

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

3 C C 9 - **6 5 1** - **2 3 G 0**

Full Scale (FS)			Flange	
0.01 ¹⁾²⁾	S		1	DN 16 ISO-KF
0.02 ¹⁾	1		3	DN 16 CF-R
0.05 ¹⁾	2		9	OD 1/2 in. tube
0.1	3		C	4 VCR male
0.25	4		D	4 VCR female
0.5	5		E	8 VCR female
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			
			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) Torr / mbar	1000 / 1100	500 ... 1	0.5 ... 0.1	0.05	0.02 ... 0.01
Accuracy ¹⁾	0.15 % of reading			-	
Precision	-			0.2 % of reading	
Temperature effect					
On zero	0.0025 % FS / °C	0.005 % FS / °C		0.01 % FS / °C	
On span	0.01 % of reading / °C	0.01 % of reading / °C		0.01 % of reading / °C	
Pressure, max. (absolute)	400 kPa	260 kPa	130 kPa		
Response time ²⁾	2 ... 20 ms				
Resolution	0.003 % FS				
Lowest reading	0.01 % FS				
Lowest suggested					
Reading	0.05 % FS				
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				
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 ₂ O ₃), stainless steel (AISI 316L)				
Internal volume	≤6.8 cm ³				

¹⁾ Non-linearity, hysteresis, repeatability at 25°C ambient operating temperature without temperature effects after two hours operation for ≥ 1 Torr and after 4 hours operation for < 1 Torr

²⁾ Increase 10 ... 90% FS

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Full scale (FS) Torr / mbar	1000 / 1100	500 ... 1	0.5 ... 0.1	0.05	0.02 ... 0.01
Weight	928 ... 985 g				

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²⁾ Increase 10 ... 90% FS

SPECIFICATIONS INTERFACES

EtherCAT®

Protocol	EtherCAT®
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

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DIMENSIONS

