

Model EPT1020 series

OEM Pressure Transmitter
Stainless steel pressure sensor
Mass production, automated calibration

Materontek
Sensing and Internet of Things

Features

- ❑ Measuring ranges from 100mbar to 600bar
- ❑ Gauge pressure, Absolute pressure
- ❑ Accuracy: $\pm 0.2\%$ FSO(Min.), $\pm 0.25\%$ FSO(Typ.)
- ❑ Calibrated and temperature compensated
- ❑ Stainless steel pressure sensor
- ❑ Output 4...20mA, DC1...5V, DC0.5...4.5V, RS485, etc.



Application

- ❑ Hydraulic and pneumatic
- ❑ Machine building
- ❑ Pumps
- ❑ Water treatment
- ❑ IoT pressure measurement

Technical data

Performance

Accuracy*	0.2%FS@25°C(Min.) 0.25%FS@25°C(Typ.)	*Linearity (best straight line) + Hysteresis + Repeatability
Operating Temperature	-20 to 85°C	
Compensated Temperature Range	-10 to 70°C	
Vibration	20 g RMS(20 to 2000Hz)	
Shock	100 g(10ms)	
Cycles	10x10 ⁵	
Long Term Stability	0.2 %FS	

Electrical @25°C

Output signal / Supply	2-wire 4...20mA / V _s = 9...30VDC
	3-wire 1...5VDC / V _s = 9...30VDC
	3-wire 0.5...4.5VDC / V _s = 5VDC
	2-wire 4...20mA+HART / V _s = 12... 30VDC
	4-wire RS485 Modbus RTU / V _s = 12... 30VDC
Insulation Resistance	100 MΩ@100VDC
EMC Test	IEC61000-6-2/IEC61000-6-3
Reverse polarity protection	No damage - no function

Physical Specifications

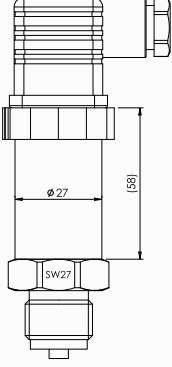
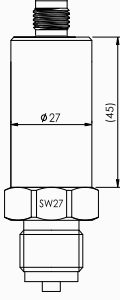
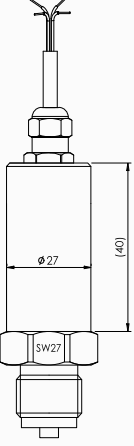
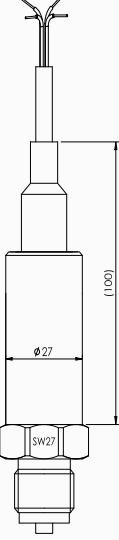
Housing	304 stainless steel
Diaphragm	316L stainless steel
Sealing	NBR or Viton O-ring
Oil Filling	Silicone oil
Protection	IP65/IP66/IP68
Weight	~210g(without cable)

The listed specifications and dimensions are subject to change without prior notice

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Dimensions (All dimensions in mm)

Code E1 DIN175301-803A/DIN43650/IP65	Code E2 Circular connector M12x1(4-pin)/IP66	Code E3 Cable outlet, 1.5m/IP66
		
Code E4 Cable outlet, 1.5m/IP68		
		

Electrical connections

DIN175301-803-A	4...20mA 2-wire	1...5VDC 3-wire	0.5...4.5VDC 3-wire	RS485 4-wire	Connector M12x1(4-pin)	4...20mA 2-wire	1...5VDC 3-wire	0.5...4.5VDC 3-wire	RS485 4-wire
+Vcc	1	1	1	1	+Vcc	1	1	1	1
OUT	2	3	3	-	OUT	3	4	4	-
GND	-	2	2	2	GND	-	3	3	3
RS485A	-	-	-	3	RS485A	-	-	-	2
RS485B	-	-	-	⊕	RS485B	-	-	-	4

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Standard pressure range

Code	Nominal pressure [bar]	Gauge	Sealed gauge	Absolute
01	0...0.1	√		
02	0...0.2	√		
03	0...0.35	√		√
04	0...0.7	√		√
05	0...1	√		√
06	0...1.6	√		√
07	0...2.5	√		√
08	0...4	√		√
09	0...6	√		√
10	0...10	√		√
11	0...16	√	√	√
12	0...25	√	√	√
13	0...40		√	
14	0...60		√	
15	0...100		√	
16	0...160		√	
17	0...250		√	
18	0...400		√	

Code	Nominal pressure [bar]	Gauge	Sealed gauge	Absolute
19	0...600		√	
20	-0.1...+0.1	√		
21	-0.2...+0.2	√		
22	-0.5...+0.5	√		
23	-1...0	√		
24	0...-1	√		
25	-1...+1	√		
26	-1...+1.6	√		
27	-1...+2.5	√		
28	-1...+4	√		
29	-1...+6	√		
30	-1...+9	√		
31	-1...+10	√		
32	-1...+16	√		
33	-1...+25	√		
34	0.8...2	√		√

Ordering code

Model	Range	Type	Output/Power supply	Pressure Port	Electrical Connection
EPT1020	code	G Gauge	42 4...20mA/9...30VDC	01 G¼ male	E1 DIN175301-803A/IP65
		A Absolute	15 DC 1...5V/9...30VDC	02 G½ male	E2 M12 connector/IP66
			05 DC 0...5V/9...30VDC	03 ¼NPT male	E3 Cable outlet,1.5m/IP66
			45 DC 0.5...4.5V/5VDC	04 ½NPT male	E4 Cable outlet,1.5m/IP68
			10 DC 0...10V/15...30VDC	05 PT¼ male	
			25 DC 0...2.5V/5VDC	06 PT½ male	
			R4 RS485 Modbus RTU/12... 30VDC	07 M20x1.5 male	
			HR 4...20mA+HART /12... 30VDC	99 Custom	

Accuracy	Label
A1 0.1%FS	S Standard
A2 0.25%FS(Standard)	N Neutral packing
A3 0.5%FS	C Custom label