	Mounting bracket for 2" pipe (to C(7/16) process conn.), mat. ss304
	/C-2"B(SS316)……	Mounting bracket for 2" pipe (to C(7/16) process conn.), mat. ss316
	/FI25…….……..	Mounting bracket for 1" pipe (to P process conn.), mat. Stainless Steel
	/RedSpaw GP……	Connector to weld impulse pipes dia. 12 and 14 mm, material 15HM(SO) or SS316(S). Only process connection GP type
	/RedSpaw C……..	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	/……....	Description of required parameters