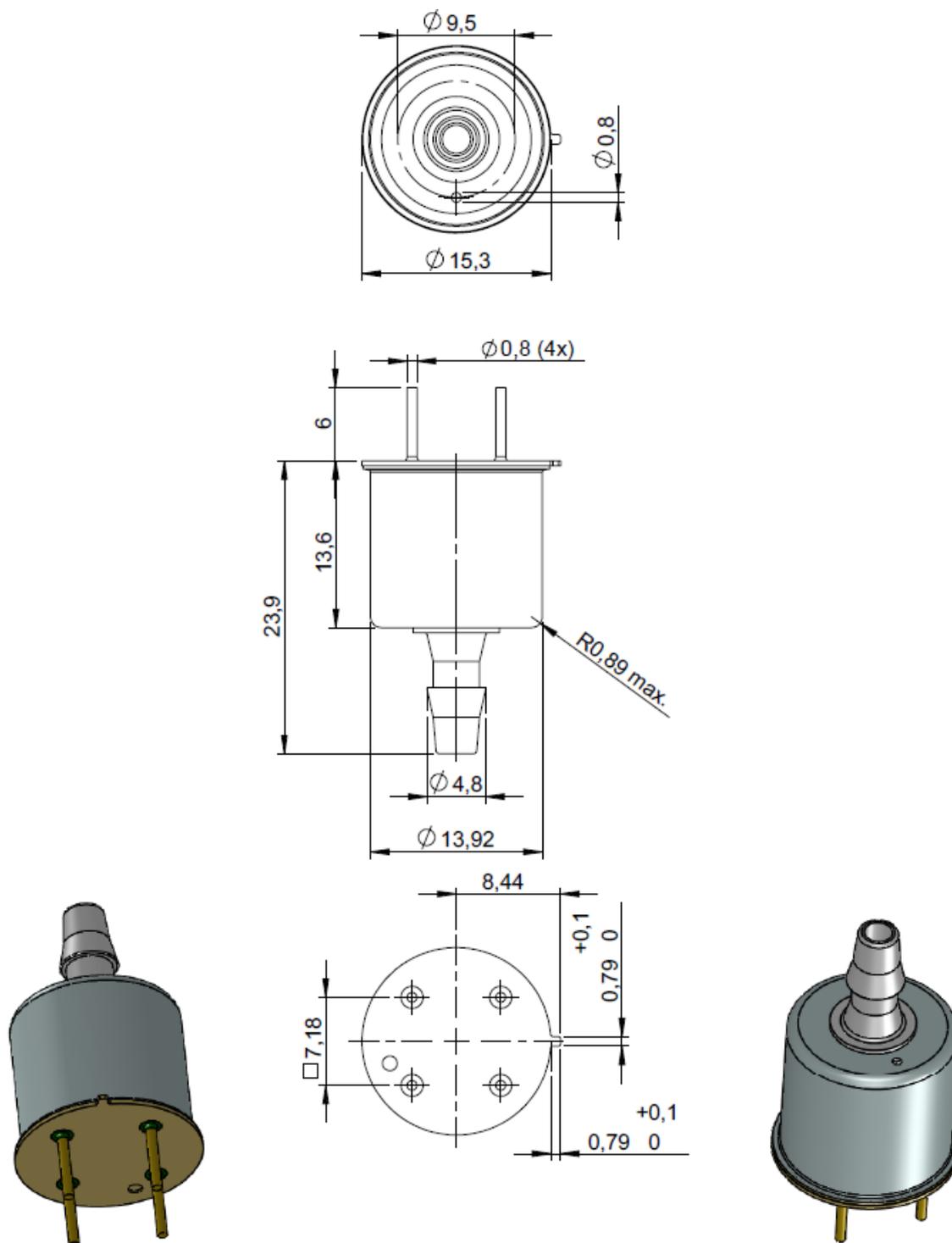


Data sheet: Oxygen sensor

Type: SO-E3-960

Housing / dimensions



Data sheet: Oxygen sensor

Type: SO-E3-960

Characteristic data

SO-E3-960 modified sensor type for high oxygen applications

Measuring parameter: oxygen concentration

Measuring medium: gaseous atmosphere

Measuring principle: limiting current sensor type

Measuring ranges: 1.0 to 96.0% O₂

Output-characteristic:

$$I_S(O_2) = -k * \ln\left(1 - \frac{[O_2]}{100}\right)$$

$I_S(O_2)$ sensor current in μA
 $[O_2]$ oxygen concentration in %
 k specific constant of sensor

Output-signal in air: 15 – 30 μA

output current at dry gas composition 20,9% O₂, remainder N₂ (air)

Output-signal: 1 - 412 μA (1-96% oxygen, with process variation)

Accuracy: $\pm 1.00\%$ O₂ (at variation of concentration 1.00% O₂ – 96.0% O₂)

Reproducibility: < 0.2% O₂ (at variation of concentration 1.00% O₂ – 96.0% O₂)

Sensor voltage: 1,6 volts

Sensor heater resistance: $R_{(25^\circ\text{C})} = 3.25 \Omega \pm 0.2 \Omega$ (4-wire measurement)

Current limitation: 0,5 amps (or soft start)

Standard operating mode: U h: 3.6 +- 0.05 volt
constant voltage Power consumption approx.. 1.41 watt

Possible operating modes: constant voltage, constant resistance, constant power

Recommended gas flow 150 ml/min (max 500 ml/min)

Warm up time: approx. 2 min.

Max. packaging temperature: approx. 70 °C (measured by room-temperature)

Max. ambient temperature: 350 °C

Sensor marking: Edged on the housing; eg. 3883011E: 388 last three numbers of batch No, 30 production week, 11 production year, E .. 1.0 – 96.0% measuring range

RoHS: Compliant