



## FD-XS8

Sensor head Maximum rated flow rate 8 L/min



\*Please note that accessories depicted in the image are for illustrative purposes only and may not be included with the product.

## Specifications

Model				FD-XS8	
Supported pipe materials				Metal pipes, Plastic pipes (soft/hard) *1	
Supported fluids				Liquids (water, oil, adhesive, grease, chemical solutions, etc.) *1	
Supported fluid temperature				0 °C (no freezing on the pipe surface) to 100 °C 32 to 212 °F (Pipe surface temperature)	
Clamp set model	Plastic pipe/tube attachment			FD-XC8R1, FD-XC8R2, FD-XC8R3	
	Metal pipe attachment			FD-XC8M*2	
Maximum rated flow rate				Outer diameter of pipe ø 6 0.24 ", 1/4 " (6.35 mm) : 0 to 3000 mL/min Outer diameter of pipe ø 8 0.31 ": 0 to 8000 mL/min	
Zero cut flow rate				40 mL/min*3 (variable, default)	
Display resolution	Instantaneous flow rate			0.1/1/10 mL/min (Displayed on controller)	
	Shot amount			0.001/0.01/0.1/1 mL (Displayed on controller)	
Repeatability	Plastic pipe/tube attachment	Response time: 50 ms	F.S.	± 0.1 %*4*5	
			Instantaneous flow rate	Outer diameter of pipe ø 6 0.24 ", 1/4 " (6.35 mm) : ±3 mL/min Outer diameter of pipe ø 8 0.31 ": ±8 mL/min*4*5	
		Response time: 500 ms			Outer diameter of pipe ø 6 0.24 ", 1/4 " (6.35 mm) : ±1.0 mL/min Outer diameter of pipe ø 8 0.31 ": ±2.6 mL/min*4
			Metal pipe attachment	Response time: 50 ms	F.S.
	Instantaneous flow rate	Outer diameter of pipe ø 6 0.24 ", 1/4 " (6.35 mm) : ±9 mL/min Outer diameter of pipe ø 8 0.31 ": ±12 mL/min*4*5			
		Response time: 500 ms			Outer diameter of pipe ø 6 0.24 ", 1/4 " (6.35 mm) : ±2.9 mL/min Outer diameter of pipe ø 8 0.31 ": ±3.8 mL/min*4
	Hysteresis				Variable
	Integrated unit display				0.1/1/10/100/1000/10000 mL (displayed on controller)
Display method				Status indicator	
Environmental resistance	Enclosure rating			IP65/IP67 (IEC60529) , IP68G (JIS C0920) *6	
	Ambient temperature			-10 to 60 °C (No freezing) 14 to 140 °F	
	Relative humidity			35 % to 85 %RH (No condensation)	
	Vibration resistance			10 to 55 Hz, double amplitude 1.5 mm 0.06 ", 2 hours each for X,Y,Z direction	
	Shock resistance			50 G 11 ms 3 times each for X,Y,Z direction	
Material	Sensor head			Head body: PPS/PPSU, in-cable amplifier: PPS, cable: PVC, controller connector: PPS/PBT/POM	
	Clamp set	For plastic pipe		Body, fixing screw: PPS, detection surface: special rubber, pipe support rubber: FKM, sensor head fixing screw: SUSXM7	
		For metal pipe		Metal: SUS304/SUSXM7, detection surface: special rubber, clamp support rubber: FKM, sensor head fixing screw: SUSXM7	
Weight				Approx. 250 g	

\*1 Liquid must allow for the passage of an ultrasonic pulse, as well as not contain large air pockets or excessive bubbles. Readings may become unstable depending on the type of pipe.

\*2 When using stainless steel or iron pipes, the ideal pipe wall thickness is as follows, FD-XS1: approx. 0.5 mm 0.02", FD-XS8: approx. 1 mm 0.04", FD-XS20: approx. 1 0.04" to 2 mm 0.08". FD-X signal strength and stability will decrease as the thickness of the pipe wall increases or decreases from the suggested size.

\*3 The zero cut flow rate can be changed in the settings. When using the unit with a low flow rate range, perform an origin adjustment when the fluid is not moving if you change the zero cut flow rate.

\*4 This specification is valid when the flow velocity distribution is stable. This value does not take into account the effects of pulsation or fluctuations in flow velocity distribution due to facility factors. Convert the F.S. (full scale value) listed in the table according to the rated flow range.

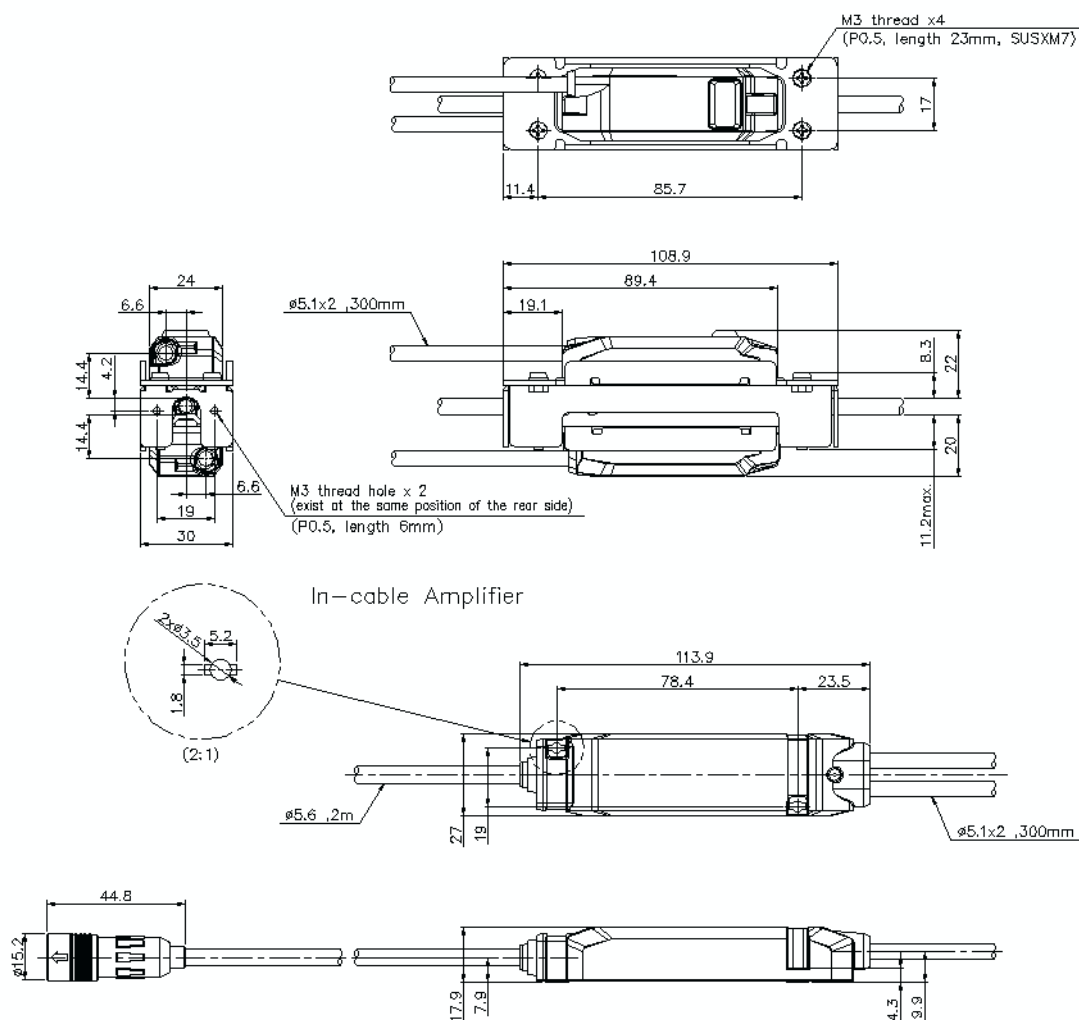
\*5 The longer the response time is set, the more repeatability is improved. As a guideline, use  $\sqrt{}$  (50 ms/response time) times.

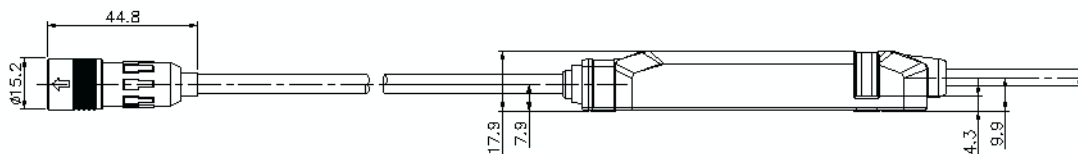
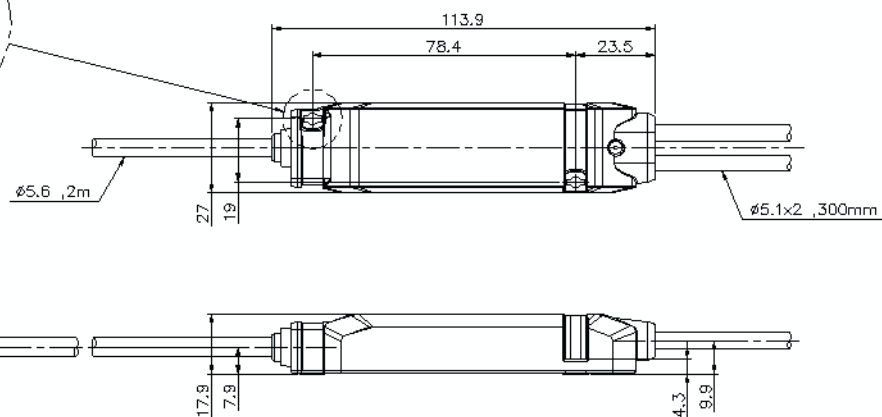
\*6 The connector part of the sensor head cable is IP65/IP67.

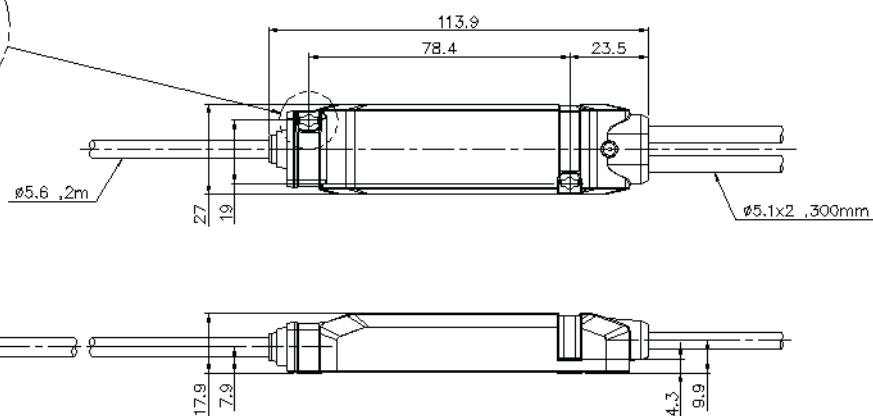
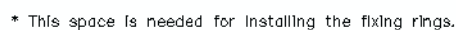
## Dimensions

\* Download CAD file or product manual for larger image/text and more detail.

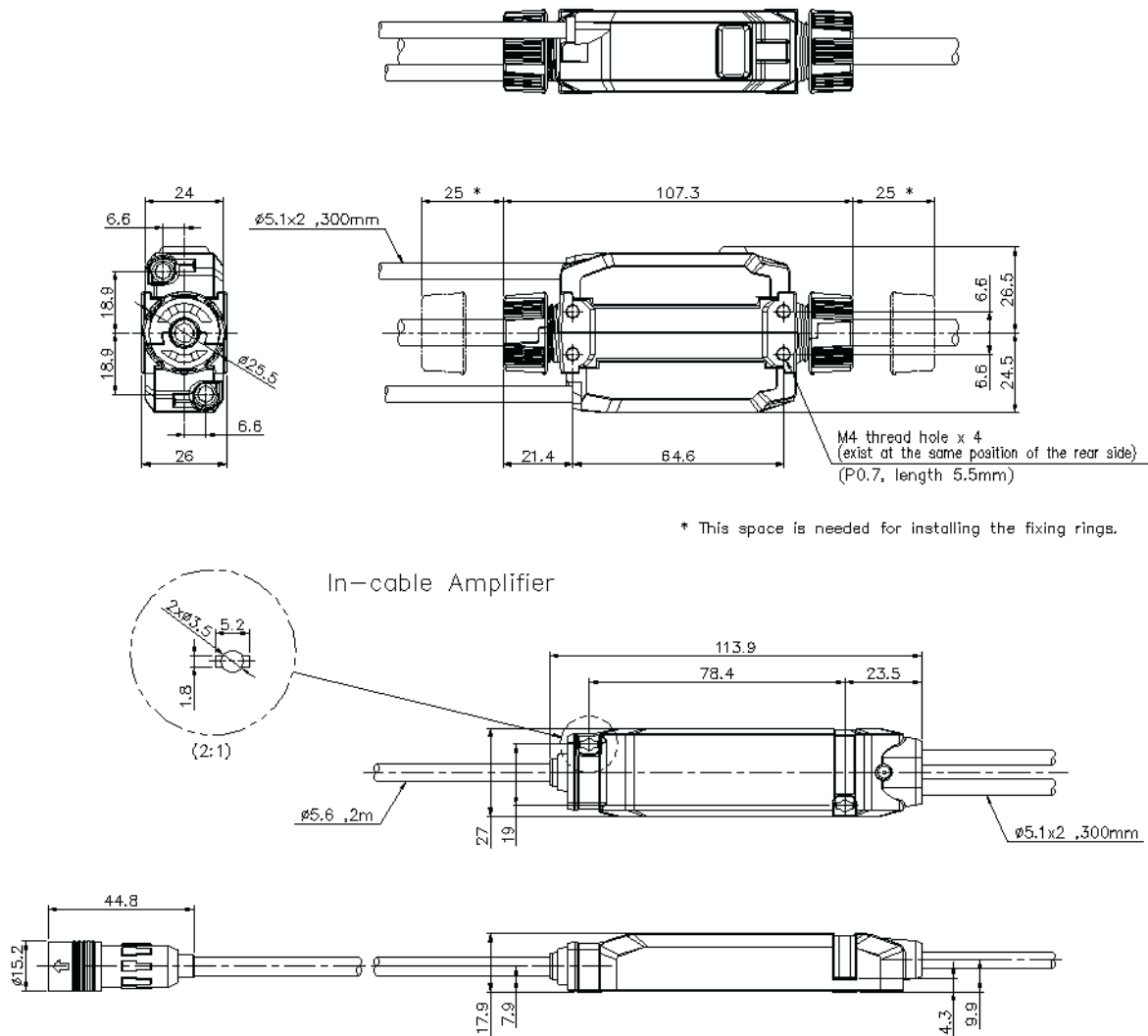
FD-XS8+FD-XC8M



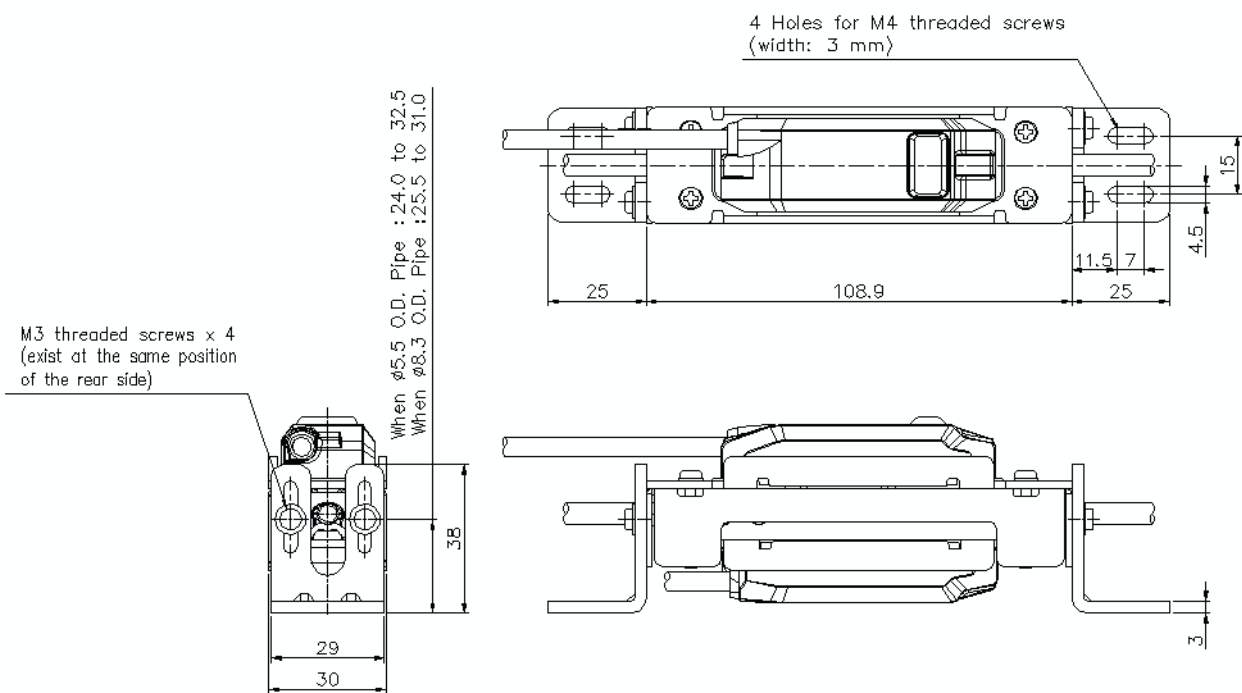




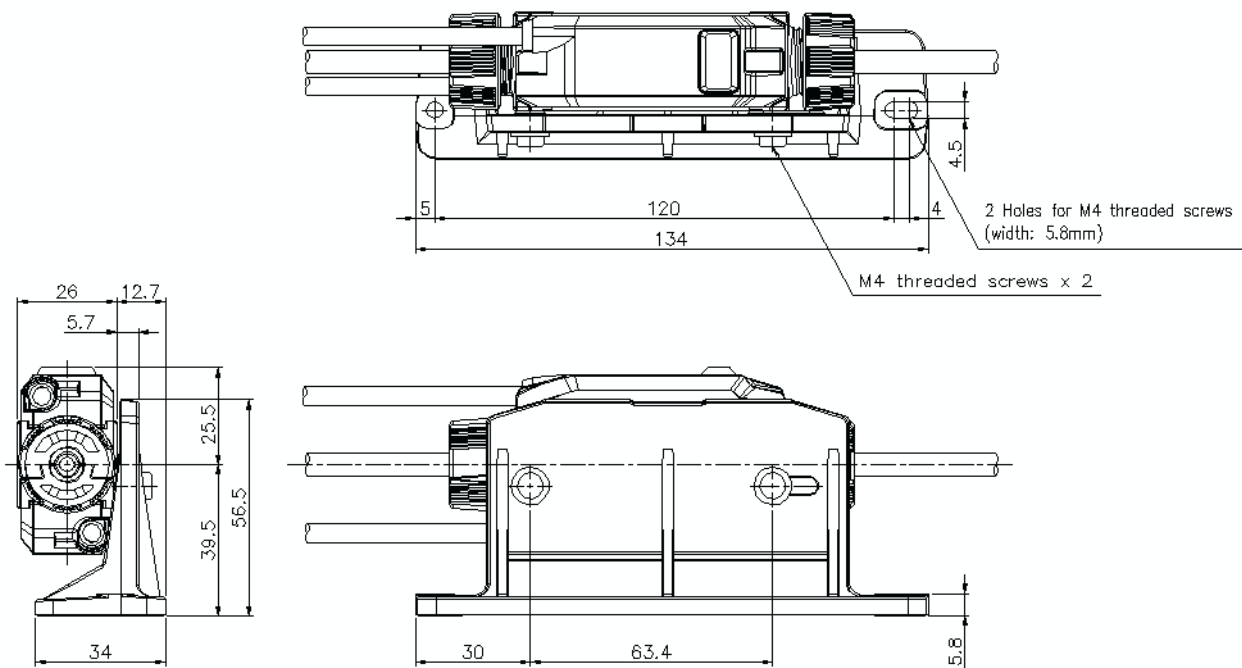
FD-XS8+FD-XC8R3



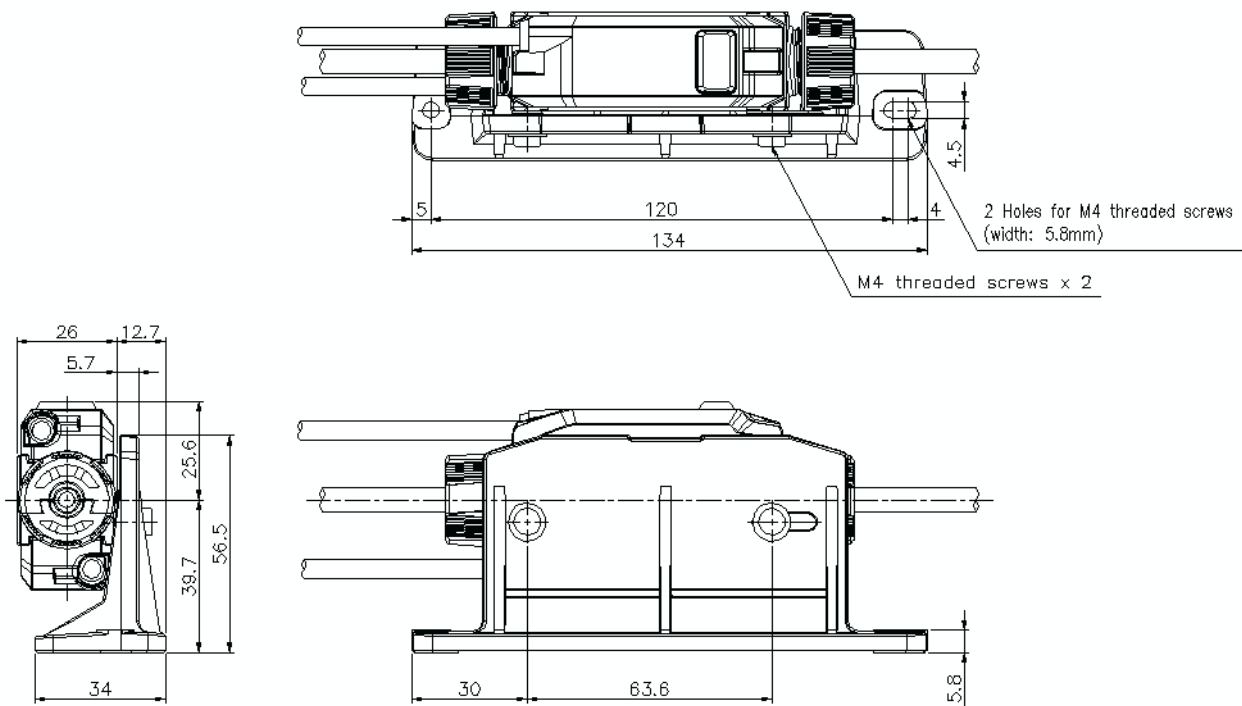
FD-XS8+FD-XC8M+OP-88297



FD-XS8+FD-XC8R1+OP-88294



FD-XS8+FD-XC8R2+OP-88294



FD-XS8+FD-XC8R3+OP-88294

