

# Pressure sensors in thin film technology on stainless steel diaphragm – extended temperature applications

## Series PSP10-ET

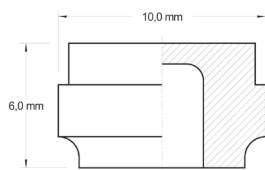
### Features

- Operating temperature up to **200 °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
- RoHS – compliant

### Customized Designs

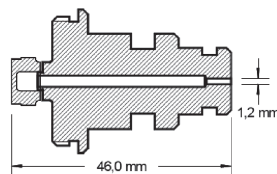
- Cylindrical stainless steel body
- Machined diaphragm
- Sensors will be shipped customized in accordance to the mechanical standard.

### Dimensions

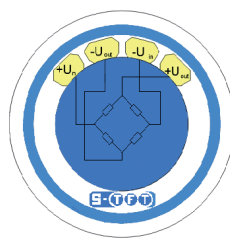


PSP10-ET

### Application

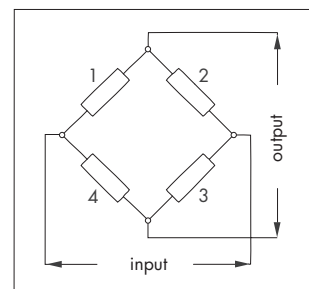


### Standard Layout (e.g.)

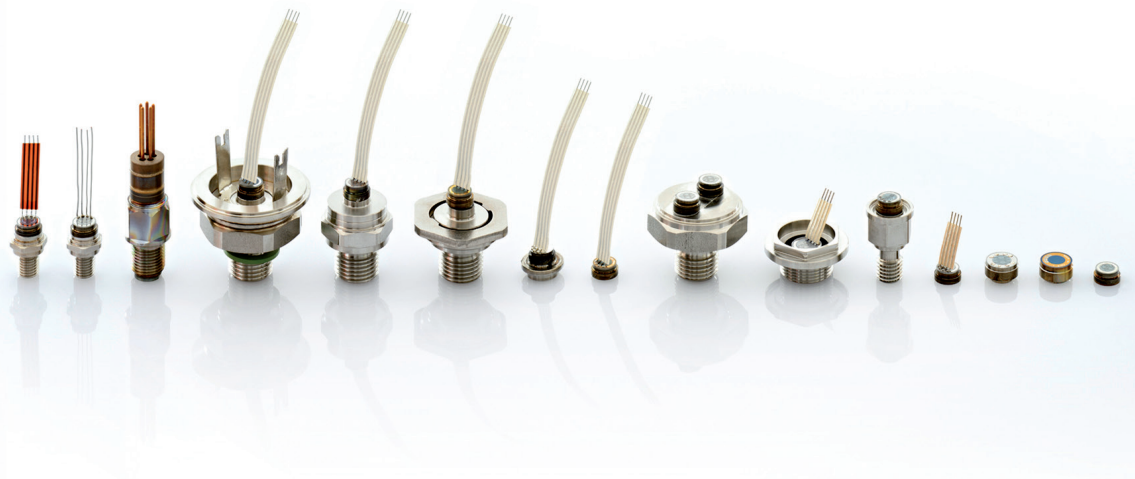


Electrical connection via tinned pads,  
ribbon cable or wire bondable

### Standard Schematic



Resistance Value: 5 kΩ



## Technical Data

Feature	Unit	Series PSP10-ET
Diaphragm Material	-	Inconel 718
Diameter (outer)	mm	10
Hight	mm	6
Nominal pressure	bar	10/16/25/40/60/100/160/250/400/ 600/1,000
Overload	-	2 x Nominal pressure
Burst pressure	-	> 5 x Nominal pressure
Nominal span	mV/V	1.8
Range of span	mV/V	1.4 ... 2.3
TC span	% FS/K	+ 0.01 ... + 0.03
Zero signal	mV/V	< ± 0.2
TC zero	% FS/K	< ± 0.035
Bridge resistance	kΩ	4 ... 7
TC of bridge resistors	ppm/K	< ± 40
Isolating resistance (100 VDC)	Ω	> 10 <sup>9</sup>
Isolating voltage	VAC	125/500
Nonlinearity		
Nominal pressure ≤ 10 bar	% FS	< 1
Nominal pressure > 10 bar		< 0.5
Hysteresis	% FS	< 0.2
Repeatability	% FS	<± 0.05
Long term stability (zero signal)		
72 h/200 °C	% FS	< ± 0.2
1,000 h/200 °C		< ± 0.4
100 h/85 °C, 85 % r.H., 5 VDC		< ± 0.6
10 Mio. Load cycles (nominal pressure)	% FS	< ± 0.3
Operating temperature range	°C	- 40 ... +200
Supply voltage range	VDC	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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