

G-TRAN Series Ceramic Capacitance Manometer [CCMT-D]

The CCMT-D series is a capacitance manometer, which detects static electric capacitance occurring when a barrier membrane made of ceramic (alumina) is deformed by changes in gas pressure.



CCMT-D

Features

- ▶ **Adoption of Ceramic Sensor**
Corrosion resistant ceramic sensor
Excellent long term signal stability
- ▶ **Absolute Pressure Measurement**
Whole pressure measurement that does not depend on the gas types is possible
- ▶ **Short Warm-up Time**
Fast stability after power on
- ▶ **Temperature Compensation**
- ▶ **Protection Function**
Sensor protected against contamination
- ▶ **Easy Zero Point Adjustment**
Push button zero point adjustment

- ▶ **Output Signal**
Accurate linear output (DC 0 to 10V)
- ▶ **Power Input**
Wide range voltage power supply (DC14 to 30V)
- ▶ **Small Size and Lightweight Sensor**
Compact in size with 329g weight (pipe end type)

Applications

- ▶ Vacuum melting or vacuum heat treatment
- ▶ Thin films deposition system
- ▶ Pressure reduction furnaces
- ▶ Gas exchange or gas sealing etc.
- ▶ PV, FPD manufacturing equipment

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Specifications

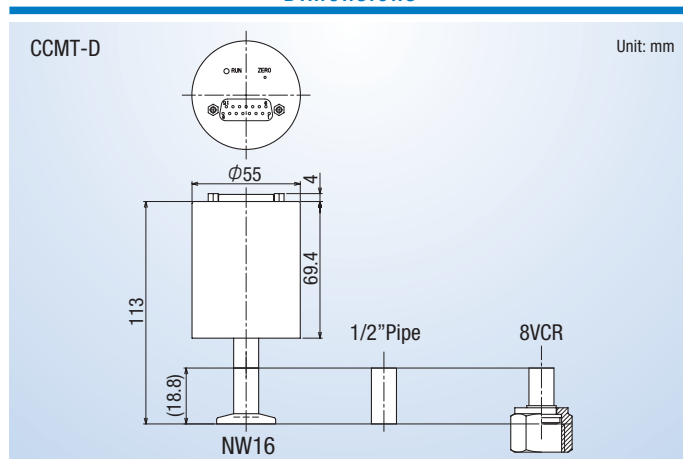
Model	CCMT-1000D	CCMT-100D	CCMT-10D	CCMT-1D
Range full scale	133kPa (1×10 ³ Torr, 1.33×10 ³ mbar) F.S.	13.3kPa (1×10 ² Torr, 1.33×10 ² mbar) F.S.	1.33kPa (10 Torr, 13.3 mbar) F.S.	133Pa (1 Torr, 1.33 mbar) F.S.
Lowest reading	13Pa (9.75×10 ⁻² Torr, 1.3×10 ⁻¹ mbar)	1.3Pa (9.75×10 ⁻³ Torr, 1.3×10 ⁻² mbar)	0.13Pa (9.75×10 ⁻⁴ Torr, 1.3×10 ⁻³ mbar)	1.3×10 ⁻² Pa (9.75×10 ⁻³ Torr, 1.3×10 ⁻⁴ mbar)
Lowest suggested reading	66.6Pa (5×10 ⁻¹ Torr, 6.66×10 ⁻¹ mbar)	6.7Pa (5×10 ⁻² Torr, 6.66×10 ⁻² mbar)	0.67Pa (5×10 ⁻³ Torr, 6.66×10 ⁻³ mbar)	6.7×10 ⁻² Pa (5×10 ⁻⁴ Torr, 6.66×10 ⁻⁴ mbar)
Resolution	0.003% of full scale			
Accuracy *1	±0.2% ±temperature coefficient relative to display value (The value indicates accuracy zero point adjustment)			
Temperature coefficient	Zero voltage	0.005%F.S./°C		0.015%F.S./°C
	Span voltage	0.01%R/°C		
Operating temperature range	10 to 50°C (50 to 122°F)			
Applicable humidity range	10 to 50% (not condensing)			
Storage temperature	-40 to 65°C (-40 to 149°C)			
Max temperature at flange *2	110°C			
Maximum applicable pressure	4×10 ⁵ Pa (3×10 ³ Torr, 4×10 ³ mbar)	2.6×10 ⁵ Pa (1.9×10 ³ Torr, 2.6×10 ³ mbar)		
Response rate	30ms or less			
Material of gas contacting sections	Al ₂ O ₃ , Vacon70 *3, SUS316, glass ceramics solder, Ag Ti Cu hard solder			
IP rating	IP30			
Input power	DC14 to 30V, 1W			
Output	DC 0 to 10V F.S.			
Temperature compensation	Internal temperature compensation circuit			
Electrical connector	D-sub 15-pin male (No.4-40, DNC screw)			
Applicable standard	CE			
Display (Option)	ISG1 (DC24V), GM2001 (AC100-240V)/2002 (DC24V)			
Certification document	Inspection result data sheet, General calibration testreport, JCSS calibration Certification			

*1 Non-linearity, hysteresis, repeatability at 25°C (77°C) ambient operating temperature without temperature effects after 2 hours operation

*2 Non operation

*3 28% Ni, 23% Co, 49% Fe

Dimensions



Display (Option)



Flange Type & Ordering Number

Flange type	NW16	1/2 inch Pipe	8VCR	
Weight	344g	329g	386g	
Internal volume	6cm ³	5.8cm ³	8.15cm ³	
Model & Ordering number	CCMT-1000D	CCMT-1000D-N16	CCMT-1000D-1/2	CCMT-1000D-VCR
		210006398100	210006397900	210006398200
	CCMT-100D	CCMT-100D-N16	CCMT-100D-1/2	CCMT-100D-VCR
		210006398600	210006398400	210006398700
	CCMT-10D	CCMT-10D-N16	CCMT-10D-1/2	CCMT-10D-VCR
		210006399100	210006398900	210006399200
	CCMT-1D	CCMT-1D-N16	CCMT-1D-1/2	CCMT-1D-VCR
		210006399600	210006399400	210006399700

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