

## Cube<sup>®</sup> CDGsci

### Heated Capacitance Diaphragm Gauge

The high-end INFICON Cube Capacitance Diaphragm Gauge is the most accurate ( $\leq 0.025\%$  Rd accuracy;  $\leq 50$  ppm F.S. Repeatability) and most stable vacuum gauge available ( $< 5$  ppm FS/ $^{\circ}$ C temperature stability;  $< 70$  ppm FS/year long term stability). Cube is designed as a pure reference device to standardize vacuum measurement systems and is the only choice for vacuum research applications. The proven INFICON temperature controlled, corrosion resistant ultrapure ceramic sensor is at the heart of Cube's outstanding performance. Cube sets new standards in modern communication and user flexibility with a 20 Bit analog output and RS232-C, TCP/IP and HTML digital output connected through a wireless or wired Ethernet interface. Each device comes with a quality assurance certificate, hand-signed by Cube's leading product researchers. Delivery in a reusable hard shell suitcase for storage or shipment to calibration laboratories underlines its professionalism.



#### ADVANTAGES

- True high precision pressure measurement - ceramic technology
- Full stable output - proven by PTB
- Flexible communication - various modern interfaces
- All functions integrated - no controller required
- Direct mounting to chamber - optimized center of gravity
- Transportation without isolation valve possible

#### APPLICATIONS

- Transfer standard
- Main reference gauge
- Research
- In-house standard

# Cube® CDGsci

## ORDERING INFORMATION

**3 C S 1 - C 1 1 - 2 3 0 0**

**Full Scale (FS / Torr)**

0.1	3
1	6
10	9
100	C
1000	F

**Flange**

1	DN 16 ISO-KF
3	DN 16 CF-R
E	8 VCR female

Other flange types on request.

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### SPECIFICATION

Full scale (FS)	1000 Torr, 1100 mbar	500 ... 1 Torr / mbar	0.5 ... 0.05Torr / mbar
Accuracy <sup>1)</sup>	0.025 % of reading		0.05 % of reading
Temperature effect			
On zero	0.0005 % FS / °C		0.005 % FS / °C
On span	0.001 % of reading / °C		0.01 % of reading / °C
Pressure, max.	3 bar (absolute)	2.5 bar (absolute)	1.5 bar (absolute)
Lowest reading	0.01 % FS		
Lowest suggested reading	0.05 % FS		
Temperature			
Operation (ambient)	+10 ... +40 °C		
Storage	-10 ... +50 °C		
Supply voltage	+14 ... +30 V (dc) or ±15 V (±5%)		
Power consumption			
During Heat up	≤15 W		≤12 W
At operating temperature	≤10 W		≤8 W
Output signal (analog)	0 ... +10 V (dc)		
Response time <sup>2)</sup>	100 ms		
Degree of protection	IP 40		
Standards			
CE conformity	EN 61000-6-2, EN 61000-6-3, EN 61010-1 and RoHS		
ETL certification	UL 61010-1, CSA 22.2 No. 61010-1		
SEMI compliance	SEMI S2		
Electrical connection	D-sub, 15-pin, male; 2 × LEMO Coax; Ethernet FCC		
Setpoint			
Number of setpoints	2 (SP1, SP2)		
Relay contact	≤30 V (dc) / ≤0.5 A (dc)		
Hysteresis	1 % FS		
Diagnostic port			
Protocol	Web pages, REST services, RS232-ASCII		
Read	Pressure, status, ID		
Set	Setpoints, filter, zero adjust, factory reset, DC offset		
Materials exposed to vacuum	ceramics (Al <sub>2</sub> O <sub>3</sub> ), stainless steel (AISI 316L)		
Internal volume	≤4.6 cm <sup>3</sup>		
Weight	1760 ... 1803 g		

<sup>1)</sup> Non-linearity, hysteresis, repeatability at 25°C ambient operating temperature without temperature effects after two hours operation

<sup>2)</sup> Increase 10 ... 90% FS

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## DIMENSIONS

mm (inch)

