

Model A20

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

Materontek
Sensing and Internet of Things

Features

- ❑ Measuring ranges from 350mbar to 200bar
- ❑ Gauge pressure
- ❑ Accuracy: $\pm 0.25\% \text{FSO(Typ.)}$, $\pm 0.5\% \text{FSO(Max.)}$
- ❑ Calibrated and temperature compensated
- ❑ Stainless steel pressure sensor
- ❑ Output 4...20mA, DC1...5V, DC0.5...4.5V etc.

Application

- ❑ Hydraulic and pneumatic
- ❑ Machine building
- ❑ Pumps
- ❑ Water treatment
- ❑ IoT pressure measurement
- ❑ HVAC controls, Refrigeration
- ❑ Air compressors



Technical data

Performance

Accuracy*	$\pm 0.25\% \text{FS@25}^\circ\text{C(Typ.)}$ $\pm 0.5\% \text{FS@25}^\circ\text{C(Max.)}$	*Linearity (best straight line) + Hysteresis + Repeatability
Operating Temperature	-10 to 70°C	
Compensated Temperature Range	0 to 70°C	
Vibration	10 g RMS(20 to 2000Hz)	
Shock	100 g(11ms)	
Cycles	10×10^5	
Long Term Stability	$\pm 0.3\% \text{FS}$	

Electrical @25°C

Output signal / Supply	2-wire 4...20mA / $V_s = 10...30\text{VDC}$
	3-wire 1...5VDC / $V_s = 12...30\text{VDC}$
	3-wire 0...5VDC / $V_s = 12...30\text{VDC}$
	3-wire 0...10VDC / $V_s = 12...30\text{VDC}$
	3-wire 0.5...4.5VDC / $V_s = 12...30\text{VDC}$
	3-wire 0.5...4.5VDC ratiometric / $V_s = 5\text{VDC}$
Insulation Resistance	100 M Ω @100VDC
EMC Test	IEC61000-4-2/IEC61000-4-3
Reverse polarity protection	No damage – no function

Physical Specifications

Housing	316 stainless steel
Diaphragm	316L stainless steel
Oil Filling	Silicone oil
Protection	IP65
Sealing	NBR (Permissible temperature range: -30 to 85°C) FKM (Permissible temperature range: -10 to 85°C) Copper (Permissible temperature range: -30 to 85°C)
Weight	~150g

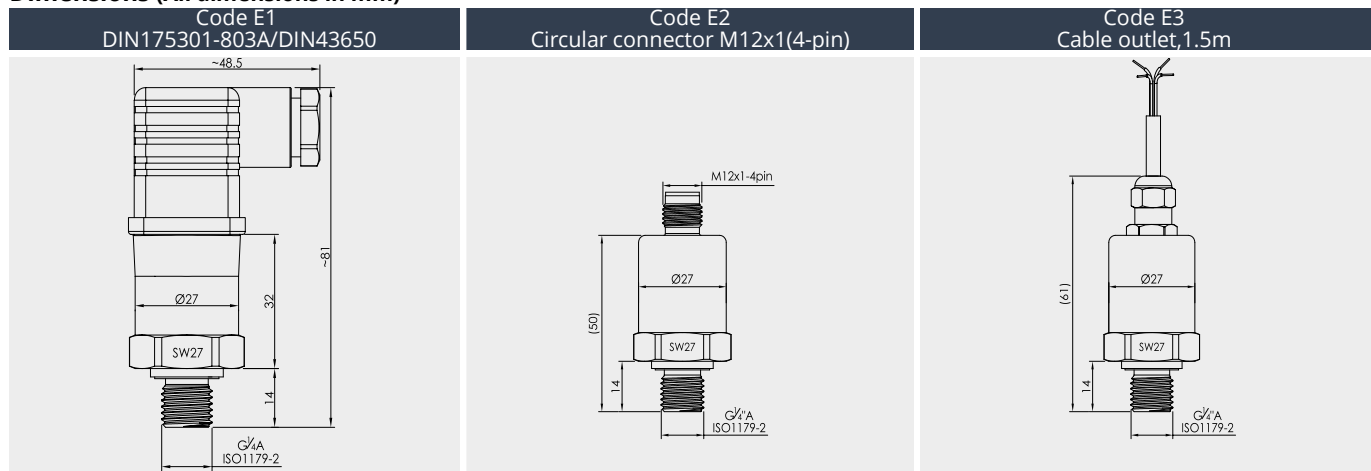
The listed specifications and dimensions are subject to change without prior notice

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Dimensions (All dimensions in mm)



Electrical connections

DIN175301-803-A	4...20mA 2-wire	1...5VDC 3-wire	0.5...4.5VDC 3-wire
+Vcc	1	1	1
OUT	2	3	3
GND	NA	2	2

Connector M12x1(4-pin)	4...20mA 2-wire	1...5VDC 3-wire	0.5...4.5VDC 3-wire
+Vcc	1	1	1
OUT	3	3	3
GND	NA	2	2

Measuring ranges, gauge pressure

Code	Nominal pressure [bar]	Overpressure limit [bar]
01	0...0.35	1
02	0...0.6	1.8
03	0...1	3
04	0...1.6	3
05	0...2.5	5
06	0...3	6
07	0...4	8
08	0...6	12
09	0...10	20
10	0...16	30
11	0...25	50
12	0...30	60
13	0...40	80
14	0...60	120
15	0...100	200
16	0...160	200
17	0...200	250

Measuring ranges, absolute pressure

Code	Nominal pressure [bar]	Overpressure limit [bar]
18	0...0.4	1
19	0...0.6	1
20	0...1	2
21	0...1.6	3
22	0...2.5	5
23	0...4	10
24	0...6	10
25	0...10	20
26	0...16	30
27	0...25	50

Vacuum and +/- measuring ranges

Code	Nominal pressure [bar]	Overpressure limit [bar]
28	-1...0	1.5
29	-1...+1	2
30	-1...+1.6	3
31	-1...+2.5	4
32	-1...+3	5
33	-1...+4	6
34	-1...+5	10
35	-1...+6	12
36	-1...+9	15
37	-1...+10	20
38	-1...+16	30
39	-1...+25	40
40	-1...+30	50
41	-1...+40	60
42	-1...+60	100

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Ordering code

Model	Measuring range	Type	Output	Pressure Port	Electrical Connection
A20	Range Code	G Gauge	E1 4...20mA	01 G $\frac{1}{4}$ A ISO9974-2	E1 DIN175301-803A/IP65
	99 Custom	A Absolute	E2 DC 1...5V	02 G $\frac{1}{2}$ A ISO9974-2	E2 M12 connector/IP65
			E3 DC 0...5V	03 G $\frac{3}{8}$ A ISO9974-2	E3 Cable outlet,1.5m
			E4 DC 0...10V	04 G $\frac{1}{4}$ A ISO9974-2 with damper	
			E5 DC 0.5...4.5V ratiometric	05 G $\frac{1}{2}$ A ISO9974-2 with damper	
			E6 DC 0.5...4.5V	06 G $\frac{3}{8}$ A ISO9974-2 with damper	
				07 G $\frac{1}{8}$ B EN837	
				08 G $\frac{1}{4}$ B EN837	
				09 G $\frac{1}{2}$ B EN837	
				10 M20x1.5 EN837	
				11 G $\frac{1}{8}$ Female EN837	
				12 G $\frac{1}{4}$ Female EN837	
				13 R $\frac{1}{4}$ ISO7	
				14 R $\frac{3}{8}$ ISO7	
				15 R $\frac{1}{2}$ ISO7	
				16 PT $\frac{1}{4}$ KS	
				17 PT $\frac{3}{8}$ KS	
				18 PT $\frac{1}{2}$ KS	
				19 M12x1.5 ISO9974-2	
				20 M14x1.5 ISO9974-2	
				21 M20x1.5 ISO9974-2	
				22 M20x1.5 ISO9974-2 with damper	
				23 $\frac{1}{8}$ NPT ANSI/ASME B1.20.1	
				24 $\frac{1}{4}$ NPT ANSI/ASME B1.20.1	
				25 $\frac{1}{2}$ NPT ANSI/ASME B1.20.1	
				26 $\frac{1}{8}$ NPT Female ANSI/ASME B1.20.1	
				27 $\frac{1}{4}$ NPT Female ANSI/ASME B1.20.1	
				28 $\frac{1}{2}$ NPT Female ANSI/ASME B1.20.1	
				29 7/16-20UNF-74° SAE J514E	

Accuracy	Lable	Accessories
05 0.5%FS	S Standard	MC1 Straight circular connector M12 x 1, 4-pin,With 2 m cable
02 0.25%FS	N Neutral packing	MC2 Straight circular connector M12 x 1, 4-pin,With 5 m cable
	C Custom label	MC3 Angled circular connector M12 x 1, 4-pin,With 2 m cable
		MC4 Angled circular connector M12 x 1, 4-pin,With 5 m cable