

GCM-230



72mm Square, High Performance



Model name

GCM-23		<input type="checkbox"/> - <input type="checkbox"/>	<input type="checkbox"/>	(Control action PID, PD or ON/OFF is selectable by key operation.)
Alarm (A1)	0			No Alarm
	A			Alarm action type is key selectable.
Control output (C1)	R			Relay contact: 1a1b
	S			Non-contact voltage (for SSR drive)
	A			Current: 4 to 20mA _{dc}
Input	E			Thermocouple: K, J or E
	R			RTD: Pt100, JPt100
Options	A2			Alarm (A2) (Alarm action type is key selectable.)
	W (20A)			Heater burnout alarm
	W (50A)			
	DR			Relay contact: 1a
	DS			Non-contact voltage (for SSR drive)
	DA			Current: 4 to 20mA _{dc}
	MR			Multi-range
	BK			Color black
IP			Dust-proof · Drip-proof	
TC			Terminal cover	

Rated scale

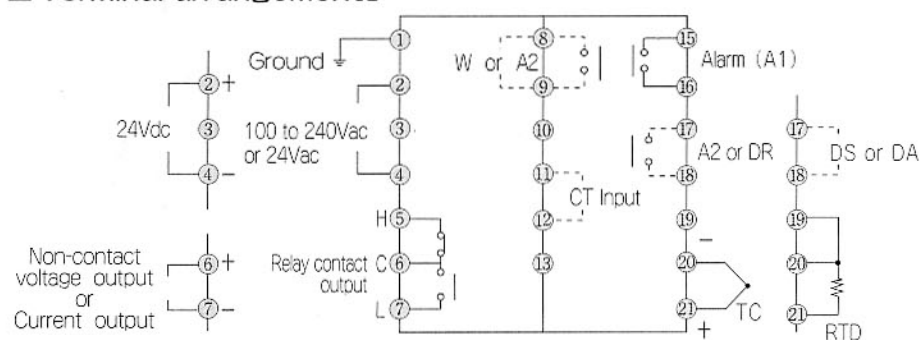
Input type		Scale range		Resolution
Thermocouple	K	0~400°C		1°C (°F)
		0~999°C	0~999°F	
	J	0~400°C		
		0~999°C	0~999°F	
E	0~600°C	0~999°F		
RTD	Pt100	-19.9~99.9°C		0.1°C
		-199~400°C	-199~999°F	1°C (°F)
	JPt100	-19.9~99.9°C		0.1°C
		-199~400°C	-199~999°F	1°C (°F)

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Standard specifications

Input	Thermocouple: K, J or E External resistance, 100Ω or less RTD : Pt100, JPt100 3-wire system (resistance per wire 10Ω or less)		
Accuracy	Within ±0.3% of full scale ±1digit		
Control action	PID action (With auto-tuning function) Proportional band (P) : 0 to 999°C(°F) Integral time (I) : 0 to 999s Derivative time (D) : 0 to 300s Proportional cycle : 1 to 120s	PD action (With auto-reset function) Proportional band (P) : 0 to 999°C(°F) Derivative time (D) : 0 to 300s Proportional cycle : 1 to 120s	ON/OFF action Hysteresis: 0.1 to 99.9°C(°F)
*In case the input is RTD and the scale has a decimal point, the proportional band is 0.1 to 99.9°C.			
Control action (C1)	Relay contact : 1a1b Control capacity, 250Vac 3A (resistive), 250Vac 1A (inductive, cos φ = 0.4) Non-contact voltage: (for SSR drive) 12Vdc, Load current 40mA maximum (Short circuit protected) Current : 4 to 20mA, Load resistance 550Ω maximum		
Alarm (A1)	(Alarm action type is key selectable.) Type : Setting range No alarm action High limit alarm : -199 to Input range maximum °C(°F) [-19.9 to 99.9°C] Low limit alarm : -199 to Input range maximum °C(°F) [-19.9 to 99.9°C] High/Low limits alarm : ±(0 to Input range maximum) °C(°F) [±(0.0 to 99.9)°C] High/Low limit range alarm : ±(0 to Input range maximum) °C(°F) [±(0.0 to 99.9)°C] Process high alarm : Input range minimum value to Input range maximum value High limit alarm with standby : -199 to Input range maximum °C(°F) [-19.9 to 99.9°C] Low limit alarm with standby : -199 to Input range maximum °C(°F) [-19.9 to 99.9°C] High/Low limits alarm w/standby : ±(0 to Input range maximum) °C(°F) [±(0.0 to 99.9)°C] When the range has a decimal point, the setting range is shown in []. Setting accuracy : Within ±0.3% of full scale ±1digit Action : ON/OFF action, Hysteresis 1°C(°F) (If the scale has a decimal point, 0.1°C) Output : Relay contact 1a Control capacity, 250Vac 3A (resistive), 250Vac 1A (inductive, cos φ = 0.4)		
Input sampling period	0.25 seconds [When the option W(20A) or W(50A) is applied, it is 0.5 seconds.]		
Supply voltage	100 to 240Vac, 50/60Hz or 24Vac/dc, 50/60Hz	Instantaneous power failure	30ms or Less
Allowable voltage fluctuation	In case of 100 to 240Vac, 85 to 264Vac In case of 24Vac/dc, 20 to 28Vac/dc	Insulation resistance	10MΩ or greater at 500Vdc
Power consumption	Approximately 8VA	Dielectric strength	1.5kVac for 1 minute Between Input terminal and Ground terminal 1.5kVac for 1 minute Between Input terminal and Power terminal 1.5kVac for 1 minute Between Power terminal and Ground terminal 1.5kVac for 1 minute Between Output terminal and Ground terminal 1.5kVac for 1 minute Between Output terminal and Power terminal
Environment	Ambient temperature: 0 to 50°C Ambient humidity: 35 to 85%RH (non-condensing)		Case (Color)
External dimension	72×72×110mm (W×H×D)	Panel (Color)	Membrane sheet (Light gray)
Weight	Approx. 250g		
Mounting method	Flush		
Attached functions	Sensor correction, Setting value lock, Power failure compensation, Self-diagnosis, Automatic cold junction temperature compensation and Sensor burnout alarm.		
Optional functions [Code]	Alarm (A2) [A2], Heater burnout alarm [W(20A), W(50A)], Multi-range [MR], Dust-proof · Drip-proof (IP), Heating/Cooling control [Control action (C2)] [DR, DS, DA], Terminal cover [TC], Color Black [BK]		

Terminal arrangements

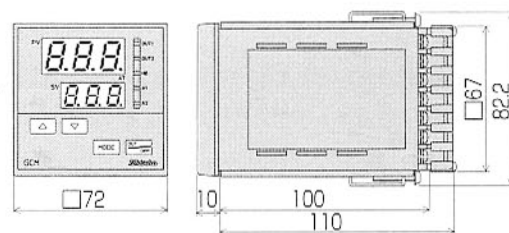


- A 2 : Alarm (A2)
D R : Heating/Cooling control (Relay contact output)
D S : Heating/Cooling control (Non-contact voltage output)
D A : Heating/Cooling control (Current output)
W : Heater burnout alarm (Including Sensor burnout)

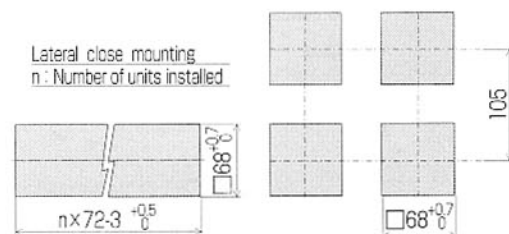
- △ Notices · Dotted line shows the option, no terminal is equipped if it is not specified.
· When applied the option only [A2], use the terminals ⑭-⑯.
· When applied the options [A2] and [W], use the terminals ⑰-⑱ for [A2], and ⑧-⑨ for [W].
· When applied the options [D□] and [A2], use the terminals ⑰-⑱ for [D□], and ⑧-⑨ for [A2].

External dimension drawing

(When the option terminal cover "TC" is applied.)
Mounting panel thickness is 1 to 15mm.



Panel cutout drawing



· Contents of this catalog is as of July 1998, specifications subject to change without notice.

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