



NO. RA-UM-1183E
January, 1987

Yamatake-Honeywell

SC50

Digiset Deviation Indicating Controller

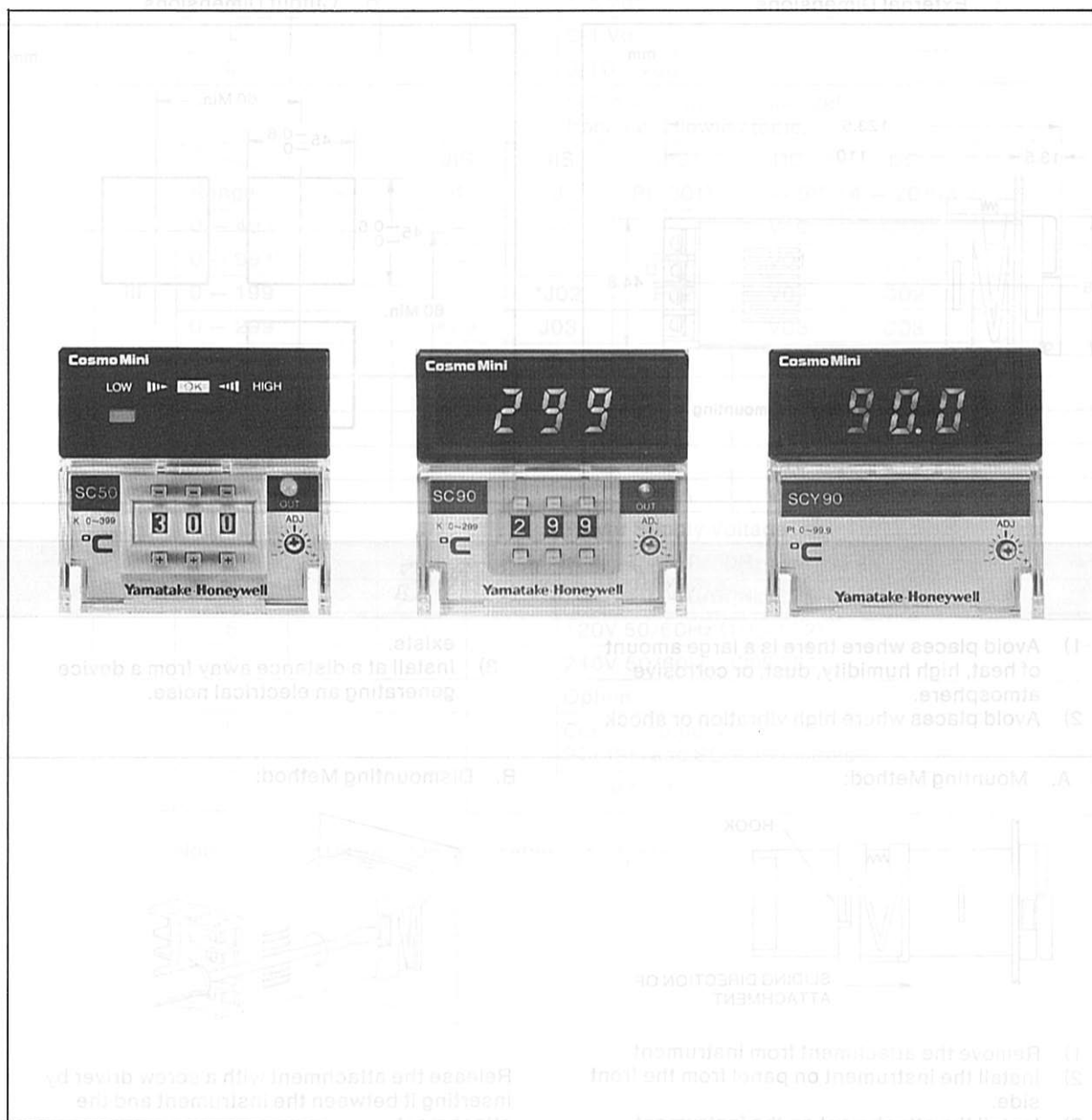
SC90

Digiset Digital Indicating Controller

Product Manual

SCY90

Digital Indication Converter



- 1) Avoid places where there is a large amount of heat, high humidity, dust, or corrosive atmosphere.
- 2) Avoid places where high vibration or shock exists.



- 1) Remove the attachment from instrument.
- 2) Install the instrument on panel from the front side.

from the rear terminal side until click stop.

SPECIFICATIONS

1) SC50/SC90:

Setting Accuracy: $\pm 1\%FS$
 Indication Accuracy: $\pm 1\%FS \pm 1$ digit (SC90),
 $\pm 2\%FS$ (SC50)
 ON/OFF Differential: $0.3\%FS$ fixed.
 Proportional Band: $3\%FS$ fixed
 Cycle Time: 20 sec. (relay contact output)
 2 sec. (voltage output)
 Output: Relay contact; 250Vac 3A (resistive
 load)
 Voltage; 5Vdc, about 50-ohm
 internal impedance
 Current; 4-20mAdc (less than
 250-ohm resistive load)
 Set Point Adjustment Range:
 -3 to $3\%FS$ adjustable
 OK Lamp Indication Range: $\pm 0.75\%FS$ fixed.

2) SCY90

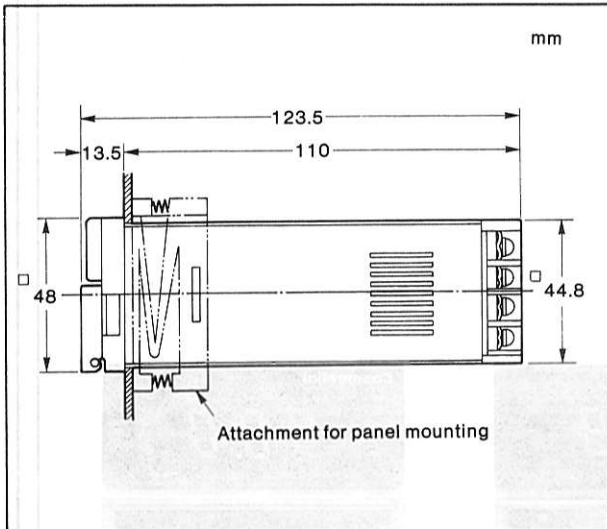
Conversion Accuracy: $\pm 1\%FS$
 Indication Accuracy: $\pm 1\%FS$
 Output Value Adjustment Range:
 -3 to $+3\%FS$ adjustable
 External Impedance:
 4 – 20 mAdc 250-ohm MAX
 1 – 5 Vdc 1 K-ohm MIN
 0 – 1 Vdc 1 K-ohm MIN
 0 – 10 mVdc 1 K-ohm MIN

3) Common Specifications for SC50/SC90/SCY90:

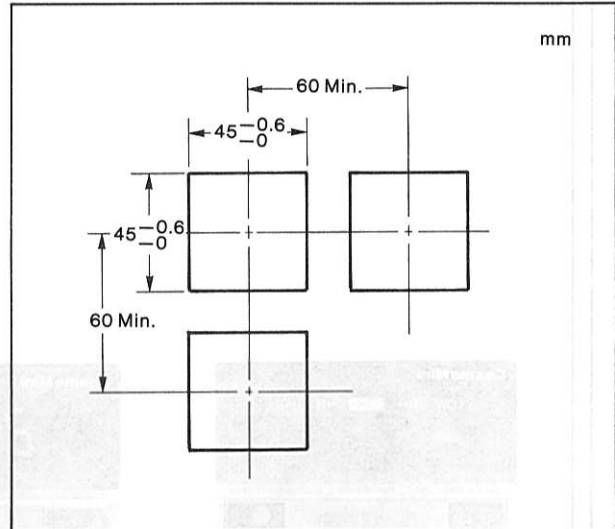
Burnout: Upscale for thermocouple sensor
 breakage.
 Ambient Temperature: -10 to $55^\circ C$
 Storage Temperature: -20 to $65^\circ C$
 Ambient Humidity: 35 to 85% RH
 Weight: About 230g

DIMENSIONS

External Dimensions



Cutout Dimensions

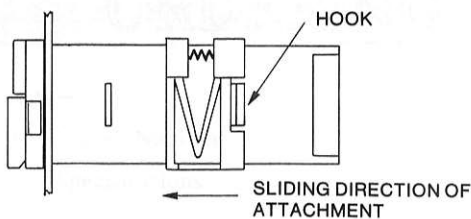


MOUNTING

- 1) Avoid places where there is a large amount of heat, high humidity, dust, or corrosive atmosphere.
- 2) Avoid places where high vibration or shock

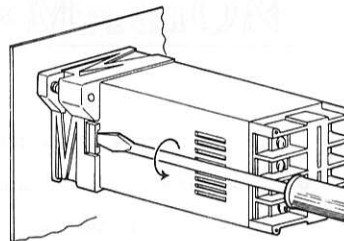
- exists.
- 3) Install at a distance away from a device generating an electrical noise.

A. Mounting Method:



- 1) Remove the attachment from instrument.
- 2) Install the instrument on panel from the front side.
- 3) Install the attachment on the instrument from the rear terminal side until click stop.

B. Dismounting Method:

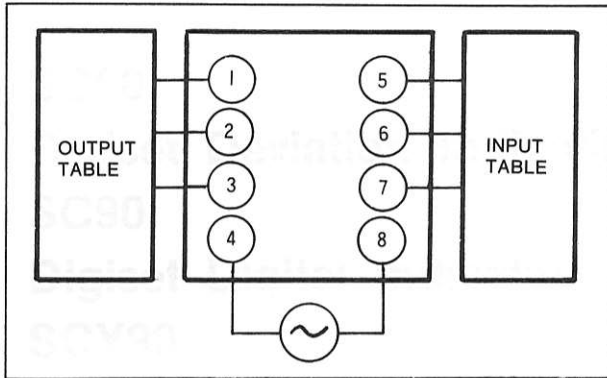


Release the attachment with a screw driver by inserting it between the instrument and the attachment.

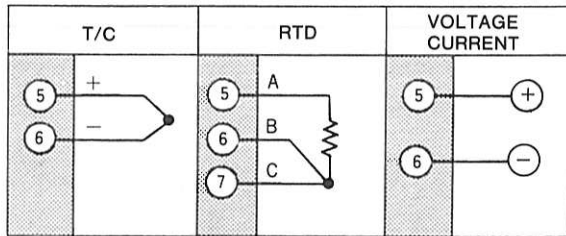
WIRING

Recommend to use a wire of JIS 3307 600V vinyl insulated wire having an outernal diameter between 1.6 and 3.2 mm, or a wire meeting with each domestic electrical code or ordinance.

1) Wiring Connection:

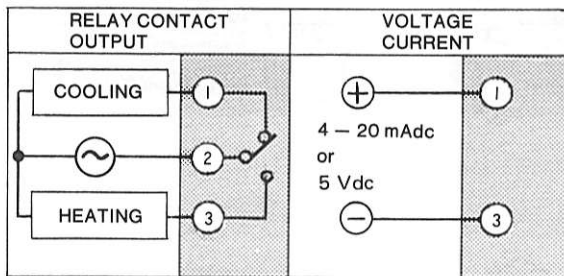


A. Input Table:



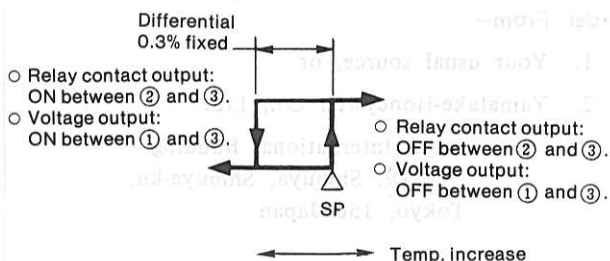
- a. Use a shield wire for input signal if there is a possibility of electrical noise.
- b. Separate the input signal line as much as possible from power line for the protection of signal against electrical noise.
- c. Use a compensation wire for thermocouple input between T/C and instrument.

B. Output Table:

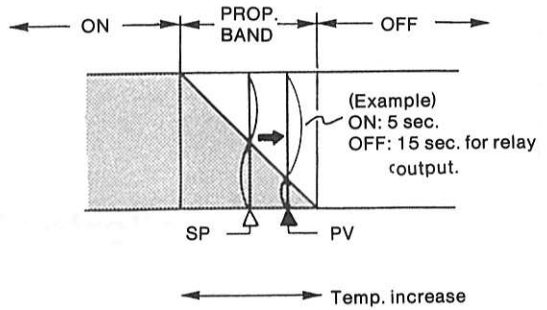


2) Control Mode:

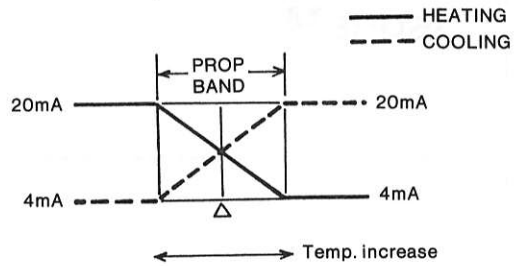
A. ON/OFF output: (SC50/SC90-A, or B)



B. Time Proportioning Control Output: (SC50/SC90-C or D)

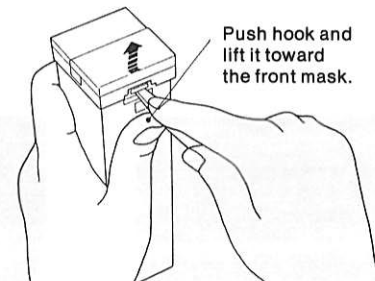


C. 4-20 mAdc Current Proportioning Control Output: (SC50/SC90-H)

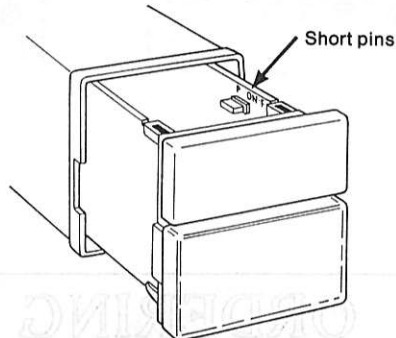


3) Control Mode Change Between "ON/OFF" and "Time Prop."

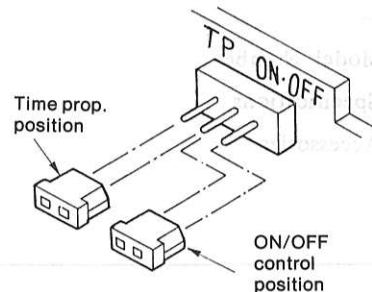
- a. Draw out the chassis from instrument case.



- b. Find the short pins on chassis.



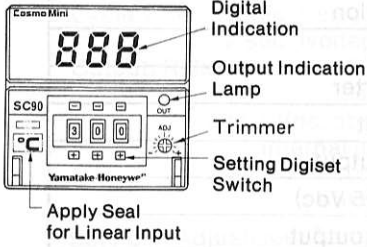
- c. Change the pin position.



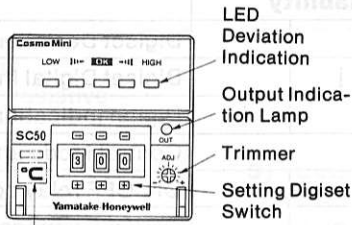
OPERATION

1) Operator Interface:

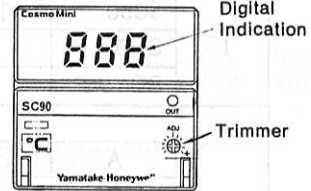
A. SC90



B. SC50



C. SCY90



2) Output Indication Lamp: (SC50/SC90-A,B,C,D) Red ON: Output ON Red OFF: Output OFF

3) Deviation Indication LEDs: (SC50) LED is ON when the deviation is as follows:

LOW		OK	<	HIGH
Exceeded below -1.5%FS	Between -0.75 and -1.5%FS	Within ±0.75%FS	Between +0.75 and +1.5%FS	Exceeded above +1.5%FS

4) Setting:

Since the digiset switch is mechanically locked depending on the range, do not push the switch with an excess force.

5) Adjustment Potentiometer (Trimmer): Set Point ±3%FS

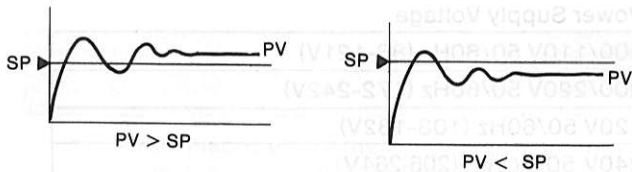
A. SC50/SC90:

When the PV is lower than the SP, turn the trimmer gradually toward ⊕ side.
When the PV is higher, turn it toward ⊖ side.

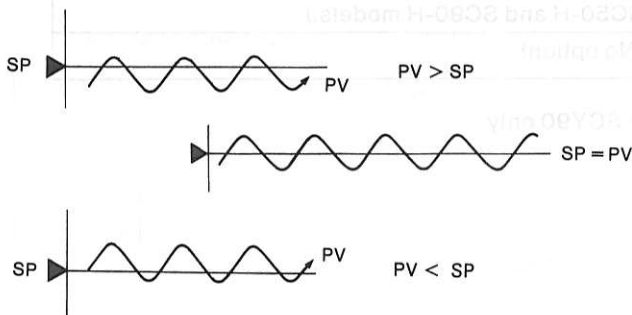
B. SCY90:

When the conversion output should be increased, turn the trimmer toward ⊕ side. When should be decreased, turn it toward ⊖ side.

a. Time Prop. or Prop. Control:



b. ON/OFF Control:



COSMOMINI MODEL SELECTION GUIDE

Example:

I	II	III	IV	V
SC50	A	K03	6	-

No.	Code	Availability			Specifications	
I	SC50	↓			Digiset Deviation Indication	
	SC90		↓		Digiset Digital Indication	
	SCY90			↓	Digital Indication Converter	
					Control Mode and Output	
	A	○	○		ON/OFF relay contact output	
	B	○	○		ON/OFF voltage output (5 Vdc)	
	C	○	○		Time prop. relay contact output	
	D	○	○		Time prop. voltage output (5 Vdc)	
	H	○	○		4-20 mAdc prop. output	
					A or C field-changeable B or D field-changeable	
					SCY90 Conversion Output	
	C			○	4-20 mAdc	
	V			○	1-5 Vdc	
	L			○	0-1 Vdc	
	M			○	0-10 mVdc	
III	Select one input/range code from the following table.					
	Range	JIS K	JIS J	JIS Pt100Ω	DC 1 - 5V	DC 4 - 20 mA
	0 - 49.9	-	-	-	V10	C10
	0 - 99.9	-	-	P01	V01	C01
	0 - 199	-	*J02	P02	V02	C02
	0 - 299	K03	J03	-	V03	C03
	0 - 399	K04	J04	P04	V04	C04
	0 - 599	*K06	*J06	-	V06	C06
	0 - 799	K08	J08	-	V08	C08
	0 - 999	K15	-	-	V15	C15
-99 to +99	-	-	P45	V45	C45	
IV					Power Supply Voltage	
	1	○	○	○	100/110V 50/60Hz (86-121V)	
	2	○	○	○	200/220V 50/60Hz (172-242V)	
	5	○	○	○	120V 50/60Hz (103-132V)	
	6	○	○	○	240V 50/60Hz (206-264V)	
V					Option	
	L	○	○		Cooling output (only for SC50-H and SC90-H models.)	
	-	○	○	○	(No option)	

Note: *J02 K06 and J06 applicable to SCY90 only.