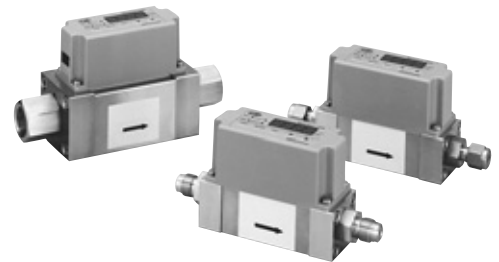




# CMS

## Gas Mass Flowmeter (Hydrogen and Helium)

The CMS is a highly reliable gas mass flowmeter that uses the Yamatake  $\mu$ F (Micro Flow) sensor as its sensing element. The  $\mu$ F sensor is a MEMS thermal mass-flow sensor capable of measuring ultra-low flow rates. The integration of the  $\mu$ F sensor and advanced channel design technology has achieved high accuracy and high rangeability at a low cost.



### Specifications

Model No.	CMS0010	CMS0050	CMS0200	CMS0500	CMS1000	CMS2000
Compatible gases	Hydrogen and helium. Gas must be dry and without corrosive components (chlorine, sulfur, acid, etc.). It must also be clean, without dust or oil mist.					
Flow rate range	0 to 10L/min (standard)	0 to 50L/min (standard)	0 to 200L/min (standard)	0 to 500L/min (standard)	0 to 1000L/min (standard)	0 to 2000L/min (standard)
Measurement accuracy	*Standard* refers to the flow rate adjusted for 20°C, 101.325kPa (1 atmosphere). 1/5 to 1/1 of flow rate range: $\pm 5\%$ rdg. 1/100 to 1/5 of flow rate range: $\pm 1\%$ FS % rdg.: percentage of indicated reading. % FS: percentage of full scale.					
Operating pressure	-0.07 to +1.0MPa					
Sampling cycle	100ms $\pm 20$ ms					
Power	12 to 24Vdc					
Current consumption	100mA max.					
Mass	Approx. 800g			Approx. 1400g		Approx. 2000g

### Selection Guide Example: CMS0050BTUH000100

Segment	Model No. selection	Description
I	Basic No.	CMS ↓ ↓ Gas mass flowmeter
II	Flow rate range (hydrogen conversion value)	0010 ○ – 0 to 10L/min (standard)
		0050 ○ – 0 to 50L/min (standard)
		0200 ○ – 0 to 200L/min (standard)
		0500 – ○ 0 to 500L/min (standard)
		1000 – ○ 0 to 1000L/min (standard)
		2000 – ○ 0 to 2000L/min (standard)
III	Display	B ○ ○ Integrated display
IV	Material	T ○ ○ SUS316
V	Connection	U ○ – 9/16-18 UNF
		– ○ 3/4-16 UNF
		T ○ – Rc 1/4"
		– ○ Rc 1/2"
		S ○ – 1/4" Swagelok
		– ○ 1/2" Swagelok
		V ○ – 1/4" VCR
		– ○ 3/8" VCR
VI	Gas	H ○ ○ Hydrogen/helium (selectable)
VII	Output	2 ○ ○ 0–5Vdc 1–5Vdc, 4–20mA (selectable)
VIII	Option 1	0 ○ ○ None
		1 ○ ○ RS-485 communications
IX	Option 2	0 ○ ○ None
X	Option 3	1 ○ ○ Gas-contacted parts treated to be oil-inhibited
XI	Option 4	0 ○ ○ None
		D ○ ○ With inspection data
		Y ○ ○ With traceability certification
XII	Design code	0 ○ ○ Product version

• A circle (○) denotes availability.

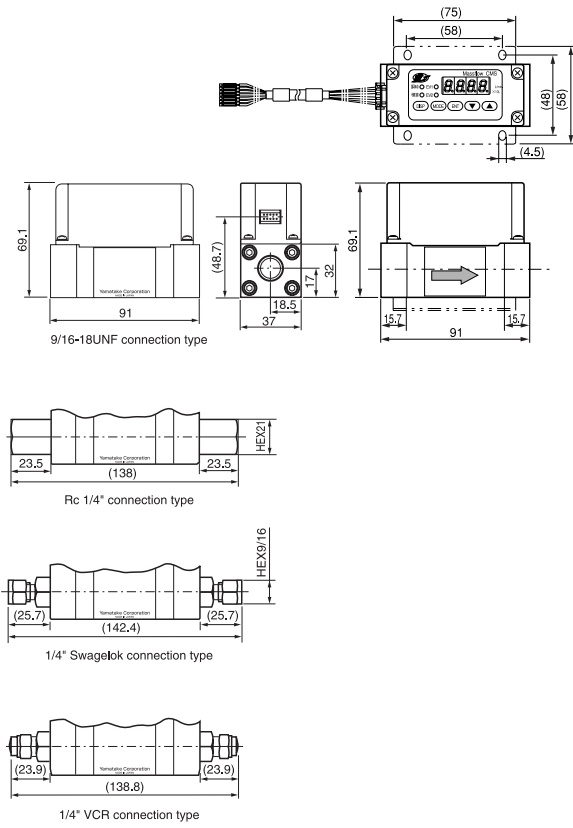
### Accessories (sold separately)

Part No.	Description
81446628-001	Mounting bracket (CMS0010/0050/0200)
81446721-001	Mounting bracket (CMS0500/1000)
81446856-001	Mounting bracket (CMS2000)
81446594-005	Harness (2m long)
81446594-006	Harness (5m long)
81446594-007	Harness for RS-485 communications (2m long)
81446594-008	Harness for RS-485 communications (5m long)
81446594-030	Harness for AC adapter for all models (20cm long)
81446957-001	AC adapter (1.8m long)

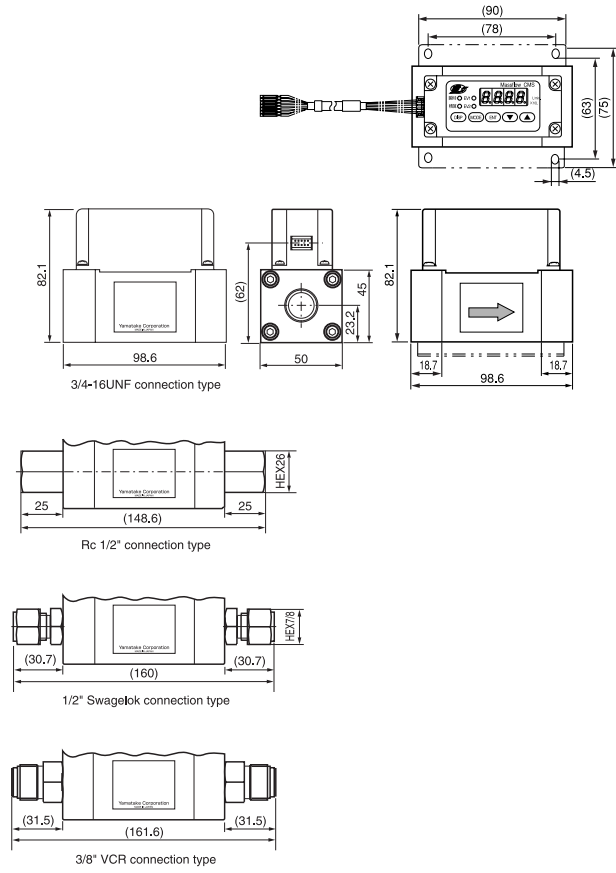
**Dimensions**

(Unit: mm)

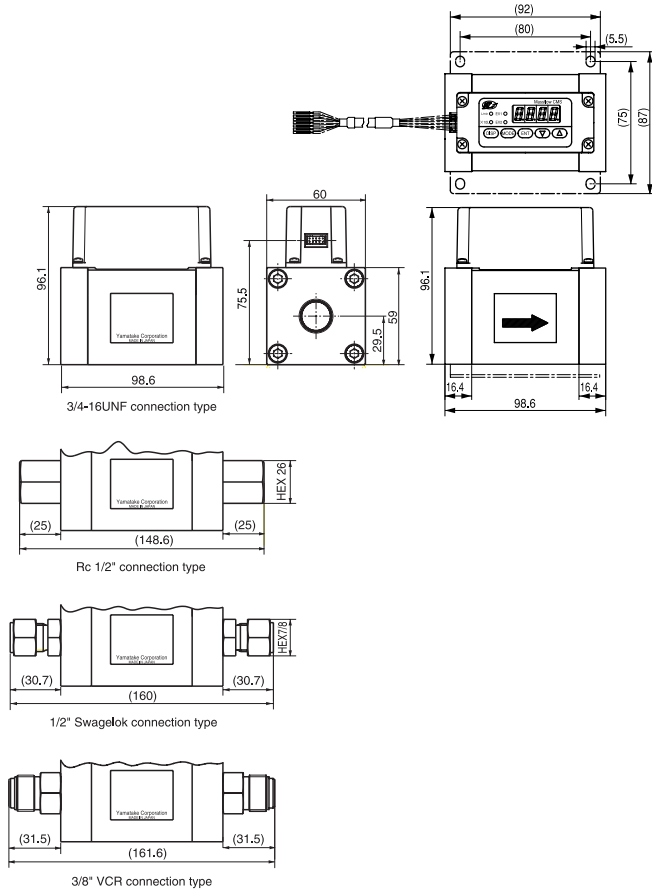
• **CMS0010/0050/0200**



• **CMS0500/1000**



• **CMS2000**



• **Harness**

