PRESSURE TRANSMITTER

PYRP-28 INDUSTRIAL & INTRINSICALLY SAFE PRESSURE TRANSMITTER

The PYRP-28 pressure transmitter is suitable for the measurement of pressure, vacuum and absolute pressure of gases, vapours and liquids for industrial and hazardous area (Exia) applications for -1 to 1000 Bar.

- Ranges from 0-25 mBar up to 0-1000 Bar
- 4 - 20 mA two-wire or 0 - 10 V output
- ATEX Intrinsically Safe (Gas and Dust) certification
- Low-voltage version with ATEX certificate available
- Gold plated diaphragm option > 60 Bar



Calibration

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

Installation

The active sensing element is a piezoresistant silicon sensor separated from the medium by a diaphragm. The electronics are housed in a casing with a degree of protection IP-65 or IP-67 depending on the type of electrical connection provided.

Installation

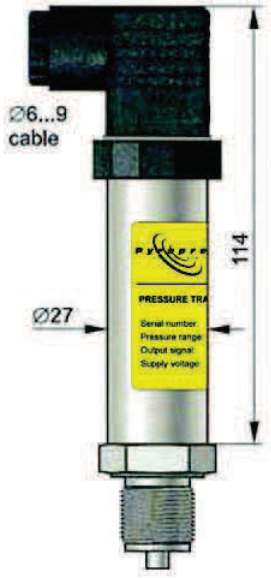
The transmitter can be installed directly on the installation. When the pressure of steam or other hot media is measured, a siphon or impulse line should be used.

When special process connections are required for measurement of levels and pressures (e.g. food and chemical industries) the transmitter can be provided with a diaphragm seal. Installing accessories and a full scope of diaphragm seals are detailed in separate literature.

Transmitters for hazardous area applications

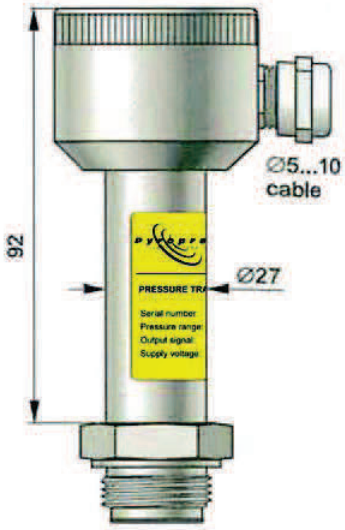
ATEX Intrinsically Safe versions are available for measurements in areas where explosive gases and dusts are present.

II 1/2G Ga/Gb Ex ia IIC T4/T5/T6
I M1 Ex ia I
II 1DEx ia D20 T105C



PYRP-28 transmitter with PD type electrical connection

- Degree of protection IP-65
- Angle electrical connector
- DIN 43650
- When the connector is removed both zero point adjustment and range setting potentiometers are accessible



PYRP-28 transmitter with PZ type electrical connection

- Degree of protection IP-66
- Stainless steel electrical housing with M20x1.5 packing gland
- When the box is opened both zero point adjustment and range setting potentiometers are accessible



PYRP-28 transmitter with PK type electrical connection

- Degree of protection IP-67
- Cable electrical connection, contact with the atmosphere through the capillary inside the cable. Standard cable length is 3M, (other cable lengths are available)



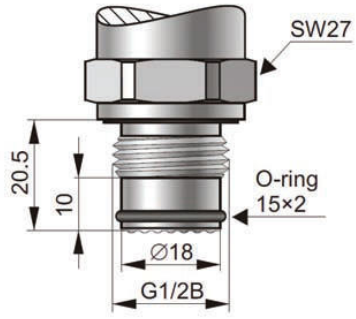
PYRP-28 transmitter with PM12 type electrical connection

- Degree of protection IP-67
- Electrical connection with thread M12x1, contact with the atmosphere through the capillary inside the cable. Standard cable length is 3M (other cable lengths are available)

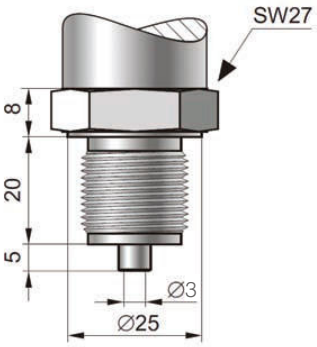
Technical Data 0-25 mBar to 0-1000 Bar (pressure, vacuum)
400 mBar - 80 Bar (absolute pressure)

Any measuring ranges within the above spans can be supplied.

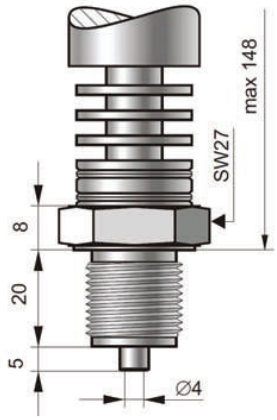
	100 mBar	**Measuring range 400 mBar**	**0-1 bar to 1000 Bar**
Overpressure Limit (repeated, without hysteresis)	1 Bar	2.5 Bar	4 x range Max 1200 Bar
Burst pressure	2 Bar	5 Bar	8 x range Max 2000 Bar
Accuracy	0.3%	0.2% (0.16% - special version)	
Long term stability	0.2% / year	0.1% / year	
Thermal error	Typically 0.3% / 10°C Max 0.4% / 10°C		Typically 0.2% / 10°C Max 0.3% / 10°C



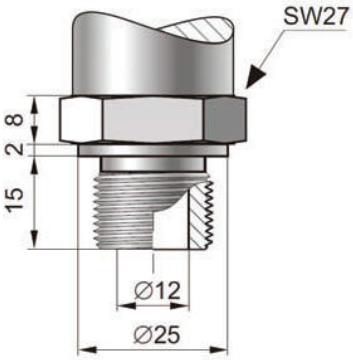
GF Type
G1/2˝ with flush diaphragm
Wetted parts material:
316 Stainless steel
Application
Suitable for measuring the pressure of viscous and contaminated media
Min range: 2.5 Bar
Max range: 300 Bar
Special option: Max. 1000BAR GFS Type



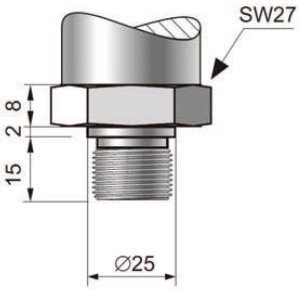
GB Type
G1/2˝, Ø3 hole
316 Stainless steel
Application
Suitable for measuring the pressure of uncontaminated gases, vapours and liquids
Max range: 1000 Bar



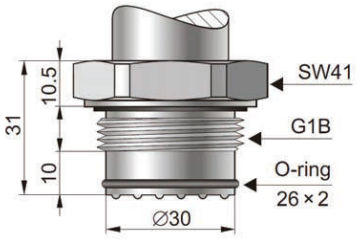
RG Type
G1/2˝ with radiator
316 Stainless steel
Application
Suitable for measuring the pressure of uncontaminated gases, vapours and liquids at temperatures up to 170°C with no impulse line.
Min range: 160 mBar
Max range: 40 Bar



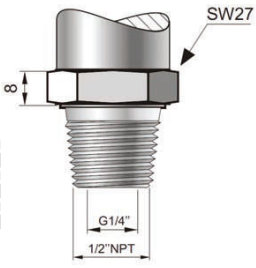
GC Type
G1/2˝, Ø12 hole
316 Stainless steel or Hastelloy C-276 option
Application
Suitable for measuring the pressure of viscous and contaminated media
Max range: 400 Bar



GA Type
G1/4”
Wetted parts materials:
316 Stainless steel
Application
Suitable for measuring the pressure of viscous and contaminated media
Max range: 400 Bar

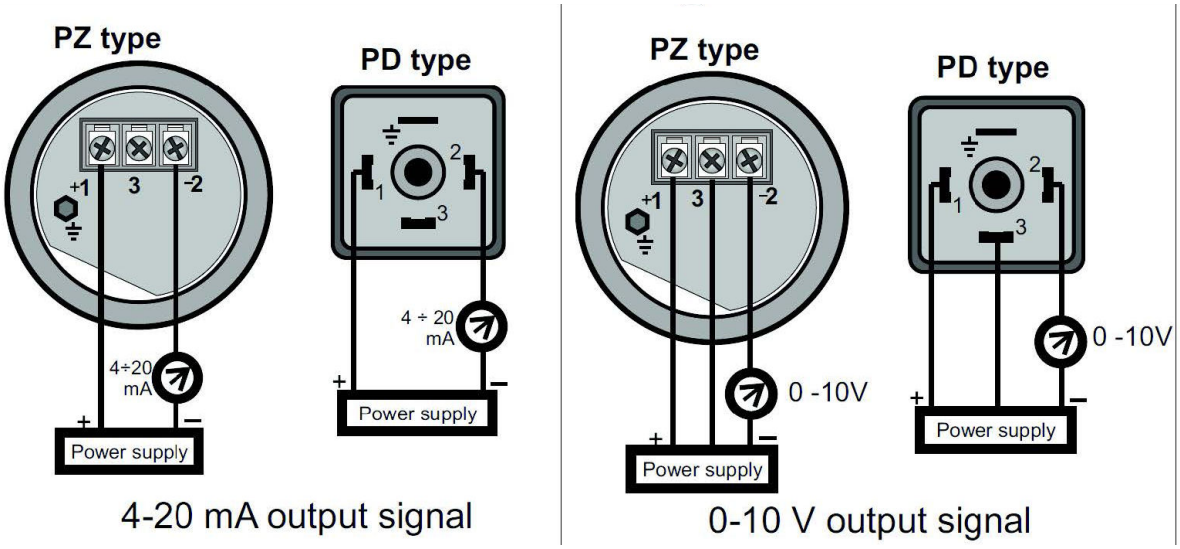


GD Type
G1˝ with flush diaphragm
Wetted parts material:
316 Stainless steel or Hastelloy C-276 option
Application
Suitable for measuring the pressure of viscous and contaminated media
Min range: 100 mBar
Max range: 70 Bar



N2 Type
1/2˝NPT, internal thread
G1/4”
Wetted parts materials:
316 Stainless steel
Application
Suitable for measuring the pressure of uncontaminated gases, vapours and liquids
Max range: 1000 Bar

Model	Description		
PYRP-28	**Pressure transmitter**		
Measuring range in relation to 4-20mA or voltage output	-3.....0 - 25 mBar -4.....0 - 40 mBar -5.....0 - 60 mBar -6.....0 - 100 mBar -7.....0 - 160 mBar -8.....0 - 250 mBar -9.....0 - 400 mBar -10.....0 - 600 mBar -11.....0 - 1 Bar	-12.....0 - 1.6 Bar -14.....0 - 2.5 Bar -15.....0 - 4 Bar -16.....0 - 6 Bar -18.....0 - 10 Bar -19.....0 - 16 Bar -20.....0 - 25 Bar -21.....0 - 40 Bar -22.....0 - 60 Bar	-24.....0 - 100 Bar -25.....0 - 160 Bar -26.....0 - 250 Bar -28.....0 - 400 Bar -29.....0 - 600 Bar -30.....0 - 1000 Bar -51.....0 to -1 Bar
	-X ..... Customer specified - select nearest range and suffix “X”		
Casing and electrical connections	-PD..... -PDS..... -PZ..... -PS..... -PM..... -PK.....	304 Stainless steel housing IP65 with DIN43650 connector 316 Stainless steel housing IP65 with DIN43650 connector 304 Stainless steel housing IP66 with M20 electrical connection 316 Stainless steel housing IP66 with M20 electrical connection Housing IP67 with M12x1 threaded connector 304 Stainless steel housing IP67 with cable connection (3M standard) If other cable length is required please specify as PK5 for 5M etc	
Process connections	-GB..... -GC..... -GF..... -GFS..... -RG..... -GD..... -GA..... -N2..... -F2..... -X.....	G1/2” Male with 3mm bore G1/2” Male with 12mm bore G1/2” Male with flush diaphragm - Min. 2.5/Max. 300Bar As GF except rated for 1000Bar Max. G1/2” Male with cooling radiator up to 170°C - Min. 160mBar/Max. 40Bar G1” Male with flush diaphragm - Min. 0.1/<ax. 70Bar G1/4” Male - Max. 350Bar 1/2” NPT Male/G1/4” Female - SS316 wetted parts 1/2” NPT Female - Max. 690Bar Diaphragm seal (please specify requirements)	
Options List if more than one		- IS:Ex II 1/2G Ga/Gb Ex ai IIC T4/T5/T6, I M1 Ex ia I, II 1D Ex ia D20 T105C Only for transmitters with 4 - 20mA output - AB: Absolute pressure available on ranges from 0 - 400mBar to 0 - 80 Bar - OXY: For oxygen service - Fluorolube filled (only available with process connection GB & M) - H: Version with high overload pressure and intergrated circuit offering over voltage protection - D: Internal pressure snubber - A: Accuracy <0.16% (available for ranges >400 mBar) - VDC: 0 - 10 V DC - Power supply 15 - 36 VDC - GP: Gold plated diaphragm with GB process connections > 60 Bar - HA: Hastelloy wetted parts with GC, GD and NZ process connections (N2 option Max. 40Bar) - SIL: Suitable for use within SIL1 systems - PC: Wall mounting bracket	



Hysteresis, repeatability	0.05%
Response time	<120ms
Thermal compensation range	-10 to +80°C
Operating temperature range (ambient temp.)	-40 to +80°C
Process temperature range	-40 to +120°C - direct measurement

For process temperatures over 120°C - Impulse line, radiator or diaphragm seal must be used
CAUTION: the medium must not be allowed to freeze in the impulse line or close to the pipe stub of the transmitter

Output signal

4...20 mA, two wire transmission

0...10 VDC

Power supply

8 - 36VDC (Ex 9 - 28V)

13 - 30VDC (output 0 - 10V)

Load resistance $R\ [\Omega] \leq \dfrac{U_{sup}\ [V] - 8V}{0.02A}$
(for current output)

Error due to supply voltage changes
0.005%/V)

Wetted parts
316 Stainless steel - (Hastelloy C-276 and gold plated options)

Casing
304 Stainless steel (316 Stainless steel option)

ABOUT PYROPRESS

Our products are designed to work in demanding and hazardous environments which require fast and cost effective solutions in instrumentation and control.
Pyropress control sensors provide safe and reliable electrical switching of alarm or control circuits in response to changes in temperature, pressure, differential pressure,vacuum, fluid, flow and level conditions.

QUALITY

To support the design of state of the art products the company has invested heavily in the latest CNC technology.

We are able to produce our own components to a high degree of a accuracy assuring a reliable and consistent quality product.