

PTM82

Nöding

Messtechnik



Datasheet Digital Contact Gauge with Temperature Display PTM82

PERFORMANCE FEATURES

- 3 digit LED display
- Recording min./max. pressure
- Dry capacitive ceramic sensor
- Smallest measuring range: 0...50 mbar
- Largest measuring range: 0...60 bar
- Negative pressure measuring range: up to -1 bar
- Temperaturmessung: -20...100°C
- 2 contact outputs DC PNP, max. 200mA
- Analogausgang: 4...20 mA, 3-wires
0...10 V, 3-wires
0...20 mA, 3-wires

AREAS OF APPLICATION

- Industrial water applications
- Beverage industry
- Gaseous media
- Hygiene applications
- Abrasive media
- Aggressive media

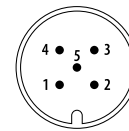
The model PTM82 combines pressure and temperature measurement with a large, bright display. The digital contact gauge can still be easily read from a distance and therefore allows for a quick assessment of the process parameters. An analog output and two switch outputs widen the range of applications. The capacitive measuring principle in combination with a ceramic membrane is resistant to aggressive and abrasive media. The process connection is made of high-quality stainless steel 1.4404 and is therefore suitable for almost all media. All wetted components are food safe, making the unit ideal for use in beverage and process water applications.

TECHNICAL DATA

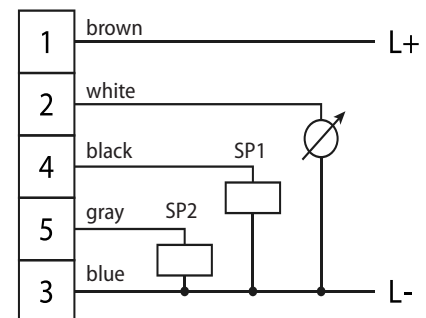
Measuring range	
Pressure range	See table „Measuring ranges pressure“ others on request
Temperature range	See table „Measuring ranges temperature“ others on request
Output	
Analog output	4...20 mA 3-wires 0...10 V 3-wires 0...20 mA 3-wires
Contact output	2x DC PNP, max. 200 mA
Power supply	
20 mA output	10...30 V DC
10 V output	16...30 V DC
Signal characteristics	
Accuracy pressure	$\leq \pm 0,5 \% \text{ FS @ } 25^\circ\text{C}$
Long term stability pressure	$\leq \pm 0,5 \% \text{ FS/Year}$
Accuracy temperature	$\leq \pm 0,3 \% \text{ FS @ } 25^\circ\text{C} + 0,3^\circ\text{C}$ Pt1000 Kl.B: $+ 0,005^\circ\text{C} \times t$
Response time	200 ms - others on request
Switch-on time	< 1 s
Temperature coefficient	
Zero pressure	$\leq \pm 0,03 \% \text{ FS / Kelvin}$
Span pressure	$\leq \pm 0,02 \% \text{ FS / Kelvin}$
Temperature measurement	$\leq \pm 0,02 \% \text{ FS / Kelvin}$
Temperature ranges	
Medium temperature	-20...100 °C
Surrounding temperature	-20...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	
Process connection	Stainless steel 1.4404
Sensor	Ceramic Al_2O_3
Sensor seal	FPM (Viton), NBR, EPDM
Surroundings	
Protection type	IP 67
Exemplary weight	
PM82-410-310 (figure S. 1)	Approx. 430 g

ELECTRICAL CONNECTION

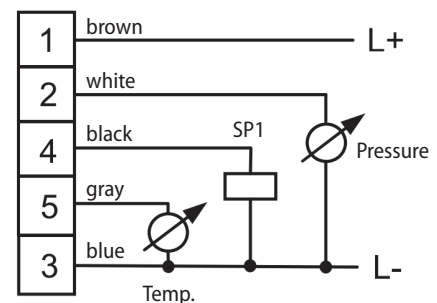
M12 Connector



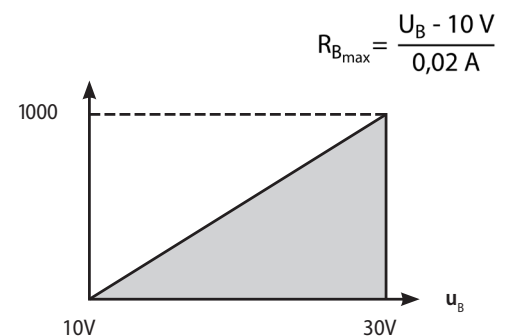
Connection with 1 analog output and 2 contact outputs



Connection with 2 analog output and 1 contact outputs



LOAD



MEASURING RANGES PRESSURE

Measuring ranges	Relative	Overload (bar)	Burst pressure (bar)
0...50 mbar/0...5 kPa	B0	-1/2	4
0...60 mbar/0...6 kPa	A9	-1/2	4
0...100 mbar/0...10 kPa	00	-1/2	4
0...160 mbar/0...16 kPa	01	-1/2	4
0...200 mbar/0...20 kPa	B1	-1/2	4
0...250 mbar/0...25 kPa	02	-1/2	4
0...400 mbar/0...40 kPa	03	-1/2	4
0...500 mbar/0...50 kPa	B7	-1/4	8
0...600 mbar/0...60 kPa	04	-1/4	8
0...1 bar/0...100 kPa	05	-1/4	8
0...1,6 bar/0...160 kPa	06	-1/7	13
0...2 bar/0...200 kPa	B3	-1/7	13
0...2,5 bar/0...250 kPa	07	-1/10	18
0...4 bar/0...400 kPa	08	-1/10	18
0...5 bar/0...500 kPa	F1	-1/21	25
0...6 bar/0...600 kPa	09	-1/21	25
0...10 bar/0...1 MPa	10	-1/30	50
0...10 bar/0...1 MPa	HD	-1/105	175
0...16 bar/0...1,6 MPa	11	-1/30	50
0...16 bar/0...1,6 MPa	H1	-1/105	175
0...20 bar/0...2 MPa	B5	-1/60	100
0...20 bar/0...2 MPa	H2	-1/105	175
0...25 bar/0...2,5 MPa	12	-1/105	175
0...40 bar/0...4 MPa	13	-1/105	175
0...60 bar/0...6 MPa	14	-1/210	350
-25...25 mbar/-2,5...2,5 kPa	C2	-0,3/2	4
-100...0 mbar/-10...0 kPa	C4	-1/2	4
-100...100 mbar/-10...10 kPa	C5	-1/2	4
-400...0 mbar/-40...0 kPa	F7	-1/2	4
-1...0 bar/-100...100 kPa	D4	-1/7	13
-1...1 bar/-100...100 kPa	D6	-1/10	10
-1...3 bar/-100...300 kPa	D8	-1/21	25
-1...5 bar/-100...500 kPa	D9	-1/21	25
-1...9 bar/-100...900 kPa	E1	-1/30	50
-1...15 bar/-0,1...1,5 MPa	E2	-1/60	100
-1...19 bar/-0,1...1,9 MPa	E3	-1/60	100
-1...20 bar/-0,1...20 MPa	E8	-1/60	100
-1...25 bar/-0,1...25 MPa	E7	-1/105	175
-1...40 bar/-0,1...40 MPa	F9	-1/105	175
-1...60 bar/-0,1...60 MPa	G1	-1/210	350

MEASURING RANGES TEMPERATURE

Measuring ranges	Code	Measuring ranges	Code
0...50 °C	1	0...50,0 °C	J
0...60 °C	2	0...60,0 °C	K
0...80 °C	3	0...80,0 °C	L
0...100 °C	4	0...100,0 °C	M
-20...50 °C	A	-20,0...50,0 °C	N
-20...60 °C	B	-20,0...60,0 °C	O
-20...80 °C	C	-20,0...80,0 °C	P
-20...100 °C	D	-20,0...100,0 °C	Q

ORDERING CODE

Analog output pressure

- 0 None
- 1 0...10 V 3-wires
- 2 0...20 mA 3-wires
- 3 4...20 mA 3-wires (*)

(*) Signal range
3,8...20,5 mA

Analog output temperature

- 0 None
- 1 0...10 V 3-wires
- 2 0...20 mA 3-wires
- 3 4...20 mA 3-wires (*)

3 outputs are possible
either
2 analog outputs
+ 1 contact output
or
1 analog output
+ 2 contact outputs

Contact output pressure

- 0 None
- 1 1 contact
- 2 2 contacts

Contact output temperature

- 0 None
- 1 1 contact
- 2 2 contacts

Pressure ranges

Measuring ranges see table

- 99 Non-standard range (on request)

Temperature ranges

Measuring ranges see table

- 9 Non-standard range (on request)

Process connection and material

- G G1/2 below, ISO 228-1, 1.4404, protection tube 6 Ø
- 0 G1/2 left, ISO 228-1, 1.4404, protection tube 6 Ø
- 9 Others (on request)

Temperature tube length

- 05 50 mm
- 10 100 mm
- 16 160 mm others on request
- 25 250 mm

Sensor seal

- 1 FPM (Viton), standard
- 2 NBR (Perbuan)
- 3 EPDM

Options

- 0 Pt 1000 Kl. B, standard
- 1 Pt 1000 Kl. B, display only 2 digits
- 2 Pt 1000 Kl. A
- 3 Pt 1000 Kl. A, display only 2 digits

PTM82 - [] - [] - []

DIMENSIONS

