

# CERAMIC STANDARD PRESSURE SENSOR CPS 2184 Z

with output amplifier



Customers in the food, pharmaceutical and chemical industry rely on the flush mounted sensors of the series CPS 2184Z with integrated amplifier. The sensors are calibrated to an output signal of 0.5V to 4.5V.

Characteristic for this series is an excellent long term stability and its suitability to operate in a harsh environment.



## TECHNICAL SPECIFICATIONS

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

<b>Insulating resistor</b>	1 Gohm $\Omega$ (with clamping $\varnothing$ 16 mm)
<b>Insulating voltage</b>	> 0.5 kVDC with minimal membrane thickness, from medium to printed circuit
<b>Body material</b>	Ceramic AL203 96 %
<b>Operating temperature</b>	-40 ... +125 °C
<b>Storage temperature</b>	-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)	TYPE
0.5	$\pm$ 0.3	$\pm$ 0.3 / 0.6	$\geq$ 1.5	$\leq$ 1	-0.1	Rel.
1	$\pm$ 0.3	$\pm$ 0.25 / 0.6	$\geq$ 2.5	$\leq$ 1.5	-0.4	Rel. / Abs.
2	$\pm$ 0.25	$\pm$ 0.2 / 0.5	$\geq$ 5	$\leq$ 3	-0.6	Rel. / Abs.
5	$\pm$ 0.25	$\pm$ 0.2 / 0.5	$\geq$ 12	$\leq$ 7.5	-1	Rel. / Abs.
10	$\pm$ 0.25	$\pm$ 0.2 / 0.4	$\geq$ 25	$\leq$ 15	-1	Rel. / Abs.
20	$\pm$ 0.2	$\pm$ 0.2 / 0.4	$\geq$ 40	$\leq$ 30	-1	Rel. / Abs.
50	$\pm$ 0.2	$\pm$ 0.2 / 0.4	$\geq$ 100	$\leq$ 75	-1	Rel. / Abs.
100	$\pm$ 0.3	$\pm$ 0.25 / 0.5	$\geq$ 250	$\leq$ 150	-1	Sealed gauge
200	$\pm$ 0.3	$\pm$ 0.25 / 0.6	$\geq$ 400	$\leq$ 300	-1	Sealed gauge
400	$\pm$ 0.3	$\pm$ 0.25 / 0.6	$\geq$ 600	$\leq$ 500	-1	Sealed gauge
600	$\pm$ 0.3	$\pm$ 0.3 / 0.6	$\geq$ 700	$\leq$ 700	-1	Sealed gauge

\* 1000 hours @ 125 °C | 50 million pressure cycles @ 25 °C, 10 – 90 % FS @ 2.5 Hz | 50 thermal cycles +125 °C / -40 °C, 2K/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 2184-ND-HD".

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

## SAMPLE ORDER

Type	Pressure range (bar)	Pressure type	Electrical connection (acc. to drawing)
CPS 2184 Z	100 bar	A/R/SG	Solder pads
Other dimensions and electrical specifications on request.			

DIMENSIONAL DRAWINGS / CONNECTOR SCHEMATIC / ELECTRICAL CONNECTORS

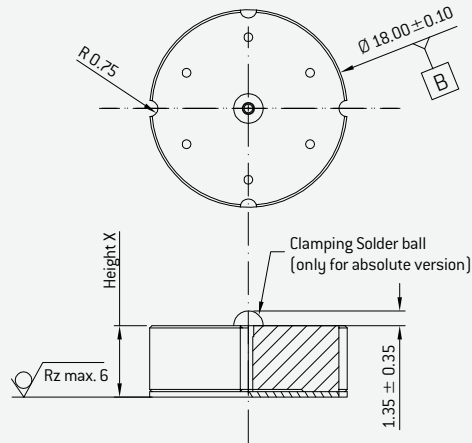
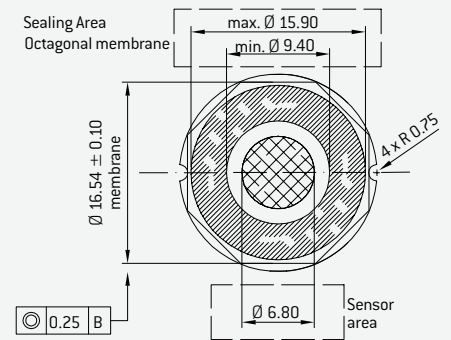
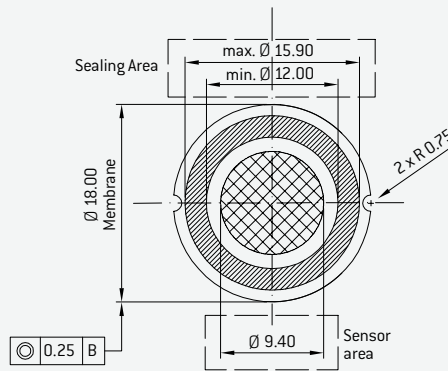


TABLE FOR HEIGHT X ROUND (MM)

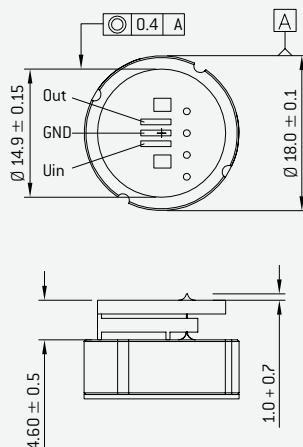
0 – 0.5 bar	6.13	± 0.15
0 – 1 bar	6.20	± 0.15
0 – 2 bar	6.25	± 0.15
0 – 5 bar	6.30	± 0.15
0 – 10 bar	6.35	± 0.15
0 – 20 bar	6.55	± 0.15
0 – 50 bar	6.70	± 0.15

TABLE FOR HEIGHT X OCTAGONAL (MM)

0 – 100 bar	6.70	± 0.15
0 – 200 bar	7.05	± 0.15
0 – 400 bar	7.35	± 0.2
0 – 600 bar	7.55	± 0.2



Apilified Output:  
RV2015 (ZSC31015)



Apilified Output:  
RV2150 (ZSC31150)

