



Differential Pressure Sensor, 0-70kPa, Isolated Construction,  
high static pressure 20MPa, 1.5X overpressure

## PD790 Series IOT Pressure Sensors Technical Data Sheet

PD790-02M2

### Features

- Pressure range 0-70kPa
- F19 mm Differential pressure sensor
- Constant current / Constant Voltage power supply
- Isolated construction, enable to measure various media
- Full stainless steel 316L
- High static pressure 20MPa
- 1.5 times overpressure

### Applications

- Industrial process control
- Differential pressure measurement
- Gas, liquid pressure measurement
- Pressure checking meter
- Pressure calibrator
- Venture and eddy-current flow meter

### Description

PD790-02M2 is a highly stable and reliable piezo-resistive pressure sensor with wide temperature compensation and zero correction. It contains a highly stable silicon die, stainless steel 316L housing with diameter 19 mm. The measured differential pressure is transmitted onto the silicon die through the 316L diaphragm and inner media. This transforms the measured pressure into an electrical signal.

### Product Configuration

Application: Differential Pressure Sensor  
Electrical Connector: 100mm Silicon rubber wires

### General Specifications\*

Description	Minimum	Typical	Maximum	Unit
Pressure Range	0		70	kPa
Linearity		±0.15	±0.25	% Full Scale
Repeatability		±0.05	±0.075	% Full Scale
Hysteresis		±0.05	±0.075	% Full Scale
Full Scale Output	60			mV DC
Zero Output			3	mV DC
Zero Thermal Error @25°C		±0.75	±1	% Full Scale/°C
Span Thermal Error @25°C		±0.75	±1	% Full Scale/°C
Compensated Temp Range	0		50	°C
Long Term Stability		±0.3	±0.5	%Full Scale/year
Overpressure		1.5		xFull Scale

\*General Specifications hold under the following Nominal Conditions



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### \*Nominal Conditions

DESCRIPTION	DESCRIPTION
Media temperature: (25±1)°C	Environment temperature: (25±1)°C
Shock: 0.1g (1m/s <sup>2</sup> ) Max.	Humidity: (50%±10%)RH
Local air pressure: (86-106)kPa	Power supply: (1.5±0.0015)mADC

### Electrical Specifications

Description	Minimum	Typical	Maximum	Unit
Power Supply/Excitation Level			10	VDC
Power Supply Current			2	mA
Input Impedance	3,000		8,000	Ω
Output Impedance	3,500		6,000	Ω
Response 10%-90%			1	msec
Zero Drift/Static Pressure			±0.5	mV/MPa
Insulation Resistance 100VDC		100		MΩ
Static Pressure			20	MPa

### Material Specifications

Description	Material
Diaphragm	Stainless Steel 316L
Plug Housing	Stainless Steel 316L
Pin	Silicone Rubber
O-Ring	Viton

### Mechanical Specifications

Weight 0.08 lbs [36.29 g]



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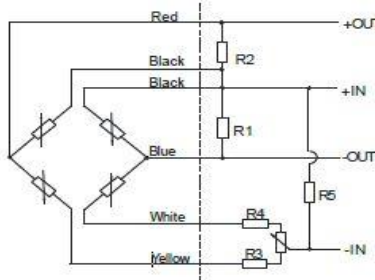
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### Electrical Connection

Wire Color	Description
Red	+OUT
Black	+IN
Black	+IN
Yellow	-IN
White	-IN
Blue	-OUT



**Note:** The electrical connection method is enclosed with the products.

### Environmental Specifications

Temperature (Operating)	-40°C to 125°C
Temperature (Storage)	-40°C to 125°C
Certifications	ROHS Compliant CE Compliant

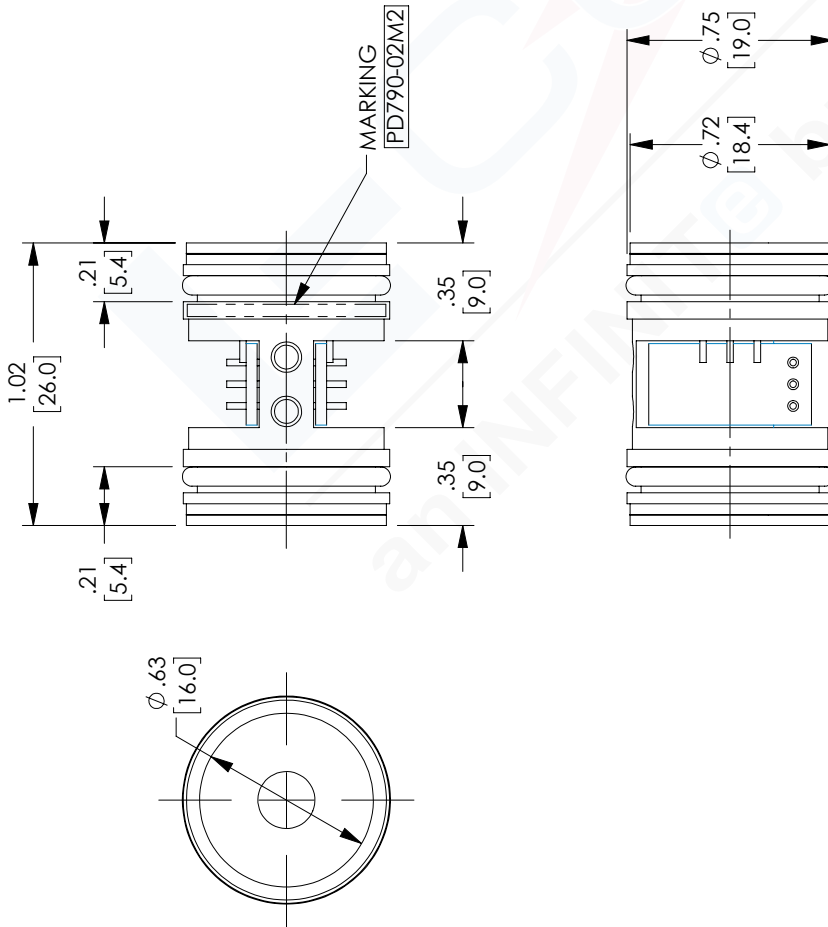
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# PD790-02M2 CAD Drawing

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REV	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	05/21/2019	TOZA



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