




IP142

Datasheet Level Transmitter IP142

PERFORMANCE FEATURES

- Welded metallic measuring cell
- Smallest measuring range: 0...200 mbar/ 0...2 mH₂O
- Largest measuring range: 0...20 bar/ 0...200 mH₂O
- Configurable measuring ranges
- Accuracy ≤ 0,25%
- Analog output: 4...20 mA with HART Communication
- Optionally integrated PT100/ PT1000 Sensor for temperature measurement
- Ex II 1G Ex ia IIC T4 / T6 Ga 

The membrane of the IP142 immersion probe is welded directly to the housing and does not have to be sealed internally with an o-ring. The medium is only in contact with highly resistant stainless steel 1.4571 and there is no weakspot along an elastomer seal. The protective cap can be removed if necessary and the thread underneath can be used as a process connection. ATEX certified and with FEP suspension cable, the model is ideal for potentially critical areas and media. The measuring range can be adjusted on site using the HART interface. 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.

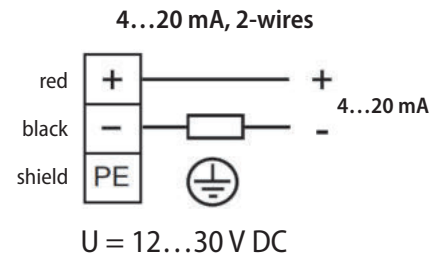
AREAS OF APPLICATION

- Gaseous media
- Liquid media
- Hygiene applications
- Aggressive media
- Industrial and salt water applications
- Potentially explosive areas
- Level monitoring in fuel tanks

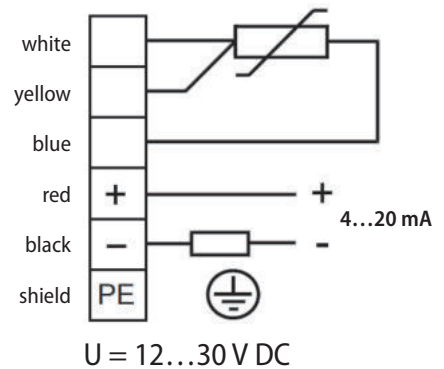
TECHNICAL DATA

Measuring range	
Pressure range	See table „Measuring ranges“ others on request
Output	
Analog output	4...20 mA 2-wires
Power supply	
20 mA output	12...30 V DC
Signal characteristics	
Accuracy	≤ ± 0,25 % FS @ 25 °C ≤ ± 0,5 % FS @ 25 °C at pressure range ≤ 250 mbar
Long term stability	≤ ± 0,2 % FS/Year
Response time	200 ms - others on request
Switch-on time	< 1 s
Temperature coefficient	
Zero	≤ ± 0,02 % FS / Kelvin (≤ 250 mbar ≤ ± 0,04 %)
Span	≤ ± 0,02 % FS / Kelvin
Temperature ranges	
Medium temperature	-20...100 °C
Surrounding temperature	-20...60 °C
Storage temperature	-20...80 °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	CrNi steel 1.4571
Sensor	CrNi steel 1.4571
Surroundings	
Protection type	IP 68
Exemplary weight	
IP142-EHB1-1005-160 (figure p. 1)	Approx. 700 g

ELECTRICAL CONNECTION



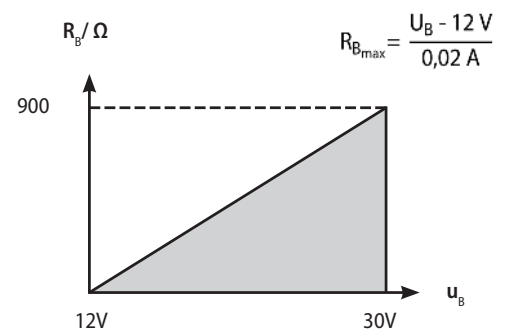
4...20 mA, 2-wires and Pt 100 / Pt 1000 temperature sensor, 3 wires



Electrical characteristics for explosion protection

Pressure signal:	Temperature signal:
$U_i \leq 30 \text{ V}$	$U_i \leq 20 \text{ V}$
$I_i \leq 150 \text{ mA}$	$I_i \leq 320 \text{ mA}$
$P_i \leq 700 \text{ mW}$	$P_i \leq 100 \text{ mW}$

LOAD



MEASURING RANGES

Measuring ranges	Code	Smallest adjustable range	Over pressure (bar)	Burst pressure (bar)
0...200 mbar / 0...20 kPa	B1	0...100 mbar / 0...10 kPa	2	2,4
0...400 mbar / 0...40 kPa	03	0...100 mbar / 0...10 kPa	2	2,4
0...600 mbar / 0...60 kPa	04	0...150 mbar / 0...15 kPa	4	4,8
0...1 bar / 0...100 kPa	05	0...250 mbar / 0...25 kPa	5	6
0...1,6 bar / 0...160 kPa	06	0...400 mbar / 0...40 kPa	10	12
0...2,5 bar / 0...250 kPa	07	0...625 mbar / 0...62,5 kPa	10	12
0...4 bar / 0...400 kPa	08	0...1 bar / 0...100 kPa	17	20
0...6 bar / 0...600 kPa	09	0...1,5 bar / 0...150 kPa	35	42
0...10 bar / 0...1 MPa	10	0...2,5 bar / 0...250 kPa	35	42
0...16 bar / 0...1,6 MPa	11	0...4 bar / 0...400 kPa	80	96
0...20 bar / 0...2 MPa	B5	0...5 bar / 0...500 kPa	80	96
0...4 mH ₂ O	53	0...1 mH ₂ O	2	2,4
0...6 mH ₂ O	54	0...1,5 mH ₂ O	4	5
0...10 mH ₂ O	55	0...2,5 mH ₂ O	5	6
0...16 mH ₂ O	56	0...4 mH ₂ O	10	12
0...25 mH ₂ O	57	0...6,25 mH ₂ O	10	12
0...40 mH ₂ O	58	0...10 mH ₂ O	17	20
0...60 mH ₂ O	59	0...15 mH ₂ O	35	42
0...100 mH ₂ O	60	0...25 mH ₂ O	35	42

TYPENSCHLÜSSEL

Output signal

- 4 4...20 mA 2-wires
- 4T 4...20 mA 2-wires und PT100 3-wires
- 4F 4...20 mA 2-wires und PT1000 3-wires
- EH 4...20 mA 2-wires / HART Ⓜ II 1G Ex ia IIC T4/T6 Ga
- TH 4...20 mA 2-wires / HART Ⓜ II 1G Ex ia IIC T4/T6 Ga and PT100 3-wires
- FH 4...20 mA 2-wires / HART Ⓜ II 1G Ex ia IIC T4/T6 Ga and PT1000 3-wires

Ranges

Measuring ranges see table

- 99 Non-standard range (on request)

Material Housing

- 1 CrNi stainless-steel 1.4571
- 2 Hastelloy
- 9 Others (on request)

Cable length

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

Specify custom lengths in meters

Material protective cap

- 1 CrNi steel 1.4571
- 2 Hastelloy
- 9 Others (on request)

Material cable

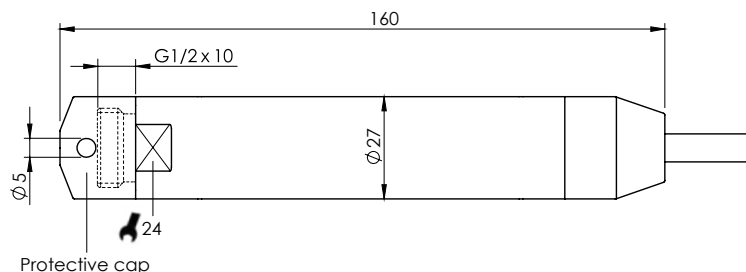
- 6 FEP cable

Options

- 0 None

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DIMENSIONS



VERSION

TYPE 1/2