

Specification Sheet

1. Scope : This specification is applied to thermostat type 22N
 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)°C Open (\pm)°C Close
Testing device = Hot air circulation system of NGT manufacture.
Temperature changing rate = 1°C/min. measuring load is LED load of not more than 20mA.
Maximum ambient temperature = 200°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 DCS500V 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 ± 5) °C.
 - 4.2 Cold test : 24 hour at (-30 ± 2) °C.
 - 4.3 Thermal cycle test : When subjected to 10 cycles, 30 minutes at (20 ± 2) °C ~ 30 minutes at (200 ± 5) °C.
 - 4.4 Humidity test : At relative humidity of (95~98%), (40 ± 3) °C X 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 X 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 ± 3 °C compared with the initial ones after finishing the tests of 4.1~4.8 & 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 ± 5 °C compared with the initial ones after finishing the test of 4.7.

5. Markings : Stamping on Cap

example Type of action → A * * * ← open temperature

Type of action → 22 N***** ← Style No.

Style No. None : Yuccata

★ NOKA : Nagata
et al. ★ C : California

W L . California
★ S : Singapore

W.S. Singapore

6. Recognition:

UL File No. E43273

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

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

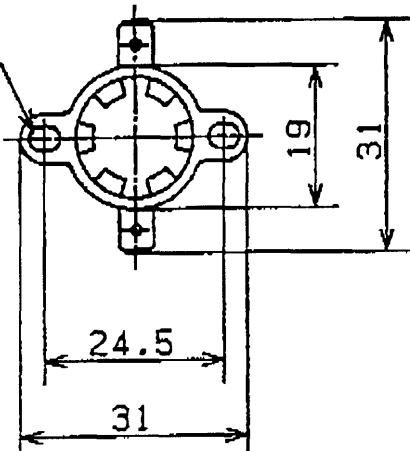
DSA File No. 1867165~87167 Resistive Lead AC125V/15A AC220V/10A 100,000 Cycles ea 2003

Inductive Load AC125V/15A AC250V/10A 100,000 Cycles

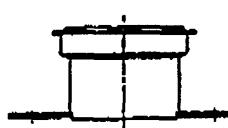
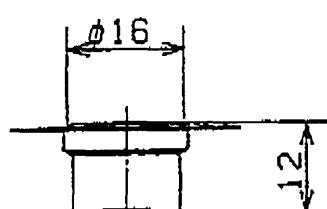
The data contained in this specification is for reference only. The user must determine the suitability of the products.

| | | |
|--|--------------------------|--|
| Assumes all risk and liability associated therewith. | | |
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| Represent | <input type="checkbox"/> | |
| Return | <input type="checkbox"/> | |
| Selling | <input type="checkbox"/> | |
| Manufacturing | <input type="checkbox"/> | |
| Engineering | Revision | |
| Distribute | Publication: | |

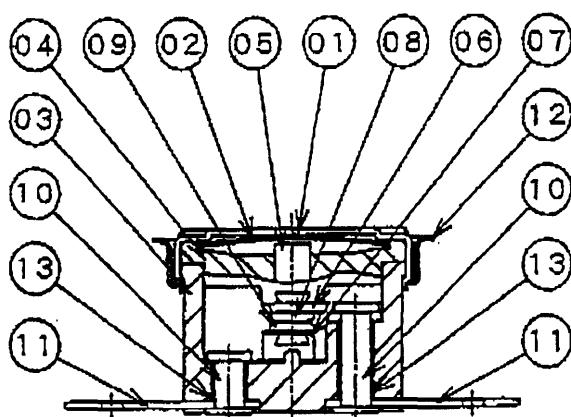
3. 2x3, 7 Hole



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 | Bimetal | |
| 01 | Cap | Aluminum |
| No. | Name | Material |

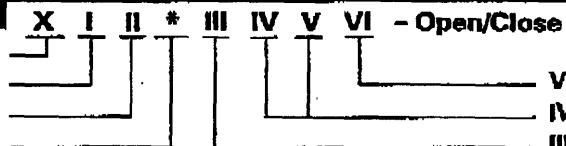
| Check | Drawing | Indication | |
|--|---------|------------|-------------|
| | | Tolerance | Project |
| | | ±0.5 | 3rd |
|  NIPPON GT | | | 100-100-100 |



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

| | | | | | | | | | | | | |
|------------|----------------------|----------------------------------|---|---------------------------|----------------|--------------|--------------|--------------|--------------|--------------|------------------|--------------|
| I | 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/DC6-30V | 10M-100mA | : Cross-Bar Contact Point | | | | | | | | |
| II | 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 |
| III | 2,7,S,U | Copper Alloy | | | | | | | | | | |
| | 3,5,6,A,P,V | Stainless Steel | <img alt="No. 0,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75,76,77,78,79,79,80,81,82,83,84,85,86,87,88,89,89,90,91,92,93,94,95,96,97,98,99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,119,120,121,122,123,124,125,126,127,128,129,129,130,131,132,133,134,135,136,137,138,139,139,140,141,142,143,144,145,146,147,148,149,149,150,151,152,153,154,155,156,157,158,159,159,160,161,162,163,164,165,166,167,168,169,169,170,171,172,173,174,175,176,177,178,179,179,180,181,182,183,184,185,186,187,187,188,189,189,190,191,192,193,194,195,196,197,198,199,199,200,201,202,203,204,205,206,207,208,209,209,210,211,212,213,214,215,216,217,218,219,219,220,221,222,223,224,225,226,227,228,229,229,230,231,232,233,234,235,236,237,238,239,239,240,241,242,243,244,245,246,247,248,248,249,250,251,252,253,254,255,256,257,258,258,259,260,261,262,263,264,265,266,267,268,268,269,270,271,272,273,274,275,276,277,278,278,279,280,281,282,283,284,285,286,287,287,288,289,290,291,292,293,294,295,296,297,297,298,299,299,300,301,302,303,304,305,306,307,308,308,309,310,311,312,313,314,315,316,317,317,318,319,320,321,322,323,324,325,326,327,327,328,329,330,331,332,333,334,335,336,337,338,338,339,340,341,342,343,344,345,346,347,347,348,349,350,351,352,353,354,355,356,357,358,358,359,360,361,362,363,364,365,366,367,367,368,369,370,371,372,373,374,375,376,377,377,378,379,380,381,382,383,384,385,386,387,387,388,389,390,391,392,393,394,395,396,396,397,398,399,399,400,401,402,403,404,405,406,407,407,408,409,410,411,412,413,414,415,416,417,417,418,419,420,421,422,423,424,425,426,427,427,428,429,430,431,432,433,434,435,436,437,437,438,439,440,441,442,443,444,445,446,447,447,448,449,450,451,452,453,454,455,456,457,457,458,459,460,461,462,463,464,465,466,467,467,468,469,470,471,472,473,474,475,476,477,477,478,479,480,481,482,483,484,485,486,487,487,488,489,490,491,492,493,494,495,496,497,497,498,499,499,500,501,502,503,504,505,506,507,507,508,509,5010,5011,5012,5013,5014,5015,5016,5017,5018,5019,5020,5021,5022,5023,5024,5025,5026,5027,5028,5029,5030,5031,5032,5033,5034,5035,5036,5037,5038,5039,50310,50311,50312,50313,50314,50315,50316,50317,50318,50319,50320,50321,50322,50323,50324,50325,50326,50327,50328,50329,50330,50331,50332,50333,50334,50335,50336,50337,50338,50339,503310,503311,503312,503313,503314,503315,503316,503317,503318,503319,503320,503321,503322,503323,503324,503325,503326,503327,503328,503329,5033210,5033211,5033212,5033213,5033214,5033215,5033216,5033217,5033218,5033219,5033220,5033221,5033222,5033223,5033224,5033225,5033226,5033227,5033228,5033229,50332210,50332211,50332212,50332213,50332214,50332215,50332216,50332217,50332218,50332219,50332220,50332221,50332222,50332223,50332224,50332225,50332226,50332227,50332228,50332229,503322210,503322211,503322212,503322213,503322214,503322215,503322216,503322217,503322218,503322219,503322220,503322221,503322222,503322223,503322224,503322225,503322226,503322227,503322228,503322229,5033222210,5033222211,5033222212,5033222213,5033222214,5033222215,5033222216,5033222217,5033222218,5033222219,5033222220,5033222221,5033222222,5033222223,5033222224,5033222225,5033222226,5033222227,5033222228,5033222229,50332222210,50332222211,50332222212,50332222213,50332222214,50332222215,50332222216,50332222217,50332222218,50332222219,50332222220,50332222221,50332222222,50332222223,50332222224,50332222225,50332222226,50332222227,50332222228,50332222229,503322222210,503322222211,503322222212,503322222213,503322222214,503322222215,503322222216,503322222217,503322222218,503322222219,503322222220,503322222221,503322222222,503322222223,503322222224,503322222225,503322222226,503322222227,503322222228,503322222229,5033222222210,5033222222211,5033222222212,5033222222213,5033222222214,5033222222215,5033222222216,5033222222217,5033222222218,5033222222219,5033222222220,5033222222221,5033222222222,5033222222223,5033222222224,5033222222225,5033222222226,5033222222227,5033222222228,5033222222229,50332222222210,50332222222211,50332222222212,50332222222213,50332222222214,50332222222215,50332222222216,50332222222217,50332222222218,50332222222219,50332222222220,50332222222221,50332222222222,50332222222223,50332222222224,50332222222225,50332222222226,50332222222227,50332222222228,50332222222229,503322222222210,503322222222211,503322222222212,503322222222213,503322222222214,503322222222215,503322222222216,503322222222217,503322222222218,503322222222219,503322222222220,503322222222221,503322222222222,503322222222223,503322222222224,503322222222225,503322222222226,503322222222227,503322222222228,503322222222229,5033222222222210,5033222222222211,5033222222222212,5033222222222213,5033222222222214,5033222222222215,5033222222222216,5033222222222217,5033222222222218,5033222222222219,5033222222222220,5033222222222221,5033222222222222,5033222222222223,5033222222222224,503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