

## Edge<sup>®</sup> CDG100D2

### 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

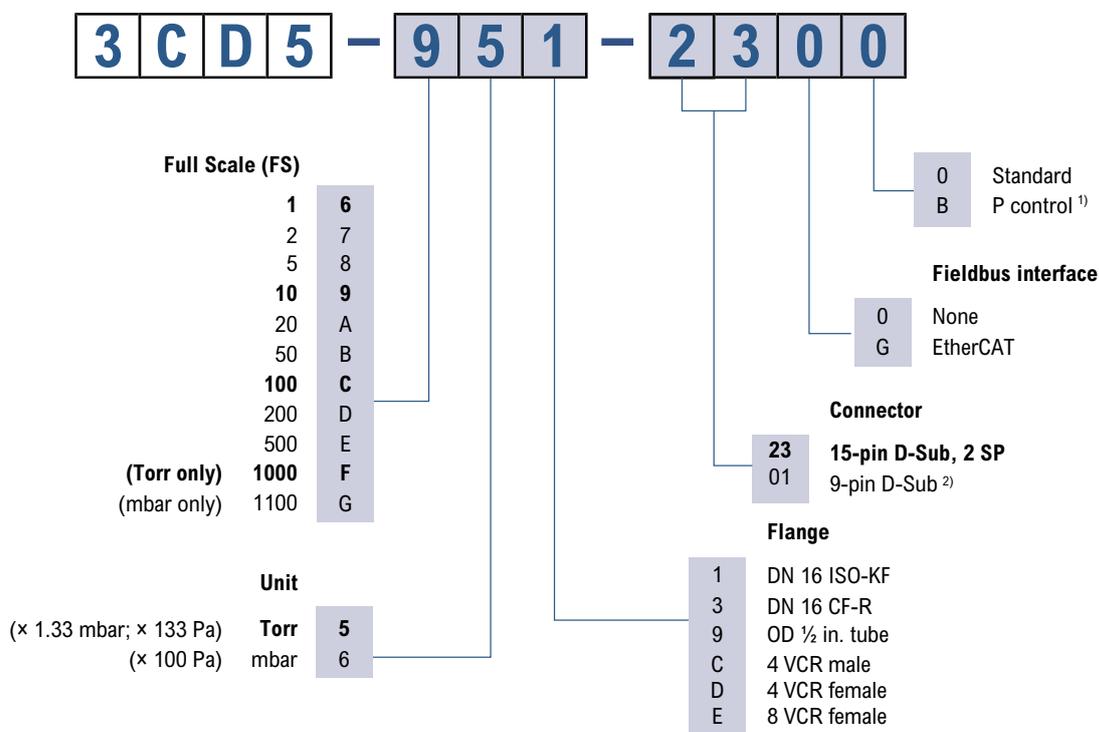
- Compact, saves valuable tool space
- Easy integration, EtherCAT, wide variety of full scales and flanges, standard with two set points
- Easy one push button or remote signal zero command, zero offset adjustable
- Diagnostic port for quick service and maintenance
- Two year warranty, longer life time 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	0.5 ... 0.05Torr / mbar
Accuracy <sup>1)</sup>		0.15 % of reading	
Temperature effect			
On zero		0.0025 % FS/ °C	
On span		0.02 % of reading / °C	
Pressure, max.	400 kPa (absolute)		260 kPa (absolute)
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) <sup>2)</sup>		+10 ... +50 °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		≤20 W	
At operating temperature		≤14 W	
Output signal (analog)		0 ... +10 V (dc)	
Response time <sup>3)</sup>		30 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 <sup>2)</sup>		
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 <sub>2</sub> O <sub>3</sub> ), stainless steel (AISI 316L )	
Internal volume		≤6.8 cm <sup>3</sup>	
Weight		552 ... 622 g	

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

<sup>2)</sup> Ambient temperatures >40°C may increase surface temperature above SEMI S2 compliance levels — mark "caution hot!"

<sup>3)</sup> Increase 10 ... 90% FS

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## SPECIFICATION ETHERCAT

### EtherCAT<sup>®</sup>

Protocol	EtherCAT <sup>®</sup> , 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

## DIMENSIONS

