

P143

Nöding

Messtechnik



Datasheet Combi Sensor P143

PERFORMANCE FEATURES

- PP housing (Polypropylene)
- Smallest measuring range: 0...250 mbar / 0...2,5 mH₂O
- Largest measuring range: 0...20 bar / 0...200 mH₂O
- Accuracy ≤ 0,5%
- Analog output: 4...20 mA, 2-wires
0...10 V, 3-wires
0...5 V, 3-wires
0,5...4,5 V, 3-wires ratiometric
- Optionally integrated PT100 / PT1000 Sensor for temperature measurement
- Optionally with stainless steel cap usable as level sensor

ANWENDUNGSGEBIETE

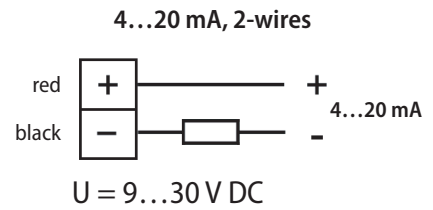
- Chlorine and salt water applications
- Chemicals
- Gaseous media
- Water
- Waste water
- Well / Deep well
- Aggressive media

The model P143 can be used as a level sensor or as a screw-in transmitter. The screw-on stainless steel cap provides the necessary weight to prevent floating during level measurement and at the same time protects the diaphragm. Without the cap, the device can be used as a screw-in transmitter with G 1/2 in. thread, integrated seal and protection class IP68. The measuring cell operates based on the piezoresistive principle and forms, in combination with the polypropylene housing, a slim transmitter with high chemical resistance. 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.

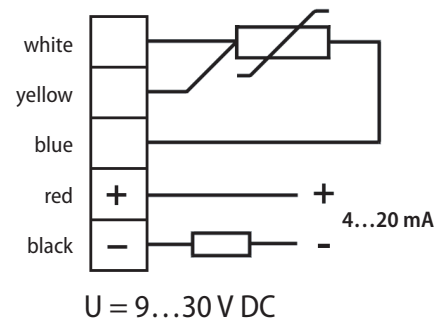
TECHNISICAL DATA

Messbereiche	
Pressure range	See table "Measuring ranges" others on request
Output	
Analog output	4...20 mA 2-wires 0...10 V, 0...5 V 3-wires 0,5...4,5V 3-wires, ratiometric
Power supply	
20 mA output, 5V output	9...30 V DC
10 V output	15...30 V DC
0,5...4,5 V output	5 V DC
Signalverhalten	
Accuracy	$\leq \pm 0,5\% \text{ FS @ } 25^\circ\text{C}$
Long term stability	$\leq \pm 0,5\% \text{ FS/Year}$
Response time	50 ms - others on request
Switch-on time	< 1 s
Temperature coefficient	
Zero	$\leq \pm 0,03\% \text{ FS/Kelvin}$
Span	$\leq \pm 0,02\% \text{ FS/Kelvin}$
Temperaturbereiche	
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	PP
Sensor	Ceramic Al_2O_3
Sensor seal	FPM (Viton), EPDM, FFKM (Chemraz / Kalrez)
Surrounding	
Schutzart	IP 68
Exemplary weight	
P137-4W1-1005-011 (figure p. 1)	Approx. 450 g

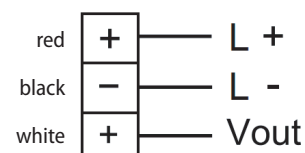
ELECTRICAL CONNECTION



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

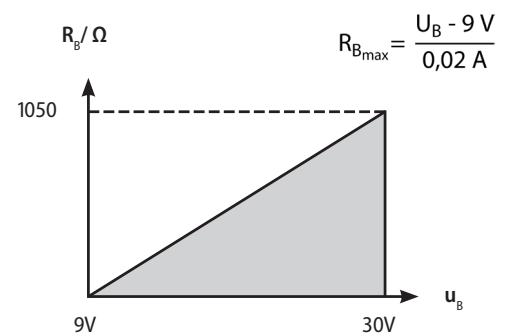


0,5...4,5 V, 3-wire ratiometric 0...5 V/0...10 V, 3-wires



For cable lengths > 30 m shielded cable is used

LOAD



MEASURING RANGE

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

* Accuracy 1%

ORDERING CODE

Output signal

- 1 0...10 V 3-wires
- 4 4...20 mA 2-wires
- 8 0...5 V 3-wires (on request)
- A 0,5...4,5 V 3-wires, ratiometric (on request)
- T 4...20 mA 2-wires and PT 100 3-wires
- F 4...20 mA 2-wires and PT 1000 3-wires

Ranges

Measuring ranges see table

- 99 Non-standard range (on request)

Process connection

GS G 1/2 A u. 10 mm drill hole, ISO 228-1, PP

- 9 Others (on request)

Cable length

- 002 2 m cable
- 005 5 m cable
- 010 10 m cable
- 020 20 m cable

Specify custom lengths in meters

Material cable

- 0 PE cable (3-wires a. PT100/PT1000 N/A.)
- 2 PUR cable
- 4 HDPE cable
- 6 FEP cable

Cable type

- 0 Unshielded cable, standard
- 1 Shielded cable

Sensor seal

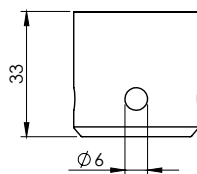
- 1 FPM (Viton), standard
- 3 EPDM
- 5 FFKM (Chemraz / Kalrez)

Options (Multiple selections possible)

- G Stainless steel cap for level sensor
- M M12 Connector IP67 (on cable)

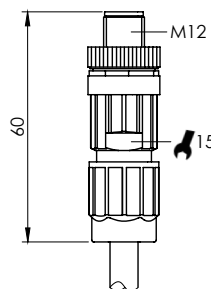
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ACCESSORIES



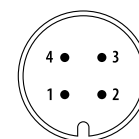
OPTIONS

■ STAINLESS STEEL CAP



■ M12 CONNECTOR

M12 Connector



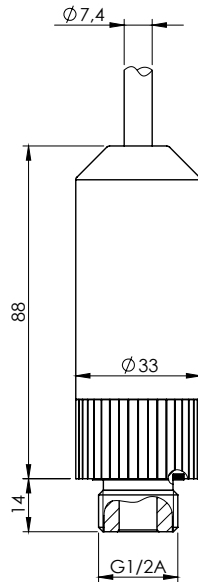
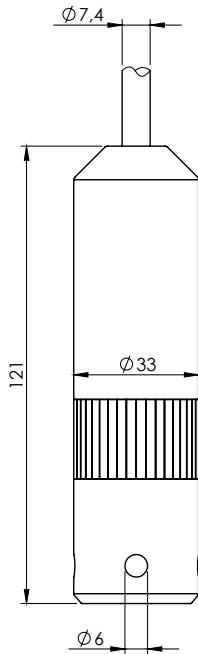
4...20 mA 2-wires

- PIN 1: Signal +
- PIN 3: Signal -

0...5 (10) V 3-wires

- PIN 1: in +
- PIN 3: in -
- PIN 4: out +

■ DIMENSIONS



VERSION

■ LEVEL SENSOR WITH STAINLESS STEEL CAP

■ SCREW-IN TRANSMITTER