

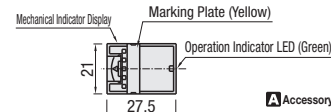
Universal Relays, Terminal Blocks

Soldered Terminals

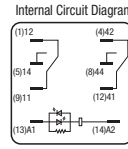
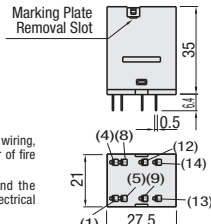
Universal Relays - Soldered Terminals



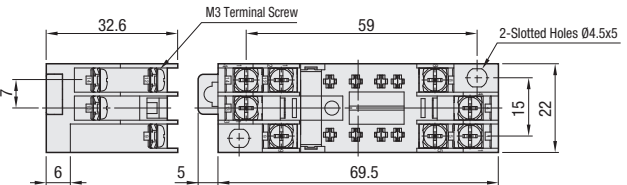
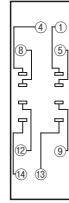
MURH



A Accessory
Socket for Relay 1 pc.
Spring Fitting 2 pcs.



Terminal Arrangement



Cautions for Safety

- Shut off the power before attaching, detaching, wiring, maintaining and examining. There may be danger of fire or electrical shock.
- Comply with the rated specification range and the specification. There may be danger of fire or electrical shock.
- Use wires suitable for the applied voltage and current. Tighten the terminal screws using appropriate torque.

| Part Number | Rated Coil *1 | | | | Number of Poles | Allowable Contact Current | Contact Rating | | | Unit Price | Volume Discount Rate |
|-------------|---------------|----------|-------------------------|----------------------|-----------------|---------------------------|------------------------------------|----------------------------|---|------------|----------------------|
| | Type | No. | Rated Current (mA) ±15% | Rated Voltage AC (V) | | | Coil Resistance (Ω) ±10% (at 20°C) | Contact Rating Voltage (V) | Allowable Contact Power (Resistance Load) | | |
| MURH | 10 | 9.2~11.0 | 7.8~9.0 | 100~110 | 2 Poles | 10A | AC250 DC30 | AC2500VA DC300W | 10A | | |
| | 20 | 4.6~5.5 | 4.0~4.6 | 200~220 | | | AC250 DC30 | | | | |

* Operating Properties of One Rated Coil (rated values at 20°C); Maximum Applied Voltage: 110%; Minimum Rated Operation: 80% or less; Return Voltage: 30% or more. ♪ For orders larger than indicated quantity, please check with WOS. Note) The rated current value includes the current of operation indicator LED.

Properties

| | | | |
|---------------------------|--|----------------------------|--|
| Contact Material | Ag Alloy | Maximum ON/OFF Frequency | Electrical: 1,800 times/h, Mechanical: 18,000 times/h |
| Contact Resistance *1 | 50mΩ or Less | Vibration Resistance | Endurance: Frequency 10 ~ 55Hz, Half Wave 0.5mm Malfunction: Frequency 10~55Hz, Half Wave 0.5mm |
| Minimum Operation Load *2 | DC24V, 5mA (Reference Value) | Impact Resistance | Endurance: 1,000m/s ² , Malfunction: 150m/s ² |
| Response Time *3 | 20ms or Less | Mechanical Durability | AC: 50 million times or more, DC: 100 million times or more. |
| Recovery Time *3 | 20ms or Less | Electrical Durability *3 | AC250V, Resistive Load 10A~100,00A, 5A~500,000 times. |
| Power Consumption | 0.9~1.2VA(60Hz) 1.1~1.4VA(50Hz) | Operating Ambient Temp. *4 | -55 ~ +60°C (No Freezing) |
| Insulation Resistance | 100MΩ or more DC500V mega | Operating Ambient Humidity | 5 ~ 85%RH (No Condensation) |
| Withstand Voltage | AC2500V, 1min (between the same pole contact circuit, AC1000V, 1min) | Mass (approx.) | 35g |



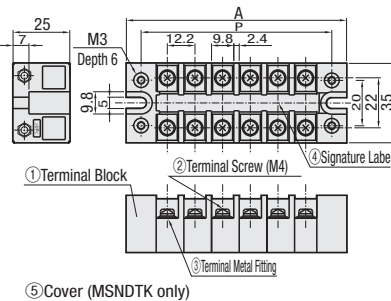
*1. Measurement Condition: DC5V, 1A, depending on the voltage descent method.
*2. Measurement Condition: The value at ON/OFF frequency 120 times/min. Failure modulus P level (Reference)
*3. Measurement Condition: When rated voltage is applied (at 20°C), Bounce is excluded.
*4. When 100% of rated voltage is applied.

Terminal Blocks



RoHS10

MSNDT MSNDTK (Cover Type)



Features

- The terminal block is made of special resin (unsaturated polyester resin), which can be used at high temperature.
- Use it when several heater lead wires are connected with the temperature controller.
- Although the use in atmosphere with temperature over 80°C causes product label to discolor and the terminal block to be loosened, there is no mechanical problem. Also, use heat resistant wires (more than 200°C) for wiring.
- Tighten the terminal screw regularly (approx. once a year).

| No. | Name of Parts | M Material | S Surface Treatment | Standards |
|-----|------------------------|-----------------------------|-----------------------------------|-----------|
| ① | Terminal Block | Unsaturated Polyester Resin | - | UL94V-0 |
| ② | Terminal Screw | Carbon Steel | Zinc Plating (Trivalent Chromate) | - |
| ③ | Terminal Metal Fitting | Brass | Nickel Plating | - |
| ④ | Signature Label | Fiber (White) | - | - |
| ⑤ | Cover (MSNDTK only) | Phenol Plate (Black) | - | - |

♪ MSNDTK (Cover Type) is included with 4 pcs. of M3 screws.

| Part Number | Type | No. | A | P | Terminal Screws | Mass (g) | MSNDT | | MSNDTK | |
|-----------------|------|-------|-------|-----|-----------------|----------|------------|----------------------|------------|----------------------|
| | | | | | | | Unit Price | Volume Discount Rate | Unit Price | Volume Discount Rate |
| MSNDT MSNDTK | 2 | 48.5 | 35.5 | 4 | 72 | 79 | Qty. 1 ~ 9 | 10~20 | Qty. 1 ~ 9 | 10~20 |
| | 3 | 60.5 | 47.5 | 6 | 91 | 99 | | | | |
| | 4 | 73 | 60 | 8 | 110 | 119 | | | | |
| | 6 | 97 | 84 | 12 | 148 | 159 | | | | |
| | 8 | 121.5 | 108.5 | 16 | 187 | 201 | | | | |
| 10 | 146 | 133 | 20 | 225 | 241 | | | | | |

♪ No. indicates number of poles.

♪ For orders larger than indicated quantity, please check with WOS.

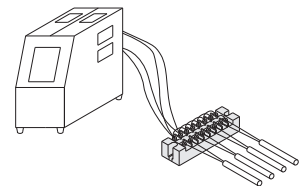
Rating and Performance

| | | | | | | | |
|---------------------------------|---|---------------|-----|-------------------|------------------------------|----------------|--|
| Rated Insulation Voltage | 250V | Rated Current | 20A | Applicable Wire | 5.5mm ² | Terminal Screw | M4 (Recommended Tightening Torque: 1.4 ~ 1.8N · m) |
| Insulation Resistance | DC500V mega | 100MΩ or more | | Withstand Voltage | AC2000V, Normal for 1 minute | | |
| Operating Temp., Humidity Range | -10~150°C, 45~85%RH (No Freezing or Condensation) | | | | | | |
| Conforming Standard | JIS C 2811 Industrial Terminal Block | | | | | | |

♪ Use under atmospheric pressure (at an altitude 2,000m or less).



One temperature controller can be connected to several heaters.



♪ Two crimping terminal can be used for one terminal.