

## CDG100D with ProfiBus

---

INFICON SKY CDG100D manometers are your best choice for accurate total pressure measurement and control. CDG100D 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 fieldbus interfaces and provide a linear 0 to 10 V, gas type independent, pressure signal. INFICON capacitance manometers 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. INFICON CDG are high quality, cost effective pressure sensors for demanding semiconductor, plasma and vacuum applications.

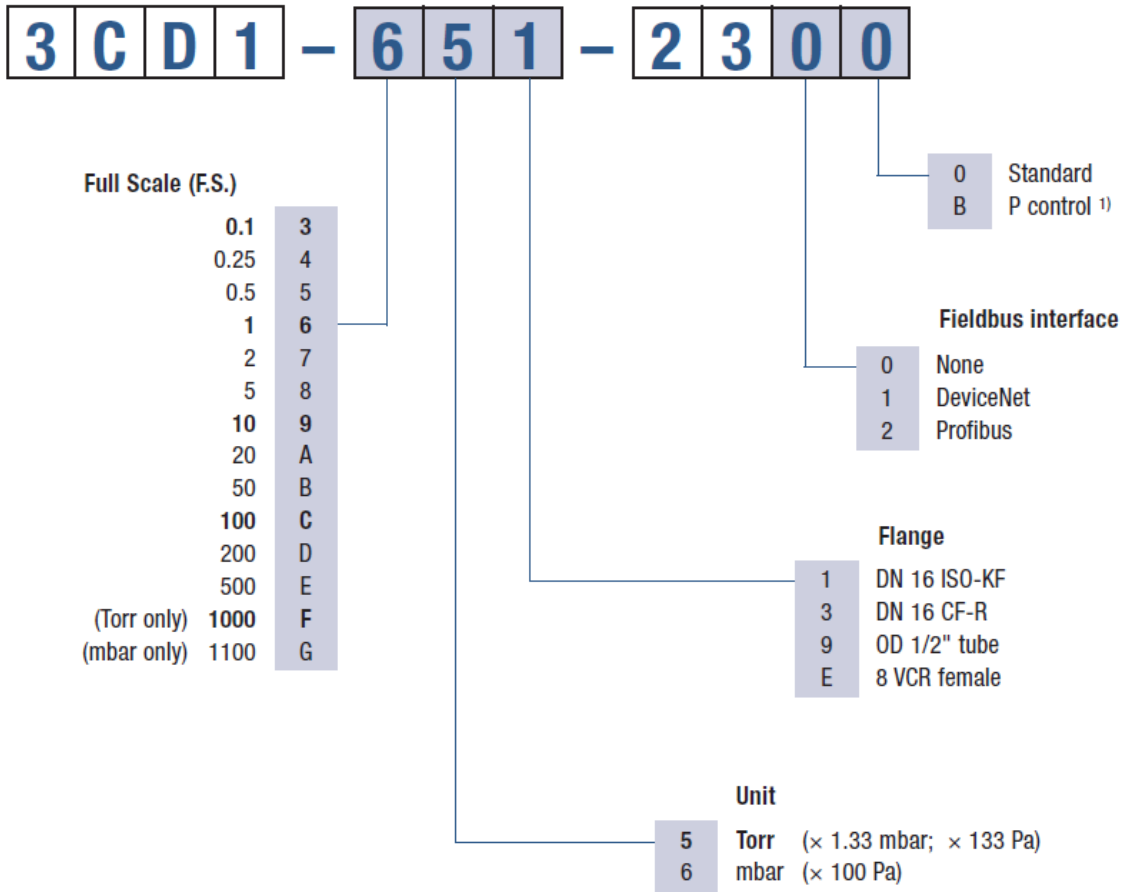


### **BENEFITS**

---

- Lower CoO (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

## ORDERING INFORMATION



<sup>1)</sup> Optimised signal filter setting for pressure control.

**bold** = standard products

Other flange types and full scale ranges (F.S.) on request.

## SPECIFICATIONS

Type		1000 Torr	100 Torr	10 Torr	1 Torr	0.1 Torr
F.S. (Full Scale)	Torr	1000	100	10	1	0.1
F.S. (Full Scale)	Pa	133,322	13,332	1,333	133	13
F.S. (Full Scale)	mbar	1333	133	13.3	1.3	0.13
Accuracy (1)	% of reading	0.2	0.2	0.2	0.2	0.4
Temperature effect						
on zero	percent FS/ °C	0.0025	0.0025	0.0025	0.0025	0.005
Temperature effect						
on span	% of reading / °C	0.01	0.01	0.01	0.01	0.01
Pressure, max.	kPa (absolute)	400	260	260	260	130
Resolution	percent FS	0.003	0.003	0.003	0.003	0.003
Lowest reading	percent FS	0.01	0.01	0.01	0.01	0.01
Lowest suggested reading	percent FS	0.05	0.05	0.05	0.05	0.05
Lowest suggested control pressure	percent FS	0.5	0.5	0.5	0.5	0.5
Temperature						
Operation (ambient)	°C	+10 ... +40	+10 ... +40	+10 ... +40	+10 ... +40	+10 ... +40
Bakeout at flange	°C	≤110	≤110	≤110	≤110	≤110
Storage	°C	-40 ... +65	-40 ... +65	-40 ... +65	-40 ... +65	-40 ... +65
Supply voltage		+14 ... +30 VDC or ±15 V (±5%)				
Supply voltage	V (dc)		+14 ... +30 VDC or ±15 V (±5%)	+14 ... +30 VDC or ±15 V (±5%)	+14 ... +30 VDC or ±15 V (±5%)	+14 ... +30 VDC or ±15 V (±5%)
Power consumption						
During Heat up	W	≤12	≤12	≤12	≤12	≤12
At operating temperature	W	≤8	≤8	≤8	≤8	≤8
Output signal (analog)	V (dc)	0 ... +10	0 ... +10	0 ... +10	0 ... +10	0 ... +10
Response time (2)	ms	30	30	30	30	130 / 30 <sup>(3)</sup>
Degree of protection		IP 40	IP 40	IP 40	IP 40	IP 40

## SPECIFICATIONS

Type		1000 Torr	100 Torr	10 Torr	1 Torr	0.1 Torr
Standards		EN 61000-6-2/-6-3, EN 61010, UL 61010-1, CSA 22.2 No.61010-1, SEMI S-2	EN 61000-6-2/-6-3, EN 61010, UL 61010-1, CSA 22.2 No.61010-1, SEMI S-2	EN 61000-6-2/-6-3, EN 61010, UL 61010-1, CSA 22.2 No.61010-1, SEMI S-2	EN 61000-6-2/-6-3, EN 61010, UL 61010-1, CSA 22.2 No.61010-1, SEMI S-2	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 pole, male	D-sub, 15 pole, male	D-sub, 15 pole, male	D-sub, 15 pole, male	D-sub, 15 pole, male
Setpoint (SP1,SP2)						
Relay contact	V (dc)	≤30	≤30	≤30	≤30	≤30
Setpoint (SP1,SP2)						
Relay contact	A (dc)	≤0.5	≤0.5	≤0.5	≤0.5	≤0.5
Setpoint (SP1,SP2)						
Hysteresis	percent FS	1	1	1	1	1
Diagnostic port						
Protocol		RS232-C	RS232-C	RS232-C	RS232-C	RS232-C
Read		pressure, status, ID	pressure, status, ID	pressure, status, ID	pressure, status, ID	pressure, status, ID
Set		set points, filter, zero adjust, factory reset, DC offset	set points, filter, zero adjust, factory reset, DC offset	set points, filter, zero adjust, factory reset, DC offset	set points, filter, zero adjust, factory reset, DC offset	set points, filter, zero adjust, factory reset, DC offset
Materials exposed to vacuum		Aluminum oxide ceramic (Al <sub>2</sub> O <sub>3</sub> ), stainless steel (AISI 316L <sup>(4)</sup> )	Aluminum oxide ceramic (Al <sub>2</sub> O <sub>3</sub> ), stainless steel (AISI 316L <sup>(4)</sup> )	Aluminum oxide ceramic (Al <sub>2</sub> O <sub>3</sub> ), stainless steel (AISI 316L <sup>(4)</sup> )	Aluminum oxide ceramic (Al <sub>2</sub> O <sub>3</sub> ), stainless steel (AISI 316L <sup>(4)</sup> )	Aluminum oxide ceramic (Al <sub>2</sub> O <sub>3</sub> ), stainless steel (AISI 316L <sup>(4)</sup> )
Internal volume						
I. volume 1/2" tube	cm <sup>3</sup> (in. <sup>3</sup> )	4.2 (0.26)	4.2 (0.26)	4.2 (0.26)	4.2 (0.26)	4.2 (0.26)
I. volume DN 16 ISO KF	cm <sup>3</sup> (in. <sup>3</sup> )	4.2 (0.26)	4.2 (0.26)	4.2 (0.26)	4.2 (0.26)	4.2 (0.26)
I. volume DN 16 CF-R	cm <sup>3</sup> (in. <sup>3</sup> )	4.2 (0.26)	4.2 (0.26)	4.2 (0.26)	4.2 (0.26)	4.2 (0.26)
I. volume 8 VCR®	cm <sup>3</sup> (in. <sup>3</sup> )	4.2 (0.26)	4.2 (0.26)	4.2 (0.26)	4.2 (0.26)	4.2 (0.26)
Weight						
Weight 1/2" tube	g	837	837	837	837	837
Weight DN 16 ISO KF	g	852	852	852	852	852
Weight DN 16 CF-R	g	875	875	875	875	875
Weight 8 VCR®	g	897	897	897	897	897

## SPECIFICATIONS

Type		1000 Torr	100 Torr	10 Torr	1 Torr	0.1 Torr
Specifications						
Profibus DP		Profibus DP	Profibus DP	Profibus DP	Profibus DP	Profibus DP
Baud rates	kBaud	9.6 / 19.2 / 93.75 / 187.5 / 500	9.6 / 19.2 / 93.75 / 187.5 / 500	9.6 / 19.2 / 93.75 / 187.5 / 500	9.6 / 19.2 / 93.75 / 187.5 / 500	9.6 / 19.2 / 93.75 / 187.5 / 500
Baud rates	Mbaud	1.5 / 12	1.5 / 12	1.5 / 12	1.5 / 12	1.5 / 12
Address		address 00 - 125 by switch or network programmable	address 00 - 125 by switch or network programmable	address 00 - 125 by switch or network programmable	address 00 - 125 by switch or network programmable	address 00 - 125 by switch or network programmable
Digital functions						
read		pressure, status, ID	pressure, status, ID	pressure, status, ID	pressure, status, ID	pressure, status, ID
set		set points, filter, zero adjust, factory reset, DC offset	set points, filter, zero adjust, factory reset, DC offset	set points, filter, zero adjust, factory reset, DC offset	set points, filter, zero adjust, factory reset, DC offset	set points, filter, zero adjust, factory reset, DC offset
Connector for Profibus DP		D-sub, 9 pin, female	D-sub, 9 pin, female	D-sub, 9 pin, female	D-sub, 9 pin, female	D-sub, 9 pin, female
Connector for CDG (analog output, supply voltage, setpoints)		D-sub, 15 pin, male	D-sub, 15 pin, male	D-sub, 15 pin, male	D-sub, 15 pin, male	D-sub, 15 pin, male

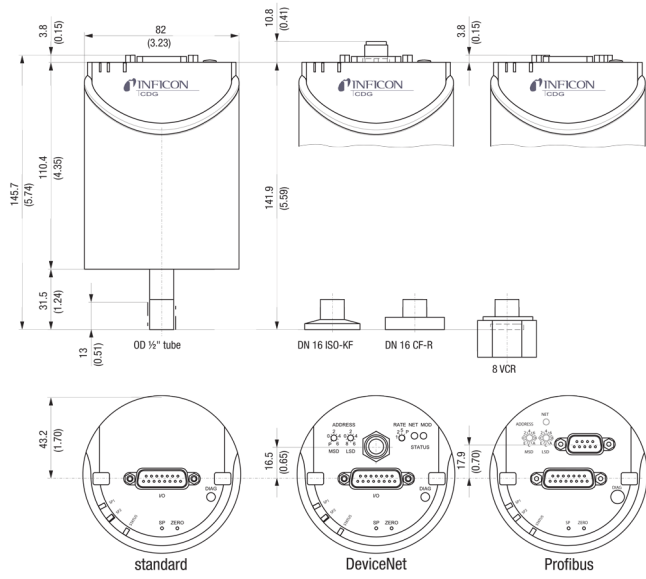
(1) Non-linearity, hysteresis, repeatability at 25 °C ambient operating temperature without temperature effects after 2 hours operation.

(2) Increase 10 ... 90% F.S.

(3) For pressure control type only.

(4) 18% Cr, 10% Ni, 3% Mo, 69% Fe

# DIMENSIONS



[www.inficon.com](http://www.inficon.com)    [reachus@inficon.com](mailto:reachus@inficon.com)

Due to our continuing program of product improvements, specifications are subject to change without notice. RateWatcher is a trademark of INFICON. All other trademarks are the property of their respective owners.