

PRESSURE TRANSMITTER

PM20S series



Features

- Stainless steel pressure sensor
- Measuring ranges from 50mbar to 600bar
- Gauge pressure, Absolute pressure
- Accuracy: $\pm 0.25\%$ of FS(Typ.), $\pm 0.5\%$ of FS(Max.)
- Calibrated and temperature compensated
- Output 4...20mA, 1...5VDC, 0.5...4.5VDC, RS485 etc.



Technical data

Performance	
Accuracy	$\pm 0.25\%$ of FS @25°C(Typ.) $\pm 0.5\%$ of FS @25°C(Max.) Linearity (best straight line) + Hysteresis + Repeatability
Operating Temperature Range	-20 to 85°C
Compensated Temperature Range	0 to 70°C
Overpressure	150% of FS
Vibration	10 g RMS (20 to 2000Hz)
Shock	100 g (11ms)
Cycles	10×10^5
Long Term Stability	$\pm 0.3\%$ of FS
Electrical @25°C	
Output signal / Supply	2-wire 4...20mA / $V_s = 10...30\text{VDC}$
	3-wire 1...5VDC / $V_s = 10...30\text{VDC}$
	3-wire 0...5VDC / $V_s = 10...30\text{VDC}$
	3-wire 0...10VDC / $V_s = 12...30\text{VDC}$
	3-wire 0.5...4.5VDC / $V_s = 8...30\text{VDC}$
	3-wire 0.5...4.5VDC ratiometric / $V_s = 5\text{V} \pm 0.1\text{VDC}$
	3-wire 0.5...2.5VDC / $V_s = 3.3\text{V} \pm 0.1\text{VDC}$
	3-wire 0.5...2.5VDC / $V_s = 5\text{V} \pm 0.1\text{VDC}$
	4-wire RS485 Modbus RTU / $V_s = 12...30\text{VDC}$
	4-wire I ² C / $V_s = 3.3...5\text{VDC}$
Insulation Resistance	100M Ω @100VDC
EMC Test	IEC61000-4-2 / IEC61000-4-3
Reverse polarity protection	No damage – no function
Physical Specifications	
Housing	stainless steel SS304 (standard) ; SS316(option)
Diaphragm	stainless steel SS316L
Oil Filling	Silicone oil
Sealing	FKM (standard) ; Fully welded structure (option)

PRESSURE TRANSMITTER

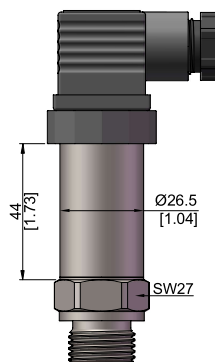
PM20S series



Dimensions in mm [in]

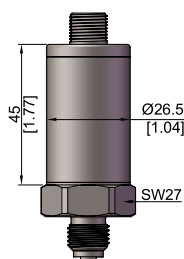
Code: D

DIN175301-803A / DIN43650 /
IP65



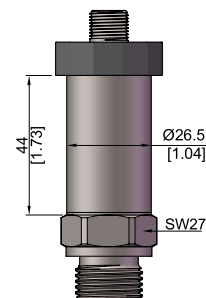
Code: M

Circular connector M12x1(4-pin)
/ IP66



Code: H

DIN43650 with Circular
connector M12x1(4-pin) / IP65



Accessory: cable with circular connector M12x1(4-pin)
PVC cable or PUR cable / 2 meters or 5 meters

Straight Type

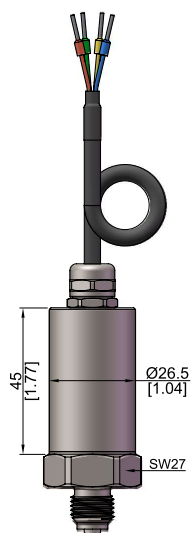


Angled Type



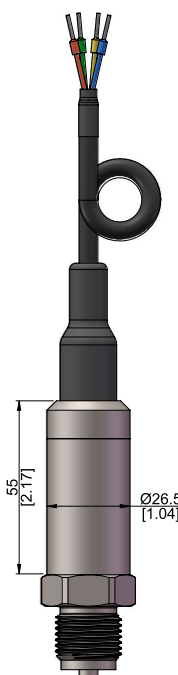
Code: C

Cable outlet, 1.5M / IP67



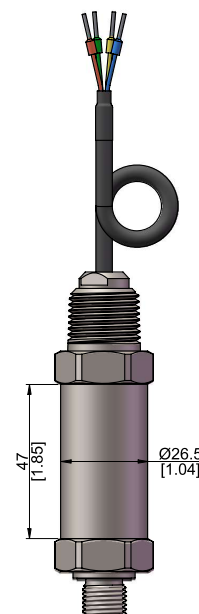
Code: C1

Cable outlet, 1.5M / IP68



Code: C2

1/2NPT conduit male,
with cable outlet, 1.5M / IP67



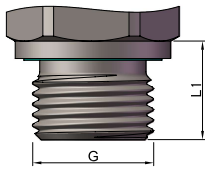
RS485 output: Length of housing increases by 30mm

PRESSURE TRANSMITTER

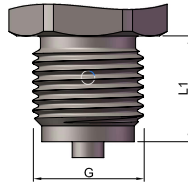
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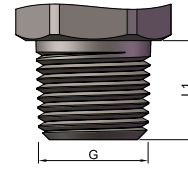
Process connections in mm



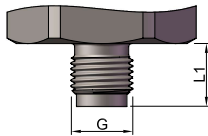
G	L1	Standard
G1/4A	14	DIN EN ISO 1179-2
G1/2A	17	
G3/4A	17	
M12x1.5	14	DIN EN ISO 9974-2
M14x1.5	14	
M20x1.5	16.5	



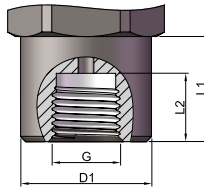
G	L1	Standard
G1/4B	13	EN 837
G3/8B	16	
G1/2B	20	
M12x1.5	15	
M20x1.5	20	



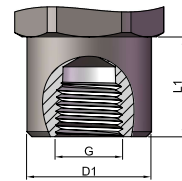
G	L1	Standard
1/8NPT	10	ANSI / ASME B1.20.1
1/4NPT	13	
1/2NPT	19	
PT1/4	13	KS
PT1/2	19	
R1/4	13	ISO7
R1/2	19	



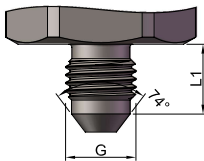
G	L1	Standard
G1/8B	10	EN 837



G	D1	L1	L2	Standard
G1/4 Female	25	20	15.5	ISO 1179-2



G	D1	L1	L2	Standard
1/8NPT Female	25	20	12	ANSI / ASME B1.20.1
1/4NPT Female	25	20	14	
1/2NPT Female	25	25	19	



G	L1	Standard
7/16-20UNF-74°	14	SAE J514E

Electrical connections

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

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

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

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Ordering code

(1) Model						
PM20S						
(2) Range						
	N001	-1...0bar	0025	0...2.5bar	1000	0...100bar
	C001	-1...+1bar	0040	0...4bar	1600	0...160bar
	0000	0...0.05bar	0060	0...6bar	2500	0...250bar
	0001	0...0.1bar	0100	0...10bar	4000	0...400bar
	0002	0...0.2bar	0160	0...16bar	6000	0...600bar
	0006	0...0.6bar	0250	0...25bar		
	0010	0...1bar	0400	0...40bar	*Other ranges can be customized.	
	0016	0...1.6bar	0600	0...60bar	*The pressure unit can be selected from kg/cm ² , psi, MPa, kPa, etc.	
(3) Pressure Type						
G		Gauge Pressure				
A		Absolute Pressure				
(4) Output						
42		4...20mA / V _S =10...30VDC			45R	DC 0.5...4.5V ratiometric / V _S =5±0.1VDC
15		DC 1...5V / V _S =10...30VDC			25	DC 0.5...2.5V / V _S =5±0.1VDC
05		DC 0...5V / V _S =10...30VDC			25S	DC 0.5...2.5V / V _S =3.3±0.1VDC
10		DC 0...10V / V _S =12...30VDC			RS485	RS485 Modbus RTU / 12... 30VDC
45		DC 0.5...4.5V / V _S =8...30VDC			IC	I ² C / V _S = 3.3...5VDC
(5) Accuracy						
02		±0.25% of FS				
05		±0.5% of FS				
(6) Electrical connection						
D		DIN175301-803A / DIN43650			C	Cable outlet, 1.5M / IP67
M		Circular connector M12x1(4-pin)			C1	Cable outlet, 1.5M / IP68
H		DIN43650 with M12x1(4-pin)			C2	1/2NPT conduit male, with cable outlet, 1.5M / IP67
DP9		With Digital Display DP-9: 4-20mA / circular connector M12x1(5-pin)				
DP7		With Digital Display DP-7: RS485 / DIN43650				
(7) Pressure Port						
G4A		G1/4A male	N1	1/8"NPT male	M4	M14x1.5 male
G2A		G1/2A male	N4	1/4"NPT male	M2	M20x1.5 male
G6A		G3/4A male	N2	1/2"NPT male	G4F	G1/4 female
G1B		G1/8B male	R4	1/4"PT male	N4F	1/4"NPT female
G4B		G1/4B male	R2	1/2"PT male	N2F	1/2"NPT female
G2B		G1/2B male	7U	7/16-20UNF	XX	Others
(1)	(2)	(3)	(4)	(5)	(6)	(7) Example : PM20S-0010-G-42-02-D-G4A

Option: Digital Display (4-20mA or RS485 Modbus RTU output only)

Model	DP-3 Removable	DP-3-L Removable	DP-9 Non-Removable	DP-7 Non-Removable
Display	4-Digit LCD	4-Digit LED	4-Digit LED	4-Digit LED
Output / Switching	4-20mA / without	4-20mA / Relay or NPN	4-20mA / NPN	RS485 / without
Electrical connection	DIN43650	DIN43650	M12x1(5-pin)	DIN43650