

# General-purpose Relay

# MY

## Versatile, Multi-featured, Miniature Power Relay for Sequence Control and Power Switching Applications

- Models with lockable test buttons now available.
- Multiple features available, including operation indicators (mechanical and LED indicators), lockable test button, built-in diode and CR (surge suppression), bifurcated contacts, etc.
- Environment-friendly cadmium-free contacts.
- Wide range of Sockets (PY, PYF Series) and optional parts.
- Max. Switching Current: 2-pole: 10 A, 4-pole: 5 A
- Provided with nameplate.
- RoHS Complaint.



## Ordering Information

### ■ Relays

#### Standard Coil Polarity

| Type                                             | Contact form      | Model                           |                                             |                       |
|--------------------------------------------------|-------------------|---------------------------------|---------------------------------------------|-----------------------|
|                                                  |                   | Plug-in socket/solder terminals |                                             |                       |
|                                                  |                   | Standard with LED indicator     | With LED indicator and lockable test button | Without LED indicator |
| Standard                                         | DPDT              | MY2N                            | MY2IN                                       | MY2                   |
|                                                  | 4PDT              | MY4N                            | MY4IN                                       | MY4                   |
|                                                  | 4PDT (bifurcated) | MY4ZN                           | MY4ZIN                                      | MY4Z                  |
| With built-in diode (DC only)                    | DPDT              | MY2N-D2                         | MY2IN-D2                                    | ---                   |
|                                                  | 4PDT              | MY4N-D2                         | MY4IN-D2                                    | ---                   |
|                                                  | 4PDT (bifurcated) | MY4ZN-D2                        | MY4ZIN-D2                                   | ---                   |
| With built-in CR (220/240 VAC, 110/120 VAC only) | DPDT              | MY2N-CR                         | MY2IN-CR                                    | ---                   |
|                                                  | 4PDT              | MY4N-CR                         | MY4IN-CR                                    | ---                   |
|                                                  | 4PDT (bifurcated) | MY4ZN-CR                        | MY4ZIN-CR                                   | ---                   |

#### Reverse Coil Polarity

| Type                          | Contact form      | Model                           |                                             |
|-------------------------------|-------------------|---------------------------------|---------------------------------------------|
|                               |                   | Plug-in socket/solder terminals |                                             |
|                               |                   | With LED indicator              | With LED indicator and lockable test button |
| Standard (DC only)            | DPDT              | MY2N1                           | MY2IN1                                      |
|                               | 4PDT              | MY4N1                           | MY4IN1                                      |
|                               | 4PDT (bifurcated) | MY4ZN1                          | MY4ZIN1                                     |
| With built-in diode (DC only) | DPDT              | MY2N1-D2                        | MY2IN1-D2                                   |
|                               | 4PDT              | MY4N1-D2                        | MY4IN1-D2                                   |
|                               | 4PDT (bifurcated) | MY4ZN1-D2                       | MY4ZIN1-D2                                  |

**Note:** 1. When ordering, add the rated coil voltage to the model number(s), followed by "(S)". Rated coil voltages are given in the coil ratings table.  
Example: MY2 AC12(S)

Rated coil voltage

2. Arc barrier standard on all four-pole relays.
3. Other models also available, such as, three-pole versions, flangemount, PCB, etc. Contact your Omron Representative for details.

# Specifications

## ■ Coil Ratings

| Rated voltage |           | Rated current |              | Coil resistance | Inductance (reference value) |         | Must operate | Must release | Max. voltage | Power consumption (approx.) |
|---------------|-----------|---------------|--------------|-----------------|------------------------------|---------|--------------|--------------|--------------|-----------------------------|
|               |           | 50 Hz         | 60 Hz        |                 | Arm. OFF                     | Arm. ON |              |              |              |                             |
| AC            | 6 V*      | 214.1 mA      | 183 mA       | 12.2 Ω          | 0.04 H                       | 0.08 H  | 80% max.     | 30% min.     | 110%         | 1.0 to 1.2 VA (60 Hz)       |
|               | 12 V      | 106.5 mA      | 91 mA        | 46 Ω            | 0.17 H                       | 0.33 H  |              |              |              |                             |
|               | 24 V      | 53.8 mA       | 46 mA        | 180 Ω           | 0.69 H                       | 1.30 H  |              |              |              |                             |
|               | 48/50 V*  | 24.7/25.7 mA  | 21.1/22.0 mA | 788 Ω           | 3.22 H                       | 5.66 H  |              |              |              |                             |
|               | 110/120 V | 9.9/10.8 mA   | 8.4/9.2 mA   | 4,430 Ω         | 19.20 H                      | 32.1 H  |              |              |              |                             |
|               | 220/240 V | 4.8/5.3 mA    | 4.2/4.6 mA   | 18,790 Ω        | 83.50 H                      | 136.4 H |              |              |              |                             |
| DC            | 6 V*      | 151 mA        |              | 39.8 Ω          | 0.17 H                       | 0.33 H  | 10% min.     |              |              | 0.9 W                       |
|               | 12 V      | 75 mA         |              | 160 Ω           | 0.73 H                       | 1.37 H  |              |              |              |                             |
|               | 24 V      | 37.7 mA       |              | 636 Ω           | 3.20 H                       | 5.72 H  |              |              |              |                             |
|               | 48 V*     | 18.8 mA       |              | 2,560 Ω         | 10.60 H                      | 21.0 H  |              |              |              |                             |
|               | 100/110 V | 9.0/9.9 mA    |              | 11,100 Ω        | 45.60 H                      | 86.2 H  |              |              |              |                             |
|               |           |               |              |                 |                              |         |              |              |              |                             |

- Note:** 1. The rated current and coil resistance are measured at a coil temperature of 23°C with tolerances of +15%/–20% for rated currents and ±15% for DC coil resistance.  
2. Performance characteristic data are measured at a coil temperature of 23°C.  
3. AC coil resistance and impedance are provided as reference values (at 60 Hz).  
4. Power consumption drop was measured for the above data. When driving transistors, check leakage current and connect a bleeder resistor if required.  
5. Rated voltage denoted by “\*” will be manufactured upon request. Ask your OMRON representative.

## ■ Contact Ratings

| Item                    | 2-pole                      |                                         | 4-pole                      |                                         | 4-pole (bifurcated)         |                                         |
|-------------------------|-----------------------------|-----------------------------------------|-----------------------------|-----------------------------------------|-----------------------------|-----------------------------------------|
|                         | Resistive load (cosφ = 1)   | Inductive load (cosφ = 0.4, L/R = 7 ms) | Resistive load (cosφ = 1)   | Inductive load (cosφ = 0.4, L/R = 7 ms) | Resistive load (cosφ = 1)   | Inductive load (cosφ = 0.4, L/R = 7 ms) |
| Rated load              | 5 A, 250 VAC<br>5 A, 30 VDC | 2 A, 250 VAC<br>2 A, 30 VDC             | 3 A, 250 VAC<br>3 A, 30 VDC | 0.8 A, 250 VAC<br>1.5 A, 30 VDC         | 3 A, 250 VAC<br>3 A, 30 VDC | 0.8 A, 250 VAC<br>1.5 A, 30 VDC         |
| Carry current           | 10 A (see note)             |                                         | 5 A (see note)              |                                         |                             |                                         |
| Max. switching voltage  | 250 VAC<br>125 VDC          |                                         | 250 VAC<br>125 VDC          |                                         |                             |                                         |
| Max. switching current  | 10 A                        |                                         | 5 A                         |                                         |                             |                                         |
| Max. switching capacity | 2,500 VA<br>300 W           | 1,250 VA<br>300 W                       | 1,250 VA<br>150 W           | 500 VA<br>150 W                         | 1,250 VA<br>150 W           | 500 VA<br>150 W                         |
| Min. permissible load*  | 5 VDC, 1 mA                 |                                         | 1 VDC, 1 mA                 |                                         | 1 VDC, 100 μA               |                                         |

\* Reference value.

**Note:** Do not exceed the carry current of a Socket in use.

## ■ Characteristics

|                                     |                   |                                                                                                        |
|-------------------------------------|-------------------|--------------------------------------------------------------------------------------------------------|
| <b>Contact resistance</b>           |                   | 100 mΩ max.                                                                                            |
| <b>Operate time</b>                 |                   | 20 ms max.                                                                                             |
| <b>Release time</b>                 |                   | 20 ms max.                                                                                             |
| <b>Max. operating frequency</b>     | <b>Mechanical</b> | 18,000 operations/hr                                                                                   |
|                                     | <b>Electrical</b> | 1,800 operations/hr (under rated load)                                                                 |
| <b>Insulation resistance</b>        |                   | 1,000 MΩ min. (at 500 VDC)                                                                             |
| <b>Dielectric withstand voltage</b> |                   | 2,000 VAC, 50/60 Hz for 1.0 min (1,000 VAC between contacts of same polarity)                          |
| <b>Vibration resistance</b>         |                   | Destruction: 10 to 55 Hz, 1.0 mm double amplitude<br>Malfunction: 10 to 55 Hz, 1.0 mm double amplitude |
| <b>Shock resistance</b>             |                   | Destruction: 1,000 m/s <sup>2</sup> (approx. 100G)<br>Malfunction: 200 m/s <sup>2</sup> (approx. 20G)  |
| <b>Life expectancy</b>              |                   | See the following table.                                                                               |
| <b>Ambient temperature</b>          | <b>Operating</b>  | -55°C to 70°C (-67°F to 158°F) with no icing (see note)                                                |
| <b>Ambient humidity</b>             | <b>Operating</b>  | 5% to 85% RH                                                                                           |
| <b>Weight</b>                       |                   | Approx. 35 g                                                                                           |

**Note:** The values given above are initial values.

## ■ Life Expectancy Characteristics

| <b>Pole</b>         | <b>Mechanical life<br/>(at 18,000 operations/hr)</b> | <b>Electrical life<br/>(at 1,800 operations/hr under rated load)</b> |
|---------------------|------------------------------------------------------|----------------------------------------------------------------------|
| 2-pole              | AC: 50,000,000 operations min.                       | 500,000 operations min.                                              |
| 4-pole              | DC: 100,000,000 operations min.                      | 200,000 operations min.                                              |
| 4-pole (bifurcated) | 20,000,000 operations min.                           | 100,000 operations min.                                              |

## ■ Approved Standards

VDE, UL, CSA, CE  
(CE marking is provided only on non-PCB terminal versions)

## ■ Precautions

### Connections

Do not reverse polarity when connecting DC-operated Relays with built-in diodes or indicators or high-sensitivity DC-operated Relays.

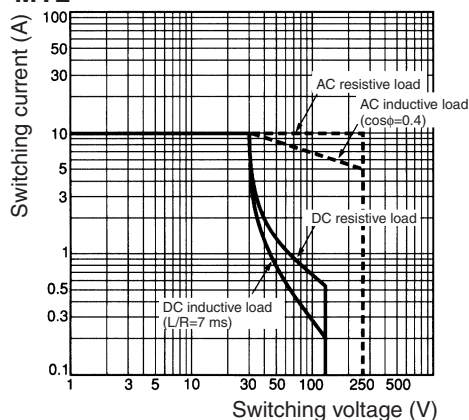
### Mounting

Whenever possible, mount Relays so that it is not subject to vibration or shock in the same direction as that of contact movement.

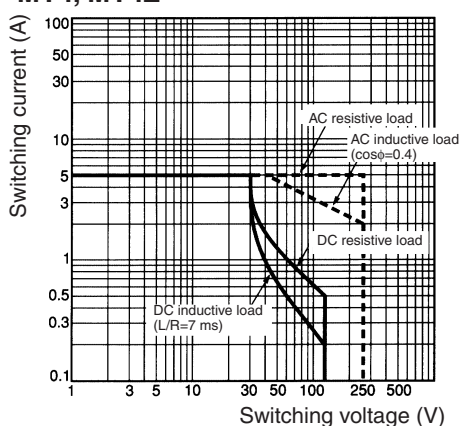
# Engineering Data

## Maximum Switching Power

MY2

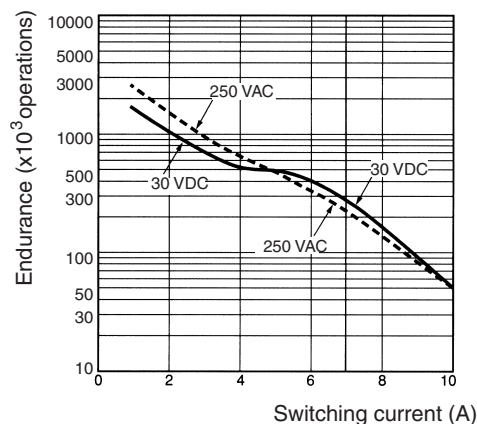


MY4, MY4Z

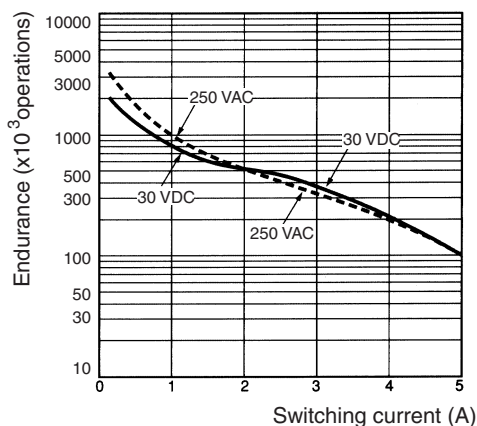


## Endurance

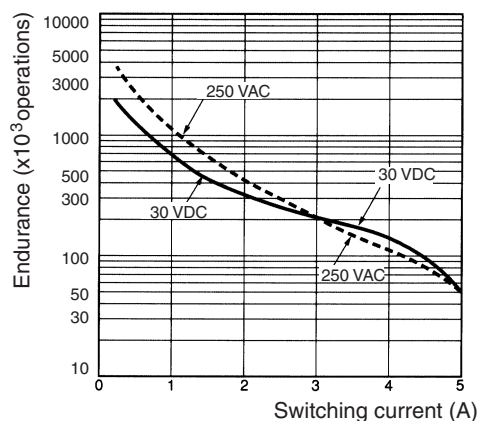
MY2 (Resistive Loads)



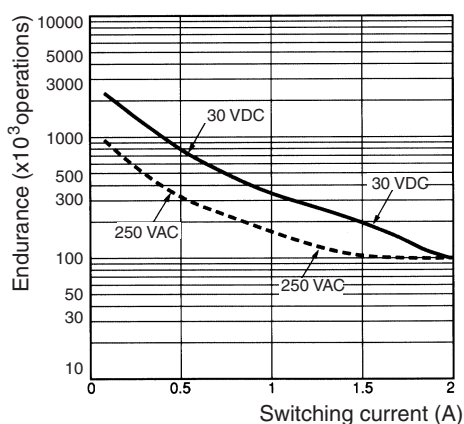
MY2 (Inductive Loads)



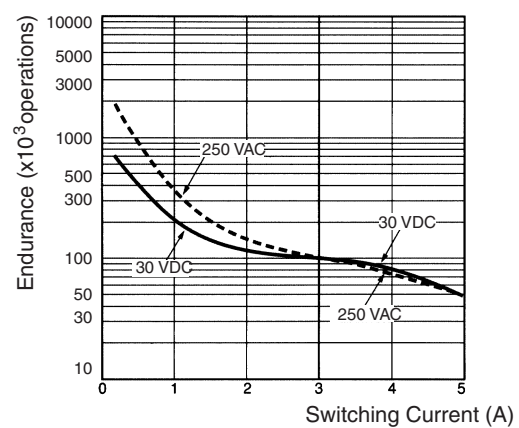
MY4 (Resistive Loads)



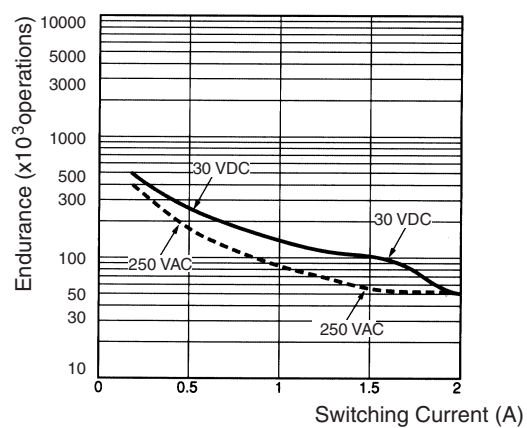
MY4 (Inductive Loads)



# MY4Z (Resistive Loads)



# MY4Z (Inductive Loads)

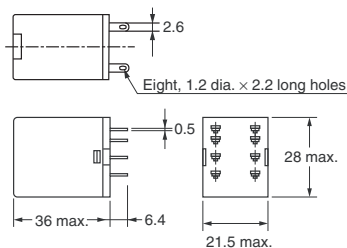
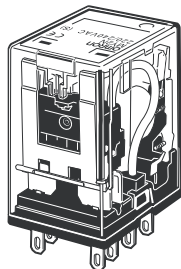


# Dimensions

**Note:** All units are in millimeters unless otherwise indicated.

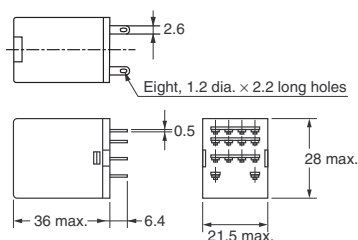
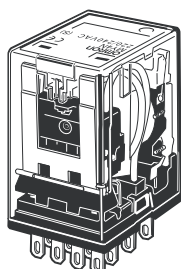
## ■ 2-Pole Models

MY2N



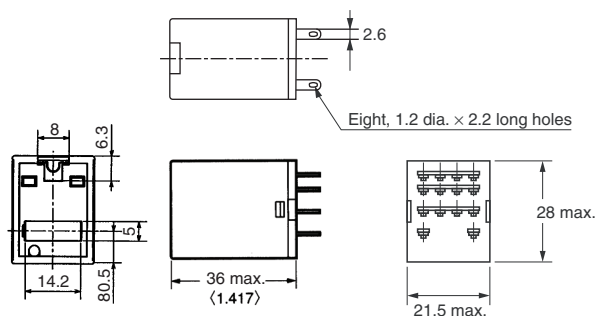
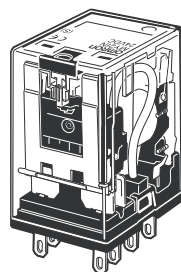
## ■ 4-Pole Models

MY4N

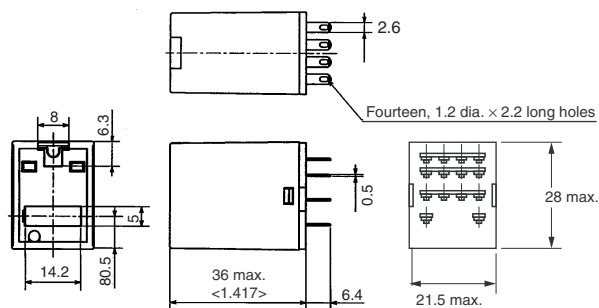
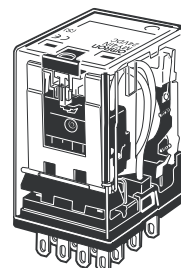


## ■ Models with Test Button

MY2IN

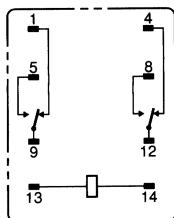


MY4IN

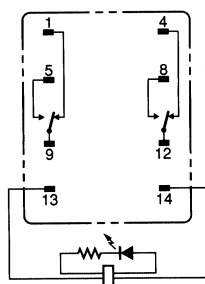


# ■ Terminal Arrangement/Internal Connections (Bottom View)

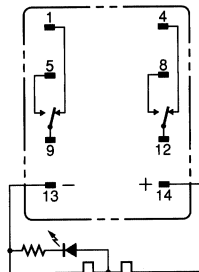
MY2



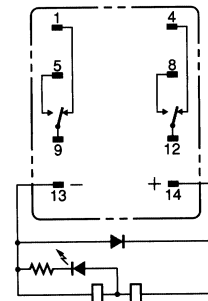
MY2N/MY2IN  
(AC Models)



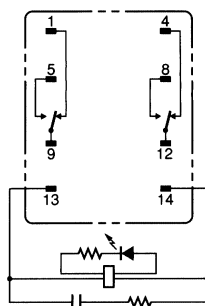
MY2N/MY2IN  
(DC Models)



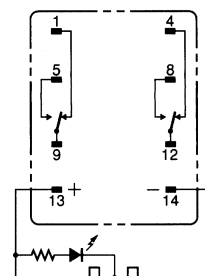
MY2N-D2/MY2IN-D2  
(DC Models Only)



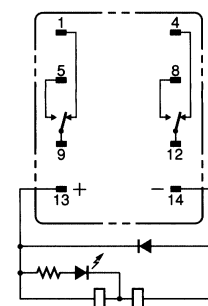
MY2N-CR/MY2IN-CR  
(AC Models Only)



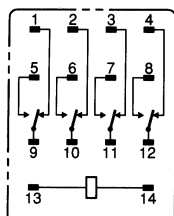
MY2N1/MY2IN1  
(DC Models Only)



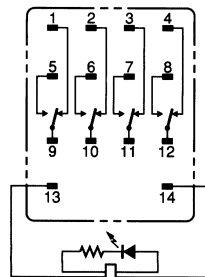
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(DC Models Only)



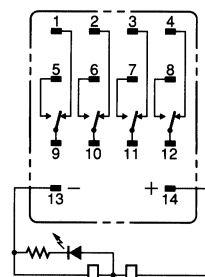
MY4(Z)



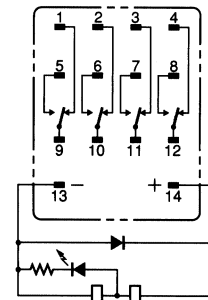
MY4(Z)N/MY4(Z)IN  
(AC Models)



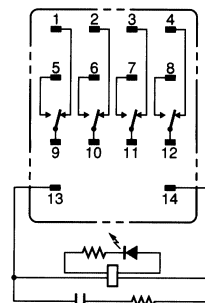
MY4(Z)N/MY4(Z)IN  
(DC Models)



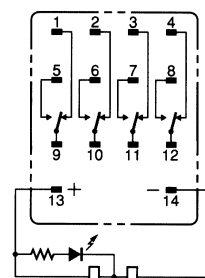
MY4(Z)N-D/MY4(Z)IN-D2  
(DC Models Only)



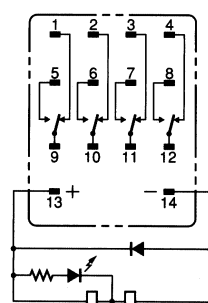
MY4(Z)N-CR/MY4(Z)IN-CR  
(AC Models Only)



MY4(Z)N1/MY4(Z)IN1  
(DC Models Only)



MY4(Z)N1-D2/MY4(Z)N1-D2  
(DC Models Only)



## Accessories (order separately)

### ■ Track-mounted Screwless Clamp Terminal Sockets

| Item                 | Model                   |           |           |           |
|----------------------|-------------------------|-----------|-----------|-----------|
|                      | 4-pole                  |           | 2-pole    |           |
| Socket               | PYF14S                  |           | PYF08S    |           |
| Clip & release lever | PYCM-14S                |           | PYCM-08S  |           |
| Nameplate            | R99-11 Nameplate for MY |           |           |           |
| Socket bridge        | PYDM-14SR               | PYDM-14SB | PYDM-08SR | PYDM-08SB |

**Note:** For complete specifications, see the datasheet at Omron's Knowledge Center on our website: [www.knowledge.omron.com](http://www.knowledge.omron.com).

### ■ Sockets

| Poles | Front-connecting socket (DIN-track/screw mounting) | Back-connecting socket |           | PCB terminals |
|-------|----------------------------------------------------|------------------------|-----------|---------------|
|       |                                                    | Solder terminals       |           |               |
|       |                                                    | Without clip           | With clip |               |
| 2     | PYF08A-E                                           | PY08                   | PY08-Y1   | PY08-02       |
|       | PYF08A-N                                           |                        |           |               |
| 4     | PYF14A-E                                           | PY14                   | PY14-Y1   | PY14-02       |
|       | PYF14A-N                                           |                        |           |               |

### ■ Socket Specifications

| Item                            | Pole | Model                 | Carry current    | Dielectric withstand voltage | Insulation resistance (see note 2) |
|---------------------------------|------|-----------------------|------------------|------------------------------|------------------------------------|
| Screwless clamp terminal socket | 2    | PYF08S                | 10 A             | 2,000 VAC, 1 min             | Less than 1,000 MΩ                 |
|                                 | 4    | PYF14S                | 5 A              |                              |                                    |
| Track-mounted socket            | 2    | PYF08A-E              | 7 A              | 2,000 VAC, 1 min             | 1,000 MΩ min.                      |
|                                 |      | PYF08A-N (see note 3) | 7 A (see note 4) |                              |                                    |
|                                 | 4    | PYF14A-E              | 5 A              |                              |                                    |
|                                 |      | PYF14A-N (see note 3) | 5 A (see note 4) |                              |                                    |
| Back-connecting socket          | 2    | PY08(-Y1)             | 7 A              | 1,500 VAC, 1 min             | 100 MΩ min.                        |
|                                 |      | PY08-02               |                  |                              |                                    |
|                                 | 4    | PY14(-Y1)             | 3 A              |                              |                                    |
|                                 |      | PY14-02               |                  |                              |                                    |

**Note:** 1. The values given above are initial values.

2. The values for insulation resistance were measured at 500 V at the same place as the dielectric strength.

3. The maximum operating ambient temperature for the PYF08A-N and PYF14A-N is 55°C.

4. When using the PYF08A-N or PYF14A-N at an operating ambient temperature exceeding 40°C, reduce the current to 60%.

5. The MY2(S) can be used at 70°C with a carry current of 7 A.

### ■ Socket Hold-down Clip Pairing

| Relay type                 | Poles | Front-connecting socket (DIN-track/screw mounting) |        | Back-connecting socket |                 |               |                 |
|----------------------------|-------|----------------------------------------------------|--------|------------------------|-----------------|---------------|-----------------|
|                            |       |                                                    |        | Solder terminals       |                 | PCB terminals |                 |
|                            |       | Socket                                             | Clip   | Socket                 | Clip            | Socket        | Clip            |
| Without 2-pole test button | 2     | PYF08A-E                                           | PYC-A1 | PY08                   | PYC-P<br>PYC-P2 | PY08-02       | PYC-P<br>PYC-P2 |
|                            |       | PYF08A-N                                           |        |                        |                 |               |                 |
| Without 2-pole test button | 4     | PYF14A-E                                           | PYC-A1 | PY14                   | PYC-P<br>PYC-P2 | PY14-02       | PYC-P<br>PYC-P2 |
|                            |       | PYF14A-N                                           |        |                        |                 |               |                 |
| 2-pole test button         | 2     | PYF08A-E                                           | PYC-E1 | PY08                   | PYC-P2          | PY08-02       | PYC-P2          |
|                            |       | PYF08A-N                                           |        |                        |                 |               |                 |



## ■ Mounting Plates for Sockets

| Socket model | For 1 socket | For 18 sockets | For 36 sockets |
|--------------|--------------|----------------|----------------|
| PY08, PY14   | PYP-1        | PYP-18         | PYP-36         |

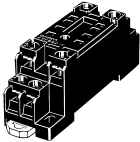
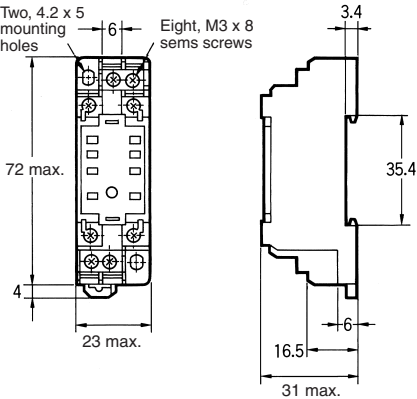
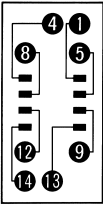
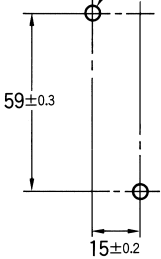
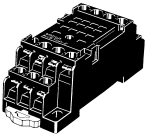
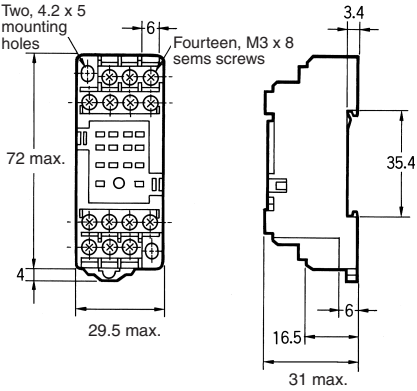
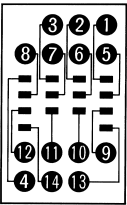
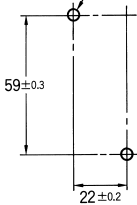
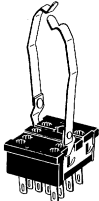
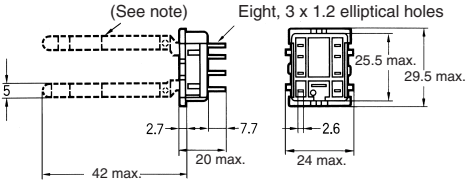
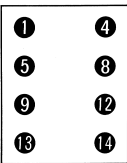
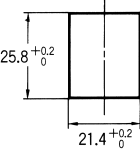
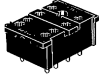
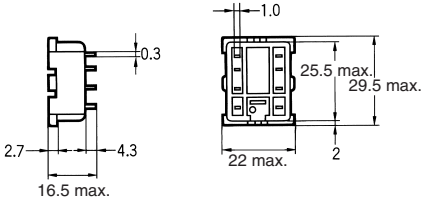
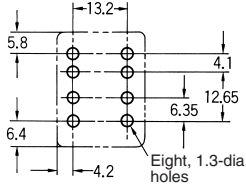
**Note:** PYP-18 and PYP-36 can be cut into any desired length in accordance with the number of Sockets.

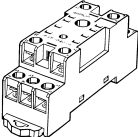
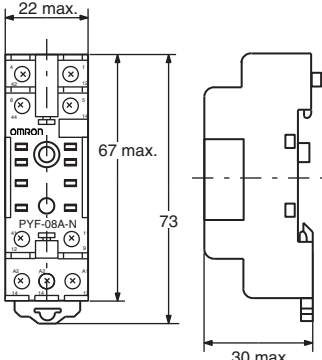
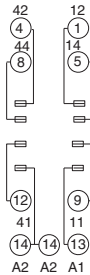
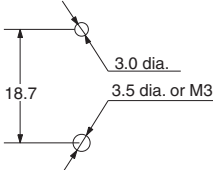
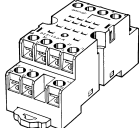
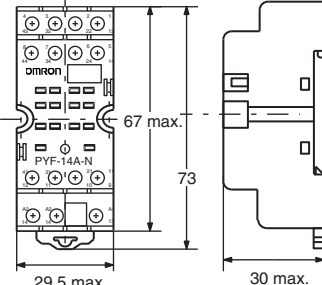
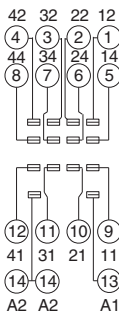
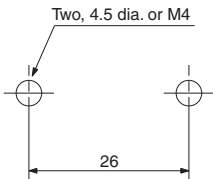
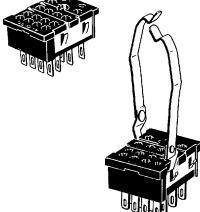
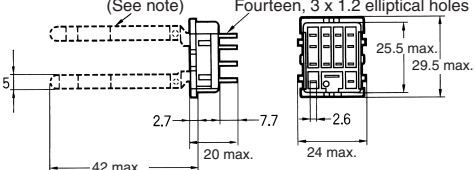
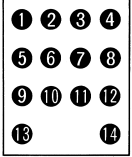
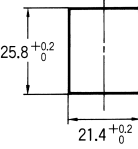
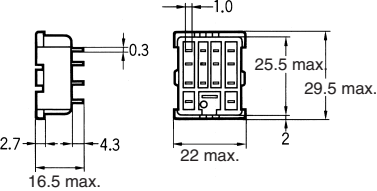
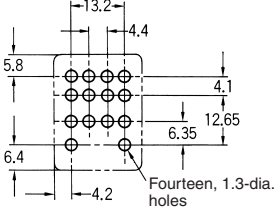
## ■ DIN Rail Track and Accessories

| Description                       | Model               |
|-----------------------------------|---------------------|
| Mounting rail (length = 500 mm)   | PFP-50N             |
| Mounting rail (length = 1,000 mm) | PFP-100N, PFP-100N2 |
| End Plate                         | PFP-M               |
| Spacer                            | PFP-S               |

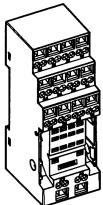
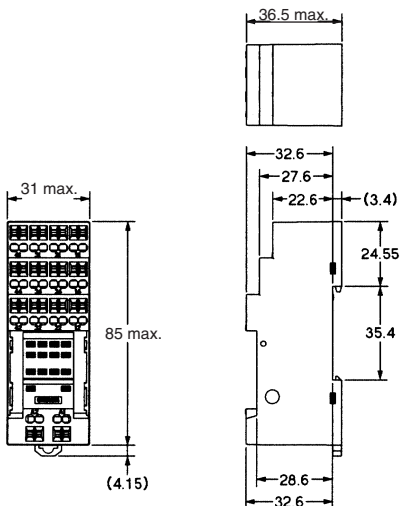
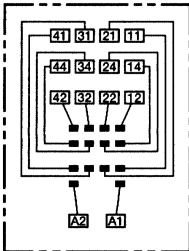
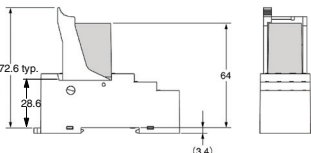
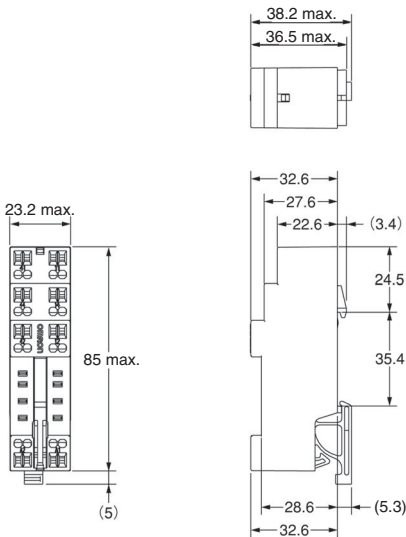
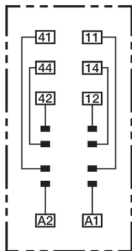
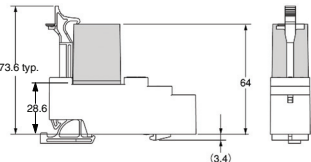
# Dimensions

Unit: mm (inch)

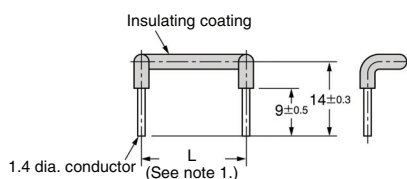
| Socket                                                                                                                                                                                         | Dimensions                                                                                                                                                                         | Terminal arrangement/<br>internal connections<br>(top view)                          | Mounting holes                                                                                                                                                                                                                           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>PYF08A-E</b><br>                                                                                           |                                                                                                   |    | <p>Two, M3, M4, or 4.5-dia. holes</p>  <p>(TOP VIEW)</p> <p><b>Note:</b> Track mounting is also possible. Refer to page 12 for supporting tracks.</p> |
| <b>PYF14A-E</b><br>                                                                                           |                                                                                                  |   | <p>Two, M3, M4, or 4.5-dia. holes</p>  <p>(TOP VIEW)</p> <p><b>Note:</b> Track mounting is also possible. Refer to page 12 for supporting tracks.</p> |
| <b>PY08/PY08-Y1</b><br>  | <p>(See note)</p>  <p><b>Note:</b> The PY08-Y1 includes sections indicated by dotted lines.</p> |  |                                                                                                                                                     |
| <b>PY08-02</b><br>                                                                                          |                                                                                                 |                                                                                      |                                                                                                                                                     |

| Socket                                                                                                    | Dimensions                                                                                                                                                      | Terminal arrangement/<br>internal connections<br>(top view)                          | Mounting holes                                                                                                                                                                   |
|-----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>PYF08A-N</b><br>      |                                                                                |    |  <p><b>Note:</b> Track mounting is also possible. Refer to page 12 for supporting tracks.</p> |
| <b>PYF14A-N</b><br>      |                                                                                |    |  <p><b>Note:</b> Track mounting is also possible. Refer to page 12 for supporting tracks.</p> |
| <b>PY14/PY14-Y1</b><br> |  <p><b>Note:</b> The PY14-Y1 includes sections indicated by dotted lines.</p> |  |                                                                                              |
| <b>PY14-02</b><br>     |                                                                              |                                                                                      |                                                                                             |

**Note:** Use a panel with plate thickness of 1 to 2 mm for mounting the Sockets.

| Socket                                                                                              | Dimensions                                                                         | Terminal arrangement/<br>internal connections<br>(top view)                                                                                                                                                                                   | Mounting height (with lever)                                                                                                  |
|-----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| <b>PYF14S</b><br>  |   |  <p><b>Note:</b> Pole-2 and pole-3 cannot be used with the MY2 type. Use pole-1 (terminal numbers 11, 14, 12) and pole-4 (terminal numbers 41, 44, 42).</p> |  <p><b>Note:</b> Track mounting only.</p>  |
| <b>PYF08S</b><br> |  |                                                                                                                                                            |  <p><b>Note:</b> Track mounting only.</p> |

## Socket Bridge



| Model number | Length L (mm) | Color of insulating coating |
|--------------|---------------|-----------------------------|
| PYDM-14SR    | 27.5±0.3      | Red                         |
| PYDM-14SB    |               | Blue                        |
| PYDM-08SR    | 19.7±0.3      | Red                         |
| PYDM-08SB    |               | Blue                        |

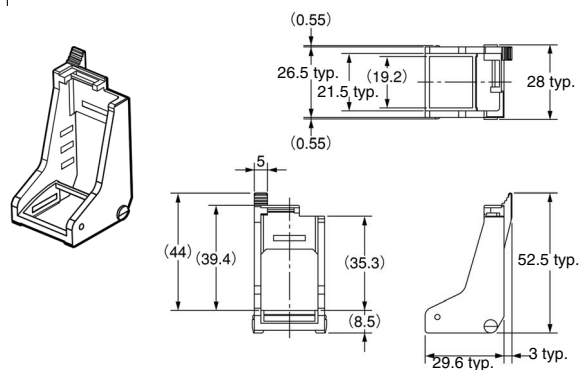
- Note:** 1. The relationship between the model number, the length L, and the color of the insulating coating is shown above.
2. The insulating coating must be able to withstand a voltage of 1,500 V for 1 minute. Use either PE or PA as the material of the insulating coating.

| Item                          | Characteristic         |
|-------------------------------|------------------------|
| Rated ON current              | 10 A                   |
| Rated insulation voltage      | 250 VAC                |
| Temperature rise              | 35°C max.              |
| Dielectric strength           | 1,500 VAC for 1 minute |
| Ambient operating temperature | -55 to 70°C            |

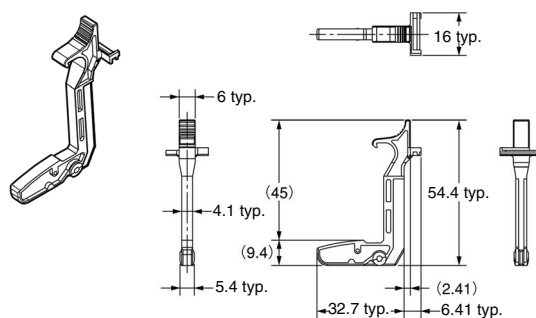
3. The positions of the ends of the insulating coating must not vary more than 0.5 mm.
4. The characteristics of the socket bridge are shown above.

# ■ Clip and Release Levers

PYCM-14S



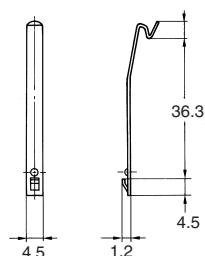
PYCM-08S



# ■ Hold-down Clips

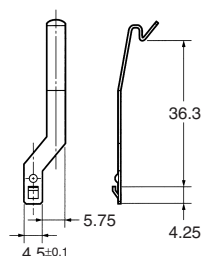
PYC-A1

(2 pcs per set)

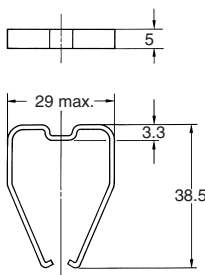


PYC-E1

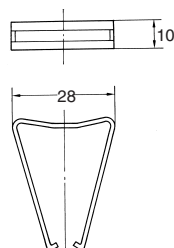
(2 pcs per set)



PYC-P

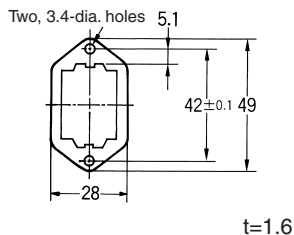


PYC-P2

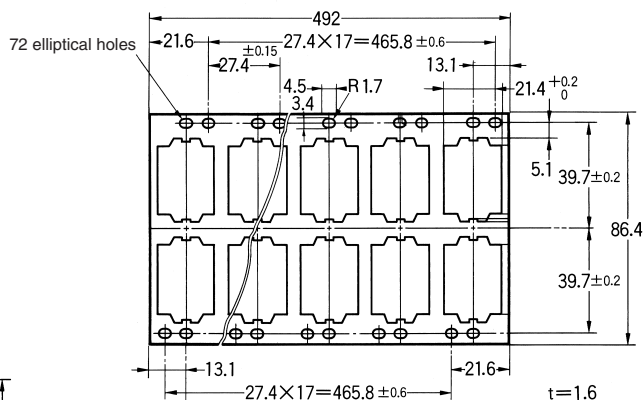


## ■ Mounting Plates for Back-connecting Sockets

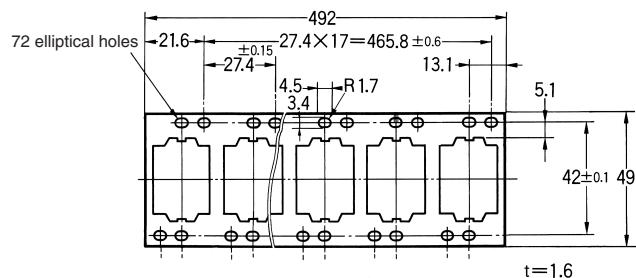
PYP-1



PYP-36



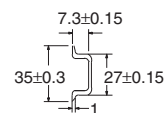
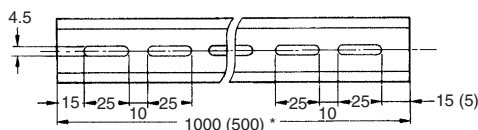
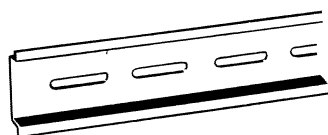
PYP-18



## ■ Mounting Track and Accessories

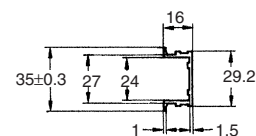
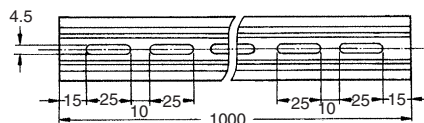
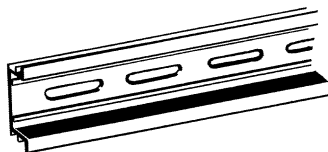
### DIN Rail Track

PFP-50N/PFP-100N



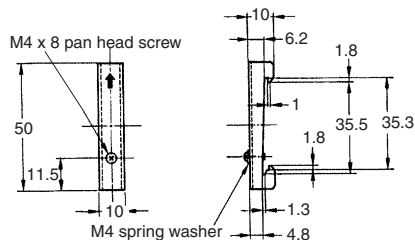
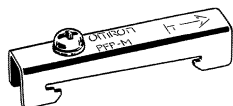
**Note:** The figure in the parentheses is for PFP-50N.

PFP-100N2



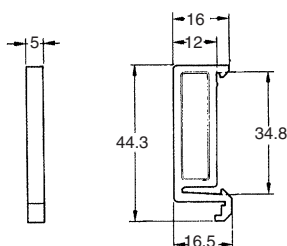
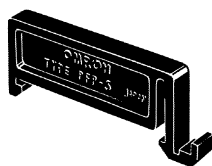
### End Plate

PFP-M



## Spacer

PFP-S



## ■ Approved Standards

### VDE Recognitions (File No. 112467UG, IEC 255, VDE 0435)

| No. of poles | Coil ratings                                                  | Contact ratings                                           | Operations                                     |
|--------------|---------------------------------------------------------------|-----------------------------------------------------------|------------------------------------------------|
| 2            | 6, 12, 24, 48/50, 100/110<br>110/120, 200/220,<br>220/240 VAC | 10 A, 250 VAC ( $\cos\phi=1$ )<br>10 A, 30 VDC (L/R=0 ms) | $10 \times 10^3$                               |
| 4            | 6, 12, 24, 48, 100/110,<br>125 VDC                            | 5 A, 250 VAC ( $\cos\phi=1$ )<br>5 A, 30 VDC (L/R=0 ms)   | $100 \times 10^3$<br>MY4Z AC; $50 \times 10^3$ |

### UL Recognized (File No. 41515)

| No. of poles | Coil ratings                 | Contact ratings                                                                                             | Operations      |
|--------------|------------------------------|-------------------------------------------------------------------------------------------------------------|-----------------|
| 2            | 6 to 240 VAC<br>6 to 125 VDC | 10 A, 30 VDC (general purpose), 40°C<br>10 A, 250 VAC (general purpose), 40°C                               | $6 \times 10^3$ |
| 4            |                              | 5 A, 30 VDC (general purpose), 40°C (Same polarity)<br>5 A, 250 VAC (general purpose), 40°C (Same polarity) |                 |

### CSA Certified (File No. LR31928)

| No. of poles | Coil ratings                 | Contact ratings                                             | Operations      |
|--------------|------------------------------|-------------------------------------------------------------|-----------------|
| 2            | 6 to 240 VAC<br>6 to 125 VDC | 10 A, 30 VDC<br>10 A, 250 VAC                               | $6 \times 10^3$ |
| 4            |                              | 5 A, 250 VAC (same polarity)<br>5 A, 30 VDC (same polarity) |                 |

### LR Recognitions (File No. 98/10014)

| No. of poles | Coil ratings                 | Contact ratings                                                                                           | Operations       |
|--------------|------------------------------|-----------------------------------------------------------------------------------------------------------|------------------|
| 2            | 6 to 240 VAC<br>6 to 125 VDC | 10 A, 250 VAC (resistive)<br>2 A, 250 VAC (PF0.4)<br>10 A, 30 VDC (resistive)<br>2 A, 30 VDC (L/R=7 ms)   | $50 \times 10^3$ |
| 4            |                              | 5 A, 250 VAC (resistive)<br>0.8 A, 250 VAC (PF0.4)<br>5 A, 30 VDC (resistive)<br>1.5 A, 30 VDC (L/R=7 ms) | $50 \times 10^3$ |

### SEV Listings (File No. 99.5 50902.01)

| No. of poles | Coil ratings                 | Contact ratings               | Operations                                     |
|--------------|------------------------------|-------------------------------|------------------------------------------------|
| 2            | 6 to 240 VAC<br>6 to 125 VDC | 10 A, 250 VAC<br>10 A, 30 VDC | $10 \times 10^3$                               |
| 4            |                              | 5 A, 250 VAC<br>5 A, 30 VDC   | $100 \times 10^3$<br>MY4Z AC; $50 \times 10^3$ |

- Note:** 1. The rated values approved by each of the safety standards (eg., UL, CSA, VDE, and SEV) may be different from the performance characteristics individually defined in this catalog.  
2. In the interest of product improvement, specifications are subject to change.

# PYF-S Installation Notes

## ■ Tools

A flat-blade screwdriver should be used to mount the cables.

### Applicable Screwdriver

- Flat-blade, Parallel-tip, 2.5 mm diameter (3.0 mm max.)

- Flat-blade, Parallel-tip



- Flat-blade, Flared-tip



**Cannot be used.**

Examples: FACOM AEF.2.5 × 75E (AEF. 3 × 75E)  
 VESSEL No. 9900-(-)2.5 × 75 (No. 9900-(-)3 × 100)  
 WAGO 210-119  
 WIHA 260/2.5 × 40 (260/3 × 50)

\*Chamfering the tip of the driver improves insertion when used as an exclusive tool.

## ■ Applicable Wires

### Applicable Wire Sizes

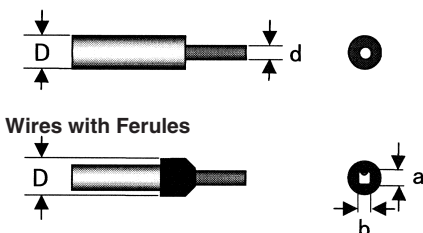
0.2 to 1.5 mm<sup>2</sup>, AWG24 to AWG16

### Applicable Wire Type

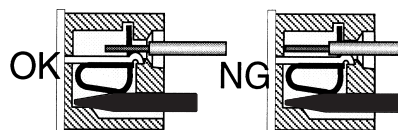
Solid wires, stranded wires, flexible wires, or wires with ferules can be used.

(See note 1.)  $< 2.2 \leq \text{Diameter } D \text{ (mm)} \leq 3.2$  (3.5: see note 2.)

Conductor diameter  $d$  (mm) or length of sides  $a$  and  $b$  (mm)  $\leq 1.9$



**Note: 1.** If the overall diameter of the wire is less than 2.2 mm, do not insert the wire past the conductor. Refer to the following diagrams.



**2.** If the overall diameter of the wire is over 3.2 mm, it will be difficult to use double wiring.

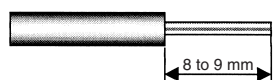


## Examples of Applicable Wires (Confirmed Using Catalog Information)

| Type of wire                     | Conductor type | See note 1, above.  | Recommended wire sizes              | See note 2, above.  |
|----------------------------------|----------------|---------------------|-------------------------------------|---------------------|
| Equipment wire 2491X             | Flexible       |                     | 0.5, 0.75, 1.0 mm <sup>2</sup>      | 1.5 mm <sup>2</sup> |
| BS6004                           | Solid          | 0.5 mm <sup>2</sup> |                                     |                     |
| Switchgear BS6231                | Solid          |                     | 1.0 mm <sup>2</sup>                 | 1.5 mm <sup>2</sup> |
| Switchgear BS6231                | Flexible       |                     | 0.5, 0.75 mm <sup>2</sup>           | 1.0 mm <sup>2</sup> |
| Tri-rated control and switchgear | Flexible       |                     | 0.5, 0.75, 1.0, 1.5 mm <sup>2</sup> |                     |
| Conduit                          | Stranded       |                     | 1.5 mm <sup>2</sup>                 |                     |
| UL1007                           | Flexible       | 18AWG               | 16AWG                               |                     |
| UL1015                           | Flexible       |                     | 18AWG, 16AWG                        |                     |
| UL1061                           | Flexible       | 18AWG               |                                     |                     |
| UL1430                           | Flexible       | 18AWG               | 16AWG                               |                     |

## ■ Wiring

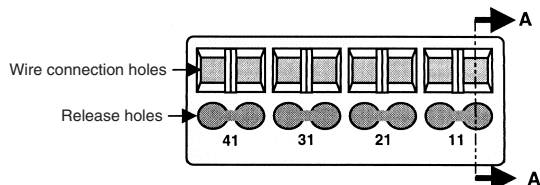
Use wires of the applicable sizes specified above. The length of the exposed conductor should be 8 to 9 mm.



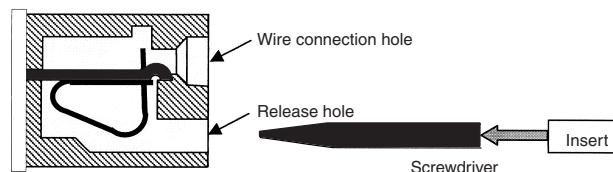
**Fig. 1 Exposed Conductor Length**

Use the following wiring procedure.

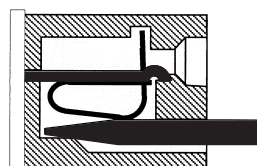
1. Insert the specified screwdriver into the release hole located beside the wire connection hole where the wire is to be inserted.



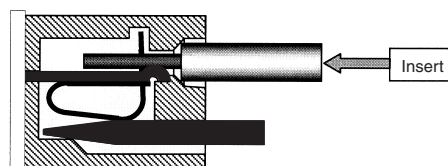
**Fig. 2 Wire Connection Holes and Release Holes**



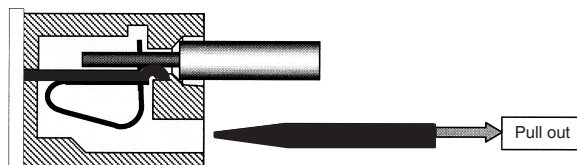
**Fig. 3 Section A-A of Fig. 2**



2. Insert the exposed conductor into the wire connection hole.



3. Pull out the screwdriver.

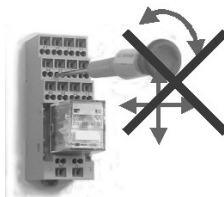


**Note:** Use no more than 2 wires per terminal, 1 wire per hole.

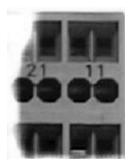
## ■ Precautions

### Precautions for Connection

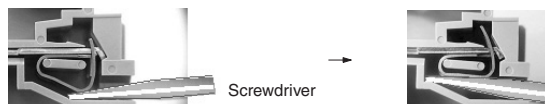
- Do not move the screwdriver up, down, or from side to side while it is inserted in the hole. Doing so may cause damage to internal components (e.g., deformation of the coil spring or cracks in the housing) or cause deterioration of insulation.
- Do not insert the screwdriver at an angle. Doing so may break the side of socket and result in a short-circuit.



- Do not insert two or more wires in the hole. Wires may come in contact with the spring causing a temperature rise or be subject to sparks. (There are two wiring holes for each terminal.)



- Insert the screwdriver along the hole wall as shown below.



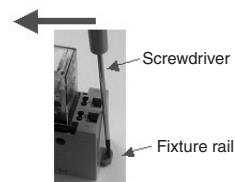
- If lubricating liquid, such as oil, is present on the tip of screwdriver, the screwdriver may fall out resulting in injury to the operator.
- Insert the screwdriver into the bottom of the hole. It may not be possible to connect cables properly if the screwdriver is inserted incorrectly.

### General Precautions

- Use the clip to prevent relays floating or falling out of the socket.
- Do not use the product if it has been dropped on the ground. Dropping the product may adversely affect performance.
- Confirm that the socket is securely attached to the mounting track before wiring. If the socket is mounted insecurely it may fall and injure the operator.
- Ensure that the socket is not charged during wiring and maintenance. Not doing so may result in electric shock.
- Do not pour water or cleansing agents on the product. Doing so may result in electric shock.
- Do not use the socket in locations subject to solvents or alkaline chemicals.
- Do not use the socket in locations subject to ultraviolet light (e.g., direct sunlight). Doing so may result in markings fading, rust, corrosion, or resin deterioration.
- Do not dispose of the product in fire.

### Removing from Mounting Rail

To remove the socket from the mounting rail, insert the tip of screwdriver in the fixture rail, and move it in the direction shown below.





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**ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.**

To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

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