

# 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, flameproof versions...

### 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 transmitters are manufactured and tested according to ISO 9001 / EN 29001.

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  $\approx 1$  bar abs.)
- PR-23/25** Vented Gauge Pressure Transmitter (Zero at atmospheric)
- PD-23** Differential Pressure Transmitter (wet / wet)

# SERIES 23 / 25



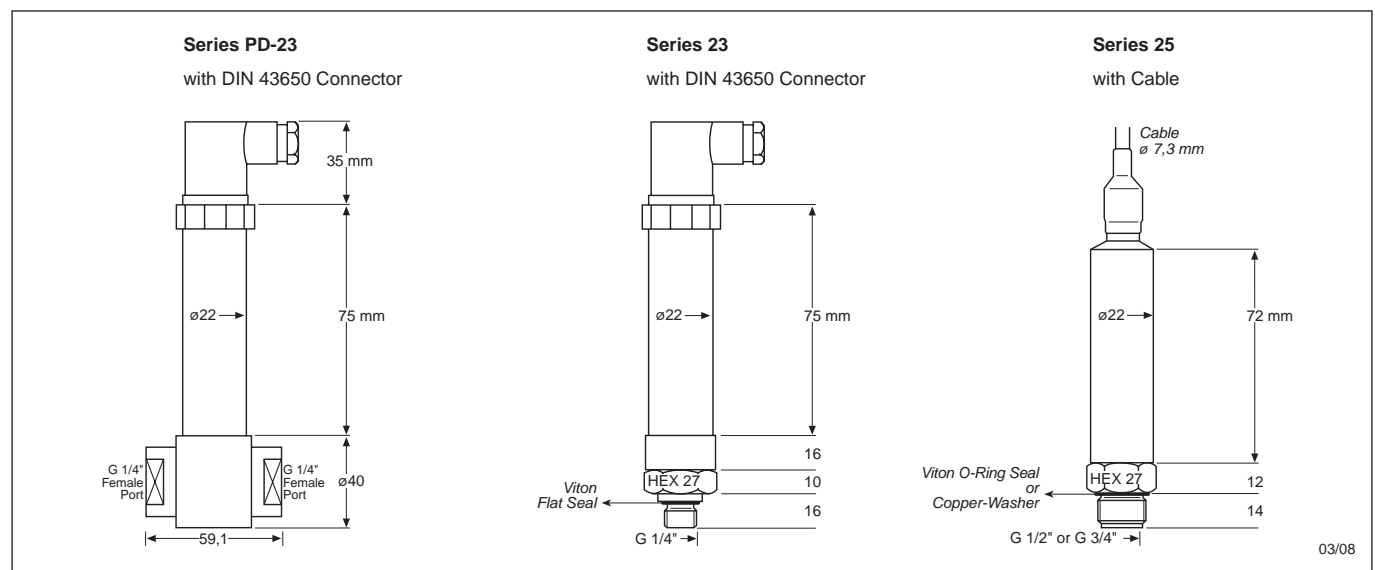
Series PD-23



Series 23



Series 25



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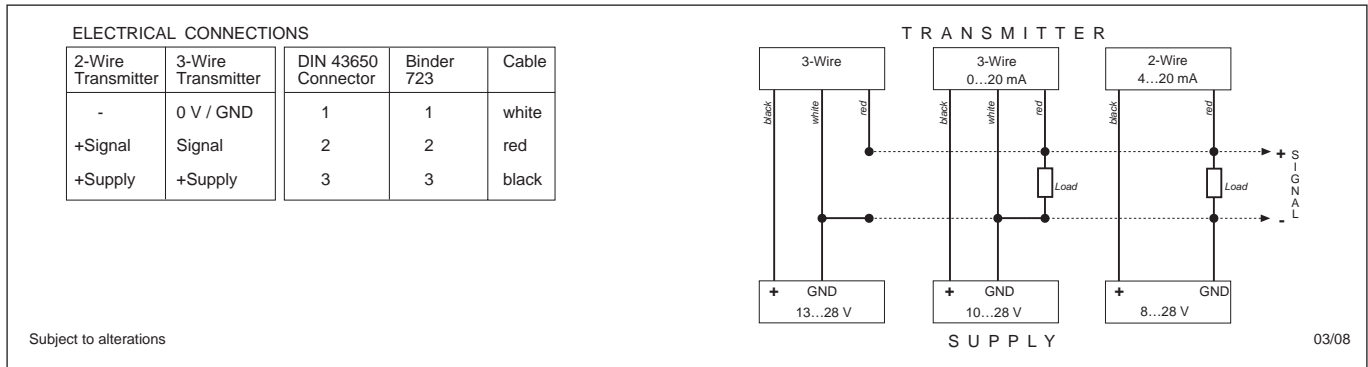


## SPECIFICATIONS

	Pressure Ranges (FS) in Bar																				
PR-23/25	-1	-0,5	-0,2	0,2	0,5	1	2	5	10	20											
PD-23				0,2	0,5	1	2	5	10	20											
PAA-23/25				0,2	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.																				
Linearity <sup>(1)</sup> + Hysteresis + Repeatability	± 0,2 %FS typ. ± 0,5 %FS max. <sup>(1)</sup> best straight line, based zero																				
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.					0,02 max.										
· Range 1 bar	0,010 typ.					0,02 max.					0,02 max.										
· Range 0,5 bar	0,015 typ.					0,03 max.					0,02 max.										
· Range 0,2 bar	0,025 typ.					0,05 max.					0,02 max.										
Stability																					
· Range > 2 bar	0,1 %FS typ.					0,2 %FS max.															
· Range ≤ 2 bar	1 mbar typ.					2 mbar max.															
Signal Output / Type	<b>4...20 mA / 2-Wire</b>					<b>0...20 mA / 3-Wire</b>					<b>0...10 V / 3-Wire</b>										
Supply	8...28 VDC					10...28 VDC					13...28 VDC										
Load Resistance (R <sub>L</sub> )	(U - 10 V) / 0,02 A					(U - 5 V) / 0,02 A					> 5 k										
Electrical Connection	- Plug DIN 43650 - Cable (with reference tube for gauge)																				
Volumetric Change	< 0,1 mm <sup>3</sup>																				
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																				
Frequency Response	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, diff. units
Linearity. Specifications	± 0,1 and ± 0,2 %FS or any customer requirement
Materials in Contact with Media	Many possibilities
Oil Filling	Fluorized oil (O2-compatible), olive-oil, low temperature oil
Hazardous Applications	Flameproof- and intrinsically safe version
Protection	IP67, IP68 (cable version)
Higher Static Line Pressure	up to 600 bar (PD only)



For pricing or any further information, please contact Omni Instruments Ltd.