

# Digital Temperature Indicating Controller Model : ACN-200

■ **Model**

Model	ACN-2	<input type="checkbox"/>	<input type="checkbox"/>	-	<input type="checkbox"/>	/	<input type="checkbox"/>	<input type="checkbox"/>
Control Action (*1)	ON/OFF control	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)

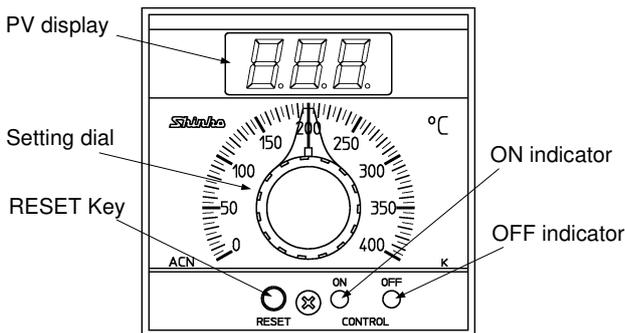
Weight : Approx. 370g

Mounting : Flush

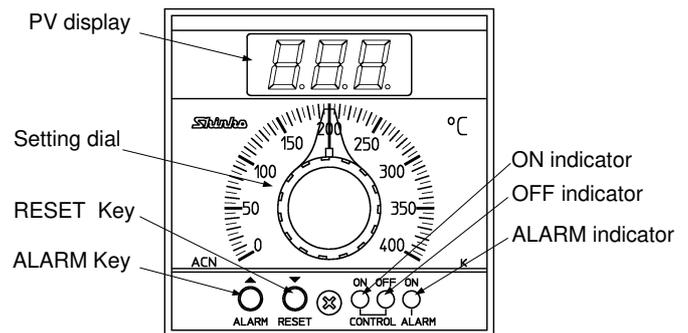
Case : Polycarbonate resin

Color: Dark gray

Panel :



Alarm function not added



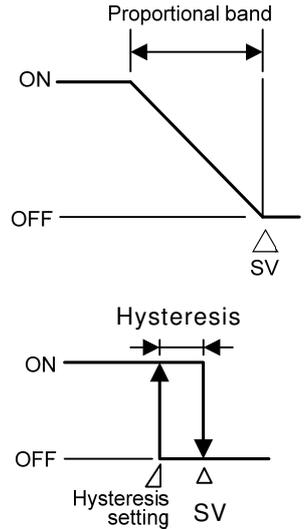
Alarm function added

**■ Indication Performance**

Indication accuracy : Within 0.5% of each input span ±1digit  
 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 ±15% (ACN-2□0-S/□)  
         Max. 40mA DC (Short circuit protected)



**■ Alarm Function**

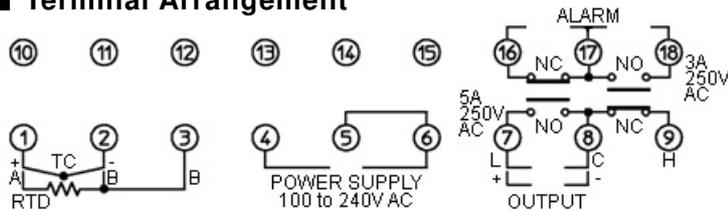
Alarm output: Setting by the ±deviation from the SV (except process alarm). If the input goes outside the range, the output turns ON or OFF (in the case of High/Low limit range alarm).

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

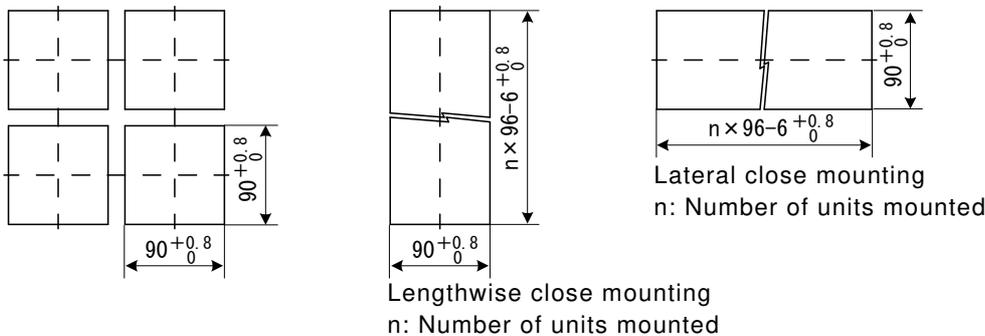
Setting accuracy: The same as control setting accuracy  
 Action : ON/OFF action  
     Alarm hysteresis 1℃  
 Output : Relay contact, 1c  
 Control capacity:  
     3A 250V AC (Resistive load)  
     1A 250V AC (Inductive load  $\cos\phi=0.4$ )  
 Electrical life: 100,000 cycles

**■ 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)**



**■ Other**

Power consumption: Approx. 5VA, Ambient temperature: 0 to 50℃  
 Ambient humidity: 35 to 85%RH (non-condensing)