

3. How to Change the Display Orientation/ Detach the Display

How to change the display orientation

The orientation of the display can be rotated manually by increments of 90 degrees. (Rotation is locked at the positions of 0°, 90°, 180°, and 270°). Adjust the display to your desired orientation.



<Caution> To prevent the display from being rotated or detached accidentally, make sure to use the product at the position where the display rotation is locked (any of the 0°, 90°, 180°, or 270° position).

4. Wiring (with Output) *1

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anything. (Make sure that conductors of the unused cores do not touch each other.)

1. Tubing Requirements

Please refer to the table below for the straight tube lengths required. Note the following to maintain metering accuracy.

				. (III	
Nominal diameter (mm)	Inner diameter (mm)	Upstream side(L1) (mm)	Downstream side (L2) (mm)		
4	8.5	59 or more	25 or more		D: Main bo
8 (male thread)	13	91 or more	39 or more		
8 (female thread)	10.7	59 or more	25 or more		
15	14	98 or more	42 or more		
25	24.5	171 or more	73 or more		L1 .

(1) Use a tube having an inner diameter equal to or larger than the main body inner diameter.

(2) An "abrupt increase in diameter", such as a throttle valve or an expanded tube, located upstream of this product, has to be at least 50D away from this product.

(3) A flow control valve has to be located downstream of this product to control the flow rate.

2. Tube Connection

(1) Connect this product so that an excessive force or impact would not applied to the tube connecting part. Tightening of tubes should be within allowable tightening torque listed in the table on the right

	Nominal diameter	Allowable tightening torque	
be the	(mm)	(N • m)	
	4	12	
	8, 15	20	
	25	50	

1. The connecting part of this product is tapered thread. Use seal materials such as seal tapes for installation. 2. A resin (PPS resin) connection may be damaged if it is fastened excessively. Make sure to observe the above allowable torque

3. When connecting the metal joint model, use a tool such as a spanner to tighten the metal joint of the body.

(2) In cases where the product cannot be supported by the tubes or the product is installed in a location subject to strong vibration, fasten the product body using the screw holes (4-M4).

How to detach the display

①Set the display orientation to any of the 45°, 135°, 225°, or 315° position. 2 Pull the display upward.

(Basically it is not necessary to detach the display except when replacing the battery unit. Refer to the INSTRUCTIONS for details on battery unit replacement.)



<Caution> The display and the main body are connected internally with a cable. To prevent damage, avoid pulling on the internal cable with an excessive force. (Do not detach the display unless it is necessary.)

5. Output Specifications

	Output type	Specifications				
	Analog output	• 4 to 20mA output (shared with the power supply cable) • Load resistance range: See below graph.				
	Factored pulse output	 Open drain output (equivalent to open collector) Allowable current: 20mA Maximum applied voltage: 30V Pulse width (standard): 30ms (the setting can be changed by 1ms in the range from 1 to 999 ms with the parameter [Pon]) Pulse unit (standard): See Section 7 below. (the setting can be changed within the limited range of the specifications with the parameter [Pu]) 				
	Alarm output (Flow switch function)	 Open drain output (equivalent to open collector) Allowable current: 20 mA Maximum applied voltage: 30V A desired "High alarm" or "Low alarm" for the respective alarm output (up to two points) 				
(6. Load Res	sistance Range during 7. Standard Pulse Unit *2				



	Nominal diameter [mm]	Total Display Unit an	*3 Maximum	
Model		Pulse unit [L]	Max. output frequency [Hz]	Flowrate [L/min]
FLM2S	4	0.01	6.67	4
FLM20	8	0.1	2.50	15
FLM21	15	1	0.75	45
FLM22	25	1	2.22	133
FLM3S	4	0.1	2.83	17
FLM30	8	1	1.50	90
FLM31	15	1	4.72	283
FLM32	25	10	1.42	850

*2: The product is shipped with the above factored pulse unit unless otherwise specified. For the final specifications at the time of shipment, see the specification plate on the product.*3: [Flow indicator] and [Analog output] are set based on Maximum flowrate listed above.

8. Basic Operation (Measuring Mode) The display mode is switched sequentially as the MODE button is pressed^{**4}. Select the display mode of your choice.

Standard (without temperature and pressure compensation)

