Operating Instructions

for

Pressure Sensors

Model: MVFP

MV Endüstriyel Ölçüm Cihazları Anonim Şirketi
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General

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

We don’taccept 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.

There should be no vibrations and/or no radiation of heat near the mounting position of the sensors. Please pay attention that the giving operating limits are not exceeded. After the mechanical and electrical connection, the sensor is ready for operation.

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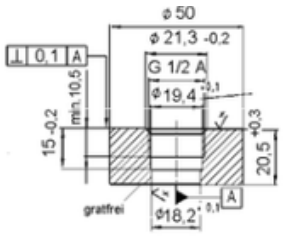
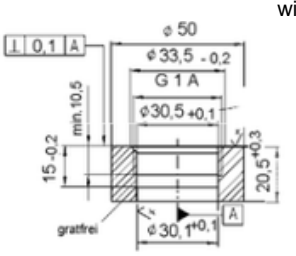
Screw in hole/Screw in socket for flush front diaphragm
with o-ring sealing

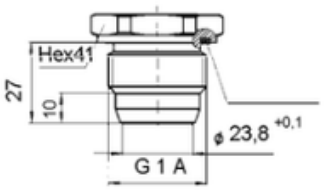


G 1/2 A

with metallical sealing cone



G 1A



G 1A

Electrical Connection

Ensure that the power is disconnected during connection of the cable.

The electrical connection is made either via plug and pin or by cable.

The exact wiring scheme is shown on the sketches hereafter or at the type plate of your sensor.

Attention! to the different wire systems
. Meaning of the different connector markings

UB+	positive pole of the supply voltage
OV	negative pole of the supply voltage
S+	positive pole of the output signal
S-	negative pole of the output signal
Shielding	Cable protection enclosure-earth

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Pressure sensors for relative pressures with cable output are equipped with an atmospheric pressure compensation cable. Please take this into account if you want to extend the cable. The relative pressure sensor with pressure ranges up to 25 bar are vented due to a venting sealing between housing and plug.

The sensor could be supplied with an unregulated DC source with the specified voltage range. The minimum supply voltage for pressure sensors with current output, should be the minimum UB plus the minimum voltage, which is needed to operate the external indicator or input device:

Current output

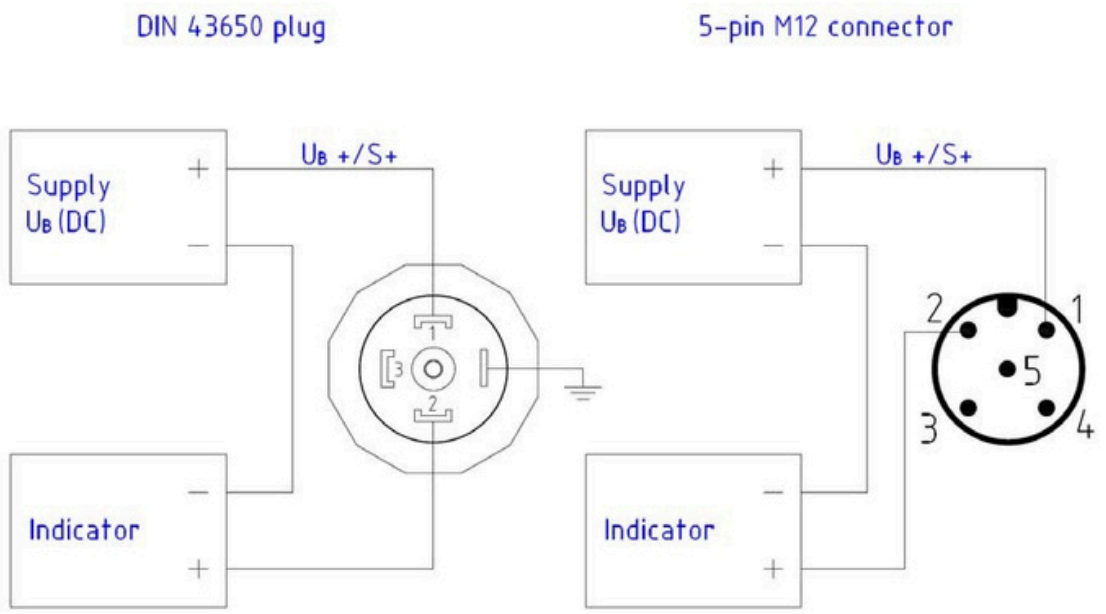
	2-wire system
Output signal	4...20mA
Supply voltage	UB= 10 ... 30 V_{DC}
Permissible load	RA[Ohm] =(UB[V] -1 0 V) / 0,02 A DC
Wiring scheme	see scheme

Voltage output

	2-wire system	
Output signal	0...10V	
Supply voltage	UB = 14…30 V	
Permissible load	RA >10 kOhm	
Wiring scheme	see scheme	

Electrical connection, principle drawings, pin assignment, cable marking

2-wire-system



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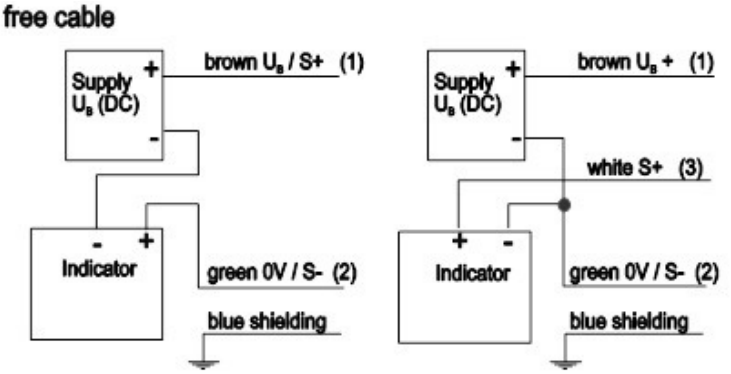

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Technical Information

Ranges	:-1...100 barg
Accuracy	:≤ ±0.5% of Full Scale (F.S.)*
Non-linearity (BFSL)	:≤ ±0.25% of Full Scale, according to EN 61298-2
Zero Output Deviation	:Typical: ≤ ±0.5% of Span
Thermal Drift	:0...80 °C: 1% of Span (Typical)
Maximum	: 2.5% of Span
Process Fluid Temperature	:-20...+80 °C
Ambient Temperature	:-20...+80 °C
Process Connection	:G 1" male thread (up to 1,6 bar) G ½ male thread (above 1,6 bar)
Output Signals	:4...20 mA 0...10 VDC
Sensor Material	:AISI 316L (1.4404) : (Metallic diaphragm)
Housing Material	:AISI 304 (1.4301)
Seal Material	:FKM
Electrical Connection	:EN 175301-803 Form A
Protection Class	:IP65 according to IEC 529 / EN 60529**

Order Codes

PRODUCT	PROCESS CONNECTION	OUTPUT SIGNAL	MEASURING RANGE	ELECTRICAL CONNECTION
MVFP	15 = G ½" Male Thread 25 = G 1" Male Thread	10 = 0…10 VDC 20 = 4…20 mA	-1...100 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 Socket 02 = M12*1 4 pin Socket 03 = 1,5 m PVC Cable

Ordering Example: MVFP-15-10-P0/0010-3
G 1/2" Male Thread, 0...10 VDC, 0...10 bar, 1,5 m PVC Cable

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