IPSL series

Low Range Industrial Pressure Sensor



- ***Piezo-resistive sensor***
- ***Stainless steel body & diaphragm***
- ***Accuracy <±0.25% FS BFSL***
- ***Various outputs including Volts and mA.***
- ***Pressure ranges from 50 mbar to 1000 mbar***
- ***Gauge or Absolute pressure reference***

The IPSL is suitable for use in a wide range of applications. The probe uses a piezo-resistive silicon sensor, giving excellent media compatibility within an oil filled 316L stainless steel housing

The electronics incorporate a microprocessor based amplifier, requiring no adjusting and giving stable electronics, especially in high vibration/shock applications.

Each device is temperature compensated, calibrated and supplied with a traceable serial number and calibration certificate.

There is a choice of internal O ring seals to ensure that the device is compatible with a wide range of media.

Custom versions can be made for particular applications.

Options available on the IPSL pressure transmitter.

Pressure range
Pressure reference (G or Abs)
Output type

Suitable applications

HVAC	Mechanical engineering
Pneumatics	Environmental engineering
Rainwater harvesting	Automotive testing
Agricultural machinery	Tank gauging
Laboratory testing	IBC, IBC Tote or pallet tank

Performance

Accuracy (Non-Linearity & Hysteresis)<±0.25% / FS (BFSL) for gauge, <±0.5% for Absolute

Setting Errors (offsets)	2-wire	Zero & Full Scale, <±0.5% / FS
	3-wire	Zero & Full Scale, <±0.5% / FS
Permissible Load	2-wire	$R_{max} = [(Supply-9min)/0.02]\Omega$
	3-wire	$R_{min} = 10k\Omega$
Influence Effects	Supply	<0.005% FS / 1V
	Load	0.05% FSO / kΩ

Material Specifications

Housing	303 Stainless Steel
"O" ring seals	Viton
Diaphragm	316L Stainless Steel
Media wetted parts	Housing & connection, "O" ring seal, diaphragm

Miscellaneous

Current consumption	2 -wire Limits at 28mA 3-wire Typical 6mA
Weight	Approx 100g
Installation position	Any, small zero shift when tilted through 90º
Operational Life	> 100x 10^6 cycles
Insulation resistance	> 50MOhms at 50Vdc

Electrical Protection

Supply reverse polarity	No damage/no function
Electromagnetic compatibility	CE Compliant

Mechanical Stability

Shock	100g / 11s
Vibration	10g RMS (20 - 2000Hz)

Temperatures & Thermal Effects

Media Temperature	-40ºC to +125ºC
Ambient Temperature	-20ºC to +80ºC
Storage temperature	-40ºC to +125ºC
Compensated temperature range	+20ºC to +80ºC
Thermal Zero Shift (TZS)	<±0.04% /FS/ºC
Thermal Span Shift	<-0.015% /ºC

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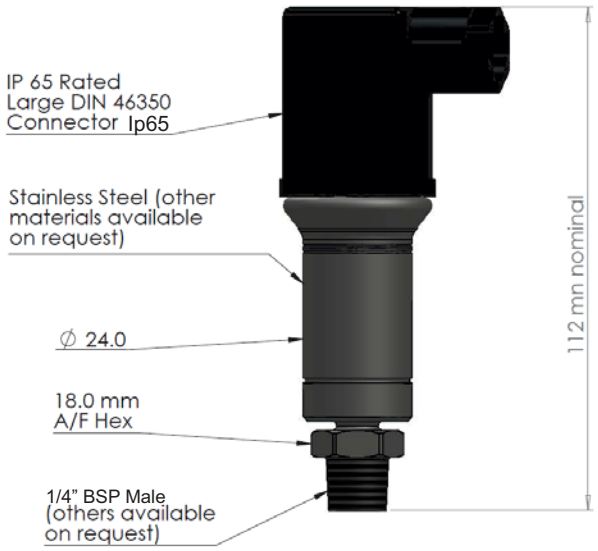
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Low Range Industrial Pressure Sensor

Pressure Ranges and Passive mV/V Outputs							
Nominal Pressure, Gauge,	mbar	50	100	250	500	750	1000
Nominal Pressure, Absolute	mbar				500	750	1000
Permissible Overpressure	mbar	2 bar	2 bar	2 bar	5 bar	5 bar	5 bar

Output Signals and Supply Voltages		DIN 43650		
Wire system	Output	Supply Volts	Connection	Pin No.
2-wire	4-20mA	9-32Vdc	+ve Supply	Pin 1
			-ve Supply	Pin 2
			Ground	Earth pin
3-wire	0.5 - 4.5Vdc (non-ratiometric)	9-32 Vdc	+ve Supply	Pin 1
			-ve Supply	Pin 2
			+ve Output	Pin 3
			Ground	Earth Pin

Part No	Pressure Range	Output
IPSL-G0050-5	0 - 50mbar G	4-20mA
IPSL-G0100-5	0 - 100mbar G	4-20mA
IPSL-G0250-5	0 - 250mbar G	4-20mA
IPSL-G0500-5	0 - 500mbar G	4-20mA
IPSL-G0750-5	0 - 750mbar G	4-20mA
IPSL-G1000-5	0 - 1000mbar G	4-20mA
IPSL-G0050-D	0 - 50mbar G	0.5 to 4.5V 3Wire
IPSL-G0100-D	0 - 100mbar G	0.5 to 4.5V 3Wire
IPSL-G0250-D	0 - 250mbar G	0.5 to 4.5V 3Wire
IPSL-G0500-D	0 - 500mbar G	0.5 to 4.5V 3Wire
IPSL-G0750-D	0 - 750mbar G	0.5 to 4.5V 3Wire
IPSL-G1000-D	0 - 1000mbar G	0.5 to 4.5V 3Wire
IPSL-A0500-5	0 - 500mbar Abs	4-20mA
IPSL-A0750-5	0 - 750mbar Abs	4-20mA
IPSL-A1000-5	0 - 1000mbar Abs	4-20mA



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