

PL-692 Differential Pressure Sensor

Issue Number 7.3



Features and Benefits

- 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.

Product Codes

4-20mA Output:			
PL-692-0.1	Liquid DI	⊃ transmitter	0-100 mbar
PL-692-0.2	"	íí .	0-200 mbar
PL-692-0.4	"	"	0-400 mbar
PL-692-1	"	ű	0-1 bar
PL-692-2.5	"	ű	0-2.5 bar
PL-692-4	"	ű	0-4 bar
PL-692-6	"	"	0-6 bar
PL-692-10	ű	íí .	0-10 bar
PL-692-16	"	ű	0-16 bar

0-10Vdc Output:			
PL-692-0.1-V	Liquid DF	transmitter	0-100 mbai
PL-692-0.2-V	. "	"	0-200 mbai
PL-692-0.4-V	"	"	0-400 mba
PL-692-1-V	44	"	0-1 bar
PL-692-2.5-V	44	"	0-2.5 bar
PL-692-4-V	"	"	0-4 bar
PL-692-6-V	"	"	0-6 bar
PL-692-10-V	44	"	0-10 bar
PL-692-16-V	"	"	0-16 bar

Accessory

PL-692-CAL Calibration certificate

Specification

Output:

PL-692-x 4-20mA (2-wire loop powered)

PL-692-x-V 0-10Vdc

Supply voltage:

4-20mA 11 to 33Vdc

0-10Vdc 18 to 33Vdc or 24Vac ±15%

Load @ nominal pressure:

4-20mA $\leq \frac{\text{Supply voltage } - 11V}{0.02A}$ (Ohm)

0-10Vdc >10Kohm

Current consumption:

4-20mA <25mA 0-10vdc <5mA

Electrical connections 1.5m flying lead Accuracy (total Linearity, hysteresis & repeatability):

See table on next page

Response time <5ms

System pressure:

≤ 6 bar 25 bar ≥ 10 bar 50 bar

Materials in contact Cermic / stainless steel 1.4305 with the medium EPDM seal, CuZn nickel plated

fittings

Load cycle <50Hz

Temperature:

Media -15 to +85°C
Ambient -15 to +85°C
Storage -40 to +85°C
Dimensions 130 x 40mm
Pressure connections 6mm Compression

Protection IP65 Country of origin Switzerland

Conformity EMC, CE & UKCA Marked

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

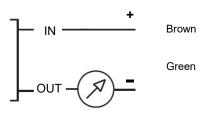
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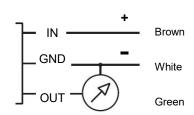
Installation, Electrical Connections & Dimensions

- 1. Mount the transmitter in a suitable location, connect the pressure points to the system pipe using the 6mm compression connectors on both low and high pressure ports.
- 2. The sensor can be mounted in any orientation if the temperature is between -15 to +85°C.
- 3. Make electrical connections:

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



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



Accuracy

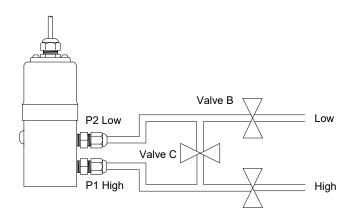
PL-692-0.1	PL-692-0.2	PL-692-0.4	PL-692-1	PL-692-2.5	PL-692-4	PL-692-6	PL-692-10	PL-692-16
±0.00125 bar	±0.0025bar	±0.005bar	±0.0125bar	±0.03125bar	±0.03bar	±0.03bar	±0.05bar	±0.08bar

Long Term Stability to DIN EN 60770

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
±0.0005bar	±0.001bar	±0.002bar	±0.005bar	±0.0125bar	±0.02bar	±0.03bar	±0.05bar	±0.08bar

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	20	32

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