

Pressure Sensor, 0-35MPa, Sealed Gauge,  
Compensated, with cap 16.8mm diameter



## PS783 Series IOT Pressure Sensors Technical Data Sheet

**PS783-118SL1**

### Features

- Pressure range 0-35MPa
- 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

PS783-118SL1 is a highly stable and reliable piezo-resistive pressure sensor with wide temperature compensation and zero correction. Optimized for middle to high pressures, the PS783-118SL1 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       |         | 35      | 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 <sup>2</sup> ) 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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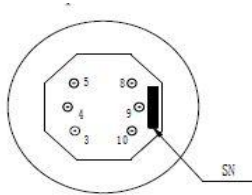


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### Electrical Connection

| 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

The Infinite Electronics portfolio includes coaxial cable assemblies, connectors, adapters and custom products, as well as our wireless product line which includes antennas, RF amplifiers, lightning and surge protectors, and NEMA rated enclosures.

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