

## CDG100D mbar based products

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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.

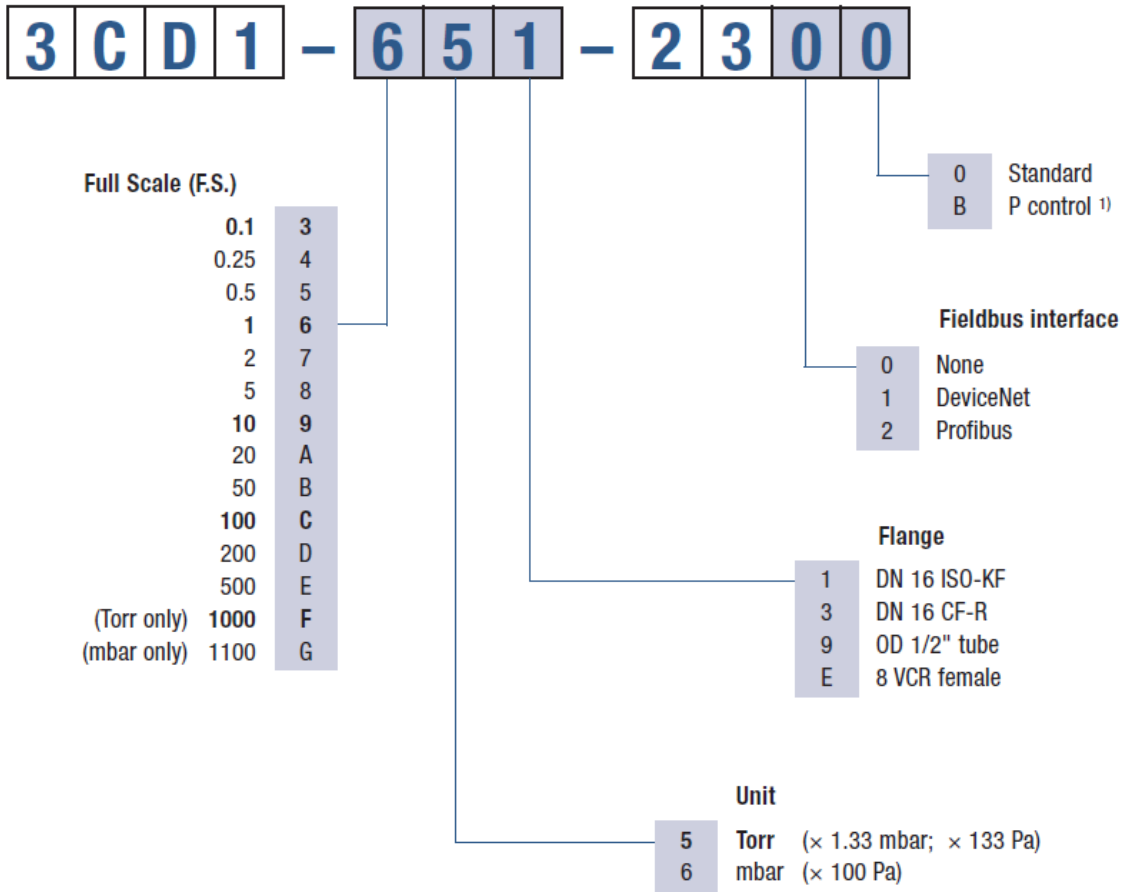


### BENEFITS

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- 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                              |                      | 1100 mbar   | 100 mbar  | 10 mbar   | 1 mbar  | 0.1 mbar  |
|-----------------------------------|----------------------|---|---|---|---|---|
| F.S. (Full Scale)                 | Torr                 | –   | –   | –   | –   | –   |
| F.S. (Full Scale)                 | mbar                 | 1100  | 100   | 10  | 1   | 0.1   |
| F.S. (Full Scale)                 | Pa                   | 110,000   | 10,000  | 1,000   | 100   | 10  |
| Accuracy (1)                      | % of reading         | 0.2   | 0.2   | 0.2   | 0.2   | 0.4   |
| Temperature effect                |                      |   |   |   |   |   |
| on zero                           | percent FS/<br>°C    | 0.0025  | 0.0025  | 0.0025  | 0.0025  | 0.005   |
| Temperature effect                |                      |   |   |   |   |   |
| on span                           | % of reading /<br>°C | 0.02  | 0.02  | 0.02  | 0.02  | 0.02  |
| Pressure, max.                    | kPa<br>(absolute)    | 400   | 260   | 260   | 260   | 130   |
| Response time (2)                 | ms                   | 30  | 30  | 30  | 30  | 130 / 30 <sup>3)</sup>  |
| 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  |
| Temperature                       |                      |   |   |   |   |   |
| Operation (ambient)               | °C                   | +10 ... +50   | +10 ... +50   | +10 ... +50   | +10 ... +40   | +10 ... +50   |
| Bakeout at flange                 | °C                   | ≤110  | ≤110  | ≤110  | ≤110  | ≤110  |
| Storage                           | °C                   | –40 ... +65   | –40 ... +65   | –40 ... +65   | –40 ... +65   | –40 ... +65   |
| Lowest suggested control pressure | percent FS           | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   |
| Power consumption                 |                      |   |   |   |   |   |
| During Heat up                    | W                    | ≤15   | ≤15   | ≤15   | ≤15   | ≤15   |
| At operating temperature          | W                    | ≤10   | ≤10   | ≤10   | ≤10   | ≤10   |
| Supply voltage                    |                      | +14 ... +30<br>VDC or ±15 V<br>(±5%)  | +14 ... +30<br>VDC or ±15 V<br>(±5%)  | +14 ... +30<br>VDC or ±15 V<br>(±5%)  | +14 ... +30<br>VDC or ±15 V<br>(±5%)  | +14 ... +30<br>VDC or ±15 V<br>(±5%)  |
| Output signal (analog)            | V (dc)               | 0 ... +10   | 0 ... +10   | 0 ... +10   | 0 ... +10   | 0 ... +10   |
| Degree of protection              |                      | IP 40   | IP 40   | IP 40   | IP 40   | IP 40   |
| Standards                         |                      | EN<br>61000-6-2/-6-<br>3, EN 61010,<br>UL 61010-1,<br>CSA 22.2<br>No.61010-1,<br>SEMI S-2 | EN<br>61000-6-2/-6-<br>3, EN 61010,<br>UL 61010-1,<br>CSA 22.2<br>No.61010-1,<br>SEMI S-2 | EN<br>61000-6-2/-6-<br>3, EN 61010,<br>UL 61010-1,<br>CSA 22.2<br>No.61010-1,<br>SEMI S-2 | EN<br>61000-6-2/-6-<br>3, EN 61010,<br>UL 61010-1,<br>CSA 22.2<br>No.61010-1,<br>SEMI S-2 | EN<br>61000-6-2/-6-<br>3, EN 61010,<br>UL 61010-1,<br>CSA 22.2<br>No.61010-1,<br>SEMI S-2 |

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|-----------------------------|-------------------------------------|---|---|---|---|---|
| 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   |

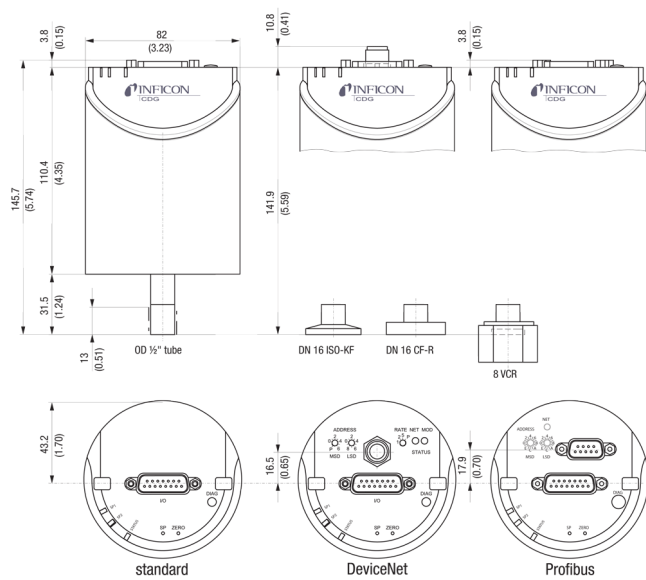
(1) Non-linearity, hysteresis, repeatability at 25 °C ambient operating temperature without temperature effects after 2 hours operation.

(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)

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