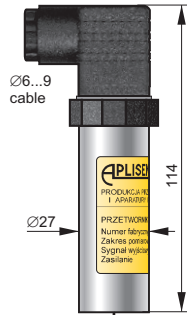


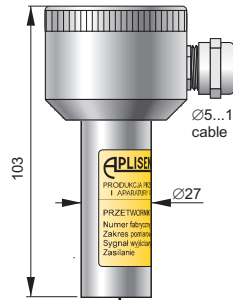
PRESSURE TRANSMITTER PCE-28

- ✓ Any range from 0...25 mbar up to 0...1000 bar
- ✓ 4 ÷ 20 mA two-wire or 0 ÷ 10 V output
- ✓ Intrinsic safety certificate (ATEX, IECEx)
- ✓ Low-voltage version with ATEX and IECEx certificate (model PC-29A, PC-29B)

- ✓ Marine certificate – DNV, BV
- ✓ Communication protocol Modbus RTU
- ✓ Gold plated diaphragm
- ✓ SIL 1 certificate
- ✓ Version with local display **NEW**



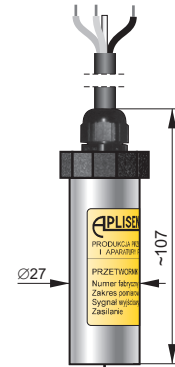
**PD type
PD316 type
IP65**



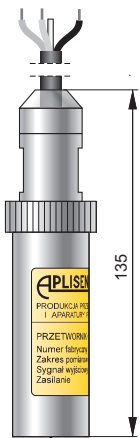
**PZ type
PZ316 type
IP66**



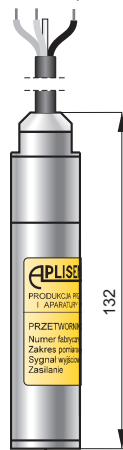
**PM12 type
IP67**



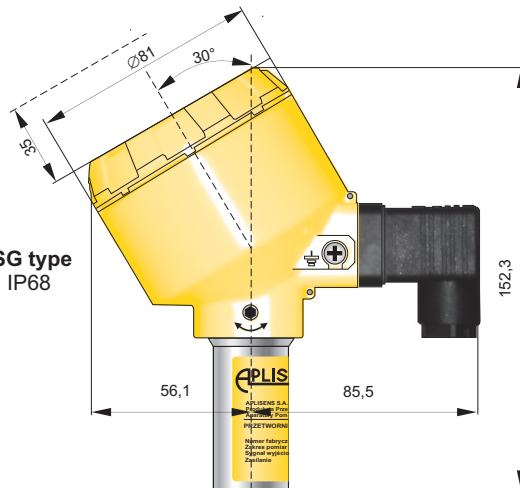
**PKD type
IP67**



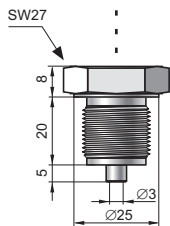
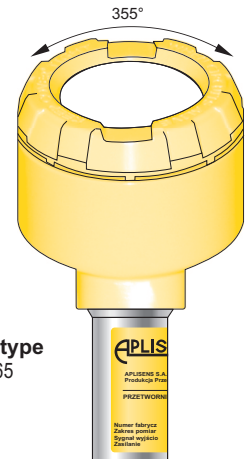
**PK type
IP66/67**



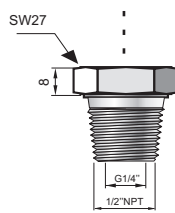
**SG type
IP68**



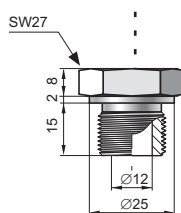
**ALW type
IP65**



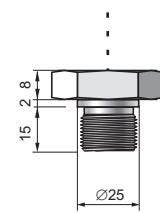
**G1/2 type
G1/2", Ø3 hole
M type
M20×1.5, Ø3 hole**



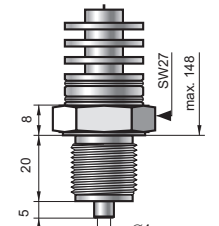
**1/2"NPT type
1/2"NPT male +
internal thread G1/4"**



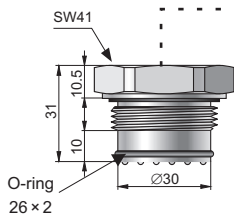
**GP type
G1/2", Ø12 hole
P type
M20×1.5, Ø12 hole**



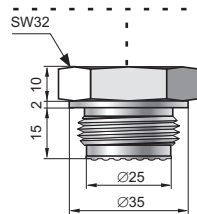
G1/4" type



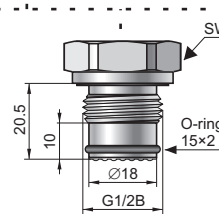
**RG type
G1/2" with radiator
RM type
M20×1.5 with radiator**



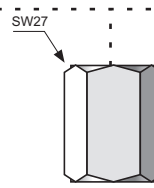
**CG1 type
G1" with flush
Diaphragm**



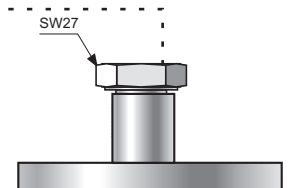
**CM30×2 type
M30×2 with flush
Diaphragm**



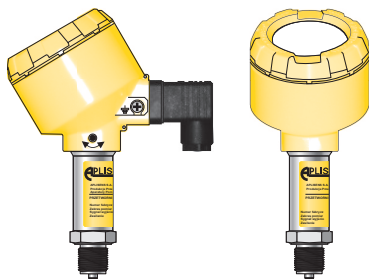
**CG1/2 type
G1/2" with
flush diaphragm**



**1/2"NPT F type
internal thread 1/2-14NPT**



**Version with direct or remote
diaphragm seal.
Diaphragm seal data -
see chapter III**



ALW type

Aluminum casing with programmable local display. The design of the casing enables the use of a local display, rotation of the display, rotation of the casing by 0–345° relative to the sensor. Electrical connection DIN43650, IP65 (special version with cable electrical connection and IP67).

Display with backlight allows to read:
 - measured pressure in user units or % of measuring range
 - current in output loop in mA

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 E-mail: td@tecnodistribuzione.it
 www.tecnodistribuzione.it

TECNODISTRIBUZIONE

Application and construction

The PCE-28 pressure transmitter is 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-30Ex1, ZS-31Ex1 power supply and separator.

Ex I M1 Ex ia I Ma
 II 1/2G Ex ia IIC T4/T5/T6 Ga/Gb
 II 1D Ex ia IIC T110°C Da

IECEx Ex ia I Ma
 Ex ia IIC T4/T5/T6 Ga/Gb
 Ex ia IIC T110°C Da

Technical data

Any measuring range

0...25 mbar + 0...1000 bar (over pressure, under pressure); 400 mbar + 80 bar (absolute pressure)
 Measurement of lower pressure ranges, possible using transmitter PRE-50G with GP process connection.

	Measuring range		
	100 mbar	400 mbar	0...1 bar + 1000bar
Overpressure Limit (repeated, without hysteresis)	1 bar	2,5 bar	4 x range; max. 1200 bar
Damaging Overpressure	2 bar	2,5 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

Hysteresis, repeatability
Response time

0,05%
 < 120 ms
 version TR: < 30 ms

Output signal

4...20 mA, two wire transmission
 0..10V

Thermal compensation range

-10...80°C

Material of wetted parts

316Lss, Hastelloy C 276, Au

Operating temperature range (ambient temp.)

-40...80°C

Material of casing

304ss, 316Lss

Medium temperature range

-40...130°C

Power supply

output 4..20mA
 8...36 V DC (Ex 9...28 V DC)
 version TR, version Safety: 10,5...36 V DC (Ex 12...28 V DC)
 PCE-28/ALW: (11...36V DC)

over 130°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

output 0..10V
 13...30 VDC

Error due to supply voltage changes

0,005% / V

Load resistance

$R[\Omega] \leq \frac{U_{sup}[V] - 8V^*}{0,022A}$

PCE-28/Modbus - Technical data*

Metrological parameters

Accuracy ≤ ±0,1%
Long-term stability (for nominal range) ≤ accuracy for 3 years
Thermal error < ±0,1% (FSO) / 10°C
 max. ±0,4% (FSO) in the whole compensation range
Thermal compensation range -25...80°C
Additional electronic damping -0...30s

Electrical parameters

Power supply 4,5...28 V DC
Transmission range 1200 m
Output MODBUS RTU + 4...20 mA
Address space 1...247 devices address
Transmission speed 600...115200 bps
Parity transmission no parity, odd, even
Frame transmission 10...11bits (1, 2 bit-stop)

Please note:

version PCE-28/Modbus is not available with ATEX certificate

* more information about electrical parameters available in user's manual

Communication

Pressure transmitters with communication protocol Modbus RTU. The communication standard for data interchange with the transmitter is the Modbus RTU. Communication with the transmitter is carried out with PC using RS converter and Aplisens software.

