

## Data Sheet

# ZX12 High Purity Pressure Transmitter with Increased Safety Approval for Hazardous Locations

### FEATURES

- ATEX and IECEx increased safety hazardous approval
- Can be used without safety barriers
- 316L Stainless steel wetted parts
- 7 µin Ra Surface finish option
- ¼" -18 UNF Male/Female, fixed, swivel and flow through process connections (compatible with ¼" VCR® fitting)
- 100% Helium leak tested
- Class 100 cleanroom packaged and double bagged
- Available in Gauge, Compound and Absolute ranges

### TYPICAL USES

- High purity gas delivery systems
- Gas sticks
- Process gas analyzers

### PERFORMANCE SPECIFICATIONS

Static Accuracy: ±0.25% of span @ 73.4 °F (23 °C)  
Accuracy includes the effects of linearity, hysteresis and repeatability

Stability: <0.25% of span/Yr

Temperature Effect: ±0.02% of span/°C (Zero & Span) in operating temperature range

### ENVIRONMENTAL SPECIFICATIONS

Operating Temperature: -4 °F to 158 °F (-20 °C to 70 °C)  
T4/T5: -4 °F to 158 °F (-20 °C to 70 °C)  
T6: -4 °F to 86 °F (-20 °C to 30 °C)

Storage Temperature: -22 °F to 176 °F (-30 °C to 80 °C)

### FUNCTIONAL SPECIFICATIONS

Ranges: Compound: Vacuum & 45 psi to Vacuum & 3000 psi  
Gauge: 0-45 psi to 0-3000 psi  
Absolute: 0-45 psi to 0-3000 psi

Response Time: ≤ 5 mSec (10% to 90%)

Leakage Test: < 5 x 10<sup>-11</sup> atm cc/s

Proof Pressure: 150% of F.S.

### ELECTRICAL SPECIFICATIONS

Output Signal: 4-20 mA (2 Wire)

Supply Voltage: 12-24 Vdc

Load Resistance: R max (Ω) = 50 (V supply) - 500 (see line load chart)

Insulation Resistance: > 100MΩ at 50 Vdc

EMC/EMI: EN61326-1: 2013, EN61326-2-3: 2013



**ZX12 Transmitter**  
Increased Safety  
Absolute Pressure

**ZX12 Transmitter**  
Increased Safety  
Gauge Pressure



### KEY BENEFITS

- Ultra-compact size ideal for high density mounting
- Ultraclean design & packaging
- 316L SS Wetted parts for protection against corrosion

### PHYSICAL SPECIFICATIONS

Ingress Rating: IP65

Case Material: 304 Stainless steel, PBT

Pressure Connection: ¼" -18UNF (compatible with ¼" VCR®) swivel Male or Female, or Male fixed or Male flow through


Surface Finish: 20 µin or 7 µin Ra (0.5 µm or 0.18 µm Ra)

Unit Weight: Appx 70g

### WETTED MATERIALS

Pressure Sensor: 316L Stainless steel

### APPROVALS

 CML 22ATEX4294X IECEx  
Ex ec II C T4/T5/T6 Gc CML 22.0033X  
-20 °C ≤ ta ≤ 70/70/30 °C

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<b>ORDERING CODE</b> Example:	<b>ZX12</b>	<b>3</b>	<b>MVS</b>	<b>42</b>	<b>E4</b>	<b>1</b>	<b>3000#</b>	<b>G</b>	<b>-X1N</b>
<b>Model</b>	ZX12								
<b>Accuracy</b>	3 - ±0.25% of span	3							
<b>Pressure Connection</b>	MVF - 1/16 -18 UNF (compatible with 1/4 VCR®) Male Fixed								
	MVS - 1/16 -18 UNF (compatible with 1/4 VCR®) Male Swivel		MVS						
	FVS - 1/16 -18 UNF (compatible with 1/4 VCR®) Female Swivel								
	MVT - 1/16 -18 UNF (compatible with 1/4 VCR®) Male Flow Through								
<b>Output</b>	42 - 4 to 20 mA (2 Wire)			42					
<b>Electrical Termination</b> (Note: Unit must be purchased with Ashcroft supplied cable assembly)	E4 - M12 Connector (4 Pin) w mating connector & 9 foot (3 meter) cable				E4				
<b>Surface Finish / Cleaning Grade</b>	0 - GP Grade 20 µin (0.5µm) Ra & grease free cleaned								
	1 - EP Grade 7 µin (0.18µm) Ra & cleaned with no particles 0.1µm or greater					1			
<b>Pressure Range</b>	V/45#								
	V/75#								
	V/150#								
	V/250#								
	V/300#								
	V/500#								
	V/750#								
	V/1500#								
	V/3000#								
	45#								
	75#								
	150#								
	250#								
	300#								
	500#								
	750#								
	1500#								
	3000# (See range table for all standard ranges)						3000#		
<b>Pressure Type</b>	G - Gauge and Compound							G	
	A - Absolute								
<b>Options (If indicating an option, must include an "X" (-X...))</b>									X
	1N - Material Test Report/ Traceability Certificate								1N

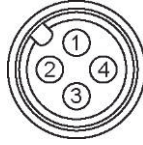
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### STANDARD RANGES (Note: Ranges with \* are available in both gauge and absolute ranges)

psi	bar	mPa
V/45#	N1/3BR	NP1/P3MP
V/75#	N1/5BR	NP1/P5MP
V/150#	N1/10BR	NP1/1MP
V/250#		
V/300#	N1/20BR	NP1/2MP
V/500#	N1/35BR	NP1/3P5MP
V/750#	N1/50BR	NP1/5MP
V/1500#	N1/100BR	NP1/10MP
V/3000#	N1/200BR	NP1/20MP
45#	3BR	P3MP
75#	5BR	P5MP
150#	10BR	1MP
250#	17BR	1P7MP
300#	20BR	2MP
500#	35BR	3P5MP
750#	50BR	5MP
1500#	100BR	10MP
3000#	200BR	20MP

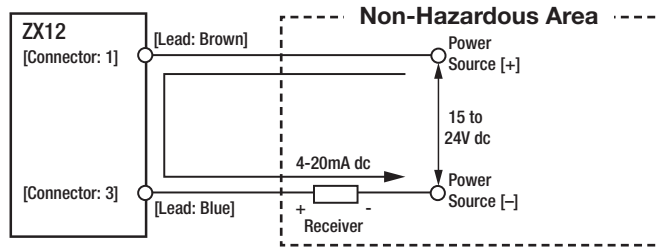
### CONNECTOR TERMINAL ARRAY



### CONNECTOR & WIRING

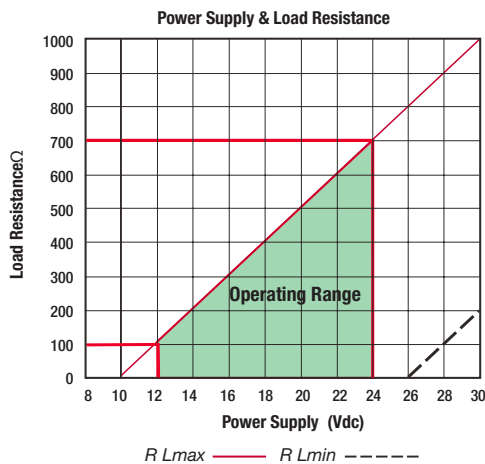
Terminal Number	2-Wire System	Cable Color
1	Power source (+)	Brown
2	-----	White
3	Power source (-)	Blue
4	-----	Black

### WIRING SCHEMATIC



- 1 - Brown: Power source (+)
- 3 - Blue: Power source (-)

### POWER SUPPLY & LOAD RESISTANCE

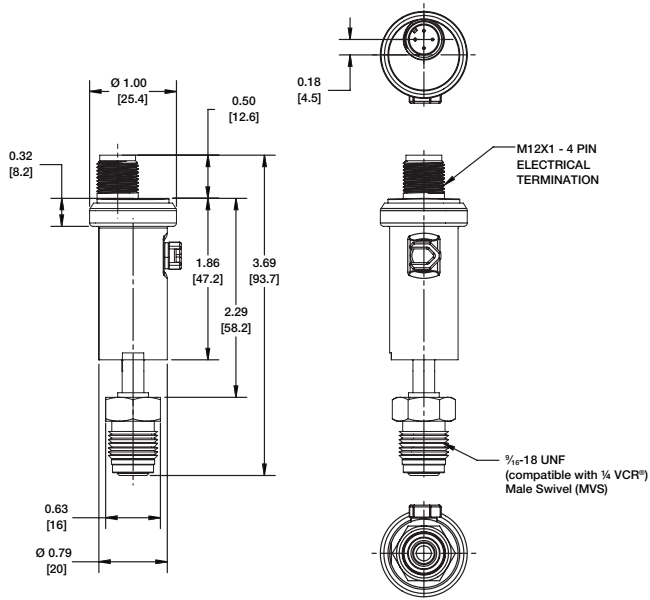


**Data Sheet**

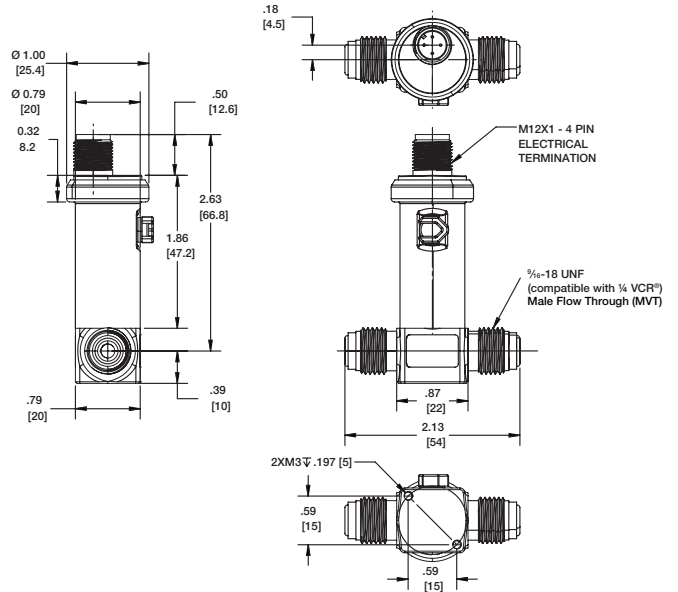
**ZX12 High Purity Pressure Transmitter with Increased Safety Approval for Hazardous Locations**

**DIMENSIONS Inches [mm]**

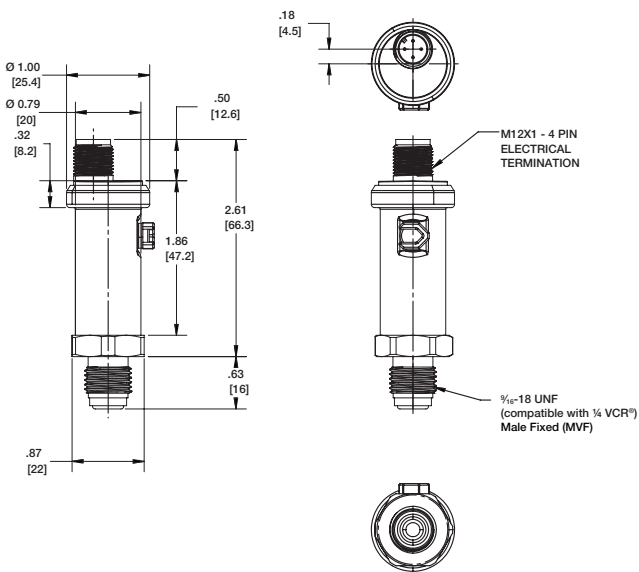
**MVS - 1/16 -18 UNF (compatible with 1/4 VCR®) Male Swivel**



**MVT - 1/16 -18 UNF (compatible with 1/4 VCR®) Male Flow Through**



**MVF - 1/16 -18 UNF (compatible with 1/4 VCR®) Male Fixed**



**FVS - 1/16 -18 UNF (compatible with 1/4 VCR®) Female Swivel**

