

### **Ambient Capacitance Diaphragm Gauge**

The INFICON SKY CDG025D Capacitance Diaphragm Gauge line of highly accurate temperature compensated manometers is designed for stable performance in harsh manufacturing tool environments. Advanced digital electronics improve gauge performance and offer easy handling features such as one push button zero function and setpoint adjustment. The corrosion resistant ultra pure ceramic sensor provides excellent zero stability with a long life expectancy of several million pressure cycles, including atmospheric bursts. A unique sensor shielding (patent pending) protects the gauge from process contamination. A robust mechanical design and digital electronics improve EMC compatibility, long term stability and temperature compensation. The CDG025D sets new standards for fast stability after power on and fast recovery from atmospheric pressure exposure.



#### **ADVANTAGES**

- Full scale (FS) ranges from 100 mTorr ... 1000 Torr
- Fast stability after power on and fast recovery from atmospheric pressure
- Corrosion resistant ceramic sensor with double protection from contamination
- Excellent long term signal stability
- Temperature compensated
- One push button zero function, remote zero included
- Interface with 2-wire current loop
- Long cable distance (<300 m)
- · Low energy gauge
- · Clean room compliant
- Status LED

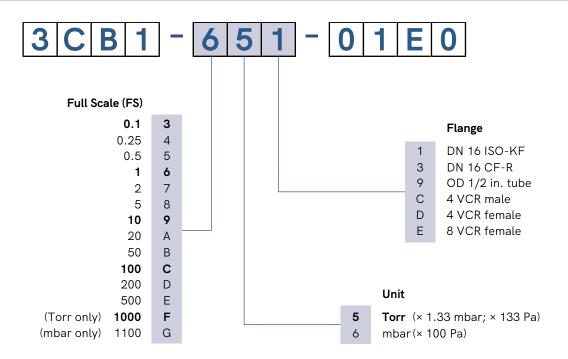
#### **APPLICATIONS**

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

SKY® CDG025D-X3 4-20mA current loop



#### **ORDERING INFORMATION**



**bold** = standard products

Other flange types on request.



SPECIFICATIONS								
Full scale (FS) Torr / mbar	1000 / 1100 200	100 5	2 0.5	0.25	0.1			
Accuracy <sup>1)</sup>		0.2 % of reading			0.5 % of reading			
Temperature effect								
on zero	0.005 % FS / °C 0.015		0.015 % FS / °C	0.02 % FS / °C				
on span	0.01 % of reading / $^{\circ}$ C		0.01 % of reading / °C	$0.03~\%$ of reading / $^{\circ}$ C				
Resolution			0.003 % FS					
Pressure, max. (absolute)	400 kPa 260 kPa 130 kPa							
Response time <sup>2)</sup>			≤100 ms					
Lowest reading	0.01 % FS							
Lowest suggested								
Reading	0.05 % FS							
Control pressure	0.5 % FS							
Temperature								
Operation (ambient)	+5 +60 °C							
Bakeout at flange <sup>3)</sup>	≤110 °C							
Storage	-20 +65 °C							
Supply voltage	+21 +27 V (dc)							
Output signal (analog)	2-wire, current loop							
Relationship current- pressure	linear							
Signal range	3.8 20.2 mA							
Measuring range (zero FS)	4.0 20.0 mA							
Loaded impedance RL								
Ω	typical $500\Omega \pm 1\% \ 24 \pm 3 \ V \ (dc)^{4)}$							
absolute	$309 \dots 657\Omega$ at 24 V (dc) <sup>4)</sup>							
remote zero input	digital input, floating contact							
High level (pulse > 1s)	+21 +27 V (dc) / ≤8 mA							
Low level	≤2							
remote zero function								
High level (pulse > 1s)	auto zero adjust							
Low level	measurement operation							
Degree of protection	IP 30							
Standards								
CE conformity		EN 61000-	-6-3, EN 61010, 6132	26-1 & RoHS				
ETL certification	UL 61010-1, CSA 22.2 No.61010-1							
Electrical connection	D-Sub, 9-pin, male							
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Non-linearity, hysteresis, repeatability at 25°C ambient operating temperature without temperature effects after two hours operation

<sup>&</sup>lt;sup>2)</sup> Increase 10 ... 90% FS

<sup>3)</sup> Non-operation

<sup>&</sup>lt;sup>4)</sup> Supply voltage at the gauge



Full scale (FS) Torr / mbar	1000 / 1100 200	100 5	2 0.5	0.25	0.1			
Sensor cable								
Without remote zero	two-wire cable plus shielding, twisted							
With remote zero	four-wire cable plus shielding, twisted							
Materials exposed to vacuum	ceramics (AI <sub>2</sub> O <sub>3</sub> ), stainless steel (AISI 316L)							
Internal volume	≤5.1 cm <sup>3</sup>							
Weight	277 334 g							

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<sup>&</sup>lt;sup>2)</sup> Increase 10 ... 90% FS

Non-operation

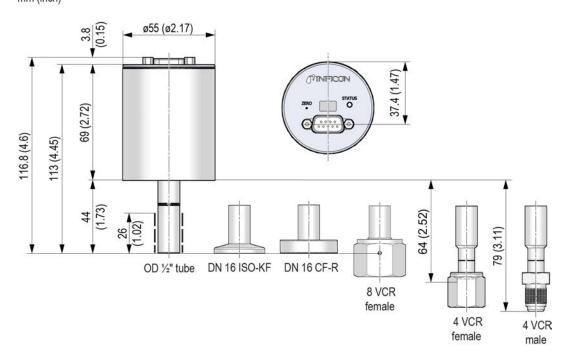
<sup>4)</sup> Supply voltage at the gauge



#### **DIMENSIONS**

mm (in.)

mm (inch)





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