

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 ¹⁾ (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 _{pp}		
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)			
Responds time			2 ms (10 ... 90%)		
Electrical connection			JST or Flex. cable		
Materials exposed to vacuum			ceramics (Al ₂ O ₃), stainless steel (AISI 316L)		
Tightness, leak rate			< 1 E-9 mbar l/s		
Mounting position			any, recommended vertical up		

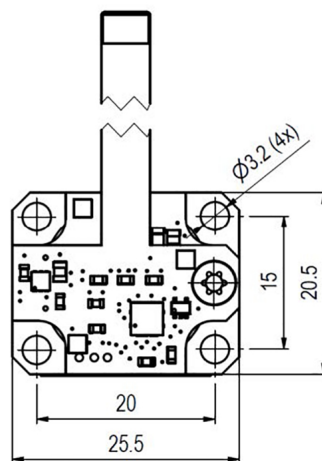
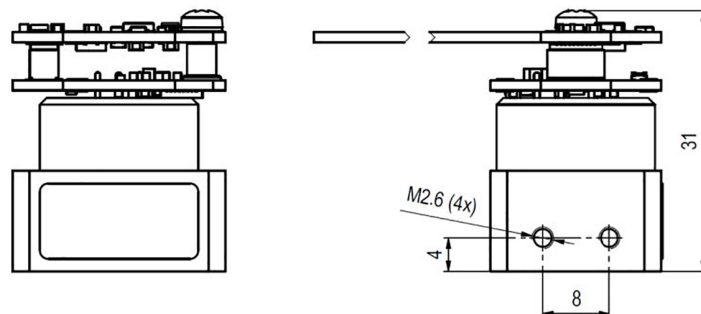
¹⁾ Calibrated at INFICON, non-linearity, hysteresis, repeatability at 25 °C ambient operating temperature without temperature effects after 2 hours operation.

Weight and internal volume are design specific

Spot™ CDS530D

DIMENSIONS

[mm]



For information only, final dimensions depend upon integration