

POWER RELAY

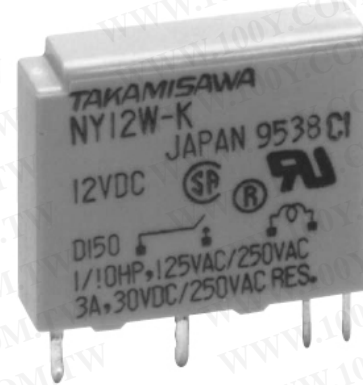
1 POLE - 5A Slim Type

NY Series

勝特力材料 886-3-5753170
 勝特力电子(上海) 86-21-34970699
 勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

■ FEATURES

- Slim type with 5 mm thickness
 - Suited for high density mounting
 - Low power consumption and high sensitivity
 - Nominal coil power: 120 mW
 - Operating power: 54 mW
 - UL, CSA, VDE recognized
 - Conforms to IEC61010, 61131
 - High insulation
 - Surge voltage: 5,080V
 - Dielectric strength: 3,000VAC (coil and contacts)
 - SIL pitch terminals
 - Plastic sealed type, RTIII
 - Compatible with solid state I/O module type SN in size and pin (terminal) arrangement
 - Environmentally friendly cadmium free contact type
 - RoHS compliant.
- Please see page 7 for more information



■ PARTNUMBER INFORMATION

[Example] $\frac{NY}{(a)} \frac{P}{(b)} - \frac{12}{(*)} \frac{W}{(c)} - \frac{K}{(d)} - \frac{IE}{(*)} \frac{}{(f)}$

| | | | |
|-----|--------------------|----------|---|
| (a) | Relay type | NY | : NY Series |
| (b) | Mounting type | Nil P | : PCB board mounting type : Socket mounting type |
| (c) | Coil rated voltage | 12 | : 4.5...24VDC Coil rating table at page 3 |
| (d) | Contact design | W | : Bifurcated contact |
| (e) | Enclosure | K | : Plastic sealed type, RTIII |
| (f) | Insulation | IE | : Complies with IEC standard, IEC61010, 61131 |

Note: Actual marking omits the hyphen (-) and IE of (*)

勝特力材料 886-3-5753170
 勝特力电子(上海) 86-21-34970699
 勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

■ SPECIFICATION

| Item | | | NY |
|--------------|------------------------------|---|---------------------------------------|
| Contact Data | Configuration | | 1 form A (SPST-NO) |
| | Construction | | Bifurcated |
| | Material | | Gold overlay silver alloy (AgNi + Au) |
| | Resistance (initial) | | Max. 30 mOhm at 6 VDC, 1 A |
| | Contact rating | | 3A, 250VAC / 30VDC |
| | Max. carrying current | | 5A |
| | Max. switching voltage | | 270VAC / 150 VDC |
| | Max. switching power | | 750VA / 90W |
| | Max. switching current | | 5A |
| | Min. switching load * | | 1 mA, 5 VDC |
| | Life | Mechanical | |
| Electrical | | Min. 100 x 10 ³ operations (at 3A, 250VAC, 30VDC resistive) Min. 50 x 10 ³ operations (at 5A, 250VAC, 30VDC resistive) | |
| Coil Data | Rated power (at 20 °C) | | 120 mW |
| | Operate power (at 20 °C) | | 54 mW |
| | Operating temperature range | | -40 °C to +90 °C (no frost) |
| Timing Data | Operate (at nominal voltage) | | Max. 10 ms (without bounce) |
| | Release (at nominal voltage) | | Max. 5 ms (no diode) |
| Insulation | Resistance (initial) | | Min. 1,000MOhm at 500VDC |
| | Dielectric strength | Open contacts | 750VAC, 1min |
| | | Contacts to coil | 3,000VAC, 1min |
| | Surge strength | Coil to contacts | 5,080V / 1.2 x 50µs standard wave |
| Other | Vibration resistance | Misoperation | 10 to 55Hz double amplitude 1.5 mm |
| | | Endurance | 10 to 55Hz double amplitude 5 mm |
| | Shock | Misoperation | Min. 100m/s ² (11 ± 1ms) |
| | | Endurance | Min. 1,000m/s ² (6 ± 1ms) |
| | Weight | Approximately 3.5 g | |
| | Sealing | Plastic sealed, RTIII | |

* Minimum switching loads mentioned above are reference values. Please perform the confirmation test with actual load before production since reference values may vary according to switching frequencies, environmental conditions and expected reliability levels.

勝特力材料 886-3-5753170
 勝特力电子(上海) 86-21-34970699
 勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

■ COIL RATING

| Coil Code | Rated Coil Voltage (VDC) | Coil Resistance +/- 10% (Ohm) | Must Operate Voltage (VDC) * | Must Release-Voltage (VDC) * | Rated Power (mW) |
|-----------|--------------------------|-------------------------------|------------------------------|------------------------------|------------------|
| 4.5 | 4.5 | 169 | 3 | 0.45 | 120 |
| 5 | 5 | 208 | 3.35 | 0.5 | |
| 6 | 6 | 300 | 4 | 0.6 | |
| 9 | 9 | 675 | 6 | 0.9 | |
| 12 | 12 | 1,200 | 8 | 1.2 | |
| 18 | 18 | 2,700 | 12.1 | 1.8 | |
| 24 | 24 | 4,800 | 16.1 | 2.4 | |

Note: All values in the table are valid for 20°C and zero contact current.

* Specified operate values are valid for pulse wave voltage.

■ SAFETY STANDARDS

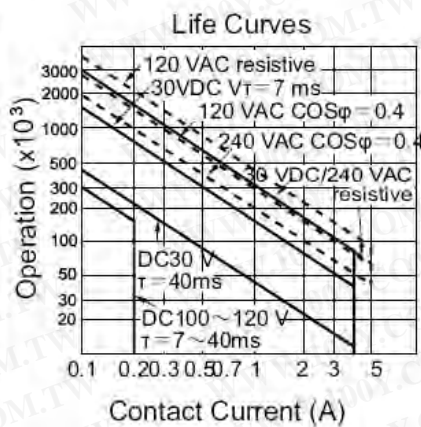
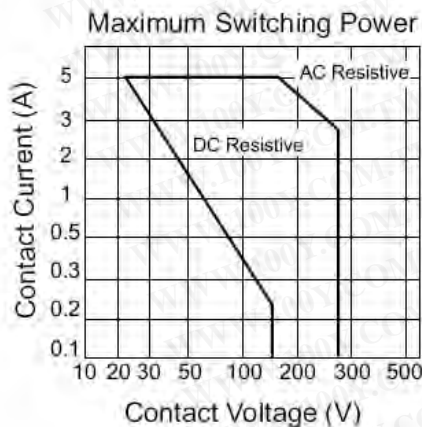
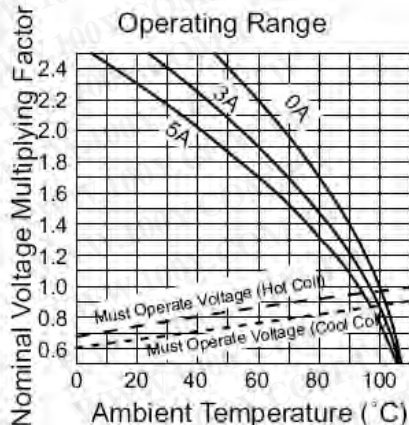
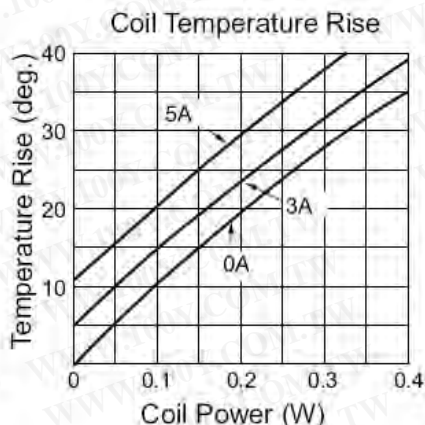
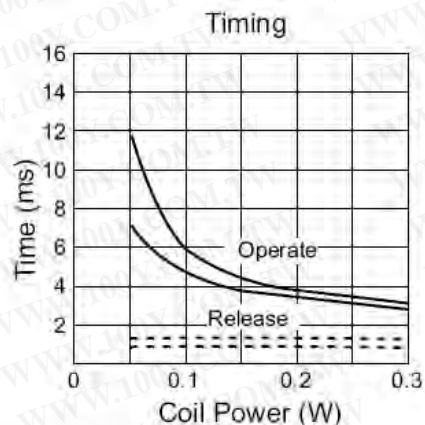
| Type | Compliance | Contact rating |
|------|---------------------------|---|
| UL | UL 508, UL 1604 | Flammability: UL 94-V0 (plastics) |
| | E56140, E199193 | 3A (General use) 5A, 250VAC/30 VDC (resistive) |
| CSA | C22.2 No. 14 LR 35579 | 1/8 HP, 250VAC /125VAC Pilot duty: C300 |
| VDE | 0435 part 201 40016933 | 5A, 250VAC, cos φ1, 30K (-40 / 80 °C) 5A, 30VDC, 0msec, 100K (-40 / 80 °C) |

Also complies with VDE, IEC 61010, 61131

勝特力材料 886-3-5753170
 勝特力电子(上海) 86-21-34970699
 勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

NY SERIES

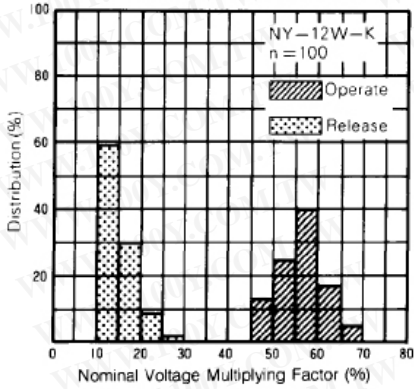
CHARACTERISTIC DATA



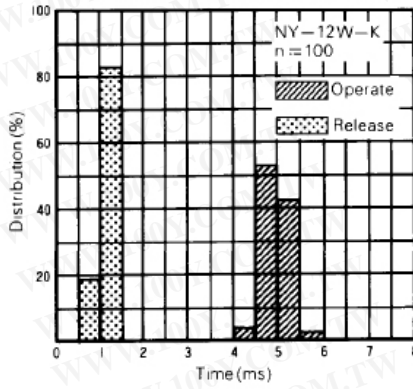
勝特力材料 886-3-5753170
 勝特力电子(上海) 86-21-34970699
 勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

■ REFERENCE DATA

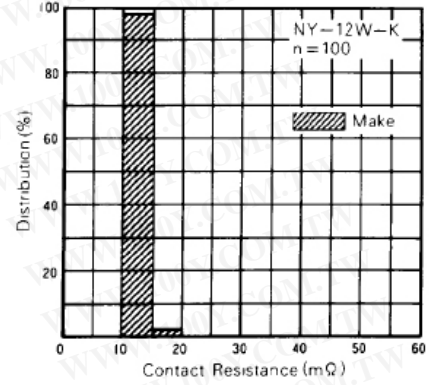
Distribution of Operate & Release Voltage



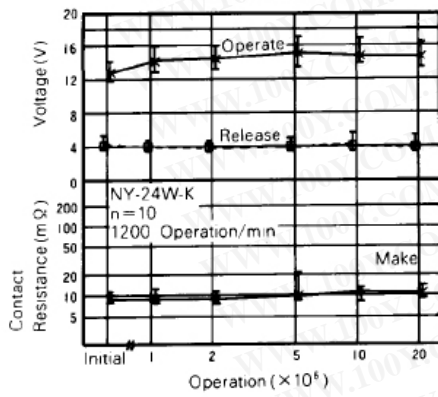
Distribution of Operate & Release Time



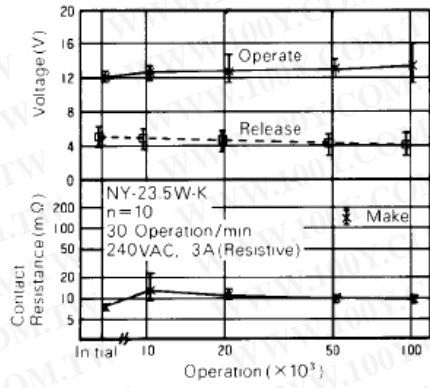
Distribution of Contact Resistance



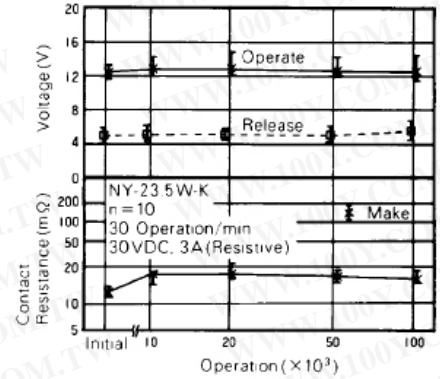
Mechanical Life Test



Electrical Life Test



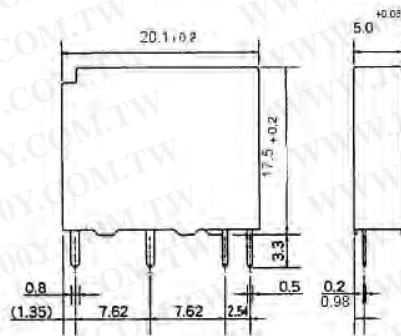
Electrical Life Test



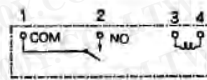
勝特力材料 886-3-5753170
 勝特力电子(上海) 86-21-34970699
 勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

■ DIMENSIONS

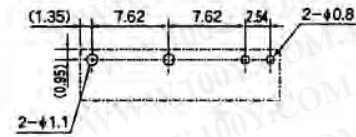
● Dimensions
NY type



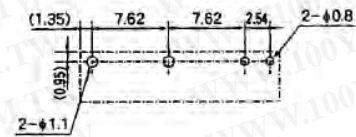
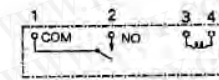
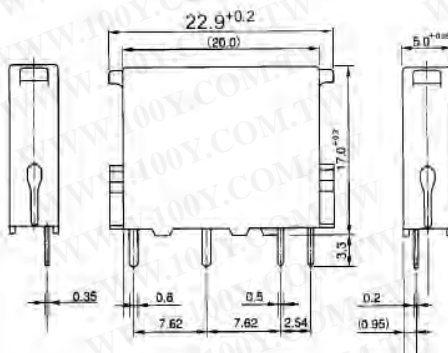
● Schematics
(BOTTOM VIEW)



● PC board mounting hole layout
(BOTTOM VIEW)

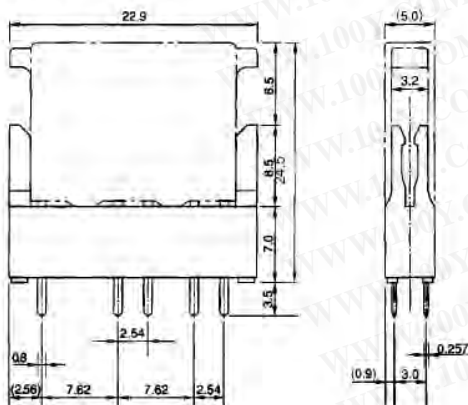


NYP type

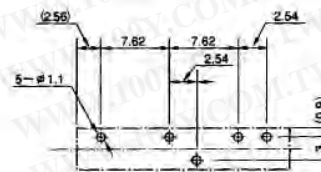


Unit: mm

■ SOCKET DIMENSIONS



■ SOCKET DRILLING PLAN



Unit: mm

■ NOTES

1. Socket ordering code. JL-5N
2. Standard IC socket is not recommended. Please use socket JL-5N.

RoHS Compliance and Lead Free Information

1. General Information

- All signal and power relays produced by Fujitsu Components are compliant with RoHS directive 2002/95EC including amendments.
- Cadmium as used in electrical contacts is exempted from the RoHS directives on October 21st, 2005. (Amendment to Directive 2002/95/EC)
- All of our signal and power relays are lead-free. Please refer to Lead-Free Status Info for older date codes at: <http://www.fujitsu.com/us/downloads/MICRO/fcai/relays/lead-free-letter.pdf>
- Lead free solder plating on relay terminals is Sn-3.0Ag-0.5Cu, unless otherwise specified. This material has been verified to be compatible with PbSn assembly process.

2. Recommended Lead Free Solder Profile

- Recommended solder Sn-3.0Ag-0.5Cu.

Flow Solder condition:

Pre-heating: maximum 120°C
Soldering: dip within 5 sec. at
260°C solder bath

Solder by Soldering Iron:

Soldering Iron
Temperature: maximum 360°C
Duration: maximum 3 sec.

勝特力材料 886-3-5753170
勝特力电子(上海) 86-21-34970699
勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

We highly recommend that you confirm your actual solder conditions

3. Moisture Sensitivity

- Moisture Sensitivity Level standard is not applicable to electromechanical relays, unless otherwise indicated.

4. Tin Whiskers

- Dipped SnAgCu solder is known as presenting a low risk to tin whisker development. No considerable length whisker was found by our in house test.

Fujitsu Components International Headquarter Offices

Japan

Fujitsu Component Limited
Gotanda-Chuo Building
3-5, Higashigotanda 2-chome, Shinagawa-ku
Tokyo 141, Japan
Tel: (81-3) 5449-7010
Fax: (81-3) 5449-2626
Email: promothq@ft.ed.fujitsu.com
Web: www.fcl.fujitsu.com

North and South America

Fujitsu Components America, Inc.
250 E. Caribbean Drive
Sunnyvale, CA 94089 U.S.A.
Tel: (1-408) 745-4900
Fax: (1-408) 745-4970
Email: components@us.fujitsu.com
Web: <http://us.fujitsu.com/components>

Europe

Fujitsu Components Europe B.V.
Diamantlaan 25
2132 WV Hoofddorp
Netherlands
Tel: (31-23) 5560910
Fax: (31-23) 5560950
Email: info@fceu.fujitsu.com
Web: emea.fujitsu.com/components/

Asia Pacific

Fujitsu Components Asia Ltd.
102E Pasir Panjang Road
#01-01 Citilink Warehouse Complex
Singapore 118529
Tel: (65) 6375-8560
Fax: (65) 6273-3021
Email: fcal@fcal.fujitsu.com
Web: <http://www.fujitsu.com/sg/services/micro/components/>

©2010 Fujitsu Components Europe B.V. All rights reserved. All trademarks or registered trademarks are the property of their respective owners.

The contents, data and information in this datasheet are provided by Fujitsu Component Ltd. as a service only to its user and only for general information purposes.

The use of the contents, data and information provided in this datasheet is at the users' own risk.

Fujitsu has assembled this datasheet with care and will endeavor to keep the contents, data and information correct, accurate, comprehensive, complete and up to date.

Fujitsu Components Europe B.V. and affiliated companies do however not accept any responsibility or liability on their behalf, nor on behalf of its employees, for any loss or damage, direct, indirect or consequential, with respect to this datasheet, its contents, data, and information and related graphics and the correctness, reliability, accuracy, comprehensiveness, usefulness, availability and completeness thereof.

Nor do Fujitsu Components Europe B.V. and affiliated companies accept on their behalf, nor on behalf of its employees, any responsibility or liability for any representation or warrant of any kind, express or implied, including warranties of any kind for merchantability or fitness for particular use, with respect to these datasheets, its contents, data, information and related graphics and the correctness, reliability, accuracy, comprehensiveness, usefulness, availability and completeness thereof. Rev. August 6, 2010

勝特力材料 886-3-5753170
勝特力电子(上海) 86-21-34970699
勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)