FD-Q10C

Sensor Main Unit 8A/10A Type

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

Specifications

Model		FD-Q10C
Supported pipe diameter		1/4" (8 A), ø13 to ø16 (mm) 3/8" (10 A), ø16 to ø18 (mm)
Supported pipe materials		Metal pipe/Resin pipe*1
Supported fluids		Various liquid [i.e. water (including DI), oils, chemicals, etc.]*1
Supported fluid temperature		0 to 85°C 32 to 185°F (No freezing on the pipe surface)*2
Maximum rated flow		1/4" (8 A): 20 L/min, 5.2 G/min 3/8" (10 A): 30 L/min, 7.9 G/min
Zero cut flow rate		1.0 L/min (Default)*3
Display method		Status indicator, output indicator, dual row display with 4-digit, 7 segment LED, stability level indicator
Display update cycle		Approx. 3 Hz
Display resolution		0.01/0.1/1 (Default : 0.1) (L/min)
Response time		0.5 s / 1.0 s / 2.5 s / 5 s / 10 s / 30 s / 60 s
Protection circuit		Power supply reverse connection protection, power supply surge protection, each output short-circuit protection, each output surge protection
Repeatability		0.5 s : ±2.0%, 1 s:±1.5%, 2.5 s : ±1.0%, 5 s : ±0.5%, 10 s : ±0.35%, 30 s : ±0.2%, 60 s : ±0.15% (/F.S.*4(Specific to selected response time))
Hysteresis		Variable
Integrated flow unit display		0.1/ 1/ 10/ 100/ 1000 (Default : 1) (L)
Integrated flow data storage cycle		Save to memory every 10 seconds
Memory backup		EEPROM (Data storage length: 10 years or longer, Data read/write frequency: 1 million times or more)
Power I/O connector		M12 4-pin connector
Input/Output (Selectable)	Output (ch.1/ch.2)	Control output/ Pulse output/ Error output (Selectable, Default : ch.1 control output/ ch.2 not used), NPN/PNP setting switchable,open collector output 30 V or less, max. 100 mA/ch., residual voltage 2.5 V or less*5
	Analog output (ch.1/ch.2)	4 to 20 mA / 0 to 20 mA (Selectable, Default: not used), load resistance 500 Ω or less*5
	External input (ch.2)	Integrated flow reset input/ Flow rate zero input/ Origin adjustment input (Selectable, Default: not used), short-circuit current 1.5 mA or less, input time 20 ms or more*5
Power supply	Power voltage	20 to 30 VDC , ripple (P-P) 10% max, Class2/LPS
	Current consumption	100 mA or less (Load current excluded)*6
Environmental resistance	Enclosure rating	IP65/IP67 (IEC60529)
	Ambient temperature	-10 to +60 °C 14 to 140 °F (No freezing)
	Relative humidity	35 to 85 % RH (No condensation)
	Vibration resistance	10 to 55 Hz, Double amplitude 1.5 mm 0.06", 2 hours in each of the X, Y, and Z directions

	Shock resistance	100 m/s², 16 ms pulse, 1,000 times in each of the X, Y, and Z directions
Material	Sensor main unit	PPS/PES/PBT/SUS303/SUS304/SUSXM7
	Sensor surface	Rubber
	Mounting bracket	SUS304/PA/SUSXM7
Weight		Approx. 340 g (including mounting bracket)

*1 Liquid must allow for the passage of an ultrasonic pulse, as well as not contain large air pockets or excessive bubbles. Detection may be unstable on certain non-standard pipes (i.e. lined pipes)
*2 Contact KEYENCE when the temperature of the pipe is greater than 85°C 185°F
*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) listed in the table according to the rated flow range.
*5 IO-Link: Compatible with Specification v1.1 / COM2 (38.4 kbps) The setting file can be downloaded from the KEYENCE website. If using the unit in the environment where downloading the file is not possible via internet, contact your nearest KEYENCE office. IO-Link is either registered trademarks or trademarks of PROFIBUS Nutzerorganisation e.V. (PNO)
*6 When including the loads, please add 200 mA to this value.

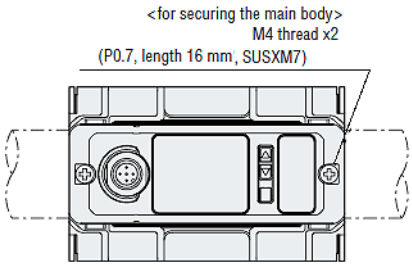
Dimensions

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

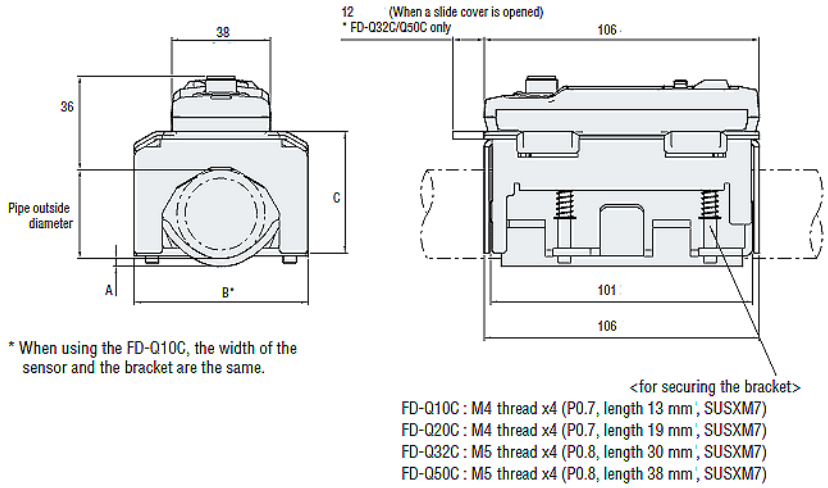
FD-Q10C_Q20C_Q32C_Q50C_dimension01.gif

Model	A	B	C
FD-Q10C	2*	38	25.3
FD-Q20C	max.2.5	48	30
FD-Q32C	max.4.2	67	46.7
FD-Q50C	max.3.6	88	56

* When installing the unit on a 1/4" pipe, the threaded portion of the screw will protrude by approximately 0.8 mm



FD-Q10C_Q20C_Q32C_Q50C_dimension02.gif



* When using the FD-Q10C, the width of the sensor and the bracket are the same.