

Operating Instructions

Pressure Sensor with Ceramic Sensor Element

Model: MVPS



General

The MVPS Standard model is an electronic transmitter with ceramic sensor for air, industrial, technical gases and water and oil, designed to be installed in gas distribution plants, on bottles, on refrigerators, on compressors, on vacuum pumps and hydraulics and water high pressure plants.

We don't accept warranty and liability claims neither upon this publication nor in case of improper treatment of the described products.

The document may contain technical inaccuracies and typographical errors. The content will be revised on a regular basis. These changes will be implemented in later versions. The described products can be improved and changed at any time without prior notice.

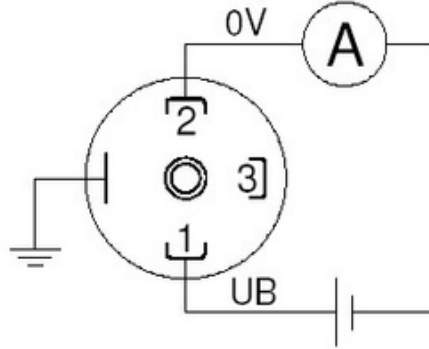
Installation

Before installing electrical instrument safely and securely into a plant or a system the user should verify the instrument suitability to the plant characteristics and the correct installation. After installation the user should verify that the instrument is not exposed to any source of heat exceeding the established ambient limits. Secure the instrument thread through a special key/wrench on the process connection hexagon (20...30 Nm). The correct torque depends on the type of process connection and the type of seal used (form and material). As for those process connections with a cylindrical thread (Gas-Metric), a head gasket compatible with the measurement gas or fluid should be used. If the connection thread is conical the instrument is tightened through a simple screwing on the plug. In order to improve the thread tightness, it is recommended to place a PTFE layer on the male thread.

Electrical Connection

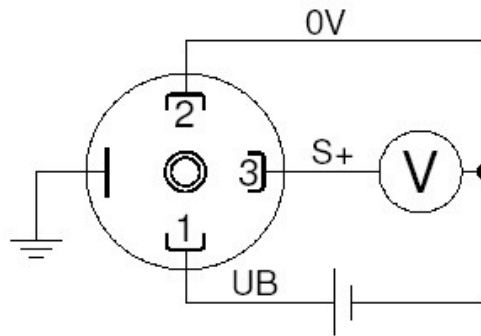
Output signal:	4...20 mA
No. of wires:	2
Load max.:	$R_L \leq (U_B - 8) / 0,02 \Omega$
Supply UB:	8...30 VDC

EN 175301-803 Form A



Output signal:	0...10 VDC
No. of wires:	3
Load max.:	$R_L \geq 10 k\Omega$
Supply UB:	14...30 VDC

EN 175301-803 Form A



The transmitter metal case should always be connected to ground (GND) through the process connection thread in order to protect the sensor from disturbances due to electromagnetic fields or electrostatic charges.

The sensor can also be connected via the ground connection to the system ground.

Technical Information

Ranges	: -1...1000 barg
Accuracy	: $\leq \pm 0.5\%$ of Full Scale (F.S.)*
Non-linearity (BFSL)	: $\leq \pm 0.25\%$ of Full Scale, according to EN 61298-2
Non-repeatability	: $\leq 0.1\%$ of Full Scale, according to EN 61298-2
Zero Output Deviation	: Typical: $\leq \pm 0.5\%$ of Span
Maximum	: $\leq \pm 0.8\%$ of Span
Thermal Drift	: 0...80 °C: 1% of Span (Typical)
Maximum	: 2.5% of Span
Long-term Drift	: $\leq 0.1\%$ of Span, according to EN 61298-2
Process Fluid Temperature	: -25...+85 °C
Ambient Temperature	: -25...+85 °C
Storage Temperature	: -25...+85 °C
Output Signals	: 4...20 mA 0...10 VDC
Process Connection	: AISI 316L (1.4404), Ø2.5 mm Port
Sensor Material	: Ceramic (Al ₂ O ₃)
Housing Material	: AISI 316L (1.4404)
Seal Material	: FKM
Electrical Connection	: EN 175301-803 Form A
Protection Class	: IP65 according to IEC 529 / EN 60529**
Weight	: 200 g

Order Codes

PRODUCT	PROCESS CONNECTION	OUTPUT SIGNAL	MEASURING RANGE	ELECTRICAL CONNECTION
MVPS	05 = G 1/4" Male Thread 15 = G 1/2" Male Thread	10 = 0...10 VDC 20 = 4...20 mA	-1...1000 bar Enter the measuring range as shown in the example. Use P for pressure and V for vacuum. Example 1: P0/0010 = 0-10 bar	01 = DIN 4400 Valve Connector 02 = M12*1 4 pin Connector 03 = 1,5 m PVC Cable

Ordering Example: MVPS-05-10-P0/0010-3

G 1/4" Male Thread, 0...10 VDC, 0...10 bar, 1,5 m PVC Cable

Dimensions

