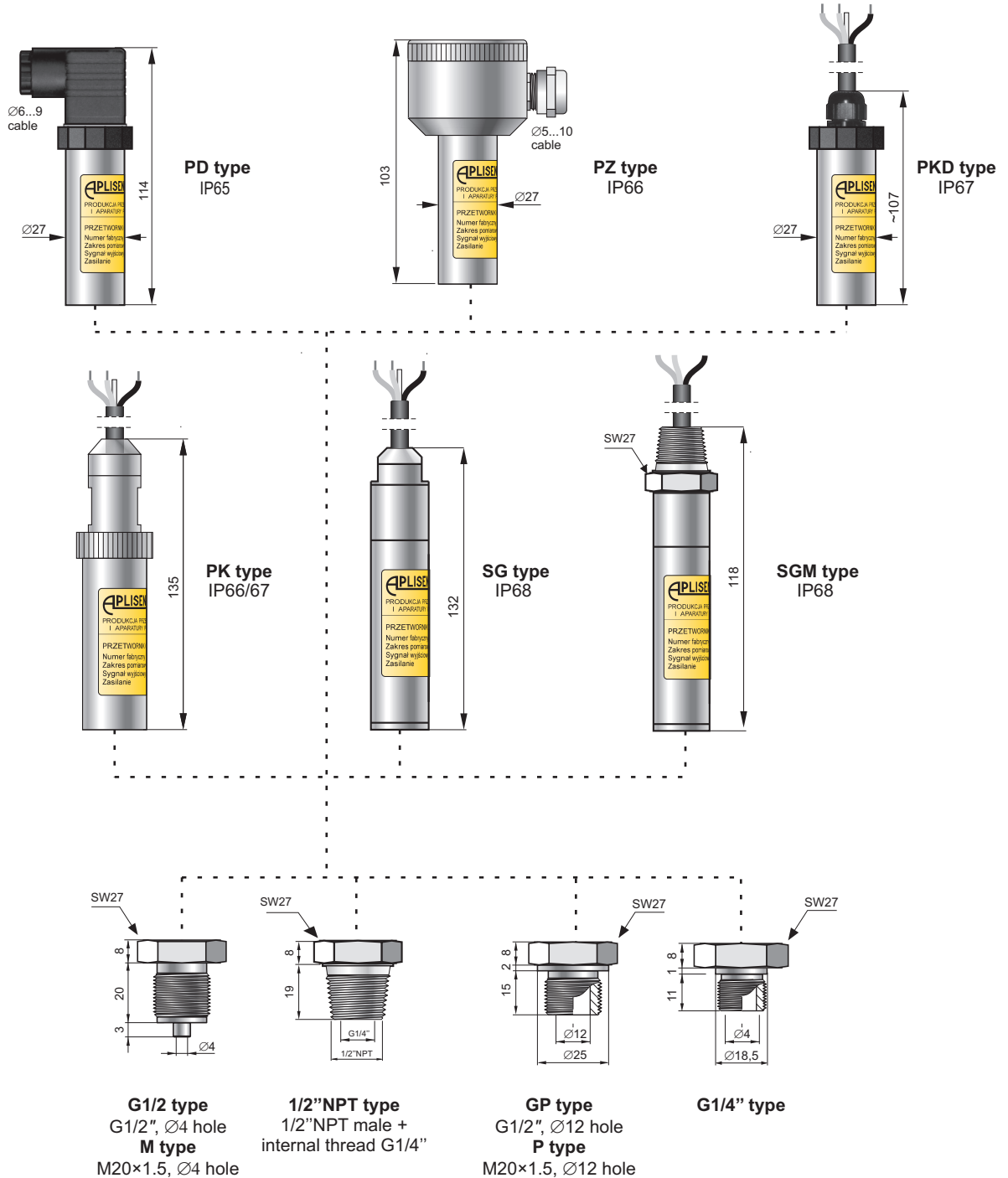


LOW VOLTAGE PRESSURE TRANSMITTERS PC-29A and PC-29B

- ✓ Any range from 0...25 mbar up to 0...1000 bar
- ✓ Intrinsic safety certificate (ATEX, IECEx)



Application and construction

The PC-29A and PC-29B pressure transmitters are applicable to the measurement of the pressure, underpressure and absolute pressure of gases, vapours and liquids. The active sensing element is a piezoresistant silicon sensor separated from the medium by a diaphragm and by specially selected type of manometric liquid. The electronics is placed in a casing with a degree of protection from IP 65 to IP 68, 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 is not heavy, so it 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. The needle valve placed upstream the transmitter simplifies installation process and enables the zero point adjustment or the transmitter replacement.

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. Installing accessories and a full scope of diaphragm seals are described in detail in the further part of the catalogue.

Measurements under explosion hazard

ATEX Intrinsic safety version is available for taking measurements in zones under explosion hazard. The installation of the transmitter in a zone under explosion hazard requires the use of a Ex power supply. We recommend the use of the Aplisens ZS-30/1Ex power supply and separator.

Technical data

Any measuring range

0...25 mbar ± 0...1000 bar (over pressure, under pressure); 400 mbar ± 80 bar (absolute pressure)

	Measuring range				
	25 mbar	100 mbar	400 mbar	0...1 bar + 160bar	0...160 bar + 1000bar
Overpressure Limit (repeated, without hysteresis)	1 bar	1 bar	2,5 bar	4 x range	2 x range; max. 1200 bar
Damaging Overpressure	2 bar	2 bar	5 bar	8 x range; max. 2000 bar	
Accuracy	0,6%	0,3%	0,2% (0,16% - special version)		
Long term stability	0,6% / year	0,2% / year	0,1% / year		
Thermal error	Typically 0,5% / 10°C Max 0,6% / 10°C	Typically 0,3% / 10°C Max 0,4% / 10°C	Typically 0,2% / 10°C Max 0,3% / 10°C		

Hysteresis, repeatability 0,05%
Response time < 120 ms
Thermal compensation range -10...80°C
Operating temperature range (ambient temp.) -40...80°C
Medium temperature range -40...120°C
 over 120°C – measurement with use an impulse

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

Material of wetted parts 316Lss
Material of casing 304ss, 316Lss

Power supply

Type	Power supply	Output signal
PC-29A	8...14 V DC	0...5 V
	8...14 V DC	0,5...4,5 V
PC-29B	3,3 V DC	0...2,5 V
	4,5 V DC	0...3,3 V

Details about power supply for Exia version available in manual

Error due to supply voltage changes 0,005% / V
Load resistance R≥20kΩ

Ordering procedure

Model	Code	Description
PC-29A / PC-29B		Pressure transmitter
Versions, certificates	/Exia.....	II 1/2G Ex ia IIC T4/T5/T6 Ga/Gb I M1 Ex ia I Ma for PD, PZ, PK, SG electrical connection
		II 1/2G Ex ia IIC T4/T5/T6 Ga/Gb for PKD electrical connection Ex ia IIC T4/T5/T6 Ga/Gb
Measuring range	/...+... [required units]	Measuring range
Output signal	/...+... [V]	Output signal
Casing, electrical connection	/PD.....	304SS housing, IP65, DIN EN 175301-803 connector
	/PZ.....	304SS housing, IP66, packing gland M20x1,5
	/PK.....	304SS housing, IP66/67, cable electrical connection
	/PKD.....	304SS housing, IP67, cable electrical connection (3 m of cable in standard)
	/SG.....	316LSS housing, IP68, cable electrical connection (3 m of cable in standard)
	/SGM.....	316LSS housing, IP68, cable electrical connection (3 m of cable in standard)
Process connections	/M.....	Thread M20x1,5 (male) with Ø4 hole, wetted parts SS316L
	/G1/2.....	Thread G1/2" (male) with Ø4 hole, wetted parts SS316L
	/G1/4.....	Thread G1/4" (male), wetted parts SS316L (Pressure limits: max. 400bar)
	/P.....	Thread M20x1,5 (male) with Ø12 hole, wetted parts SS316L
	/GP.....	Thread G1/2" (male) with Ø12 hole, wetted parts SS316L
	/1/2"NPTM.....	Thread 1/2"NPT Male, G1/4" Female, wetted parts SS316L (Pressure limits: "NPT Male max. 690bar, G1/4" Female max. 1000bar)
Accessories	/MT.....	Stainless Steel Tag plate mounted on wire
Other specification	/.....	Description of required parameters