Digital indicating controllers

JCM-33A

■Model name

JCM−33A - □/□, □ □□□				JCM-330(W72×H72×D100mm)
Alarm1 (A1)	A			Applied(Selectable by key operation)
Control output (OUT1)	R			Relay contact
	S			Non-contact voltage(for SSR drive)
	A			DC current
Input		M		Multi-range input
Supply voltage			1	24V AC/DC
Option			A2	Alarm 2
			LA	Loop break alarm
			W(5A)	Heater burnout alarm — Rated current: 5A
			W(10A)	Heater burnout alarm — Rated current: 10A
			W(20A)	Heater burnout alarm — Rated current: 20A
			W(50A)	Heater burnout alarm — Rated current: 50A
			D□	Control output (OUT2) (Heating/Cooling control output) — DR: Relay contact
				DS: Non-contact voltage
				DA: DC current
			P24	Isolated power output
			C5	Serial communication(RS-485)
			BK	Color, Black
			TC	Terminal cover
			IP	Dust-proof/Drip-proof (IP54)

Please designate the specification from the□, □□□columns.
When adding an option, enter it punctuated by comma.
- For DC current output type, option W cannot be added.
- If option C5 is added, SV1/SV2 external selection is not available.
- 100 to 240V AC is standard supply voltage. However when ordering 24V AC/DC, enter "1" after the input code.

■Option combination

	A2	LA	W	D□	P24	C5	BK	TC	IP
Combination 1	○	○	○	—	—	○	○	○	○
Combination 2	○	○	—	○	—	○	○	○	○
Combination 3	—	—	○	○	—	○	○	○	○
Combination 4	○	○	—	—	○	○	○	○	○
Combination 5	○	○	○	—	—	—	○	○	○
Combination 6	○	○	—	○	—	—	○	○	○
Combination 7	—	—	○	○	—	—	○	○	○
Combination 8	○	○	—	—	○	—	○	○	○

■Rated scale

Input type		Scale	
Thermocouple	K	−200 to 1370 ℃	−320 to 2500 ℉
		−199.9 to 400.0℃	−199.9 to 750.0℉
	J	−200 to 1000 ℃	−320 to 1800 ℉
	R	0 to 1760 ℃	0 to 3200 ℉
	S	0 to 1760 ℃	0 to 3200 ℉
	B	0 to 1820 ℃	0 to 3300 ℉
	E	−200 to 800 ℃	−320 to 1500 ℉
	T	−199.9 to 400.0℃	−199.9 to 750.0℉
	N	−-200 to 1300 ℃	−320 to 2300 ℉
	PL-Ⅱ	0 to 1390 ℃	0 to 2500 ℉
	C(W/Re5-26)	0 to 2315 ℃	0 to 4200 ℉
RTD	Pt100	−200 to 850 ℃	−300 to 1500 ℉
		−199.9 to 850.0℃	−199.9 to 999.9℉
	JPt100	−200 to 500 ℃	−300 to 900 ℉
		−199.9 to 500.0℃	−199.9 to 900.0℉
DC current	4 to 20mA DC	−1999 to 9999, −199.9 to 999.9 −19.99 to 99.99, −1.999 to 9.999	
	0 to 20mA DC		
DC voltage	0 to 1V DC		
	0 to 10V DC		
	1 to 5V DC		
	0 to 5V DC		

- For DC inputs, scaling and decimal point place change are possible.
- For DC current input, 50Ω shunt resistor (sold separately) has to be externally installed.

■Input For the input type, refer to the "Rated scale".
Thermocouple: External resistance, 100Ω or less
(However, for B input, external resistance, 40Ω or less)
RTD : 3-wire system (Resistance per wire: 10Ω or less)
DC current : Input impedance, 50Ω (Connect 50Ω shunt resistor between input terminals)
Allowable input current, 50mA or less (when using 50Ω shunt resistor)
DC voltage : Input impedance, 1MΩ or greater (for input 0 to 1V DC)
Input impedance, 100kΩ or greater (for inputs 0 to 10V DC, 1 to 5V DC, 0 to 5V DC)

■Accuracy (Setting, Indication)
Thermocouple: Within ±0.2% of each input span ±1digit, or within ±2℃(4℉), whichever is greater
However , R, S inputs, 0 to 200℃(400℉): Within ±6℃(12℉)
B input, 0 to 300℃(600℉): Accuracy is not guaranteed.
K, J, E, T, N inputs, less than 0℃ (32℉): Within 0.4% of each input span ±1digit
RTD : Within ±0.1% of each input span±1digit, or within ±1℃ (2℉), whichever is greater
DC current, DC voltage: Within ±0.2% of each input span±1digit

■Input sampling period 0.25 seconds

■Control output Relay contact: 1a1b 3A 250V AC (resistive load),
1A 250V AC (inductive load cos ϕ =0.4)
Electric life: 100,000 times
Non-contact voltage: 12$^{+3}_{-2}$V DC Max. 40mA (short-circuit protected)
DC current: 4 to 20mA DC Load resistance: Max. 550Ω

■Control action PID, PI, PD, P, ON/OFF

■Alarm 1 (A1) Alarm action and Energized/Deenergized can be selected by keypad operation.
- No alarm action
- High limit alarm (deviation setting), Low limit alarm (deviation setting), High limit alarm with standby (deviation setting), Low limit alarm with standby (deviation setting)
  Setting range: −(Input span) to input span
- High/Low limits alarm (deviation setting), High/Low limit range alarm (deviation setting), High/Low limits alarm with standby (deviation setting)
  Setting range: 0 to input span
- Process high alarm, Process low alarm
  Setting range: Input range low limit value to input range high limit value
- When input has a decimal point, the negative minimum value is −199.9 and the positive maximum value is 999.9.
- For DC current or voltage inputs, input span is the same as the input range scaling span.
- For DC inputs, input range low limit (high limit) value is the same as input range scaling low limit (high limit) value.

Action: ON/OFF action
Output: Relay contact 1a, 3A 250V AC (resistive load),
1A 250V AC(inductive load cos ϕ =0.4)
Electric life: 100,000 times

■Supply voltage 100 to 240V AC 50/60Hz, 24V AC/DC 50/60Hz
Allowable voltage fluctuation range: 85 to 264V AC, 20 to 28V AC/DC

■Power consumption Approx. 8VA

■Ambient temperature 0 to 50℃

■Ambient humidity 35 to 85%RH (Non-condensing)

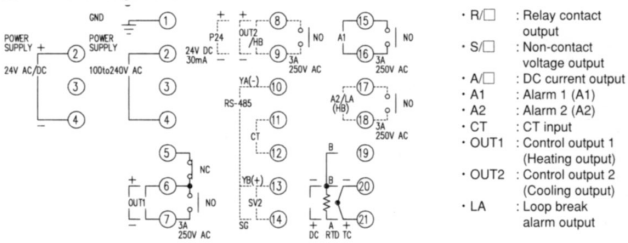
■Mounting method Screw type mounting bracket
Mountable panel thickness: Within 1 to 15mm

■Weight Approx. 300g

■Attached function Sensor correction, Setting value lock, Power failure countermeasure, Self-diagnosis, Automatic cold junction temperature compensation (for thermocouple only), Sensor burnout alarm, Input burnout

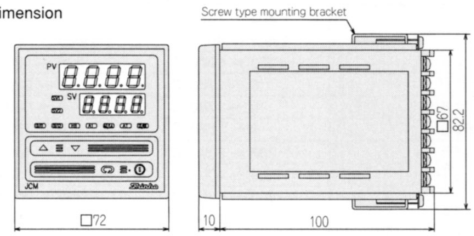
■Option Refer to the "Model name".

■Terminal arrangement

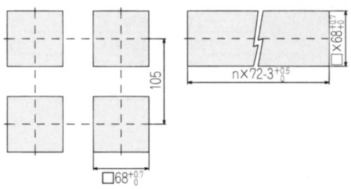


- HB: Heater burnout alarm output
- RS-485: Serial communication (C5)
- P24: Isolated power output
[Dotted lines show options.]

■External dimension



■Panel cutout



- This catalog is as of June 2016, 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

Head office: 2-5-1, Senbahigashi, Minoo, Osaka, 562-0035, Japan
Tel : 81-72-727-6100
Fax : 81-72-727-7006
URL : http://www.shinko-technos.co.jp
E-mail : overseas@shinko-technos.co.jp