

Pressure Sensor, 0-70MPa, Sealed Gauge,
Compensated, with cap 16.8mm diameter



PS783 Series IOT Pressure Sensors Technical Data Sheet

PS783-119SL1

Features

- Pressure range 0-70MPa
- Constant current / Constant Voltage power supply
- Isolated construction, enable to measure various fluid media
- 12.6 mm compact size, sealed gauge pressure sensor
- Stainless steel 316L
- Wide temperature compensation range

Applications

- Industrial process control
- Level measurement
- Gas, liquid pressure measurement
- Pressure inspection meter
- Pressure calibrator
- Liquid pressure system and switch
- Cooling equipment and air conditioning system
- Aviation and navigation inspection

Description

PS783-119SL1 is a highly stable and reliable piezo-resistive pressure sensor with wide temperature compensation and zero correction. Optimized for middle to high pressures, the PS783-119SL1 contains a highly stable silicon die, stainless steel 316L housing with diameter 12.6 mm. The measured 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:	Pressure Sensor
Pressure Type:	Sealed Gauge
Electrical Connector:	Kovar pin

General Specifications*

Description	Minimum	Typical	Maximum	Unit
Pressure Range	0		70	MPa
Linearity		±0.15	±0.2	% Full Scale
Repeatability		±0.05	±0.075	% Full Scale
Hysteresis		±0.05	±0.075	% Full Scale
Full Scale Output	70			mV DC
Zero Output			3	mV DC
Zero Thermal Error @35°C		±0.75	±1	% Full Scale/°C
Span Thermal Error @35°C		±0.75	±1	% Full Scale/°C
Compensated Temp Range	-10		80	°C
Long Term Stability		±0.1	±0.2	%Full Scale
Overpressure		1.5		xFull Scale

*General Specifications hold under the following Nominal Conditions



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*Nominal Conditions

DESCRIPTION	DESCRIPTION
Media temperature: (35±1)°C	Environment temperature: (35±1)°C
Shock: 0.1g (1m/s ²) Max	Humidity: (50%±10%)RH
Local air pressure: (86-106)kPa	Power supply: (1.5±0.0015)mA DC

Electrical Specifications

Description	Minimum	Typical	Maximum	Unit
Power Supply/Excitation Level			10	VDC
Power Supply Current			2	mA
Input Impedance	2,000		6,000	Ω
Output Impedance	3,500		6,000	Ω
Response (10%-90%)			1	msec
Insulation Resistance 100VDC		100		MΩ

Material Specifications

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

Mechanical Specifications

Weight 0.018 lbs [8.16 g]



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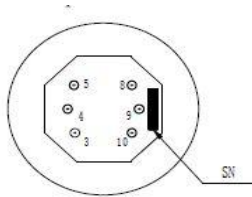


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Electrical Connection

Pin	Connection	Wire Color
4	-OUT	Blue
5	-IN	Yellow
8	+IN	Black
9	+Out	Red



Environmental Specifications

Temperature (Operating) -40°C to 125°C

Temperature (Storage) -40°C to 125°C

Shock 100g, 11ms

Impact no change at 10gRMS, (20-2000)Hz

Notes: Media compatibility-the liquid or gas which is compatible with stainless steel and viton

Certifications ROHS Compliant

CE Compliant

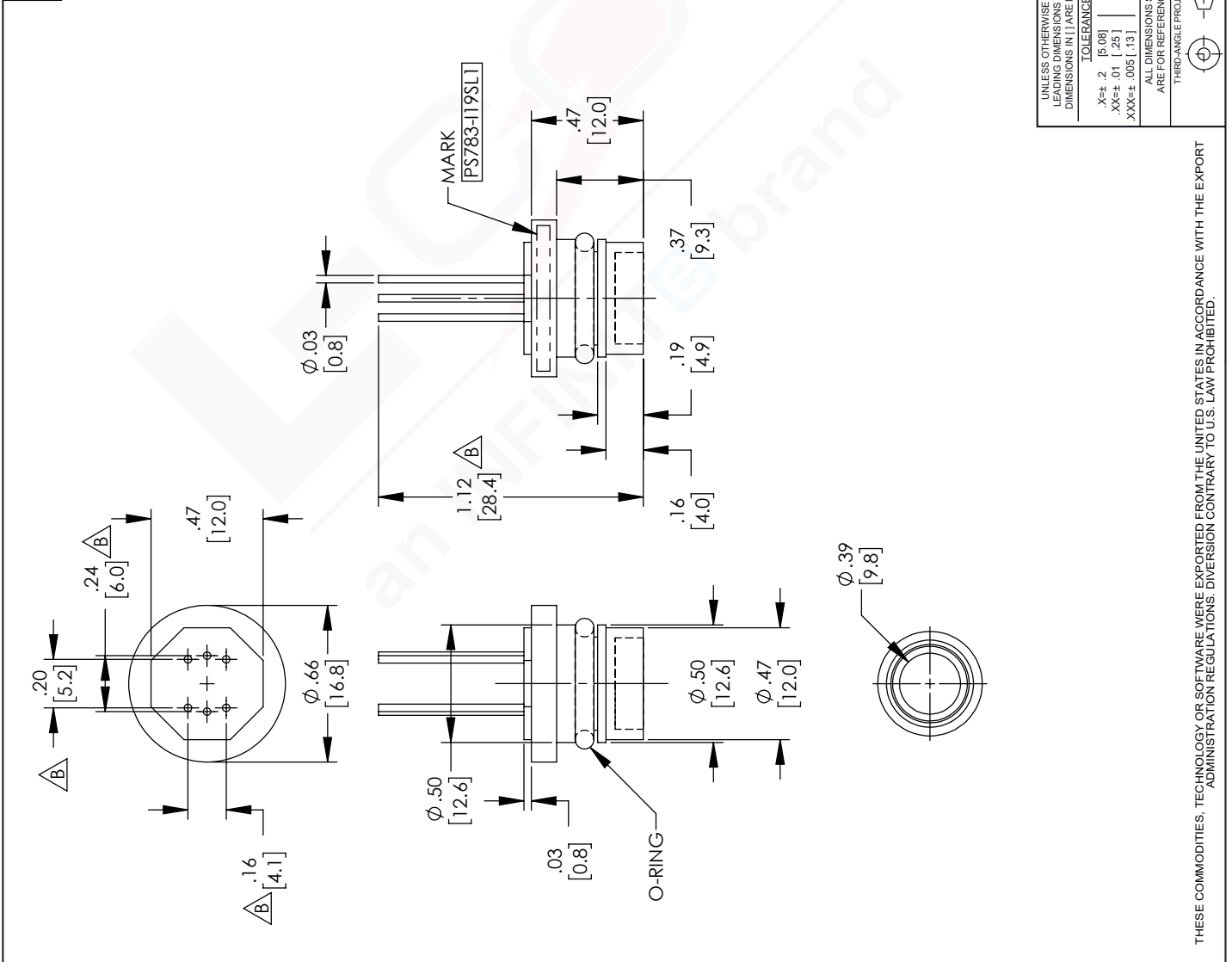
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PS783-119SL1 CAD Drawing

Pressure Sensor, 0-70MPa, Sealed Gauge, Compensated, with cap 16.8mm diameter

REV	DESCRIPTION	DATE	APPROVED
B	ECN 10065; DIM [5.2] WAS 4.5, [6.0] WAS 5.5, [4.1] WAS 4.5, [28.4] WAS 23.0	08/28/2019	TO/A



UNLESS OTHERWISE SPECIFIED
LEADING DIMENSIONS PRECEDING
DIMENSIONS IN [] ARE MILLIMETERS

TOLERANCES:
 .X±.2 [5.08] FRACTIONS
 .XX±.01 [.25] ± 1/32
 .XXX±.005 [.13] ANGLES ± 1°
 ALL DIMENSIONS SHOWN
 ARE FOR REFERENCE ONLY



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SCALE	N/A	REV	
SIZE	A	CAGE	43321
DRAWN BY	DZINN	PART NUMBER	PS783-119SL1
		REV	B

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