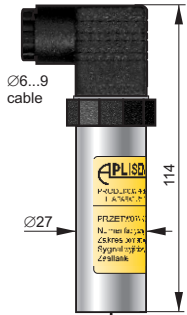
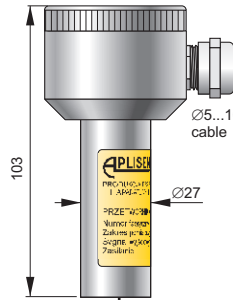


## PRESSURE TRANSMITTER PCE-28

- ✓ 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



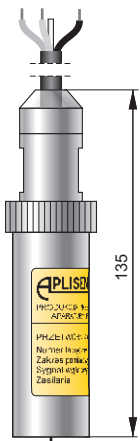
**PZ type**  
**PZ316 type**  
IP66



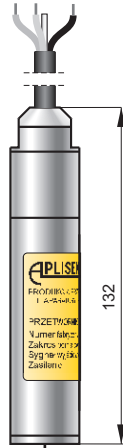
**PM12 type**  
IP67 or IP65



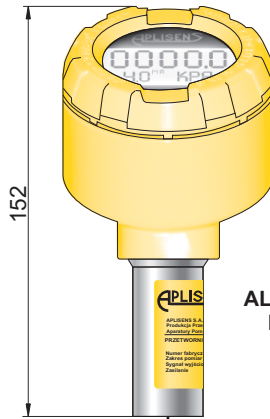
**PKD type**  
IP67



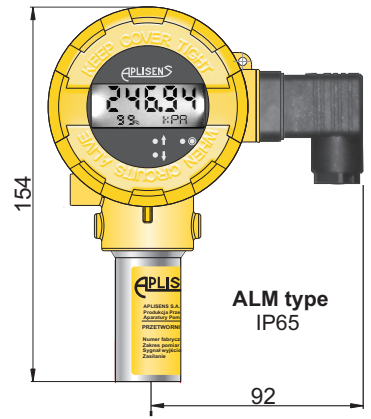
**PK type**  
IP66/67



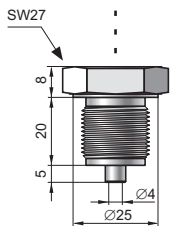
**SG type**  
IP68



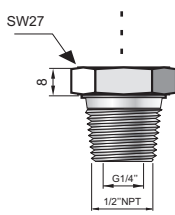
**ALW type**  
IP65



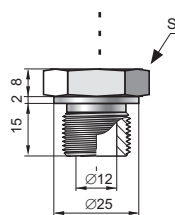
**ALM type**  
IP65



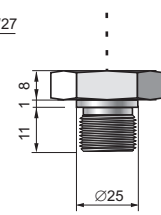
**G1/2 type**  
G1/2", Ø4 hole  
**M type**  
M20×1.5, Ø4 hole



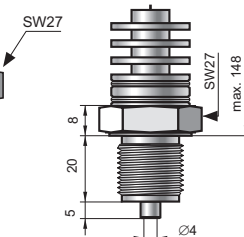
**1/2"NPT type**  
1/2"NPT male +  
internal thread G1/4"



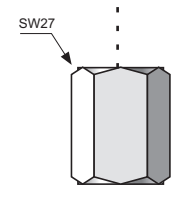
**GP type**  
G1/2", Ø12 hole  
**P type**  
M20×1.5, Ø12 hole



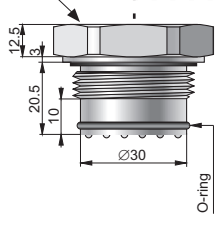
**G1/4" type**



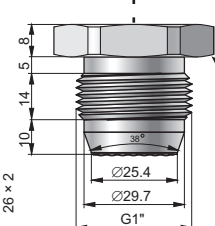
**RG type**  
G1/2" with radiator  
**RM type**  
M20×1.5 with radiator



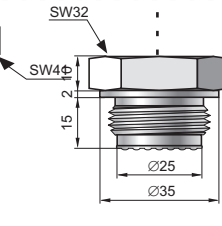
**1/2"NPT F type**  
internal thread  
1/2-14NPT



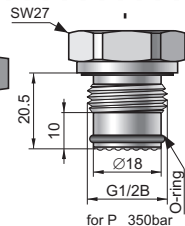
**CG1 type**  
G1" with flush  
diaphragm



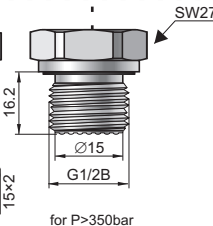
**CG1-S38 type**  
G1" with flush  
diaphragm



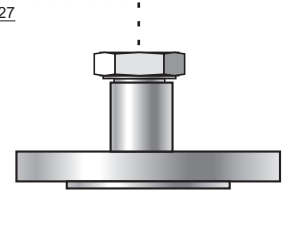
**CM30×2 type**  
M30×2 with flush  
Diaphragm



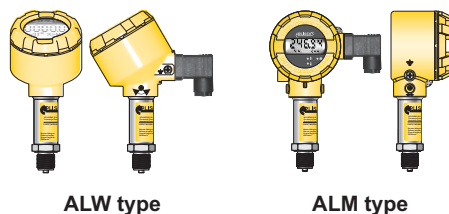
**CG1/2 type**  
G1/2" with  
flush diaphragm  
for P < 350bar



**CG1/2 type**  
G1/2" with  
flush diaphragm  
for P > 350bar



**Version with direct  
or remotediaphragm sea.**  
Diaphragm seal data -  
see chapter III



### ALW and ALM type

Aluminum casing with programable 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 DIN EN 175301-803, 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

### 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.

### 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				
	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  
 version TR: < 30 ms  
**Thermal compensation range** -10...80°C  
**Operating temperature range (ambient temp.)** -40...80°C  
**Medium temperature range** -40...130°C

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 signal** 4...20 mA, two wire transmission  
 0..10V  
**Material of wetted parts** 316Lss, Hastelloy C 276, Au  
**Material of casing** 304ss, 316Lss  
**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)  
 ALW and ALM version: (11...36V DC)  
 output 0..10V  
 13...30 VDC  
**Error due to supply voltage changes** 0,005% / V  
**Load resistance**  $R[\Omega] \leq \frac{U_{sup}[V] - 8V}{0,02A}$

### PCE-28/Modbus - Technical data\*

**Metrological parameters**  
**Accuracy** ≤ ±0,1%  
**Long-term stability** ≤ accuracy for 3 years  
 (for nominal range)  
**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...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)

\* 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.

