CERAMIC PRESSURE CELL CPS 1184

This monolithic ceramic pressure measuring cell has a diameter of 18 mm and is suitable for measuring gauge pressure up to 600 bar.

Available with pitch dimensions of 1.27 or 2.54 mm and as a Z variant with signal amplification (see CPS 1184 Z).

Advantages
– Compact design
– High measurement accuracy
– Very good media resistance
– Excellent long-term stability

Application examples
– Pumps
– Pressure transmitters
– Heating and cooling systems
– Pressure monitoring







General data	
Sensor technology	Piezoresistive, Wheatstone bridge
Sensor type	Monolitic, gauge pressure

Electrical data	
Pressure range	-1 to 600 bar
Supply voltage	3 to 30 VDC
Output signal	Analog
Current consumption	≤ 1.2 mA at 10 VDC
Offset	0 ±0.2 mV/V
Temperature Coefficient of Span	0 to -0.013 % FS/K (0 to 70 °C) 0 to -0.015 % FS/K (-20 to 0 °C and 70 to 85 °C) 0 to -0.018 % FS/K (-40 to 0 °C and 85 to 135 °C)
Temperature Coefficient of Offset	0 ±0.02 % FS/K (20 to 85 °C) Compensated

Mechanical data	
Dimensions	See drawing
Diameter	18 mm
Pitch	1.27 or 2.54 mm
Weight	< 5 g

Environmental data	
Operating temperature	-40 to +135 °C*
Storage temperature	-40 to +150 °C

*The operating temperature range may vary depending on the electrical connection.

Material	
Sensor body	Ceramic Al_2O_3 96 % Others on request

Electrical connection
Solder pad tinned Solder pin Cable Others on request

Nominal pressure		2 bar	5 bar	10 bar	20 bar	50 bar	100 bar	200 bar	400 bar	600 bar
Gauge pressure		•	•	•	•	•	•	•	•	•
Overpressure*	bar	≤ 3	≤ 7.5	≤ 15	≤ 30	≤ 75	≤ 150	≤ 300	≤ 550	≤ 720
Burst pressure	bar	≥ 5	≥ 15	≥ 30	≥ 60	≥ 150	≥ 250	≥ 450	≥ 700	≥ 900
Vacuum strength	bar	-0.6	-0.8	-1	-1	-1	-1	-1	-1	-1
Sensitivity	mV/V	2.9 – 3.9	2.8 – 3.8	2.5 – 3.5	2.5 – 3.5	2.7 – 3.7	2.9 – 3.9	2.7 – 3.7	2.4 – 3.4	2.2 – 3.2
Accuracy** typ./max.	% FS	0.3 / 0.5	0.3 / 0.5	0.3 / 0.5	0.3 / 0.5	0.3 / 0.5	0.5 / 0.6	0.5 / 0.6	0.6 / 0.7	0.6 / 0.7

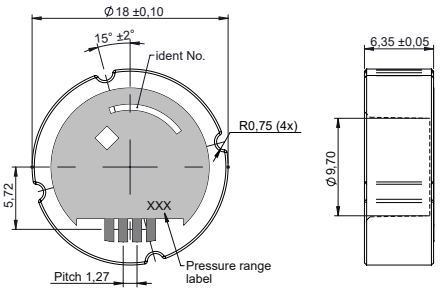
* The specified overpressure ensures correct functioning of the cell in the event of overload. Duration of overpressure < 1 s
** Basis of calculation:

$$\text{Accuracy} = \sqrt{\text{Nonlinearity}^2 + \text{Hysteresis}^2 + \text{Nonrepeatability}^2}$$

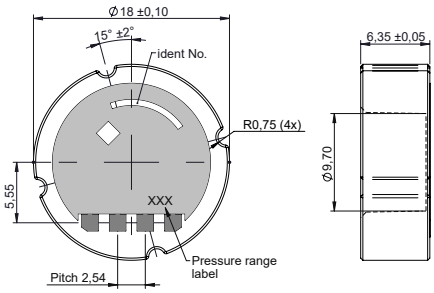
CERAMIC PRESSURE CELL CPS 1184

Dimensions

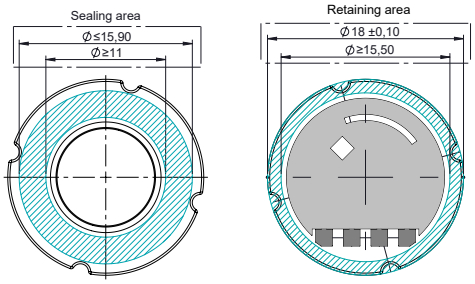
Pitch 1.27 mm



Pitch 2.54 mm



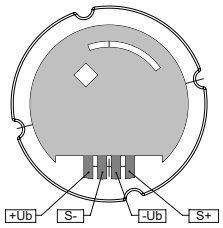
Mounting proposal



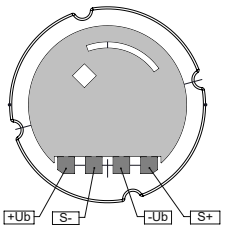
All dimensions in mm

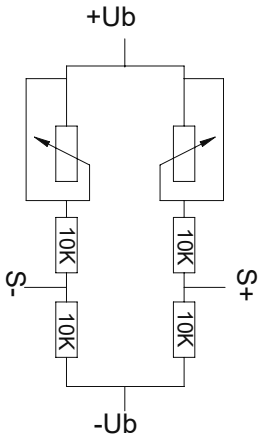
Connection diagram

Pitch 1.27 mm



Pitch 2.54 mm

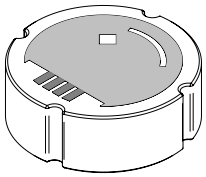




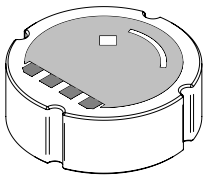
Electrical connection

Solder pad tinned

Pitch 1.27 mm



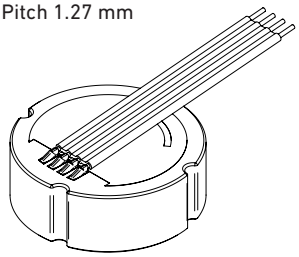
Pitch 2.54 mm



Cable

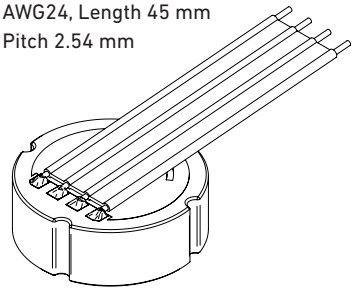
AWG24, Length 45 mm

Pitch 1.27 mm



AWG24, Length 45 mm

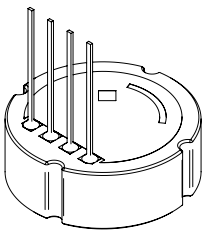
Pitch 2.54 mm



Solder pin

0.5 x 0.27 mm, Length max. 13 mm

only Pitch 2.54 mm



Metallux cannot picture the customer's operating and application conditions and the customer's existing environmental influences.
We therefore recommend that you carry out your own investigations into the planned use of the products under the actual operating conditions.

We continuously improve our products and also update our data sheets regularly. In this respect, there may be changes in the specification.
These changes will apply to orders received by us from the time of the update, unless otherwise agreed.

Our products comply with Directive 2011/65/EU (RoHS) including Directive 2015/863/EU and Regulation (EC) No. 1907/2006 (REACH).