



FI-T100

Temperature Sensors 65A/80A/90A/100A



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

Specifications

Model			FI-T100
Supported pipe diameter			2 1/2", 3", 3 1/2", 4" (65 A, 80 A, 90 A, 100 A) ø70–126 ø2.76"–4.96"
Supported pipe materials			Metal piping
Supported temperature range			–20 to +180°C –4 to +356°F*1
Display method			Organic EL, status indicator light
Display resolution			0.1°C 32.18°F
Response time			5 s (50% response), 15 s (90% response)*2
Display amplifier averaging time			0.1 s / 10.0 s / 20.0 s / 30.0 s / 60.0 s / 120.0 s / 300.0 s
Measurement accuracy			±0.5°C ±0.9°F (pipe temperature –20 to +80°C –4 to 176°F) (ambient temperature of 25°C 77°F)*2*3 ±1.0°C ±1.8°F (pipe temperature 80–180°C 176–356°F) (ambient temperature of 25°C 77°F)*2*3
Hysteresis			Variable
Measurement principle			Pt100 4-wire type
Power I/O connector			M8 4-pin connector
Power supply	Current consumption		20 mA or less (excluding load current)*4
When used standalone	I/O (switchable)	Output (Ch1/Ch2)	Control output: switching NPN/PNP setting Open collector output: 30 VDC or less, maximum 100 mA/ch or less, residual voltage 2.5 V or less*5
		Analog output (Ch2)	4–20 mA / 0–20 mA (switchable), load resistance 260 Ω or less*5
	Power voltage		20–30 VDC, ripple (P-P) 10% included; Class2/LPS*5
	Protection circuit		Protection against reverse power connection, power supply surges, output short circuits, and output surges*5
	Network compatibility		IO-Link*6*5
	Environmental resistance	Enclosure rating	
Ambient temperature		–10 to +60°C -14 to +140°F (no freezing)	
Relative humidity		35–85% RH (no condensation)	
Vibration resistance		10–500 Hz; power spectral density: 0.816 G ² /Hz; X, Y and Z directions	
Shock resistance		100 m/s ² (approx. 10 G), 16 ms pulses, 1000 times each for X, Y and Z directions	
Material	Display amplifier		PBT / PAR / POM / SUS303
	Sensor head		Head: PPS / SUS303 / Sn; Pipe clamp unit: SUS304; Cable: fluororesin
	Display amplifier mounting bracket		SUS304
Weight			Approx. 100 g 3.53 oz

*1 When pipe temperature is 100°C 212°F or more, the display amplifier cannot be mounted on the pipe clamp unit. Install the amplifier so it is insulated from the heat from the pipe.

*2 This is the guaranteed value from verification performed at KEYENCE inspection facilities. Measurement error may occur depending on the type and condition of the customer's pipes and fluid, the ambient temperature and other factors.

*3 This is the value for a constant 25°C 77°F environment, taking into account absolute error and repeatability.

*4 During standalone use, 220 mA or less including load.

*5 When connecting to a FD-H Series/FI-1000 model, please follow the specifications of the display unit.

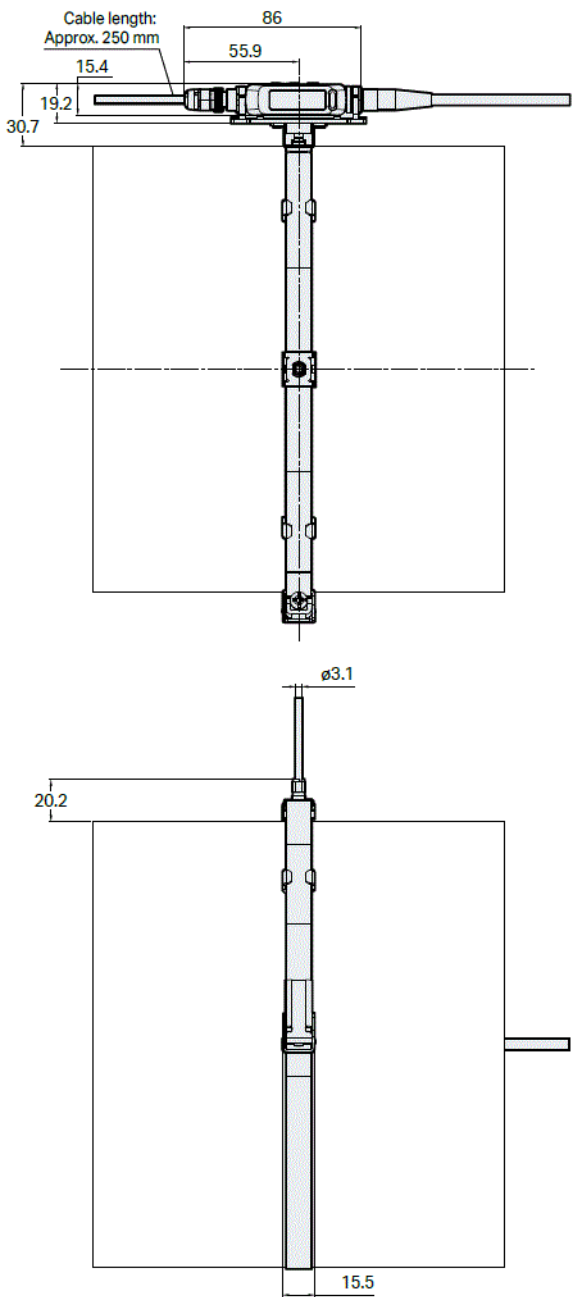
*6 Supports IO-Link specification v.1.1/COM2 (38.4 kbps). Setting files can be downloaded from the KEYENCE website (www.keyence.com).

IO-Link is a trademark or registered trademark of PROFIBUS Nutzerorganisation e.V. (PNO).

Dimensions

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

FI-T100/T200



Amplifier stabilisation bracket

