



## PL-692

# Liquid Differential Pressure Sensor



### Features:

- Suitable for water, steam (with pigtail) or air
- Robust construction
- 6mm Compression pressure connections

### Technical Overview

The PL-692 range of differential pressure transmitters is suitable for use with liquids and non-aggressive gases. With unique ceramic sensing technology for no mechanical aging and creepage.

The sensor and transmitter are housed in a robust stainless steel casing with a 1.5 meter flying lead for electrical connection and sealed for IP65 protection.



## Specification:

Output:	PL-692-x	4-20mA (2-wire loop powered)
	PL-6912-x-V	0-10Vdc
Supply voltage:	4-20mA	11 to 33Vdc
	0-10Vdc	18 to 33Vdc or 24Vac $\pm$ 15%
Load:	4-20mA	$\leq \frac{\text{Supply voltage} - 11\text{V}}{0.02\text{A}}$ (Ohm)
	0-10Vdc	>10Kohm
Current consumption:	4-20mA	<25mA
	0-10vdc	<5mA
Electrical connections	1.5m flying lead	
Accuracy (total Linearity, hysteresis & repeatability) :	$\pm$ 1.3% Full scale @ 2 x nominal pressure	
	$\pm$ 0.8% Full scale @ 3 x nominal pressure	
	$\pm$ 0.5% Full scale @ 5 x nominal pressure	
Response time	<5ms	
Overload	See page 3	
Materials in contact with the medium	Cermic / stainless steel 1.4305	
Load cycle	EPDM seal	
Temperature:	<50Hz	
Media	-15 to +80°C	
Ambient	-15 to +80°C	
Dimensions	130 x 40mm	
Pressure connections	6mm Compression	
Protection	IP65	
CE Conformity:	EN 61000-6-2, EN 61000-6-3	
	EMC, CE Marked	
Country of origin	Switzerland	

## Part Codes:

4-20mA Output:	
<b>PL-692-0.1</b>	Liquid DP transmitter 0-100 mbar
<b>PL-692-0.2</b>	Liquid DP transmitter 0-200 mbar
<b>PL-692-0.4</b>	Liquid DP transmitter 0-400 mbar
<b>PL-692-1</b>	Liquid DP transmitter 0-1 bar
<b>PL-692-2.5</b>	Liquid DP transmitter 0-2.5 bar
<b>PL-692-4</b>	Liquid DP transmitter 0-4 bar
<b>PL-692-6</b>	Liquid DP transmitter 0-6 bar
<b>PL-692-10</b>	Liquid DP transmitter 0-10 bar
<b>PL-692-16</b>	Liquid DP transmitter 0-16 bar
0-10Vdc Output:	
<b>PL-692-0.1-V</b>	Liquid DP transmitter 0-100 mbar
<b>PL-692-0.2-V</b>	Liquid DP transmitter 0-200 mbar
<b>PL-692-0.4-V</b>	Liquid DP transmitter 0-400 mbar
<b>PL-692-1-V</b>	Liquid DP transmitter 0-1 bar
<b>PL-692-2.5-V</b>	Liquid DP transmitter 0-2.5 bar
<b>PL-692-4-V</b>	DP pressure transmitter 0-4 bar
<b>PL-692-6-V</b>	Liquid DP transmitter 0-6 bar
<b>PL-692-10-V</b>	Liquid DP transmitter 0-10 bar
<b>PL-692-16-V</b>	Liquid DP transmitter 0-16 bar

### Accessory

<b>PL-692-CAL</b>	Calibration certificate
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The products referred to in this data sheet meet the requirements of EU Directive 2004/108/EC



## Installation & Connections:

1. Fix the transmitter to the system pipe using the 6mm compression connectors on both low and high pressure ports.
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 +80°C.
4. Make electrical connections:

- **PL-692-x (4-20mA):**

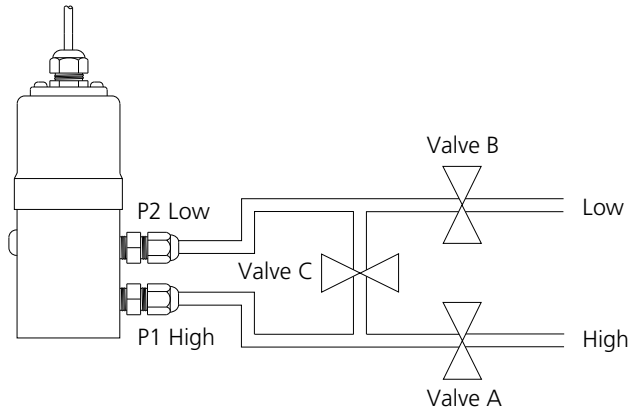
Brown      11 - 33Vdc  
Green      4-20mA signal

- **PL-692-x-V (0-10Vdc):**

Brown      18 - 33Vdc or 24Vac  $\pm$ 15%  
White      0V (Ground)  
Green      0-10Vdc signal

## Tech Tip:

For differential pressure measurement at high line pressure, it is recommended that the pressure sensor should be installed with a valve in each line plus a shunt (bypass) valve across the high (P1) and low (P2) pressure ports. This ensures that any potential overload on either P1 or P2 doesn't exceed the maximum permitted.



Valve A = High side valve  
Valve B = Low side valve  
Valve C = Shunt (bypass) valve

Valve C should be open and valves A & B closed whenever the system is first being wetted or pressurized. Valves A & B should then be opened **slowly** to avoid hammering. Valve C can then be closed and the system is operating.

If the pressure sensor is to be removed from the system, valve C must be opened first, the valve A & B can then be closed.

Overload (bar)									
1 side (max)	PL-692-0.1	PL-692-0.2	PL-692-0.4	PL-692-1	PL-692-2.5	PL-692-4	PL-692-6	PL-692-10	PL-692-16
P1 (+)	0.6	1.2	2	5	12	12	12	20	32
P2 (-)	0.6	1.2	2	5	12	12	12	12	12

Whilst every effort has been made to ensure the accuracy of this specification, we cannot accept responsibility for damage, injury, loss or expense from errors or omissions. In the interest of technical improvement, this specification may be altered without notice.

For pricing or any further information, please contact Omni Instruments Ltd.