Pressure sensors in thin film technology on stainless steel diaphragm – front flush

Series PSF-St, PSF-HT, PSF-KL und PSF-FL

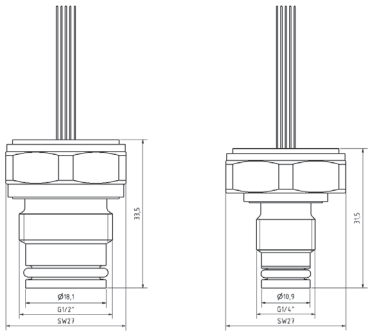
Features

- For static and dynamic measurements
- 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 resistance
- Basic sensing element without external active components
- Small sensitivity on enviromental influences
- RoHS – compliant

Customized Designs

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

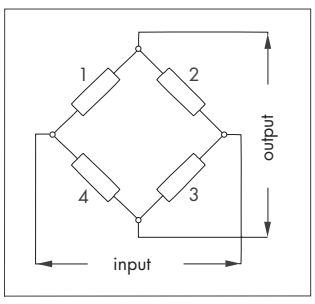
Standard Units



PSF-St/HT

PSF-KL

Standard Schematic



Resistance Value: 5 kΩ

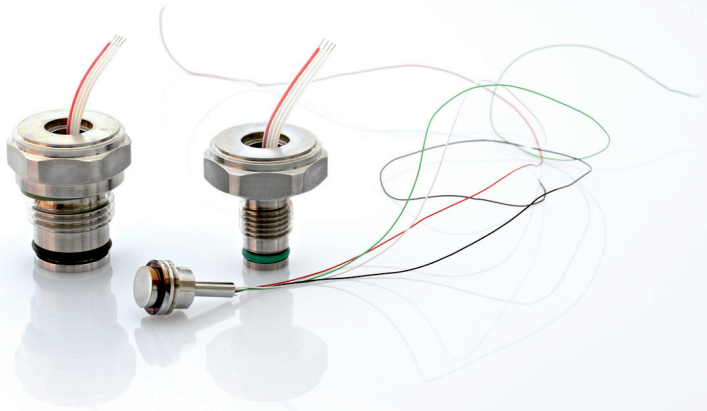
Electrical Connection:
- Ribbon cable
- Single wires
- Customized

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

Tel. +49(0)36601 858 - 0



Technical Data

Feature	Unit	Series PSF-St	Series PSF-HT	Series PSF-KL	Series PSF-FL
		oil-free			Frontflushed with oil-filling
Diaphragm material	-	Stainless steel (17-4 PH)	Stainless steel (17-4 PH)	Stainless steel (17-4 PH)	Stainless steel (316 L)
Nominal pressure	bar	100/160/250/400	100/160/250 400	100/160/250/400/600	4/6/10/16/25/40/60/100/160/250/400/600
Overload	-	2 x Nominal pressure	2 x Nominal pressure	2 x Nominal pressure	2 x Nominal pressure
Burst pressure	-	> 5 x Nominal pressure	> 5 x Nominal pressure	> 5 x Nominal pressure	> 5 x Nominal pressure
Nominal span	mV/V	1.8	1.8	1.8	1.8
Range of span	mV/V	1.5 ... 2.5	1.5 ... 2.5	1.1 ... 2.5	1.5 ... 2.5
TC span	% FS/K	+ 0.01 ... + 0.03	+ 0.01 ... + 0.03	+ 0.01 ... + 0.03	+ 0.01 ... + 0.03
Zero signal	mV/V	< ± 0.25	< ± 0.25	< ± 0.5	< ± 0.2
TC zero	% FS/K	< ± 0.035	< ± 0.035	< ± 0.05	< ± 0.035
Bridge resistance	kΩ	4 ... 7	4 ... 7	4 ... 7	4 ... 7
TC of bridge resistors	ppm/K	< ± 25	< ± 25	< ± 25	< ± 25
Isolating resistance (100 VDC)	Ω	> 10^9	> 10^9	> 10^9	> 10^9
Isolating voltage	VAC	125/500	500	500	125/500
Nonlinearity Nominal pressure <= 4 bar Nominal pressure ≥ 6 bar to ≤ 16 bar Nominal pressure ≥ 25 bar to ≤ 100 bar Nominal pressure > 100 bar	% FS	< 1 - - - -	< 1 - - - -	< 2 - - - -	 < 1 < 0.5 < 1 < 0.5
Hysteresis	% FS	< 0.5	< 0.5	< 0.75	< 0.2
Repeatability	% FS	< ± 0.2	< ± 0.2	< ± 0.2	< ± 0.05
Long term stability (zero signal) 72 h/125 °C 1.000 h/125 °C 72 h/150 °C 1.000 h/150°C 100 h/85 °C, 85 % r.H., 5 VDC	% FS	 < ± 0.15 < ± 0.25 - - < ± 0.6	 - - < ± 0.15 < ± 0.25 < ± 0.6	 - - < ± 0.15 < ± 0.25 < ± 0.6	 < ± 0.15 < ± 0.25 - - < ± 0.6
Operating temperature range	°C	- 40 ... + 125	- 40 ... + 150	- 40 ... + 150	- 40 ... + 125
Supply voltage range	VDC	10	10	10	10