DS-VAC-CMC-eng
January, 2017

Data Sheet

CMC Series

Vacuum

CMC Series

Brooks® CMC Series Compact Capacitance Manometers

Overview

Used as the vacuum capacitance manometer of choice for thin-film processes, the Brooks® CMC Series Capacitance Manometers provide accurate total pressure measurement independent of gas composition.

The CMC Series delivers exceptional performance over a wide range of operating temperatures, making it an alternative choice to larger premium performance unheated gauges. The CMC is 40% smaller in size than traditional unheated Capacitance Manometers.

Ideal for Aggressive Applications

The all welded design and Inconel® wetted surfaces ensures reliable operation in even the most aggressive processes. The combination of precision components and a wide temperature compensated operating range allows the CMC to deliver best in class zero and span temperature coefficients for optimum measurement stability.

Available for Typical Process Ranges

The CMC Series is available in full scale ranges from 1000 Torr to 10 Torr and is an ideal upgrade for small form-factor Capacitance Manometers and an economical alternative to full sized unheated Capacitance Manometers.

Features

- 40% smaller than traditional unheated Capacitance Manometers, the CMC Series delivers similar performance in a space saving, economic package
- The optional high accuracy calibration matches the accuray of more costly premium unheated manometers
- The robust all welded construction ensures optimum measurement repeatability compared to other designs that are prone to error inducing internal stresses that cause unpredictable variations in pressure measurement

Product Specifications

CMC Series Specifications

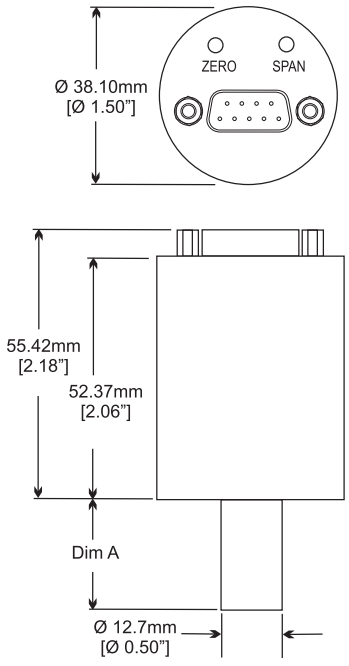
Performance	CMC
Full Scale Ranges	10, 20 50, 100, 500 and 1000 Torr
Accuracy[1]	Type A = 0.25% of reading; Type B = 0.5% of reading
Resolution[2]	Infinite, limited by output noise (≤0.0006% F.S.)
Temp. Effect on Zero	0.005% F.S. / °C
Temp. Effect on Span	0.027% Rdg / °C
Response Time	20 msec
Operating Temperature	0 to 80°C
Compensated Temperature	0 to 50°C
Mechanical	
Exposed Materials[2]	Inconel®
Over-Pressure Limit	45 psia
Weight	0.3 lbs. (137 grams)
Electrical	
Input Power	+12 to 30 Vdc
Output Signal	0-10 Vdc (<10K Ω load)
Power Consumption	<200 mW
Electrical Connectors	15-pin D sub on 6" cable
	9-pin D sub
	5-pin terminal strip
Certifications	
Electromagnetic Compatibility	Fully CE certified to EMC Directive 89/336/EEC
RoHs	Compliant

Notes:

1. RSS-Including hysterisis, linearity and non-repeatability.

2. Wetted material is for 1/2" tube stub option, other flanges and fitting will add stainless steel.

Dimension Drawing - CMC Series



Fitting Type	Code	Dim. A
0.5" O.D. Tube	0	25.4mm [0.99"]
KF-16 Flange	2	28.96mm [1.14"]
KF-25 Flange	3	28.96mm [1.14"]
8 VCR Female	4	44.07mm [1.735"]

Model Code

Code	Description	Code Option	Option Description
I.	Base Model Number	**CMCA**	Compact Capacitance Manometer
II.	Full Scale Range	**T11**	10 Torr
		T12	20 Torr
		T15	50 Torr
		T21	100 Torr
		T31	1000 Torr
		C11	10 mbar*
		C12	20 mbar
		C21	100 mbar
		C31	1000 mbar
		P11	1.333 kPa
		P21	13.33 kPa
		P31	133.3 kPa
III.	Electrical Connector	**1**	9-pin sub D, 0-10 Vdc
		2	5-pin terminal strip, 0-10 Vdc
		3	15-pin sub D, 0-10 Vdc on 6" cable
IV.	Fitting**	**0**	1/2" tube stub
		1	KF10
		2	KF16
		3	KF25
		4	8VCR® F
		9	2.75" conflat
		Q	1/4" tube stub
		R	4VCR® F
V.	Accuracy	**A**	± 0.25% of reading accuracy
		B	± 0.5% of reading accuracy
VI.	Compliance	**R**	RoHs Compliant

* Available with "B" Code (.5% of reading) only.

**Other flanges and fitting options available upon request, contact Brooks technical support.

Sample Standard Model Code

I	II	III	IV	V	VI
CMCA	T11	1	Q	A	R

Brooks Service and Support

Brooks is committed to assuring all of our customers receive the ideal flow solution for their application, along with outstanding service and support to back it up. We operate first class repair facilities located around the world to provide rapid response and support. Each location utilizes primary standard calibration equipment to ensure accuracy and reliability for repairs and recalibration and is certified by our local Weights and Measures Authorities and traceable to the relevant International Standards.

Visit www.BrooksInstrument.com to locate the service location nearest to you.

START-UP SERVICE AND IN-SITU CALIBRATION

Brooks Instrument can provide start-up service prior to operation when required. For some process applications, where ISO-9001 Quality Certification is important, it is mandatory to verify and/or (re)calibrate the products periodically. In many cases this service can be provided under in-situ conditions, and the results will be traceable to the relevant international quality standards.

CUSTOMER SEMINARS AND TRAINING

Brooks Instrument can provide customer seminars and dedicated training to engineers, end users, and maintenance persons.

Please contact your nearest sales representative for more details.

Due to Brooks Instrument's commitment to continuous improvement of our products, all specifications are subject to change without notice.

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