

Model 238TSC

High Precision Transmitter—Sanitary Style Connection

Applications

- Sanitary Applications
- Food & Beverage Industry
- Pharmaceutical Industry
- Water Treatment
- Industrial Environments
- Automotive Paint Systems



Model 238TSC

Features

- Ranges from 0 to 10 psi thru 0 to 600 psi
- FDA Approved Fill Fluid
- 4:1 Turndown with optional programming tool
- Zero Point adjustment can made using permaent magnet
- 4-20mA and 0-10Vdc Standard Industrial Output Signals
- 316L stainless steel wetted parts / 304 stainless steel body
- Industry standard electrical connections including DIN 175301-803A, C and Shielded Cable
- Highly flexible modular design
- Protection Class IP65/NEMA 4X, PUR Cable Connection IP68/NEMA 6P, M12 4 pin IP67 NEMA 6

The **TRERICE 238TSC** "Sanitary Connection" Digital-Programmable, Pressure Transmitter is the ideal choice for demanding pharmaceutical, food & beverage, water treatment and chemical applications. By use of the optional programming tool this transmitter provides 4 to 1 turn down and adjustable zero-point & span, allowing for multiple units of measure. The stainless membrane is completely vacuum-sealed, extremely burst resistant and is applicable for use with a variety of process mediums. Stainless steel wetted parts provide long-term durability even in the harshest environments.

In addition, the modular design of the 238TSC Pressure Transmitter allows for a wide variety of electrical connections, output signals and process connections to be specified to meet the requirements of any application.

Specifications

Model 238TSC • Sanitary Connection Transmitter

Sensor Element Capsule Type - Thin film resistors on a Silicon Membrane, Oil-Filled, Stainless Steel Diaphragm

Process Connection
1 1/2" or 2" Tri-Clamp Sanitary Style Connection

Materials of Construction
Housing: 304 stainless steel
Wetted Parts: 316L stainless steel
Pressure Transmission Liquid: FDA Approved Oil
Diaphragm Surface Finish (Ra): <30 µin

| | BFSL | Full Scale |
|---------------------------------|-------|------------|
| Accuracy at 77° F (25°C) | 0.35% | 0.50% |
| Non-Linearity: | 0.15% | 0.30% |
| Hysteresis: | 0.10% | 0.10% |
| Repeatability: | 0.10% | 0.10% |

Operating Temperature Ranges
Medium: 14/+257°F (-10/+125°C)
Ambient: 14/+185°F (-10/+85°C)

Temperature Error Band
Temperature compensated to within
1% between 41°F to 185°F (5 to +85 °C)

Humidity
95% RH Non-condensing
100% RH with Shielded Cable Connection (E3)

Electronic Connection
90° Angle "Standard" Connector / DIN 175301-803 (A)
PUR (Polyurethane) Cable (3 Feet Standard)
M12 (S723) 4 pin Circular Connector

Output Signal
4-20mA (2 wire) and 0-10Vdc (3 wire)

Overpressure Limit
at least: 1.5 x FS
burst pressure at least: 2.9 x FS

Response Time (10-90%) < 10 ms

Power Supply

| Output Signal: | Minimum | Maximum | Recommended |
|----------------|---------|---------|-------------|
| 4-20mA: | 10Vdc | 32Vdc | 24Vdc |
| 0-10Vdc: | 12Vdc | 32Vdc | 24Vdc |

Load Resistance 4-20mA: $\leq \frac{V_{SUPPLY} - 10 \text{ Vdc}}{0.02 \text{ A}}$
0-10 Vdc: > 5 kOhm

Circuit Protection
Protected against reverse polarity and short circuits

CE Conformity RoHS2 Directive 2011/65/EU
EMC Directive: 2014/30/EU - PED Directive: 2014/68/EU
Applied standards: EN 61326-1:2013, EN 61326-2-3:2013

Ingress Protection Rating
90° Angle Connector: IP65 / NEMA 4X
PUR Cable: IP68 / NEMA 6P, M12 4 pin IP67/NEMA 6

Approximate Shipping Weight 0.4 lbs (0.20kg)

HOW TO ORDER

Sample Order Number: **238TSC 15 C A 0/60 E1 3**

| Model | Process Connection | Accuracy | Units of Measure | Range Code | Electrical Connection | Cable Length (omit if none) | Output Signal |
|--------|----------------------|---------------------------|------------------|---------------------|-----------------------------|--|---------------------|
| 238TSC | 15 1 1/2" Tri-Clamp* | C 0.5% FS (0.35% BFSL) | A psi | See Standard Ranges | E1 DIN 175301-803 (A) "std" | Specify Length in Feet (ie., 3 Ft=003) | 3 4-20mA (2-wire) |
| | 20 2" Tri-Clamp | | | | E4 PUR Cable (3 Ft Std) | | 2 0-10 Vdc (3-wire) |
| | | | | | E9 M12 (S723) 4 pin | | |

* Use for 1" clamp connection.

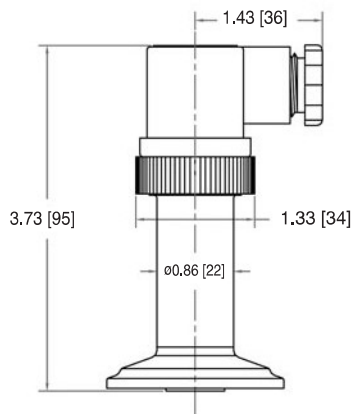
Multiple electrical connections, output signals and process connections are available, Please consult factory.

Model 238TSC

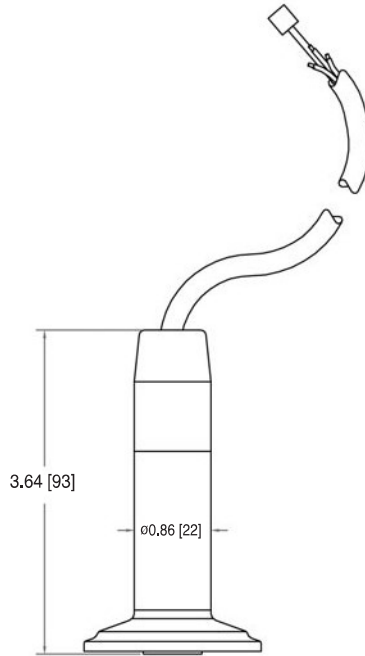
High Precision Transmitter—Sanitary Style Connection

All dimensions are nominal.
Dimensions in [] are in millimeters.

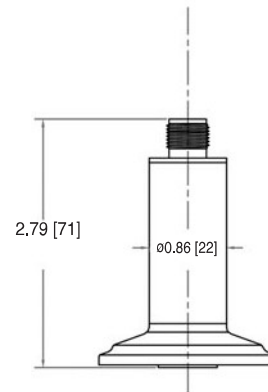
E1 90° Angle “std” Connector
DIN 175301-803 (A)



E4 PUR Cable
(3 Feet Standard)

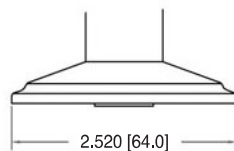


E9 M12 (S723) 4 pin

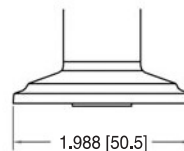


Clamps, gaskets and ferrules are not supplied by Trerice

Clamp Connections • ISO 2852



2" Clamp Connection



1" & 1 1/2" Clamp Connection

Standard Ranges

| psi Ranges (A) | | | |
|----------------|----------------|--------------------|----------------|
| Range Code | Specific Range | Overpressure Limit | Burst Pressure |
| 0/10 | 0 to 10 psi | 15 psi | 29 psi |
| 0/15 | 0 to 15 psi | 23 psi | 44 psi |
| 0/30 | 0 to 30 psi | 45 psi | 87 psi |
| 0/60 | 0 to 60 psi | 90 psi | 174 psi |
| 0/100 | 0 to 100 psi | 150 psi | 290 psi |
| 0/160 | 0 to 160 psi | 240 psi | 464 psi |
| 0/200 | 0 to 200 psi | 300 psi | 580 psi |
| 0/300 | 0 to 300 psi | 450 psi | 870 psi |
| 0/400 | 0 to 400 psi | 600 psi | 1160 psi |
| 0/600 | 0 to 600 psi | 900 psi | 1740 psi |

Classification; UL® Classified and Listed to NSF/ANSI Standard 61 & 372 of “Safe Drinking Water Act”

Actual working pressures should never exceed the “Specific Range” or the maximum process connection rating. “Overpressure Limits” and “Burst Pressures” shown refer to the sensor or body of the transmitter and are for reference purposes only. For correct use and application See: ASTM F2070-00.

INDUSTRIAL TRANSMITTERS