

Edge[®] 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.



ADVENTAGES

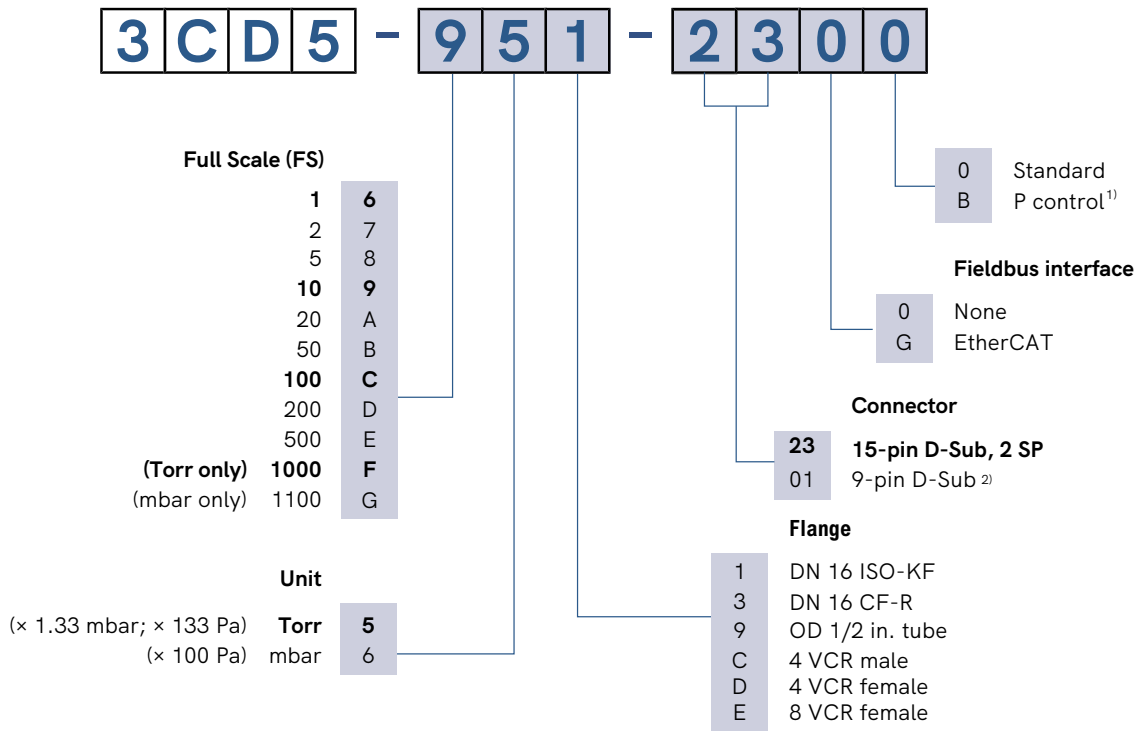
- Compact, saves valuable tool space
- Easy integration, EtherCAT, wide variety of full scales and flanges, standard with two set points
- Easy one push button or remote signal zero command, zero offset adjustable
- Diagnostic port for quick service and maintenance
- Two year warranty, longer life time 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) Torr / mbar | 1000 / 1100 ... 200 | 100 ... 1 |
|-----------------------------------|---|-----------|
| Accuracy ¹⁾ | 0.2 % of reading | |
| Temperature effect | | |
| On zero | 0.0025 % FS/ °C | |
| On span | 0.02 % of reading / °C | |
| Pressure, max. (absolute) | 400 kPa | 260 kPa |
| Response time ²⁾ | 30 ms | |
| Resolution | 0.003 % FS | |
| Lowest reading | 0.01 % FS | |
| Lowest suggested | | |
| Reading | 0.05 % FS | |
| Control pressure | 0.5 % FS | |
| Temperature | | |
| Operation (ambient) ³⁾ | +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) | |
| 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 ³⁾ | |
| 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 | 552 ... 622 g | |

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

²⁾ Increase 10 ... 90% FS

³⁾ Ambient temperatures >40°C may increase surface temperature above SEMI S2 compliance levels — mark "caution hot!"

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SPECIFICATION INTERFACES

EtherCAT[®]

| | |
|-------------------------|---|
| Protocol | EtherCAT [®] |
| 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

