

Model PM20F

For General Industrial Applications



Product Overview

The PM20F metal foil strain gauge pressure transmitter is designed for superior high pressure applications up to 600bar. This model provides a very high long-term stability and a very good accuracy. The transmitter is featured with no O-ring, free of leakage risks. The compact and rugged design makes these pressure transmitter suitable for applications including process control systems, hydraulic systems and valves, refrigeration and HVAC controls, level measurement and test equipment. A wide range of process connection and electrical connection options are available to meet almost requirement.

Applications

- Process control systems
- Hydraulic systems and valve
- Mechanical and plant engineering
- Test equipment

Features

- Measuring ranges from 16bar to 600bar
- Gauge type
- Accuracy: $\pm 0.25\% \text{ FSO}$, $\pm 0.5\% \text{ FSO}$
- Calibrated and temperature compensated
- Foil strain gauge pressure sensor design
- Fully welded structure, no-ring inside
- Variety of Pressure & Electrical connections
- Output 4...20mA, 0...10V, 0.5...4.5V and others

Standard Pressure Range

Nominal pressure	gauge	sealed gauge	absolute
0...16bar	●		
0...25bar	●		
0...40bar	●		
0...60bar	●		
0...100bar	●		
0...160bar	●		
0...250bar	●		
0...400bar	●		
0...600bar	●		

other pressure ranges available. Please consult the factory.

Performance Specifications

Parameter	Value	Units	Notes
General			
Pressure Range	0-16,...,600	bar	1bar=14.5psi
Overpressure	1.5xFS	bar	
Environmental			
Operating Temperature Range	-40 to +85	°C	-40°F to 185°F
Compensated Temperature Range	0 to +70	°C	32°F to 158°F
Storage Temperature Range	-40 to +125	°C	-40°F to 257°F
Vibration	10	g	20 to 2000Hz
Shock	100	g	10ms
Cycles	10x10 ⁶	cycles	
Electrical @25°C(77°F)			
Output Signal	4...20mA 0...5Vdc 1...5Vdc 0...10Vdc 0.5...4.5Vdc(ratiometric)		
Power Supply(Vs)	12...36Vdc 12...36Vdc 12...36Vdc 15...36Vdc 5Vdc		
Load Resistance	<(Vs-12)/0.02A (For current output), >10kΩ (For voltage output)		
Insulation Resistance	100MΩ@50Vdc		

Physical Specifications

Media Compatibility	All media compatible with stainless steel
Housing	304 stainless steel
Diaphragm	stainless steel
Seal Ring	/
Oil Filling	/
Protection	IP65(Standard), IP66(only for cable outlet)
Net Weight	Approx.280g

Parameter	Minimum	Typical	Maximum	Units	Notes
Performance					
Accuracy	0.1	0.25	0.5	%FSO	1,2
Temp Coeff - Zero		±1.0	±1.5	%FSO	3
Temp Coeff - Span		±1.0	±1.5	%FSO	3
Long-Term Stability		±0.2	±0.3	%FSO/year	1

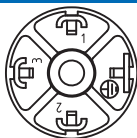
Notes

1. All values measured at 25°C(77°F)
2. Including non-linearity, hysteresis and repeatability.
3. -10°C to 70°C(32°F to 158°F) with reference to 25°C(77°F).

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

Connection Diagrams

Connector DIN43650



	2-wire(current)	3-wire(voltage)
Supply+	1	1
Signal+	2	3
Gnd	-	2

Connector M12x1 (4-pin)



	2-wire(current)	3-wire(voltage)
Supply+	1	1
Signal+	2	3
Gnd	-	2

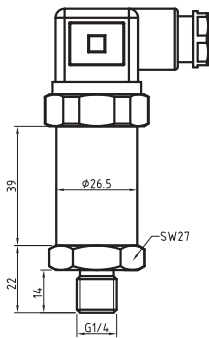
Cable outlet



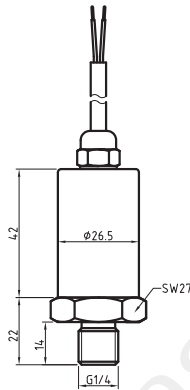
	2-wire(current)	3-wire(voltage)
Supply+	red	red
Signal+	black	green
Gnd	-	black

Dimensions (in mm)

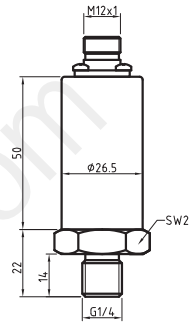
Connector DIN43650



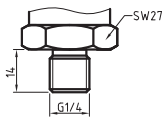
Cable outlet with PVC-cable



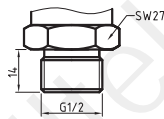
M12x1, 4-pin



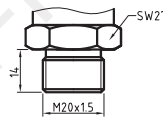
Mechanical Connection (in mm)



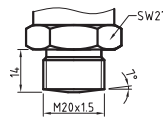
G1/4



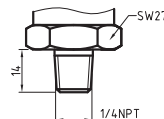
G1/2



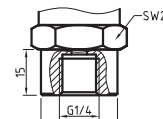
M20x1.5



M20x1.5-A



1/4NPT



G1/4(F)

Ordering Information

Option1: Model							
PM20F	Foil Strain Gauge Pressure Transmitter						
Option2: Pressure Ranges							
0160	0...16bar	4000	0...400bar				
0250	0...25bar	6000	0...600bar				
0400	0...40bar	Cxxx	Customized range				
0600	0...60bar						
1000	0...100bar						
1600	0...160bar						
2500	0...250bar						
Option3: Pressure Type							
G	gauge						
Option4: Output Signal							
42	4...20mA						
05	0...5Vdc						
15	1...5Vdc						
10	0...10Vdc						
45	0.5...4.5(ratiometric)						
Option5: Accuracy							
02	0.25%FSO						
05	0.5%FSO						
Option6: Electrical Connection							
D	Connector DIN43650						
C	Cable outlet with PVC-cable,length=1.5m						
M	M12x1, 4-pin						
Option7: Mechanical Connection							
M2	M20x1.5(male)	G2	G1/2(male)	Nx	Customized		
M2A	M20x1.5-A(male)	N1	1/4NPT(male)				
G4	G1/4(male)	F4	G1/4(female)				
PM20F	0400	G	42	02	D	G4	Examples of Ordering Code: PM20F-0400-G-42-02-D-G4