

## Spot™ CDS530D

### Capacitance Diaphragm Sensor (Wide Range)

The Spot CDS530D ceramic capacitance diaphragm sensor is designed for integration into the limited space in your specific vacuum instruments and systems. The dual miniature sensor offers a high accuracy in a wide measurement range and the alumina ceramic cells and the weldable stainless steel feedthrough are all alumina coated. The sensor electronics provides a digital SPI interface for easy integration. The sensor features a fast data cycle time for instant response to pressure changes, outstanding repeatability and long-term stability.



#### ADVANTAGES

- The dual miniature sensor offers a high accuracy in a wide measurement range
- Wide range, high precision
- Excellent repeatability and long-term stability
- Sensor electronics with SPI interface for easy integration
- Welded custom flange for integration of calibrated sensor
- Fast response time

#### APPLICATIONS

- For integration into custom vacuum instrumentation and systems

# Spot™ CDS530D

## ORDERING INFORMATION

### Type

CDS530D **on request**

## SPECIFICATIONS

Full scale (FS)	1000 Torr	300 Torr	100 Torr	30 Torr	10 Torr
Accuracy <sup>1)</sup> (Sensor 1 & 2)	0.5 % of reading				
Temperature effect					
on zero	0.01 % FS / °C				
on span	0.01 % of reading / °C				
Resolution	0.01 % FS / °C				
Long time stability	0.5 % FS / year				
Lowest reading	0.05 % FS				
Measuring range	0.1 ... 100 % FS				
Temperature					
Ambient operating	0 ... 60 °C				
Compensated range	10 ... 50 °C				
Storage	-20 ... 80 °C				
Ambient humidity limits	< 80 % RH non-condensing				
Maximum admissible pressure	400 kPa absolute				
Burst pressure	800 kPa absolute				
Supply voltage	5 ± 0.25 VDC				
Supply voltage ripple	≤ 50 mV <sub>pp</sub>				
Power consumption	< 0.05 W operation				
Digital interface	SPI bus				
Data rate	1, 2.5, 5, 10, 25, 100, 200, 250 ms (selectable during ordering process)				
Response time	2 ms (10 ... 90%)				
Electrical connection	JST or Flex. cable				
Materials exposed to vacuum	ceramics (Al <sub>2</sub> O <sub>3</sub> ), stainless steel (AISI 316L)				
Tightness, leak rate	< 1 E-9 mbar l/s				
Mounting position	any, recommended vertical up				

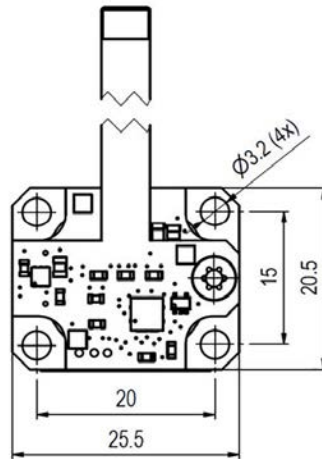
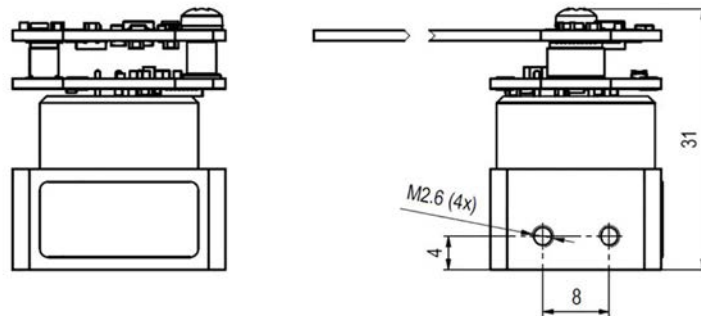
<sup>1)</sup> Calibrated at INFICON, non-linearity, hysteresis, repeatability at 25 °C ambient operating temperature without temperature effects after 2 hours operation.

Weight and internal volume are design specific

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## DIMENSIONS

[mm]



For information only, final dimensions depend upon integration