

Specification Sheet

1. Scope : This specification is applied to thermostat type Z2N
 2. Structure
 - 2.1 Type : Single pole single throw thermostat with bimetallic disc.
 - 2.2 Type of action : Contacts open on temperature rise. Contacts close on temperature fall. (To be called "A" operation at NGT)
 - 2.3 Insulation distance : To satisfy the UL, CSA standard.
 3. Initial characteristics
 - 3.1 Electrical Rating : Resistive Load AC125V/15A, AC250V/10A
 - 3.2 Operating temperature : ($\pm$) $^{\circ}$ C Open ($\pm$) $^{\circ}$ C Close
Testing device = Hot air circulation system of NGT manufacture.
Temperature changing rate = 1 $^{\circ}$ C/min. measuring load is LED load of not more than 20mA.
Maximum ambient temperature = 200 $^{\circ}$ C
 - 3.3 Resistance between terminals : Initial value shall be not more than 30 m ohm measured by Micro Current Ohm Meter.
 - 3.4 Insulation resistance : Not less than 1,000 M ohm measured by DC500V Megger between live part and dead metal part.
 - 3.5 Dielectric strength : Shall stand AC1,500V for 1 minutes or AC1,800V for 1 second without a breakdown between live part and insulator. (Leakage current : 5 mA)
 4. Test
 - 4.1 Heat test : 24 hour at (200 $\pm$ 5) $^{\circ}$ C.
 - 4.2 Cold test : 24 hour at (-30 $\pm$ 2) $^{\circ}$ C.
 - 4.3 Thermal cycle test : When subjected to 10 cycles, 30 minutes at (20 $\pm$ 2) $^{\circ}$ C ~ 30 minutes at (200 $\pm$ 5) $^{\circ}$ C.
 - 4.4 Humidity test : At relative humidity of (95~98%), (40 $^{\circ}$ C $\pm$ 3) $^{\circ}$ C $\times$ 24 hour, thereafter 10 minutes at the room temperature.
The insulation resistance shall be not less than 10M ohm.
 - 4.5 Vibration test : When subjected to the vertical vibration for 60 minutes under no load, 50 Hz total amplitude of 2 mm gravity acceleration of 10G.
 - 4.6 Drop shock test : Fixed to a steel plate of 10 sq cm $\times$ 1 cm thick and when subjected to the drop from 1 meter high to a wooden floor.
 - 4.7 Endurance test : When subjected to 10,000 cycles, thermal operation at approved voltage and current.
 - 4.8 Terminal strength : When subjected to 8 kgs. tension to the direction of terminal and 4 kgs. static load to the vertical direction of terminal for 1 minutes, the insulator shall show no abnormalities.
- The sample shall satisfy the clauses 3.3~3.5 and the change of the operating temperature shall be within $\pm 3^{\circ}$ C compared with the initial ones after finishing the tests of 4.1~4.6 & 4.8.
- The sample shall satisfy the clauses 3.4~3.5 and resistance between terminals shall be not more than 100 mohm, and the change of the operating temperatures shall be within $\pm 5^{\circ}$ C compared with the initial ones after finishing the test of 4.7.

5. Marking : Stamping on Cap

example Type of action → A * * * ← Open temperature
 Type → 2 2 N * * * * ← Style No.
 Lot No. → * * * *

☆ None : Yamagata
 * ← Factory ☆ C : California
 ☆ S : Singapore

6. Recogniten :

UL File No. E43273

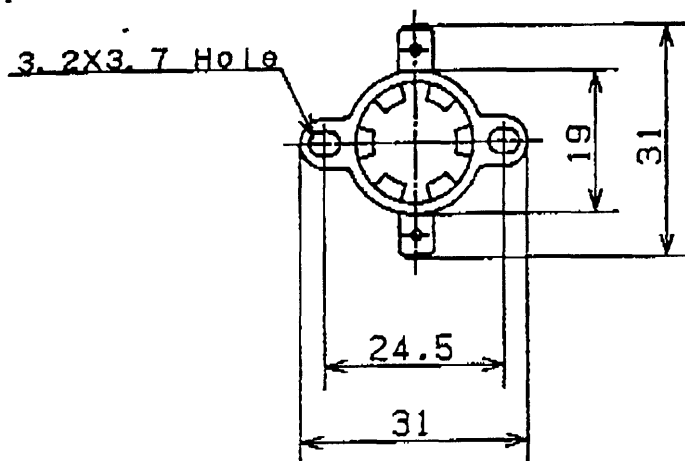
CSA File No. LR67165~67167

Resistive Load	AC125V/15A, AC250V/10A	100,000 Cycles	200°C
Inductive Load	AC125V/15A, AC250V/10A	6,000 Cycles	200°C
Resistive Load	AC125V/15A, AC250V/10A	100,000 Cycles	200°C
Inductive Load	AC125V/15A, AC250V/10A	100,000 Cycles	200°C

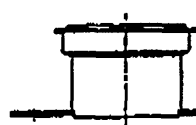
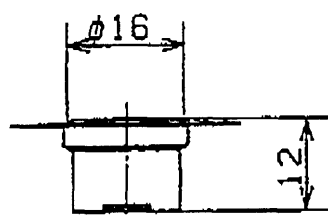
* The data contained in this specification is for reference information only.

The user must determine the suitability of the product for the application and assumes all risk and liability associated therewith.

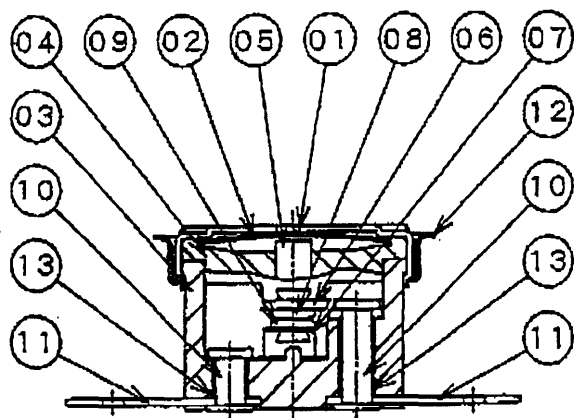
Customer	☐		
Represent	☐		
Return	☐		
1 Selling	☐		
Manufacturing	☐		
1 Engineering		Revision	
Distribute		Publication:	



REFERENCE DRAWING



3/16" Quick connect



13	Sleeve	Copper
12	Bracket	Stainless steel
11	Terminal	Copper alloy
10	Rivet	Copper
09	Contact	Silver-Nickel alloy
08	Contact	Silver-Nickel alloy
07	Movable arm	Copper alloy
06	Stationary arm	Copper alloy
05	Pin	Ceramic
04	Retainer	Polyphenylene sulfide
03	Case	Polyphenylene sulfide
02	Bi-metal	
01	Cap	Aluminum
No.	Name	Material

Check	Drawing	Indication	
		Tolerance	Project
		±0.5	3rd
		NIPPON	

5	
0	Location
1	No.

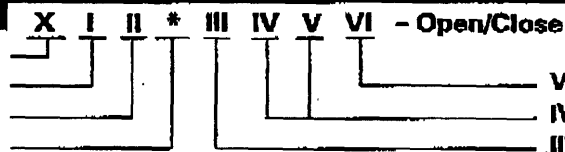
1073



Thermostat Part Number Key/Variation Chart

Our Designation of Type-Code

X = Type No., Basic Models
I = Electrical Rating & Contact Point
II = Switch Action on Temperature Rise
***** = Body Material (Automatic Only: 1. Phenolic 2. Ceramic)



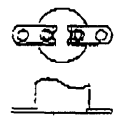
VI = Bracket, Mounting Arrangement
IV + V = Terminals
III = Sensing Cap

N	AC 120V/AC 240V 15A/10A	: Standard Contact Point
S	AC 120V/AC 250V 6A/3A	: For Short Body
X	AC 120V/DC 30V 10M-1A	: Cross-Bar Contact Point
P	AC 120V/DC 6-30V 10M-100mA	: Cross-Bar Contact Point

1	Open on rise (operation type A)
3	Close on rise (operation type B)
4	Open on rise: one time operation

0, 1, 4, T, W	Aluminum	No. 0	No. 1,2,3	No. 4,5	No. 6	No. 7	No. A	No. P	No. S	No. T,U,V	No. W
2, 7, S, U	Copper Alloy										
3, 5, 6, A, P, V	Stainless Steel										
0, 1, 2, 3, A, P, W	Fits w/Bracket #...										
0	Open Cap										
T, U, V	Close On Rise (Operation Type B)										
S	Screw Threads (6-32, 8-32UNC)										
7, P	Tube Mounting										

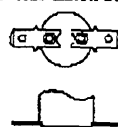
No. 01 Solder



No. 02 Solder



No. 05 .187 Quick Connect



No. 06/10 .187 Quick Connect



No. 07 Strap



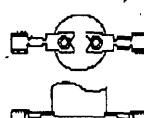
No. 08 Weld



No. 11 Strap



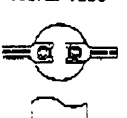
No. 12 Crimp



No. 14 .187 Quick Connect



No. 27 Tube



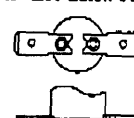
No. 28 Strap



No. 36 .187 Quick Connect



No. 43 .250 Quick Connect



No. 44 .250 Quick Connect



0 No Bracket

B, E, H Fixed Bracket

1, 2, 3, 4, A Loose Bracket

E, A (With Spring) Tube Mounting



No. 1



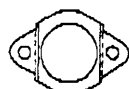
No. 2



No. 3



No. 4



No. A

No. B
(Fits with Cap A)No. E
(Fits with Cap P)No. H
(Fits with Cap W)

MICROTHERM LIMITED

Merrow Business Centre Merrow Lane Guildford Surrey GU4 7WA

Telephone: +44 (0)1483 450100 Facsimile: +44 (0)1483 451816

Email: office@microtherm.co.uk Web: www.microtherm.co.uk