

Edge™ CDG025D2 with EtherCAT 0.1 ... 1000Torr / mbar

INFICON temperature compensated Edge CDG025D2 with EtherCAT Capacitance Diaphragm Gauge is a highly accurate vacuum measurement instrument designed for harsh manufacturing environments.

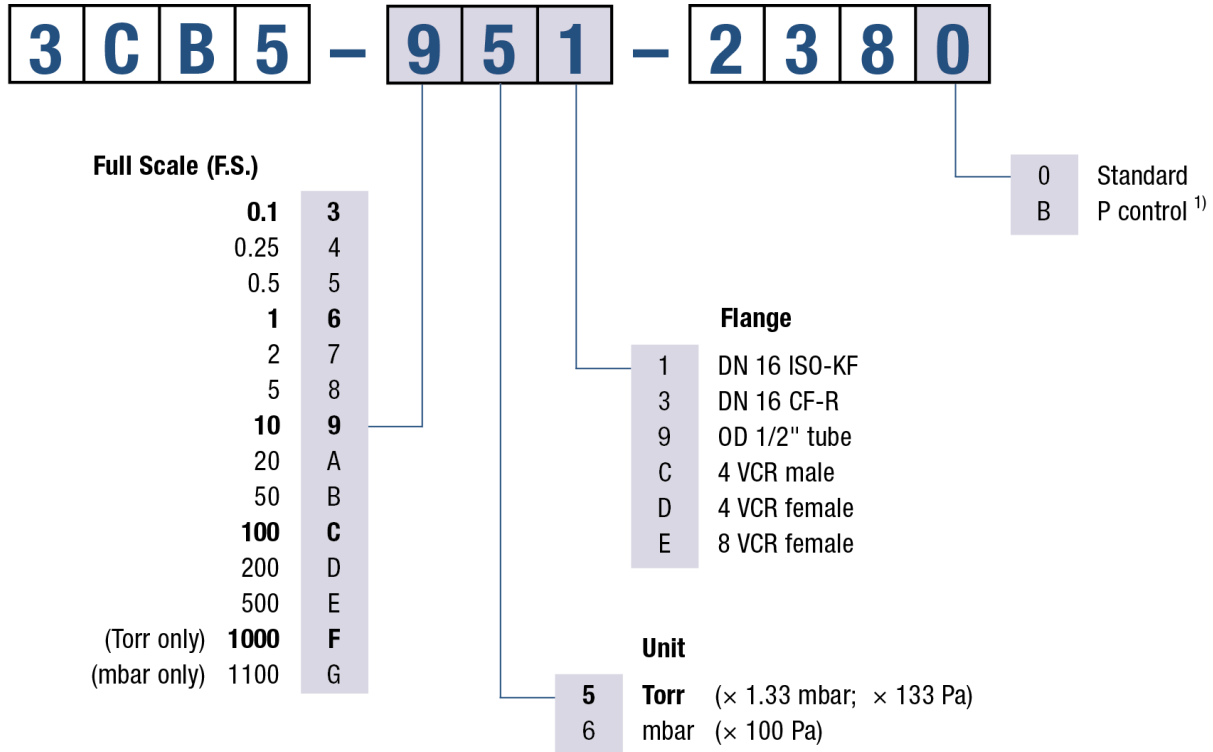
The proven temperature compensated , corrosion resistant, ultra-pure ceramic sensor provides superior span stability over many years paired with state-of-the-art zero stability. Edge comes with the INFICON patented unique sensor shield which protects the gauge from undesired process by-products. Advanced electronics offer a wide range of configurable signal conditioning for all applications with EtherCAT fieldbus interface.



BENEFITS

- Easy integration, EtherCAT, wide variety of full scales and flanges, standard with two set points
- Easy one push button or remote signal zero command, zero offset adjustable
- Diagnostic port for quick service and maintenance
- Corrosion resistant ceramic sensor
- Excellent long term signal stability
- Temperature compensated
- Sensor protected from contamination
- Compliance & standards: CE, EN, UL, SEMI, RoHS

ORDER INFORMATION



¹⁾ 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, 1100 mbar	500 ... 10 Torr / mbar	1 Torr / mbar	0.25 Torr / mbar	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
Pressure, max.	kPa (absolute)	400	260	260	130	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						
Sensor	°C	25	25	25	25	25
Operation (ambient)	°C	+5 ... +50	+5 ... +50	+5 ... +50	+5 ... +50	+5 ... +50
Bakeout at flange	°C	≤110	≤110	≤110	≤110	≤110
Storage	°C	-20 ... +65	-20 ... +65	-20 ... +65	-20 ... +65	-20 ... +65
Supply voltage		+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%)	+14 ... +30 VDC or ±15 V (±5%)
Power consumption						
At operating temperature	W	≤1	≤1	≤1	≤1	≤1
Output signal (analog)	V (dc)	0 ... +10	0 ... +10	0 ... +10	0 ... +10	0 ... +10
Response time (2)	ms	30	30	30	130	130 / 30 (3)
Degree of protection		IP 40	IP 40	IP 40	IP 40	IP 40
Standards						
CE conformity		EN 61000-6-2/-6- 3, EN 61010 & RoHS	EN 61000-6-2/-6- 3, EN 61010 & RoHS	EN 61000-6-2/-6- 3, EN 61010 & RoHS	EN 61000-6-2/-6- 3, EN 61010 & RoHS	EN 61000-6-2/-6- 3, EN 61010 & 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
SEMI compliance		SEMI S2	SEMI S2	SEMI S2	SEMI S2	SEMI S2

SPECIFICATIONS

Type		1000 Torr, 1100 mbar	500 ... 10 Torr / mbar	1 Torr / mbar	0.25 Torr / mbar	0.1 Torr / mbar
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						
Number of setpoints		2 (SP1,SP2)	2 (SP1,SP2)	2 (SP1,SP2)	2 (SP1,SP2)	2 (SP1,SP2)
Setpoint						
Relay contact	V (dc)	≤30	≤30	≤30	≤30	≤30
Setpoint						
Relay contact	A (dc)	≤0.5	≤0.5	≤0.5	≤0.5	≤0.5
Setpoint						
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 ₂ O ₃), stainless steel (AISI 316L ⁽⁴⁾)	Aluminum oxide ceramic (Al ₂ O ₃), stainless steel (AISI 316L ⁽⁴⁾)	Aluminum oxide ceramic (Al ₂ O ₃), stainless steel (AISI 316L ⁽⁴⁾)	Aluminum oxide ceramic (Al ₂ O ₃), stainless steel (AISI 316L ⁽⁴⁾)	Aluminum oxide ceramic (Al ₂ O ₃), stainless steel (AISI 316L ⁽⁴⁾)
Internal volume						
I. volume 1/2" tube	cm ³ (in. ³)	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 ³ (in. ³)	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 ³ (in. ³)	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 ³ (in. ³)	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
EtherCAT						

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Type		1000 Torr, 1100 mbar	500 ... 10 Torr / mbar	1 Torr / mbar	0.25 Torr / mbar	0.1 Torr / mbar
Protocol EtherCAT		protocol specialized for EtherCAT	protocol specialized for EtherCAT	protocol specialized for EtherCAT	protocol specialized for EtherCAT	protocol specialized for EtherCAT
Communication standards		ETG.5003 Part 1 "Semiconductor Device Profile" ETG.5003 Part 2080 "Specific Device Profile: Vacuum Pressure Gauge"	ETG.5003 Part 1 "Semiconductor Device Profile" ETG.5003 Part 2080 "Specific Device Profile: Vacuum Pressure Gauge"	ETG.5003 Part 1 "Semiconductor Device Profile" ETG.5003 Part 2080 "Specific Device Profile: Vacuum Pressure Gauge"	ETG.5003 Part 1 "Semiconductor Device Profile" ETG.5003 Part 2080 "Specific Device Profile: Vacuum Pressure Gauge"	ETG.5003 Part 1 "Semiconductor Device Profile" ETG.5003 Part 2080 "Specific Device Profile: Vacuum Pressure Gauge"
Node address		Explicit Device Identification	Explicit Device Identification	Explicit Device Identification	Explicit Device Identification	Explicit Device Identification
Physical layer		100BASE-Tx (IEEE 802.3)	100BASE-Tx (IEEE 802.3)	100BASE-Tx (IEEE 802.3)	100BASE-Tx (IEEE 802.3)	100BASE-Tx (IEEE 802.3)
Digital functions read		pressure, status, ID	pressure, status, ID	pressure, status, ID	pressure, status, ID	pressure, status, ID
Digital functions set		set points, filter, zero adjust, reset, DC offset	set points, filter, zero adjust, reset, DC offset	set points, filter, zero adjust, reset, DC offset	set points, filter, zero adjust, reset, DC offset	set points, filter, zero adjust, reset, DC offset
Mailbox (CoE)		SDO requests, responses and information	SDO requests, responses and information	SDO requests, responses and information	SDO requests, responses and information	SDO requests, responses and information
Process data		Fixed PDO mapping and configurable PDO mapping	Fixed PDO mapping and configurable PDO mapping	Fixed PDO mapping and configurable PDO mapping	Fixed PDO mapping and configurable PDO mapping	Fixed PDO mapping and configurable PDO mapping
EtherCAT connector		RJ45, 8-pin (socket), IN and OUT	RJ45, 8-pin (socket), IN and OUT	RJ45, 8-pin (socket), IN and OUT	RJ45, 8-pin (socket), IN and OUT	RJ45, 8-pin (socket), IN and OUT
Cable		shielded Ethernet CAT5e or higher	shielded Ethernet CAT5e or higher	shielded Ethernet CAT5e or higher	shielded Ethernet CAT5e or higher	shielded Ethernet CAT5e or higher
EtherCAT						
Data rate	Kbps	100000	100000	100000	100000	100000
EtherCAT						
Cable length	m (ft.)	≤100 (330)	≤100 (330)	≤100 (330)	≤100 (330)	≤100 (330)

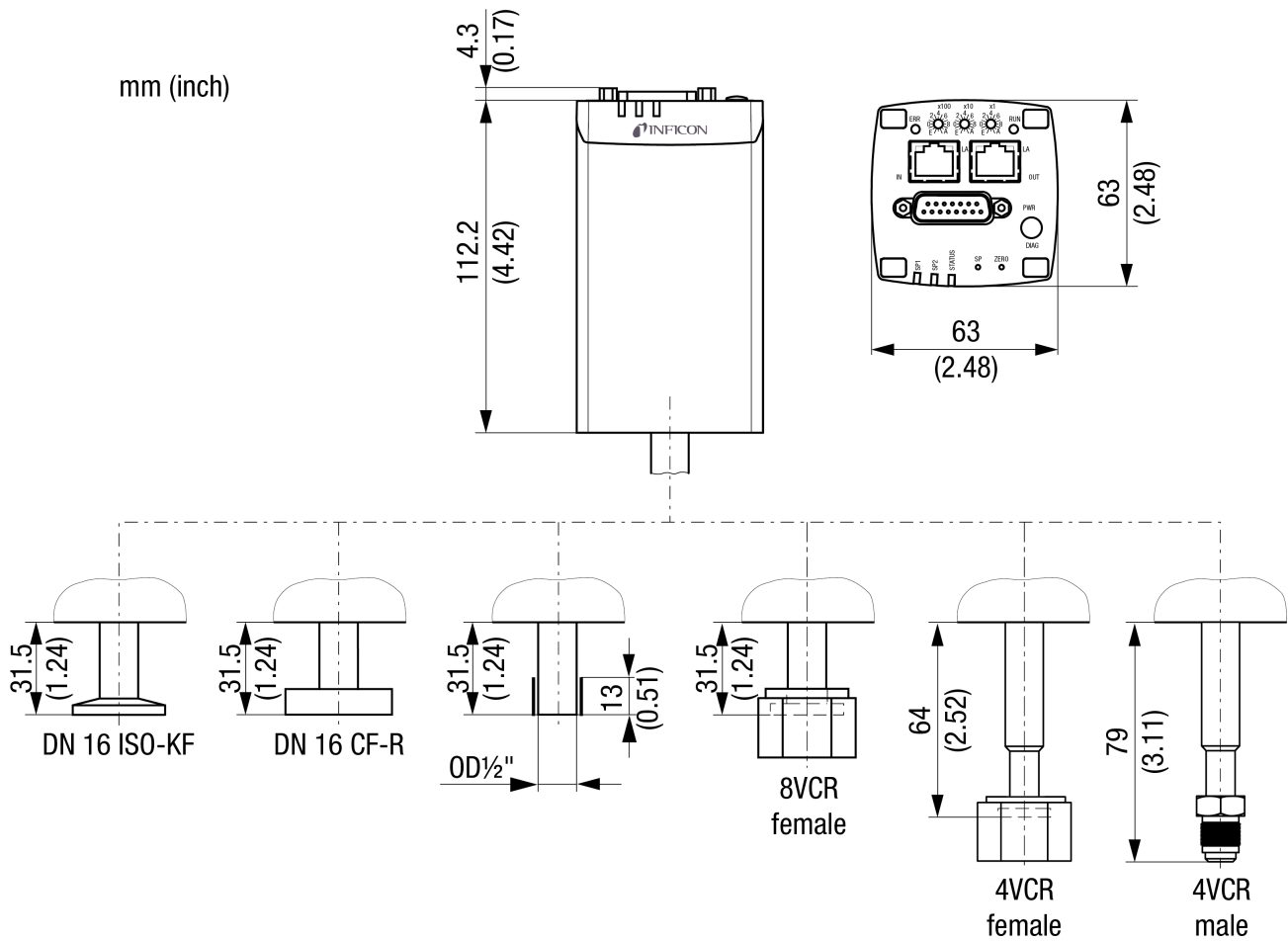
(1) Non-linearity, hysteresis, repeatability at 25 °C ambient operating temperature without temperature effects after 2 hours operation.

(2) Increase 10 ... 90 percent FS

(3) For pressure control type only

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

DIMENSIONS



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