

# 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 320g 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 <sup>3</sup> Torr, 1.33×10 <sup>3</sup> mbar) F.S.	13.3kPa (1×10 <sup>2</sup> Torr, 1.33×10 <sup>2</sup> 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 <sup>-2</sup> Torr, 1.3×10 <sup>-1</sup> mbar)	1.3Pa (9.75×10 <sup>-3</sup> Torr, 1.3×10 <sup>-2</sup> mbar)	0.13Pa (9.75×10 <sup>-4</sup> Torr, 1.3×10 <sup>-3</sup> mbar)	1.3×10 <sup>-2</sup> Pa (9.75×10 <sup>-3</sup> Torr, 1.3×10 <sup>-4</sup> mbar)
Lowest suggested reading	66.6Pa (5×10 <sup>-1</sup> Torr, 6.66×10 <sup>-1</sup> mbar)	6.7Pa (5×10 <sup>-2</sup> Torr, 6.66×10 <sup>-2</sup> mbar)	0.67Pa (5×10 <sup>-3</sup> Torr, 6.66×10 <sup>-3</sup> mbar)	6.7×10 <sup>-2</sup> Pa (5×10 <sup>-4</sup> Torr, 6.66×10 <sup>-4</sup> mbar)
Resolution	0.003% of full scale			
Accuracy *1	±0.2% ±temperature coefficient relative to display value			
Temperature coefficient	0.005%F.S./°C			0.015%F.S./°C
Zero voltage	0.01%R/°C			
Span voltage	10 to 50°C (50 to 122°F)			
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 <sup>5</sup> Pa (3×10 <sup>3</sup> Torr, 4×10 <sup>3</sup> mbar)	2.6×10 <sup>5</sup> Pa (1.9×10 <sup>3</sup> Torr, 2.6×10 <sup>3</sup> mbar)		
Response rate	30ms or less			
Material of gas contacting sections	Al <sub>2</sub> O <sub>3</sub> , Vacon70 *3, SUS316 *4			
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			

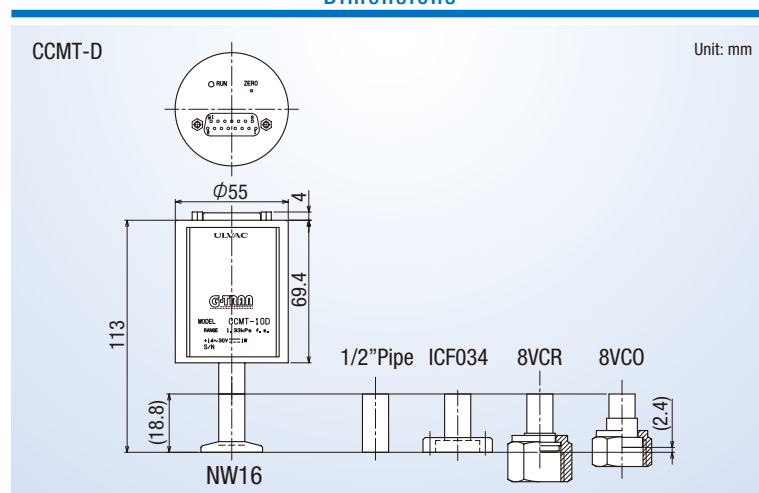
\*1 Non-linearity, hysteresis, repeatability at 25°C (77°C) ambient operating temperature without temperature effects after 2 hours operation

\*2 Non operation

\*3 18% Cr, 10% Ni, 3% Mo, 69% Fe

\*4 28% Ni, 23% Co, 49% Fe

## Dimensions



## Flange Type & Ordering Number

Flange type		1/2 inch Pipe	NW16	ICF034	8VCR	8VCO
Weight		329g	344g	365g	386g	366g
Internal volume		5.8cm <sup>3</sup>	6cm <sup>3</sup>	6cm <sup>3</sup>	8.15cm <sup>3</sup>	8.15cm <sup>3</sup>
Model & Ordering number	CCMT-1000D	CCMT-1000D-1/2	CCMT-1000D-NW16	CCMT-1000D-034	CCMT-1000D-VCR	CCMT-1000D-VCO
		210006397900	210006398100	210006398000	210006398200	210006398300
	CCMT-100D	CCMT-100D-1/2	CCMT-100D-NW16	CCMT-100D-034	CCMT-100D-VCR	CCMT-100D-VCO
		210006398400	210006398600	210006398500	210006398700	210006398800
	CCMT-10D	CCMT-10D-1/2	CCMT-10D-NW16	CCMT-10D-034	CCMT-10D-VCR	CCMT-10D-VCO
		210006398900	210006399100	210006399000	210006399200	210006399300
	CCMT-1D	CCMT-1D-1/2	CCMT-1D-NW16	CCMT-1D-034	CCMT-1D-VCR	CCMT-1D-VCO
		210006399400	210006399600	210006399500	210006399700	210006399800

ULVAC, Inc. Components Division

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Overseas Sales in Japan TEL +81-467-89-2261

USA : ULVAC Technologies, Inc. TEL +1-978-686-7550  
 GERMANY : ULVAC GmbH TEL +49-89-960909-0  
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