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Miniature Power Relays

MY Series

Best-selling, general-purpose relays that can be selected based on operating environment and application

- Wiring work can be shortened by as much as 60%*
 compared to conventional screw terminal sockets by
 combining with push-in plus terminal sockets
 (PYF-□-PU) that feature light insertion force and strong
 pull-out strength to achieve less wiring work.
- In addition to our standard type (MY-GS-R), an abundant lineup of models including latching relays that retain contact operation status (MYK) and sealed relays suitable for environments where dust and corrosive gases are present (MYQ/MYH) are also available.
- Selection is possible to suit the application, such as models with operation indicators and models with latching levers (MY-GS-R).
- * When both push-in plus terminals and screw terminal sockets are combined with plug-in terminal types (according to actual OMRON measurements as of November 2015)

Refer to Safety Precautions on pages 59 to 60 and Safety Precautions for All Relays.













Refer to the standards certifications and compliance section of your OMRON website for the latest information on certified models.

Miniature Power Relay Types

| MY-GS-R Miniature Power Relays | From page 4 |
|---------------------------------------|--------------|
| MYK Miniature Power Latching Relays | From page 14 |
| MYQ/MYH Miniature Power Sealed Relays | From page 19 |
| Other MY Miniature Power Relays | From page 25 |

Common Information

| Common Options (Order Separately) | From | page 40 |
|-----------------------------------|------|---------|
| Common Safety Precautions | From | page 59 |

Selection

Use this as reference when selecting the model.

Firstly Choice!

This general-purpose model can be used for a wide range of applications

MY-GS-R page 4



Choose this model if you want to maintain the operation status of the contact!

MYK Latching Relays

page 14



Choose this model in an environment with a large amount of corrosive gases and dust!

MYQ Plastic Sealed Relays MYH Hermetically Sealed Relays

page 19





Choose this model if you want to properly control a microload!

 $MY \square Z$ page 25

Bifurcated contacts MY□Z-CBG Crossbar bifurcated contacts



Miniature Power Relays: MY

| Classification | | Number | | Plug-in terminals | | | | Case-surface |
|------------------|-----------------------|-------------------------|---------------------|-------------------|--------------------------|------------------------|---------------|--------------|
| | | of poles | Contacts | Standard | With operation indicator | With latching lever | PCB terminals | mounting |
| | | 2 | Single | MY2-GS-R | MY2N-GS-R | MY2IN-GS-R | MY2-02 | MY2F |
| | | 2 | Bifurcated | MY2Z | MY2ZN | | | |
| Standard mod | -1- | 3 | Single | MY3 | MY3N | | MY3-02 | MY3F |
| Standard mod | eis | | Single | MY4-GS-R | MY4N-GS-R | MY4IN-GS-R | MY4-02 | MY4F |
| | | 4 | Bifurcated | MY4Z(S) | MY4ZN(S) | MY4ZIN(S) | MY4Z-02 | MY4ZF |
| | | | Crossbar bifurcated | MY4Z-CBG | MY4ZN-CBG | | | |
| | | ⊕ 3 | Single | | MY2N-D2-GS-R | MY2IN-D2-GS-R | | |
| | Type 1 | | Bifurcated | | MY2ZN-D2 | | | |
| Models with | \bigcirc \oplus | | Single | | MY3N-D2 | | | |
| built-in diode | 110 110 1110 1110 110 | 13 14 A1 A2 4 | Single | | MY4N-D2-GS-R | MY4IN-D2-GS-R | | |
| for coil surge | | | Bifurcated | | MY4ZN-D2(S) | MY4ZIN-D2(S) | | |
| absorption | Type 2 | 2 | Single | | MY2N-D1-GS-R | MY2IN-D1-GS-R | | |
| | ⊕ ⊖ | ÷ - | Single | | MY4N-D1-GS-R | MY4IN-D1-GS-R | | |
| 13 14 A1 A2 | _14 4 | Bifurcated | | MY4ZN1-D2(S) | MY4ZIN1-D2(S) | | | |
| Models with | 2 | Single | | MY2N-CR-GS-R | MY2IN-CR-GS-R | | | |
| built-in CR circ | | 4 | Single | | MY4N-CR-GS-R | MY4IN-CR-GS-R | | |
| coil surge abs | coil surge absorption | | Bifurcated | | MY4ZN-CR(S) | MY4ZIN-CR(S) | | |

Miniature Power Latching Relays (MYK)

| | | | Plug-in terminals | | PCB terminals |
|-----------------|-----------------|----------|-------------------|--------------------------|---------------|
| Classification | Number of poles | Contacts | | With operation indicator | T |
| Standard models | 2 | Single | MY2K | | MY2K-02 |

Miniature Power Sealed Relays (MYQ/MYH)

| | | | Plug-in terminals | | PCB terminals |
|-----------------------|-----------------|------------|-------------------|--------------------------|---------------|
| Classification | Number of poles | Contacts | | With operation indicator | F |
| Plantic Cooled Paleys | 4 | Single | MYQ4 | MYQ4N | MYQ4-02 |
| Plastic Sealed Relays | 4 | Bifurcated | MYQ4Z | | MYQ4Z-02 |
| Hermetically Sealed | 4 | Single | MY4H | | MY4H-0 |
| Relays | 4 | Bifurcated | MY4ZH | | MY4ZH-0 |

Refer to Front-connecting Sockets and Back-connecting Sockets in *Common Options (Order Separately)* on pages 40 and 42 for main unit and socket combinations.

Miniature Power Relays

MY-GS-R

Mechanical Indicators Added as a Standard Feature to Our Best-selling MY General-purpose Relays

- A lineup of models with latching levers added for easier circuit checking.
- Reduces wiring work by 60% when combined with the PYF-PU Push-In Plus Socket (according to actual OMRON measurements).
- · Relays with AC and DC coils have different colors of operating indicators (LEDs).
- Printing on the coil tape indicates the operating coil specification.
- Mechanical operation indicators are a standard feature on all models.
- UL, CSA, IEC (VDE certification), CQC and Lioyd.



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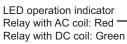
Refer to the Common Relay Precautions.

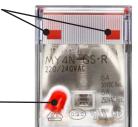
Features

Common to all specifications

- · Mechanical indicators are a standard feature on all models so that you can easily check the contact status.
- The color of the LED shows whether the coil voltage is AC or DC.

Mechanical indicators (one on left and one on right)





Contacts ON (coil energized)

Relay with AC Coil (LED: Red)

Contacts OFF (coil de-energized)



Relay with AC Coil (LED: Red)



Relay with DC Coil (LED: Green)

With latching lever

- · Useful for the operation check of relay sequence circuits.
- The coil voltage AC/DC can be identified by the color of the latching lever (AC coil specification: red, DC coil specification: Blue).

Latching lever operating method

| | Normal State | Mode 1: Momentary State | Mode 2: Locked State |
|-------------------------|--------------|--|--|
| When seen from the top | MATHICAS R | Yellow button | Common Co |
| When seen from the side | BE 10 AV | C C C C C C C C C C C C C C C C C C C | State Save |
| Operation Description | | Slide the lever one step and press the yellow button with an insulated tool to operate the contacts. | If you slide the lever two steps, the contacts lock in the operation position |

Model Number Structure

Model Number Legend

MY 🗆 🗆 🗆 - GS - R DC24

1. Number of Poles

2: 2 poles 4: 4 poles

 Latching Lever
 Blank:Without latching lever With latching lever

3. LED Operation Indicator

Blank: Built-in mechanical indicators

LED operation indicator and built-in mechanical indicators

4. Coil Surge Absorption Blank:Standard models

D2: Models with built-in diodes (14: +)
D1: Models with built-in diodes (13: +) CR: Models with built-in CR circuits

Operating Coil Voltage Display Example: DC24

List of Models

Miniature Power Relays (MY-GS-R)

| | | | | Plug-in (octal pin | s) terminals | |
|--|----------------|----------------|-----------|--------------------|--------------------------|---------------------|
| Catagony | | Number Contact | | 4 | With operation indicator | |
| Category | Category | | structure | | | With latching lever |
| Standard models | | 2 | | MY2-GS-R | MY2N-GS-R | MY2IN-GS-R |
| Standard models | | 4 | | MY4-GS-R | MY4N-GS-R | MY4IN-GS-R |
| | Type 1 — + | 2 | Simala | | MY2N-D2-GS-R | MY2IN-D2-GS-R |
| Models with built-in diodes | 13 14 A1 A2 | 4 | | | MY4N-D2-GS-R | MY4IN-D2-GS-R |
| for coil surge absorption | Type 2 + - | 2 | Single | | MY2N-D1-GS-R | MY2IN-D1-GS-R |
| | 13 14 A1 A2 | 4 | | | MY4N-D1-GS-R | MY4IN-D1-GS-R |
| Models with built-in CR circuits for coil surge absorption | | 2 | | | MY2N-CR-GS-R | MY2IN-CR-GS-R |
| | | 4 | | | MY4N-CR-GS-R | MY4IN-CR-GS-R |

Ordering Information

Main unit

Standard model without operation indicator

| Number of poles | Model | Rated voltage (V) |
|-----------------|----------|--|
| 2 | MY2-GS-R | 12, 24, 48, 100/110, 110/120, 200/220, 220/240 VAC 6, 12, 24, 48, 100/110 VDC |
| 4 | | 12, 24, 48, 100/110, 110/120, 200/220, 220/240 VAC 6, 12, 24, 48, 100/110 VDC |

Standard model with operation indicator

| Number of poles | Model | Rated voltage (V) |
|-----------------|-----------|---|
| 2 | MY2N-GS-R | 12, 24, 48, 100/110, 110/120, 200/220, 220/240 VAC 6, 12, 24, 48, 100/110, 220 VDC |
| 4 | | 12, 24, 48, 100/110, 110/120, 200/220, 220/240 VAC 6, 12, 24, 48, 100/110, 220 VDC |

Standard model with operation indicator and latching lever

| Number of poles | Model | Rated voltage (V) |
|-----------------|------------|---|
| 2 | MY2IN-GS-R | 12, 24, 48, 100/110, 110/120, 200/220, 220/240 VAC 6, 12, 24, 48, 100/110, 220 VDC |
| 4 | MY4IN-GS-R | 12, 24, 48, 100/110, 110/120, 200/220, 220/240 VAC 6, 12, 24, 48, 100/110, 220 VDC |

Models with built-in diodes for coil surge absorption with operation indicator (14: +)

| Number of poles | Model | Rated voltage (V) |
|-----------------|--------------|------------------------------|
| 2 | MY2N-D2-GS-R | 12, 24, 48, 100/110, 220 VDC |
| 4 | MY4N-D2-GS-R | 12, 24, 48, 100/110, 220 VDC |

Models with built-in diodes for coil surge absorption with operation indicator (13: +)

| Number of poles | Model | Rated voltage (V) |
|-----------------|--------------|-------------------------|
| 2 | MY2N-D1-GS-R | 12, 24, 48, 100/110 VDC |
| 4 | MY4N-D1-GS-R | 12, 24, 48, 100/110 VDC |

Models with built-in diodes for coil surge absorption with operation indicator and latching lever (14: +)

| Number of poles | Model | Rated voltage (V) |
|-----------------|---------------|------------------------------|
| 2 | MY2IN-D2-GS-R | 12, 24, 48, 100/110, 220 VDC |
| 4 | MY4IN-D2-GS-R | 12, 24, 48, 100/110, 220 VDC |

Models with built-in diodes for coil surge absorption with operation indicator and latching lever (13: +)

| Number of poles | Model | Rated voltage (V) | |
|-----------------|---------------|-------------------------|--|
| 2 | MY2IN-D1-GS-R | 12, 24, 48, 100/110 VDC | |
| 4 | MY4IN-D1-GS-R | 12, 24, 48, 100/110 VDC | |

Models with built-in CR circuits for coil surge absorption with operation indicator

| Number of poles Model | | Rated voltage (V) | |
|-----------------------|--------------|--|--|
| 2 | MY2N-CR-GS-R | 100/110, 110/120, 200/220, 220/240 VAC | |
| 4 | MY4N-CR-GS-R | 100/110, 110/120, 200/220, 220/240 VAC | |

Models with built-in CR circuits for coil surge absorption with operation indicator and latching lever

| Number of poles Model | | Rated voltage (V) | |
|-----------------------|---------------|--|--|
| 2 | MY2IN-CR-GS-R | 100/110, 110/120, 200/220, 220/240 VAC | |
| 4 MY4IN-CR-GS-R | | 100/110, 110/120, 200/220, 220/240 VAC | |

Ratings and Specifications

Ratings

Main unit Operating Coil

| Item | | Rated cu | urrent (mA) | Coil resistance | Coil indu | ctance (H) | Must-operate voltage | Must-release voltage | Maximum voltage | Power consumption |
|---------------|---------|---------------|-------------|--------------------|--------------------------|------------|----------------------|----------------------|-----------------|-------------------------------|
| Rated voltage | | 50 Hz | 60 Hz | (Ω) | Armature OFF Armature ON | | Perce | entage of rated v | oltage | (VA, W) |
| | 12 | 106.5 | 91 | 46 | 0.17 | 0.33 | | | | |
| | 24 | 53.8 | 46 | 180 | 0.69 | 1.3 | 1 | | | |
| | 48 | 25.7 | 21.1 | 788 | 3.22 | 5.66 | 1 | | | |
| AC | 100/110 | 11.7/12.9 | 10.0/11.0 | 3,750 | 14.54 | 24.6 | 1 | 30% min. *2 | | Approx. 0.9 to 1.3 (at 60 Hz) |
| | 110/120 | 9.9/10.8 | 8.4/9.2 | 4,430 | 19.2 | 32.1 | 1 | | _ 110% | 1.0 (d. 00 112) |
| | 200/220 | 6.2/6.8 | 5.3/5.8 | 12,950 | 54.75 | 94.07 | 1 | | | |
| | 220/240 | 5.2/6.2 | 4.3/5.0 | 15,920 | 83.5 | 136.4 | 80% max. * 1 | | | |
| | 6 | 146 (151) | • | 41.0 (39.8) | 0.17 | 0.33 | - 00 /0 max. • 1 | nax. 4-1 | | |
| | 12 | 72.7 (75) | | 165 (160) | 0.73 | 1.37 | 1 | | | |
| | 24 | 36.3 (37.7) | | 662 (636) | 3.2 | 5.72 | 1 | | | Approx. 0.9 |
| DC | 48 | 17.6 (18.8) | | 2,725 (2,560) | 10.6 | 21.0 | 1 | 10% min. * 2 | | , ppiox. 0.0 |
| | 100/110 | 8.7 (9.0)/9.6 | 3 (9.9) | 11,440 (11,100) | 45.6 | 86.2 | 1 | | | |
| | 220 | 3.6 | | 60,394 | 362.3 | 452.9 | 1 | | | Approx. 0.8 |

Note: 1. The rated current and coil resistance are measured at a coil temperature of 23°C with tolerances of +15%/–20% for the AC rated current and +15% for the DC coil resistance.

- 2. The AC coil resistance and inductance values are reference values only (at 60 Hz).
- 3. Operating characteristics were measured at a coil temperature of 23°C.
- 4. The values in parentheses for the rated currents and coil voltages of DC coils are for models with LED operation indicators.
- 5. The maximum voltage capacity was measured at an ambient temperature of 23°C.
- ***1.** There is variation between products, but actual values are 80% max.

The Relay will operate if 80% or higher of the rated voltage is applied. However, to achieve the specified characteristics, apply the rated voltage to the coil.

***2.** There is variation between products, but actual values are 30% minimum for AC and 10% minimum for DC. To ensure release, use a value that is lower than the specified value.

Contacts

| | | 2 poles | | | 4 poles | | |
|------------------------------------|-----------------------------------|---------------------------------|--|---------------------------------|---------------------------------|--|--|
| | Resisti | ve load | Inductive load (cos φ = 0.4, L/R = 7 ms) | Resist | tive load | Inductive load (cos φ = 0.4, L/R = 7 ms) | |
| Contact configuration | DPDT | | | 4PDT | | | |
| Contact structure | Single | | | | | | |
| Contact material | Ag | | | | | | |
| Rated load | 10 A at 250 VAC 10 A at 30 VDC | 5 A at 220 VAC 5 A at 24 VDC | 2 A at 220 VAC 2 A at 24 VDC | 6 A at 250 VAC 6 A at 30 VDC | 3 A at 220 VAC 3 A at 24 VDC | 0.8 A at 220 VAC 1.5 A at 24 VDC | |
| Electrical endurance *1 | 100,000 operations | 500,000 operations | | 30,000 operations | rations 200,000 operations | | |
| Rated carry current | 10 A | | | 6 A *2 | | | |
| Maximum contact voltage | 250 VAC, 220 VDC | | | 250 VAC, 220 VDC | | | |
| Maximum contact current | 10 A | | | 6 A *2 | | | |
| Maximum switching capacity | 2,500 VA 300 W | | 440 VA 48 W | 1,500 VA 180 W | | 176 VA 36 W | |
| Minimum load (reference values) *3 | 1 mA at 5 VDC | | | 1 | | - | |

- *1. Rated load, switching frequency: 2,400 operations/h. Ambient temperature condition: 23°C. Duty ratio: 33%.
- *2.4 poles of 6 A is for an ambient temperature of 50°C. At an ambient temperature of 70°C, the value is 3 A.
- *3. These values are guides for the switchable limits for minute load levels, such as in electronic circuits. Actual characteristics may be different. These values will depend on the switching frequency, atmosphere, and expected reliability level. Confirm applicability in the actual system under actual application conditions.

Characteristics Main unit

| | | 2 poles | 4 poles | |
|-------------------------------|--|--|---------|--|
| Contact resistance *1 | | 100 m Ω max. | | |
| Operation time *2 | | 20 ms max. | | |
| Release time *2 | | 20 ms max. | | |
| Maximum operating | Mechanical | 18, 000 operations/h | | |
| frequency | Rated load | 2,400 operations/h | | |
| Insulation resistance | k3 | 1,000 MΩ min. | | |
| | Between coil and contacts | 2,000 VAC at 50/60 Hz for 1 min. | | |
| Dielectric strength | Between contacts of different polarity | 2,000 VAC at 50/60 Hz for 1 min. | | |
| | Between contacts of the same polarity | 1,000 VAC at 50/60 Hz for 1 min. | | |
| Vibration resistance | Destruction | 10 to 55 to 10 Hz, Double amplitude: 1.0 mm | | |
| VIDIALION TESISLANCE | Malfunction | 10 to 55 to 10 Hz, Double amplitude: 1.0 mm | | |
| Shock resistance | Destruction | 1,000 m/s ² (approx. 100 G) | | |
| SHOCK resistance | Malfunction | 200 m/s ² (Approx. 20 G) | | |
| Mechanical endurance | | 50,000,000 operations (switching frequency: 18,000 operations/h) | | |
| Ambient operating temperature | | Standard models: –55 to 70°C (with no icing or condensation) Models with LED operation indicators: –40 to 70°C (with no icing or condensation) | | |
| Ambient humidity | | 5% to 85% | | |
| Weight | | Approx. 35 g | | |

Note: The above values are initial values.

- *1. Measurement conditions: 1 A at 5 VDC using the voltage drop method.

 *2. Measurement conditions: With rated operating power applied, not including contact bounce time.
- *3. Measurement conditions: For 500 VDC applied to the same location as for dielectric strength measurement.

Certified Ratings for Models Certified for Safety Standards

The rated values for safety standard certification are not the same as individually defined performance values. Always check the specifications before use.

Main unit

UL-certified Models: UL508

| MY-GS | Number of poles Coil ratings | | Contact ratings | Certified number of operations |
|-------|------------------------------|--|--|--------------------------------|
| | 2 | 12 VAC, 24 VAC, 48 VAC, 100/110 VAC, 110/120 VAC, 200/220 VAC, or 220/240 VAC 6 VDC, 12 VDC, 24 VDC, 48 VDC, 100/110 VDC, or 220 VDC | 5 A, 30 VDC (General Use) 10 A, 30 VDC (General Use) 5 A, 250 VAC (General Use) 10 A, 250 VAC (General Use) | 6,000 operations |
| | 4 | 12 VAC, 24 VAC, 48 VAC, 100/110 VAC, 110/120 VAC, 200/220 VAC, or 220/240 VAC 6 VDC, 12 VDC, 24 VDC, 48 VDC, 100/110 VDC, or 220 VDC | 3 A, 30 VDC (General Use) 6 A, 30 VDC Resistive Load 3 A, 250 VAC (General Use) 6 A, 250 VAC Resistive Load | 6,000 operations |

CSA-certified Models: CSA C22.2 No.14

| MY-GS | Number of poles | Coil ratings | Contact ratings | Certified number of operations |
|-------|-----------------|---|--|--------------------------------|
| | 2 | 12 VAC, 24 VAC, 48 VAC, 100/110 VAC, 110/120 VAC, 200/220 VAC, or 220/240 VAC 6 VDC, 12 VDC, 24 VDC, 48 VDC, 100/110 VDC, or 220 VDC | 5 A, 30 VDC (General Use) 10 A, 30 VDC (General Use) 5 A, 250 VAC (General Use) 10 A, 250 VAC (General Use) | 6,000 operations |
| | 4 | 12 VAC, 24 VAC, 48 VAC, 100/110 VAC, 110/120 VAC, 200/220 VAC, or 220/240 VAC 6 VDC, 12 VDC, 24 VDC, 48 VDC, 100/110 VDC, or 220 VDC | 3 A, 30 VDC (General Use) 6 A, 30 VDC Resistive Load 3 A, 250 VAC (General Use) 6 A, 250 VAC Resistive Load | 6,000 operations |

VDE-certified Models: EN 61810-1

| MY-GS | Number of poles | Coil ratings | Contact ratings | Certified number of operations |
|-------|-----------------|--|--|--------------------------------|
| | 2 | 12 VAC, 24 VAC, 48 VAC, 100/110 VAC, 110/120 VAC, 200/220 VAC, or 220/240 VAC 6 VDC, 12 VDC, 24 VDC, 48 VDC, 100/110 VDC, or 220 VDC | 10 A, 30 VDC (L/R = 0) 10 A, 250 VAC (cos\(\phi = 1 \) | 10,000 operations |
| | 4 | 12 VAC, 24 VAC, 48 VAC, 100/110 VAC, 110/120 VAC, 200/220 VAC, or 220/240 VAC 6 VDC, 12 VDC, 24 VDC, 48 VDC, 100/110 VDC, or 220 VDC | 6 A, 30 VDC (L/R = 0) 6 A, 250 VAC (cosφ = 1) | 10,000 operations |

CQC-certified Models

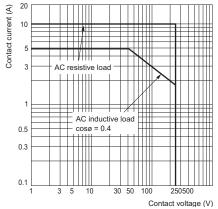
| Model | Standard number | Certification No. |
|-------|-----------------|-------------------|
| MY-GS | GB/T 21711.1 | CQC18002198531 |

LR certification (Lloyd's Register)

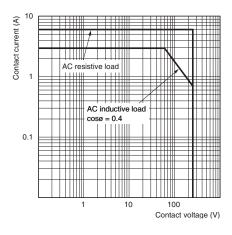
| | <u> </u> | |
|---------|------------------------|------------------------|
| Model | Environmental Category | Operating Coil ratings |
| MY-GS-R | ENV2. 3 | 12 to 240 VAC |
| W1-00-K | LIVVZ, S | 6 to 220 VDC |

Engineering Data (Reference Value)

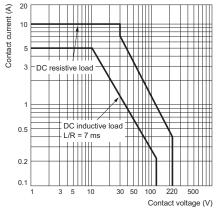
Maximum Switching Capacity MY2□□-□□-GS-R (AC load)



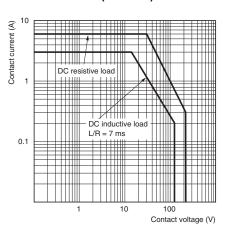
MY4□□-□□-GS-R (AC load)



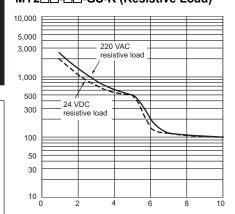
MY2□□-□□-GS-R (DC load)



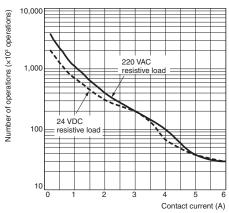
MY4□□-□□-GS-R (DC load)



Endurance Curve MY2□□-□□-GS-R (Resistive Load)



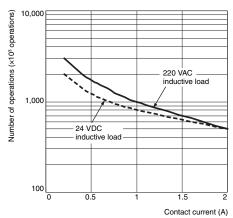
MY4□□-□□-GS-R (Resistive Load)



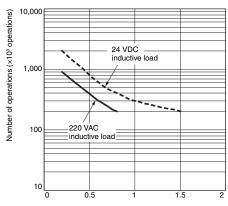
Note: 1. Number of operations: AC load, 50 Hz, 80%

2. Switching condition: NO or NC

MY2□□-□□-GS-R (Inductive Load)



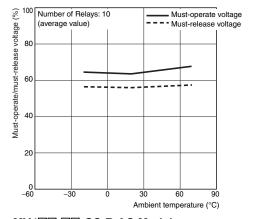
MY4□□-□□-GS-R (Inductive Load)



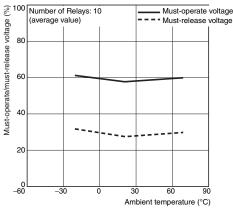
Contact current (A)

Ambient Temperature vs. Must-operate and Must-release Voltage

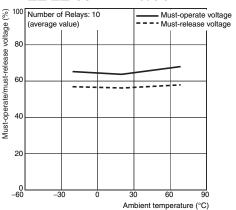
MY2□□-□□-GS-R AC Models



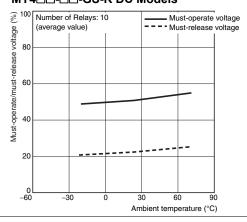
MY2□□-□□-GS-R DC Models



MY4□□-□□-GS-R AC Models

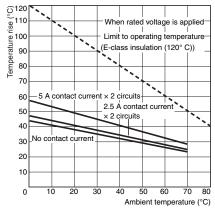


MY4□□-□□-GS-R DC Models

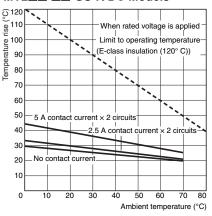


Ambient Temperature vs. Coil Temperature Rise

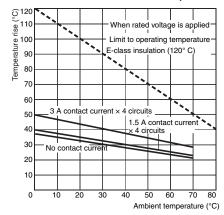
MY2□□-□□-GS-R AC Models, 50 Hz



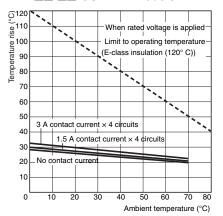
MY2□□-□□-GS-R DC Models



MY4□□-□□-GS-R AC Models, 50 Hz



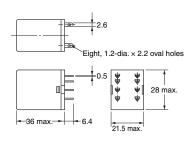
MY4□□-□□-GS-R DC Models



Relays

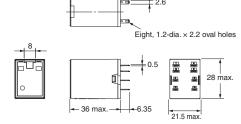
MY2-GS-R MY2N-GS-R MY2N-D2-GS-R MY2N-CR-GS-R MY2N-D1-GS-R





MY2IN-GS-R MY2IN-D2-GS-R MY2IN-CR-GS-R MY2IN-D1-GS-R





Terminal Arrangement/Internal Connections (Bottom View)

| MY2-GS-R | MY2□N-GS-R MY2□N-D2- | | | | | |
|------------------------------|--|-----------------------------|-------------------------------|----------------------------|--------------------------|--|
| Standard Models | AC Models DC Models DC Models (except 220 VDC) (for 220 VDC) | | DC Models (except 220 VDC) | DC Models (for 220 VDC) | | |
| 5 8 1 9 12 13 | 5 9 112 113 | 5 8 12 12 14 | 1 4 8 8 12 12 13 14 14 | 1 8 8 9 12 13 13 14 14 | 1 | |
| (The coil has no polarity.) | (The coil has no polarity.) | (The coil has no polarity.) | (The coil has no polarity.) | (The coil has polarity.) | (The coil has polarity.) | |

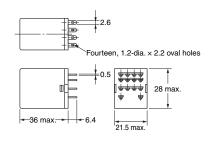
| MY2□N- | MY2□N-CR-GS-R | |
|-------------------------------|-------------------------------|-----------------------------|
| DC Models (except 220 VDC) | DC Models (for 220 VDC) | AC Models |
| 1 8 8 12 12 13 + -14 | 5 5 9 12 13 13 | 5 8 12 12 13 14 |
| (The coil has polarity.) | (The coil has polarity.) | (The coil has no polarity.) |

- Note: 1. An AC model has coil disconnection self-diagnosis.
 - 2. For models with built-in diodes for coil surge absorption, check the coil polarity when wiring and wire all connections correctly.

 - The indicator is red for AC and green for DC.
 The LED operation indicators indicate the energization of the coil and do not necessarily represent contact operation.

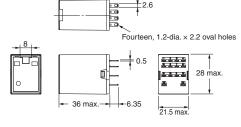
MY4-GS-R MY4N-GS-R MY4N-D2-GS-R MY4N-CR-GS-R MY4N-D1-GS-R





MY4IN-GS-R MY4IN-D2-GS-R MY4IN-CR-GS-R MY4IN-D1-GS-R





Terminal Arrangement/Internal Connections (Bottom View)

| MY4-GS-R | | MY4□N-GS-R | | MY4□N-I | D2-GS-R |
|-----------------------------|--|----------------------------------|----------------------------------|----------------------------------|--|
| Standard Models | AC Models DC Models (except 220 VDC) DC Models (for 220 VDC) | | DC Models (except 220 VDC) | DC Models (for 220 VDC) | |
| 5 6 7 8 9 10 11 12 13 14 | 1 2 3 4 5 6 7 8 9 10 11 12 | 1 2 3 4 5 6 7 8 9 10 11 12 | 1 2 3 4 5 6 7 8 9 10 11 12 | 1 2 3 4 5 6 7 8 9 10 11 12 | 1 2 3 4 8 5 6 7 8 9 10 11 12 13 13 14 14 |
| (The coil has no polarity.) | (The coil has no polarity.) | (The coil has no polarity.) | (The coil has no polarity.) | (The coil has polarity.) | (The coil has polarity.) |

| MY4□N- | MY4□N-D1-GS-R | | | | | |
|----------------------------------|----------------------------------|--|--|--|--|--|
| DC Models (except 220 VDC) | DC Models (for 220 VDC) | DC Models | | | | |
| 1 2 3 4 5 6 7 8 9 10 11 12 | 1 2 3 4 5 6 7 8 9 10 11 12 | 5 6 7 8 9 10 11 12 13 14 14 14 14 14 14 14 14 14 14 14 14 14 | | | | |
| (The coil has polarity.) | (The coil has polarity.) | (The coil has no polarity.) | | | | |

Note: 1. An AC model has coil disconnection self-diagnosis.

- For models with built-in diodes for coil surge absorption, check the coil polarity when wiring and wire all connections correctly.
 The indicator is red for AC and green for DC.
- 4. The LED operation indicators indicate the energization of the coil and do not necessarily represent contact operation.

Miniature Power Latching Relays

MYK

Latching miniature power relays that retain contact operation status

- A low power consumption type that retains contacts using a magnetic lock system.
- Equipped with mechanical operation indicators to make operation status easy-to-see.

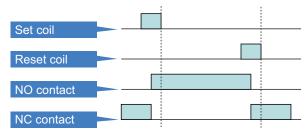
Refer to Safety Precautions on pages 59 to 60 and Safety Precautions for All Relays.



Features

Latching Relays MYK

Retains contact operation status.



NO contact turns on when voltage is applied to the set coil and stays on even if voltage stops being applied to the set coil. NO contact turns off when voltage is applied to the reset coil, after which NC contact will turn on.*

*MYK features a magnetic lock system.

Contact operation status can be seen at a glance thanks to the mechanical operation indicator.







Model Number Structure

Model Number Legend



(1) Basic model name

MY: Miniature Power Relays

(3) Type

K: Latching relay

(2) Number of poles/contacts

2: 2-pole, single

(4) Options, terminal type

None: Plug-in terminals 02: PCB terminals

Ordering Information

When your order, specify the rated voltage.

Main unit

Plug-in terminals

| Classification | Number of poles | Contacts | Model | Rated voltage | |
|--|-----------------|----------|-------|--------------------------|--|
| Standard models (compliant with Electrical | 2 | Single | MY2K | 12, 24, 100, 100/110 VAC | |
| Appliances and Material Safety Act) | | Single | | 12, 24, 48 VDC | |

PCB terminals

| (:lassification | Number of poles | Contacts | Model | Rated voltage |
|---|-----------------|----------|---------|---------------|
| Standard models (compliant with Electrical Appliances and Material Safety Act) | 2 | Single | | 24, 100 VAC |
| | 2 | Single | MY2K-02 | 12, 24 VDC |

Ratings and Specifications

Ratings

Operating coil

| | | | Set | coil | | Rese | t coil | | | | | Power consumption (VA, W) | |
|---------|------------|-------|---------------|-----------------|-------|---------------|-----------------|--------------------------------|--------------------------------|---------------------|-------------|---------------------------|--|
| Rated v | oltage (V) | | current A) | Coil resistance | | current A) | Coil resistance | Must operate voltage (V) | Must release voltage (V) | Maximum voltage (V) | Set coil | Reset coil | |
| | | 50 Hz | 60 Hz | (Ω) | 50 Hz | 60 Hz | (Ω) | voltage (v) | ronage (v) | | | | |
| | 12 | 57 | 56 | 72 | 39 | 38.2 | 130 | | | | Approx. 0.6 | Approx. 0.2 | |
| AC | 24 | 27.4 | 26.4 | 320 | 18.6 | 18.1 | 550 | 80% max.* 80% max. | | to 0.9 | to 0.5 | | |
| | 100 | 7.1 | 6.9 | 5,400 | 3.5 | 3.4 | 3,000 | | 90% may | 110701116711 | (at 60 Hz) | (at 60 Hz) | |
| | 12 | 11 | 10 | 110 | 5 | 0 | 235 | | 00% IIIax. | | | | |
| DC | 24 | 5 | 2 | 470 | 2 | :5 | 940 | | | | Approx. 1.3 | Approx. 0.6 | |
| | 48 | 2 | 7 | 1,800 | 1 | 6 | 3,000 | | | | | | |

Note: 1. The rated current for AC is the value measured with a DC ammeter in half-wave rectification.

- The rated current and coil resistance are measured at a coil temperature of 23°C with tolerances of +15%/-20% for AC rated current and ±15% for DC coil resistance.
 The AC coil resistance is a reference value only.
 Operating characteristics were measured at a coil temperature of 23°C.

- The maximum voltage capacity was measured at an ambient temperature of 23°C.
 *There is variation between products, but actual values are 80% maximum.

Contact Ratings

| Number of poles (contact configuration) | 2-pole (DPDT) | | | | | |
|---|---------------------------------|--|--|--|--|--|
| Contact structure | \$ | Single | | | | |
| Load | Resistive load | Inductive load (cos φ = 0.4, L/R = 7 ms) | | | | |
| Rated load | 3 A at 220 VAC 3 A at 24 VDC | 0.8 A at 220 VAC 1.5 A at 24 VDC | | | | |
| Rated carry current | 3 A | | | | | |
| Maximum switching voltage | 250 VAC, 125 VDC | | | | | |
| Maximum switching current | 3 A | | | | | |
| Maximum switching power | 660 VA 72 W | 176 VA 36 W | | | | |
| Contact material | Au plating + Ag | | | | | |

Characteristics

| ınce*1 | 50 m $Ω$ max. | | | | | |
|--|--|--|--|--|--|--|
| Operate time*2 | AC: 30 ms max., DC: 15 ms max. | | | | | |
| Minimum pulse width | AC: 60 ms, DC: 30 ms | | | | | |
| Release time*2 | AC: 30 ms max., DC: 15 ms max. | | | | | |
| Minimum pulse width | AC: 60 ms, DC: 30 ms | | | | | |
| Mechanical | 18,000 operations/h | | | | | |
| Rated load | 1,800 operations/h | | | | | |
| stance*3 | 100 MΩ min. | | | | | |
| Between coil and contacts Between contacts of different polarity | 1,500 VAC at 50/60 Hz for 1 min | | | | | |
| Between contacts of the same polarity | 1,000 VAC at 50/60 Hz for 1 min | | | | | |
| Between set/reset coils | | | | | | |
| Destruction | 10 to 55 to 10 Hz, 0.5-mm single amplitude (1.0-mm double amplitude) | | | | | |
| Malfunction | 10 to 55 to 10 Hz, 0.5-mm single amplitude (1.0-mm double amplitude) | | | | | |
| Destruction | 1,000 m/s ² | | | | | |
| Malfunction | 200 m/s ² | | | | | |
| Mechanical | 100,000,000 operations min. (switching frequency: 18,000 operations/h) | | | | | |
| Electrical*4 | 200,000 operations min. (at rated load, switching frequency: 1,800 operations/h) | | | | | |
| ralue (reference value)*5 | 1 mA at 1 VDC | | | | | |
| ting temperature*6 | -55 to 60°C | | | | | |
| ting humidity | 5% to 85% | | | | | |
| | Approx. 30 g | | | | | |
| | Operate time*2 Minimum pulse width Release time*2 Minimum pulse width Mechanical Rated load Stance*3 Between coil and contacts Between contacts of different polarity Between contacts of the same polarity Between set/reset coils Destruction Malfunction Destruction Malfunction Mechanical Electrical*4 salue (reference value)*5 ting temperature*6 | | | | | |

Note: The data shown above are initial values. *1. Measurement conditions: 1 A at 5 V

1 A at 5 VDC using the voltage drop method.

Measurement conditions:

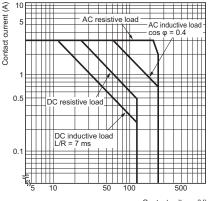
With rated operating power applied, not including contact bounce.
For 500 VDC applied to the same location as for dielectric strength measurement. *2. *3. *4. *5. *6. Measurement conditions:

Ambient temperature condition: 23°C

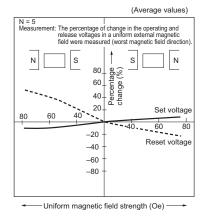
- This value was measured at a switching frequency of 120 operations per minute.
- With no icing or condensation.

Engineering Data (Reference Value)

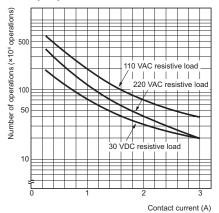
Maximum Switching Capacity MY2K(-02)



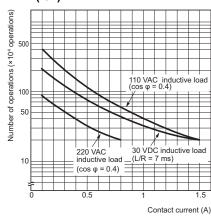
Magnetic Interference (External Magnetic Field) **MY2K** 24 VDC



Endurance Curve MYK(-02)

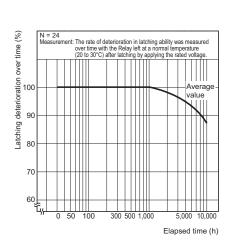


MYK(-02)



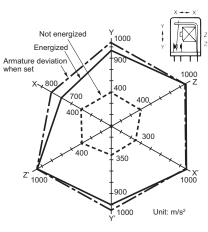
Latching Deterioration Over Time

MY2K 24 VDC



Shock Malfunction

MY2K 100 VAC



N = 20

Measurement: Shock was applied in 6 directions along 3 axes 2 times with the Relay energized and 3 times with the Relay not energized to check the shock values that cause the Relay to

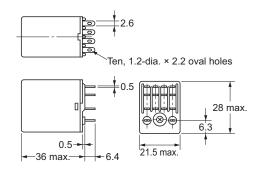
malfunction. Criteria: Non-energized: 200 m/s² Energized: 200 m/s²

MYQ·MYH

Dimensions (Unit: mm)

●Plug-in terminals MY2K





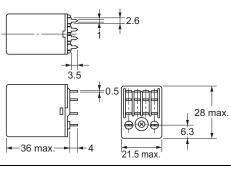
Terminal Arrangement/ Internal Connection Diagram (Bottom View)

Note: R is a resistor for ampereturn correction. Built into models with specifications of 50 VAC or more. (The coil has no polarity.)

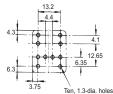
Note: Pay close attention to the set coil and reset coil polarities. If the connections are not correct, unintended operation may occur.

●PCB terminals MY2K-02





PCB Processing Dimensions (Bottom View)



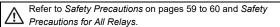
Note: The dimensional tolerance is ±0.1.

Miniature Power Sealed Relays

MYQ/MYH

Sealed relays that are tough in environments where dust or corrosive gases, etc., are present

- Plastic sealed relays (MYQ) and hermetically sealed relays (MYH) that are resistant to effects from the surrounding environment
- Highly airtight structures that are tough in environments where corrosive gases such as chloride gas, sulfuric gas, and silicone gas are generated. They are also resistant to environments where salt damage is occurred and where dust is generated.
- Prevent relay contact failures via a highly airtight structure.





Refer to the standards certifications and compliance section of your OMRON website for the latest information on certified models.

Features

Highly Airtight Relays (Plug-in Terminals)

| Seal performance | Degree of protection | Typical relay | Features |
|------------------|----------------------|---------------|--|
| High 🔨 | Hermetically sealed | мүн | Sealing with metals, the glass case and base, etc. with inert gases (N2) inside makes it airtight structure which provides the external casing with durability against harmful corrosion, and prevents corrosive gases from intruding inside relays. |
| | Plastic sealed | MYQ | Structure that seals relays with the resin case and cover, etc., to prevent effects from corrosive environments. |
| Low | Closed type (cased) | MY, MY4Z-CBG | Relays in the case realize the structure that protects them from contact with foreign materials. |

Plastic Sealed Relays: MYQ

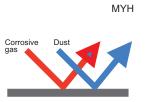
These realize excellent reliability even in environments where salt damage occurs or where dust is generated.





Hermetically Sealed Relays: MYH

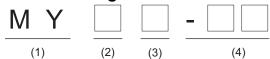
These realize excellent reliability even in environments where dust is generated or where corrosive gases (chloride gas, sulfuric gas, silicone gas, etc.) are present.





Model Number Structure

Model Number Legend



(1) Basic model name

MY: Miniature Power Sealed Relays

(3) Type

None: None

N: With operation indicator*
*Only MYQ (plastic sealed relay)

(2) Contacts/seals

Q4: 4-pole, single contacts, plastic sealed relays
Q4Z: 4-pole, bifurcated contacts, plastic sealed relays
4H: 4-pole, single contacts, hermetically sealed relays
4ZH: 4-pole, bifurcated contacts, hermetically sealed relays

(4) Options, terminal type

None: Plug-in terminals

02: Plastic sealed relays, PCB terminals0: Hermetically sealed relays, PCB terminals

Ordering Information

When your order, specify the rated voltage.

Plastic Sealed Relays

Plug-in terminals

| Classification | Number | Contonto | | | With o | peration indicator |
|---|----------|------------|-------|---|--------|---|
| Classification | of poles | Contacts | Model | Rated voltage | Model | Rated voltage |
| Standard models | | Single | MYQ4 | 100/110, 110/120, 200/220, 220/240 VAC | MYQ4N | 24, 100/110, 110/120, 200/220, 220/240 VAC |
| (compliant with | | | | 24 VDC | | 12, 24, 48, 100/110 VDC |
| Electrical Appliances and Material Safety Act) | 4 | Bifurcated | MYQ4Z | 100/110, 110/120, 200/220 VAC | | |
| | | | | 12 24 VDC | | |

PCB terminals

| Classification | Number of poles | Contacts | Model | Rated voltage |
|---|-----------------|------------|------------|--------------------------|
| Standard models (compliant with Electrical Appliances and Material Safety Act) | 4 | Single | MYQ4-02 | 50, 200/220, 220/240 VAC |
| | | | | 24 VDC |
| | | Bifurcated | MYQ4Z-02 | 100/110 VAC |
| | | | W 1 Q4Z-02 | 24, 48 VDC |

Hermetically Sealed Relays

Plug-in terminals

| Classification | Number of poles | Contacts | Model | Rated voltage |
|---|-----------------|------------|-------|---|
| Standard models (compliant with Electrical Appliances and Material Safety Act) | | Single | MY4H | 24, 100/110, 110/120 VAC 12, 24, 48, 100/110 VDC |
| | 4 | Bifurcated | MY4ZH | 24, 100/110, 110/120 VAC 12, 24, 48, 100/110 VDC |

PCB terminals

| Classification | Number of poles | Contacts | Model | Rated voltage |
|---|-----------------|------------|---------|-----------------|
| Standard models (compliant with Electrical Appliances and Material Safety Act) | 4 | Single | MY4H-0 | 110/120 VAC |
| | | | | 24 VDC |
| | | Bifurcated | MY4ZH-0 | 24, 100/110 VDC |

Ratings and Specifications

Operating coil

| | | Rated cur | rent (mA) | Coil | Coil indu | ctance (H) | Must spende | Must release | Maximum | Power |
|-------|-------------|-----------|-----------|-------------------|-----------------|----------------|----------------------------|---------------|-------------------------------|----------------------------------|
| Rated | voltage (V) | 50 Hz | 60 Hz | resistance (Ω) | Armature OFF | Armature ON | Must operate voltage (V)*1 | voltage (V)*2 | voltage (V) | consumption (VA, W) |
| | 24 | 53.8 | 46 | 180 | 0.69 | 1.3 | | | 110% max. of rated voltage | |
| | 100/110 | 11.7/12.9 | 10/11 | 3,750 | 14.54 | 24.6 | | 30% min. | | |
| AC | 110/120 | 9.9/10.8 | 8.4/9.2 | 4,430 | 19.2 | 32.1 | | | | Approx. 0.9 to 1.3 (at 60 Hz) |
| | 200/220 | 6.2/6.8 | 5.3/5.8 | 12,950 | 54.75 | 91.07 | | | | |
| | 220/240 | 4.8/5.3 | 4.2/4.6 | 18,790 | 83.5 | 136.4 | 80% max. | | | |
| | 12 | 7 | 5 | 165 | 0.734 | 1.37 | | 10% min. | | |
| DC | 24 | 36 | 5.9 | 650 | 3.2 | 5.72 | | | | Approx. 0.9 |
| ЪС | 48 | 18 | 3.5 | 2,600 | 10.6 | 21.0 | | 10 /6 111111. | | Арргох. 0.9 |
| | 100/110 | 9.1 | /10 | 11,000 | 45.6 | 86.0 | | | | |

Note: 1. The rated current and coil resistance are measured at a coil temperature of 23°C with tolerances of +15%/-20% for AC rated current and ±15% for DC coil

- The AC coil resistance and coil inductance values are for reference only. Operating characteristics were measured at a coil temperature of 23°C.
- 4. The maximum voltage capacity was measured at an ambient temperature of 23°C.
- *1. There is variation between products, but actual values are 80% maximum. To ensure operation, apply at least 80% of the rated value.
 *2. There is variation between products, but actual values are 30% minimum for AC and 10% minimum for DC. To ensure release, use a value that is lower than the specified value.

Contact Ratings

Plastic Sealed Relays: MYQ

| Number of poles (contact configuration) | 4-pole (4PDT) | | | |
|---|---------------------------------|--|--|--|
| Contact structure | Single/b | ifurcated | | |
| Load | Resistive load | Inductive load (cos φ = 0.4, L/R = 7 ms) | | |
| Rated load | 1 A at 220 VAC 1 A at 24 VDC | 0.5 A at 220 VAC 0.5 A at 24 VDC | | |
| Rated carry current | 1 A | | | |
| Maximum switching voltage | 250 VAC 125 VDC | | | |
| Maximum switching current | 1 A | | | |
| Maximum switching power | 220 VA 24 W | 110 VA 12 W | | |
| Contact material | Au plating + Ag | | | |
| , | | | | |

Hermetically Sealed Relays: MYH

| Number of poles (contact configuration) | 4-pole (4PDT) | | | | |
|---|---------------------------------------|---|---------------------------------------|--|--|
| Contact structure | Sii | ngle | Bifu | rcated | |
| Load | Resistive load | Inductive load (cos ϕ = 0.4, L/R = 7 ms) | Resistive load | Inductive load (cos φ = 0.4, L/R = 7 ms) | |
| Rated load | 3 A at 110 VAC 3 A at 24 VDC | 0.8 A at 110 VAC 1.5 A at 24 VDC | 3 A at 110 VAC 3 A at 24 VDC | 0.8 A at 110 VAC 1.5 A at 24 VDC | |
| Rated carry current | 3 A | | | | |
| Maximum switching voltage | 125 VAC 125 VDC | | | | |
| Maximum switching current | 3 A | | | | |
| Maximum switching power | 330 VA 72 W | 88 VA 36 W | 330 VA 72 W | 88 VA 36 W | |
| Contact material | Au plating + | Ag | | | |

Characteristics

| Model | | | MYQ | | MYH | |
|---------------------|--|--|---|--|--|--|
| Contact resistance | e*1 | 50 mΩ max. | | | | |
| Operate time*2 | | 20 ms max. | | | | |
| Release time*2 | | 20 ms max. | | | | |
| Maximum | Mechanical | 18,000 operations/h | | | | |
| switching frequency | Rated load | 1,800 operations/h | | | | |
| Insulation resistan | ice*3 | 100 M Ω min. | | | | |
| | Between coil and contacts | 1,500 VAC at 50/60 | Hz for 1 min | 1,000 VAC at 50/60 | Hz for 1 min | |
| Dielectric strength | Between contacts of different polarity | 1,500 VAC at 50/60 | Hz for 1 min | 1,000 VAC at 50/60 | Hz for 1 min | |
| | Between contacts of the same polarity | 1,000 VAC at 50/60 | Hz for 1 min | 700 VAC at 50/60 Hz for 1 min | | |
| Vibration | Destruction | 10 to 55 to 10 Hz, 0. | 10 to 55 to 10 Hz, 0.5-mm single amplitude (1.0-mm double amplitude) | | | |
| resistance | Malfunction | 10 to 55 to 10 Hz, 0. | .5-mm single amplitude (1.0-mm doubl | amplitude) | | |
| Shock resistance | Destruction | 1,000 m/s ² | | | | |
| SHOCK TESISTATICE | Malfunction | 200 m/s ² | | - | | |
| Endurance | Mechanical | Single contacts: Bifurcated contacts: | AC: 50,000,000 operations min., DC: 100,000,000 operations min. 5,000,000 operations min., DC: 5,000,000 operations min. (switching frequency: 18,000 operations/h) | Single contacts: Bifurcated contacts: | 50,000,000 operations min. 5,000,000 operations min. (switching frequency: 18,000 operations/h) | |
| | Electrical*4 | Single contacts: Bifurcated contacts: | 200,000 operations min. 100,000 operations min. (at rated load, switching frequency: 1,800 operations/h) | Single contacts: Bifurcated contacts: | 100,000 operations min. 50,000 operations min. (at rated load, switching frequency: 1,800 operations/h) | |
| Failure rate P Leve | el (reference value)*5 | Single contacts: Bifurcated contacts: | 1 mA at 1 VDC 100 μA at 1 VDC | Single contacts: Bifurcated contacts: | 100 μA at 1 VDC 100 μA at 100 mVDC | |
| Ambient operating | temperature*6 | -55 to 60°C -25 to 60°C | | | | |
| Ambient operating | humidity | 5% to 85% | | | | |
| Weight | | Approx. 35 g | | Approx. 50 g | | |

Note: The data shown above are initial values.

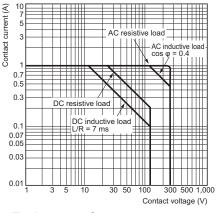
Measurement conditions:

1 A at 5 VDC using the voltage drop method.

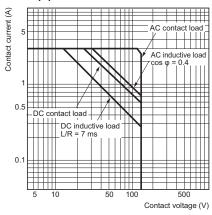
With rated operating power applied, not including contact bounce. Measurement conditions:

Engineering Data (Reference Value)

Maximum Switching Capacity MYQ4(Z)

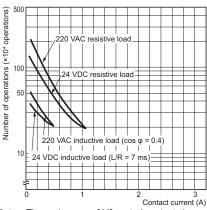


MY4(Z)H



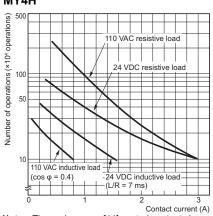
Endurance Curve

MYQ4



Note: The endurance of bifurcated contacts is one-half that of single contacts.

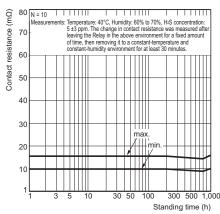
MY4H



The endurance of bifurcated contacts is one-half that of single contacts. Note:

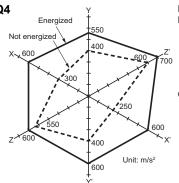
H₂S Gas Data

MYQ4



Shock Malfunction

MYQ4



N = 20

Measurement: Shock was applied 3 times each in 6 directions along 3 axes with the Relay energized and not energized to check the shock values that cause the Relay to malfunction.

Criteria: Non-energized: 200 m/s2 Energized: 200 m/s²

Shock direction

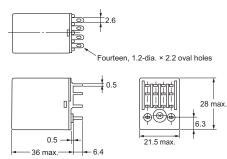


(Unit: mm)

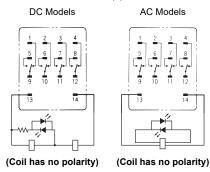
Plug-in terminals

Plastic Sealed Relays MYQ4(Z)(N)





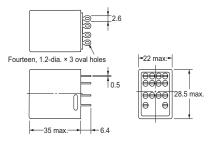
MYQ4(Z)N



Note: An AC model has coil disconnection self-diagnosis.

Hermetically Sealed Relays MY4(Z)H





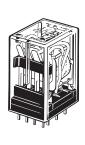
Terminal Arrangement/ Internal Connection Diagram (Bottom View) MY4(Z)H

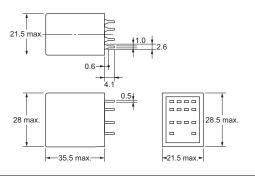


(Coil has no polarity)

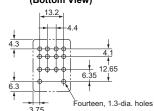
PCB terminals

Plastic Sealed Relays MYQ4(Z)-02





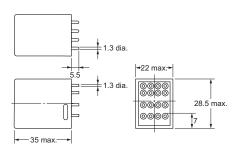
PCB Processing Dimensions (Bottom View)



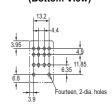
Note: The dimensional tolerance is ±0.1.

Hermetically Sealed Relays MY4(Z)H-0





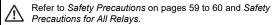
PCB Processing Dimensions (Bottom View)



Miniature Power Relays Other MY

Best-selling, general-purpose relays

- AC/DC coil voltage specifications can now be more easily distinguished thanks to the use of color-coded coil tape and operation indicators (LED).
- Latching levers convenient for circuit checking and MY(S) models equipped with mechanical operation indicators and operation indicators for monitoring operation status are available.
- · Contact materials and contact structures can be selected based on contact reliability and corrosion resistance.
- *Voltage is printed on white tape in the case of the Standard 3-pole model (MY3).





Refer to the standards certifications and compliance section of your OMRON website for the latest information on certified models.

Features

1. More easily distinguished AC/DC coil voltage specifications

Example: MY4

- · Distinguished using color-coded coil tape*
- * Voltage is printed on white tape in the case of the Standard 3-pole model (MY3).

· Distinguished using color-coded operation indicators (LED)







Example: MY4

Green = DC voltage



Operation indicator (LED)





Coil tape

Example: MY2









2. Contact materials and contact structures can be selected based on contact reliability and corrosion resistance.

| Contact relia | bility | Corrosion re | Corrosion resistance | | |
|---------------|------------------------------|--------------|---|---------------|--|
| | Contact structure | | Contact material | Typical model | |
| High 🔨 | Crossbar bifurcated contacts | High 1 | Au cladding + AgPd | MY4Z-CBG | |
| | Bifurcated contacts | _ | Au cladding + Ag alloy Au plating + Ag alloy | MY4Z MY2Z | |
| | Single contacts | | Au cladding + Ag alloy | MY4 | |
| Low | Olligie contacts | Low | Ag alloy | MY2 | |

Model Number Structure

Model Number Legend

Plug-in Terminals

Standard models

(Example: MY4ZIN(S)) (2)(3)

(1) Number of poles

2: 2-pole 3: 3-pole 4: 4-pole

(2) Contacts

(3) Options None, (S): None None: Single

Bifurcated N, N(S): With operation indicator Z-CBG: Crossbar bifurcated IN(S): With operation indicator/latching lever

Models with built-in diode for coil surge absorption

(Example: MY4ZIN-D2(S)) (2)

(1) Number of poles/contacts

2Z: 2-pole, bifurcated contacts 3: 3-pole, single contacts 4Z: 4-pole, bifurcated contacts

(2) Options

N-D2, N-D2(S): Built-in diode for coil surge absorption, with operation indicator (A2/14: +) N1-D2(S): Built-in diode for coil surge absorption, with operation indicator (A1/13: +)

IN-D2(S): Built-in diode for coil surge absorption, with operation indicator/latching lever (A2/14: +)

IN1-D2(S): Built-in diode for coil surge absorption,

with operation indicator/latching lever (A1/13: +)

Models with built-in CR circuit for coil surge absorption



(1) Number of poles/contacts (2) Options

2Z: 2-pole, bifurcated contacts 4Z: 4-pole, bifurcated contacts N-CR, N-CR(S): Built-in CR circuit for coil surge absorption, with operation indicator IN-CR(S): Built-in CR circuit for coil surge absorption, with operation indicator/latching lever

PCB terminals/case surface mounted

(Example: MY2-02) (2) (1)

(1) Number of poles/contacts

2: 2-pole, single contacts 3: 3-pole, single contacts

4: 4-pole, single contacts

4Z: 4-pole, bifurcated contacts

(2) Terminals

-02: PCB terminals

Case-surface mounting

Ordering Information When your order, specify the rated voltage.

●Plug-in Terminals

Without operation indicator

| Classification | Number of poles | Contacts | Model | Rated voltage |
|-----------------|-----------------|---------------------|-----------|--|
| | 2 | Bifurcated | MY2Z | 12, 24, 110/120, 220/240 VAC |
| | 2 | Biturcated | IVI I ZZ | 12, 24, 100/110 VDC |
| 2 | 3 | Single | мүз | 12, 24, 110/120, 220/240 VAC |
| Standard models | 3 | | | 12, 24, 48, 100/110 VDC |
| Standard models | | Bifurcated | MY4Z(S) | 6, 12, 24, 48/50, 110/120, 220/240 VAC |
| | 4 | Diffurcated | | 6, 12, 24, 48, 100/110 VDC |
| | Cros | Crossbar bifurcated | MY4Z-CBG | 100/110, 110/120, 200/220 VAC |
| | | | WIT4Z-CBG | 12, 24, 48, 100/110 VDC |

With operation indicator

| Classification | | Number of poles | Contacts | Model | Rated voltage |
|---|----------------|-----------------|---------------------|--------------|--|
| | | 2 | Bifurcated | MY2ZN | 110/120, 220/240 VAC |
| | | 2 | Bilurcated | IVI Y ZZIN | 24 VDC |
| | | 3 | Cinale | MY3N | 24, 110/120, 220/240 VAC |
| Standard mode | do. | 3 | Single | IVITON | 12, 24, 48, 100/110 VDC |
| Standard mode | :15 | | Difusested | MV47N(C) | 6, 12, 24, 48/50, 110/120, 220/240 VAC |
| 4 | | _ | Bifurcated | MY4ZN(S) | 6, 12, 24, 48, 100/110 VDC |
| | | 4 | Crossbar bifurcated | MY4ZN-CBG | 100/110, 200/220 VAC |
| | | | Crosspar bilurcated | WIT4ZN-CBG | 24 VDC |
| | Type 1 | 2 | Bifurcated | MY2ZN-D2 | 24 VDC |
| Models with | ⊕ ⊕ | 3 | Single | MY3N-D2 | 12, 24, 48 VDC |
| built-in diode | 13 14 A1 A2 | 4 | Bifurcated | MY4ZN-D2(S) | 6, 12, 24, 48, 100/110 VDC |
| for coil surge absorption | Type 2 + | 4 | Bifurcated | MY4ZN1-D2(S) | 6, 12, 24, 48, 100/110 VDC |
| Models with built-in CR circuit for coil surge absorption 4 | | 4 | Bifurcated | MY4ZN-CR(S) | 110/120, 220/240 VAC |

With operation indicator/latching lever

| Classification | | Number of poles | Contacts | Model | Rated voltage |
|---|--------|-----------------|------------|---------------|--|
| Standard mode | le | 4 | Bifurcated | MY4ZIN(S) | 6, 12, 24, 48/50, 110/120, 220/240 VAC |
| Standard mode | 13 | 7 | Dirurcated | W1142114(3) | 6, 12, 24, 48, 100/110 VDC |
| Models with built-in diode | Type 1 | 4 | Bifurcated | MY4ZIN-D2(S) | 6, 12, 24, 48, 100/110 VDC |
| for coil surge absorption | Type 2 | 4 | Bifurcated | MY4ZIN1-D2(S) | 6, 12, 24, 48, 100/110 VDC |
| Models with built-in CR circuit for coil surge absorption | | 4 | Bifurcated | MY4ZIN-CR(S) | 110/120, 220/240 VAC |

●PCB terminals

| Classification | Number of poles | Contacts | Model | Rated voltage |
|---|-----------------|--------------------|-------------|--|
| | 2 | Single | MY2-02 | 12, 24, 100/110, 110/120, 200/220, 220/240 VAC |
| | | Siligle | IVI I 2-02 | 12, 24, 48, 100/110 VDC |
| Standard models (compliant with Electrical | 3 | Single | MY3-02 | 12, 24, 100/110, 110/120, 200/220, 220/240 VAC |
| | | | | 12, 24, 48, 100/110 VDC |
| Appliances and Material | | Single Bifurcated | MY4-02 | 12, 24, 100/110, 110/120, 200/220, 220/240 VAC |
| Safety Act) | 4 | | IVI I 4-02 | 12, 24, 48, 100/110 VDC |
| | 4 | | MY4Z-02 | 100/110, 110/120, 200/220 VAC |
| | | | IVI 1 4Z-UZ | 12, 24, 48, 100/110 VDC |

● Case-surface mounting

| Classification | Number of poles | Contacts | Model | Rated voltage |
|----------------------------|-----------------|-------------|-----------|--|
| | 2 | Single | MY2F | 24, 100/110, 110/120, 200/220, 220/240 VAC |
| | 2 | Single | IVI Y ZF | 12, 24, 48, 100/110 VDC |
| Standard models | 3 | Single | MY3F | 24, 100/110, 200/220 VAC |
| (compliant with Electrical | | | | 24, 100/110 VDC |
| Appliances and Material | 4 | Single | MY4F | 24, 100/110, 110/120, 200/220 VAC |
| Safety Act) | | | | 12, 24, 48, 100/110 VDC |
| | | Bifurcated | MY4ZF | 200/220 VAC |
| | | Diffurcated | IVI T 42F | 12, 24 VDC |

Ratings and Specifications

Ratings Operating Coils

| Terminal Type | Classification | Number of poles | Contacts | Without operation indicator | With operation indicator | With latching lever |
|----------------------|---|-----------------|------------|-----------------------------|---------------------------|-----------------------------|
| | Standard models | 4 | Bifurcated | MY4Z(S) | MY4ZN(S) | MY4ZIN(S) |
| Plug-in terminals | Models with built-in diode for coil surge absorption | 4 | Bifurcated | | MY4ZN-D2(S), MY4ZN1-D2(S) | MY4ZIN-D2(S), MY4ZIN1-D2(S) |
| maio | Models with built-in CR circuit for coil surge absorption | 4 | Bifurcated | | MY4ZN-CR(S) | MY4ZIN-CR(S) |

| | Item | Rated cur | rent (mA) | Coil resistance | Coil induc | ctance (H) | Must | Must | Maximum | Power |
|-------|-------------|-------------|-----------|-----------------|--------------|-------------|------------------------|------------------------|-------------|-----------------------|
| Rated | voltage (V) | 50 Hz 60 Hz | | (Ω) | Armature OFF | Armature ON | operate voltage (V) | release voltage (V) | voltage (V) | (VA, W) |
| | 6 | 214.1 | 183 | 12.2 | 0.04 | 0.08 | | | | |
| | 12 | 106.5 | 91 | 46 | 0.17 | 0.33 | | | | |
| AC | 24 | 53.8 | 46 | 180 | 0.69 | 1.30 | | 30% min.*2 | | Approx. 0.9 to 1.3 |
| AC | 48/50 | 24.7/25.7 | 21.1/22.0 | 788 | 3.22 | 5.66 | | 30 /0 111111. 2 | | (at 60 Hz) |
| | 110/120 | 9.9/10.8 | 8.4/9.2 | 4,430 | 19.20 | 32.1 | | | 110% of | |
| | 220/240 | 4.8/5.3 | 4.2/4.6 | 18,790 | 83.50 | 136.4 | 80% max.*1 | | rated | |
| | 6 | 151 | | 39.8 | 0.17 | 0.33 | | | voltage | |
| | 12 | 7 | 5 | 160 | 0.73 | 1.37 | | | | |
| DC | 24 | 37 | 7.7 | 636 | 3.20 | 5.72 | | 10% min.*2 | | Approx. 0.9 |
| | 48 | 18.8 | | 2,560 | 10.60 | 21.0 | | | | |
| | 100/110 | 9.0 | /9.9 | 11,100 | 45.60 | 86.2 | | | | |

Note: 1. The rated current and coil resistance are measured at a coil temperature of 23°C with tolerances of +15%/-20% for AC rated current and ±15% for DC coil resistance

- The AC coil resistance and inductance values are reference values only (at 60 Hz).
- Operating characteristics were measured at a coil temperature of 23°C
- The maximum voltage capacity was measured at an ambient temperature of 23°C.
- 5. Power consumption drop was measured for the above data. When driving transistors, check leakage current and connect a bleeder resistor if required.
- *1. There is variation between products, but actual values are 80% maximum.
 - To ensure operation, apply at least 80% of the rated value (at a coil temperature of 23°C).
- There is variation between products, but actual values are 30% minimum for AC and 10% minimum for DC. To ensure release, use a value that is lower than the specified value.

| Terminal Type | Classification | Number of poles | Contacts | Without operation indicator | With operation indicator |
|--------------------------|----------------------------|-----------------|---------------------|-----------------------------|--------------------------|
| | | 2 | Bifurcated | MY2Z | MY2ZN |
| Plug-in terminals | Standard models | 3 | Single | MY3 | MY3N |
| | | 4 | Crossbar bifurcated | MY4Z-CBG | MY4ZN-CBG |
| | Models with built-in diode | 2 | Bifurcated | | MY2ZN-D2 |
| | for coil surge absorption | 3 | Single | | MY3N-D2 |
| | | 2 | Single | MY2-02 | |
| РСВ | Standard models | 3 | Single | MY3-02 | |
| terminals | Standard models | | Single | MY4-02 | |
| | | 4 | Bifurcated | MY4Z-02 | |
| Case-surface mounting | | 2 | Single | MY2F | |
| | Standard models | 3 | Single | MY3F | |
| | Standard models | 4 | Single | MY4F | |
| | | 4 | Bifurcated | MY4ZF | |

| | Item | Rated cur | rent (mA) | Coil resistance | Coil induc | ctance (H) | Must | Must | Maximum | Power |
|-------|-------------|-------------|-----------|-----------------|--------------|-------------|------------------------|------------------------|-----------------------------|------------------------|
| Rated | voltage (V) | 50 Hz 60 Hz | | (Ω) | Armature OFF | Armature ON | operate voltage (V) | release voltage (V) | voltage (V) | consumption (VA, W) |
| | 12 | 106.5 | 91 | 46 | 0.17 | 0.33 | | | | |
| | 24 | 53.8 | 46 | 180 | 0.69 | 1.3 | | | | |
| AC | 100/110 | 11.7/12.9 | 10/11 | 3,750 | 14.54 | 24.6 | | 30% min.*2 | | Approx. 0.9 to 1.3 |
| AC | 110/120 | 9.9/10.8 | 8.4/9.2 | 4,430 | 19.2 | 32.1 | | 30% 11111. 2 | 110% of rated voltage | (at 60 Hz) |
| | 200/220 | 6.2/6.8 | 5.3/5.8 | 12,950 | 54.75 | 94.07 | 80% max.*1 | | | (====) |
| | 220/240 | 4.8/5.3 | 4.2/4.6 | 18,790 | 83.5 | 136.4 | 00% IIIax. I | | | |
| | 12 | 7 | 5 | 160 | 0.73 | 1.37 | | 10% min.*2 | | |
| DC | 24 | 36 | 5.9 | 650 | 3.2 | 5.72 | | | | Approx. 0.9 |
| DC | 48 | 18 | 3.5 | 2,600 | 10.6 | 21.0 | | | | |
| | 100/110 | 9.1 | /10 | 11,000 | 45.6 | 86.2 | | | | |

Note: 1. The rated current and coil resistance are measured at a coil temperature of 23°C with tolerances of +15%/-20% for AC rated current and ±15% for DC coil

- The AC coil resistance and inductance values are reference values only (at 60 Hz).
- Operating characteristics were measured at a coil temperature of 23°C.
 The maximum voltage capacity was measured at an ambient temperature of 23°C.
 There is variation between products, but actual values are 80% maximum.
- To ensure operation, apply at least 80% of the rated value.

 There is variation between products, but actual values are 30% minimum for AC and 10% minimum for DC. To ensure release, use a value that is lower than the

Contact Ratings

| Number of poles (contact configuration) | | 2-pole | (DPDT) | | 3-pole | e (3PDT) | |
|---|---------------------------------|--|--|---------------------------------|--|---------------------------------|--|
| Contact structure | Sir | ngle | Bifu | rcated | Single | | |
| Load | Resistive load | Inductive load (cos φ = 0.4, L/R = 7 ms) | Inductive load (cos φ = 0.4, L/R = 7 ms) | Resistive load | Inductive load (cos φ = 0.4, L/R = 7 ms) | | |
| Rated load | 5 A at 220 VAC 5 A at 24 VDC | | | 2 A at 220 VAC 2 A at 24 VDC | 5 A at 220 VAC 5 A at 24 VDC | 2 A at 220 VAC 2 A at 24 VDC | |
| Rated carry current*1 | 5 A | | | | 5 A | | |
| Maximum switching voltage | 250 VAC, 125 VDC | | | | 250 VAC, 125 VDC | | |
| Maximum switching current | 5 A | | | | 5 A | | |
| Maximum switching power | 1,100 VA 120 W | 440 VA 48 W | 1,100 VA 120 W | 440 VA 48 W | 1,100 VA 120 W | 440 VA 48 W | |
| Contact material | Ag | | Au plating + Ag | | Ag | | |

| Number of poles (contact configuration) | | | | | | | | | | |
|---|---------------------------------|--|---------------------------------|--|---------------------------------|--|---------------------------------|--|--|--|
| Contact structure | Sin | igle | Bifur | cated | With latchi | ng lever (S) | Crossbar bifurcated (CBG) | | | |
| Load | Resistive load | Inductive load (cos φ = 0.4, L/R = 7 ms) | Resistive load | Inductive load (cos φ = 0.4, L/R = 7 ms) | Resistive load | Inductive load (cos φ = 0.4, L/R = 7 ms) | Resistive load | Inductive load (cos φ = 0.4, L/R = 7 ms) | | |
| Rated load | 3 A at 220 VAC 3 A at 24 VDC | 0.8 A at 220 VAC 1.5 A at 24 VDC | 3 A at 220 VAC 3 A at 24 VDC | 0.8 A at 220 VAC 1.5 A at 24 VDC | 3 A at 250 VAC 3 A at 30 VDC | 0.8 A at 250 VAC 1.5 A at 30 VDC | 1 A at 220 VAC 1 A at 24 VDC | 0.3 A at 220 VAC 0.5 A at 24 VDC | | |
| Rated carry current*1 | 3 A | | 3 A (5 A*2) | | 1 A | | | | | |
| Maximum switching voltage | 250 VAC, 125 VI | DC . | | | | | | | | |
| Maximum switching current | 3 A (5 A*2) 1 A | | | | | | | | | |
| Maximum switching power | 660 VA 72 W | 176 VA 36 W | 200 VA 45 W | 220 VA 24 W | 66 VA 12 W | | | | | |
| Contact material | Au cladding + Ag | alloy (Au plating | + Ag*3) | | | | Au cladding + Ag | _I Pd | | |

^{*1.} If you use a Socket, do not exceed the rated carry current of the Socket.

*2. Values shown in parentheses are for the MY□(S) model with latching lever.

*3. For MY□-02 relays with PCB terminals and MY□F case-surface-mounting relays.

Characteristics

| (conta | Number of poles act configuration) | 2-pole | (DPDT) | 3-pole (3PDT) | | 4-pole (4PDT) | | | | | | |
|------------------------------|--|---|--|---|---|--|--|--|--|--|--|--|
| | Contact structure | Single | Bifurcated | Single | Single | Bifurcated | Crossbar bifurcated (CBG) | | | | | |
| Contact res | istance*1 *2 | 100 mΩ max. | 50 mΩ max. | 50 mΩ max. | 100 mΩ max. | 100 mΩ max. | 100 mΩ max. | | | | | |
| Operate tim | e*3 | 20 ms max. | | | | | | | | | | |
| Release tim | e*3 | 20 ms max. | | | | | | | | | | |
| Maximum switching | Mechanical | 18,000 operations/h | | | | | | | | | | |
| frequency | Rated load | 1,800 operations/h | | | | | | | | | | |
| Insulation r | esistance*4 | 100 M Ω min. | | | | | | | | | | |
| | Between coil and contacts | | | | | | | | | | | |
| Dielectric strength | Between contacts of different polarity | 2,000 VAC, 50/60 Hz | z for 1 min | | | | | | | | | |
| | Between contacts of the same polarity | 1,000 VAC at 50/60 I | | 700 VAC at 50/60 Hz for 1 min | | | | | | | | |
| Vibration | Destruction | 10 to 55 to 10 Hz, 0.5 | 5-mm single amplitude | (1.0-mm double amp | litude) | | | | | | | |
| resistance | Malfunction | 10 to 55 to 10 Hz, 0.5 | 5-mm single amplitude | (1.0-mm double amp | litude) | | | | | | | |
| Shock | Destruction | 1,000 m/s ² | | | | | | | | | | |
| resistance | Malfunction | 200 m/s ² | | | | | | | | | | |
| Endurance | Mechanical | AC: 50,000,000 operations min. DC: 100,000,000 operations min. (switching frequency: 18,000 operations/h) | AC: 50,000,000 operations min. DC: 50,000,000 operations min. (switching frequency: 18,000 operations/h) | AC: 50,000,000 operations min. DC: 100,000,000 operations min. (switching frequency: 18,000 operations/h) | AC: 50,000,000 operations min. DC: 100,000,000 operations min. (switching frequency: 18,000 operations/h) | AC: 20,000,000 operations min. DC: 20,000,000 operations min. (switching frequency: 18,000 operations/h) | AC: 5,000,000 operations min. DC: 5,000,000 operations min. (switching frequency: 18,000 operations/h) | | | | | |
| | Electrical*5 | 500,000 operations min. (rated load, switching frequency: 1,800 operations/h) | 200,000 operations min. (rated load, switching frequency: 1,800 operations/h) | 500,000 operations min. (rated load, switching frequency: 1,800 operations/h) | 200,000 operations min. (rated load, switching frequency: 1,800 operations/h) | 100,000 operations min. (rated load, switching frequency: 1,800 operations/h) | 50,000 operations min. (rated load, switching frequency: 1,800 operations/h) | | | | | |
| Failure rate (reference v | | 1 mA at 5 VDC | 100 μA at 1 VDC | 1 mA at 5 VDC | 1 mA at 1 VDC | 100 μA at 1 VDC | 100 μA at 1 VDC | | | | | |
| Weight | | Approx. 35 g | Approx. 35 g | Approx. 35 g | Approx. 35 g | Approx. 35 g | Approx. 35 g | | | | | |

- Note: The data shown above are initial values.
 *1. Models with latching lever are 100 mΩ maximum.
 *2. Measurement conditions: 1 A at 5 VDC using the voltage drop method.
 *3. Measurement conditions: With rated operating power applied, not including contact bounce.
 *4. Measurement conditions: For 500 VDC applied to the same location as for dielectric strength measurement.
 *5. Ambient temperature condition: 23°C
 *6. This value measured at a switching frequency of 130 expertions page minute.
- *6. This value was measured at a switching frequency of 120 operations per minute.

| Number of poles (contact configuration) | | 2-pole (DPDT) | | | | 3-pole (3PDT) | | 4-pole (4PDT) | | | |
|---|-----------------------------|--------------------------|-----------------------------|--------------------------|-----------------------------|--------------------------|-----------------------------|--------------------------|-----------------------------|--------------------------|--|
| Contact structure | Contact structure Single | | Bifur | Bifurcated | | Single | | Single/bifurcated | | bifurcated 3G) | |
| Operation indicator | Without operation indicator | With operation indicator | Without operation indicator | With operation indicator | Without operation indicator | With operation indicator | Without operation indicator | With operation indicator | Without operation indicator | With operation indicator | |
| Ambient operating temperature*1 | 1-55 to +/11% | | -55 to +70% | -55 to +60%*2 | -55 to +70% | -55 to +60% *2 | -55 to +70% | | -55 to +70% | -55 to +60% | |
| Ambient operating humidity | 5 to 85%RH | | | | | | | | | | |

^{*1.} With no icing or condensation.
*2. This limitation is due to the diode junction temperature and elements used.

Certified Standards

●UL certification (File No. E41515)

| Model | Standard number | Category | Listed/ Recognized | Operating Coil ratings | No. of poles | Contact ratings | Certified number of operations |
|---|--------------------|----------|-----------------------|------------------------------|--------------|--|--------------------------------|
| MY2Z□ MY2-02 MY2F | UL508 | NRNT2 | Recognition | 6 to 240 VAC 6 to 125 VDC | 2 | 7 A, 240 VAC (General Use) 7 A, 24 VDC (Resistive) 5 A, 240 VAC (General Use) 5 A, 250 VAC (Resistive) 5 A, 30 VDC (Resistive) 3 A, 265 VAC (Resistive) | 6,000 |
| | | | | | | 1/6 HP, 250 VAC 1/8 HP, 265 VAC 1/10 HP, 120 VAC | 1,000 |
| | | | | | | B300 Pilot Duty (Same polarity) | 6,000 |
| MY3□ MY3N-D2 | UL508 | NRNT2 | Recognition | 6 to 240 VAC 6 to 125 VDC | 3 | 5 A, 28 VDC (Resistive) 5 A, 240 VAC (General Use) | 6,000 |
| MY3-02 MY3F | | | | | | 1/6 HP, 250 VAC | 1,000 |
| MY4□(S) MY4□-D2(S) MY4□-CR(S) MY4□-02 MY4□F | UL508 | NRNT2 | Recognition | 6 to 240 VAC 6 to 125 VDC | 4 | 5 A, 28 VDC (General Use) (Same polarity) 5 A, 240 VAC (General Use) (Same polarity) 5 A, 30 VDC (Resistive) (Same polarity) 5 A, 250 VAC (Resistive) (Same polarity) 0.2 A, 120 VDC (Resistive) (Same polarity) | 6,000 |
| | | | | | | 1/6 HP, 250 VAC (Same polarity) 1/10 HP, 120 VAC (Same polarity) | 1,000 |
| | | | | | | B300 Pilot Duty (Same polarity) | 6,000 |

●CSA certification (File No. LR31928)

| Model | Standard number | Class number | Operating Coil ratings | No. of poles | Contact ratings | Certified number of operations |
|-----------------------------------|-------------------|-----------------|------------------------------|---|---|--------------------------------|
| MY2Z□ MY2-02 MY2F | C22.2 NO.0, No.14 | | 6 to 240 VAC 6 to 125 VDC | 2 7 A, 240 VAC (General Use) (Same polarity) 7 A, 24 VDC (Resistive) (Same polarity) 5 A, 240 VAC (General Use) (Same polarity) 5 A, 30 VDC (Resistive) 5 A, 250 VAC (Resistive) (Same polarity) 0.2 A, 120 VDC (Resistive) | | 6,000 |
| | | | | | 1/6 HP, 250 VAC 1/10 HP, 120 VAC | 1,000 |
| MY3□ MY3N-D2 MY3-02 MY3F | C22.2 NO.0, No.14 | | 6 to 240 VAC 6 to 125 VDC | 3 | 5 A, 28 VDC (Resistive) 5 A, 240 VAC (General Use) 7 A, 240 VAC (General Use) 7 A, 24 VDC (Resistive) | 6,000 |
| | | | | | 1/6 HP, 250 VAC | 1,000 |
| MY4□-02 MY4□F | C22.2 NO.0, No.14 | 3211 07 | 6 to 240 VAC 6 to 125 VDC | 4 | 7 A, 240 VAC (General Use) (Same polarity) 7 A, 24 VDC (Resistive) (Same polarity) 5 A, 240 VAC (General Use) (Same polarity) 5 A, 30 VDC (Resistive) 5 A, 250 VAC (Resistive) (Same polarity) 0.2 A, 120 VDC (Resistive) | 6,000 |
| | | | | | 1/6 HP, 250 VAC 1/10 HP, 120 VAC | 1,000 |

●TÜV Rheinland certification (Certification No. R50030059)

| Model | Operating Coil ratings | Contact ratings | Certified number of operations |
|-----------------------------------|-------------------------------|--|--------------------------------|
| MY2Z□ MY2-02 MY2F | 6 to 125 VDC, 6 to 240 VAC | 5 A, 250 VAC (cos φ = 1.0) | 100,000 |
| MY3□ MY3N-D2 MY3-02 MY3F | | 5 A, 250 VAC ($\cos \varphi$ = 1.0) 0.8 A, 250 VAC ($\cos \varphi$ = 0.4) | |
| MY4□-02 MY4□F | | 3 A, 120 VAC ($\cos \varphi = 1.0$) 0.8 A, 250 VAC ($\cos \varphi = 0.4$) | |

●CE Marking

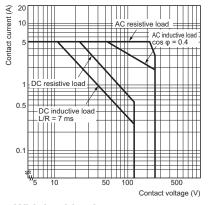
| ı | Model | EMC Directive | Low Voltage Directive | Machinery Directive | Safety Category |
|---|---------------------------|----------------|-----------------------|---------------------|-----------------|
| | MY2Z□ MY2ZN-D2 MY2F | Not applicable | Applicable | Not applicable | 1 |
| | MY3□ MY3N-D2 MY3F | | | | |

●LR certification (Lloyd's Register)

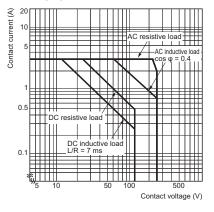
| Model | Environmental Category | Operating Coil ratings |
|----------|------------------------|------------------------|
| MY2Z□ | ENV2,3 | 6 to 240 VAC |
| MY2ZN-D2 | | 6 to 125 VDC |

Engineering Data (Reference Value)

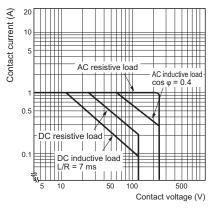
● Maximum Switching Capacity MY2 and MY3



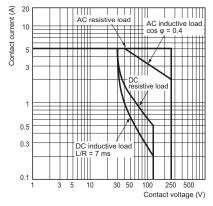
MY4 and MY4Z



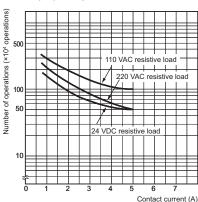
MY4Z-CBG



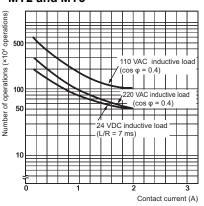
With latching lever MY4Z(S)



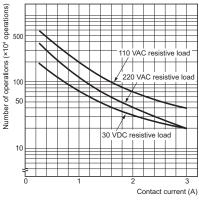
Endurance Curve MY2 and MY3



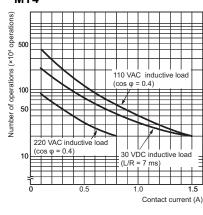
MY2 and MY3



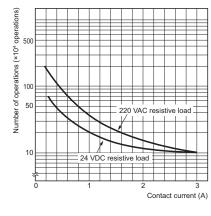
MY4



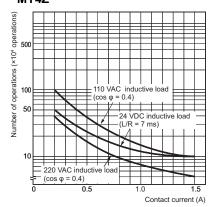
MY4



MY4Z

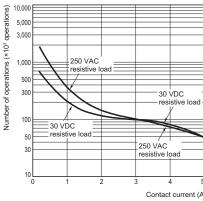


MY4Z

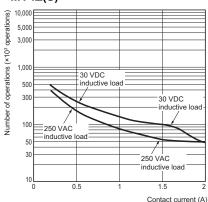


With latching lever



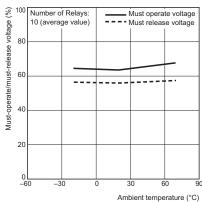


MY4Z(S)

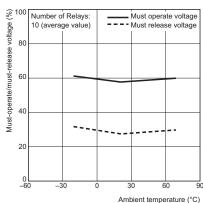


● Ambient Temperature vs. Must-operate and Must-release Voltage

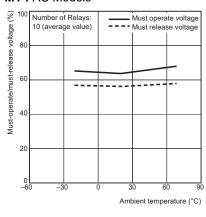
MY2 AC Models



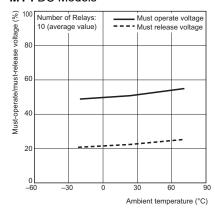
MY2 DC Models



MY4 AC Models

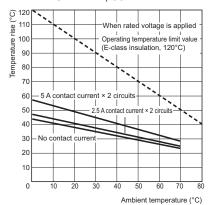


MY4 DC Models

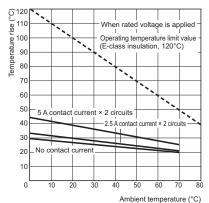


Ambient Temperature vs. Coil Temperature Rise

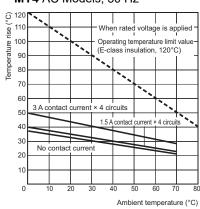
MY2 AC Models, 50 Hz



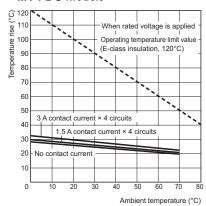
MY2 DC Models



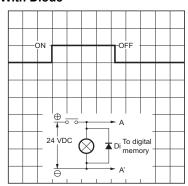
MY4 AC Models, 50 Hz

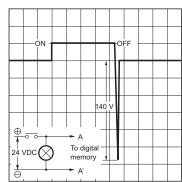


MY4 DC Models



Models with built-in diode for coil surge absorption MY□-D With Diode **Without Diode**

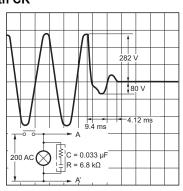


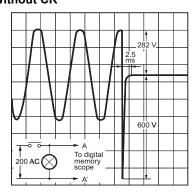


Note: 1. 2.

- Make sure that the polarity is correct. The release time will increase, but the 20-ms specification for standard models is satisfied.
- Diode properties: The diode has a reversed dielectric strength of 1,000 V. Forward current: 1 A

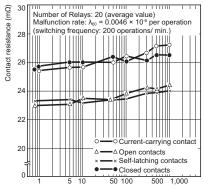
Models with built-in CR circuit for coil surge absorption MY□-CR With CR Without CR





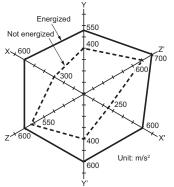
Contact Reliability Test MY4Z-CBG (Modified Allen Bradley Circuit)

Contact load: 5 VDC, 1 mA resistive load Malfunction level: Contact resistance of 100 Ω



Number of operations (×10⁴ operations)

Common Specifications for MY2, MY3, MY4, MY4Z, MY□-02, MY□F, and MY(S) except CBG •Shock Malfunction



N = 20

Measurement: Shock was applied 3 times each in 6 directions along 3 axes with the Relay energized and not energized to check the shock values that cause the Relay to malfunction.

 $\begin{array}{ll} \text{Criteria: Non-energized: 200 m/s}^2, \\ \text{Energized: 200 m/s}^2 \end{array}$

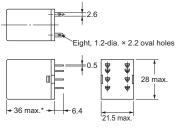
Shock direction



Dimensions (Unit: mm)

MY2Z□ MY2ZN-D2

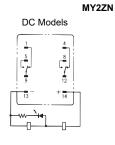


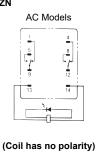


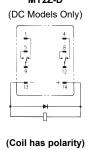
* For the MY2Z-CR and MY2ZN-CR, this dimension is 53 mm maximum.

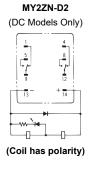
Terminal Arrangement/Internal Connection Diagram (Bottom View) MY2Z (AC/DC Models)

(Coil has no polarity)

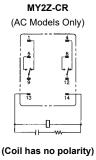


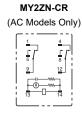






Terminal Arrangement/



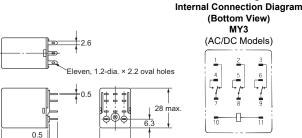


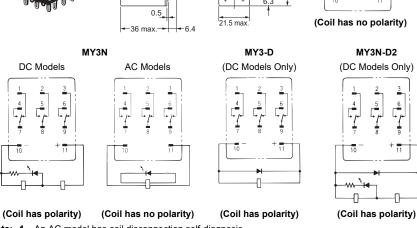
(Coil has no polarity)

(Coil has polarity) 1. An AC model has coil disconnection self-diagnosis. Note:

- For the DC models, check the coil polarity when wiring and wire all connections correctly.
- The indicator is red for AC and green for DC.
- 4. The operation indicator indicates the energization of the coil and does not represent contact operation.





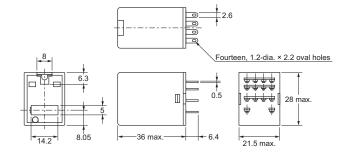


- Note: 1. An AC model has coil disconnection self-diagnosis.
 - For the DC models, check the coil polarity when wiring and wire all connections correctly. The indicator is red for AC and green for DC.
 - 4. The operation indicator indicates the energization of the coil and does not represent contact operation.

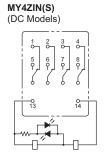
MY4Z□(S)

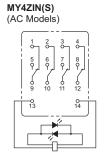


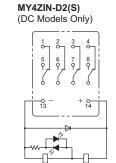
Note: The picture is lockable test button type.

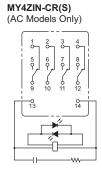


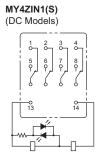
Terminal Arrangement/Internal Connections (Bottom View)

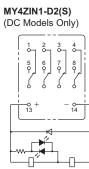








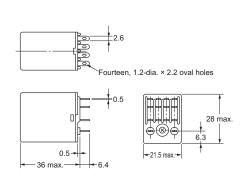


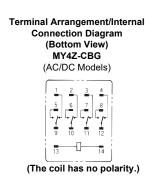


Note: For the DC models, check the coil polarity when wiring and wire all connections correctly.

MY4□-CBG







●PCB terminals

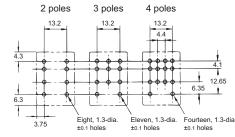
MY2-02 MY3-02 MY4□-02



The figure and outline drawing show MY4-02. The 2-pole and 3-pole models conform to these dimensions.

3.5 1 3.3 (2.6)* 1 3.3 (2.6)* 28 m 1 3.3 (2.6)*

PCB Processing Dimensions (Bottom View)



Note: 1. The dimensional tolerance is ±0.1.

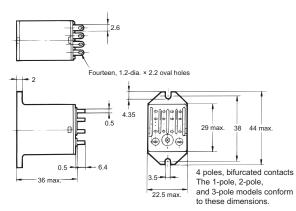
Refer to the terminal arrangement and internal connections diagrams for the MY2, MY3, MY4, and MY4Z.

●Case-surface mounting

MY2F MY3F MY4□F

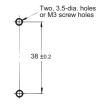


The above figure is for the MY4F.
The 2-pole and 3-pole models conform to these dimensions.



* Dimensions in parentheses are for the MY4-02.

Mounting Hole Dimensions



Note: Refer to the terminal arrangement and internal connections diagrams for the MY2, MY3, MY4, and MY4Z.

Common Options (Order Separately)

Ordering Information

Front-mounting Sockets

| Applicable relay model*1 | Mounting Method | Conductive part protection | Terminal Type | Applicable crimp terminal/ Electric wire | Appearance | Model | Hold-down Clips/ Release Levers (Order Separately) |
|--------------------------|---|---|--|--|-------------|------------------------------------|--|
| MY2□ MY2Z□-CR | | Option (Terminal cover sold separately) | Push-In Plus | Ferrules Solid wire Stranded wire | | PYF-08-PU*2 | With release lever * Hold by release lever |
| | | | Terminal | | | PYF-08-PU-L*2 | |
| | Mounted on a DIN track or with screws | | Forked terminals Solid wire Stranded wire Screw terminal (M3 screw size) Round terminals Forked terminals Solid wire Stranded wire | | PYFZ-08-E*4 | | |
| | | | | | | PYF08A-N | PYC-A1 |
| | | | | Forked terminals Solid wire | | PYFZ-08 * Terminal cover: PYCZ-C08 | |
| | Mounted on a DIN track | Available | Screwless terminal (Clamp method) | Solid wire Stranded wire | | PYF08S | PYCM-08S * Hold by release lever |
| MY3□ | Mounted on a DIN track or with screws | None | Screw terminal (M3 screw size) | Round terminals Forked terminals Solid wire Stranded wire | | PYF11A | PYC-A1 |

The applicable relay model is a plug-in terminal type.

There are screw mounting holes in the DIN hooks on the PYF-□□-PU and P2RF-□□-PU. Pull out the DIN hook tabs to mount the Sockets with screws.

Terminal cover type is PYCZ-C08. (Order Separately) For details, refer to the For Screw Terminal Sockets (PYFZ-08/PYFZ-14) Terminal covers on page 47.

The finger-protection type (PYFZ-□-E) is a type in which the terminal cover is integrated into the socket. Round terminals cannot be used. Use forked terminals or ferrules instead.

MY-GS/MY(S)/MYK/MYQ·MYH

| Applicable relay model*1 | Mounting Method | Conductive part protection | Terminal Type | Applicable crimp terminal/ Electric wire | Appearance | Model | Hold-down Clips/ Release Levers (Order Separately) |
|--|---|---|---|--|------------|------------------------------------|--|
| | | | Push-In Plus | Ferrules Solid wire | | PYF-14-PU*2 | With release lever * Hold by release lever |
| | Z□(S) □H 4□ □-CBG-CR | Available | Terminal | Stranded wire | | PYF-14-PU-L*2 | |
| | | Mounted on a DIN track or with screws Screw | | Forked terminals | | PYFZ-14-E*4 | - PYC-A1 |
| MY4□ MY4Z□(S) MY4□H MYQ4□ MY4Z□-CBG-CR | | | Screw terminal (M3 screw size) | Solid wire Stranded wire | | PYF14A-N | FIGAT |
| MY2K | | | | Round terminals Forked terminals Solid wire Stranded wire | | PYFZ-14 * Terminal cover: PYCZ-C14 | |
| | Mounted on a DIN track | Available | Screwless terminal (Clamp method) | Solid wire Stranded wire | | PYF14S | PYCM-14S * Hold by release lever |
| | Mounted on a DIN track or with screws | None | Screw terminal (M3.5 screw size) | Round terminals Forked terminals Solid wire Stranded wire | | PYF14T | PYC-A1 |
| MY2 and MY4 | Mounted on a DIN track or with screws | IN track or Available Rise-U | | Solid wire Stranded wire | | PYF14-ESS-B | PYC-35-B |
| | | | Tube-op terminal | | 1 | PYF14-ESN-B | 110 00-0 |

The applicable relay model is a plug-in terminal type.

There are screw mounting holes in the DIN hooks on the PYF-□□-PU and P2RF-□□-PU. Pull out the DIN hook tabs to mount the Sockets with screws.

Terminal cover type is PYCZ-C14. (Order Separately) For details, refer to the For Screw Terminal Sockets (PYFZ-08/PYFZ-14) Terminal covers on page 47.

The finger-protection type (PYFZ-□-E) is a type in which the terminal cover is integrated into the socket. Round terminals cannot be used. Use forked terminals or ferrules instead.

Back-mounting Sockets

| Applicable relay model*1 | Terminal Type | Hold-down Clips | Appearance | Model |
|--------------------------|--|--|------------|------------|
| | Solder terminals | | | PY08 |
| MY2□ | Wrapping terminals Terminal length: 25 mm | Accessories (Order Separately) - *MY2Z□-CR: PYC-1 | | PY08QN |
| MY2Z□-CR | Wrapping terminals Terminal length: 20 mm | Other than those above: PYC-P*3 | | PY08QN2 |
| | PCB terminals | | | PY08-02 |
| | Solder terminals | | | PY08-Y1 |
| MY2□ | Wrapping terminals Terminal length: 25 mm | With Hold-down Clips*2 | | PY08QN-Y1 |
| | Wrapping terminals Terminal length: 20 mm | | | PY08QN2-Y1 |

The applicable relay model is a plug-in terminal type.

The hold-down clips for connecting the relay and socket come as a set with the socket.

If a Relay with a Latching Lever is used in combination with a PY□□-02 Socket for Relays with PCB Terminals and a PYC-P Mounting Bracket, the lever will not operate.

| Applicable relay model*1 | Terminal Type | Hold-down Clips | Appearance | Mode |
|---|--|---|------------|------------|
| | Solder terminals | Accessories (Order Separately) * PYC-P | | PY11 |
| MY3□ | Wrapping terminals Terminal length: 25 mm | Accessories (Order Separately) *PYC-P | | PY11QN |
| | Wrapping terminals Terminal length: 20 mm | Accessories (Order Separately) * PYC-P | | PY11QN2 |
| | PCB terminals | Accessories (Order Separately) * PYC-P | | PY11-02 |
| MY4□ MY4Z□(S) MY4□H MYQ4□ MY4Z□-CBG-CR MY2K | Solder terminals | | | PY14 |
| | Wrapping terminals Terminal length: 25 mm | Accessories (Order Separately) * MY4Z□-CBG-CR: PYC-1 | | PY14QN |
| | Wrapping terminals Terminal length: 20 mm | Other than those above: PYC-P*3 | | PY14QN2 |
| | PCB terminals | PCB terminals | | PY14-02 |
| | Solder terminals | | | PY14-Y1 |
| S) | Wrapping terminals Terminal length: 25 mm | With Hold-down Clips*2 | | PY14QN-Y1 |
| The applicable relay model is The hold-down clips for connection | Wrapping terminals Terminal length: 20 mm | | | PY14QN2-Y1 |

The hold-down clips for connecting the relay and socket come as a set with the socket.
 If a Relay with a Latching Lever is used in combination with a PY□□-02 Socket for Relays with PCB Terminals and a PYC-P Mounting Bracket, the lever will not

Hold-down Clip

| Appearance*1 | Model*2 | Weight*3 | Application | | |
|--------------|---------|----------------|--|--|--|
| | PYC-A1 | Approx. 0.54 g | | | |
| | PYC-E1 | Approx. 0.6 g | For connecting relays and sockets | | |
| | PYC-P | Approx. 1.4 g | For connecting relays and sockets | | |
| | PYC-S | Арргох. 1.8 g | For connecting sockets, socket mounting plates, and relays | | |
| | Y92H-3 | Approx. 0.7 g | For connecting models with built-in CR circuit for coil surge absorption | | |
| | PYC-1 | Approx. 6 g | (MY2Z□-CR) and sockets | | |

^{*1.} The appearance shown is one in which the relay, socket, and hold-down clip are assembled.
*2. Hold-down clips are used in sets of two. However, PYC-P and PYC-1.
*3. The weight shown above is the weight for one hold-down clip.

Front-connecting Socket Accessories

For Push-In Plus Terminal Sockets (PYF-08-PU(-L)/PYF-14-PU(-L))

Short Bars

| Applicable sockets | Pitch | Application | | Number of poles | L (Length) | Insulati on color | Model*1 |
|-------------------------------|---------|-----------------------|--------------------------|-----------------|---------------|-----------------------|----------------|
| | | | 3.90 | 2 | 15.1 | | PYDN-7.75-020□ |
| | 7.75 | Bridging contact | 5 | 3 | 22.85 | | PYDN-7.75-030□ |
| PYF-08-PU(-L) PYF-14PU(-L) | 7.75 mm | terminals (common) | 12 18.5 | 4 | 30.6 | Red (R) | PYDN-7.75-040□ |
| | | | 2.25 1.57 | 20 | 154.6 | | PYDN-7.75-200□ |
| | 31.0 mm | For Coil terminals | 3.90 12 12 1.57 | 8 | 224.35 | Blue (S) Yellow(Y) | PYDN-31.0-080□ |

^{*1.} Replace the box (□) in the model number with the code for the covering color. □Color selection: R = Red, S = Blue, Y = Yellow

Labels

| Applicable sockets | Model | Manufacturer | Minimum order (Box) (quantity per box) |
|-------------------------------|------------------|--------------|---|
| PYF-08-PU(-L) PYF-14PU(-L) | MG-CPM-04 41390N | Cembre | 1,680 (35 sheet / 48 pieces) |

Note: PRINTER: MARKINGENIUS MG3 (Ask to your Omron contact for more details on printers)

For Screwless Terminal Sockets (PYF08S/PYF14S)

Short Bars

| Applicable sockets | Pitch | Application | Shape/external dimensions | Number of poles | Insulati on color | Model*1 |
|--------------------|---------|-----------------------|---------------------------|-----------------|-------------------|---------------------------------|
| PYF08S | 19.7 mm | For bridging | Insulation | 2 | Red (R) | PYDM-08S □ (50 pcs./bag) |
| PYF14S | 27.5 mm | coils between sockets | 1.2-dia. Pitch Pitch | 2 | Blue (B) | PYDM-14S □ (50 pcs./bag) |

^{*1.} Replace the box (\Box) in the model number with the code for the covering color. \Box Color selection: R = Red, B = Blue

Labels

| Applicable sockets | Model |
|--------------------|----------------|
| PYF08S | R99-11 |
| PYF14S | (100 pcs./bag) |

Release Levers

| Applicable sockets | Shape/external dimensions | Model |
|--------------------|---------------------------|----------|
| PYF08S | 54.4 | PYCM-08S |
| PYF14S | 52.5 | PYCM-14S |

For Screw Terminal Sockets (PYFZ-08/PYFZ-14) Short Bars

| Applicable sockets | Pitch | Application | Shape/external dimensions | Number of poles | | Model*1 |
|--------------------|-------|-------------------------|---|-----------------|-------------------------|------------------------------------|
| | | For bridging | 35° | 2 | | PYD-025B □ (10 pcs./bag) |
| PYFZ-08 | 22 mm | | 35° -22- -35° -35° -35° -35° | 8 | B (Black) | PYD-085B □ (10 pcs./bag) |
| | 29 mm | adjacent sockets | 3.3 | 2 | S (Blue) R (Red) | PYD-026B □ (10 pcs./bag) |
| PYFZ-14 | | | 203 29 29 3.3 3.3 5.6 | 8 | | PYD-086B □ (10 pcs./bag) |
| | | For bridging | 3.2 | 2 | B (Black) | PYD-020B □ (50 pcs./bag) |
| | 7 mm | with the same socket | 3.2 | 3 | B (Black) Y (Yellow) | PYD-030B □ (10 pcs./bag) |

^{*1.} Replace the box (\square) in the model number with the code for the covering color.

For Screw Terminal Sockets (PYFZ-08/PYFZ-14)

Terminal covers

| Applicable sockets | Appearance | Model |
|--------------------|------------|-------------------------|
| PYFZ-08 | | PYCZ-C08 (2 pcs/set) |
| PYFZ-14 | | PYCZ-C14 (1 pcs/set) |

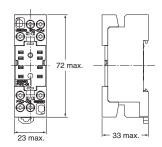
- Note: 1. These covers cannot be used for PYF08A and PYF14A.
 - 2. A short bar (optional) cannot be used attached to the upper section because it will interfere with the terminal cover.

Dimensions with terminal cover

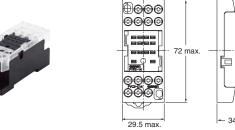
(Unit: mm)











Socket Mounting Plates (For Back-connecting Socket PY\(\subset \)/Solder Terminals, PY\(\subset \)QN(2)/Wrapping Terminals)

| Applicable Sockets | | Socket Mounting Plates | | |
|--|------------------------------------|------------------------|-------------------|---------|
| Model | Models with hold-down clips | Appearance | Number of sockets | Model |
| PY08 PY08QN | | | 1 | PYP-1 |
| PY08QN2 PY08QN2 PY11 PY11QN PY11QN2 PY14-Y1 PY14QN2 PY14QN PY14QN2 | PY08QN-Y1 PY08QN2-Y1 PY14-Y1 | | 18 | PYP-18* |
| | | | 36 | PYP-36* |

^{*}You can cut the PYP-18 and PYP-36 to any required length.

Parts for Track Mounting

| Туре | | Appearance | Model |
|------------|-------|------------|----------|
| DIN Tracks | 1 m | | PFP-100N |
| DIN Tracks | 0.5 m | | PFP-50N |
| End Plate* | | Company o | PFP-M |
| Spacer | | | PFP-S |

Note: The track conforms to DIN standards.

^{*}When mounting DIN track, please use End Plate (Model PFP-M).

MY-GS/MY(S)/MYK/MYQ-MYH

Ratings and Specifications

Characteristics

Sockets

| | | | | | | | Die | lectric strengt | th *4 | | | | | |
|------------|------------|--|--|-------------------------------|----------------------------|--------------------------------|---|---|--|--|------------------------|------------------------|--------------|--------------|
| Model | Connection | Number of pins | Terminal Type | Ambient operating temperature | Ambient operating humidity | Continuous carry current | Between contact terminals of same polarity | Between contact terminals of different polarity | Between coil and contact terminals | Insulation resistance *1 *4 | Weight | | | |
| PYF-08-PU | | | Push-In Plus Terminal | erminal -40 to 70°C | | 10 A*2 | 2,000 VAC | 2,000 VAC | 2,000 VAC | | Approx. 80 g | | | |
| PYF08S | | | Screwless terminal | | | 10 A 2 fo | for 1 min | for 1 min | for 1 min | | Approx. 46 g | | | |
| PYFZ-08 | | 8 | | −55 to 70°C | | 10 A | 2,250 VAC | 2,250 VAC | 2,250 VAC | | Approx. 32 g | | | |
| PYFZ-08-E | | 8 | Screw terminal | | | 10 A | for 1 min | for 1 min | for 1 min | | Approx. 32 g | | | |
| PYF08A-N | | | | −55 to 55°C | | 7 A*3 | 2,000 VAC for 1 min | 2,000 VAC for 1 min | 2,000 VAC for 1 min | | Approx. 32 g | | | |
| PYF11A | Front | 11 | Screw terminal | -55 to 70°C | | 5 A | 2,000 VAC for 1 min | 2,000 VAC for 1 min | 2,000 VAC for 1 min | 1,000 MΩ min. | Approx. 43 g | | | |
| PYF-14-PU | FIOIIL | | Push-In Plus Terminal | -40 to 70°C | | 6 A | 2,000 VAC | 2,000 VAC | 2,000 VAC | (500 VAC) | Approx. 87 g | | | |
| PYF14S | | | Screwless terminal | | | 5 A | for 1 min | for 1 min | for 1 min | (000 1710) | Approx. 62 g | | | |
| PYFZ-14 | | | | −55 to 70°C | | 6 A | 2,250 VAC | 2,250 VAC | 2,250 VAC | | Approx. 50 g | | | |
| PYFZ-14-E | | 14 | Screw terminal | | | 0 A | for 1 min | for 1 min | for 1 min | | Approx. 50 g | | | |
| PYF14A-N | | | | Screw terminal | Screw terminal | Screw terminal | −55 to 55°C | | 5 A*3 | 2,000 VAC for 1 min | 2,000 VAC for 1 min | 2,000 VAC for 1 min | | Approx. 50 g |
| PYF14T | | | | -55 to 70°C | −55 to 70°C | −55 to 70°C | | 3 A | 2,000 VAC for 1 min | 2,000 VAC for 1 min | 2,000 VAC for 1 min | | Approx. 53 g | |
| PY08 | | | Caldar tarminala | | | | | | | | Approx. 8 g | | | |
| PY08-Y1 | | | Solder terminals | | | | | | | | Approx. 9 g | | | |
| PY08QN | | Wrapping terminals (Terminal length: 25 mm) Wrapping terminals (Terminal length: 20 mm) | 5% to | | | | | | Approx. 12 g | | | | | |
| PY08QN-Y1 | | | | | 85% | 7 A | 1,500 VAC for 1 min | 1,500 VAC for 1 min | 1,500 VAC for 1 min | $\begin{array}{c} \text{100 M}\Omega \\ \text{min.} \end{array}$ | Approx. 13 g | | | |
| PY08QN2 | | | | | | | i I | | | | | Approx. 11 g | | |
| PY08QN2-Y1 | | | | | | | | | | | Approx. 12 g | | | |
| PY08-02 | | | PCB terminals | | 1 | | | | | | | | | Approx. 7 g |
| PY11 | | | Solder terminals | | | | | | | | Approx. 9 g | | | |
| PY11QN | Back | 11 | Wrapping terminals (Terminal length: 25 mm) | −55 to 70°C | | 5 A | 1,500 VAC | 1,500 VAC | 1,500 VAC | 100 MΩ | Approx. 13 g | | | |
| PY11QN2 | Dack | | Wrapping terminals (Terminal length: 20 mm) | 33 10 70 0 | | 37 | for 1 min | for 1 min | for 1 min | min. | Approx. 12 g | | | |
| PY11-02 | | | PCB terminals | | | | | | | | Approx. 8 g | | | |
| PY14 | | l | Solder terminals | | | | | | | | Approx. 10 g | | | |
| PY14-Y1 | | | Soluei terminais | | | | | | | | Approx. 11 g | | | |
| PY14QN | | | Wrapping terminals | 1 | | | | | | | Approx. 14 g | | | |
| PY14QN-Y1 | | | (Terminal length: 25 mm) | | | 1,500 VAC | 1,500 VAC | 1,500 VAC | $\begin{array}{c} 100 \ \text{M}\Omega \\ \text{min.} \end{array}$ | Approx. 15 g | | | | |
| PY14QN2 | | | Wrapping terminals | | | | | | | | Approx. 13 g | | | |
| PY14QN2-Y1 | | | (Terminal length: 20 mm) | | | | | | | | Approx. 14 g | | | |
| PY14-02 | | | PCB terminals | | | | | | | | Approx. 9 g | | | |

| Model | Connection | Number of pins | Terminal Type | Continuous carry current | Dielectric strength | Insulation resistance *1 |
|-------------|------------|----------------|--------------------|--------------------------|---------------------|--------------------------|
| PYF14-ESS-B | Front | 4.4 | Dies I In terminal | 10.4 | >3 kV | >5 MΩ |
| PYF14-ESN-B | FIONL | 14 | Rise-Up terminal | 12 A | >3 KV | >2 IVI22 |

For 500 VDC applied to the same location as for dielectric strength measurement.

The carrying current of 10 A is for an ambient temperature of 55°C or below. At an ambient temperature of 70°C, the value is 7 A.

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

The dielectric strength and insulation resistance values in the above table are for a single socket.

Socket Accessories

●For Front-connecting Sockets

Short Bars

| Application | Applicable sockets | Model | Maximum carry current | Ambient operating temperature | Ambient operating humidity | |
|----------------------------|--------------------------------|----------------|---------------------------|---|--|--|
| | | PYDN-7.75-020□ | | | | |
| | PYF-08-PU(-L) | PYDN-7.75-030□ | 20 A | -40 to 70°C | 50/, to 950/ | |
| | PYF-14-PU(-L) | PYDN-7.75-040□ | - 20 A | -40 to 70 C | 5% to 85% | |
| | | PYDN-7.75-200□ | | | | |
| Bridging contact terminals | PYFZ-08 | PYD-025B□ | | -40 to 70°C (with no icing or condensation) | 45% to 85% (with no icing or condensation) | |
| (common) | | PYD-085B□ | | | | |
| | PYFZ-14 | PYD-026B□ | 20 A | | | |
| | | PYD-086B□ | (However, 18 A when 70°C) | | | |
| | | PYD-020B□ | | | | |
| | | PYD-030B□ | | | | |
| | PYF-08-PU(-L) PYF-14-PU(-L) | PYDN-31.0-080□ | 20 A | -40 to 70°C | 5% to 85% | |
| For Coil terminals | PYF08S | PYDM-08S□ | 10 A | -40 to 70°C | 5% to 85% | |
| | PYF14S | PYDM-14S□ | 10 A | -40 to 70°C | 5% to 85% | |

Certified Standards

●CSA certification (File No. LR031928)

| Model | Ratings | Class number | Standard number |
|---------------|-------------|--------------|-----------------|
| PYF-08-PU(-L) | 10 A, 250 V | | |
| PYF-14-PU(-L) | 6 A, 250 V* | | |
| PYF08S | 10 A, 250 V | | |
| PYF14S | 5 A, 250 V | 3211 07 | CSA C22.2 No14 |
| PYFZ-08(-E) | 10 A, 250 V | 021101 | OON OLL INGT |
| PYFZ-14(-E) | 6 A, 250 V | | |
| PY□ PYF□A | 7 A, 250 V | | |

^{*}When power is supplied to all four poles, use with a total power current that does not exceed 20 A.

●UL certification (File No. E87929)

| Model | Ratings | Standard number | Category | Listed/Recognized |
|------------------|-------------|-----------------|----------|-------------------|
| PYF-08-PU(-L) | 10 A, 250 V | | | |
| PYF-14-PU(-L) | 6 A, 250 V* | | | |
| PYF08S PYF14S | 10 A, 250 V | 111 500 | SWIV2 | Recognition |
| PYFZ-08(-E) | 10 A, 250 V | UL508 | | |
| PYFZ-14(-E) | 6 A, 250 V | | | |
| PY□ PYF□A | 7 A, 250 V | | | |

^{*}When power is supplied to all four poles, use with a total power current that does not exceed 20 A.

●TÜV Rheinland certification

| Model | Ratings | Standard number | Certification No. | |
|---------------|--------------|-----------------|-------------------|--|
| PYF-08-PU(-L) | 10 A, 250 V* | | R50327595 | |
| PYF-14-PU(-L) | 6 A, 250 V | EN 61984 | K30327393 | |
| PYFZ-08(-E) | 10 A, 250 V | EN 01904 | R50405329 | |
| PYFZ-14(-E) | 6 A, 250 V | | | |

^{*}Ratings are for an ambient temperature of 55°C or below. At an ambient temperature of 70°C, the value is 7 A.

●VDE certification

| Model | Standard number | Certification No. | |
|--------|-------------------|-------------------|--|
| PYF08S | VDE0627 (EN61984) | 40015509 | |
| PYF14 | VDE0027 (EN01904) | | |

Others

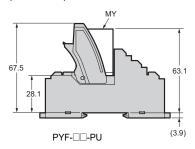
| Model | Standards | File No. |
|-------------|-----------|----------|
| PYF14-ESN-B | UL508 | E244189 |
| PYF14-ESS-B | CSA22.2 | LR225761 |

(Unit: mm)

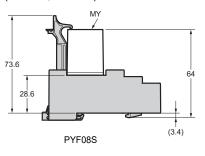
Height with Socket

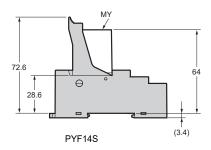
Front-connecting Sockets

• Push-In Plus Terminal (PYF-□-PU)

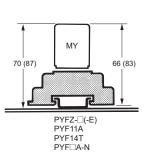


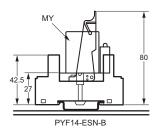
· Screwless terminal (PYF08S, PYF14S)

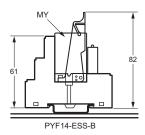




· Screw terminal (PYFZ- \square (-E), PYF11A, PYF14T, PYF \square A-N, PYF14-ES \square -B)







Note: 1. The PYF11A can be mounted on a track or with screws.

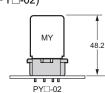
The heights given in parentheses are the measurements for 53-mm-high Relays.

Back-connecting Sockets

 Solder terminals/wrapping terminals (PY□)

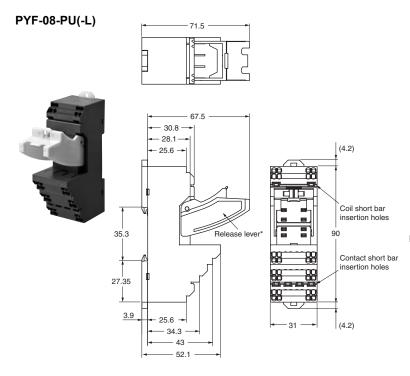


• PCB terminals (PY□-02)



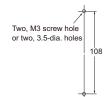
Front-connecting Sockets

●Push-In Plus Terminal



Terminal Arrangement/Internal Connection Diagram

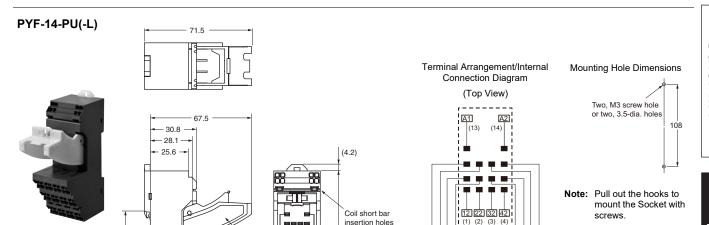
 Mounting Hole Dimensions



Note: Pull out the hooks to mount the Socket with screws.

- Note: 1. The numbers in parentheses are traditionally used terminal numbers.
 - Insert the short bar into only the A1 or A2 side.
 - 3. Only the No. 11 and No. 41 terminals function as bridging contact terminals. The two insertion holes between the terminals are false terminals to allow for installation without having to fold out the short bar pins.

*The PYF-08-PU-L Sockets do not have release levers.



Contact short bar

Note: The numbers in parentheses are traditionally used terminal numbers.

14 24 34 44

11 21 31 41

(9) (10) (11) (12)

*The PYF-14-PU-L Sockets do not have release levers.

25.6 → - 34.3 ----- 43

52.1

35.3

27.35

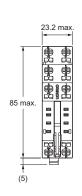
3.9

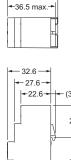
Release leve

Screwless terminal

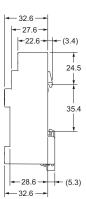
PYF08S





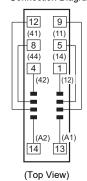


-38.2 max.-



--36.5 max.--

Terminal Arrangement/Internal Connection Diagram

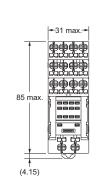


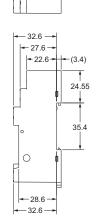
Note: The number shown in parentheses is the DIN

standard.

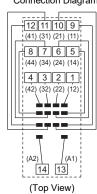
PYF14S







Terminal Arrangement/Internal Connection Diagram



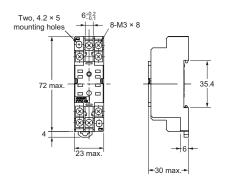
Note: The number shown in parentheses is the DIN standard.

Front-connecting Sockets

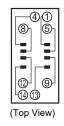
Screw terminal

PYFZ-08

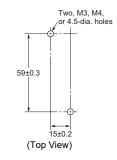




Terminal Arrangement/ Internal Connection Diagram



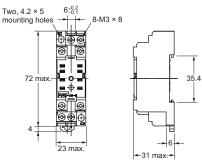
Mounting Hole Dimensions



Note: Track mounting is also possible.

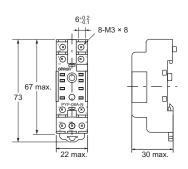
PYFZ-08-E (Finger-protection structure)



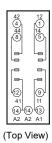


PYF08A-N

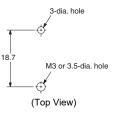




Terminal Arrangement/ Internal Connections



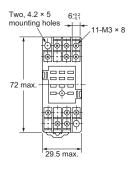
Mounting Hole Dimensions

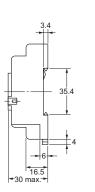


Note: Mounts to DIN Track.

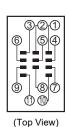
PYF11A



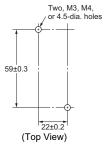




Terminal Arrangement/Internal Connection Diagram



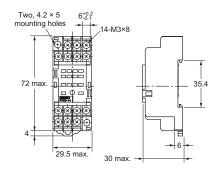
Mounting Hole Dimensions



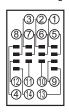
Note: Track mounting is also possible.

PYFZ-14



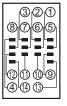


Terminal Arrangement/Internal Connection Diagram



(Top View) Note: Track mounting is also

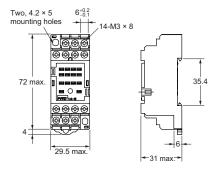
59±0.3



(Top View)

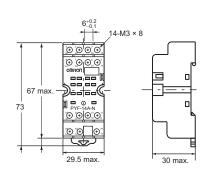
PYFZ-14-E (Finger-protection structure)



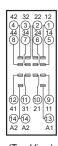


PYF14A-N





Terminal Arrangement/Internal Connections



(Top View)

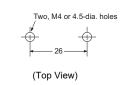
Mounting Hole Dimensions

Mounting Hole Dimensions

22±0.2

possible.

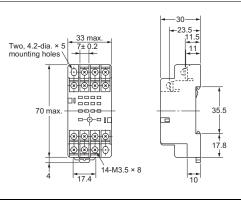
Two, M3, M4, or 4.5-dia. holes



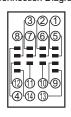
Note: Mounts to DIN Track.

PYF14T



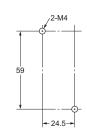


Terminal Arrangement/Internal Connection Diagram



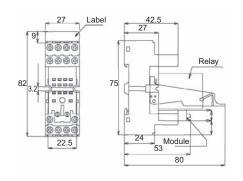
(Top View)

Mounting Hole Dimensions



PYF14-ESN-B

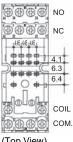




61

55

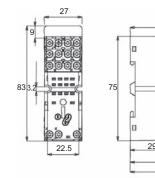
Terminal arrangement/ Internal connections/ mounting holes



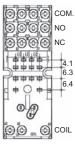
(Top View)

PYF14-ESS-B





Terminal arrangement/ Internal connections/ mounting holes



(Top View)

Back-connecting Socket Solder terminals





*PY08-Y□ includes the potion indicated by broken line

Terminal Arrangement/Internal Connection Diagram



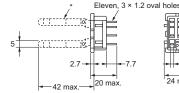
(Bottom View)

Mounting Hole Dimensions



PY11





*PY11-Y1 includes the potion indicated by broken line

Terminal Arrangement/Internal Connection Diagram



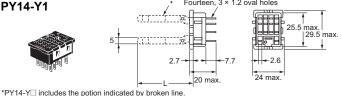
(Bottom View)

Mounting Hole Dimensions



PY14 PY14-Y1





Eight, 3 × 1.2 oval holes

-26

24 max.

Terminal Arrangement/Internal Connection Diagram



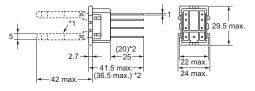
Mounting Hole Dimensions



Wrapping terminals

PY08QN PY08QN2





*1. PY08QN(2)-Y1 includes the potion indicated by broken line *2. Dimensions in parentheses are for PY08QN2(-Y1).

Terminal Arrangement/Internal Connection Diagram

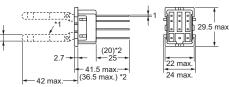


Mounting Hole Dimensions



PY11QN PY11QN2





*1. PY11QN(2)-Y1 includes the potion indicated by broken line.
*2. Dimensions in parentheses are for PY11QN2(-Y1).

Terminal Arrangement/Internal Connection Diagram



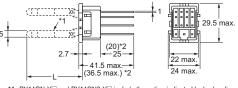
(Bottom View)

Mounting Hole Dimensions



PY14QN/PY14QN2 PY14QN-Y1/PY14QN2-Y1





*1. PY14QN-Y□ and PY14QN2-Y□ include the potion indicated by broken line. *2. Dimensions in parentheses are for PY14QN2(-Y□).

Terminal Arrangement/Internal Connection Diagram



(Bottom View)

Mounting Hole Dimensions

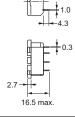


PCB terminals

PY08-02

• This is not a flux-tight structure. We recommend manual soldering for this product.





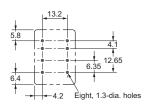


Terminal Arrangement/Internal Connection Diagram



(Bottom View)

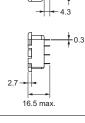
Mounting Hole and PCB Dimensions

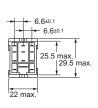


PY11-02

 This is not a flux-tight structure. We recommend manual soldering for this product.





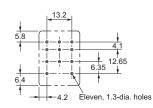


Terminal Arrangement/Internal Connection Diagram



(Bottom View)

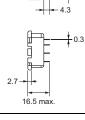
Mounting Hole and PCB Dimensions



PY14-02

• This is not a flux-tight structure. We recommend manual soldering for this product.





1.0

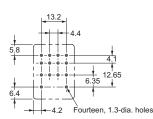


Terminal Arrangement/Internal Connection Diagram



(Bottom View)

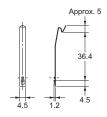
Mounting Hole and PCB Dimensions

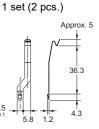


Socket Accessories

●Hold-down Clip

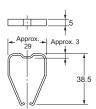
• PYC-A1 1 set (2 pcs.)



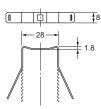


• PYC-E1

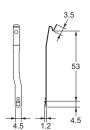
• PYC-P



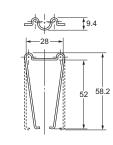
PYC-S
 1 set (2 pcs.)



• Y92H-3 pcs.) 1 set (2 pcs.)

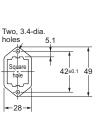


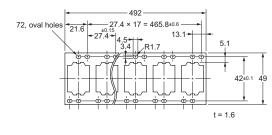
PYC-1



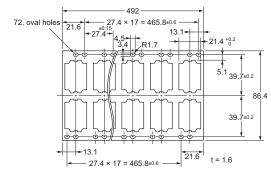
Socket Mounting Plates

PYP-18





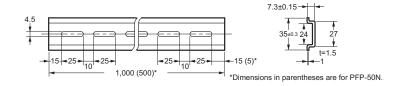
PYP-36



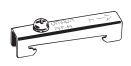
Accessories for DIN Track Mounting

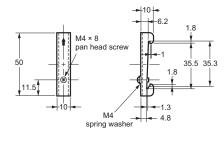
DIN Tracks PFP-100N PFP-50N





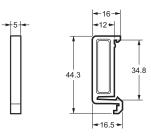
End Plate PFP-M





Spacer PFP-S





Safety Precautions

Relays

Be sure to read the *Safety Precautions for All Relays* in the website at the following URL: http://www.ia.omron.com/product/cautions/36/safety_precautions.html

Warning Indications



Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury, or may result in serious injury or death.

Additionally there may be significant property damage.

CAUTION

Indicates a potenti10_ally hazardous situation which, if not avoided, may result in minor or moderate injury or in property damage.

Precautions for Correct Use

Supplementary comments on what to do or avoid doing, to prevent failure to operate, malfunction, or undesirable effects on product performance.

Meaning of Product Safety Symbols



General caution
 Indicates the possibility of nor

Indicates the possibility of non-specified general cautions, warnings, and danger.



Electric shock caution

Used to warn of the risk of electric shock under specific conditions.



 High temperature caution
 Indicates the possibility of injuries by high temperature under specific conditions.

↑ CAUTION

Do not touch terminal sections (i.e., current-carrying parts) while power is being supplied.



Also, always mount the terminal cover.

Touching current-carrying parts may result in electric shock.

Do not touch the main unit while power is being supplied or immediately after the power supply has been turned OFF. The main unit will be extremely hot and may result in burns.



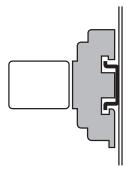
Precautions for Correct Use

Handling

For models with a built-in operation indicator, models with a built-in diode, or high-sensitivity models, check the coil polarity when wiring and wire all connections correctly (DC operation).

Installation

 There is no specifically required installation orientation, but make sure that the Relays are installed so that the contacts are not subjected to vibration or shock in their movement direction.



• Use two M3 screws to mount the case-surface mounting (MY□F) and tighten them securely. (Appropriate tightening torque: 0.98 N·m)

● Relay Replacement

To replace the Relay, turn OFF the power supply to the load and Relay coil sides to prevent unintended operation and possible electrical shock.

Applicable Sockets

Use only combinations of OMRON Relays and Sockets.

Attaching and Removing Relay Hold-down Clips

When you attach a Hold-down Clip to or remove it from a Socket, wear gloves or take other measures to prevent injuring your fingers on the Hold-down Clip.

Compliance with Electrical Appliances and Material Safety Act

- MY standard models comply with the Electrical Appliances and Material Safety Act.
- Always protect any exposed terminals (including Socket terminals) after wiring with insulation tubes or resin coating on PCBs.

| Model | Number of poles | Operating Coil ratings | Contact ratings |
|-------|-----------------|------------------------------|-----------------|
| MY | 1 2 3 | 6 to 220 VAC 6 to 120 VDC | 5 A, 200 VAC |
| | 4* | 6 to 110 VAC 6 to 120 VDC | 3 A, 115 VAC |

*Under the Electrical Appliances and Material Safety Act, do not use the Type 4 model with a voltage that exceeds 150 VAC. However, this restriction can be ignored if compliance with the Electrical Appliances and Material Safety Act is not required.

•Miniature Power Relays: MY

Latching Levers

- Turn OFF the power supply when operating the latching lever.
 After you use the latching lever always return it to its original state.
- Do not use the latching lever as a switch.
- The latching lever can be used for 100 operations minimum.

About the Built-in Diode and CR Elements

The diode or CR element that are built into the Relay are designed to absorb the reverse voltage from the Relay coil. If a large surge in voltage is applied to the diode or CR element from an external source, the element will be destroyed.

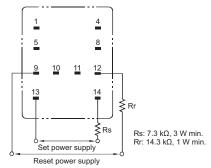
If there is the possibility of large voltage surges that could be applied to the elements from an external source, take any necessary surge absorption measures.

Using Microloads with Infrequent Operation

If any standard MY-series Relays (e.g., MY4) are used infrequently to switch microloads, the contacts may become unstable and eventually result in failure contact. In this case, we recommend using the MY4Z-CBG Series, which has high contact reliability for microloads.

●Latching Relays (MYK)

 For applications that use a 200 VAC power supply, connect external resistors Rs and Rr to a 100 VAC Relay.



- Do not apply a voltage to the set and reset coils at the same time.
 If you apply the rated voltage to both coils simultaneously, the Relay will be set.
- The minimum pulse width in the performance column is the value for the following measurement conditions: an ambient temperature of 23°C with the rated operating voltage applied to the coil. Satisfactory performance may be unattainable due to decreased holding strength caused by changes in circuit conditions and ambient operating temperature, or due to changes caused by product aging.

During actual use, apply a pulse width of the rated operating voltage suitable for the actual load to the coil and reset this at least once per year as a means of dealing with product aging.

 If the Relay is used in an environment with strong magnetic fields, the surrounding magnetic field can demagnetize the magnetic body and cause unintended operation.

Therefore, do not use these Relays in environments with strong magnetic fields.

Hermetically Sealed Relays (MYH)

Relays with PCB Terminals

When a Relay with PCB Terminals is mounted, a short-circuit can occur depending on the design of the PCB pattern because the Relay itself is made out of metal.

Solution

Refer to the external dimensions of the Relay and design the PCB pattern with enough space to prevent this problem.

Application Environments

Humid environments can cause insulation problems, which may result in short-circuiting or unintended operation.

Solution

Do not use these Relays in any environment where the Relay will come into contact with water vapor, condensation, or water droplets. This can reduce the surface tension of the terminal insulating beads and cause short-circuiting or unintended operation due to insulation problem.

Optional Sockets (Order Separately)

Be sure to read the Safety Precautions for All Relays in the website at the following URL: http://www.ia.omron.com/product/cautions/36/safety_precautions.html

Front-connecting Sockets

●Push-In Plus Terminal Sockets (PYF-08-PU(-L), PYF-14-PU(-L))

Screwless Terminal Sockets (PYF08S, PYF14S)

Refer to Safety Precautions on the Screwless Terminal Socket PYF S Data Sheet (Catalog No. CDRR-011).

●Screw Terminal Sockets (PYFZ-08(-E), PYF11A, PYFZ-14(-E), PYF-14T)

Be sure to read the Safety Precautions for All Relays, 4-2-1 Panel-mounting Sockets and 4-2-2 Relay Removal Direction of the website at the following URL: http://www.ia.omron.com/product/cautions/36/safety_precautions.html

• Use the following tightening torque for screws during wiring.

| Model | Tightening torque |
|------------------------|--|
| PYFZ-08 PYFZ-14 | 0.78 to 1.18 N·m |
| PYFZ-08-E PYFZ-14-F | 0.59 to 0.88 N·m * Use a No. 1 screwdriver. |

 Use the following wire diameters as a guide for wiring. (Select the appropriate wire diameter for the current used.)

| Model | Recommended wire diameter (mm²) | |
|------------------------|---------------------------------|---|
| PYFZ-08 PYFZ-14 | Stranded wire | 0.75 to 2.5 mm ² AWG 18 to 14 |
| | Solid wire | 0.75 to 1.5 mm ² AWG 18 to 16 |
| PYFZ-08-E PYFZ-14-E | Stranded wire | 0.75 to 2.5 mm ² AWG 18 to 14 |
| | Solid wire | 0.75 to 1.5 mm ² AWG 18 to 16 |

Back-connecting Socket

- ●Solder Terminal Sockets (PY08(-Y1/-Y3), PY11(-Y1/-Y3))
- •Wrapping Terminals Sockets (PY08QN(-Y1/-Y3), PY08QN2(-Y1/-Y3), PY11QN(-Y1), PY11QN2(-Y1))
- ●PCB Terminal Sockets (PY08-02, PY11-02)

Be sure to read the Safety Precautions for All Relays, 4-2-3 Back-connecting Sockets and 4-2-5 Terminal Soldering of the website at the following URL: http://www.ia.omron.com/product/cautions/36/safety precautions.html

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