PRESSURE SENSOR DMU - 10.0

Signal output 4...20mA, 2-wire

DESCRIPTION

The DMU-10.0 pressure transmitters contain only a few active components, such as the sensor element, a signal processing ASIC and a U/I converter circuit.

Calibration is performed electronically, resulting in a comparatively small overall error and long-term stability for the pressure transmitters. The hermetically sealed measuring cell ensures high long-term tightness and stability. The ASIC is a programmable precision CMOS ASIC with EEPROM data storage and an analog signal path, qualified for an extended operating temperature range.

The stainless steel diaphragm is completely vacuum-tight, extremely burst-resistant, and suitable for use with all standard media in hydraulics, pneumatics, environmental technology, process engineering, semiconductor technology, and automotive engineering, provided they are compatible with stainless steel. This covers its use in standard mobile hydraulic applications and other fields. Its high accuracy and robust, compact design guarantee broad industrial applicability. The ability to combine various mechanical and electronic connections allows for a wide range of pressure transmitter options.

CONSTRUCTION

- Stainless steel membrane
- Piezoresistive measuring principle (Poly-Si- to SiO)2)
- Operating temperature -40 °C to +100 °C
- Class: 0.5% Standard (Linearity)
- No internal O-rings, no silicone oil reservoir

EXECUTION

Measuring range: -1...0bar,
0...1 bar to 0...1600 bar
Output signal: 4...20 mA (2 wire)
Ambient temperature: -40 °C to +105 °C
Medium: up to +125 °C

- Resistant to pressure spikes
- Shock and vibration resistant
- Insensitive to temperature shocks
- Protection class IP 65 according to DIN EN 60 529
- Wiping parts and housing made of CrNi steel

OPTION

Special measuring ranges available upon request

DKD calibration certificate EN17025

TECHNICAL DATA			
Measuring range (bar) **Standard print areas *)**	**-1...0; 0...1; 0...1.6; 0...2.5; 0...4; 0...6; 0...10; 0...16; 0...25; 0...40; 0...60; 0...100; 0...160; 0...250; 0...400; 0...600; 0...1000**		
Overload range (bar) *)	2-fold		
Burst pressure bar *)	triple		
Pressure connection	G1/4" Form E, Standard		
Materials of parts in contact with measuring instruments	Stainless steel (CrNiCuNb 17-4 PH) No O-ring, no silicone oil		
Weight	50g		
Output signal Operating voltage UB Permissible load resistance (RI) Setting time (10...90%) Z	4...20mA 12 to 32 V (UB-12V)/20mA < 1ms		
Insulation resistance at 50V	100 MΩ		
Electrical connection	Device connector DIN 43650		
Protection class according to DIN EN 60 529	IP65 and according to plug system		
Linearity error in RT**) (%FS)	+/- 0.5 max.		
Reproducibility, stability per year, permissible - Ambient temperature - Medium temperature - Storage temperature	 -40...+105 °C -40...+125 °C -40...+125 °C		
Total error max. ***)	-40...-20°C	-20...+85°C	+85...+100°C
	3.0% typical +/- 2.0%	1.0% typical +/- 0.7%	2.5% typical +/- 1.5%
Electromagnet. Compatibility DIN EN 55022 and DIN EN 61000-4-3	<30 dB µ V/m 25 V/m		
Shock resistance (IEC 68-2-32)	1m (free fall onto a steel plate)		
Vibration resistance (IEC 68-2-06 and IEC 68-2-36)	20 g		

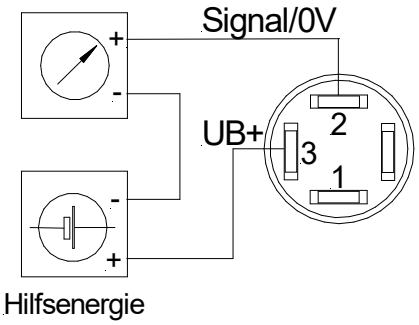
*) Others available on request

**) integral linearity deviation

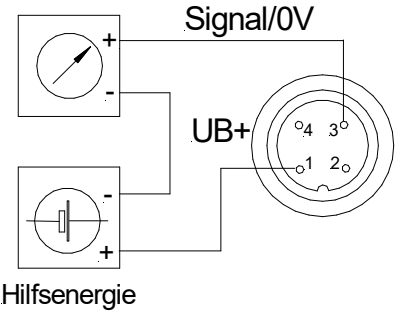
***)The total error includes nonlinearity, hysteresis, repeatability, and temperature influence.

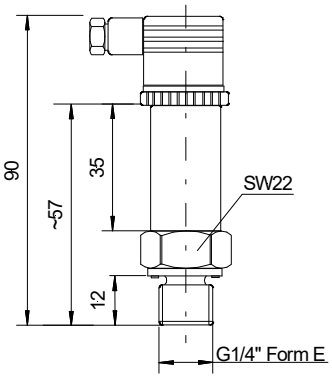
ELECTRICAL CONNECTION

2-wire
MVS/A and MVS/C



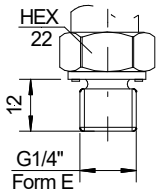
M12x1



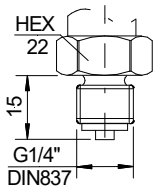


PRINT CONNECTION

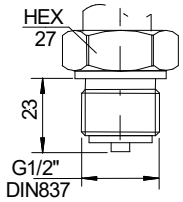
G1/4A-DIN3852 FormE



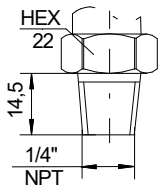
G1/4B



G1/2B

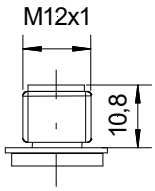


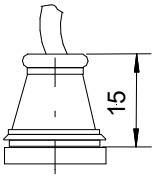
¼ NPT

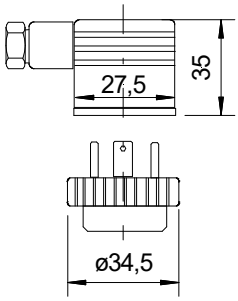


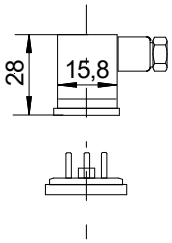
PLUG

Flange connector cable outlet MVS/A (standard) MVS/C
M12x1DIN EN 175301-803 DIN EN 175301-803









RoHS Compliance Declaration

The European Union's RoHS Directive 2011/65/EU on the restriction and use of certain hazardous substances in electrical and electronic equipment (RoHS) entered into force on 3 January 2013.
These are specifically the following substances:

Lead (Pb)
Cadmium (Cd)
Hexavalent chromium (CrVI)
Polybrominated biphenyls (PBBs)
Polybrominated diphenyl ethers (PBDEs)
Mercury (Hg)

We hereby declare that all products of the DMU10.0 series are manufactured in compliance with RoHS.

Signed: Marko Goldberg
Managing Director
January 2022