

PIEZORESISTIVE PRESSURE TRANSMITTER HIGH TEMPERATURE



For High Temperature Applications

IPS-PT-10



FEATURES

- Measuring ranges from 100mbar to 600bar
- Absolute, gauge and sealed gauge
- Accuracy: $\pm 0.5\%$ FSO, $\pm 0.2\%$ FSO (optional)
- Calibrated and temperature compensated
- Stainless steel construction
- Wider operation temperature range
- Variety of Pressure & Electrical connections
- Output 4...20mA, 0...10V, 0...5V and ModBus RS485

PRODUCT OVERVIEW

IPS-PT-10 is made from high temperature silicon piezoresistive sensor chip. The piezoresistive sensor chip is packaged in a fluid-filled cylindrical cavity and isolated from measured media by a stainless steel diaphragm and housing. The measured media is transferred onto sensor through heating cooling parts, and high accuracy amplified circuit board is in stainless steel housing, transmitting sensor signal into standard output signal.

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

APPLICATIONS

- Process Control System
- Steam and heat exchange
- Hydraulic systems and valve
- Machine building
- Pharmaceutical Industries
- Dairy Processing Industries
- Paper & Pulp Industries

STANDARD PRESSURE RANGE

Nominal pressure	gauge	sealed gauge	absolute
-1...0bar	•		
0..0.1bar	•		
0..0.2bar	•		
0..0.35bar	•		•
0..0.7bar	•		•
0..1bar	•		•
0..1.6bar	•		
0..2.5bar	•		•
0..4bar	•		•
0..6bar	•		•
0..10bar	•	•	•
0..16bar	•	•	•
0..25bar	•	•	
0..60bar		•	
0...100bar		•	
0..250bar		•	
0..400bar		•	
0..600bar		•	

Other pressure ranges available. Please consult the factory.



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CIN : U52399MH2021PTC368555

Performance and Specifications

IPS-PT-10

Parameter	Value			Units	Notes
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General

Pressure Range	-1-0,...,0-0.35,...,600			bar	1bar=14.5psi
Over Pressure	1.5 x FS			bar	

Environmental

Medium Temperature Range	0 to +150(standard), 0 to +220(optional)			°C	32 °F to 302 °F
Compensated Temperature Range	-10 to +70			°C	14 °F to 158 °F
Storage Temperature Range	-20 to +85			°C	-4 °F to 185 °F
Vibration	10			g	20 to 2000Hz
Shock	100			g	10 ms
Cycles	10x10 ⁶			Cycles	

Electrical

Output Signal	4...20mA	0.....5 Vdc	1.....5 Vdc	0.....10Vdc	0.5.....4.5Vdc (ratiometric)
Power Supply(Vs)	12....36Vdc	12....36Vdc	12....36Vdc	15....36Vdc 5V	5 Vdc
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	316 stainless steel, Die cast aluminium flameproof Exd as per IS/IEC 60079-1:2014				
Diaphragm (Wetted Part)	316L stainless steel				
Seal Ring	Viton or NBR				
Oil Filling	Silicon Oil				
Protection	IP65(Standard), IP67 (Only for flameproof enclosure)				
Net Weight	Approx.355g				

Parameter	Minimum	Typical	Maximum	Units	Notes
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Performance

Accuracy	0.1	0.2	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:

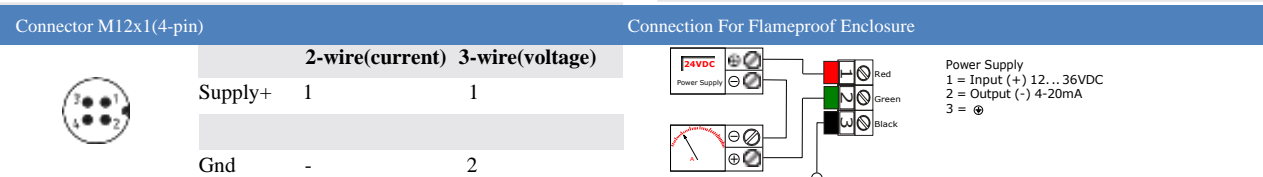
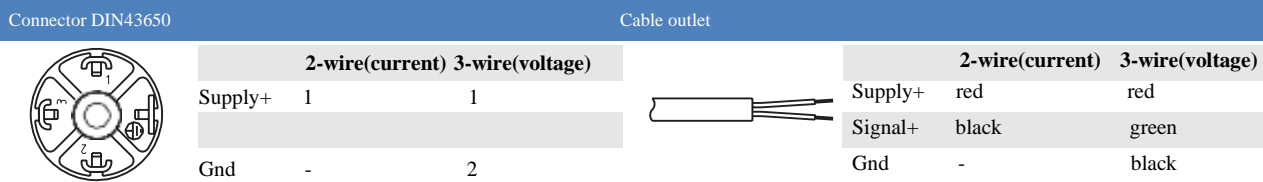
- All values measured at 25°C(77°F)
 - Including non-linearity, hysteresis and repeatability.
 - 10°C to 70°C(14°F to 158°F) with reference to 25°C(77°F).
- The listed specifications and dimensions are subject to change without prior notice.

Process Indicator

Dimension: 65 x 45 x 45 mm
 Display: 4 Digit 7 Segment
 Display resolution: 1999 to 9999
 Input: 4-20mA
 Accuracy: mA : 0.5% of span
 Enclosure: ABS



Connection Diagrams



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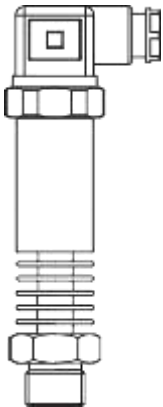
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Electrical Connection

Connector DIN43650



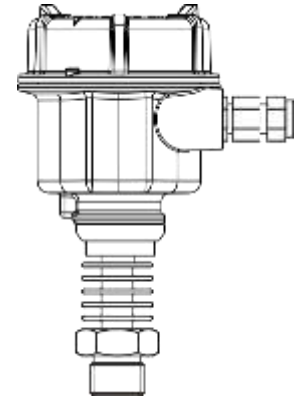
Cable outlet with PVC cable



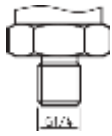
M12x1, 4-pin



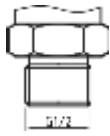
With Flameproof Enclosure



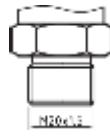
Mechanical Connection



G1/4



G1/2



M20X1.5



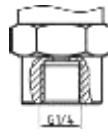
1/4NPT



1/2NPT



G1/4(F)



N1/4(F)

Ordering Information

IPS-PT-10 2500 G 1 G2 IX D 01			
MODEL FAMILY			ACCURACY
IPS-PT-10 Piezoresistive Pressure Transmitter (High Temperature)			01 = 0.5% FS
			02 = 0.2% FS (Optional)
PRESSURE RANGE			ELECTRICAL CONNECTION
N001 = -1...0bar	0040 = 0 - 4 Bar	1000 = 0 - 100 Bar	D = Connector DIN43650
0001 = 0...0.1bar	0060 = 0 - 6 Bar	1600 = 0 - 160 Bar	C = Cable outlet with PVC-cable,length=1.5m
0003 = 0...0.35bar	0100 = 0 - 10 Bar	2500 = 0 - 250 Bar	M = M12x1, 4-pin
0007 = 0...0.7bar	0160 = 0 - 16 Bar	4000 = 0 - 400 Bar	HAX = With Flameproof Enclosure as per IS/IEC 60079-1:2014; suitable for gas group IIC, T6
0010 = 0...1bar	0250 = 0 - 25 Bar	6000 = 0 - 600 Bar	INDICATOR
0016 = 0 - 1.6 Bar	0350 = 0 - 35 Bar	PRS = Customized range	IX = Without Indicator
0025 = 0 - 2.5 Bar	0600 = 0 - 60 Bar		I = With Indicator
PRESSURE TYPE			MECHANICAL CONNECTION
G = Gauge			M2 = M20x1.5 (M)
A = Absolute Gauge			G2 = G 1/2" (M)
S = Sealed Gauge			G4 = G 3/4" (M)
			F4 = G 1/4" (F)
OUTPUT SIGNAL			N1 = 1/4" NPT (M)
1 = 4 - 20 mA			N2 = 1/2" (M)
2 = 1 - 5 Vdc			F5 = 3/8" NPT (F)
3 = 0 - 5 Vdc			Nx = Customized
4 = 0 - 10 Vdc			
5 = 0.5...4.5(ratiometric)			
6 = RS 485			

Due to continuous development of our products technical information's are subject to change.

Please ensure the compatibility between the measured medium and the contacting part of the product when placing an order.

IP SPL reserves the right to make any change in this datasheet without notice. The information provided is believed to be accurate and reliable as of this product sheet. Contact factory for custom configurations not shown