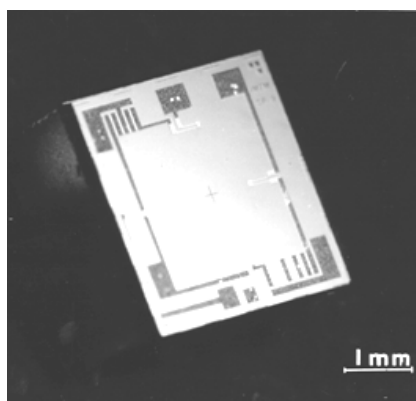


## PRESSURE SENSOR SP, SPT SERIES



SP, SPT series pressure sensors are intended for measurement of middle range pressures, from 0.25 to 25 bar. A pressure sensor is a sensitive element converting mechanical strain into electrical signal. An SP, SPT series sensor is miniature piezoresistive Wheatstone bridge fabricated by planar technology in a circular or square silicon diaphragm produced by micromachining.

A SPT series sensor differs from a NP series sensor because it is equipped with an additional temperature sensor, built into the same chip by planar technology. Sensors are built into TO-5 or other housings, depending on application

### FEATURES

- High sensitivity
- Media compatible with noncorrosive gases and moist air
- Good linearity
- High reliability
- High pressure overload
- Each sensor is shipped with its specific callibration card. The card lists the resistor values setting the zero offset and full scale output voltages in addition to optimizing the sensor performance for various temperatures.

### ABSOLUTE MAXIMUMS:

Operating temperature range: (-50 to +120)<sup>o</sup>C

Storage temperature range: (-50 to +150)<sup>o</sup>C

Pressure overload: 3x nominal

Supply current: up to 3 mA

## SPECIFICATIONS

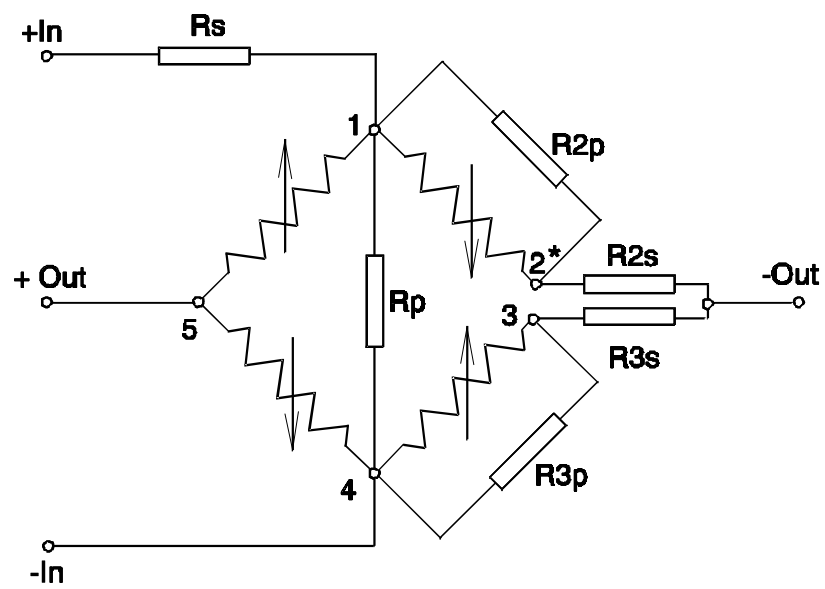
- Ambient temperature 22°C, unless otherwise stated
- Operating pressures range: 1/2/5/10/16/25 bar absolute, relative and differential

Parameter	typical	min	max	Units	Notice
Output voltage	100	80	150	mV	AT 2 Ma
Offset voltage	±10		±30	% FS	Noncomp. sensor
Nonlinearity	0.1		0.15	% FS	Dev. from best straight line
Bridge resistance	2500	2000	3000	Ω	500 to 5000 Ω on request
Temp. coeff. of offset voltage	±0.01		±0.02	% FS/°C	Compensated
Temp. coeff. of sensitivity	±0.01		±0.05	% /°C	Compensated
Hysteresis, repeatability	0.01		0.02	% FS	
Supply current	2		3	mA	
Compensated temper. range		-30	+80	°C	Other ranges upon request

## TEMPERATURE SENSOR

Resistance at 22°C	2500	2000	3000	Ω	
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## DIMENSIONS AND SCHEMATICAL DRAWING:



Recommended circuitry for temperature effect compensation

Temperature sensor is built only into SPT series sensors