Stripe® CDG045Dhs

Heated Capacitance Diaphragm Gauge

INFICON Stripe high-speed Capacitance Diaphragm Gauges are the fastest, highly accurate vacuum measurement instruments available. With the combination of response time below 2 ms and EtherCAT fieldbus interface, it opens up a total new field of applications. The proven temperature controlled, corrosion resistant, ultra-pure ceramic sensor provides superior span stability over many years paired with state-of-the-art zero stability. Stripe comes with the INFICON patented unique sensor shield, which protects the gauge from undesired process by-products. INFICON Stripe using an innovative heating concept, which provides a cool to the touch surface, and its unique speed capabilities, enabling an unprecedented productivity increase, making it the most advanced vacuum instrument of its kind.

Stripe CDG045Dhs is a proud winner of the prestigious 2014 R&D100 Award!

ADVANTAGES

- High productivity - faster than 2 ms response time (FS > 50 mTorr)
- Flexible integration - EtherCAT fieldbus
- Long lifetime - proven ceramic sensor
- Forget recalibration - 90 ppm / year full scale stability

APPLICATIONS

- Atomic layer deposition
- High speed process control
- PVD, CVD, Etch
- General high temperature vacuum applications

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ORDERING INFORMATION

Full Scale (FS)

0.01[1) 2)]		S
0.02[1)]		1
0.05[1)]		2
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 ½ in. tube
C	4 VCR male
D	4 VCR female
E	8 VCR female

Unit

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

1) Mounting orientation: vertical
2) Torr only

bold = standard products

Other flange types on request.

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SPECIFICATIONS

Full scale (FS)	1000 / 1100 ... 0.05 Torr / mbar	0.02 ... 0.01 Torr / mbar
Accuracy [1]	0.15 % of reading	-
Precision	-	0.2 % of reading
Temperature effect		
On zero		
1000 …1 Torr/mbar	0.0025 % FS / °C	-
0.5 …0.05 Torr/mbar	0.005 % FS / °C	-
0.02 …0.01 Torr	-	0.01 % FS / °C
On span	0.01 % of reading / °C	0.01 % of reading / °C
Pressure, max. (absolute)		
1000 Torr/mbar	400 kPa	
500…1 Torr/mbar	260 kPa	
0.5…0.01 Torr/mbar	130 kPa	
Resolution	0.003 % FS	
Lowest reading	0.01 % FS	
Lowest suggested reading	0.05 % FS	
Lowest suggested control pressure	0.5 % FS	
Temperature		
Operation (ambient)	+10 … +40 °C	
Bakeout at flange	≤110 °C	
Storage	–20 … +85 °C	
Supply voltage	+14 ... +30 V (dc) or ±15 V (±5%)	
Power consumption		
During Heat up	≤14 W	
At operating temperature	≤9 W	
Output signal (analog)	0 ... +10 V (dc)	
Measurement rate	1 kHz	
Response time [2]	2 ... 20 ms	
Degree of protection	IP 30	
Standards		
CE conformity	EN 61000-6-2, EN 61000-6-3, EN 61010 and RoHS	
ETL certification	UL 61010-1, CSA 22.2 No. 61010-1	
SEMI compliance	SEMI S2	
Electrical connection	D-sub, 15-pin, male	
Setpoint		
Number of setpoints	2 (SP1, SP2)	
Relay contact	≤30 V (dc) / ≤0.5 A (dc)	
Hysteresis	1 % FS	
Diagnostic port		
Protocol	USB	
Read	pressure, status, ID	
Set	Set points, filter, zero adjust, factory reset, DC offset	
Materials exposed to vacuum	ceramics (Al_2O_3), stainless steel (AISI 316L)	
Internal volume	≤6.8 cm^3	
Weight	928 … 985 g	

[1] Non-linearity, hysteresis, repeatability at 25°C ambient operating temperature without temperature effects after two hours operation

[2] Increase 10 ... 90% FS

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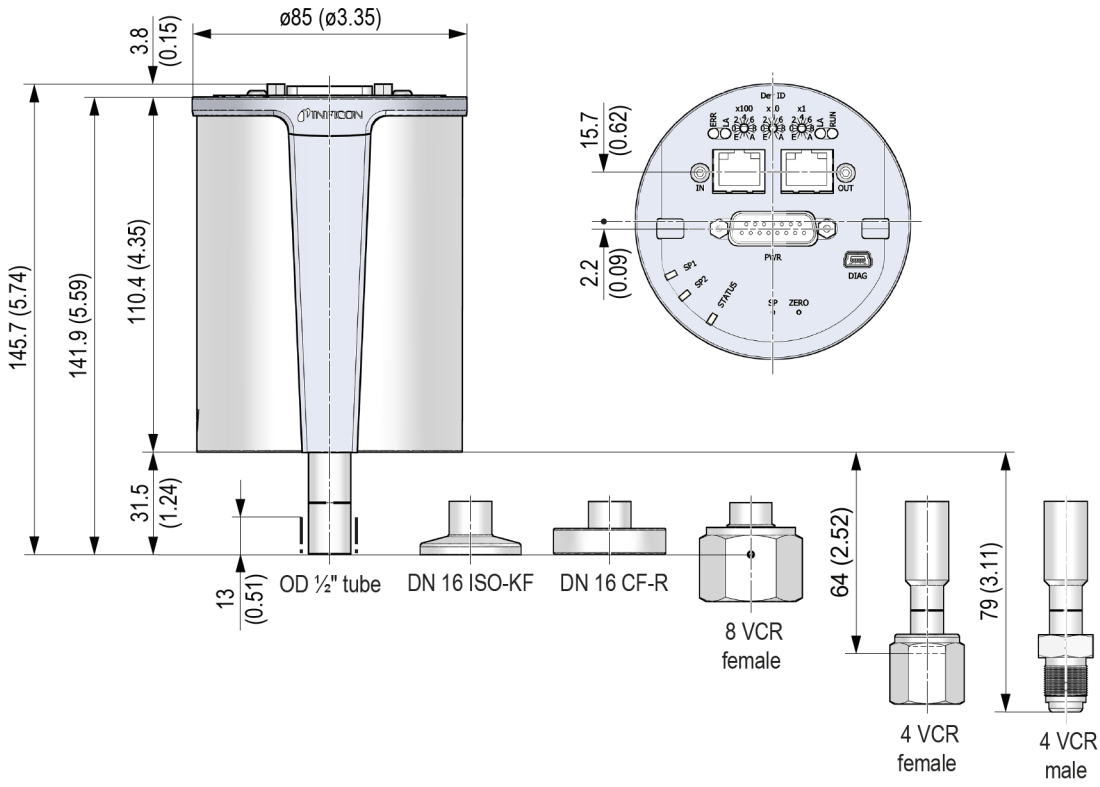
SPECIFICATIONS ETHERCAT

EtherCAT®	
Protocol	EtherCAT®, firmware generation 2.0
Communication standards	Semiconductor Device Profile ETG.5003 Part 1 Common Device Profile ETG.5003 Part 2080 “Specific Device Profile - Vacuum Pressure Gauge"
Process Data	Fixed PDO mapping and configurable PDO mapping
EtherCAT connector	RJ45, 8-pin (socket), IN and OUT
Cable	Shielded Ethernet CAT5e or higher
Cable length	≤100 m (330 ft.)
Data rate	100000 Kbps

DIMENSIONS

mm (inch)



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