

Pressure sensors in thin film technology on stainless steel diaphragm – extremely high output signal

Series PSP8-HS and PSP10-HS

Thanks to our new sputtering technology we are able to provide a pressure sensor with an extremely high output signal. The mechanical stress and the diaphragm deflection are as known at the standard units. This new sensor is available in our well known standard shapes (8 mm and 10 mm); in standard stainless steel.

Features

- Extremely high sensitivity (**25 mV/V**)
- High number of pressure ranges
- Excellent technical data
- Many new design opportunities for the client
- RoHS – compliant

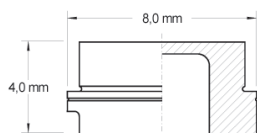
Optional Features

- Additional TC span compensation
- RTD – temperature sensor 1,000 Ohm
- Pressure port according to client's specification

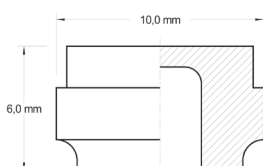
Customization (e.g.)

- Bridge resistance from 3.5 KOhm to 10 KOhm
- Specific schematics (e.g. open bridge)
- Other data on request

Dimensions

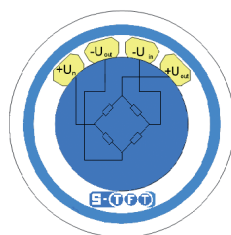


PSP8-HS



PSP10-HS

Standard Layout (e.g.)



Electrical connection via tinned pads, ribbon cable or wire bondable



Technical Data

Feature	Unit	Series PSP8-HS	Series PSP10-SH
Diaphragm Material	-	Stainless steel (17-4 PH)	Stainless steel (17-4 PH)
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	25	25
Range of span	mV/V	20 ... 32	20 ... 32
TC span	% FS/K	+ 0.01 ... + 0.04	+ 0.01 ... + 0.04
Zero signal	mV/V	< ± 5	< ± 5
TC zero	% FS/K	< ± 0.035	< ± 0.035
Bridge resistance	kΩ	3 ... 10	3 ... 10
TC of bridge resistors	ppm/K	< ± 50	< ± 50
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	% FS	-	< 0.5
Nominal pressure ≥ 25 bar to ≤ 100 bar		< 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/85 °C	% FS	< ± 0.2	< ± 0.2
1,000 h/85 °C		< ± 0.35	< ± 0.35
100 h/85 °C, 85 % r.H., 5 VDC		< ± 0.3	< ± 0.3
10 Mio. Load cycles (nominal pressure)	% FS	< ± 0.2	< ± 0.2
Operating temperature range	°C	- 40 ... +85	- 40 ... +85
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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