

## Data Sheet

# ZT12 High Purity Transmitter

### FEATURES

- 316L Stainless steel wetted parts
- 7 µin Ra Surface finish option
- 1/16"-18 UNF Male/Female fixed, swivel and flow through process connections (compatible with 1/4 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)<br>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)  |
| Storage Temperature:   | -22 °F to 176 °F (-30 °C to 80 °C) |
| Humidity:              | 35% to 85% RH                      |

### 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



ZT12 Transmitter  
Standard  
Absolute Pressure

ZT12 Transmitter  
Standard  
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: | 1/16"-18UNF (compatible with 1/4 VCR®) swivel male or female lower connection or 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

CE, UKCA, RoHS

# Data Sheet

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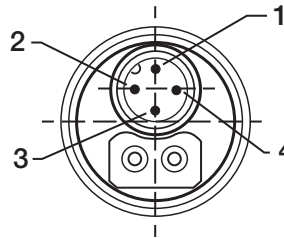
|   |   |          |            |           |           |          |              |          |             |
|---|---|----------|------------|-----------|-----------|----------|--------------|----------|-------------|
| <b>ORDERING CODE</b><br>Example:                                      | <b>ZT12</b>   | <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>  | ZT12  |          |            |           |           |          |              |          |             |
| <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>   | 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          |

# Data Sheet

## ZT12 High Purity Transmitter

### STANDARD 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  | NP1/3.5MP |
| 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     | 1.7MP     |
| 300#    | 20BR     | 2MP       |
| 500#    | 35BR     | 3P5MP     |
| 750#    | 50BR     | 5MP       |
| 1500#   | 100BR    | 10MP      |
| 3000#   | 200BR    | 20MP      |

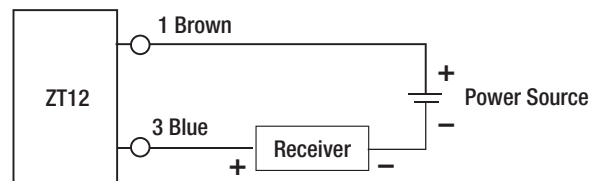
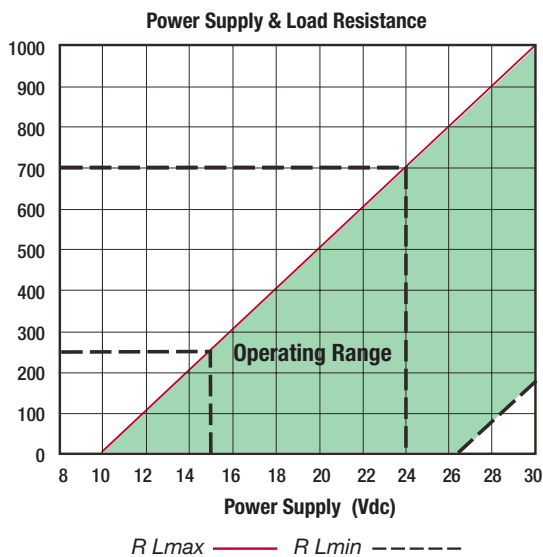


### CONNECTOR & WIRING

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

### POWER SUPPLY & LOAD RESISTANCE

### WIRING SCHEMATIC



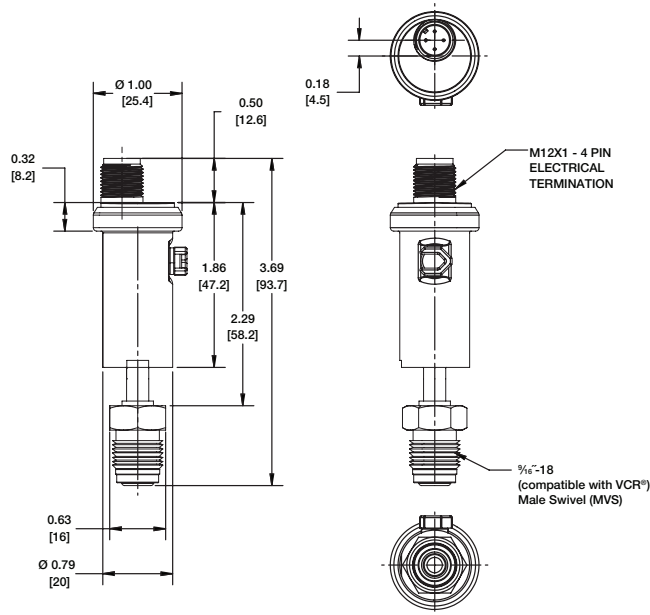
- 1- Brown: Power source (+)
- 3- Blue: Power source (-)

**Data Sheet**

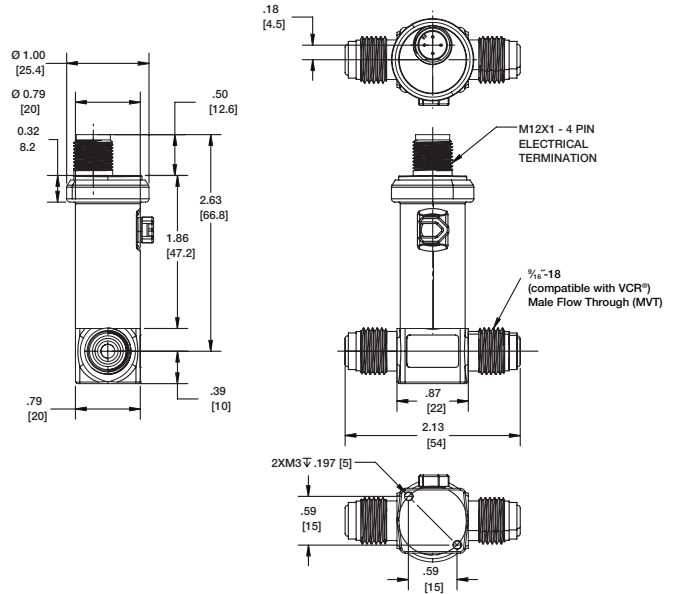
**ZT12 High Purity Transmitter**

**DIMENSIONS Inches [mm]**

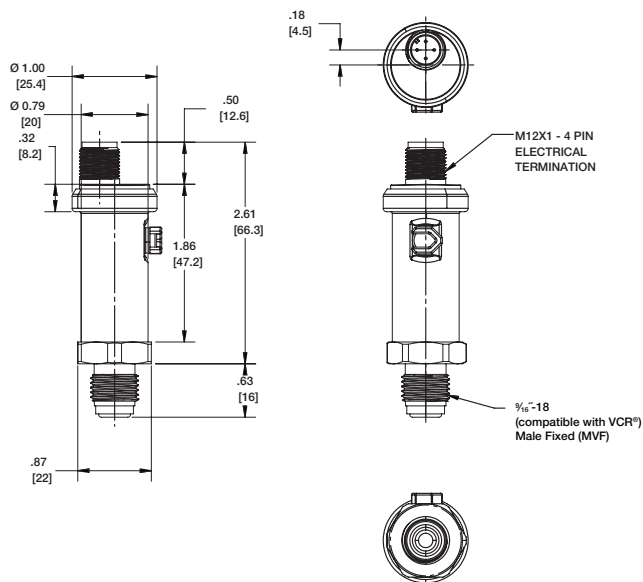
**MVS - 1/16"-18 UNF (compatible with 1/4 VCR®) Male Swivel**



**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**

