

Digital Mass Flow Controller (Hydrogen and Helium)

Model No.	MQV9500	MQV0005	MQV0010	MQV0050	MQV0200	MQV0500	MQV1000
Valve type	Proportional solenoid valve						
Standard full-scale flow rate	0.500L/min (standard)	5.00L/min (standard)	10.00L/min (standard)	50.0L/min (standard)	200L/min (standard)	500L/min (standard)	1000L/min (standard)
Gas types	Hydrogen, helium. Gas must be dry and without corrosive components (chlorine, sulfur, acid, etc.). It must also be clean, without dust or oil mist.						
Accuracy (at standard temperature and differential pressure; Q is flow rate)	±0.5% FS (0% FS ≤ Q ≤ 40% FS), ±1.0% FS (40% FS < Q ≤ 80% FS), ±2.0% FS (80% FS < Q ≤ 100% FS)					±1% FS (0% FS < Q ≤ 80% FS)	
Operating differential pressure range (T is operating temperature)	300kPa max.						(1) 300kPa max. (-10°C ≤ T ≤ 40°C) (2) 180kPa max. (40°C < T ≤ 60°C) (when power = 24.0Vdc)
Operating temperature	-10 to +60°C						
Operating humidity	10 to 90% RH (no condensation allowed)						
Flow rate setting methods	(1) Key input, (2) external analog input, (3) PC, using dedicated connector, (4) RS-485 communications (3-wire type)						
External analog input	0–5Vdc, 1–5Vdc, 0–20mA, or 4–20mAdc (selectable)						
Output type	Instantaneous flow rate (PV) or flow rate set point (SP) (selectable)						
Output range	0–5Vdc, 1–5Vdc, 0–20mA, or 4–20mAdc (selectable)						
No. of alarm/event outputs	Alarm: 1. Event: 2						
No. of external switching inputs	3-way switching: 1 External contact inputs (2-way switching): 3						
Power (T is operating temperature)	24Vdc						
Current consumption	300mA max.					400mA max.	
Mass	Approx. 1.2kg					Approx. 3.5kg	

I II III IV V VI VII VIII IX X XI XII Example: MQV9500BSRH000100

- A circle (○) denotes availability.

Note: The controllable flow rate range varies according to the gas type. See table.

Model No.	Name	Description
81446681-001	Cable with dedicated connector	2m 20-core flat cable
81446951-001	Cable with dedicated connector	5m 20-core shielded cable
81446957-001	AC adapter	Rating: 24Vdc, 650mA
81446683-002	Potentiometer for setting flow rate	Digital dial, 5k Ω , 10 turns
81446858-001	Front cover for separate display	Resin

Control Flow Rate Range and Resolutions

The controllable flow rate range varies according to the gas type.

Specifications	MQV9500		MQV0005		MQV0010		MQV0050		MQV0200		MQV0500		MQV1000	
	Control flow rate range	Setting/display resolution	Control flow rate range	Setting/display resolution	Control flow rate range	Setting/display resolution	Control flow rate range	Setting/display resolution	Control flow rate range	Setting/display resolution	Control flow rate range	Setting/display resolution	Control flow rate range	Setting/display resolution
Gas type	L/min		L/min		L/min		L/min		L/min		L/min		L/min	
Hydrogen	0.004 to 0.500	0.002	0.04 to 5.00	0.02	0.10 to 10.00	0.05	0.4 to 50.0	0.2	2 to 200	1	4 to 500	2	10 to 1000	5
Helium	0.004 to 0.500	0.002	0.04 to 5.00	0.02	0.10 to 10.00	0.05	0.4 to 50.0	0.2	2 to 200	1	4 to 500	2	10 to 1000	5

Dimensions (Unit: mm)

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- Models with integrated display
- Model with separate display

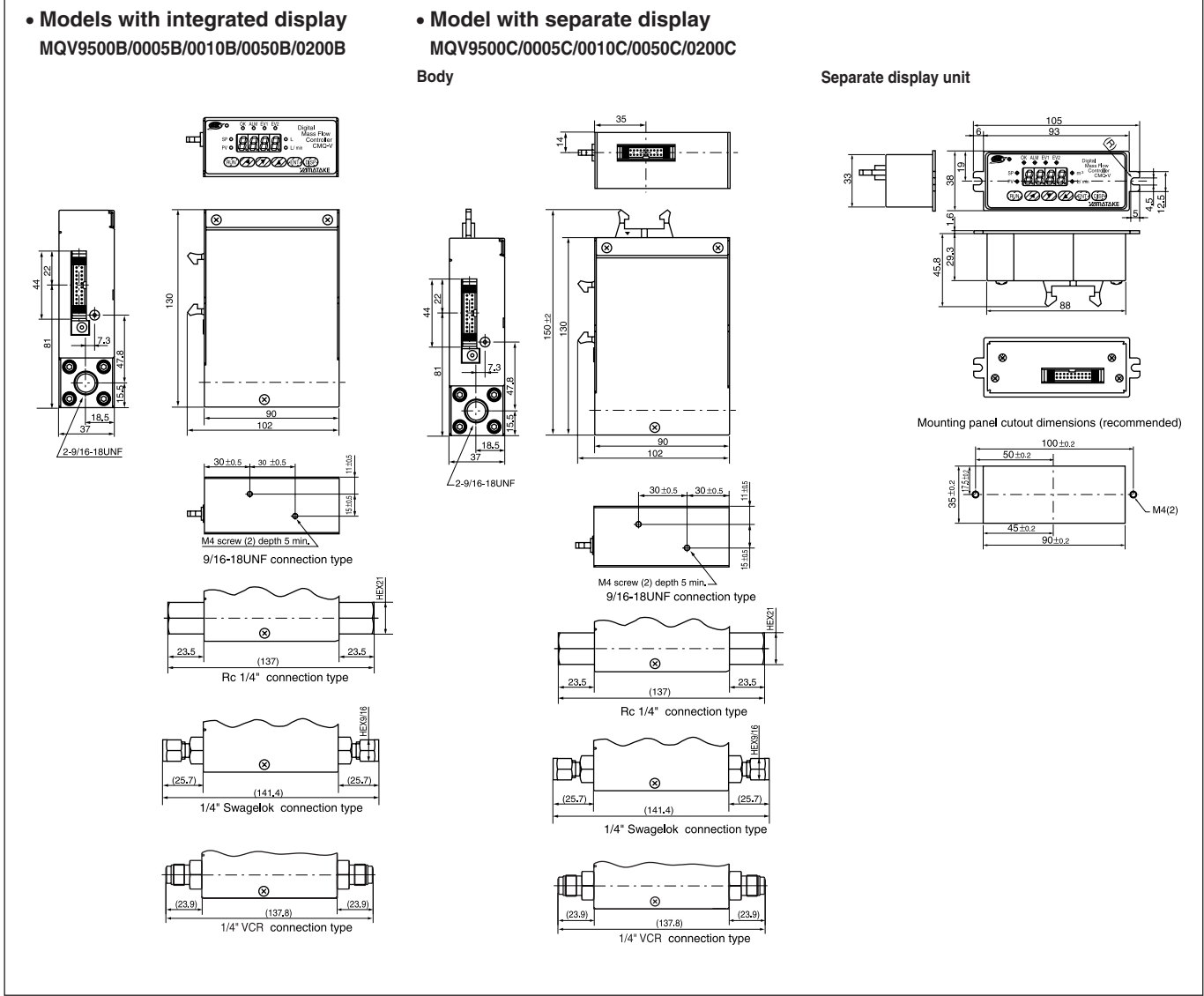
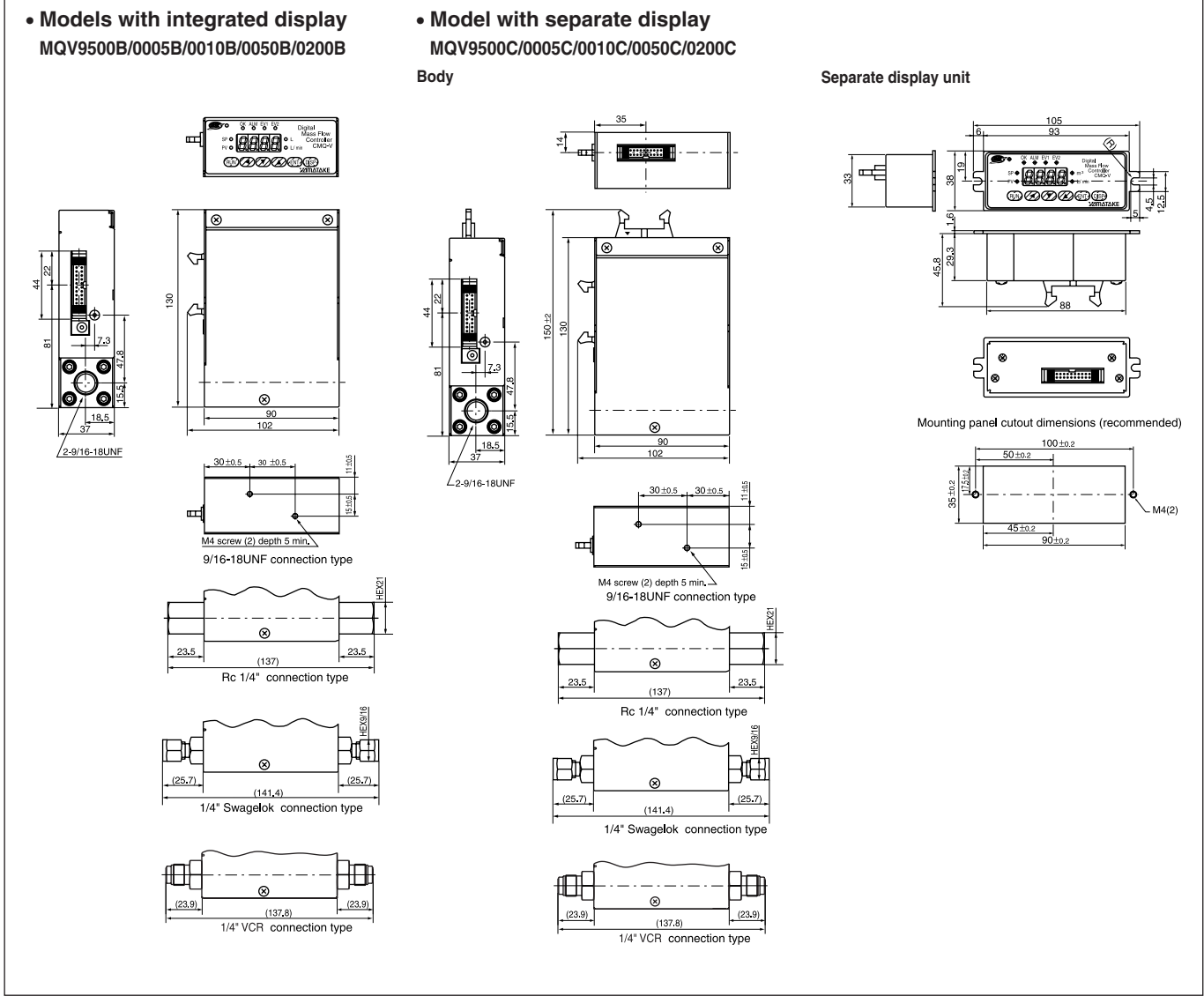
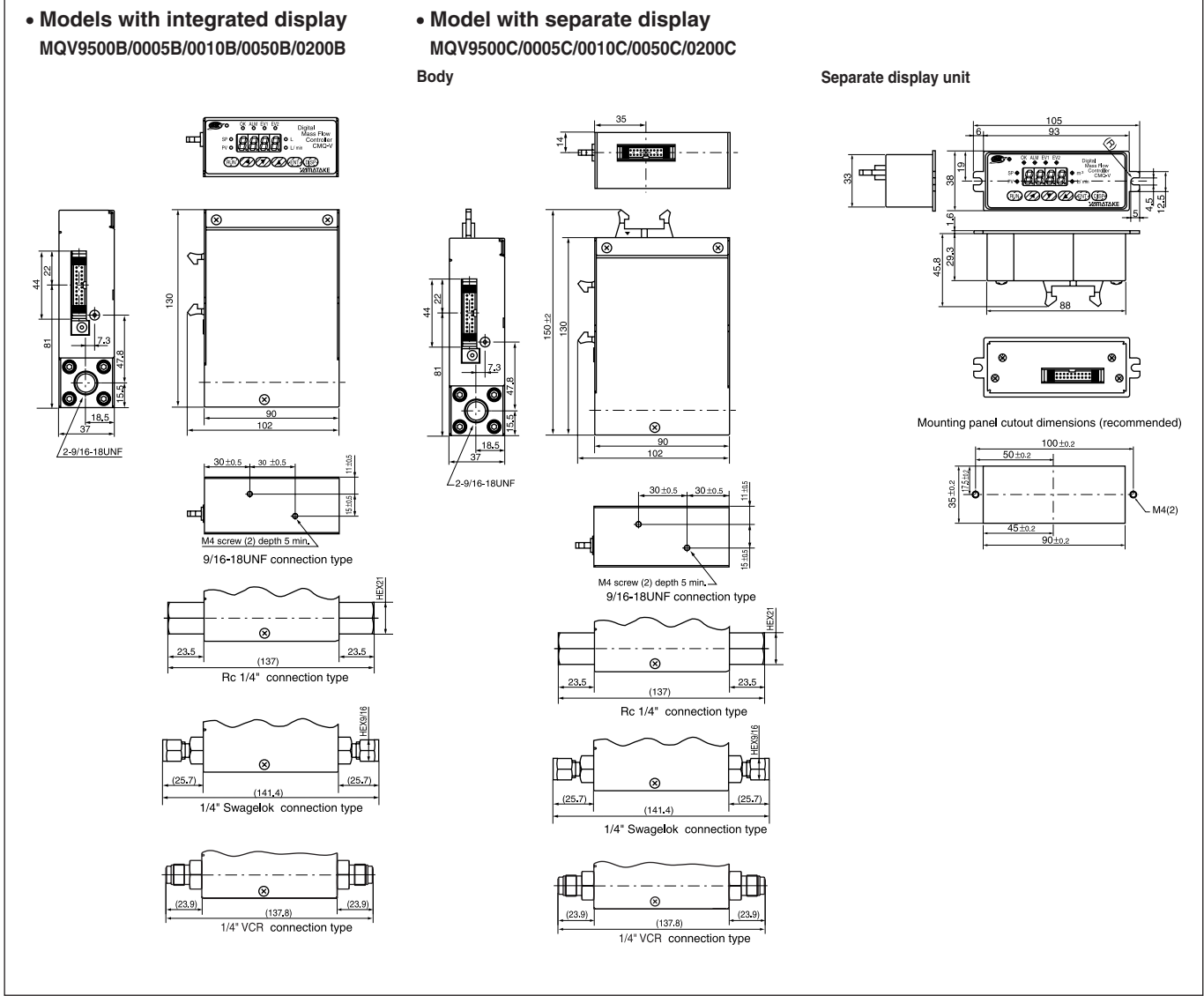
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Body	Separate display unit

<ul style="list-style-type: none"> • Models with integrated display MQV9500B/0005B/0010B/0050B/0200B 	<ul style="list-style-type: none"> • Model with separate display MQV9500C/0005C/0010C/0050C/0200C
Body	Separate display unit



• **Models with integrated display**
 MQV9500B/0005B/0010B/0050B/0200B

• **Model with separate display**
 MQV9500C/0005C/0010C/0050C/0200C

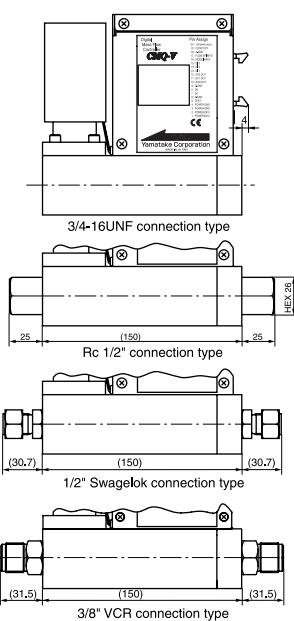
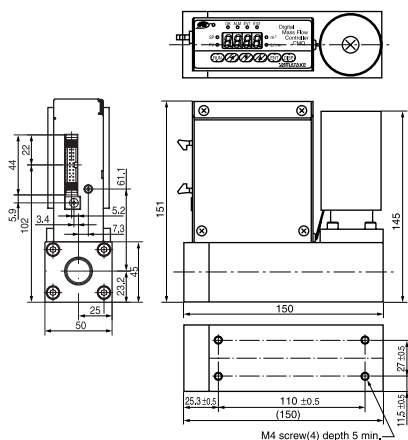
Body

• **Separate display unit**

Mounting panel cutout dimensions (recommended)

• Models with integrated display

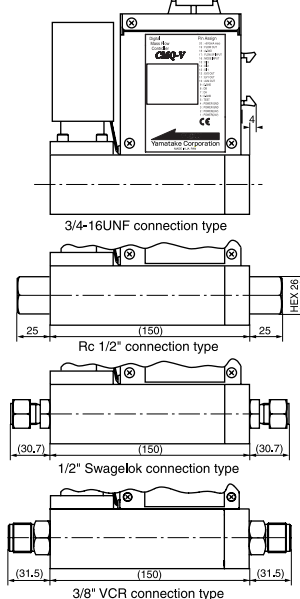
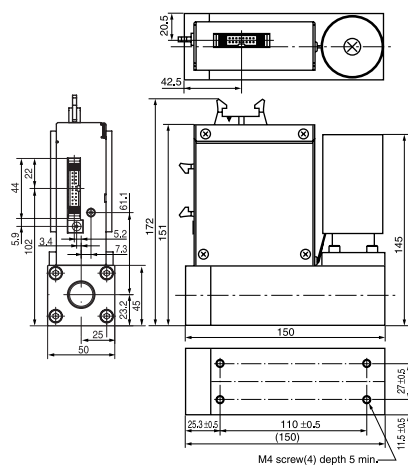
MQV0500J/1000J



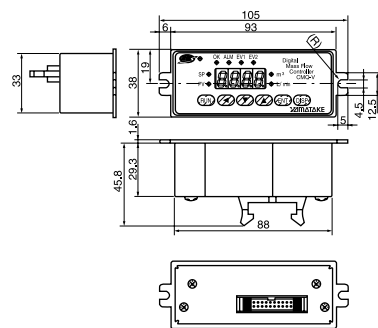
• Model with separate display

MQV0500K/1000K

Body



Separate display unit



Mounting panel cutout dimensions (recommended)

