General Specifications

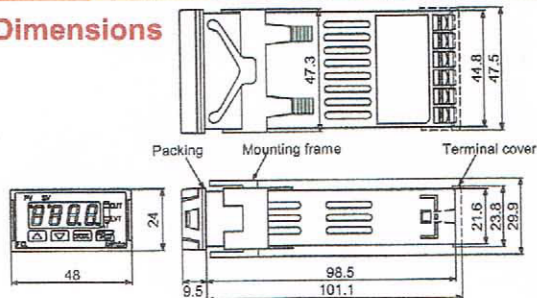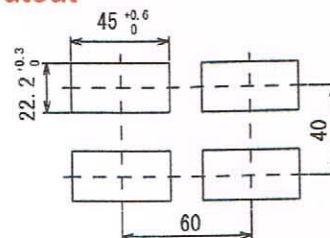|	
Control Output (OUT 1)	Relay contact ------------ (JCS-33A) 3A 250C AC (Resistive load) 1A 250V AC (Inductive load cos ∅=0.4), Electric life: 100,000 Times Non contact voltage ------ 12-14V DC Maximum 40mA (Short circuit protected) DC Current ---------------- 4 to 20mA DC load resistance: maximum 550Ω
Control Action	Actions mentioned below can be selected by key operation. (Factory default set as PID) PID (with auto-tuning function), PI, PD (with manual Reset function), P (with manual reset function), ON/OFF OUT Proportional band (P) ---- 0.0 to 110% (ON/OFF action when set to 0) Integral time (I) ------------------- 0 to 1000 seconds (OFF when set to 0) Derivative time (D) ------------ 0 to 300 seconds (OFF when set to 0) OUT Proportional cycle -------- 1 to 120 seconds (Not available for DC current output type.) ARW ------------------------------ 0 to 100% Hysteresis ----------------------- Thermocouple, RTD: 0.1 to 100.0°c (°F) DC current, DC voltage: 1 to 1000 (The placement of the decimal point follows selection)
Event Output 1 (EV1) **Event Output 2 (EV2)**	Alarm action, Timer functin and Pattern end function can be selected by keypad. For the inputs with a decimal point, the negative minimum value is -199.9 and the positive maximum value is 999.9. Setting accuracy --- The same as the indicating accuracy. Action ---------------- ON/OFF action. Hysteresis ---------- Thermocouple, RTD: 0.1 to 100°C (°F) DC current, DC voltage: 1 to 1000 (The palcement of the decimal point place follows the selection) EV1 -------- Relay contact 1a, Control capacity: 3A 250V AC (Resistive load), 1A 250V AC (Inductive load cos ∅=0.4), Electric life: 100,000 times EV2 -------- Open collector. Control capacity: 0.1A 24V DC (Max.) Alarm action delayed timer function --- Alarm action is delayed by this funtion. If input entrers alarm output range and the set time has passed, the output is turned on.

DI (Digital Input)	DI input has 3 functions as shown below. Each function can be selected by keypad.
	• Timer function: If input signal enters from outside, timer measurement starts, and ON delay timer, OFF delay timer or ON/OFF delay timer action output is turned on after dealy timer setting time has passed.
	• SV1/SV2 external selection function: SV1 (Main setting 1), and SV2 (Main setting 2) can be selected by external contact signal. (If the JCL-33 is used as a programmable controller, this function is not available.)
	• OUT/OFF (RUN/STOP) external selection function:
	    Control output OUT/OFF (Fixed value control) or Program control RUN/STOP can be switched
	    [Fixed value control]
	    (If the JCL-33 is used as a programmable controller, this function is not available.)
	    [Program control]
	    Program control RUN/STOP can be switched by external contact pulse input (ON time, approx. 30ms).

Simplified Programmable Controller Function	JCL-33A can perform 1 pattern and 9 steps of simplified program control. Progressing time error ---- Within ±1 minute Pattern end output -------- Pattern end output can be selected by front keypad.
Converter function	JCL-33A has a converter function,which can be easily used by changing with keypad. (However,this is available only for the DC current output type.)
Mounting Method	Provided with one piece mounting bracket.
Setting Method	Sheet key input
Material • Color	Material: Flame resistant resin. Color: Black
Environment	Ambient temperature: -10 to 50°C. Ambient humidity: 35 to 85%RH (No conensation)
Supply Voltage	100 to 240V AC 50/60Hz, 24V AC/DC 50/60Hz Allowable voltage fluctuation: 85 to 264V AC, 20 to 28 AC/DC Power consumption approximately 6VA

External Dimensions

Packing   Mounting frame   Terminal cover

Panel Cutout

Options

Heating/Cooling (DR)	If this option is added, Event output 1 cannot be used. Heating control action: The same as the control output (OUT). Cooling control action 　Proportional band (P) ---- 0.0 to 10.0 times the control output (OUT) (ON/OFF action when set to 0.0) 　Integral time (I) ----------- The same as that of the control output (OUT). 　Deriviative time (D) ----- The same as that of the control output (OUT). 　Proportional cycle ------ 1 to 120 seconds (Not available for DC current output type). 　Overlap/Dead band ---- Thermocouple, RTD: -100.0 to 100.0°C (°F,), DC current, DC voltage: -1000 to 1000 　　　　　　　　　　　　　(The placement of the decimal point follows the selection). 　Hysteresis -------------- Thermocouple, RTD: 0.1 to 100.0°C (°F), DC current, DC voltage: -1000 to 1000 　　　　　　　　　　　　　(The placement of the decimal point follows the selection). 　Control output (EV1) ----- Relay contact 1a, control capacity: 3A 250V AC (resistive load), 1 A 250V AC (inductive load cos ∅=0.4), Electric life: 100,000 times
Serial Communication (C5)	Performs operations such as various setting status changes, setting value reading and setting, etc., from the external computer. Shinko programmable controller which has the SVTC option can digitally transmit its SV to JCL-33A units which have the C5 option. Communication interface: Based on EIA RS-485 Communication speed: 2400/4800/9600/19200bps (can be selected by keypad) Communication protocol: Shinko/Modbus RTU/Modbus ASCII (can be selected by keypad) Number of connectable units: Maximum 31 units per host computer.

Model Number Configuration

JCL-33A- ___ /M ___ ___

FRONT PANEL SIZE	CODE
1/32 DIN (48mm x 24mm)	L

ALARM FUNCTION (EVENT)	CODE
Standard	A

CONTROL OUTPUT	CODE
Relay Contact	R
SSR Driver	S
4-20mA*	A

*Not available with heater break alarm.

SUPPLY VOLTAGE	CODE
24V AC/DC	1
100 - 240V AC	-

HEATING/COOLING CONTROLING OUTPUT	CODE
Relay Output	DR

OPTIONS*	CODE
RS-485	C5

All units feature a full 3 year warranty and lifetime technical support!

Shinko is an
ISO 9001
facility

High Performance Temperature & Recording Instrumentation
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