

# Foxboro® IDP10M

## Modbus differential pressure transmitter

The Foxboro® IDP10M Modbus Pressure Transmitter is an accurate and intelligent transmitter that offers precise measurement of differential pressure in a compact, robust package. As a fully digital transmitter, the product is networked using Modbus over Ethernet or a selectable RS485/232 serial line.

Easy to install and operate, any Modbus master can access and control a large number of these transmitters. The Foxboro® Modbus Pressure Transmitter is a natural choice in a wide variety of oil, gas, water and industrial applications.



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# Specifications

Features	
Optional Analog Output	0 - 20mA, 12 bit, sinking Control of measured variable for PID logic control of RTU
LCD Interface	Two button control, 2-line interface with 13 characters
Communications	
Serial Port	RS232/485 configurable, 1200 to 38400 baud
Serial Protocol	Modbus RTU
Ethernet Port	10BaseT, terminal block connection
Ethernet Protocols <sup>1</sup>	Modbus/UDP, Modbus RTU in UDP
Performance Specifications <sup>1</sup>	
Pressure Accuracy <sup>2</sup>	±0.06% for Spans ≥10% URL ±[0.025 + 0.0035 (URL/Span)]% for Spans <10% URL Add ±0.02% for Span Code E
Stability	<±0.05% of URL per year over 5-year period
Analog Output Accuracy	<ul style="list-style-type: none"> <li>±0.15% of Full Scale at 25°C (77°F)</li> <li>±0.25% of Full Scale over Temperature Range</li> </ul>
Physical Specifications	
Power	9 to 30 Vdc Supply 76 mW with RS-232 or RS-485 Serial 200 mW with Ethernet LAN 600 mW with Analog Output externally powered
Mass	3.5kg (7.8lb) without process connectors
Environmental	5% RH to 95%, non-condensing – 40°C (– 40°F) to 70°C (158°F)

1 Zero-Based Calibrations; Stainless Steel Sensor w/Silicone Fluid; Under Reference Operating Conditions unless otherwise Specified;  
URL = Upper Range Limit and Span = Calibrated Span.

2 Includes Linearity, Hysteresis, and Repeatability.

# Specifications – continued

## Certifications

- cCSAus Explosionproof Class I, Div. 1 Groups B, C and D Hazardous Locations
- cCSAus Explosionproof Class I, Div. 2 Groups A, B, C and D Hazardous Locations
- Temperature code T5 at maximum ambient, 70°C
- Provides non-incendive field circuits for RTD

CSA certified to the following standards:

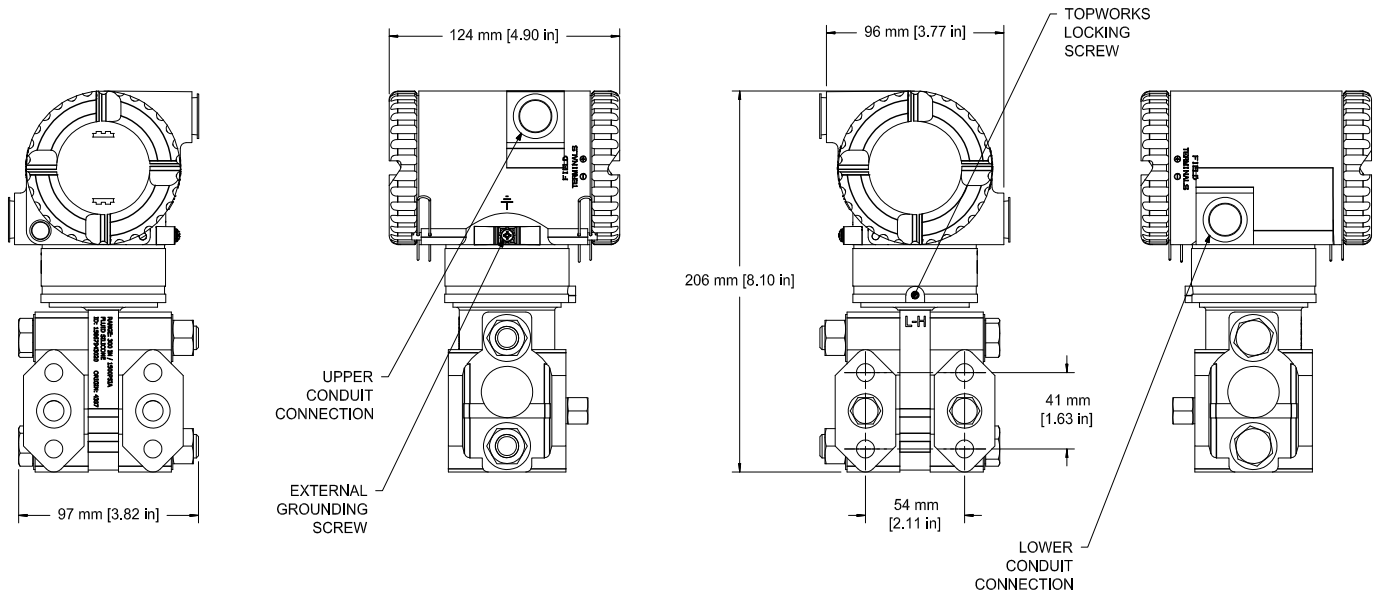
- CSA Std. C22.2 No. 213-M1987 - Class I, Division 2 Hazardous Locations
- CSA Std. C22.2 - No. 142-M1987 - Process Control Equipment
- UL Std. No. 1604 - Class I and II, Division 2; Class III Hazardous (Classified) Locations
- UL Std No. 916 - Energy Management Equipment

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# Model Code

Model	Product Description			
IDP10M	Differential Pressure Transmitter with Modbus RTU protocol			
Code	Process Cover	Sensor Material	Sensor Fill Fluid	Bolts
2	316 SS	316L SS	Silicone	CS-B7
Code	Span Limit			
	KPa	inH2O		
A	0.12 to 7.5 kPa	0.5 to 30		
B	0.87 to 50	3.5 to 200		
C	7 to 210	28 to 840		
	Mpa	PSI		
D	0.07 to 2.1	10 to 300		
E	0.7 to 21	100 to 3000		
Code	Process Connector Type			
0	1/4 NPT Internal Thread in Process Covers			
Code	Transmitter Housing Material	Conduit Entry		
1	Epoxy, coated, Aluminium	1/2 - 14 NPT		
Code	Approvals			
U	cCSAus Explosion proof Class 1, Div. 1 & Class1, Div 2, Groups A, B, C and D. Approved for Hazardous locations			
Code	Options			
0	None			
1	RS-232 Serial Comms Cable, 10 ft (3 m)			
2	Ethernet Comms Cable, 10 ft (3 m)			
Code	Display			
N	None			
A	Digital Indicator with Internal Pushbuttons and Window Cover			

# Dimensions



1 Conduit connection 1/2 NPT both sides; unused connection is sealed with supplied metal plug.

Note: Topworks can be rotated to any position within one turn counter clockwise of the fully tightened position.

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