

Pressure sensors in thin film technology on stainless steel diaphragm

– Standard

Series PSP8-St and PSP10-St

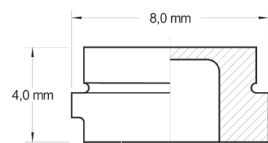
Features

- Operating temperature up to **125 °C**
- For static and dynamic measurement
- Sputtered thin film strain gauge on stainless steel diaphragm
- Wheatstone bridge with small TC and excellent precision
- Signal is given by change of the bridge resistors
- Basic sensing element without external active components
- Small sensitivity on environmental influences
- Several electrical connections available
- RTD – optional
- RoHS – compliant

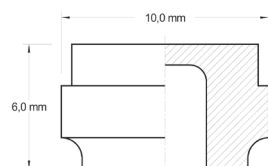
Customized Designs

- Cylindrical stainless steel body
- Machined diaphragm
- Sensors will be shipped customized in accordance to the mechanical standard.

Dimensions

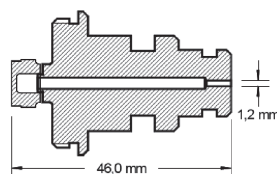


PSP8-St

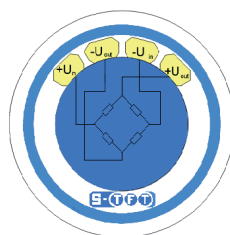


PSP10-St

Application

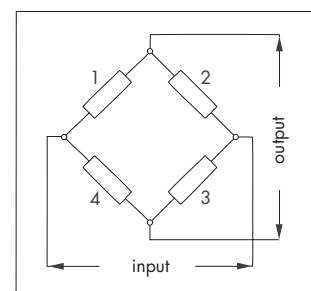


Standard Layout (e.g.)



Electrical connection via tinned pads, ribbon cable or wire bondable

Standard Schematic



Resistance Value: 5 kΩ



Technical Data

Feature	Unit	Series PSP8-St	Series PSP10-St
Diaphragm Material	-	Stainless steel (17-4PH)	Stainless steel (17-4PH)
Diameter (outer)	mm	8	10
Height	mm	4	6
Nominal pressure	bar	25/40/60/100/ 160/250/400/ 600/1,000	2,5/4/6/10/16/ 1,000/1,600/2,000
Overload	-	2 x Nominal pressure	2 x Nominal pressure (2,000 bar 1.5 x)
Burst pressure	-	> 5 x Nominal pressure	> 5 x Nominal pressure (2,000 bar 2 x)
Nominal span	mV/V	1.8	1.8
Range of span	mV/V	1.4 ... 2.3	1.4 ... 2.3
TC span	% FS/K	+ 0.01 ... + 0.03	+ 0.01 ... + 0.03
Zero signal	mV/V	< ± 0.2	< ± 0.2
TC zero	% FS/K	< ± 0.035	< ± 0.035
Bridge resistance	kΩ	4 ... 7	4 ... 7
TC of bridge resistors	ppm/K	< ± 25	< ± 25
Isolating resistance (100 VDC)	Ω	> 10 ⁹	> 10 ⁹
Isolating voltage	VAC	125 / 500	125 / 500
Nonlinearity			
Nominal pressure ≤ 4 bar		-	< 1.0
Nominal pressure ≥ 6 bar to ≤ 16 bar		-	< 0.5
Nominal pressure ≥ 25 bar to ≤ 100 bar	% FS	< 1.0	-
Nominal pressure > 100 bar		< 0.5	< 0.5
Hysteresis	% FS	< 0.2	< 0.2
Repeatability	% FS	< ± 0.05	< ± 0.05
Long term stability (zero signal)			
72 h / 125 °C		< ± 0.15	< ± 0.15
1,000 h / 125 °C	% FS	< ± 0.25	< ± 0.25
100 h / 85 °C, 85 % r.H., 5 VDC		< ± 0.6	< ± 0.6
10 Mio. Load cycles (nominal pressure)	% FS	< ± 0.3	< ± 0.3
Operating temperature range	°C	- 40 ... + 125	- 40 ... + 125
Supply voltage range	VDC	10	10

Ordering Information

- Series
- Pressure range
- Bridge resistance
- TC compensation of the stainless steel (Yes/No)
- Temperature sensor (Yes/No)
- Special requirements
- Quantity
- Delivery form

Sales and Development

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