Sontay®
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PL-525
Static Pressure Sensors

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Features & Benefits

- Suitable for water, steam (with PL-HS) or air
- Compact rugged construction
- Very high measurement accuracy
- Excellent thermal characteristic

Technical Overview

The PL-525 has a compact and robust design and a very high measurement accuracy and is suitable for use with liquids and non-aggressive gases.

The pressure transmitter is based on proven ceramic technology for exceptional performance speed and reliability.

Product Codes

4-20mA Output:

PL-525-0.1	Liquid pressure transmitter	0 to 100mbar
PL-525-0.2	" "	0 to 200mbar
PL-525-0.3	" "	0 to 300mbar
PL-525-0.6	" "	0 to 600mbar

0-10Vdc Output:

PL-525-0.1-V	Liquid pressure transmitter	0 to 100mbar
PL-525-0.2-V	" "	0 to 200mbar
PL-525-0.3-V	" "	0 to 300mbar
PL-525-0.6-V	" "	0 to 600mbar

Accessories

PL-HS	Pressure transmitter heat sink
PL-525-CAL	Calibration certificate

Specification

Output:		
	PL-525-x	4-20mA (2-wire loop powered)
	PL-525-x-V	0-10Vdc
Supply voltage:		
	4-20mA	10-30Vdc
	0-10Vdc	12-33Vdc
Current consumption:		
	4-20mA	<23mA
	0-10vdc	<5mA
Electrical connections		DIN EN175301-803-A
Accuracy @ 25°C, 45% RH 24Vdc supply pressure con down:		
	Characteristic line	±0.35 % fs
	Resolution	<0.1% fs
	Thermal characteristic	±0.07 % fs/10K max.
	Error horizontal mounting	+0.1mbar
	Error vertical mounting	+0.2mbar
	Pressure cons upward	
Response time		<150ms
Load cycle		<100Hz
Overload/rupture		2bar
Materials in contact with the medium		Stainless steel 1.4404/AISI 316L FPM & Ceramic A12O3 (96%)
Temperature:		
	Media	-15 to 85°C
	Ambient	-40 to 85°C
Dimensions		104 x 65mm
Pressure connection		½" BSP male
Protection		IP65
Conformity		EN 61326-2-3, CE Marked, EMC
Country of origin		Switzerland

WEEE Directive:
At the end of the products useful life please dispose as per the local regulations.
Do not dispose of with normal household waste.
Do not burn.

CE

The products referred to in this data sheet meet the requirements of EU Directive 2014/30/EU

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Installation

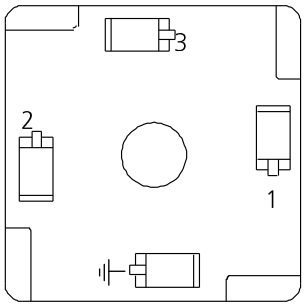
1. Fix the transmitter to the pipe using a ½" BSP female connection, and an gate valve
2. You should avoid mounting the transmitter where it will be subjected to mechanical vibration.
3. The sensor can be mounted in any orientation if the temperature is between -15 to 85°C.
4. Remove the DIN connector and expose the electrical terminals feed cable through the cable gland and connected as required. Re-fit connector to transmitter.
5. When opening the gate valve it is important to do this slowly to avoid pressure spikes that can damage the transmitter,

PL-525-x (4-20mA):

- Terminal 1 10 - 30Vdc
- Terminal 2 4-20mA signal

PL-525-x-V (0-10Vdc):

- Terminal 1 12 - 33Vdc
- Terminal 2 0-10Vdc signal
- Terminal 3 0V (Ground)



Tech Tip

Effects of water hammer and pulsation.
By knowing and eliminating problems beforehand, you can avoid situations that will create water hammer or pulsation during a specific process, avoiding failed equipment and costly downtime.

Surge or water hammer, as it is commonly known is the result of a sudden change in liquid velocity. Water hammer usually occurs when a transfer system is quickly started, stopped or is forced to make a rapid change in direction. Any of these events can lead to catastrophic system component failure. Without question, the primary cause of water hammer in process applications is the quick closing valve, whether manual or automatic. A valve closing in 1.½ sec. or less depending upon valve size and system conditions causes an abrupt stoppage of flow. The pressure spike (acoustic wave) created at rapid valve closure can be high as five (5) times the system working pressure.

Pulsation generally occurs when a liquid's motive force is generated by reciprocating or peristaltic positive displacement pumps. It is most commonly caused by the acceleration and deceleration of the pumped fluid. This uncontrolled energy appears as pressure spikes. Vibration is the visible example of pulsation and is the culprit that usually leads the way to component failure.

Unlike centrifugal pumps (which produce normally non-damaging high-frequency but low-amplitude pulses), the amplitude is the problem because it's the pressure spike. The peak, instantaneous pressure required to accelerate the liquid in the pipe line can be greater than ten (10) times the steady state flow pressure produced by a centrifugal pump.

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