

CERAMIC STANDARD PRESSURE SENSOR CPS 2184



The CPS 2184 sensors with front-flush diaphragm seal are suitable for measurement of relative as well as absolute pressures. The flush-front diaphragm makes for easy cleaning, an important requirement for sensors used in the medical and food industry.

The sensors are also available with diaphragms with 99.6 % aluminium oxide, for applications with extremely aggressive media.



TECHNICAL SPECIFICATIONS

Supply voltage	4 ... 30 VDC
Impedance	10 kOhm \pm 20 %
FS output (Span)	Min. 1.5 / typ. 3.2 / max. 6 mV/V
Offset	0 \pm 0.2 mV/V
Therm. offset shift	Typ. 0 \pm 0.015 / max. 0 \pm 0.03 % FS/K (25 ... 85 °C)
Therm. span shift	0 ... -0.013 % FS/K (0 ... 70 °C) 0 ... -0.015 % FS/K (-20 ... 0 °C / 70 ... 85 °C) 0 ... -0.018 % FS/K (-40 ... 0 °C / 85 ... 135 °C)

Insulating resistor	>1 Gohm @ 500 VDC, RT, 70 % rH (mounting 16.00mm)
Insulating voltage	> 0.5 kVDC with minimal membrane thickness, from medium to printed circuit
Body material	Al ₂ O ₃ 96 %
Operating temperature	-40 ... +135 °C
Storage temperature	-40 ... +150 °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 0.25	\pm 0.3 / 0.6	\geq 1,5	\leq 1	-0.1	Rel.
1	\pm 0.25	\pm 0.25 / 0.6	\geq 2,5	\leq 1,5	-0.4	Rel. / Abs.
2	\pm 0.2	\pm 0.2 / 0.5	\geq 5	\leq 3	-0.6	Rel. / Abs.
5	\pm 0.2	\pm 0.2 / 0.5	\geq 12	\leq 7,5	-1	Rel. / Abs.
10	\pm 0.2	\pm 0.2 / 0.4	\geq 25	\leq 15	-1	Rel. / Abs.
20	\pm 0.15	\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 0.25	\pm 0.25 / 0.5	\geq 250	\leq 150	-1	Sealed gauge
200	\pm 0.25	\pm 0.25 / 0.6	\geq 400	\leq 300	-1	Sealed gauge
400	\pm 0.25	\pm 0.25 / 0.6	\geq 600	\leq 500	-1	Sealed gauge
600	\pm 0.25	\pm 0.3 / 0.6	\geq 700	\leq 700	-1	Sealed gauge

* 1000 hours @ 150 °C | 50 million pressure cycles @ 80 °C, 10 – 90 % FS @ 2.5 Hz | 3 thermal shocks +125 °C / -20 °C, 3 K/sec | 50 thermal cycles +135 °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 proposa CPS 2184-ND-HD".

*** 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)	Pressure type	Electrical connection (acc. to drawing)
CPS 2184	100 bar	A/R/SG	Solder pads

Other dimensions and electrical specifications on request.

DIMENSIONAL DRAWINGS / CONNECTOR SCHEMATIC / ELECTRICAL CONNECTORS

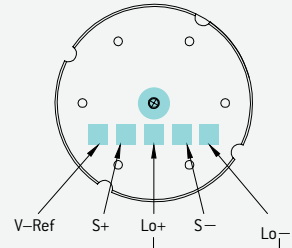
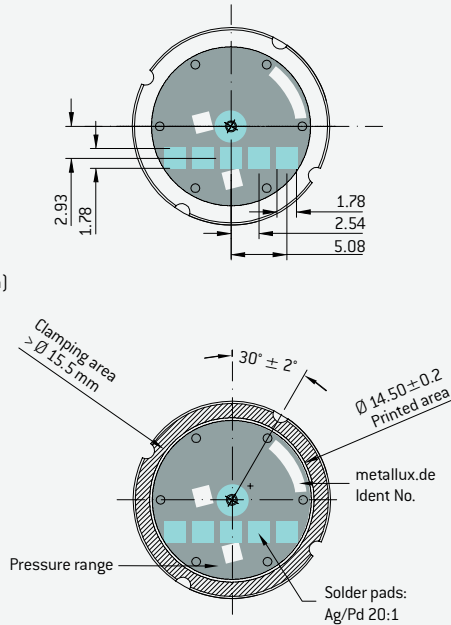
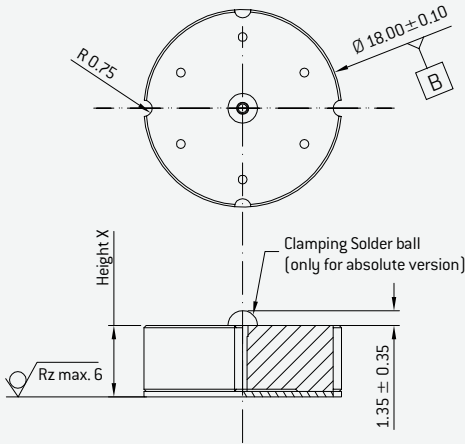
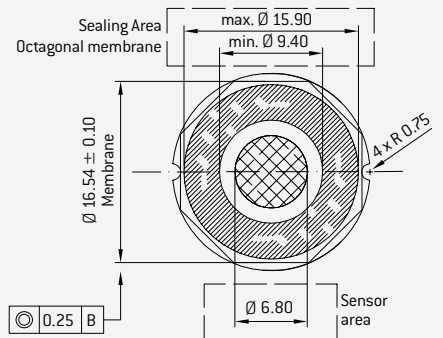
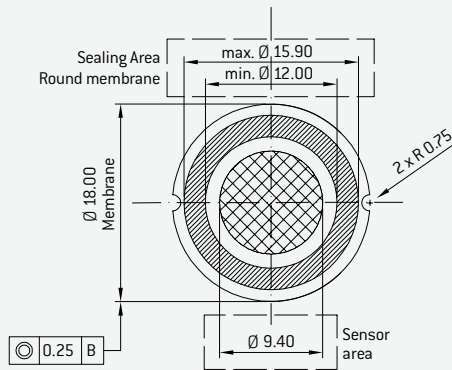


TABLE FOR HEIGHT X ROUND (MM)

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



Standard:
Tin plated: Sn95.6; Ag3.8; Cu0.6

Type of connection:
flat cable

Type of connection:
Pins 0.5 x 0.27 mm

