


- High pressure sensors

Ex ia I / IIC T6 acc. to ATEX

Accuracy: 0,5 %
Standard output: 4...20 mA; 2-wire system



Description

- pressure sensors Industrial Heavy Duty are top of the range products in Ex - pressure gauge technology.

The intrinsically safe Ex - pressure sensors are designed for zone 0 and have special type approval for use in potentially explosive atmospheres and a CENELEC certificate according to the ATEX, additionally accreditation according.

The measuring ranges range from 0...1600 bar to the maximum pressure range of 0...8000 bar. The case and wetted parts comprise stainless steel and are thus resistant to chemically aggressive media. The pressure connection and measuring element are up tightened via a metal cone. Therefore there is no risk of leakage in the welding seams.

A relief bore ensures a defined escape for the media in direction of the pressure connection in case of damage.

Several electrical connections can be obtained to pick up the electrical output signal.

The field case design enables use in aggravated operation conditions.

Pressure sensors Industrial Heavy Duty meet the electronic magnetic compatibility (EMC) requirements to EN 61326.

Features

- intrinsically safe, zone 0
- high long-term stability
- high accuracy
- finely graded selection of nominal pressure ranges according to EN
- corrosion resistant stainless steel design
- good repeatability
- high overload protection
- for dynamic and static measurements
- simple installation
- ATEX certificate

Measuring ranges

High pressure

Positive 0...1600 bar to 0... 8000 bar

Applications

Process engineering,
 plant engineering and construction,
 Chemical and pharmaceutical industry

Model: PEX15

Technical data

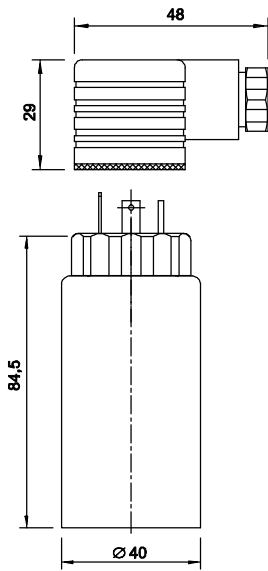
| Model | PEX15 | |
|---|--|---|
| Type | Standard with internal diaphragm | Field case with internal diaphragm |
| Pressure type | positive pressure | |
| Output signal | 4...20 mA - 2-wire | |
| Accuracy % of F.S. ¹⁾ | 0,5 (option 0,25 BFSL) | |
| Measuring ranges acc. to EN | 0 ... 1600 bar 0 ... 2500 bar 0 ... 4000 bar 0 ... 5000 bar 0 ... 6000 bar 0 ... 7000 bar 0 ... 8000 bar | |
| Repeatability | ≤ ± 0,05 % of F.S. | |
| Stability (annual) | ≤ ± 0,2 % of F.S. in rated conditions | |
| Case | stainless steel 1.4571 | |
| Process connection | M16x1,5 female 9/16"--18UNF F250-C female M20 x 1,5 female | |
| Wetted parts | stainless steel | |
| Overload limit | ≤ 5000 bar 1,2x; > 5000 bar 1,1x; | |
| Electr. connection and protection type acc. to EN 60 529/IEC529 | Plug acc. to DIN EN 175301 - 803 A with cable outlet (PG 9), IP 65 Option: Round connector 4-pin M12x1, IP 67 Cable outlet IP 67 with 1,5 m cable with inner ventilation | Field case with internal diaphragm IP68 |
| Power supply | 10 ... 30 VDC (field case 11... 30 VDC) | |
| Power consumption | signal current | |
| Power PI | 1W (750 mW with approval for Category 1D) | |
| Load standard | $R_A[\Omega] \leq (U_B[V]-10V)/0,02A - (0,14[\Omega] \times \text{cable length in [m] })$ | |
| Load field case | $R_A[\Omega] \leq (U_B[V]-11V)/0,02A$ | |
| Test circuit signal | $R_A[\Omega] < 15 \text{ max. load}$ | |
| Temperature comp. Range | 0... 80 °C | |
| Temperature influence | ≤ 0,2 % /10 K on zero and span | |
| Adjustability | Zero and span up to ± 10% | |
| Response time | ≤ 1 ms (within 10 % to 90 % of F.S.) | |
| Protection type | IP 65 acc. to EN 60 529/IEC 529 | |
| CE-certification | 89/336/EWG, interference emission and immunity see EN 61326, interference emission limit class A and B, ATEX EN 50014 (general part), EN 50 020 (intrinsic safety), EN 50 284 (Zone 0), EN 50303 (mining industry) | |
| HF immunity | 10 V/m | |
| BURST | 2 KV | |
| Electrical protection types | Protected against reverse polarity and short circuiting on the instrument side | |
| Explosion proof protection type ATEX | EEx ia I / IIC T4-T6 (BVS 08 ATEX E 067 X) ²⁾ category 1/2G, 2G , M1, M2 | |
| Temperature ranges | | |
| - storage | -30 ... 105 °C | |
| - media | -20... 80 °C ³⁾ | |
| - ambient | -20 ... 80 °C ³⁾ | |
| Weight | ca. 0,3 kg | |

of.F.S.= of Full Scale

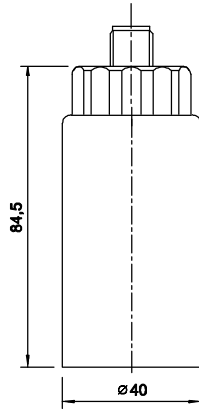
- 1) Terminal point adjustment acc. to IEC 61298-2, including non-linearity and hysteresis, zero point and full scale deviation
- 2) Application conditions and safety data see listing acc. to EC Type Test certificate (BVS 08 ATEX E 067 X)
- 3) Other temperature range, see listing acc. to EC Type Test certificate

Dimensions (mm)

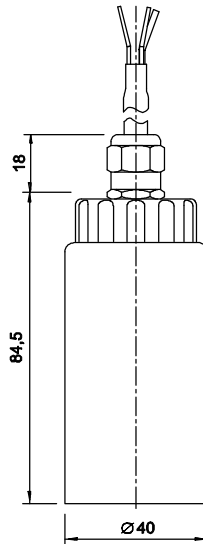
Plug DIN EN 175301-803 A
IP65



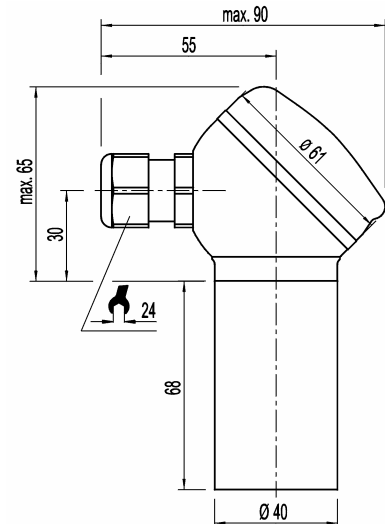
Round connector M12 x 1
IP67



Cable outlet
IP67

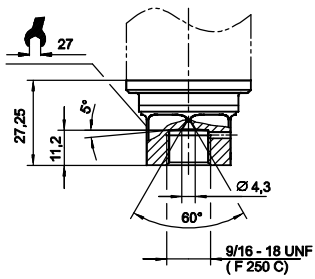


Field case
IP68

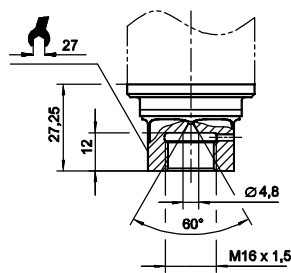


Pressure connection

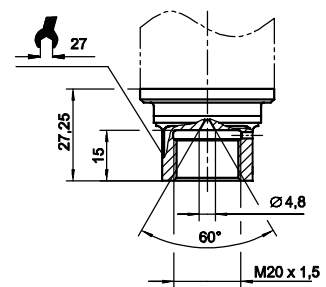
9/16 – 18 UNF



M16 x 1,5 female



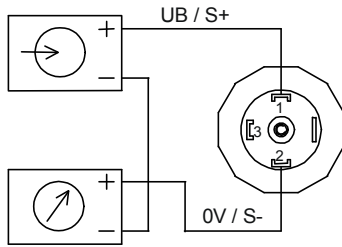
M20 x 1,5



Electrical connection

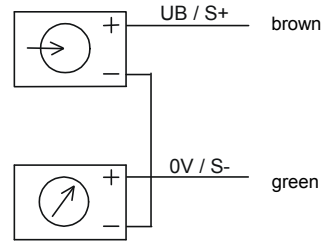
2-wire

Plug DIN EN 175301-803 A



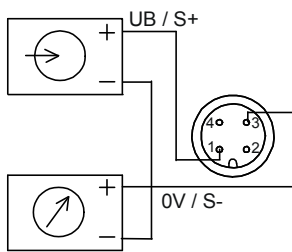
E-001

Cable outlet



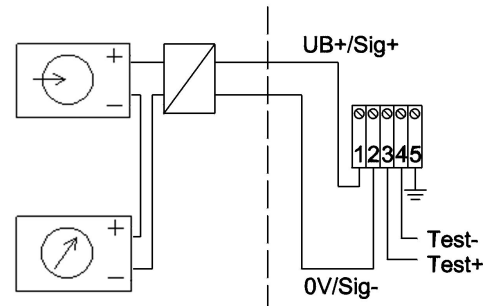
E-015

4-pol. round connector M 12 x 1



E-033

Field case



Ex-Zone (in comparison ATEX and CSA)

| | Flammable material Present continuously | Flammable material Present intermittently | Flammable material Normally not present |
|-------------|---|---|---|
| ATEX | Zone 0 | Zone 1 | Zone 2 |
| CSA | Zone 0 | Zone 1 | Zone 2 |
| | Division 1 | | Division 2 |

| | | ATEX Group | CSA Class | Group |
|---------------------|--------------------------|------------------------|---------------|--------------------------------------|
| Strip mining | Gases and vapours | IIA / IIB / IIC | I | A / B / C / D / E / F / G |
| | Dusts | | II | |
| | Fibres | | III | |
| Mining | Gas/Dusts | I | ID/IIF | |

Other details

1. Model
2. Measuring range
3. Options
4. **Ex-Zone**

Modifications reserved