

General

These operating instructions refer to installation, commissioning, servicing and adjustment. Statutory regulations, valid standards, additional technical details in the relevant data sheet, details of the type plate and any additional certificates are to be observed along with these operating instructions.



Safety instructions

- Installation, operation and maintenance of the instrument may be executed by authorized personnel, only, using suitable equipment.
- Warning: If the instrument is used incorrectly it is possible that serious injuries or damage can occur!
- Prior to the disassembly of the pressure transmitter the impulse ducts between the measuring transmitter and the process have to be locked and relieved from pressure.
- The standard nominal pressure rating of the gasket should be observed for all process connections.
- Pressure transmitters that are mechanically defective can cause injuries or give rise to process faults. Suitable precautions should be taken to avoid this.
- De-installed pressure transmitters can contain dangerous media residues. Adequate safety precautions must be taken when de-installing or transporting these instruments.



CE marking

The CE marking on the instruments certifies compliance with valid EU directives for bringing products to market within the European Union. The following directives are met:

EMC directives	EMC	2004/108/EG
Pressure Equipment Directive	PED	97/23/EG
Lower Voltage Directive	LVD	2006/95/EG

Mounting and operating

- Before mounting the instrument ensure that pressure range, overpressure resistance, temperature range, over temperature resistance, media compatibility, and process connection are suitable for the process at hand.
- Conduct process installation before electrical installation. Check for pressure tightness when commissioning the transmitter.
- The instrument can only be protected against electromagnetic interference (EMC) if the conditions for screening, earthing, wiring and potential isolation are met during installation.
- Measurements can be impacted by the process and by how devices are installed.
- When the instrument is opened any contact with the electrical connections can affect the signals. This situation can be avoided by switching off the supply voltage or by disconnecting the signal circuit.
- Gaskets must be chosen that are suited to the process connection and resistant to the measured medium.
- Check for pressure tightness when commissioning the transmitter.
- The instrument requires no maintenance.
- The pressure transmitter system is to be installed optional. Standard mounting: vertical position. Different position requires zero point correction. Transmitters are designed for self-supporting installation arrangements. An additional measuring instrument support should be fitted if the measuring line is not stable enough. Renewed installation always requires the use of new gaskets. Gaskets must be chosen that are suited to the process connection and resistant to the measured medium.
- Do not insulate the temperature decoupler, as this would reduce the decoupling effect.

Please refer to EN 60079-14, Section 9 for information on cables and lines.

Instrument ranges

nominal range [bar]	standard measuring ranges * [bar]		measuring spans		overload limits [bar]	vacuum tight
	min.	max.	min. [bar]	max. [bar]		
3	0...1	-1...0	1	3	6	-1 bar
	0...1.6	-1...0.6				
	0...2.5	-1...1.5				
10	0...4	-1...3	3	12	20	
	0...6	-1...5				
	0...10	-1...9				
50	0...16	-1...15	12.5	50	100	
	0...25					
	0...40					
200	0...60		50	200	400	
	0...100					
	0...160					
600	0...250		200	600	900	
	0...400					
	0...600					

* variant measuring ranges and units upon request

Transportation and storage

Store and transport resistance thermometers under dry, clean condition and, where possible, in their original packaging. Avoid shock and vibrations.

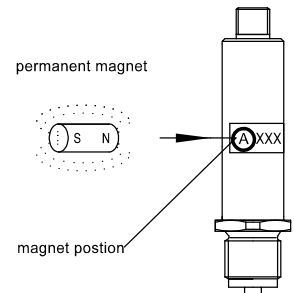
Electrical connection

Supply:	24 V DC
Operating range:	10...30 V DC
Output, 2-wire:	4...20 mA (20...4 mA)
Current range:	3.8...20.8 mA
Current limitation:	approx. 22 mA
Load	$R \leq \frac{U - 10 \text{ V}}{20 \text{ mA}}$ (Ohm)

Zero correction

The zero can be set easily with a magnet within $\pm 10\%$ of the nominal range.

To correct the zero point, hold a permanent magnet – a pin board magnet, for example – at the position marked on the pressure transmitter (i.e. a letter in a circle) for $\frac{1}{2}$ to 2 $\frac{1}{2}$ minutes after the power has been switched on.



To correct the zero, atmospheric pressure is applied. Offsets for previously set values for initial and ultimate pressures will be corrected automatically by the device. A magnetic field applied outside of this time period has no effect on the setting. The power must be switched off and on before the zero point can be set again.

Demontage

The pressure transmitter system may be pulled out only while the process medium is liquid (above melting point).

The process needs to be depressurized, opened and vented before pressure gauges are dismantled. Disconnect all pressurized lines from the device. De-energize all electrical contacts and then disconnect them before mechanically dismantling the device. It is mandatory that any residues in the process or on the device do not pose any personal or environmental risk. Force should not be used when extracting the gauge from the process – in other words, no effort should be needed to remove it. When you have removed the device secure the tapping point against any discharge from the process and tag it. The device should be transported in its original packaging if possible, or in an appropriate protective wrapping, and it should not be exposed to shock or vibration.



Process connections

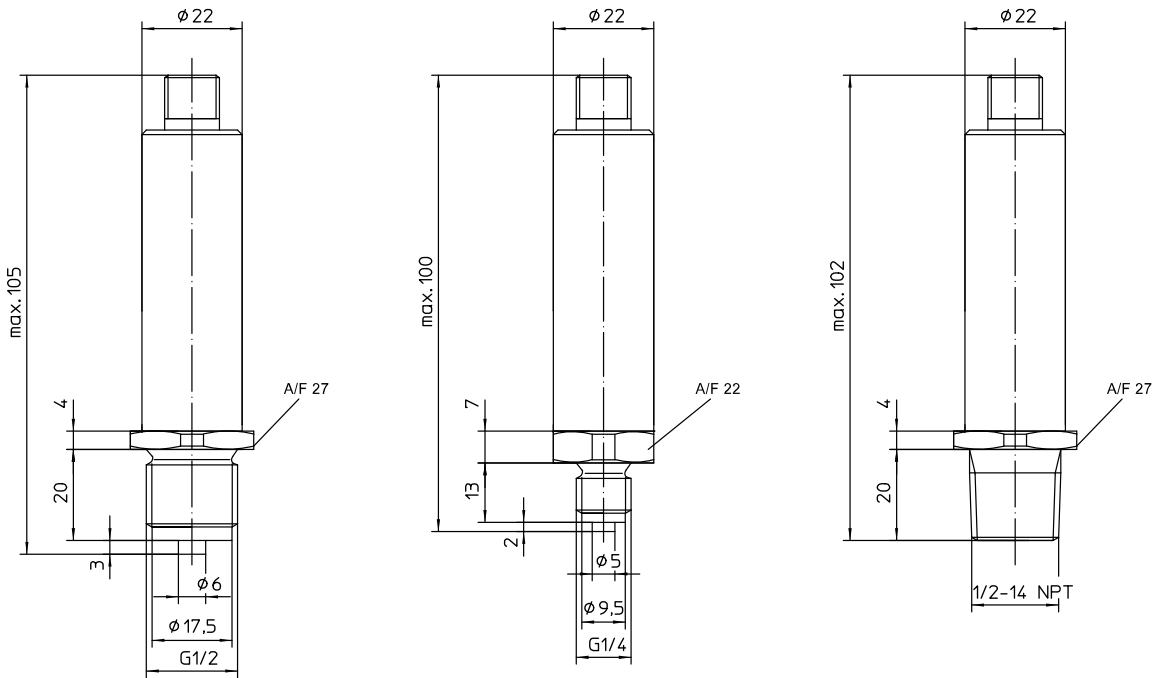
Screw-in thread

- G 1/2"
- G 1/4"
- 1/2" NPT

Material

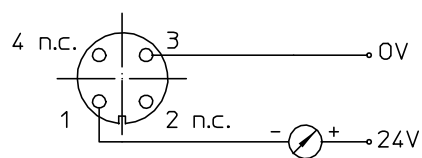
housing/process connection:
 mat.-no. 1.4301 (AISI 304)
 sensor diaphragm:
 mat.-no. 1.4542 (AISI 630)

Dimensions/designs



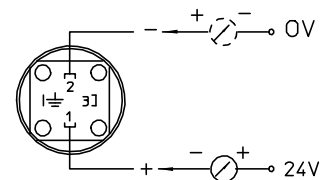
Connection diagram

circular connector M12



Do not wire terminals 2 + 4

right-angle plug



Do not wire terminals 3 + 4 (≠)

2-wire technologie
 4 ... 20 mA

The transmitter is grounded via the process connection