



PIEZORESISTIVE PRESSURE TRANSMITTERS

ABSOLUTE-, GAUGE- AND DIFFERENTIAL PRESSURE

These piezoresistive transmitters have been designed for precision applications in industrial environments for pressures ranging from 0,2 to 1000 bar, liquids or gas.

- Series 23: Male pressure port
- Series 25: Flush diaphragm

A Complete Range

Absolute, barometric, gauge (over- and underpressure) and differential for wet/wet applications. 13 nominal pressure ranges. Current or voltage output.

Flexibility

A modular concept uses the selection of off-the-shelf capsules, allowing a customised production. Numerous options and variants are available, fully adapted to the customer's requirements: Mechanical and electrical interface, ports, signal outputs, materials in media contact, oil filling, oxygen-compatibility, special features.

Reliability / Quality

These transmitters use the highly stable KELLER Series 10 capsules, proven in millions of applications throughout the world. Each capsule is subjected to severe tests and calibration procedures.

The type of the transmitter is defined according to the reference pressure:

- PAA-23/25** Absolute Pressure Transmitter (Zero at 0 bar abs.)
- PA-23/25** Sealed Gauge Pressure Transmitter (Zero at 1 bar abs.)
- PR-23/25** Vented Gauge Pressure Transmitter (Zero at atmospheric)
- PD-23** Differential Pressure Transmitter (wet / wet)

SERIES 23 / 25



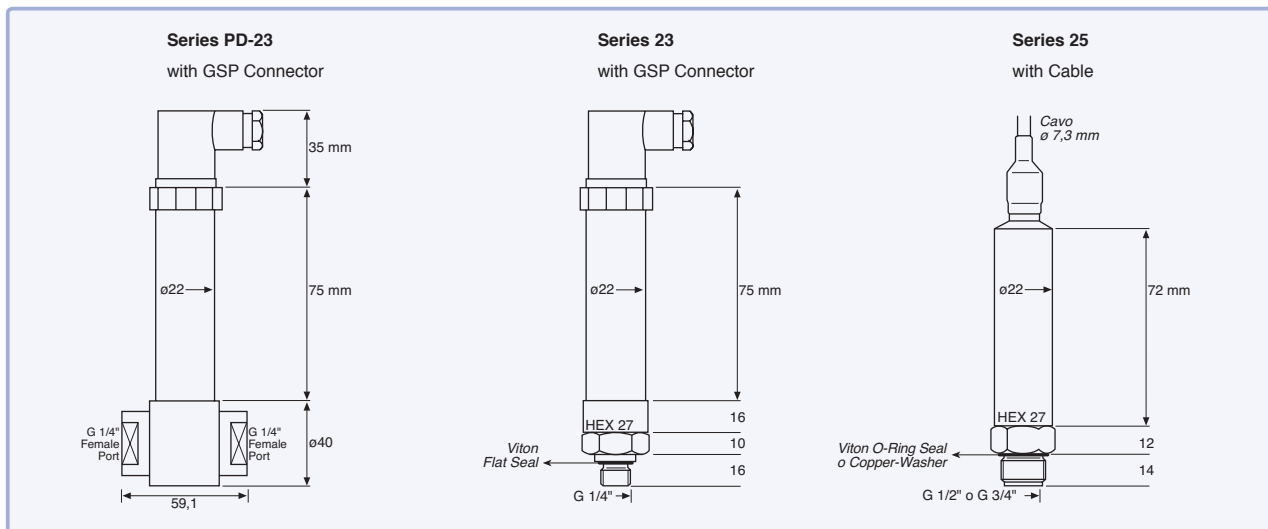
Series PD-23



Series 23



Series 25





SPECIFICATIONS

| | Pressure Ranges (FS) in bar | | | | | | | | | | |
|-----------------------------------|--|------|--|----------------------------|--------------------------|---|---|----|----|----|--------------------------|
| PR-23 | -1 | -0,5 | -0,2 | 0,2 | 0,5 | 1 | 2 | 5 | 10 | 20 | |
| PR-25 | -1 | -0,5 | | | 0,5 | 1 | 2 | 5 | 10 | 20 | |
| PD-23 | | | | 0,2 | 0,5 | 1 | 2 | 5 | 10 | 20 | |
| PAA-23 | | | | 0,2 | 0,5 | 1 | 2 | 5 | 10 | 20 | |
| PAA-25 | | | | | 0,5 | 1 | 2 | 5 | 10 | 20 | |
| PA-23/25 | | | | | | 1 | 2 | 5 | 10 | 20 | 50 100 200 400 600 1000 |
| Overpressure | -1 | -1 | -1 | 2,5 | 2,5 | 3 | 4 | 10 | 20 | 40 | 100 200 300 600 900 1100 |
| Overpressure Ref.-Side PD | | | | 1 | 1 | 2 | 3 | 5 | 7 | 10 | |
| PD, static line pressure | 200 bar max. | | | | | | | | | | |
| Accuracy* | ± 0,2 %FS typ. ± 0,5 %FS max. | | *Linearity (best straight line) + Hysteresis + Repeatability | | | | | | | | |
| Storage-/Operating Temperature | -40...100 °C | | | | | | | | | | |
| Compensated Temperature Range | -10...80 °C | | | | | | | | | | |
| Temperature Coefficients... | ...of Zero, in %FS/°C | | | ...of Sensitivity, in %/°C | | | | | | | |
| · Range > 1 bar | 0,005 typ. 0,01 max. | | | 0,05 typ. | | | | | | | |
| · Range 1 bar | 0,010 typ. 0,02 max. | | | 0,05 typ. | | | | | | | |
| · Range 0,5 bar | 0,015 typ. 0,03 max. | | | 0,05 typ. | | | | | | | |
| · Range 0,2 bar | 0,025 typ. 0,05 max. | | | 0,05 typ. | | | | | | | |
| Long Term Stability | 0,1 %FS typ. 0,2 %FS max. | | | | | | | | | | |
| · Range > 2 bar | 1 mbar typ. 2 mbar max. | | | | | | | | | | |
| · Range ≤ 2 bar | | | | | | | | | | | |
| Signal Output / Type | 4...20 mA / 2-Wire | | | | 0...10 V / 3-Wire | | | | | | |
| Supply | 8...32 VDC | | | | 13...32 VDC | | | | | | |
| Load Resistance (R _L) | (U - 8 V) / 0,02 A | | | | > 5 k | | | | | | |
| Electrical Connection | - GSP Plug EN 175 301-803-A (DIN 43650) - Cable (with reference tube for gauge) | | | | | | | | | | |
| Volumetric Change | < 0,1 mm ³ | | | | | | | | | | |
| Pressure Connection | See drawings front page | | | | | | | | | | |
| Material in Media Contact | Stainless steel 316L (DIN 1.4435), Viton® | | | | | | | | | | |
| Protection | IP65 | | | | | | | | | | |
| Weight | PR/PA/PAA: ≈ 180 g. PD: ≈ 440 g | | | | | | | | | | |
| Insulation | > 100 MΩ@50 V | | | | | | | | | | |
| Endurance | > 10 million cycles 0...100 %FS at 25 °C | | | | | | | | | | |
| Limiting frequency | 1 kHz (5 kHz option) | | | | | | | | | | |

Options

| | |
|-------------------------------------|--|
| Pressure Connection, Electrical Out | On request, many possibilities |
| Pressure Ranges | Other pressure ranges between 0,2 and 1000 bar, different units |
| Accuracy (Linearity) | ± 0,2 %FS max. or any customer requirement |
| Materials in Contact with Media | Many possibilities |
| Oil Filling | Fluorized oil (O ₂ -compatible), olive-oil, low temperature oil |
| Protection | IP67, IP68 (cable version) |
| Higher Static Line Pressure | up to 600 bar (PD only) |

ELECTRICAL CONNECTIONS

| 2-Wire Transmitter | 3-Wire Transmitter | GSP Connector | Binder 723 | Cable |
|--------------------|--------------------|---------------|------------|-------|
| - | GND | 1 | 1 | white |
| OUT/GND | OUT | 2 | 2 | red |
| +Vcc | +Vcc | 3 | 3 | black |

