

Digital Temperature Indicating Controller Model : **ACN-200**

Model

Model	ACN-2	☐	☐	-	☐	/	☐	☐
Control	ON/OFF control	1						
Action (*1)	PD control	2						
Alarm Function (*2)	No alarm action		0					
	High limit alarm		1					
	High limit alarm with standby		1				H	
	Low limit alarm		2					
	Low limit alarm with standby		2				H	
	High/Low limits alarm		4					
	High/Low limits alarm with standby		4				H	
	High/Low limit range alarm		6					
	Process high alarm		8					
	Process low alarm		9					
Output	Relay contact				R			
	Non-contact voltage				S			
Input (*3)	Thermocouple (K, J)					E		
	RTD (Pt100)					R		

(*1) Control actions are selectable with the DIP switch.

(*2) When ordering, please specify an alarm type (except no alarm action). The alarm type can be changed with the DIP switch. If no alarm action is specified, the alarm function will not be equipped when shipped.

(*3) Customer specified

Input Specifications

Rated scale:

Thermocouple

Input type	Input range	Resolution
K	0 to 400°C [5°C]	1°C
J	0 to 400°C [5°C]	1°C

[] : One division of the setting scale

RTD

Input type	Input range	Resolution
Pt100	0 to 100°C [1°C]	1°C

[] : One division of the setting scale

Input (Customer specified):

Thermocouple: K, J

External resistance: 100Ω or less

RTD: Pt100 3-wire type,

Allowable input lead wire resistance: 10Ω or less
per wire

Supply voltage: 100 to 240V AC 50/60Hz

Allowable voltage fluctuation range: 85 to 264V AC

General Structure

Dimensions: 96×96×120mm (W×H×D)

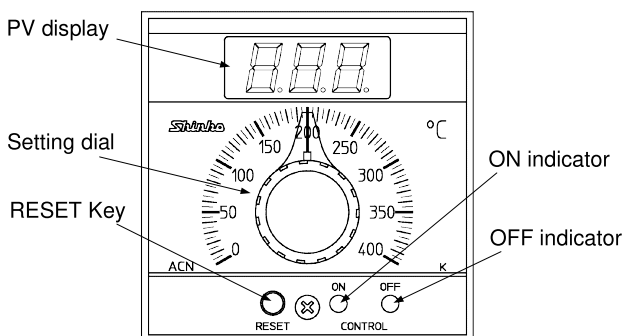
Weight : Approx. 370g

Mounting : Flush

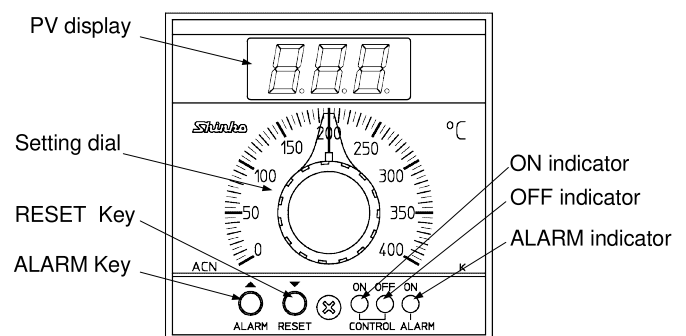
Case : Polycarbonate resin

Color: Dark gray

Panel :



Alarm function not added



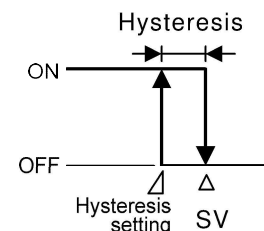
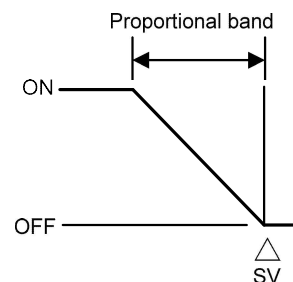
Alarm function added

■ Indication Performance

Indication accuracy : Within 0.5% of each input span ± 1 digit
 Input sampling period: 250ms

■ Control Performance

Setting accuracy: Within 1.0% of each input span
 Control action: PD control (with Auto-reset function) (DIP switch No.1: OFF)
 Proportional band (P): 2.5% of each input span
 Derivative time (D): 50 sec
 Proportional cycle: 3 sec (ACN-2□0-S/□),
 30 sec (ACN-2□0-R/□)
 ON/OFF control (DIP switch No.1: ON)
 ON/OFF hysteresis: 0.6% of each input span
 Control output: Relay contact: 1c (ACN-2□0-R/□)
 Control capacity: 5A 250V AC (Resistive load)
 2A 250V AC (Inductive load $\cos\phi=0.4$)
 Electrical life: 100,000 cycles
 Non-contact voltage (for SSR drive)
 : 12V DC $\pm 15\%$ (ACN-2□0-S/□)
 Max. 40mA DC (Short circuit protected)



■ Alarm Function

Alarm output: Setting by the $\pm$ deviation from the SV (except process alarm). If the input goes outside the range, the output turns ON or OFF (in the case of High/Low limit range alarm).

Alarm type: If any alarm type (except no alarm action) is specified, the alarm type can be changed with the DIP switch. (Default: Customer specified alarm type)

Alarm type	Setting range	SW2	SW3	SW4	SW5
No alarm action	—	OFF	OFF	OFF	OFF
High limit alarm	-199 to input span	ON	OFF	OFF	OFF
High limit alarm with standby	"	ON	OFF	OFF	ON
Low limit alarm	"	OFF	ON	OFF	OFF
Low limit alarm with standby	"	OFF	ON	OFF	ON
High/Low limits alarm	0 to input span	ON	ON	OFF	OFF
High/Low limits with standby	"	ON	ON	OFF	ON
High/Low limit range alarm	"	OFF	OFF	ON	OFF
Process high alarm	"	ON	OFF	ON	OFF
Process low alarm	"	OFF	ON	ON	OFF

Setting accuracy: The same as control setting accuracy

Action : ON/OFF action

Alarm hysteresis 1℃

Output : Relay contact, 1c

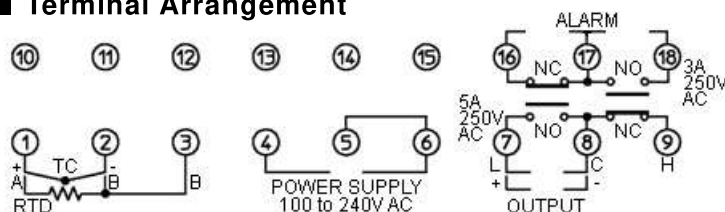
Control capacity:

3A 250V AC (Resistive load)

1A 250V AC (Inductive load $\cos\phi=0.4$)

Electrical life: 100,000 cycles

■ Terminal Arrangement



POWER SUPPLY: 100 to 240V AC

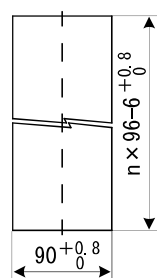
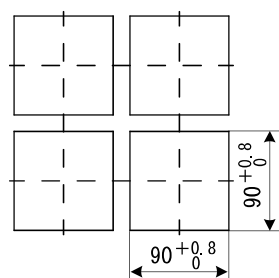
ALARM : Alarm output

OUTPUT : Control output

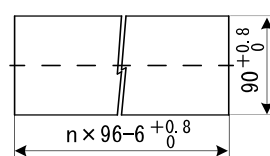
TC : Thermocouple input

RTD : Resistance temperature detector input

■ Panel Cutout (Scale: mm)



Lengthwise close mounting
 n: Number of units mounted



Lateral close mounting
 n: Number of units mounted

■ Other

Power consumption: Approx. 5VA, Ambient temperature: 0 to 50℃

Ambient humidity: 35 to 85%RH (non-condensing)