

# Edge<sup>®</sup> CDG025D2 with EtherCAT

## Ambient Capacitance Diaphragm Gauge

INFICON temperature compensated Edge CDG025D2 with EtherCAT Capacitance Diaphragm Gauge is a highly accurate vacuum measurement instrument designed for harsh manufacturing environments.

The proven temperature compensated, 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 with EtherCAT fieldbus interface.



### ADVANTAGES

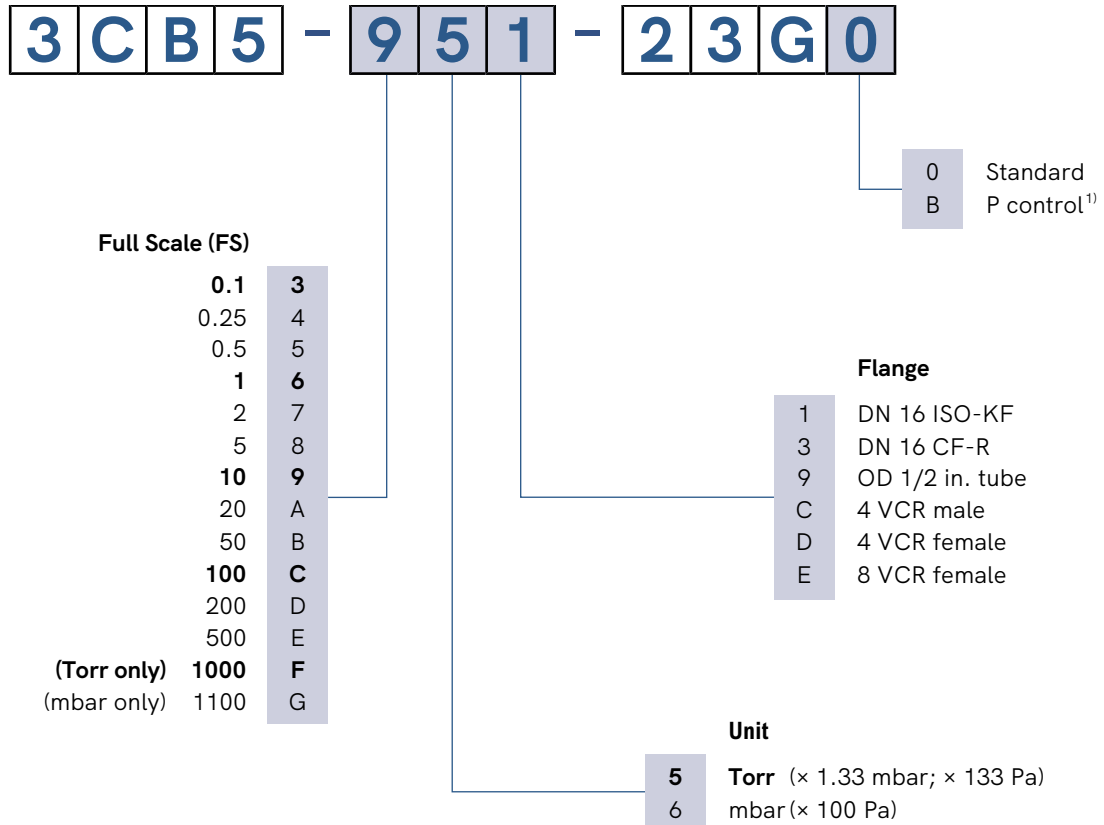
- Easy integration, EtherCAT, wide variety of full scales and flanges, standard with two set points
- Easy one push button or remote signal zero command, zero offset adjustable
- Diagnostic port for quick service and maintenance
- Corrosion resistant ceramic sensor
- Excellent long term signal stability
- Temperature compensated
- Sensor protected from contamination
- Compliance & standards: CE, EN, UL, SEMI, RoHS

### APPLICATIONS

- Semiconductor manufacturing equipment for Etch, CVD, PVD, ALD
- Data storage and display manufacturing equipment
- Industrial vacuum equipment
- General high accuracy pressure measurement

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## ORDERING INFORMATION



1) Optimized signal filter setting for pressure control

**bold** = standard products

Other flange types on request.

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## SPECIFICATIONS

| Full scale (FS)<br>Torr / mbar | 1000 / 1100 ...<br>200  | 100 ... 5 | 2 ... 0.5              | 0.25                      | 0.1                    |
|--------------------------------|---|-----------|------------------------|---------------------------|------------------------|
| Accuracy <sup>1)</sup>         | 0.2 % of reading  |           | 0.25 % of reading      |                           | 0.5 % of reading       |
| Temperature effect             |   |           |                        |                           |                        |
| on zero                        | 0.005 % FS / °C   |           | 0.015 % FS / °C        |                           | 0.02 % FS / °C         |
| on span                        | 0.01 % of reading / °C  |           | 0.01 % of reading / °C |                           | 0.03 % of reading / °C |
| Pressure, max. (absolute)      | 400 kPa   | 260kPa    |                        | 130 kPa                   |                        |
| Resolution                     | 0.003 % FS  |           |                        |                           |                        |
| Response time <sup>2)</sup>    | 30 ms   |           |                        | 130 / 30 <sup>3)</sup> ms |                        |
| Lowest reading                 | 0.01 % FS   |           |                        |                           |                        |
| Lowest suggested               |   |           |                        |                           |                        |
| Reading                        | 0.05 % FS   |           |                        |                           |                        |
| Control pressure               | 0.5 % FS  |           |                        |                           |                        |
| Temperature                    |   |           |                        |                           |                        |
| Sensor                         | 25 °C   |           |                        |                           |                        |
| Operation (ambient)            | +5 ... +50 °C   |           |                        |                           |                        |
| Bakeout at flange              | ≤110 °C   |           |                        |                           |                        |
| Storage                        | -20 ... +65 °C  |           |                        |                           |                        |
| Supply voltage                 | +14 ... +30 V (dc) or ± 15 V (±5%)                                      |           |                        |                           |                        |
| Power consumption              |   |           |                        |                           |                        |
| At operating temperature       | <3 W  |           |                        |                           |                        |
| Output signal (analog)         | 0 ... +10 V (dc)  |           |                        |                           |                        |
| Degree of protection           | IP 40   |           |                        |                           |                        |
| Standards                      |   |           |                        |                           |                        |
| CE conformity                  | EN 61000-6-2/-6-3, EN 61010 & 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                            | set points, 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> Increase 10 ... 90% FS

<sup>3)</sup> For pressure control type only

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| EtherCAT <sup>®</sup>   |   |
|-------------------------|---|
| Protocol                | EtherCAT <sup>®</sup>   |
| Communication standards | Semiconductor Device Profile<br>ETG.5003 Part 1 Common Device Profile<br>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

