

FIR-101-M FIR-201-M



■ Features

- Safety in design, Economical.
- Multi-range input: Thermocouple, RTD, DC current, DC voltage (Selectable by DIP switch)
- Sampling period: 125ms
Accuracy: Within $\pm 0.2\%$ of full scale ± 1 digit.
- For the FIR-201-M, Alarm function is standard, and Transmission output and Communication function are optional.

■ Rated scale

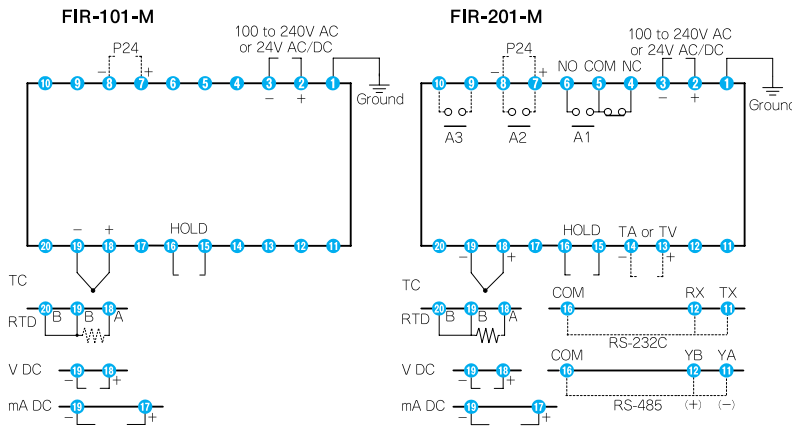
Input types	Scale range		Resolution	
Thermo-couple	K	-200 to 1370 °C	-320 to 2500 °F	1°C (°F)
	J	-200 to 1000 °C	-320 to 1800 °F	1°C (°F)
	R	0 to 1760 °C	0 to 3200 °F	1°C (°F)
	S	0 to 1760 °C	0 to 3200 °F	1°C (°F)
	B	0 to 1820 °C	0 to 3300 °F	1°C (°F)
	E	0 to 1000 °C	0 to 1800 °F	1°C (°F)
	T	-199.9 to 400.0°C	-199.9 to 750.0 °F	0.1°C (°F)
	C (W/Re5-26)	0 to 2315 °C	0 to 4200 °F	1°C (°F)
	N	0 to 1300 °C	0 to 2300 °F	1°C (°F)
	PL-II	0 to 1390 °C	0 to 2500 °F	1°C (°F)
	RTD	Pt100	-199.9 to 850.0°C	-199.9 to 999.9 °F
JPt100		-199.9 to 500.0°C	-199.9 to 900.0 °F	0.1°C (°F)
Current	4 to 20mA DC	FIR-101-M: 0.0 to 100.0		
Voltage	0 to 20mA DC	FIR-201-M: -1999 to 9999 *		
	0 to 1V DC	FIR-101: 0.1		
		FIR-201: 1		

* With the FIR-201-M, the decimal point place and the scale range are changeable.

Standard specifications

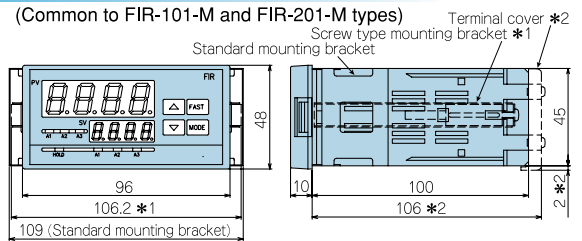
Input	Thermocouple : K, J, R, S, B, E, T, C(W/Re5-26), N, PL- II External resistance: 100 Ω or less RTD : Pt100, JPt100 3-wire system (Resistance per wire: 10 Ω or less) Current : 4 to 20mA DC, 0 to 20mA DC Input impedance: 50 Ω Voltage : 0 to 1V DC Input impedance: 1M Ω or more
Indicating accuracy	Within ±0.2% of full scale ±1digit however, when Thermocouple input, for K, J or T type, range less than 0°C (32°F), within ±0.4% of full scale ±1digit when R or S type, range 0 to 200°C (400°F), within ±4°C (8°F) when B type, range 0 to 300°C (600°F), Accuracy is not guaranteed. (Cold junction compensating accuracy ±1°C, at 25±25°C)
Alarm 1 (A1) (Applicable only to FIR-201)	Type Setting range Process high alarm : Input range minimum value to Input range Maximum value Process low alarm : Input range minimum value to Input range Maximum value Process high alarm w/standby : Input range minimum value to Input range Maximum value Process low alarm w/standby : Input range minimum value to Input range Maximum value Setting accuracy : Within ±0.2% of full scale ±1digit Action : ON/OFF action Hysteresis setting range Thermocouple or RTD input: 0.1 to 100.0°C (°F) DC input: 1 to 1000 (The placement of the decimal point place follows the selection.) Output : Relay contact, 1a1b Capacity, 3A 250V AC (resistive load), 1A 250V AC (inductive load, cos φ = 0.4)
Sampling period	0.125 seconds
Supply voltage	100 to 240V AC, 50/60Hz or 24V AC/DC, 50/60Hz
Allowable voltage fluctuation	100 to 240V AC : 85 to 264V AC 24V AC/DC : 20 to 28V AC/DC
Power consumption	Approximately 15VA
Ambient temperature	0 to 50°C
Ambient humidity	35 to 85%RH (non-condensing)
Weight	FIR-101-M : Approx. 300g FIR-201-M : Approx. 350g
Attached functions	Set value lock (FIR-201-M), Sensor correction (FIR-201-M), Multi-range, Multi-function, Power failure compensating function (FIR-201-M), Self-diagnostic function, Automatic cold junction temperature compensation, Sensor burnout, Warm-up display, Hold function and PV filter function.
Optional functions [Code]	FIR-101-M : Color black [BK], Screw type mounting bracket [BL], Drip-proof/Dust-proof [IP], Terminal cover [TC], PV display with green LED [GP] and Insulated power output [P24]. FIR-201-M : Alarm 2 output [A2], Alarm 3 output [A3], Transmission output (4 to 20mA or 0 to 1V) [TA or TV], Serial communication [C or C5], Color black [BK], Screw type mounting bracket [BL], Drip-proof/Dust-proof [IP], Terminal cover [TC] and Insulated power output [P24] *. * [A2] and [P24] cannot be applied together.

Terminal arrangement



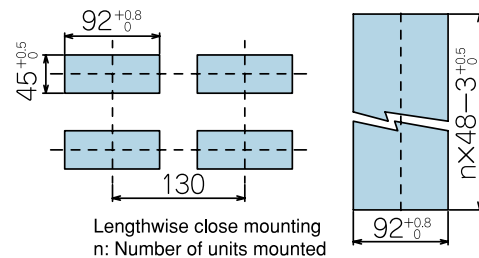
Dotted line shows optional terminals. Not equipped unless specified.

External dimensions (Unit: mm)



*1: When BL option is added
*2: When TC option is added
One-touch mounting bracket Mounting panel thickness: 1 to 3mm
Screw type mounting bracket Mounting panel thickness: 1 to 15mm

Panel cutout (Unit: mm)



· When ordering, specify a model FIR-101-M, [] or FIR-201-M, []. Enter the option codes in [].
· This catalog is as of December 2005. Specifications are subject to change without prior notice.