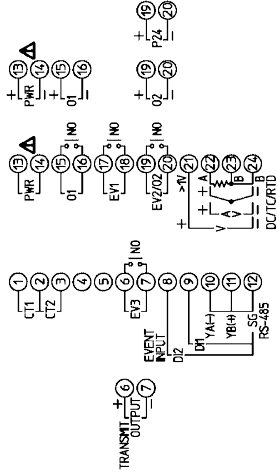
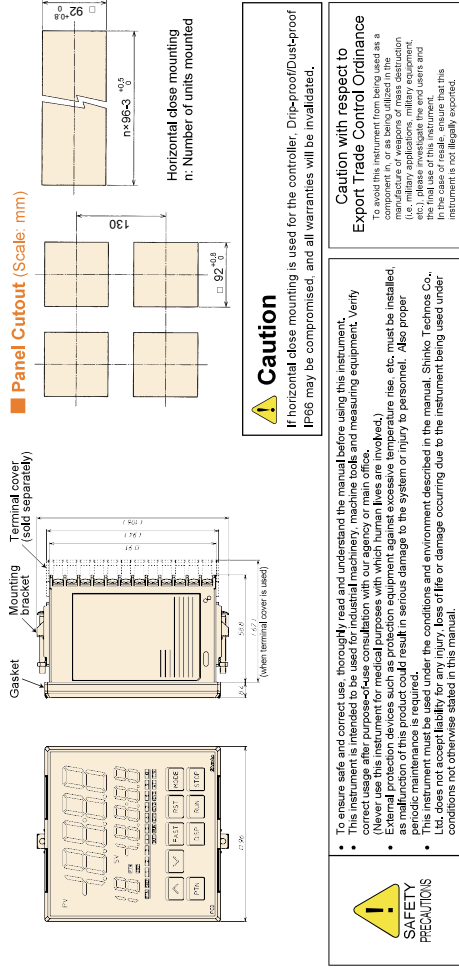


User Focused Functionality



PWR	Power supply voltage 100 to 240 V AC or 24 V VAC/DC (For 24 V DC, ensure polarity is correct.)
O1	Control output OUT1
EV1	Event output EV1
EV2	Event output EV2 (EV2, EV3/DR options)
O2	Control output OUT2 (EV2, DS, DA, EV3D options)
P24	Insulated power output 24 V DC (P24 option)
TC	Thermocouple input
RTD	RTD input
DC	Direct current, DC voltage inputs
CT1	CT input 1 (C5W, EIW, W options)
CT2	CT input 2 (C5W, EIW, W options)
RS-485	Serial communication RS-485 (C5W, C5 options)
EVENT INPUT	Event input DI1 (C5W, EIW, EIT, C5, EI options) Event input DI2 (C5W, EIW, EIT, C5, EI options)
EV3	Event output EV3 (EV3D, EI options)
TRANSMIT OUTPUT	Transmission output (EIT option)

External Dimensions (Scale: mm)



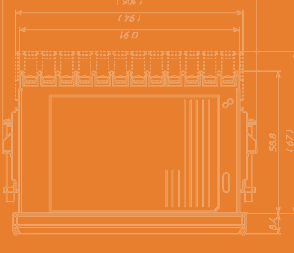
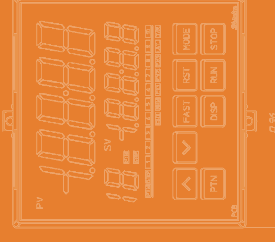
This catalog is as of August 2021 and its contents are subject to change without notice.
• If you have any inquiries, please consult us or our agency.

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Max. 10-patterns, 10-steps each, programmable
Power supply and quick setup using
the Tool Cable and USB cable



Easier viewing large display

Drip-proof / Dust-proof IP66 (for front panel only)

Model

(e.g.) PCB1 R 0 0 - 1 0



PCB1	Control Output	Power Supply	Input (*1)	Option 1 (*2)	Option 2 (*2)	Specification
PCB1						Relay contact: 1a
	R					Non-contact voltage (for SSR drive): 12 V DC± 15%
	S					Direct current: 4 to 20 mA DC
	A					100 to 240 V AC (Standard)
		0				24 V AC/DC
		1				Multi-range (*1)
			0	—		Option 1 not needed
				0		Event output EV2 or Heating/Cooling control output OUT2 Relay contact output
				1		EV2(DR) (*3)
				2		Heating/Cooling control output OUT2
						DS
				3		Non-contact voltage output
						DA
				4		Heating/Cooling control output OUT2
						P24
				5		Event output EV3, and [Event output EV2 or Heating/Cooling control output OUT2 Relay contact output]
						EV3(DR) (*3), (*4)
				6		Event output EV3, and Heating/Cooling control output OUT2 Non-contact voltage output
						EV3DS (*4)
				7		Event output EV3, and Heating/Cooling control output OUT2 Direct current output
						EV3DA (*4)
				0		Option 2 not needed
				1		Serial communication + Heater burnout alarm output + Event input (*6)
						C5W(20A) (*5)
				2		Serial communication + Heater burnout alarm output + Event input (*6)
						C5W(100A) (*5)
				3		Event input + Heater burnout alarm output
						EIW(20A) (*5)
				4		Event input + Heater burnout alarm output
						EIW(100A) (*5)
				5		Event input + Transmission output (4 to 20 mA DC)
						EIT (*4)
				6		Serial communication RS-485 + Event input (*6)
						C5
				7		Heater burnout alarm output
						W(20A) (*5)
				8		Heater burnout alarm output
						W(100A) (*5)
				9		Event input + Event output EV3
						EI

(*1) Thermocouple, RTD, Direct current or DC voltage can be selected by keypad.
(*2) Only one option can be selected from Option 1 and Option 2 respectively.
(*3) If 'Heating/Cooling control Relay contact output' is selected in [Event output EV2 allocation], this works as the DR option.
(*4) The EV3DS= option and EIT option cannot be used together.
(*5) If control output OUT1 is relay contact output or non-contact voltage output, the C5W, EIW or W option cannot be used.
(*6) 'SV digital transmission' or 'SV digital reception' can be selected in [Communication protocol].

Accessories Sold Separately

Model
Terminal cover (TC-BCD2)
CT for 20A (CTL-6S-H) (*)
CT for 100A (CTL-12-S36-10L1U) (*)
Tool cable (CMD-001)
USB cable (CUS-100)

To our valued customers who are currently using our PCD-33A with external operation function: If you want to replace with the PCB1, please order the model PCB1□□ 0-19. For details, please contact our main office or dealers.

(*) Used for Heater burnout alarm (C5W, EIW, W options)

Specifications

Input	Thermocouple: K, J, R, S, B, E, T, N, PL-II, C (W/Re5-26) External resistance: 100 Ω max.(However, B: 40 Ω max.)
	RTD: Pt100, JPt100, 3-wire type, Allowable input lead wire resistance: 10 Ω max. per wire
	Direct current: 0 to 20 mA, 4 to 20 mA DC
	Input impedance: 50 Ω, Allowable input current: 50 mA max.
DC voltage:	0 to 1 V DC
	Input impedance: 1 MΩ min. Allowable input voltage: 5 V DC max.
	Allowable signal source resistance: 2 kΩ max.
	0 to 5 V DC, 1 to 5 V DC, 0 to 10 V DC
Input impedance:	100 kΩ min. Allowable input voltage: 15 V DC max.
	Allowable signal source resistance: 100 Ω max.
	Within ± 0.2% of each input span ± 1 digit
	However, R, S input, 0 to 200°C (32 to 392 F): Within ± 6°C (12 F)
Base accuracy	B input, 0 to 300°C (32 to 572 F): Accuracy is not guaranteed.
	K, J, E, T, N input, Less than 0°C (32 F): Within ± 0.4% of input span ± 1 digit
	Within ± 0.1% of each input span± 1 digit
	Direct current: Within ± 0.2% of each input span± 1 digit
DC voltage:	Within ± 0.2% of each input span± 1 digit
	125 ms
Input sampling period	Relay contact 1a: Control capacity: 3 A 250 V AC (resistive load), 1 A 250 V AC (inductive load cosφ =0.4)
	Electrical life: 100,000 cycles, Minimum applicable load: 10 mA 5 V DC
	Non-contact voltage (for SSR drive): 12 V DC± 15%
	Max. 40 mA (short circuit protected)
Control output OUT1	Direct current: 4 to 20 mA DC (Resolution: 12000)
	Load resistance: Max. 550 Ω
	Relay contact 1a: Control capacity: 3 A 250 V AC (resistive load), 1 A 250 V AC (inductive load cosφ =0.4)
	Electrical life: 100,000 cycles
Event output EV1 Event output EV2 (Optional) Event output EV3 (Optional)	Minimum applicable load: 10 mA 5 V DC
	Number of patterns: 10 (Linkable)
	Number of steps: 100 (10 steps/pattern)
	Number of repetitions: 0 to 10000 times (Repetitions disabled when set to 0.)
Program performance	Program time range: 0 to 99 hours 59 minutes/step, or 0 to 99 minutes 59 seconds/step
	(When □□□□□ is set: Fixed value control is performed using step SV.)
	Wait value: Thermocouple, RTD input: 0 to 20% of input span
	DC voltage, current input: 0 to 20% of scaling span
Communication line:	(The placement of the decimal point follows the selection.)
	(The Wait function is disabled when set to 0 or 0.0.)
	EIA RS-485
	Communication method: Half-duplex communication
Synchronization method:	Start-stop synchronization
	Communication speed: 9600, 19200, 38400 bps (Selectable by keypad) (Factory default: 9600 bps)
	Data bit: 7 or 8 (Factory default: 7 bits)
	Parity: Even, Odd, No parity (Selectable by keypad) (Factory default: Even)
Stop bit:	1 or 2 (Selectable by keypad) (Factory default: 1 bit)
	Data format:
	Communication protocol
	Shinko protocol
Serial communication (Optional)	MODBUS ASCII
	MODBUS RTU
	Start bit
	1
Data bit	7 (8)
	Selectable
	7 (8)
	Selectable
Parity	Even (No parity, Odd) Selectable
	Even (No parity, Odd) Selectable
	No parity (Even, Odd) Selectable
	1 (2)
Stop bit	1 (2)
	Selectable
	1 (2)
	Selectable
SV digital transmission: If 'SV digital transmission' is selected in [Communication protocol] in Serial communication, SV can be digitally transmitted to Shinko digital indicating controllers (with Serial communication C5 option).	
Transmission output (Optional)	Resolution: 12000
	Output: 4 to 20 mA DC (Load resistance: Max. 550 Ω)
	Output accuracy: Within ± 0.3% of Transmission output span
	Response time: 400 ms + Input sampling period (0%→90%)
Insulated power output (Optional)	Output voltage: 24± 3 V DC (When load current is 30 mA DC)
	Ripple voltage: Within 200 mV DC (When load current is 30 mA DC)
	Max. load current: 30 mA DC
	Relay contact 1a: Control capacity: 3 A 250 V AC (resistive load), 1 A 250 V AC (inductive load cosφ =0.4)
Control output OUT2 (Optional)	Electrical life: 100,000 cycles, Minimum applicable load: 10 mA 5 V DC
	{EV2 option (when 'Heating/Cooling control Relay contact' is selected in [Event output EV2 allocation]), EV3(DR) option}
	Non-contact voltage (for SSR drive): 12 V DC± 15%
	Max. 40 mA (short circuit protected) (DS, EV3DS options)
Direct current:	4 to 20 mA DC (Resolution: 12000)
	Load resistance: Max. 550 Ω (DA, EV3DA options)