

CERAMIC STANDARD PRESSURE SENSOR CPS 1184 Z

with output amplifier



The ceramic pressure sensors in the CPS 1184 Z series are integrated with an amplifier and are supplied calibrated to an output signal of 0.5 V to 4.5 V.

The excellent long-term stability and high resistance against a wide range of media are additional features of this sensor series.



TECHNICAL SPECIFICATIONS

| | |
|----------------------------|--|
| Supply voltage | 5 V \pm 0.5 VDC |
| Power consumption | < 10 mA typ. Rload > 2 k) < 50 mA max. |
| Output signal | 0.5 ... 4.5 V ratiometric |
| Kalibrierfehler | \pm 1 % / FS |
| Therm. offset shift | 0 \pm 0.05 % FS/K (0 ... 80 °C not compensated) |
| Therm. span shift | 0 ... -0.012 % FS/K (20 ... 80 °C) 0 ... -0.018 % FS/K (-40 ... 125 °C) |
| Sample rate | 1 kHz typ. / 0.5 kHz min. |

| | |
|------------------------------|--|
| Insulating resistor | >1Gohm @ 500 VDC, RT, 70 % rH (clamping 16.00mm) |
| Insulating voltage | > 0.5 kVDC with minimal membrane thickness, from medium to printed circuit |
| Body material | Ceramic AL203 96 % |
| Operating temperature | -40 ... +125 °C |
| Storage temperature | -20 ... +125 °C |

Mechanical and electrical characteristics are customisable. Specifications are subject to change without notice. We recommend that customers perform their own tests for new or untested applications.

| PRESSURE RANGE [BAR] | LONG THERM STABILITY * | LINEARITY / HYSTERESIS (TYP./MAX.) (% FS) ** | BURST PRESSURE [BAR] | OVER-PRESSURE [BAR] *** | VACUUM CAPABILITY [BAR] |
|----------------------|------------------------|--|----------------------|-------------------------|-------------------------|
| 2 {1.6 ... 2.5} | \pm 0.25 | \pm 0.15 / 0.4 | \geq 5 | \leq 3 | -0.6 |
| 5 {4 ... 6} | \pm 0.25 | \pm 0.15 / 0.4 | \geq 15 | \leq 7.5 | -0.8 |
| 10 | \pm 0.15 | \pm 0.15 / 0.4 | \geq 30 | \leq 15 | -1 |
| 20 {16 ... 25} | \pm 0.15 | \pm 0.15 / 0.4 | \geq 60 | \leq 30 | -1 |
| 50 {40 ... 60} | \pm 0.15 | \pm 0.15 / 0.4 | \geq 150 | \leq 75 | -1 |
| 100 | \pm 0.2 | \pm 0.2 / 0.5 | \geq 250 | \leq 150 | -1 |
| 200 {160 ... 250} | \pm 0.2 | \pm 0.2 / 0.5 | \geq 450 | \leq 300 | -1 |
| 400 | \pm 0.25 | \pm 0.3 / 0.6 | \geq 700 | \leq 550 | -1 |
| 600 | \pm 0.25 | \pm 0.3 / 0.6 | \geq 900 | \leq 720 | -1 |

* 1000 hours @ 125 °C | 50 million pressure cycles @ 25 °C, 10 - 90 % FS @ 2.5 Hz | 50 thermal cycles +125 °C/-40 °C, 2 K/min.

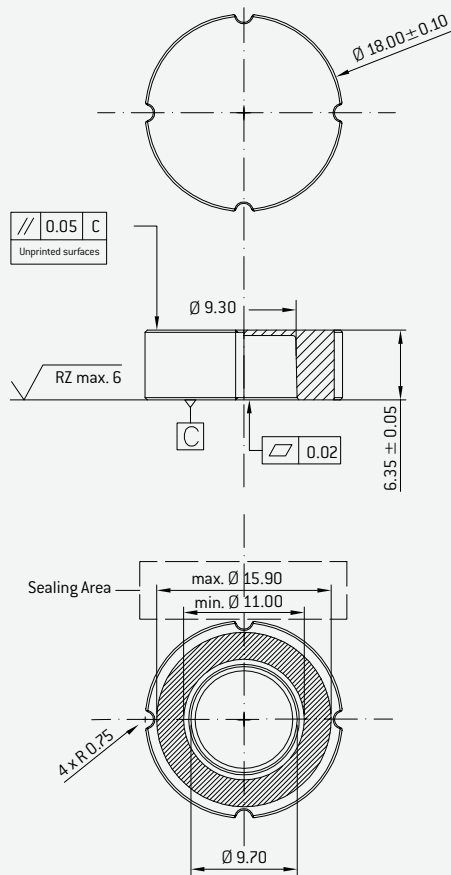
** For independent linearity 10 points are measured and compared to an ideal straight line. | For all measurements, DUT's are mounted in Metallux standard Housing according to "mounting proposal CPS 1184".

*** Over-Pressure indicates the maximum (short time < 1 s) operating pressure within no irreversible damage to the printed circuit are expected.

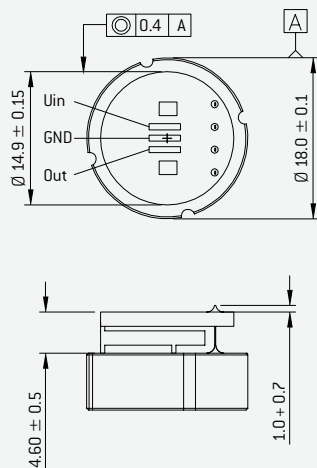
SAMPLE ORDER

| Type | Pressure range [bar] | Electrical connection (acc. to drawing) |
|--|----------------------|---|
| CPS 1184 Z | 100 bar | Solder pads |
| Other dimensions and electrical specifications on request. | | |

DIMENSIONAL DRAWINGS / CONNECTOR SCHEMATIC / ELECTRICAL CONNECTORS



Applified Output:
RV1015 [ZSC31015]



Applified Output:
RV1015 [ZSC31150]

