

DIGITAL INDICATOR



JIR-301-M



INDICATOR

Multi-input (total 18 types)

3-point alarm output

Dust-proof / Drip-proof, IP66

Serial communication (optional)

Shinko

Features

Multi-input

Total 18 types of input can be chosen from thermocouple (10 types), RTD (2 types), DC current (2 types) and DC voltage (4 types).

Alarm output (3 points) is provided as standard.

Alarm output (3 points) is available as standard. Alarm action type and status Energized/De-energized can be easily switched by key operation. (Default: No alarm action, Energized)

Standard transmission output.

The input value is converted in analog every 0.25 seconds, and is outputted in DC current. 4 to 20mA DC is standard output.

Modbus

Serial communication (option C5) protocol comprises Shinko protocol and Modbus protocol. For Modbus protocol, RTU mode and ASCII mode are selectable by key operation. Without the communication converter, Modbus compatible instruments can be connected.

Standard Dust-proof/Drip-proof function (for front part only)

IP66 structure means the indicator can be used even in harsh environment exposed to dust and water splashes.

Safety standards

UL/CSA , CE marking

Specifications

Model names

JIR-301-M	□, □, □, □	Series name: JIR-301-M
Input	M	Multi-input
Power supply	1	24V AC/DC
Option	TA	DC current output 0 to 20mA DC 0 to 1V DC
	TV	Specified transmission output DC voltage output 0 to 5V DC 1 to 5V DC 0 to 10V DC
	C5	Serial communication (Based on EIA RS-485)
	P24	Insulated power output
	BK	Color, black
TC	Terminal cover	

Please designate the specification from the □, □, □, □ columns. When adding an option, enter it punctuated by a comma.

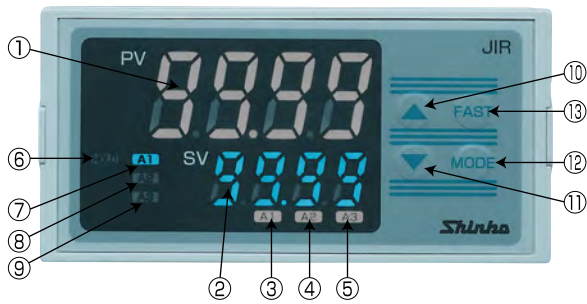
- When P24 option is added, Alarm 2 output is not available.
- When C5 option is added, Hold function is not available.
- For the supply voltage, 100 to 240V AC is standard. However, when ordering 24V AC/DC, enter "1" after the input.

Rated range

Input type	Input range	
Thermocouple	K -200 to 1370 °C -320 to 2500 °F	
	J -199.9 to 400.0°C -199.9 to 750.0°F	
	R -200 to 1000 °C -320 to 1800 °F	
	S 0 to 1760 °C 0 to 3200 °F	
	B 0 to 1760 °C 0 to 3200 °F	
	E 0 to 1820 °C 0 to 3300 °F	
	T -200 to 800 °C -320 to 1500 °F	
	N -199.9 to 400.0°C -199.9 to 750.0°F	
	PL - II -200 to 1300 °C -320 to 2300 °F	
	C (W/Re5-26) 0 to 1390 °C 0 to 2500 °F	
	0 to 2315 °C 0 to 4200 °F	
	RTD	Pt100 -200 to 850 °C -300 to 1500 °F
		JPt100 -199.9 to 850.0°C -199.9 to 999.9°F
DC current	4 to 20mA DC -199.9 to 999.9	
	0 to 20mA DC -199.9 to 999.9	
DC voltage	0 to 1V DC -19.99 to 99.99, -1.999 to 9.999	
	0 to 10V DC 1 to 5V DC 0 to 5V DC	

- For DC current and voltage input, scaling is possible and decimal point place can be changed.
- For DC current input, 50Ω shunt resistor (sold separately) must be externally installed.

Name and functions of the sections

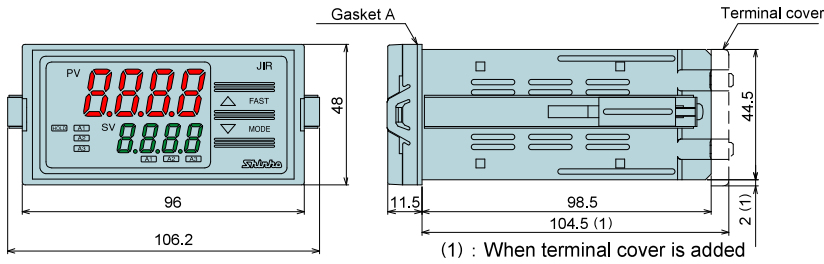


- ① PV display : Input value is indicated with a red LED.
- ② SV display : A1, A2 or A3 setting value is indicated with a green LED.
- ③ A1 indicator : When A1 output is ON, red indicator lights up.
- ④ A2 indicator : When A2 output is ON, red indicator lights up.
- ⑤ A3 indicator : When A3 output is ON, red indicator lights up.
- ⑥ HOLD indicator : When PV Hold (Hold, Peak hold, Bottom hold) output is ON, yellow indicator lights up.
- ⑦ A1 setting indicator : When A1 setting is indicated, green indicator lights up.
- ⑧ A2 setting indicator : When A2 setting is indicated, green indicator lights up.
- ⑨ A3 setting indicator : When A3 setting is indicated, green indicator lights up.
- ⑩ Increase key : Increases the numeric setting value.
- ⑪ Decrease key : Decreases the numeric setting value.
- ⑫ Mode key : Switches the setting mode and registers the setting value. (To register the setting value or selected value, press the Mode key)
- ⑬ Fast key : By pressing the Fast key while holding down the Increase key or Decrease key, the setting value changes faster.

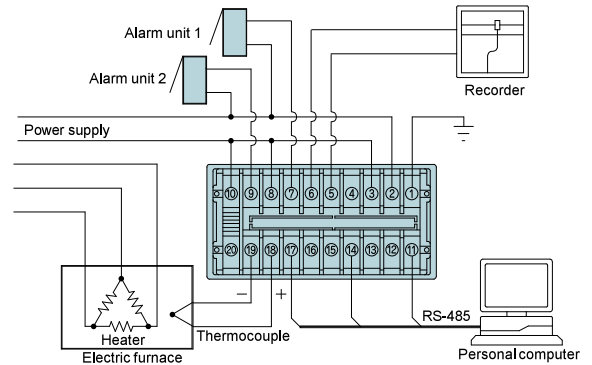
Standard specifications

Display	PV: Red LED 4-digit, character size, 16 x 7.2mm (H x W) SV: Green LED 4-digit, character size, 10 x 4.8mm (H x W)
Input	Thermocouple : K, J, R, S, B, E, T, N, PL- II, C (W/Re5-26) External resistance: 100Ω or less (for B input, 40Ω or less)
	RTD : Pt100, JPt100 3-wire system (Allowable input lead wire resistance: 10Ω or less per wire)
Accuracy (Setting/indication)	DC current : 0 to 20mA DC, 4 to 20mA DC Input impedance: 50Ω (Install 50Ω shunt resistor between input terminals) Allowable input current: 50mA or less (when 50Ω shunt resistor is used)
	DC voltage : 0 to 1V DC Input impedance: 1MΩ or greater Allowable input voltage: 5V or less 0 to 5V DC, 1 to 5V DC, 0 to 10V DC Input impedance: 100kΩ or greater Allowable input voltage: 15V or less Allowable signal source resistance: 2kΩ or less
Input sampling period	0.25 seconds

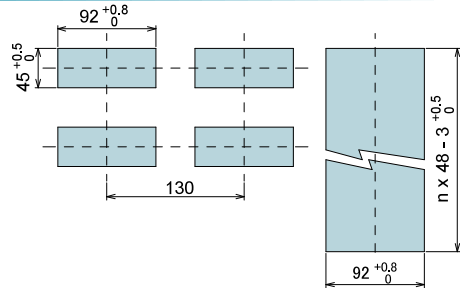
External dimensions



Wiring example



Panel cutout



Lengthwise close mounting
n: Number of units mounted

⚠ Caution: For the lengthwise close mounting,
Dust-proof/Drip-proof IP66 specification is not fulfilled.

Peripheral instrument 6-point switch FS-106-E

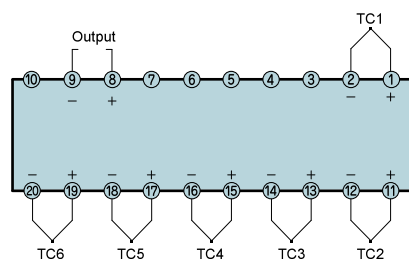
Standard specification

Input	Thermocouple: K, J, R, S, B, E, T, C (W/Re5-26), N, PL-II
Action system	Locks only pressed switches
Input switching	6-point push button switch (Push button head: Black)
Switch	Model name: Push switch Rating: 0.3A 45V DC (resistive load) Contact resistance: 20mΩ or less Between contacts capacity: 3pF or less Switching timing: Non-shorting Contact life: 10,000 times (rated load) or greater Working force: 450±200g
Environment	Ambient temperature: 0 to 50°C Ambient temperature: 35 to 85%RH (Non-condensing)
Material, color	Material: Flame resistant resin, Color: Light gray
Mounting	Flush, Mounting bracket: One-touch type (Panel thickness: 1 to 3mm)
Weight	Approx. 250g

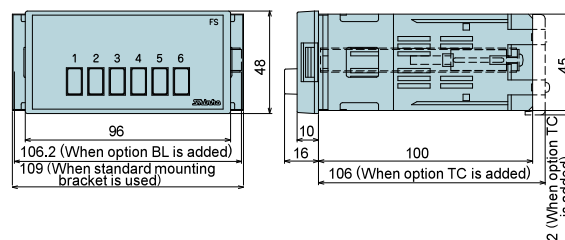
Option

Terminal cover[TC]	Electrical shock protection terminal cover (Be sure to use this terminal cover by adding this option if operator may touch the back of the controller while running the controller.)
Color, black [BK]	The standard color of the case and base is light gray, however, by adding this option, the color of the case and base is black.
Screw type mounting bracket [BL]	One-touch type mounting bracket is standard, however, if this option is added, screw type mounting bracket will be provided. Panel thickness: 1 to 15mm

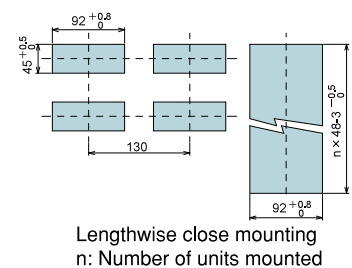
Terminal arrangement



External dimensions



Panel cutout



Lengthwise close mounting
n: Number of units mounted



- To ensure safe and correct use, thoroughly read and understand the manual before using this instrument.
- This instrument is intended to be used for industrial machinery, machine tools and measuring equipment. Verify correct usage after consulting purpose of use with our agency or main office.
(Never use this instrument for medical purposes with which human lives are involved.)
- External protection devices such as protection equipment against excessive temperature rise, etc. must be installed, as malfunction of this product could result in serious damage to the system or injury to personnel. Also proper periodic maintenance is required.
- This instrument must be used under the conditions and environment described in the manual. Shinko Technos Co., Ltd. does not accept liability for any injury, loss of life or damage occurring due to the instrument being used under conditions not otherwise stated in this manual.

Caution with respect to Export Trade Control Ordinance

To avoid this instrument from being used as a component in, or as being utilized in the manufacture of weapons of mass destruction (i.e. military applications, military equipment, etc.), please investigate the end users and the final use of this instrument.
In the case of resale, ensure that this instrument is not illegally exported.



This catalog is as of January 2005, and specifications are subject to change without notice. If you have any inquiries, please consult us or our agency.

SHINKO TECHNOS CO., LTD. OVERSEAS DIVISION

Reg. Office : 1-2-48, Ina, Minoo, Osaka, 562-0015, Japan
Mail Address: P. O. Box 17, Minoo, Osaka, Japan
Tel : 81 - 72 - 721 - 2781
Fax : 81 - 72 - 724 - 1760
URL : <http://www.shinko-technos.co.jp>
E-mail : overseas@shinko-technos.co.jp