

SKY[®] CDG025D-X3 4-20mA current loop

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 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

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SPECIFICATIONS

Full scale (FS) Torr / mbar	1000 / 1100 ... 200	100 ... 5	2 ... 0.5	0.25	0.1
Accuracy ¹⁾	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	
Resolution	0.003 % FS				
Pressure, max. (absolute)	400 kPa	260 kPa		130 kPa	
Response time ²⁾	≤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 ³⁾	≤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 500Ω±1% 24±3 V (dc) ⁴⁾				
absolute	309 ... 657Ω at 24 V (dc) ⁴⁾				
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, 61326-1 & RoHS				
ETL certification	UL 61010-1, CSA 22.2 No.61010-1				
Electrical connection	D-Sub, 9-pin, male				

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

²⁾ Increase 10 ... 90% FS

³⁾ Non-operation

⁴⁾ Supply voltage at the gauge

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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 (Al ₂ O ₃), stainless steel (AISI 316L)				
Internal volume	≤5.1 cm ³				
Weight	277 ... 334 g				

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DIMENSIONS

mm (in.)

