

Model VMEPT1020-T series

OEM Pressure transmitter Stainless steel
pressure sensor For high temperature
application



Features

- Measuring ranges from 100mbar to 400bar
- Gauge pressure, Absolute pressure
- Accuracy: $\pm 0.5\%$ FSO(Typ.)
- Calibrated and temperature compensated
- Stainless steel pressure sensor
- Output 4...20mA, 1...5 VDC, 0.5...4.5 VDC, RS485 etc.

Application

- Hydraulic and pneumatic
- Machine building
- Steam and heat exchange
- Water treatment
- IoT pressure measurement

Technical data

Performance	
Accuracy	$\pm 0.5\%$ FS@25°C(Typ.) $\pm 1.0\%$ FS@25°C(Max.) ¹⁾
Operating Temperature Range	-20 to 150°C, -20 to 200°C
Compensated Temperature Range	0 to 70°C
Overpressure	150%FS
Vibration	10 g RMS(20 to 2000Hz)
Shock	100 g(11ms)
Cycles	10x10 ⁵
Long Term Stability	$\pm 0.3\%$ FS

Electrical @25°C	
Output signal / Supply	2-wire 4...20 mA / V _S = 10...30 VDC
	3-wire 1...5 VDC / V _S = 10...30 VDC
	3-wire 0...5 VDC / V _S = 10...30 VDC
	3-wire 0...10 VDC / V _S = 12...30 VDC
	3-wire 0.5...4.5 VDC / V _S = 8...30 VDC
	3-wire 0.5...4.5 VDC ratiometric / V _S = 5 V $\pm$ 0.1 VDC
	3-wire 0.5...2.5 VDC / V _S = 3.3 V $\pm$ 0.1 VDC
	3-wire 0.5...2.5 VDC / V _S = 5 V $\pm$ 0.1 VDC
	3-wire 4...20mA(Level)+4...20mA(Temp.) / V _S = 12...30 VDC
	4-wire RS485 Modbus RTU / V _S = 12... 30 VDC
	4-wire I ² C / V _S = 3.3...5 VDC
Insulation Resistance	100 M Ω @100VDC
EMC Test	IEC61000-4-2/IEC61000-4-3
Reverse polarity protection	No damage – no function

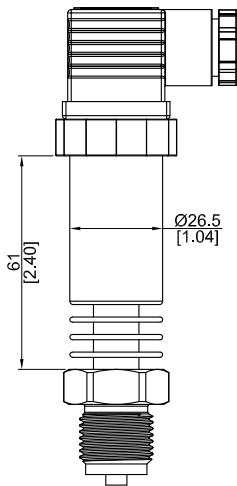
Physical Specifications	
Housing	SUS304 stainless steel
Diaphragm	SUS316L stainless steel
Oil Filling	Silicone oil
Protection	IP65
Weight	~250g

¹⁾ Linearity (best straight line) + Hysteresis + Repeatability

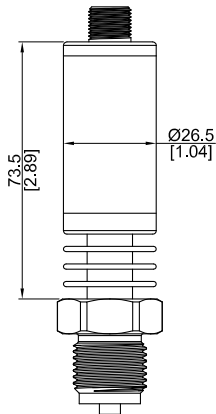


Dimensions in mm [in]

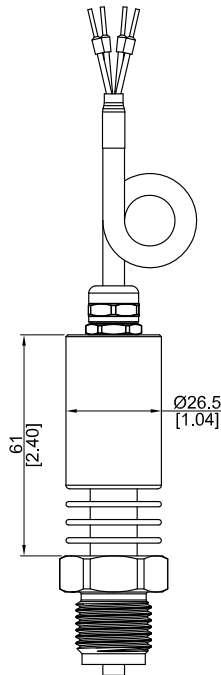
Code E1
DIN175301-803A/DIN43650/IP65



Code E2
Circular connector M12x1(4-pin)/IP66

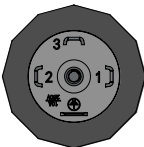


Code E4
Cable outlet,1.5m/IP67



S0~D5 output: Length of housing increases by 30mm

Electrical connections

DIN175301-803A /DIN43650		4...20 mA	0...10 VDC 0...5VDC 0.5...4.5VDC	RS485
		2-wire	3-wire	4-wire
	+Vcc	1	1	1
	OUT	2	3	-
	GND	-	2	2
	RS485A	-	-	3
	RS485B	-	-	• •

Circular connector M12x1(4-pin)		4...20 mA	0...10 VDC 0...5VDC 0.5...4.5VDC	RS485
		2-wire	3-wire	4-wire
	+Vcc	1	1	1
	OUT	3	4	-
	GND	-	3	3
	RS485A	-	-	2
	RS485B	-	-	4

Cable outlet		4...20 mA	0...10 VDC 0...5VDC 0.5...4.5VDC	RS485
		2-wire	3-wire	4-wire
	+Vcc	Red	Red	Red
	OUT	Green/Black	Yellow	-
	GND	-	Green	Green
	RS485A	-	-	Yellow
	RS485B	-	-	Blue



Range code

Code	Nominal pressure [bar]	Gauge	Sealed gauge	Absolute
00	0...0.05	✓		
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	-0.1...+0.1	✓		
20	-0.2...+0.2	✓		
21	-0.5...+0.5	✓		
22	-1...0	✓		
23	0...-1	✓		
24	-1...+1	✓		
25	-1...+1.6	✓		
26	-1...+2.5	✓		
27	-1...+4	✓		
28	-1...+6	✓		
29	-1...+9	✓		
30	-1...+10	✓		
31	-1...+16	✓		
32	-1...+25	✓		
33	0.8...2	✓		✓

Ordering code

Model	Range	Type	Output/Power supply	Electrical Connection
VMEPT1020-T	Code ²⁾	G Gauge	S1 4...20mA / V _S =10...30VDC	E1 DIN175301-803A/DIN43650/IP65
		A Absolute	S2 DC 1...5V / V _S =10...30VDC	E2 Circular connector M12x1(4-pin)/IP66
			S3 DC 0...5V / V _S =10...30VDC	E4 Cable outlet,1.5m/IP67
			S4 DC 0.5...4.5V / V _S =8...30VDC	
			S5 DC 0.5...4.5V ratiometric / V _S =5 V±0.1 VDC	
			S6 DC 0.5...2.5V / V _S =5 V±0.1 VDC	
			S7 DC 0.5...2.5V / V _S =3.3 V±0.1 VDC	
			S8 DC 0...10V / V _S =12...30VDC	
			S0 4...20 mA(Pre.)+4...20mA(Temp.) / V _S = 12...30 VDC ³⁾	
			D1 4...20 mA+HART/V _S =12...30 VDC	
			D2 RS485 Modbus RTU(Pre.)/V _S =12...30 VDC	
			D3 RS485 Modbus RTU(Pre.)/V _S =3.6...5 VDC	
			D4 RS485 Modbus RTU(Pre.+Temp.)/V _S =12...30 VDC ³⁾	
			D5 RS485 Modbus RTU(Pre.+Temp.)/V _S =3.6...5 VDC ³⁾	
			D6 I ² C(Pre.+Temp.) / V _S = 3.3...5 VDC ⁴⁾	

Pressure Port			Accuracy	Medium Temperature
01	G¼ male	12 ½NPT male	A2 0.25%FS	T3 -20 to 150°C(Standard)
02	G½ male	13 PT¼ male	A3 0.5%FS(Standard)	T4 -20 to 200°C
03	G¾ male	14 PT½ male	A4 1.0%FS	
04	G¼ B male	15 R¼ male		
05	G¼ B male	16 R½ male		
06	G½ B male	17 M12x1.5 male		
07	G¾ B male	18 M14x1.5 male		
08	7/16-20UNF with 74° taper	19 M20x1.5 male		
09	7/16-20UNF with 90° taper	20 G¼ female		
10	½NPT male	21 ¼NPT female		
11	¾NPT male			

Sensor sealing	Explosion-proof
N NBR (Standard)	N No (Standard)
F FKM	IA Ex ia II CT6 ⁵⁾
E EPDM	
W Welding	

²⁾ The pressure unit can be selected from mH₂O, inH₂O, psi, mbar, bar, kPa.

³⁾ For temperature measurement output, temperature measurement range = -20...+80°C

⁴⁾ I²C output, cable length ≤15m.

⁵⁾ Intrinsic safety explosion-proof, power supply=12...28 VDC, output can only be 4...20mA



Accessory [Optional]		
Description	Version	Order number
 Circular connector M12x1, 4-pin, straight	With 2 m PVC cable	M124S2PV
	With 5 m PVC cable	M124S5PV
	With 2 m PUR cable	M124S2PU
	With 5 m PUR cable	M124S5PU
 Circular connector M12 x 1, 4-pin, angled	With 2 m PVC cable	M124A2PV
	With 5 m PVC cable	M124A5PV
	With 2 m PUR cable	M124A2PU
	With 5 m PUR cable	M124A5PU

