

P139

Nöding

Messtechnik



Datasheet Level Transmitter P139

PERFORMANCE FEATURES

- Dry gold plated ceramic sensor
- Smallest measuring range: 0...100 mbar / 0...1 mH₂O
- Largest measuring range: 0...20 bar / 0...200 mH₂O
- Accuracy $\leq 0,3\%$
- High overload capability
- Rugged design
- Analog output: 4...20 mA, 2-wires
- Optionally integrated PT100 / PT1000 sensor for temperature measurement

The ceramic capacitive measuring principle of the level transmitter P139 is used in a wide range of industrial applications. In combination with a high-quality stainless steel housing, the sensor is suitable for almost all liquids and gases. The sensor is commonly used in pumping and lifting applications, where it guarantees long-term stable measurement. Our modular design concept provides a wide variety of products. Feel free to contact us if you need a customization that is not listed in this datasheet.

AREAS OF APPLICATION

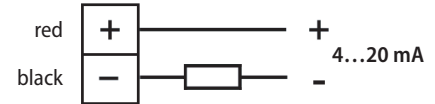
- Gaseous media
- Water
- Waste water
- Well / Deep well
- Lifting equipment
- Oil and fuel
- Viscous and pasty media
- Aggressive media

TECHNICAL DATA

Measuring range	
Pressure range	See table "Measuring ranges" others on request
Output	
Analog output	4...20 mA 2-wires
Power supply	
20 mA output	9...30 V DC
Signal characteristics	
Accuracy	$\leq \pm 0,3 \% \text{ FS @ } 25^\circ\text{C}$
Long term stability	$\leq \pm 0,3 \% \text{ FS/Year}$
Response time	200 ms - others on request
Switch-on time	< 1 s
Temperature coefficient	
Zero	$\leq \pm 0,015 \% \text{ FS/Kelvin}$ < 200mbar $\leq \pm 0,025 \% \text{ FS/K}$
Span	$\leq \pm 0,015 \% \text{ FS/Kelvin}$ < 200 mbar $\leq \pm 0,025 \% \text{ FS/K}$
Temperature ranges	
Medium temperature	-25...80 °C
Surrounding temperature	-25...80 °C
Storage temperature	-40...85 °C
Electrical protections	
Short-circuit resistance	Permanent
Reverse polarity protection	Protection against reverse polarity, but no function
Electromagnetic compatibility	Interference emissions and immunity acc. to EN 61326
Wetted materials	
Housing	Stainless steel 1.4404
Sensor	Ceramic Al ₂ O ₃
Sensor seal	FPM (Viton), EPDM, FFKM (Chemraz / Kalrez)
Surroundings	
Protection type	IP 68
Exemplary weight	
P139-4W1-1005-011 (figure p. 1)	Approx. 550 g

ELECTRICAL CONNECTION

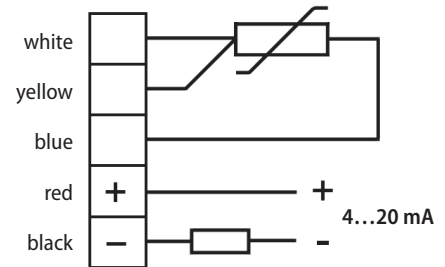
4...20 mA, 2-wires



$U = 9 \dots 30 \text{ V DC}$

Ex-model: 12...30 V DC

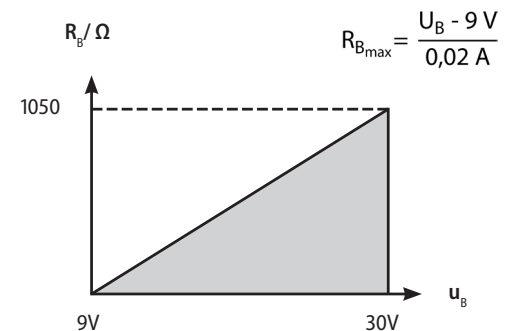
4...20 mA, 2-wires and Pt 100 / Pt 1000 temperature sensor, 3 wires



$U = 9 \dots 30 \text{ V DC}$

For cable lengths > 30 m shielded cable is used

LOAD



MEASURING RANGES

Measuring ranges in bar / Pa		Measuring ranges in mH ₂ O		Overload (bar)
0...100 mbar / 0...10 kPa	00	0...1 mH ₂ O	50	-1/4
0...150 mbar / 0...15 kPa	Y3	0...1,5 mH ₂ O	65	-1/4
0...160 mbar / 0...16 kPa	01	0...1,6 mH ₂ O	51	-1/4
0...200 mbar / 0...20 kPa	B1	0...2 mH ₂ O	W1	-1/4
0...250 mbar / 0...25 kPa	02	0...2,5 mH ₂ O	52	-1/4
0...300 mbar / 0...30 kPa	X5	0...3 mH ₂ O	66	-1/4
0...350 mbar / 0...35 kPa	X1	0...3,5 mH ₂ O	67	-1/4
0...400 mbar / 0...40 kPa	03	0...4 mH ₂ O	53	-1/4
0...500 mbar / 0...50 kPa	B7	0...5 mH ₂ O	W2	-1/8
0...600 mbar / 0...60 kPa	04	0...6 mH ₂ O	54	-1/8
0...1 bar / 0...100 kPa	05	0...10 mH ₂ O	55	-1/8
0...1,6 bar / 0...160 kPa	06	0...16 mH ₂ O	56	-1/13
0...2 bar / 0...200 kPa	B3	0...20 mH ₂ O	W3	-1/13
0...2,5 bar / 0...250 kPa	07	0...25 mH ₂ O	57	-1/18
0...4 bar / 0...400 kPa	08	0...40 mH ₂ O	58	-1/25
0...5 bar / 0...500 kPa	F1	0...50 mH ₂ O	68	-1/25
0...6 bar / 0...600 kPa	09	0...60 mH ₂ O	59	-1/50
0...10 bar / 0...1 MPa	10	0...100 mH ₂ O	60	-1/50
0...16 bar / 0...1,6 MPa	11	0...160 mH ₂ O	61	-1/100
0...20 bar / 0...2 MPa	B5	0...200 mH ₂ O	W5	-1/100

ORDERING CODE

Output signal

- 4 4...20 mA 2-wire
- T 4...20 mA 2-wire and PT 100 3-wires
- F 4...20 mA 2-wire and PT 1000 3-wires

Ranges

Measuring ranges see table

- 99 Non-standard-range (on request)

Material housing

- 1 Stainless steel 1.4404
- S 1.4404 Serto screw fitting

Cable length

- 002 2 m cable
- 005 5 m cable
- 010 10 m cable
- 050 50 m cable
- 100 100 m cable

Specify custom lengths in meters

Material cable

- 0 PE cable (PT100/PT1000 N/A)
- 2 PUR cable
- 4 HDPE cable
- 6 FEP cable

Cable type

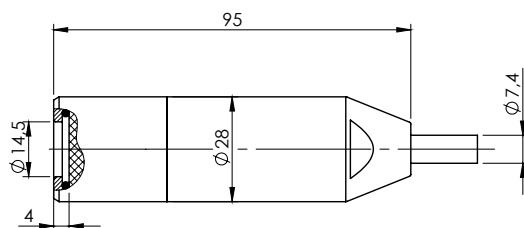
- 0 Unshielded cable, standard
- 1 Shielded cable

Sensor seal

- 1 FPM (Viton), standard
- 3 EPDM
- 5 FFKM (Chemraz / Kalrez)

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DIMENSIONS



VERSION

TYPE 1