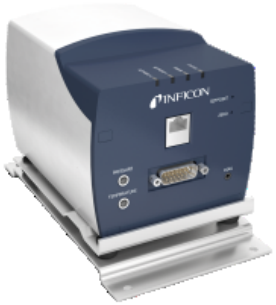
Cube™ CDGsci

Cube™ CDGsci - The Reference



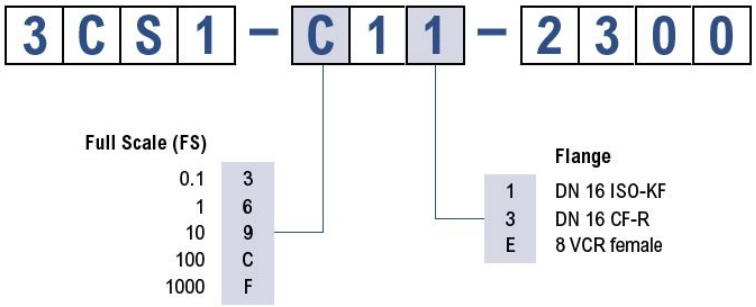
The high end INFICON Cube Capacitance Diaphragm Instrument is the most accurate (≤ 0.025 % Rd accuracy; ≤ 50 ppm FS Repeatability) and most stable vacuum gauge available (< 5 ppm FS/ °C temperature stability; < 70 ppm FS/ year long term stability). Cube is designed as a pure reference device to standardize vacuum measurement systems and is the only choice for vacuum research applications. The proven INFICON temperature controlled, corrosion resistant ultrapure ceramic sensor is the heart of the 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 wireless or wired Ethernet interface. Each device comes with a quality assurance certificate, hand-signed by the Cube's leading product researchers. Delivery in a reusable hard shell suit case for storage or shipment to calibration laboratories underlines its professonality.

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

ORDER INFORMATION

ORDERING INFORMATION



Other flange types on request.

SPECIFICATIONS

Type		1000 Torr	100 ... 1 Torr	100mTorr
Accuracy (1)	% of reading	0.025	0.025	0.05
Temperature effect				
on zero	percent FS/°C	0.0005	0.0005	0.005
Temperature effect				
on span	% of reading / °C	0.001	0.001	0.01
Pressure, max.	bar (absolute)	3	2.5	1.5
Lowest reading	percent FS	0.01	0.01	0.01
Lowest suggested reading	percent FS	0.05	0.05	0.05
Temperature				
Operation (ambient)	°C	+10 … +40	+10 … +40	+10 … +40
Storage	°C	–10 … +50	–10 … +50	–10 … +50
Supply voltage		+14 … +30 VDC or ±15 V (±5%)	+14 … +30 VDC or ±15 V (±5%)	+14 … +30 VDC or ±15 V (±5%)
Power consumption				
During Heat up	W	≤20	≤20	≤20
At operating temperature	W	≤17	≤17	≤17
Output signal (analog)	V (dc)	0 … +10	0 … +10	0 … +10
Response time (2)	ms	100	100	100
Degree of protection		IP 40	IP 40	IP 40
Standards				
CE conformity		EN 61000-6-2/-6-3, EN 61010 & RoHS	EN 61000-6-2/-6-3, EN 61010 & RoHS	EN 61000-6-2/-6-3, EN 61010 & RoHS
ETL certification		UL 61010-1, CSA 22.2 No.61010-1	UL 61010-1, CSA 22.2 No.61010-1	UL 61010-1, CSA 22.2 No.61010-1
SEMI compliance		SEMI S2	SEMI S2	SEMI S2
Electrical connection		D-sub, 15 pole, male; 2 x LEMO Coax; Ethernet FCC	D-sub, 15 pole, male; 2 x LEMO Coax; Ethernet FCC	D-sub, 15 pole, male; 2 x LEMO Coax; Ethernet FCC
Setpoint				
Number of setpoints		2 (SP1,SP2)	2 (SP1,SP2)	2 (SP1,SP2)
Setpoint				
Relay contact	V (dc)	≤30	≤30	≤30
Setpoint				
Relay contact	A (dc)	≤0.5	≤0.5	≤0.5
Setpoint				

SPECIFICATIONS

Type		1000 Torr	100 ... 1 Torr	100mTorr
Hysteresis	percent FS	1	1	1
Diagnostic port				
Protocol		Web pages, REST services, RS232-ASCII	Web pages, REST services, RS232-ASCII	Web pages, REST services, RS232-ASCII
Read		pressure, status, ID	pressure, status, ID	pressure, status, ID
Set		set points, filter, zero adjust, factory reset, DC offset	set points, filter, zero adjust, factory reset, DC offset	set points, filter, zero adjust, factory reset, DC offset
Materials exposed to vacuum		Aluminum oxide ceramic (Al_2O_3), stainless steel (AISI 316L [3])	Aluminum oxide ceramic (Al_2O_3), stainless steel (AISI 316L [3])	Aluminum oxide ceramic (Al_2O_3), stainless steel (AISI 316L [3])
Internal volume				
I. volume 1/2" tube	cm^3 ($in.^3$)			4.2 (0.26)
I. volume DN 16 ISO KF	cm^3 ($in.^3$)	4.2 (0.26)	4.2 (0.26)	4.2 (0.26)
I. volume DN 16 CF-R	cm^3 ($in.^3$)	4.2 (0.26)	4.2 (0.26)	4.2 (0.26)
I. volume 8 VCR®	cm^3 ($in.^3$)	4.2 (0.26)	4.2 (0.26)	4.2 (0.26)
Weight				
Weight DN 16 ISO KF	g	1670	1670	1670
Weight DN 16 CF-R	g	1670	1670	1670
Weight 8 VCR®	g	1670	1670	1670

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

(2) Increase 10 … 90 percent FS

(3) 18% Cr, 10% Ni, 3% Mo, 69% Fe

DIMENSIONS

mm (inch)