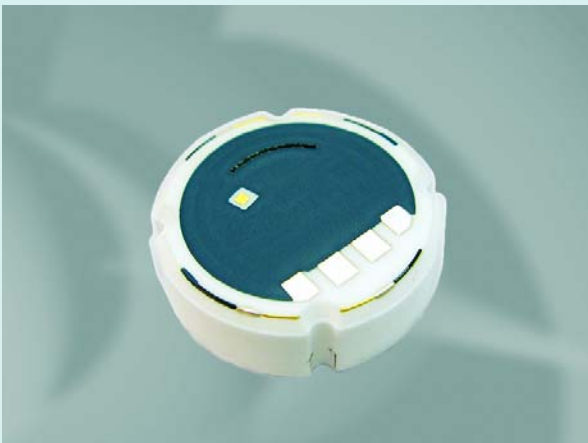


## Ceramic Pressure Sensor

### CPS 1184



#### Features

- monolithic ceramic technology
- robust design
- temperature compensated
- easy to assemble

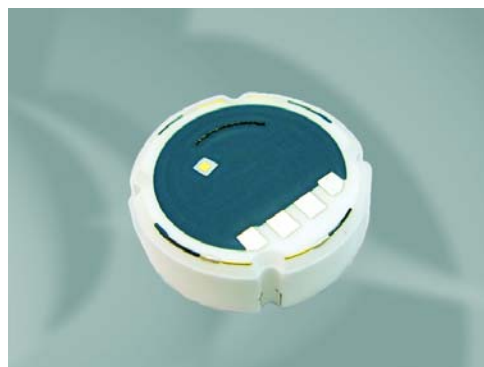
#### Applications

- brake systems
- forklift trucks
- pneumatic
- hydraulic
- electronic pressure switches
- pressure transmitters

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# Ceramic Pressure Sensor

CPS 1184



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## General data

Sensor type	Monolithic
Pressure type	Gauge pressure
Reference conditions	Temperature $T_{ref}$ 25°C
	Supply voltage $U_{ref}$ 10 V <sub>DC</sub>

## Electrical data

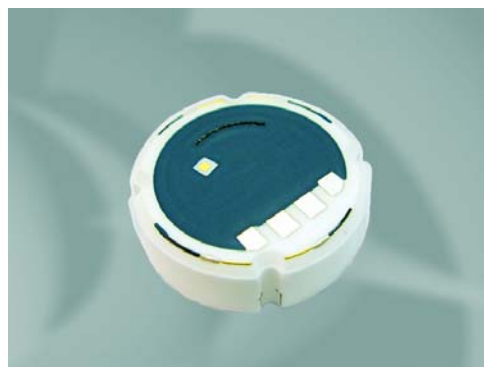
Supply voltage stabilised	$\leq 30$ V <sub>DC</sub>
$I_{max}$	4 mA
Bridge resistance	$10 \pm 20$ % k $\Omega$

## Pressure ranges

Pressure range $p_{Nom}$ [bar]	Overload pressure $P_s$ (max. 1min) [bar]	Burst pressure $p_B$ [bar]	Output voltage range [mV/V]	Acceptable minimum pressure [bar]
1,6	3	$\geq 4$	1,5 ... 2,8	Vacuum
2,5	5	$\geq 7$	2,5 ... 4,4	
4	8	$\geq 15$	1,5 ... 2,8	
6	12	$\geq 15$	2,4 ... 4,2	
10	20	$\geq 35$	2,7 ... 4,0	
16	32	$\geq 50$	2,2 ... 3,5	
25	50	$\geq 70$	3,7 ... 5,3	
40	80	$\geq 150$	2,0 ... 3,3	
60	120	$\geq 150$	3,2 ... 4,8	
100	200	$\geq 250$	2,1 ... 3,5	
160	250	$\geq 320$	1,4 ... 2,7	
250	400	$\geq 450$	2,2 ... 4,2	
400	700	$\geq 700$	1,4 ... 2,9	

# Ceramic Pressure Sensor

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### Output data

Output voltage range	See pressure ranges
Offset range	- 0,2 ... 0 mV/V *)
Total error **)	$\leq \pm 0,4 \% \text{ FS}$ ; $p_{\text{Nom}} \leq 60 \text{ bar}$
Sum of non-linearity, hysteresis and non-repeatability ***)	$\leq \pm 0,8 \% \text{ FS typ.}$ ; $p_{\text{Nom}} > 60 \text{ bar}$
Offset change after 1000h @ 125°C	$\leq \pm 0,25 \% \text{ FS}$
after 2,5 mio. Pressure cycles 0 ... 100 %	$\leq \pm 0,1 \% \text{ FS}$
Change of span after 1000h @ 125°C	$\leq \pm 0,05 \% \text{ FS}$
after 2,5 mio. Pressure cycles 0 ... 100 %	$\leq \pm 0,05 \% \text{ FS}$
Influence of ambient temperature on offset TC-Offset (0 ... 85°C)	$\leq \pm 0,02 \% \text{ FS *)}$
Influence of ambient temperature on span TC-Span (0 ... 85°C)	$\leq \dots 0,012 \% \text{ FS}$

\*) other data on request, minimum order quantity 150 pieces

\*\*) depending on housing geometry and assembly conditions

\*\*\*) terminal based according to DIN 16086:2006...01

### Environmental conditions

Nominal temperature range	- 40 ... 125°C *)
Working temperature range	- 40 ... 125°C *)
Storage temperature range	- 50 ... 125°C *)
Material of parts in contact with the pressure medium	Al <sub>2</sub> O <sub>3</sub> - 96 % **)

\*) sensor without cable

\*\*) Aluminium oxide shows highest chemical resistivity against liquid and gaseous media. It is recommended, especially in the case of new and not tested applications, to do own tests.

### Electrical connections

Soldering pads	Pitch 2,54 mm / 1,27 mm
Pins	Pitch 2,54 ; length 12 mm **)
Silicon wire	50,8 mm **)
Nomex Flexprint	50,8 mm **)
PVC flat ribbon	50,8 mm **)

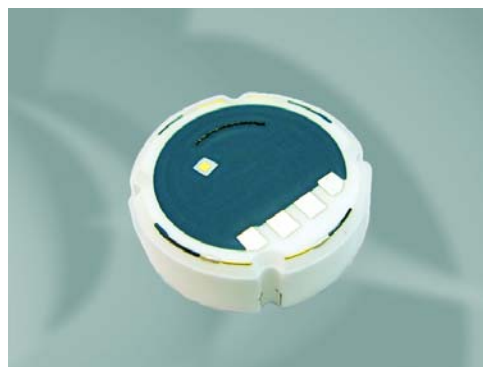
\*\*) other materials or length on request, min. order quantity 150 pcs

### Dimensions

Diameter	18 ± 0,1 mm
Height	6,35 ± 0,1 mm
Weight	ca. 5 g
Other dimensions	see drawing

# Ceramic Pressure Sensor

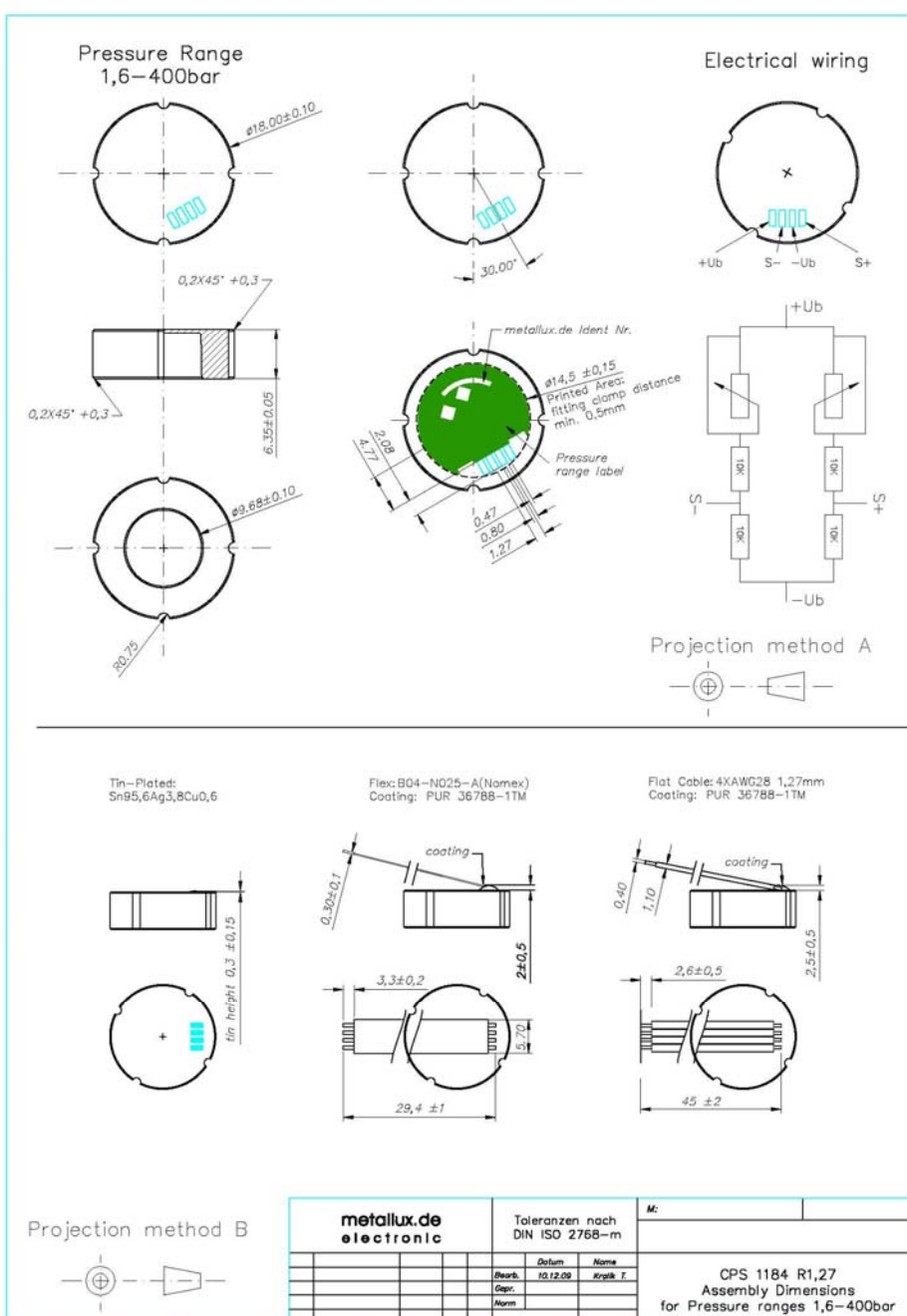
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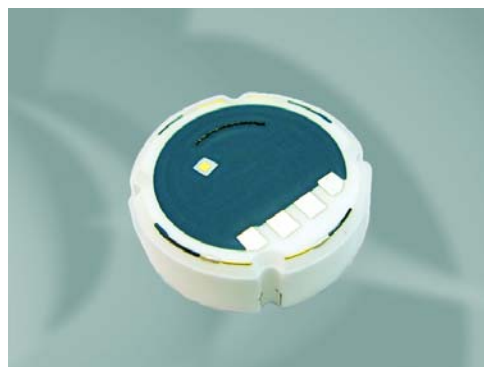
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## Dimensions



# Ceramic Pressure Sensor

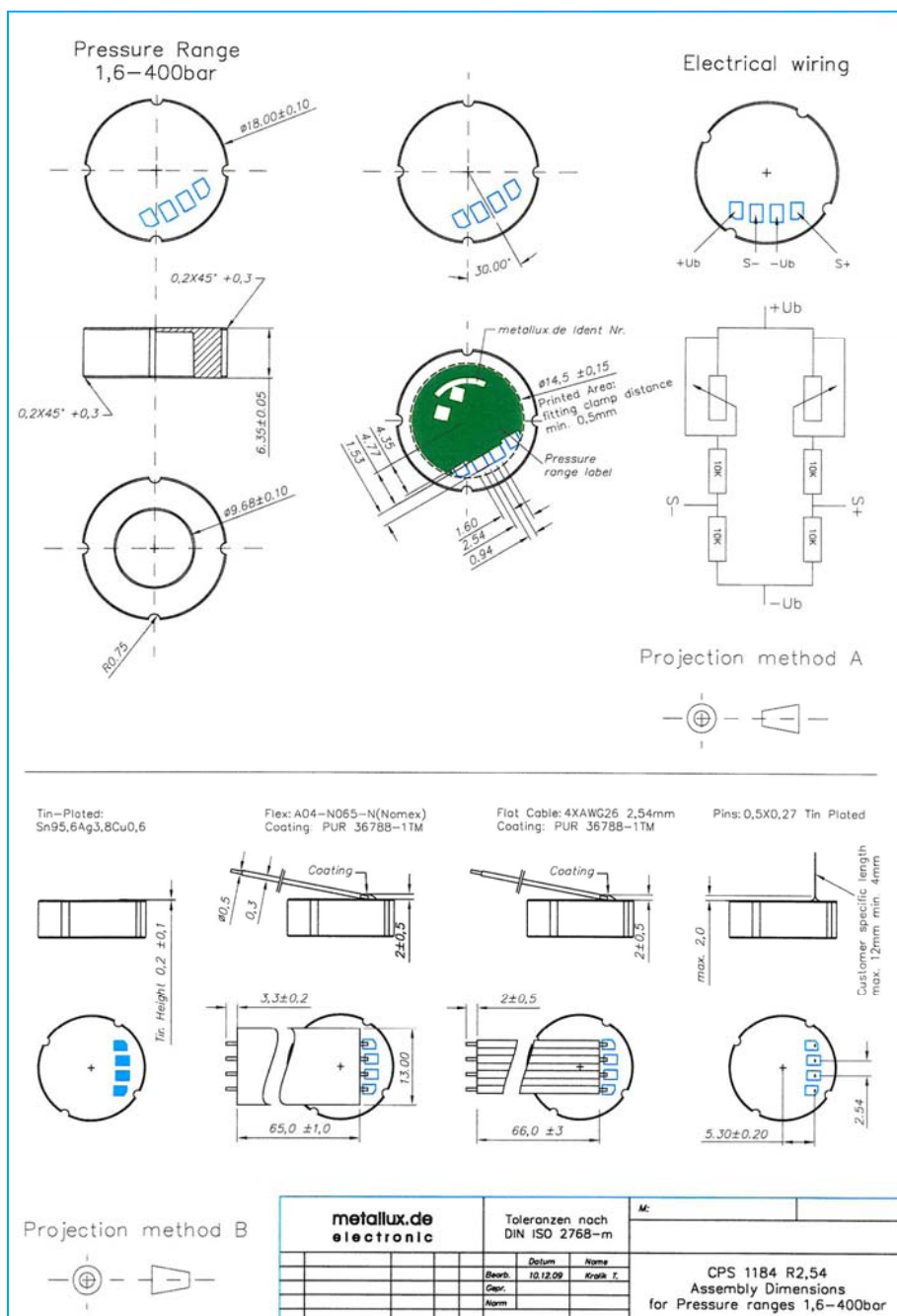
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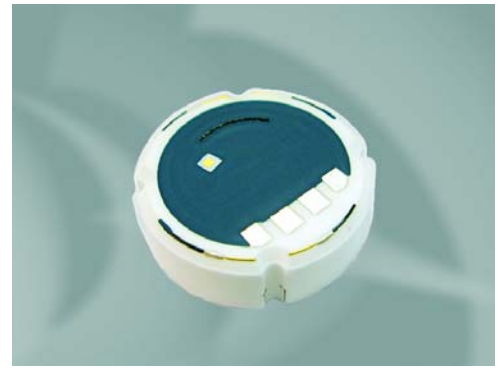
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## Dimensions



# Ceramic Pressure Sensor

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## How to order

Type	Pressure range	Pitch	Electr. connection
CPS 1184	25 bar	R 2,54 R 1,27	Pins