

Edge[®] CDG045D2

Heated Capacitance Diaphragm Gauge

INFICON Edge Capacitance Diaphragm Gauge is a highly accurate vacuum measurement instrument designed for harsh manufacturing environments. The proven temperature controlled, corrosion resistant, ultra-pure ceramic sensor provides superior span stability over many years paired with state-of-the-art zero stability. Edge comes with the INFICON patented unique sensor shield, which protects the gauge from undesired process by-products. Advanced electronics offer a wide range of configurable signal conditioning for all applications and optional EtherCAT[®] fieldbus interface. The innovative heating concept enables a cool to the touch surface and saves valuable tool space.

INFICON Edge is the smallest vacuum measurement instrument of its kind.

ADVANTAGES

- Compact, saves valuable tool space
- Easy integration, EtherCAT, wide variety of full scales and flanges, standard with two set points
- Easy one push button or remote signal zero command, zero offset adjustable
- Diagnostic port for quick service and maintenance
- Two year warranty, longer life time with advanced heating concept and gauge protection.
- No long term recalibration due to excellent signal stability and repeatability, even in harsh plasma applications
- Compliance and standards: CE, EN, UL, SEMI, RoHS

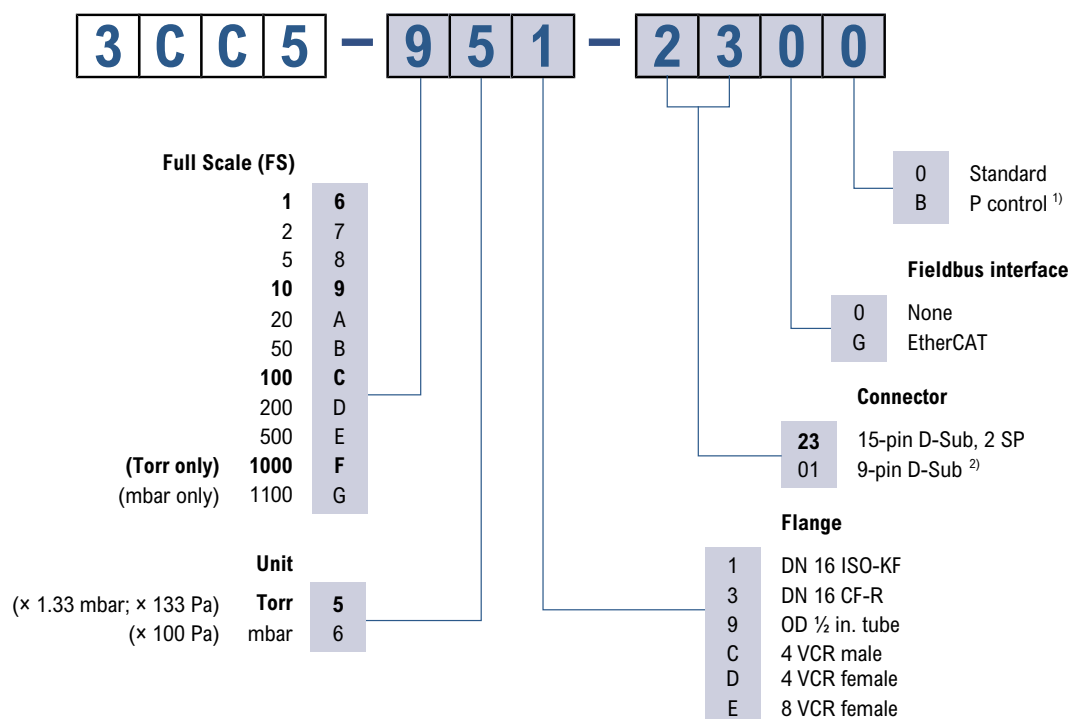
APPLICATIONS

- CVD, Etch, PVD and other semiconductor production processes



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ORDERING INFORMATION



1) Optimized signal filter setting for pressure control

2) Not possible with fieldbus interfaces

bold = standard products

Other flange types on request.

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SPECIFICATIONS

Full scale (FS)	1000 Torr, 1100 mbar	500 ... 1 Torr / mbar
Accuracy ¹⁾	0.15 % of reading	
Temperature effect		
On zero	0.0025 % FS / °C	
On span	0.01 % of reading / °C	
Pressure, max. (absolute)	400 kPa	260kPa
Resolution	0.003 % FS	
Lowest reading	0.01 % FS	
Lowest suggested reading	0.05 % FS	
Lowest suggested control pressure	0.5 % FS	
Temperature		
Operation (ambient)	+10 ... +40 °C	
Bakeout at flange	≤110 °C	
Storage	-20 ... +65 °C	
Supply voltage	+14 ... +30 V (dc) or ±15 V (±5%)	
Power consumption		
During Heat up	≤12 W	
At operating temperature	≤8 W	
Output signal (analog)	0 ... +10 V (dc)	
Response time ²⁾	30 ms	
Degree of protection	IP 40	
Standards		
CE conformity	EMC (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	
Setpoint		
Number of setpoints	2 (SP1, SP2)	
Relay contact	≤30 V (dc) / ≤0.5 A (dc)	
Hysteresis	1 % FS	
Diagnostic port		
Protocol	RS232-C	
Read	pressure, status, ID	
Set	setpoints, filter, zero adjust, factory reset, DC offset	
Materials exposed to vacuum	ceramics (Al ₂ O ₃), stainless steel (AISI 316L)	
Internal volume	≤6.8 cm ³	
Weight	540 ... 610 g	

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

²⁾ Increase 10 ... 90% FS

EtherCAT[®]

Protocol	EtherCAT [®] , firmware generation 2.0
Communication standards	Semiconductor Device Profile ETG.5003 Part 1 Common Device Profile ETG.5003 Part 2080 "Specific Device Profile - Vacuum Pressure Gauge"
Process Data	Fixed PDO mapping and configurable PDO mapping
EtherCAT connector	RJ45, 8-pin (socket), IN and OUT
Cable	Shielded Ethernet CAT5e or higher
Cable length	≤100 m (330 ft.)
Data rate	100000 Kbps

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DIMENSIONS

