

# TEMPERATURE CONTROLS

## GENERAL PURPOSE

Type TNS, CNS & INS

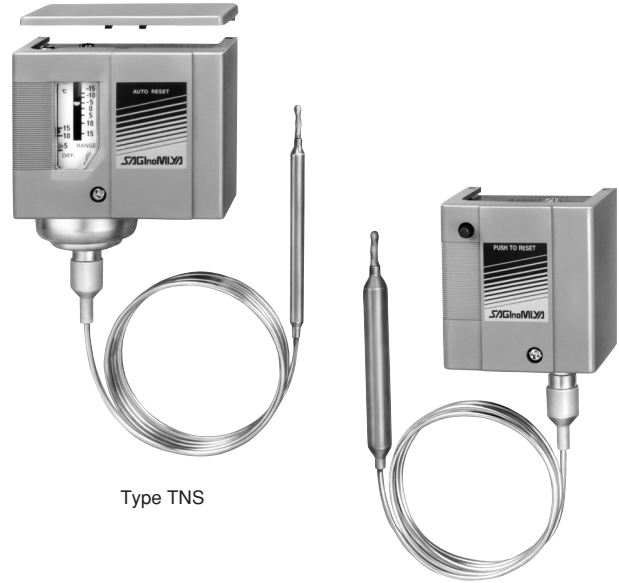
SAGInoMIYA

### GENERAL DESCRIPTION

- Type TNS is provided with a differential adjustable mechanism.
- Type CNS is provided with a fixed differential. Also manual reset models are available.
- Type INS provides automatic High-cut temp. control with manual reset.
- Narrow and adjustable temp. diff. for more accurate control model Type BNS is available.
- Available drip proof enclosure for marine application or explosion proof enclosure for special application.
- A mounting bracket is supplied as standard.
- With SPDT contact mechanism.
- IP44 with upper lid (option).

CE mark applicable (available upon request)

UL recognized (available upon request)



Type TNS

Type INS

### TYPE NUMBER SELECTION (SPECIFICATIONS)

#### Type TNS—Automatic Reset Type

Unit: °C

Catalog No.	Range		Differential		Factory Setting		Limit Temp.	Bulb Size (mm)		Usage Condition	Wt. (kg)
	Min.	Max.	Min.	Max.	Off (On)	On (Off)		φ A	B		
TNS-C100X	-25	0	Bottom 4.5	15	-18	-15	70	6	80	Ts > Tb	0.34
TNS-C114X	-15	15									
TNS-C134X	0	35									
TNS-C1070X	45	75	4	20	61	65	115	12.7	100	Ts < Tb	0.37
TNS-C1100X	65	105									
TNS-C1120X	95	125	5	20	110	115	160	12.7	100	Ts < Tb	0.37
TNS-C1150X	115	150									
TNS-C1010XC	-45	10	4	20	-4	0	45	12.7	100	Ts ≅ Tb	0.37
TNS-C1034XC	-20	35									
TNS-C1070XC	15	70									
TNS-C114XQ009	-30	15	Bottom 5	15	-8	-5	120	Capillary Tube Type		Ts > Tb	0.37
TNS-C114XQ010					Capillary Coil Type						
TNS-C134XQ009	-5	35	Top 2	15	12	15	120	Capillary Tube Type		Ts > Tb	0.37
TNS-C134XQ010								Capillary Coil Type			

- Bottom...Differential when the switch is set at minimum of range.
- Top...Differential when the switch is set at maximum of range.
- Ts...Ambient temp. of switch body. • Tb...Sensing bulb temp.
- Drip proof models: Available upon request. (Refer to pages 48, 49.)
- Enclosure: IP20

#### Type CNS—Automatic Reset Type

Unit: °C

Catalog No.	Range		Differential	Factory Setting		Limit Temp.	Bulb Size (mm)		Usage Condition	Wt. (kg)
	Min.	Max.		Off	On		φ A	B		
CNS-C115X	-35	-15	Bottom 4	-28	-25	70	6	80	Ts > Tb	0.34
CNS-C100X	-25	0								
CNS-C114X	-15	15								
CNS-C134X	0	35	Top 3	17	20					

- Bottom...Differential when the switch is set at minimum of range.
- Top...Differential when the switch is set at maximum of range.
- Ts...Ambient temp. of switch body. • Tb...Sensing bulb temp.
- Enclosure: IP20

## TYPE CNS–Manual Reset Type

Unit: °C

Catalog No.	Range		Manual Reset	* Factory Setting		Limit Temp.	Bulb Size (mm)		Usage Condition	Wt. (kg)
	Min.	Max.		Off	On		φ A	B		
CNS-C115XM2	-35	-15	Automatic operation on temperature decrease and manual reset	-28	Manual Reset	70	6	80	Ts > Tb	0.34
CNS-C100XM2	-25	0		-18						
CNS-C114XM2	-15	15		-3						
CNS-C134XM2	0	35		17						

\* Based on the 1-3 terminal connection.

- Ts...Ambient temp. of switch body. • Tb...Sensing bulb temp.
- Enclosure: IP20

## TYPE INS–Manual Reset Type

Unit: °C

Catalog No.	Range		Manual Reset	* Factory Setting		Limit Temp.	Bulb Size (mm)		Usage Condition	Wt. (kg)	
	Min.	Max.		Off	On		φ A	B			
INS-C1070XM1	25	75	Automatic operation on temperature increase and manual reset.	Manual Reset	65	115	9.5	80	Ts < Tb	0.26	
INS-C1120XM1	70	120			115						160
INS-C1150XM1	115	150			140						180

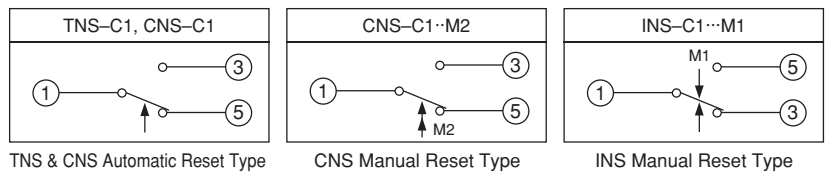
\* Based on the 1-3 terminal connection.

- Ts...Ambient temp. of switch body. • Tb...Sensing bulb temp.
- Enclosure: IP20

## ELECTRICAL RATINGS

Rated Voltage (V)	Rated Amps. (A)	Power Factor (cos φ)	
		125/250 V. AC	
Non-Inductive Current		1	12
Inductive Current	Full Load	0.75	
	Locked Rotor	0.45	72

## CONTACT FUNCTIONS

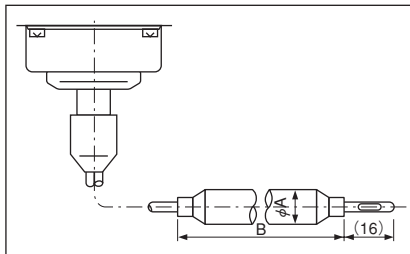


1	Common Terminal
3	Close on Temperature Increase
5	Close on Temperature Decrease

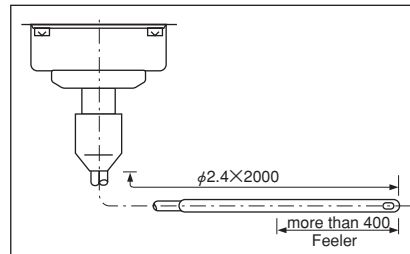
↑: Operating direction on temp. increase at High temp. side  
 ↓M1, ↑M2: Operating direction on manual reset

## SENSING ELEMENT STYLE

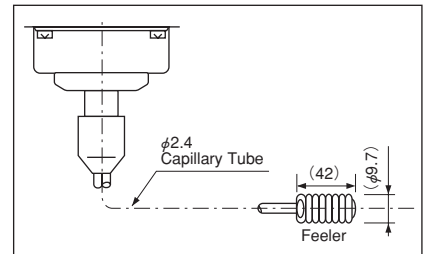
### Sensing Bulb Type



### Capillary Tube Type



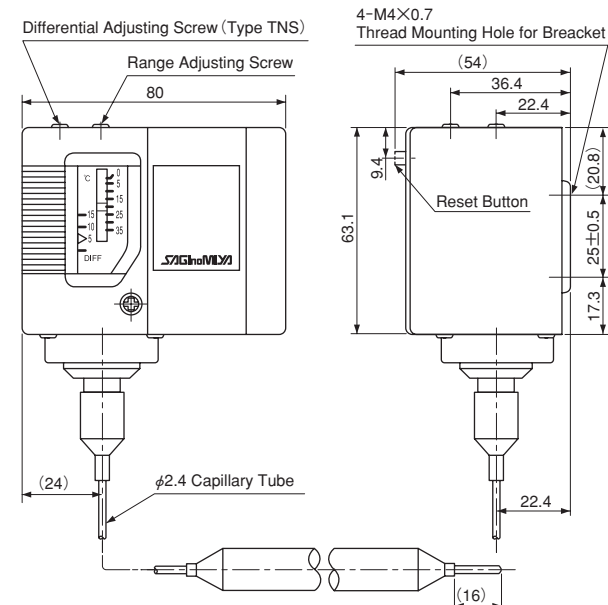
### Capillary Coil Type



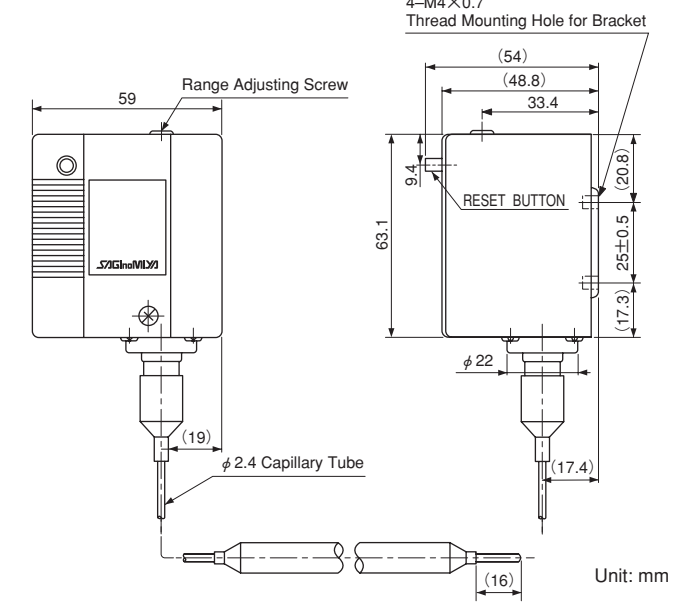
Standard: 1000mm Capillary tube. Other capillary length are available upon request.

## DIMENSIONS

### Type TNS, CNS



### Type INS



Unit: mm