

Downstream Pressure Control - Capacitance Diaphragm Gauges (CDG100)



Nor-Cal **CDG100-series** manometers are your best choice for accurate total pressure measurement and control. **CDG100-series** gauges are temperature controlled at 100°C for superior performance in demanding semiconductor and plasma processes. They are available for full scale ranges from 100 mTorr to 1000 Torr, with all common flange types and provide a linear 0 to 10 V, gas type independent, pressure signal. Nor-Cal's capacitance diaphragm gauges use an ultra pure alumina ceramic diaphragm which is corrosion proof. The advantages of the ceramic sensor are better signal stability, faster recovery from atmosphere, short warm up time and an extraordinary lifetime. The **CDG100-series** gauges are high quality, cost effective pressure sensors for demanding semiconductor, plasma and vacuum applications.

ADVANTAGES

- Lower cost of ownership, 50% faster warm up, energy efficient low power consumption
- Easy integration, wide variety of full scales, flanges and interfaces, 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 & standards: CE, EN, UL, SEMI, RoHS

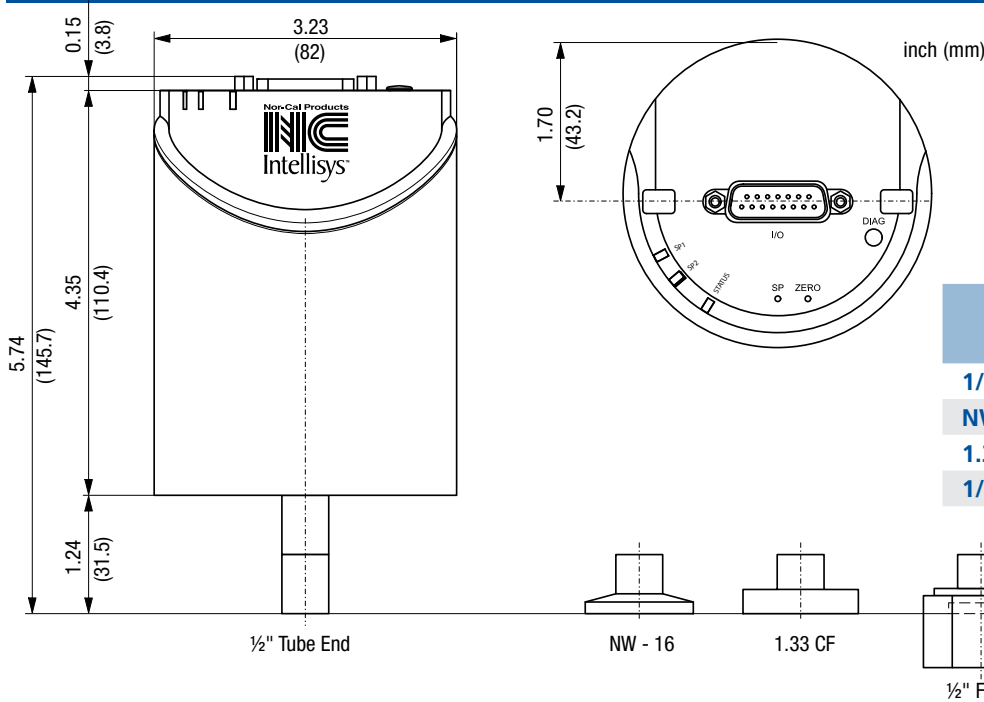
MODEL NUMBER	F.S. RANGE	TUBE FITTING	HEATED
CDG100-M11	100 mTorr	1/2" Tube End	100°C
CDG100-M11-CF	100 mTorr	1.33" CF	100°C
CDG100-M11-NW1	100 mTorr	NW-16	100°C
CDG100-M11-VCR	100 mTorr	1/2" FVCR	100°C
CDG100-T01	1 Torr	1/2" Tube End	100°C
CDG100-T01-CF	1 Torr	1.33" CF	100°C
CDG100-T01-NW1	1 Torr	NW-16	100°C
CDG100-T01-VCR	1 Torr	1/2" FVCR	100°C
CDG100-T02	2 Torr	1/2" Tube End	100°C
CDG100-T02-CF	2 Torr	1.33" CF	100°C
CDG100-T02-NW1	2 Torr	NW-16	100°C
CDG100-T02-VCR	2 Torr	1/2" FVCR	100°C
CDG100-T11	10 Torr	1/2" Tube End	100°C
CDG100-T11-CF	10 Torr	1.33" CF	100°C
CDG100-T11-NW1	10 Torr	NW-16	100°C
CDG100-T11-VCR	10 Torr	1/2" FVCR	100°C
CDG100-T12	20 Torr	1/2" Tube End	100°C
CDG100-T12-CF	20 Torr	1.33" CF	100°C
CDG100-T12-NW1	20 Torr	NW-16	100°C
CDG100-T12-VCR	20 Torr	1/2" FVCR	100°C
CDG100-T21	100 Torr	1/2" Tube End	100°C
CDG100-T21-CF	100 Torr	1.33" CF	100°C
CDG100-T21-NW1	100 Torr	NW-16	100°C
CDG100-T21-VCR	100 Torr	1/2" FVCR	100°C
CDG100-T31	1,000 Torr	1/2" Tube End	100°C
CDG100-T31-CF	1,000 Torr	1.33" CF	100°C
CDG100-T31-NW1	1,000 Torr	NW-16	100°C
CDG100-T31-VCR	1,000 Torr	1/2" FVCR	100°C



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	INTERNAL VOLUME in ³ (cm ³)	WEIGHT grams
1/2" Tube End	0.26 (4.2)	837
NW - 16	0.26 (4.2)	852
1.33 CF	0.26 (4.2)	875
1/2" FVCR®	0.26 (4.2)	897

MEASUREMENT RANGE F.S. (FULL SCALE)	TORR	1000	100	20/10	2/1	0.1
Accuracy ¹⁾	% of reading	0.2				0.4
Temperature effect on zero on span	% F.S./ °C	0.00025				0.005
	% of reading / °C	0.02				
Pressure, max.	kPa (absolute)	400		260		130
Resolution	% F.S.	0.003				
Lowest reading	% F.S.	0.01				
Lowest suggested reading	% F.S.	0.05				
Lowest suggested control pressure	% F.S.	0.05				
Temperature Operation (ambient)	°C	+10 to +50				
Bakeout at flange	°C	≤110				
Storage	°C	-40 to +65				
Supply voltage		+14 to +30 VDC or ± 15 V (±5%)				
Power consumption	W	≤15				
	W	≤10				
Output signal (analog)	VDC	0 to +10				
Response time ²⁾	ms	30				130
Degree of protection		IP 40				
Standards		EN 61000-6-2/6-3, EN 61010, UL 61010-1, CSA 22.2 No. 61010-1, SEMI S-2				
Electrical connection		D-sub, 15 pin, male				
Set point		two set points (SPT, SP2)				
Relay Contact	VDC / ADC	≤30 / ≤0.5				
Hysteresis	% F.S.	1				
Diagnostic port		RS232-C				
Protocol		Pressure, status, ID,				
Read		set points, filter, zero adjust, factory reset, DC offset				
Set						
Materials exposed to vacuum		Aluminum oxide ceramic (A203), stainless steel (AISI 316L ³⁾ , Nickel, sealing glass				

¹⁾ Non-linearity, hysteresis, repeatability at 25 °C ambient operating temperature without temperature effects after 2 hours operation.

²⁾ Incease 10 to 90% F.S.

³⁾ 18% Cr, 10% Ni, 3% Mo, 69% Fe

