



Flush Diaphragm Pressure Transmitter



Model TFP-310 Food and Beverage Industry



Features

- Measuring ranges from 1bar to 100bar
- Absolute, gauge and sealed gauge
- Accuracy: $\pm 0.25\%FSO$ or $\pm 0.5\%FSO$
- Calibrated and temperature compensated
- Flush diaphragm construction
- Piezoresistive pressure sensor design
- Variety of Pressure & Electrical connections
- Output 4...20mA, 0...10V, 0...5V and others

Product Overview

TFP-310 is made from high-quality silicon piezoresistive chip. All process connections of the flush pressure transmitter are made of stainless steel, fully welded and isolate the process medium from the pressure measuring instrument via a positive seal. The TFP-310 is precision engineered to fit food, pharmaceutical and chemical liquid pressure measurement.

A wide range of process connection and electrical connection options are available to meet almost requirement.

Applications

- Process control systems
- Food and beverage
- Medical
- Papermaking

Standard Pressure Ranges

Nominal pressure	gauge	sealed gauge	absolute
0...1bar	•		•
0...1.6bar	•		•
0...2.5bar	•		•
0...4bar	•		•
0...6bar	•		•
0...10bar	•	•	•
0...16bar	•	•	•
0...25bar	•	•	
0...60bar		•	
0...100bar		•	

Other pressure ranges available. Please consult the factory.

TFP-310: Flush Diaphragm Pressure Transmitter

Performance Specifications

Parameter	Value	Units	Notes
General			
Pressure Range	0-1,...,100	bar	1bar=14.5psi
Overpressure	1.5xFS		

Environmental

Operating Temperature Range	-20 to +85(standard), -20 to +150	°C	-4 °F to 185 °F
Compensated Temperature Range	-10 to +70	°C	14 °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 ⁵	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 316L stainless steel
Housing	304 stainless steel
Diaphragm	316L stainless steel
Seal Ring	Viton or NBR
Oil Filling	Silicone oil
Protection	IP65(Standard)
Net Weight	Approx.285g

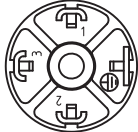
Parameter	Minimum	Typical	Maximum	Units	Notes
Performance					
Accuracy	0.1	0.25	0.5	%FSO	1,2
Temp Coeff - Zero		±1.5	±2	%FSO	3
Temp Coeff - Span		±1.5	±2	%FSO	3
Long-Term Stability		±0.2	±0.3	%FSO/year	1

Notes

1. All values measured at 25°C(77°F)
2. Including non-linearity, hysteresis and repeatability.
3. -10°C to 70°C(14°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)		Cable outlet	2-wire(current)		3-wire(voltage)		
	Supply+	1	Signal+	2	Gnd	-	2			
	Supply+	1	Signal+	3	Gnd	-	2	Supply+	red	red
	Supply+	1	Signal+	3	Gnd	-	2	Signal+	black	green
	Supply+	1	Signal+	3	Gnd	-	2	Signal+	black	black

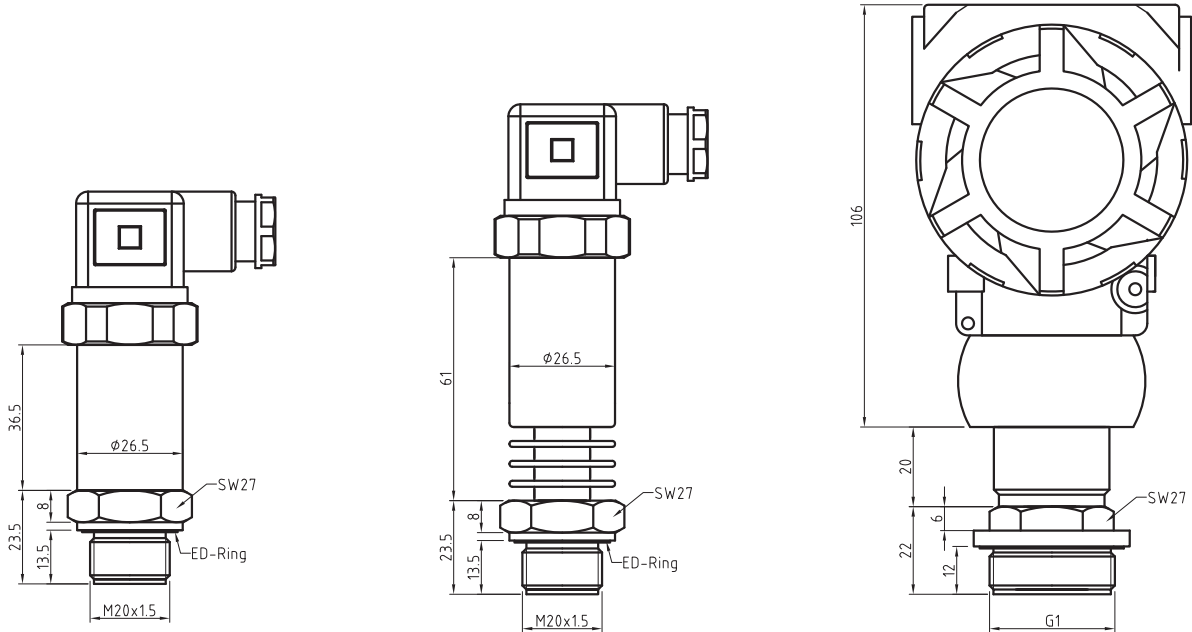
TFP-310: Flush Diaphragm Pressure Transmitter

Dimensions (in mm)

Connector DIN43650
Operating Temperature Range
-20 to +85°C

Connector DIN43650
Operating Temperature Range
-20 to +150°C

2088 housing
Operating Temperature Range
-20 to +150°C



Ordering Information

Option1: Model							
TFP-310	Flush Diaphragm Pressure Transmitter						
Option2: Pressure Ranges							
0010	0...1bar	0250	0...25bar				
0016	0...1.6bar	0400	0...40bar				
0025	0...2.5bar	0600	0...60bar				
0040	0...4bar	1000	0...100bar				
0060	0...6bar	Cxxx	Customized range				
0100	0...10bar						
0160	0...16bar						
Option3: Pressure Type							
G	gauge						
A	absolute						
S	sealed 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							
DL	Connector DIN43650, Operating Temperature Range:-20 to +85°C						
DH	Connector DIN43650, Operating Temperature Range:-20 to +150°C						
H	2088 housing, Operating Temperature Range:-20 to +150°C						
-	-						
Option7: Mechanical Connection							
K2	2 inch clamp flange interface(Ø 50.4mm)						
K25	2.5 inch clamp flange interface(Ø 64mm)						
NX	Customized						
TFP-310	0010	G	42	02	DL	K2	Examples of Ordering Code: TFP-310-0010-G-42-02-DL-K2

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