

# OEM pressure sensor Ceramic thick-film technology Model SCT-1

WIKA data sheet PE 81.40

## Applications

- Applications with limited mounting space
- Design-in solutions
- Automotive industry
- Pneumatics

## Special features

- Unamplified mV/V signal
- Temperature compensation directly on the sensor
- Condensation-resistant sensor surface
- Excellent media compatibility

**OEM pressure sensor model SCT-1**

## Description

### Resistance to humidity and condensation

Due to the special, full-surface passivation of the sensor's surface, the sensor is impervious to humidity or condensation.

### Flexible connection possibilities

A high variety of electrical connections enables an easy sensor integration.

### State-of-the-art production standards

The production is carried out on state-of-the-art manufacturing lines with high capacity, high levels of automation and high process reliability. The sensors are manufactured in lot sizes of 500 pieces.

### Monolithic ceramic

With the monolithic body of the ceramic thick-film sensor a high long-term stability is achieved.

## Specifications

### Measuring ranges

Relative pressure [bar]			
Measuring range	0 ... 2	0 ... 5	0 ... 10
Overpressure limit	5	10	20
Burst pressure	6	12	25
Measuring range	0 ... 20	0 ... 50	0 ... 100
Overpressure limit	40	100	200
Burst pressure	50	120	250

Other measuring ranges on request.

### Output signals

Measuring range [bar]	Output signal [mV/V] (unamplified)
0 ... 2	1 ... 4
0 ... 5, 0 ... 10	1.5 ... 4
0 ... 20, 0 ... 50	2 ... 4
0 ... 100	1.7 ... 2.7

### Electrical connection

- Bondable pads, grid dimension 2.54 or 1.27
- Solderable pads, grid dimension 2.54 or 1.27
- Flex with solder pins

Others on request

### Power supply

DC 1 ... 20 V

### Settling time (10 ... 90 %)

< 1 ms

### Limit frequency (mechanical)

15 kHz

### Condensation resistance

In accordance to test as per IEC 68-2-30, test Db, variant 2  
test level: 25 ... 55 °C

6 cycles

### Permissible temperature ranges

Medium: -40 ... +125 °C

Ambient: -40 ... +125 °C

Storage: -40 ... +125 °C

### Service life

> 10 million load cycles

### Zero offset

-0.2 ... 0 mV/V

### Bridge resistance

7.5 ... 15 kΩ

### Temperature error

Temperature compensation directly on the sensor

Compensated temperature range: -25 ... +105 °C

Mean temperature coefficient

- Zero point: < 0.2 % of span/10 K  
< 0.3 % of span/10 K (at 0 ... 2 bar)
- Span: < 0.2 % of span/10 K

### Accuracy at reference conditions

Including non-linearity, hysteresis, non-repeatability  
(corresponds to measured error per IEC 61298-2).

- **Measuring range 0 ... 2 bar**  
Typical: < 0.40 % of span  
Maximum: < 0.75 % of span
- **Measuring ranges 0 ... 5 to 0 ... 50 bar**  
Typical: < 0.25 % of span  
Maximum: < 0.50 % of span
- **Measuring range 0 ... 100 bar**  
Typical: < 0.40 % of span  
Maximum: < 0.75 % of span

### Material, wetted parts

Ceramic (96% Al<sub>2</sub>O<sub>3</sub>)

## Reference conditions (per IEC 61298-1)

### Temperature

15 ... 25 °C

### Atmospheric pressure

860 ... 1,060 mbar

### Humidity

45 ... 75 % relative

### Power supply

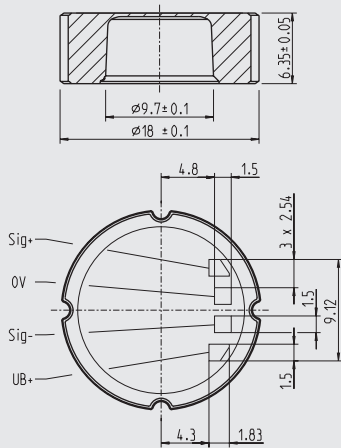
DC 10 V

### Mounting position

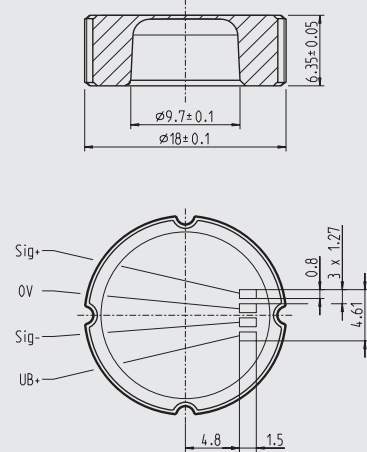
any

**Dimensions in mm**

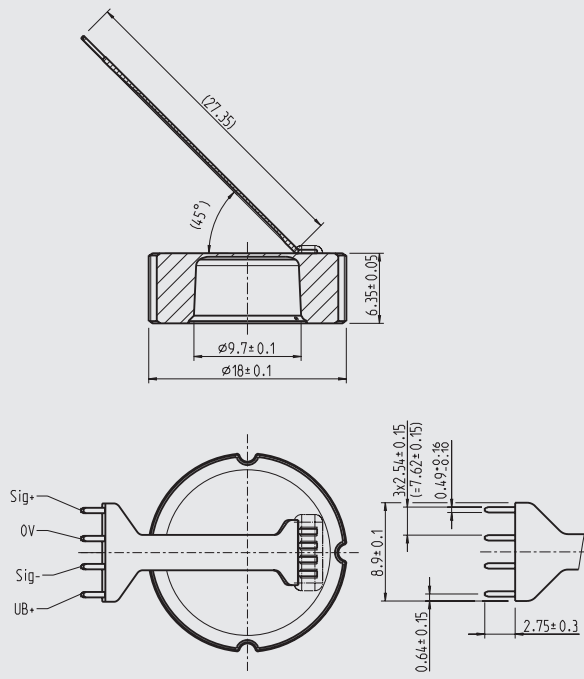
Bondable pads, grid dimension 2.54  
Solderable pads, grid dimension 2.54



Bondable pads, grid dimension 1.27  
Solderable pads, grid dimension 1.27



Flex with solder pins



Customer-specific solutions on request  
Detailed mounting instructions on request.

**Ordering information**

Measuring range / Output signal / Electrical connection

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