

SKY® CDG025D-X3 4-20mA current loop 0.1 ... 1000 Torr / mbar process 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 pushbutton zero function. New Version with 2wire current Loop is now available. 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.



BENEFITS

- Full scale ranges from 100 mTorr ... 1000 Torr
- Fast stability after power on
- Fast recovery from atmospheric pressure
- Corrosion resistant ceramic sensor
- Excellent long term signal stability
- Temperature compensated
- Sensor double protected from contamination
- One pushbutton zero function

- Interface with 2-wire current loop
- Long cable distance (<300m)
- Low energy gauge
- Remote zero included
- Clean room compliant
- Status LED

ORDER INFORMATION

3 C B 1 - **6 5 1** - **0 1 E 0**

Full Scale (F.S.)

0.1	3
0.25	4
0.5	5
1	6
2	7
5	8
10	9
20	A
50	B
100	C
200	D
500	E
(Torr only) 1000	F
(mbar only) 1100	G

Flange

1	DN 16 ISO-KF
3	DN 16 CF-R
9	OD 1/2" tube
E	8 VCR female

Unit

5	Torr	(× 1.33 mbar; × 133 Pa)
6	mbar	(× 100 Pa)

bold = standard products

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

SPECIFICATIONS

Type		1000 Torr / 1100 mbar	500 ... 10 Torr / mbar	1 Torr / mbar	0.25 Torr	0.1 Torr / mbar
Accuracy (1)	% of reading	0.2	0.2	0.2	0.25	0.5
Temperature effect						
on zero	percent FS/ °C	0.005	0.005	0.015	0.02	0.02
Temperature effect						
on span	% of reading / °C	0.01	0.01	0.01	0.03	0.03
Resolution	percent FS	0.003	0.003	0.003	0.003	0.003
Pressure, max.	kPa (absolute)	300	200	200	200	130
Response time (2)	ms	≤100	≤100	≤100	≤100	≤100
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	+5 ... +60	+5 ... +60	+5 ... +60	+5 ... +60	+5 ... +60
Bakeout at flange (3)	°C	≤110	≤110	≤110	≤110	≤110
Storage	°C	-20 ... +65	-20 ... +65	-20 ... +65	-20 ... +65	-20 ... +65
Supply voltage	V (dc)	+21 ... +27	+21 ... +27	+21 ... +27	+21 ... +27	+21 ... +27
Output signal (analog)						
		2-wire, current loop	2-wire, current loop	2-wire, current loop	2-wire, current loop	2-wire, current loop
Relationship current- pressure		linear	linear	linear	linear	linear
Output signal (analog)						
Signal range	mA	3.8 ... 20.2	3.8 ... 20.2	3.8 ... 20.2	3.8 ... 20.2	3.8 ... 20.2
Measuring range (zero ...FS)	mA	4.0 ... 20.0	4.0 ... 20.0	4.0 ... 20.0	4.0 ... 20.0	4.0 ... 20.0
Loaded impedance RL						
Ω		typical 500Ω ±1% 24±3 V (dc) (4)	typical 500Ω ±1% 24±3 V (dc) (4)	typical 500Ω ±1% 24±3 V (dc) (4)	typical 500Ω ±1% 24±3 V (dc) (4)	typical 500Ω ±1% 24±3 V (dc) (4)
absolute		309 ... 657 Ω at 24 V (dc) (4)	309 ... 657 Ω at 24 V (dc) (4)	309 ... 657 Ω at 24 V (dc) (4)	309 ... 657 Ω at 24 V (dc) (4)	309 ... 657 Ω at 24 V (dc) (4)
remote zero input						

SPECIFICATIONS

Type		1000 Torr / 1100 mbar	500 ... 10 Torr / mbar	1 Torr / mbar	0.25 Torr	0.1 Torr / mbar
		digital input, floating contact	digital input, floating contact	digital input, floating contact	digital input, floating contact	digital input, floating contact
High level		+21 ... +27 V (dc) / ≤8 mA	+21 ... +27 V (dc) / ≤8 mA	+21 ... +27 V (dc) / ≤8 mA	+21 ... +27 V (dc) / ≤8 mA	+21 ... +27 V (dc) / ≤8 mA
remote zero input						
Low level	V (dc)	≤2	≤2	≤2	≤2	≤2
Remote zero function						
High level (pulse >1s)		auto zero adjust	auto zero adjust	auto zero adjust	auto zero adjust	auto zero adjust
Low level		measurement operation	measurement operation	measurement operation	measurement operation	measurement operation
Degree of protection		IP 30	IP 30	IP 30	IP 30	IP 30
Standards						
CE conformity		EN 61000-6-2, EN 61000-6-3, EN 61010, 61326-1 & RoHS	EN 61000-6-2, EN 61000-6-3, EN 61010, 61326-1 & RoHS	EN 61000-6-2, EN 61000-6-3, EN 61010, 61326-1 & RoHS	EN 61000-6-2, EN 61000-6-3, EN 61010, 61326-1 & RoHS	EN 61000-6-2, EN 61000-6-3, EN 61010, 61326-1 & RoHS
ETL certification		UL 61010-1, CSA 22.2 No.61010-1	UL 61010-1, CSA 22.2 No.61010-1	UL 61010-1, CSA 22.2 No.61010-1	UL 61010-1, CSA 22.2 No.61010-1	UL 61010-1, CSA 22.2 No.61010-1
Electrical connection		D-Sub, 9-pin, male	D-Sub, 9-pin, male	D-Sub, 9-pin, male	D-Sub, 9-pin, male	D-Sub, 9-pin, male
Sensor cable						
Without remote zero		two-wire cable plus shielding, twisted	two-wire cable plus shielding, twisted	two-wire cable plus shielding, twisted	two-wire cable plus shielding, twisted	two-wire cable plus shielding, twisted
With remote zero		four-wire cable plus shielding, twisted	four-wire cable plus shielding, twisted	four-wire cable plus shielding, twisted	four-wire cable plus shielding, twisted	four-wire cable plus shielding, twisted
Materials exposed to vacuum		Aluminum oxide ceramic (Al ₂ O ₃), stainless steel (AISI 316L ⁽⁵⁾)	Aluminum oxide ceramic (Al ₂ O ₃), stainless steel (AISI 316L ⁽⁵⁾)	Aluminum oxide ceramic (Al ₂ O ₃), stainless steel (AISI 316L ⁽⁵⁾)	Aluminum oxide ceramic (Al ₂ O ₃), stainless steel (AISI 316L ⁽⁵⁾)	Aluminum oxide ceramic (Al ₂ O ₃), stainless steel (AISI 316L ⁽⁵⁾)
Internal volume						
I. volume 1/2" tube	cm ³ (in. ³)	3.6 (0.22)	3.6 (0.22)	3.6 (0.22)	3.6 (0.22)	3.6 (0.22)
I. volume DN 16 ISO KF	cm ³ (in. ³)	3.6 (0.22)	3.6 (0.22)	3.6 (0.22)	3.6 (0.22)	3.6 (0.22)
I. volume DN 16 CF-R	cm ³ (in. ³)	3.6 (0.22)	3.6 (0.22)	3.6 (0.22)	3.6 (0.22)	3.6 (0.22)
I. volume 8 VCR®	cm ³ (in. ³)	3.6 (0.22)	3.6 (0.22)	3.6 (0.22)	3.6 (0.22)	3.6 (0.22)

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Type		1000 Torr / 1100 mbar	500 ... 10 Torr / mbar	1 Torr / mbar	0.25 Torr	0.1 Torr / mbar
Weight						
Weight 1/2" tube	g	310	310	310	310	310
Weight DN 16 ISO KF	g	330	330	330	330	330
Weight DN 16 CF-R	g	350	350	350	350	350
Weight 8 VCR®	g	370	370	370	370	370

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

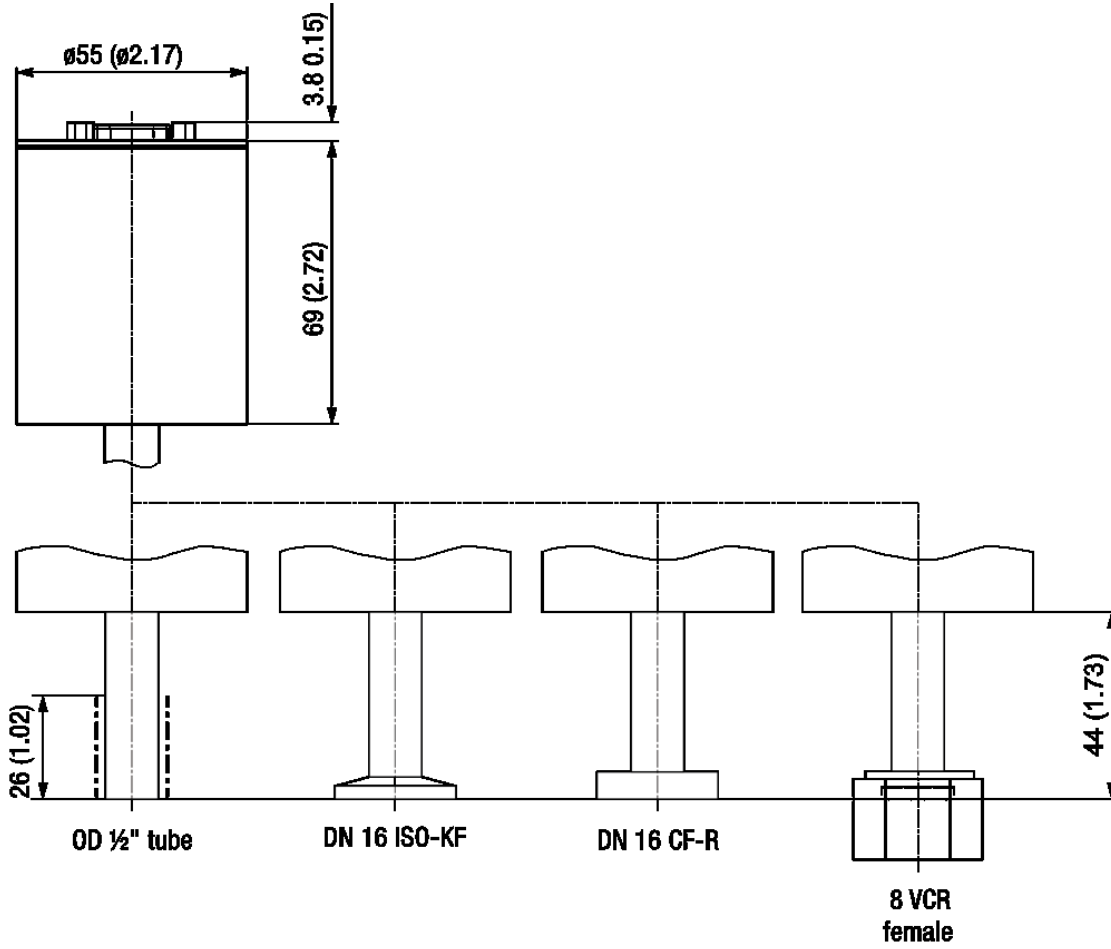
(2) Increase 10 ... 90 percent FS

(3) Non operation

(4) Supply voltage at the gauge

(5) 18% Cr, 10% Ni, 3% Mo, 69% Fe

DIMENSIONS



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