

P15 Series

Miniature OEM Pressure Transducer

XRI's P15 series pressure transducer is a small diameter, multi-configuration, highly reliable and accurate pressure sensor. The simple outline design allows the user to install with mechanical fixtures or weld onto end-use equipment. Each transducer is calibrated and the data of temperature and pressure is provided, allowing the customer to integrate into systems through its centralized data acquisition and processing capability. This methodology provides the best optimization of accuracy and cost at the end-use system level. Alternatively, compensated units can be provided through special order.

Each transducer is built with an oil-filled capsule with a micro machined silicon MEMS pressure chip, providing robust medium compatibility. Standard configurations are made of stainless steel; however, Inconel and Hastelloy alloys are available for corrosive environments, such as those in the oil and gas industry. P15 series is especially suitable for use in semiconductor manufacturing where hazardous gases are used. Semiconductor grade "clean" packaging is available.

About Us

- XRI Innovation, Inc. (XRI) is a vertically integrated company aimed at reaching the pinnacle of sensing with innovative and modern designs and manufacturing technologies.
- XRI is committed to offering high-end products with technology innovation, quality control and production efficiency.
- Portfolio includes pressure, temperature, flow, position, displacement, rotational speed, gas and others. The products are positioned for high-end applications, especially in aerospace, precision manufacturing, oil and gas and transportation vehicles.
- XRI adheres to the principle that company employees as a team are the most valuable asset, and focuses on building a company that values reliability, devotion and innovation.
- XRI firmly believes that 'Satisfying Customers' Wants is the Primary Mission of XRI.

XRI is a "continuous improvement" company. Its product [datasheets](#) evolve as technology advances. Most update versions are on www.XRIINC.com

Specifications

Physical properties

Item	Description
Range ¹	Absolute, Sealed gage or Gauge
Unit	MPa PSI
	0-0.01 0-1.5
	0-0.02 0-3
	0-0.05 0-7
Gauge Measurement Range	0-0.1 0-15
	0-0.2 0-30
	0-0.5 0-70
	Note: Other non-standard ranges or units can be customized
	0-1 0-150
	0-2 0-300
	0-5 0-700
Absolute and Sealed gage Measurement Range	0-10 0-1500
	0-35 0-5000
	0-70 0-10000
	Note: Other non-standard ranges or units can be customized
Accuracy (Combined Non-Linearity, Hysteresis and Repeatability ⁷)	A1: 0.2% FS BFUL A2: 0.1% FS BFUL *Other choices available upon request
Over Pressure ²	2 x FS ⁵
Burst Pressure ³	3 x FS ⁵
Supply current	1.0mA (Typical) ; 2.0mA (Max)
Supply voltage	5V (Typical); 10V (Max)
Output Sensitivity	10~20mV / V @25°C
Zero Offset	±10mV / V @25°C
Bridge Resistance	3000~6000 Ohms @25°C
Long-term Stability	Typically within ±0.1%FS ⁶
Insulation Resistance	> 100 MΩ @ 50VDC
Weight	Depends on Configuration Guide

Mechanical Properties

Item	Description
Vibration Resistance	< 20g Max, 10-2500Hz;
Housing Material	316LSS, HC-276, Inconel718 or 17-4 PH (*Other choices available upon request)
	10x1.5mm Viton(-20°C~200°C)
O-Ring	10x1.5mm Fluorosilicone (<-20°C)

Temperature Properties⁴

Item	Description
Storage Temperature Range	-55°C~150°C
Temperature Coefficient of Bridge Resistance	2.5K ~ 3.5K PPM/°C
Temperature Coefficient of Sensitivity	-1.5K ~ -2.5 K PPM/°C
Temperature Coefficient of Zero Offset	±25 μV/V/°C

Configuration guide

Base Model P15

Electrical Connector

E10 Color wires TFE 5x26AWG + MOLEX electrical connector

E11 Color wires TFE 5x26AWG

Other choices available upon request

Pressure Connections

P23 Rear ring radial seal

P24 Back support

P26 1/4 NPT External Thread

P28 1/8 NPT External Thread

P29 7/16-20 UNF External Thread

Other choices available upon request

Accuracy

A1 0.2%FS BFUL

A2 0.1%FS BFUL

Other choices available upon request

Calibration report

CA 6 points room temperature pressure calibration data

CB 5 temperature points pressure data

Range Unit Pressure types

(0-35) MPaA Absolute

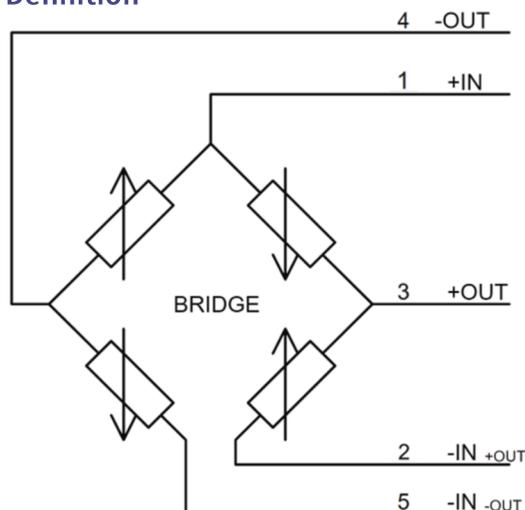
(0-35) MPaS Sealed Gage

Special requests

S: Refer to the purchase contract

Example: P15 -E10 -P23 -A1 -CA -(0-20) MPaA -S

Pin Definition



1: Offers composite ranges such as from 5~100kPa Absolute Pressure.

2: Pressure exposure not exceeding proof pressure does not affect transducer performance.

3: Burst Pressure is a safety upper limit. Over this value transducer may be permanently damaged.

4: Temperature effects are related to sensor accuracy variations within the compensation temperature range.

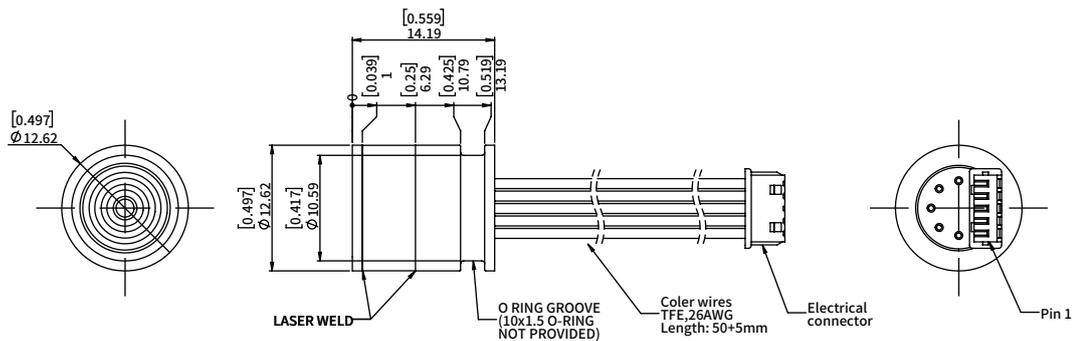
5: FS= Full scale.

6: Error based on deviations away from the best endpoint fit straight line calibration.

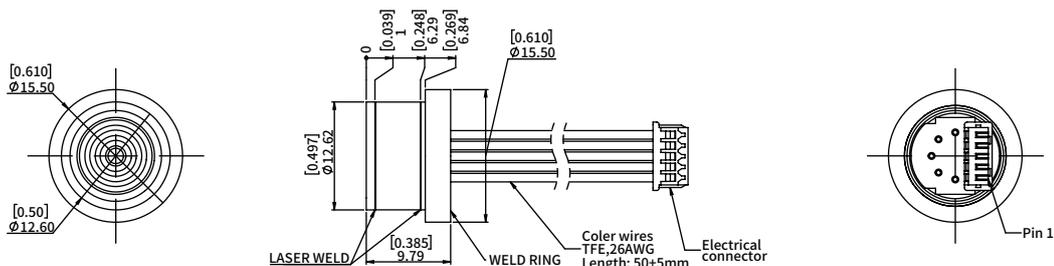
7: Reference to ISA 37.1-1975(R1982).

Outline dimensions and Pressure connection (mm [inch])

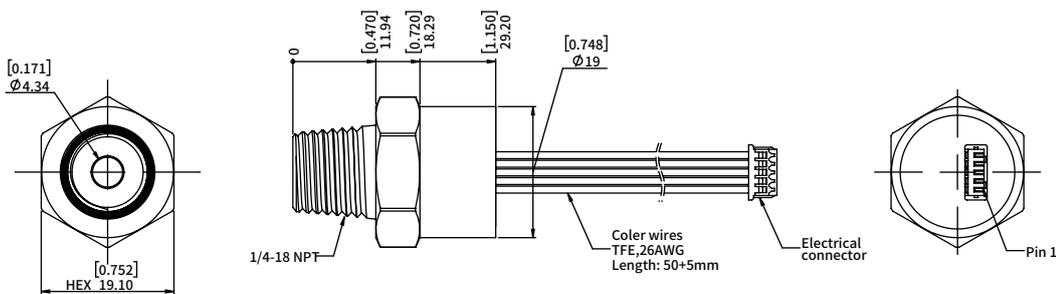
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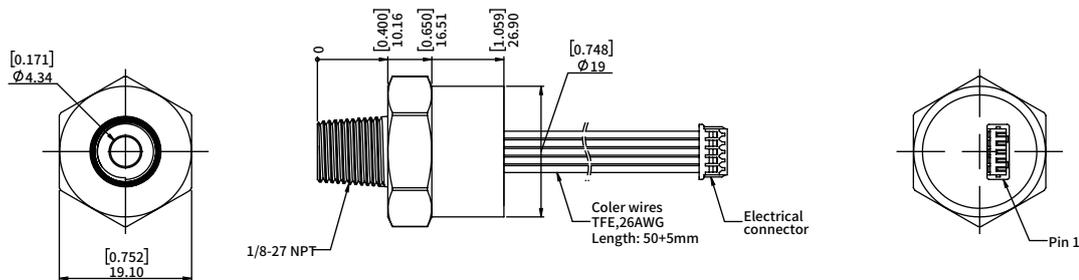
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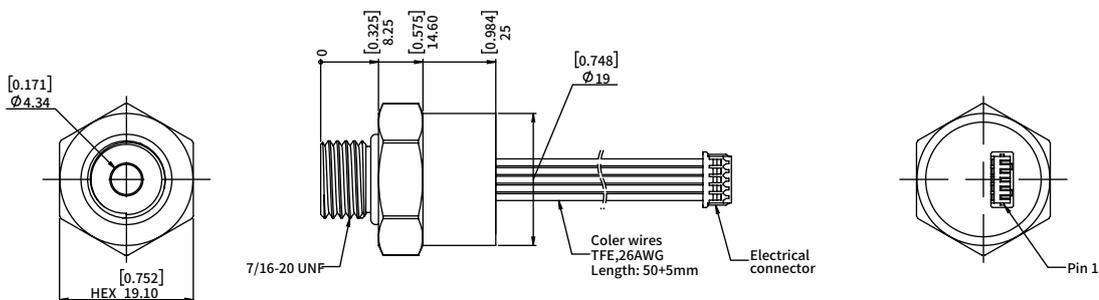
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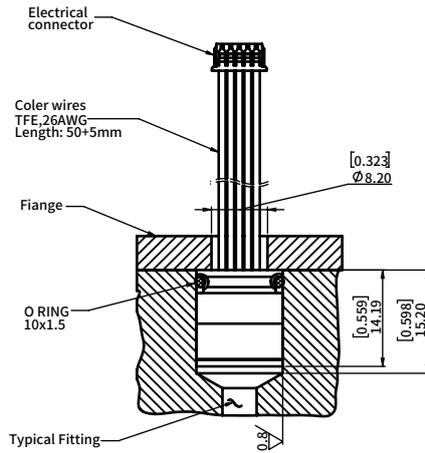


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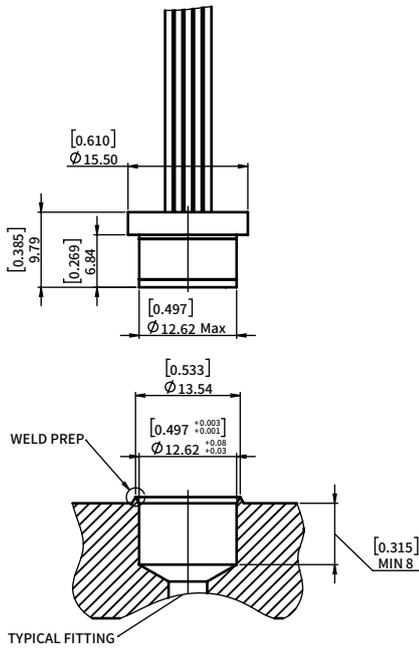


Installation guide (mm [inch])

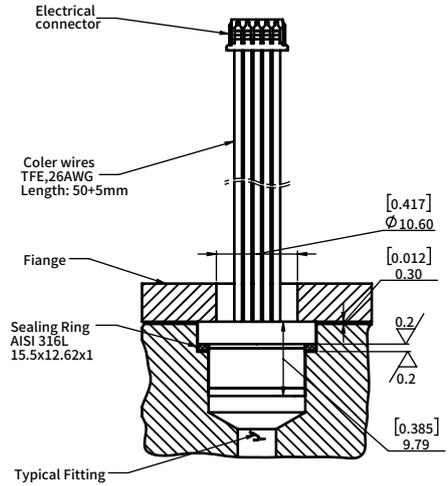
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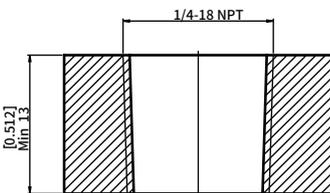
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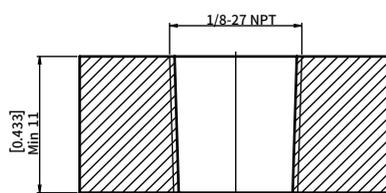
P24:



P26:



P28:



P29:

