

Features

Electromagnetic flow meter

Electromagnetic flow meter has no moving parts in the flow path, cutting down maintenance time and avoiding a clogging problem, compared with turbine and vortex type flow meters. Air purge is also available.

Operation mode

- 1. Local mode (Hand-manual)**
(Target flow rate can be selected on display)
- 2. Remote mode (Analog input signal)**
(Target flow rate can be selected with analog input)
- 3. Preset mode**
(Up to 4 target flow rates can be selected in advance by using three wires)

Alarm tripping

2 of alarm outputs that you set in advance are available with relay turning ON / OFF. In addition, hysteresis value can be set to prevent this product from chattering.

Flow output (analog signal)

Flow rate can be remotely monitored by having analog output signal that is proportional to flow rate. This output signal may help for root cause analysis.

Dead zone

This setting makes the valve life longer by suppressing valve behavior, improving durability and saving power. Dead zone range is selectable.

Flow control ON / OFF

Control can be activated or deactivated by using preset wires. This function helps when quick valve control is required, such as for operation that needs to repeat a cycle of valve shut-off and valve open, resulting in durability enhancement.

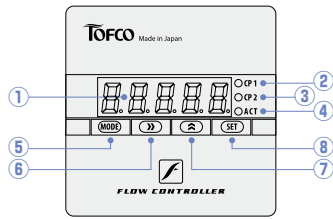
Specifications

Item		FLC-E010			FLC-E020	
Flow range		0.5 – 5 L/min	1 – 10 L/min	2 – 20 L/min	5 – 50 L/min	10 – 100 L/min
Orifice size		φ3.0	φ4.5	φ6.0	φ12.0	φ13.5
Fluid name		WATER, cooling water, etc. (Conductivity must be greater than 50 μs/cm)				
Flow accuracy		±5% of F.S.				
Operating pressures		0.15 – 0.4MPa(G), Max. 0.5MPa(G), Required differential pressure: 0.15MPa				
Response time		Approx. 8s				
Fluid temperatures		0 – 60°C (Heat resistant temp: 80°C) Non-condensing and freezing				
Operating temperatures		0 – 50°C (Non-condensing and freezing)				
Input	Setpoint (Analog x1)	Selecting flow rate either with: *4-20 mA (Input impedance: 20 Ω) or *0-5 VDC / 1-5 VDC (Input impedance: 1 MΩ)				
	Preset	Selecting flow rate with preset wires. (Up to 4 points available) Turning Flow Control ON / OFF				
Output	Flow (Analog x1) *	Measured flow rate: 4-20 mA (Load resistance: ≤ 300 μ) 0-5 VDC / 1-5 VDC (Load resistance: ≥ 1 kΩ)				
	Alarm	Relay output: 2 outputs (upper / upper limits, upper / lower limits, lower / lower limits) 35 VDC, max. 0.1 A				
Valve shut-off		Valve fully closes when selecting 0 L/min ※				
Value on display		Instantaneous flow rate / selected flow rate				
Power source		24 VDC ±10%, Max. 450 mA (Approx. 100 mA on standby)				
Cable length		2 m				
Wetted materials		SCS13, SS304, SS316L, PPS, PTFE (filled), FKM, HNBR				
Weight	Body	Approx. 1800 g			Approx. 2400 g	
	Cable	Approx. 150 g				

* Flow output signal is proportional to flow rate. e.g. 4 mA: 0 L/min, 20 mA: Max. flow rate. (Flow accuracy is ensured for the above specified flow ranges)

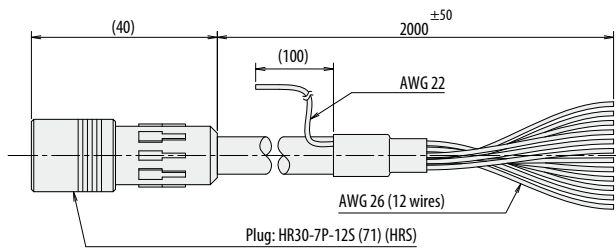
※ 100% complete shut off is not guaranteed.

Display and key panel



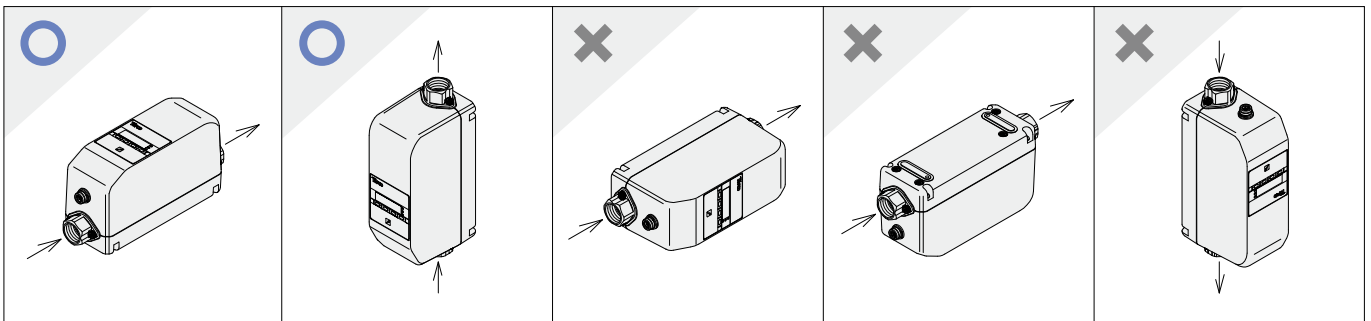
- ① **Display** Measured (Instantaneous) value / Setting menus and parameters / Error messages, etc indicated
- ② **CP1 LED** Turned on when CP1 alarm is tripped
- ③ **CP2 LED** Turned on when CP2 alarm is tripped
- ④ **ACT LED** Blinked with different speed, depending on sensing status of the flow meter
- ⑤ **Mode Key** Used when moving from Measurement mode to Setting mode
- ⑥ **Right arrow Key** Used when moving between digits
- ⑦ **Up arrow Key** Used when changing values.
- ⑧ **Set Key** Used when changing setting items

Cable

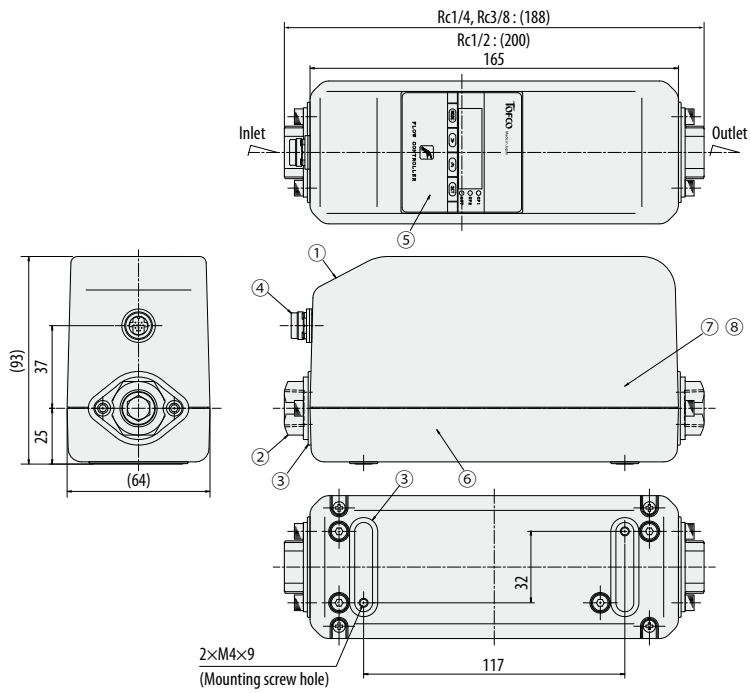


Wire color	Function
Black	Power source 0 VDC
Red	Power source 24 VDC
Orange	Analog Output
Green	Analog Output COM
Yellow	Preset 1
Gray	Preset COM
Purple	Preset 2
Peach	Alarm 1
White	Alarm COM
Magenta	Alarm 2
Brown	Analog Input
Blue	Analog Input COM

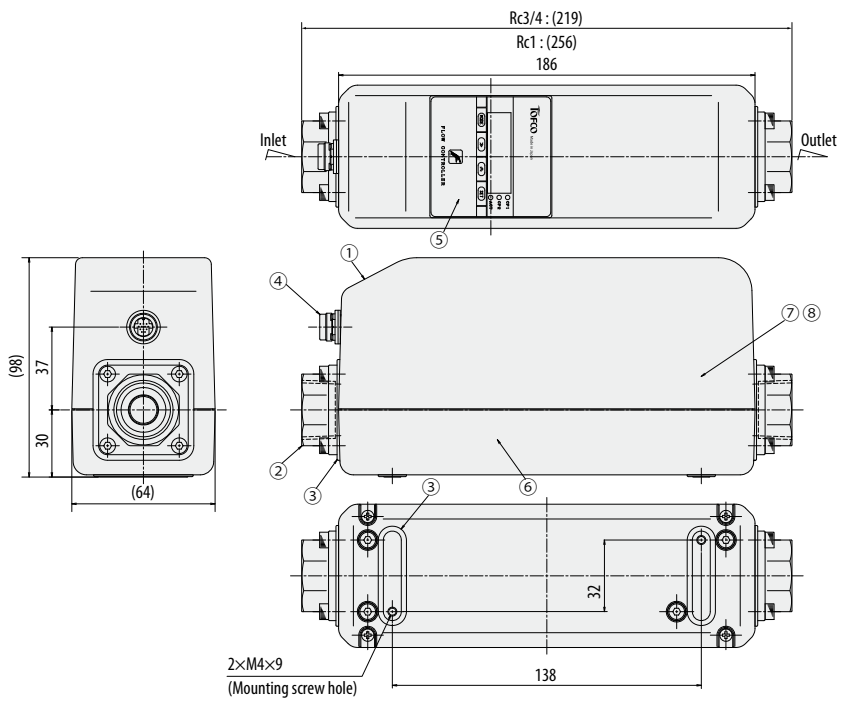
Installation orientation



FLC-E010



FLC-E020



Materials

No.	Part name	Material	Note
1	Cover	ZDC2	Wine red metallic colored
2	Fitting	SCS13	SS304 Equivalent
3	Splash-proof gasket	NBR	
4	Water-proof connector	PPS etc.	
5	Controller	PC etc.	
6	Electromagnetic flow meter	PPS etc.	
7	Stepper motor	POM etc.	
8	Ball valve	SCS13 etc.	SS304 equivalent, etc.

Panel cut-out

