## OmROn

## Miniature Power Relays MY/MYK/MYQ.MYH

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

- In addition to our standard type (MY), 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 plug-in terminals).
- 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- $\square$-PU) that feature light insertion force and strong pull-out strength to achieve less wiring work.
* 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 the standards certifications and compliance section of your OMRON website for the latest information on certified models.

## Miniature Power Relay Types



## MY/MYK/MYQ•MYH

## Model List

## Miniature Power Relays: MY



Note: 1. The models in this table are UL/CSA certified. This is indicated with a certification mark on the products. (Except crossbar bifurcated models MY4Z-CBG and MY4Z-CBG)
2. The standard models with plug-in terminals, models with built-in diodes for coil surge absorption, and models with built-in CR circuits for coil surge absorption were used in combination with the PYF■A-E, PYF■-S and PYF-■-PU for the EC Declaration of Conformity. These products display the CE Marking.

## Miniature Power Latching Relays (MYK)

| Classification | Number of poles | Contacts | Plug-in terminals |  | PCB terminals |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | With operation indicator | $\sqrt{6}$ |
| Standard models | 2 | Single | MY2K |  | MY2K-02 |

Miniature Power Sealed Relays (MYQ/MYH)

| Classification | Number of poles | Contacts | Plug-in terminals |  | PCB terminals |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\square$ | With operation indicator |  |
| Plastic Sealed Relays | 4 | Single | MYQ4 | MYQ4N | MYQ4-02 |
|  |  | Bifurcated | MYQ4Z |  | MYQ4Z-02 |
| Hermetically Sealed Relays | 4 | Single | MY4H |  | MY4H-0 |
|  |  | Bifurcated | MY4ZH |  | MY4ZH-0 |

Refer to Front-connecting Sockets and Back-connecting Sockets in Common Options (Order Separately) on pages 35 and 36 for main unit and socket combinations.

## 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 Safety Precautions on pages 53 to 54 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.

## Features

## 1. More easily distinguished AC/DC coil voltage specifications

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

Example: MY2


Coil tape
Pink $=$ AC voltage $\underset{\text { specification }}{\text { AC coil }}$

Example: MY4


Coil tape
Blue = DC voltage

- Distinguished using color-coded operation indicators (LED)


Operation indicator (LED) Red = AC voltage

## AC coil specification

Example: MY4


Operation indicator (LED) Green = DC voltage
2. Latching levers convenient for circuit checking and MY(S) models equipped with mechanical operation indicators and operation indicators for monitoring operation status are available.

- Latching lever operating procedure


Sliding the lever to the first stage and pressing the yellow button using an insulated flat-blade screwdriver, etc., will operate the contacts.


Sliding the lever to the second stage will lock the contacts in the operating position.

- Mechanical operation indicator/LED operation indicator


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

| Contact reliability |  |  | Corrosion resistance |  | Typical model |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Contact structure |  |  | Contact material |  |
| High $\uparrow$ | Crossbar bifurcated contacts |  | $\text { High } \uparrow$ | Au cladding + AgPd | MY4Z-CBG |
|  | Bifurcated contacts |  |  | Au cladding + Ag alloy <br> Au plating +Ag alloy | $\begin{aligned} & \text { MY4Z } \\ & \text { MY2Z } \end{aligned}$ |
|  |  |  |  | Au cladding + Ag alloy | MY4 |
| Low |  |  | Low | Ag alloy | MY2 |

## Model Number Structure

## Model Number Legend

## - Plug-in Terminals

M Y



(Example: MY4ZIN(S))
(1)
(2)
(3)
(1) Number of poles

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

## (2) Contacts

None: Single
Z: Bifurcated
Z-CBG: Crossbar bifurcated

## (3) Options

None: None
N : With operation indicator
IN(S): With operation indicator/latching lever

Models with builtin diode for coil surge absorption

(Example: MY4ZIN-D2(S))
(1) (2)
(2) Options
-D: Models with built-in diode for coil surge absorption
N-D2: Built-in diode for coil surge absorption, with operation indicator IN-D2(S): Built-in diode for coil surge absorption, with operation indicator/latching lever

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

Models with builtin CR circuit for coil surge absorption

$\square$ (Example: MY4ZIN-CR(S))
(1)
(2)
(1) Number of poles/contacts

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

## (2) Options

-CR: Models with built-in CR circuit for coil surge absorption
N -CR: 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* *4-pole: Single/bifurcated contacts only

## - PCB terminals/case surface mounted


$\square$ (Example: MY2-02)
(1)
(2)
(2) Terminals
-02: PCB terminals
F: Case-surface mounting

## Ordering Information

## -Plug-in Terminals

Without operation indicator

| Classification | Number of poles | Contacts | Model | Rated voltage |
| :---: | :---: | :---: | :---: | :---: |
| Standard models (compliant with Electrical Appliances and Material Safety Act) | 2 | Single | MY2 | 12, 24, 100/110, 110/120, 200/220, 220/240 VAC |
|  |  |  |  | 12, 24, 48, 100/110 VDC |
|  |  | Bifurcated | MY2Z | 12, 24, 100/110, 110/120, 200/220, 220/240 VAC |
|  |  |  |  | 12, 24, 48, 100/110 VDC |
|  | 3 | Single | MY3 | 12, 24, 100/110, 110/120, 200/220, 220/240 VAC |
|  |  |  |  | 12, 24, 48, 100/110 VDC |
|  | 4 | Single | MY4 | 12, 24, 100/110, 110/120, 200/220, 220/240 VAC |
|  |  |  |  | 12, 24, 48, 100/110 VDC |
|  |  | Bifurcated | MY4Z | 100/110, 110/120, 200/220, 220/240 VAC |
|  |  |  |  | 12, 24, 48, 100/110 VDC |
|  |  | Crossbar bifurcated | MY4Z-CBG | 100/110, 110/120, 200/220 VAC |
|  |  |  |  | 12, 24, 48, 100/110 VDC |
| Models with built-in diode for coil surge absorption (DC coil specification only) | 2 | Single | MY2-D | 12, 24, 48, 100/110 VDC |
|  |  | Bifurcated | MY2Z-D | 12, 24, 100/110 VDC |
|  | 3 | Single | MY3-D | 12, 24, 100/110 VDC |
|  | 4 | Single | MY4-D | 12, 24, 48, 100/110 VDC |
|  |  | Bifurcated | MY4Z-D | 12, 24, 48, 100/110 VDC |
| Models with built-in CR circuit for coil surge absorption (AC coil specification only) | 2 | Single | MY2-CR | 100/110, 110/120, 200/220, 220/240 VAC |
|  |  | Bifurcated | MY2Z-CR | 100/110, 200/220 VAC, |
|  | 4 | Single | MY4-CR | 100/110, 110/120, 200/220, 220/240 VAC |
|  |  | Bifurcated | MY4Z-CR | 100/110, 110/120, 200/220, 220/240 VAC |

With operation indicator

| Classification | Number of poles | Contacts | Model | Rated voltage |
| :---: | :---: | :---: | :---: | :---: |
| Standard models (compliant with Electrical Appliances and Material Safety Act) | 2 | Single | MY2N | 12, 24, 100/110, 110/120, 200/220, 220/240 VAC |
|  |  |  |  | 12, 24, 48, 100/110 VDC |
|  |  | Bifurcated | MY2ZN | 12, 24, 100/110, 110/120, 200/220, 220/240 VAC |
|  |  |  |  | 12, 24, 48, 100/110 VDC |
|  | 3 | Single | MY3N | 12, 24, 100/110, 110/120, 200/220, 220/240 VAC |
|  |  |  |  | 12, 24, 48, 100/110 VDC |
|  | 4 | Single | MY4N | 12, 24, 100/110, 110/120, 200/220, 220/240 VAC |
|  |  |  |  | 12, 24, 48, 100/110 VDC |
|  |  | Bifurcated | MY4ZN | 24, 100/110, 110/120, 200/220, 220/240 VAC |
|  |  |  |  | 12, 24, 48, 100/110 VDC |
|  |  | Crossbar bifurcated | MY4ZN-CBG | 100/110, 200/220 VAC |
|  |  |  |  | 24 VDC |
| Models with built-in diode for coil surge absorption (DC coil specification only) | 2 | Single | MY2N-D2 | 12, 24, 48, 100/110 VDC |
|  |  | Bifurcated | MY2ZN-D2 | 12, 24, 100/110 VDC |
|  | 3 | Single | MY3N-D2 | 12, 24, 100/110 VDC |
|  | 4 | Single | MY4N-D2 | 12, 24, 48, 100/110 VDC |
|  |  | Bifurcated | MY4ZN-D2 | 12, 24, 48, 100/110 VDC |
| Models with built-in CR circuit for coil surge absorption (AC coil specification only) | 2 | Single | MY2N-CR | 100/110, 110/120, 200/220, 220/240 VAC |
|  | 4 | Single | MY4N-CR | 100/110, 110/120, 200/220, 220/240 VAC |
|  |  | Bifurcated | MY4ZN-CR | 100/110, 110/120, 200/220, 220/240 VAC |

## With operation indicator/latching lever

| C\|c|c|c|l |
| :--- |
| Classification |
|  |
|  |  |

## -PCB terminals

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

-Case-surface mounting

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

## Ratings and Specifications

## Ratings

## Operating Coils

| Terminal Type | Classification | Number of poles | Contacts | Without operation indicator | With operation indicator |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Plug-in terminals | Standard models | 2 | Single | MY2 | MY2N |
|  |  | 4 | Single | MY4 | MY4N |
|  |  |  | Bifurcated | MY4Z | MY4ZN |
|  | Models with built-in diode for coil surge absorption (DC coil specification only) | 2 | Single | MY2-D | MY2N-D2 |
|  |  | 4 | Single | MY4-D | MY4N-D2 |
|  |  |  | Bifurcated | MY4Z-D | MY4ZN-D2 |
|  | Models with built-in CR circuit for coil surge absorption (AC coil specification only) | 2 | Single | MY2-CR | MY2N-CR |
|  |  | 4 | Single | MY4-CR | MY4N-CR |
|  |  |  | Bifurcated | MY4Z-CR | MY4ZN-CR |


| ( Item |  | Rated current (mA) |  | Coil resistance ( $\Omega$ ) | Coil inductance ( H ) |  | Must operate voltage (V) | $\begin{gathered} \text { Must } \\ \text { release } \\ \text { voltage (V) } \\ \hline \end{gathered}$ | Maximum voltage (V) | Powerconsumption(VA, W) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 50 Hz | 60 Hz |  | Armature OFF | Armature ON |  |  |  |  |
|  | 12 | 106.5 | 91 | 46 | 0.17 | 0.33 | 80\% max.*1 | 30\% min. ${ }^{*} 2$ | $110 \%$ of rated voltage |  |
|  | 24 | 53.8 | 46 | 180 | 0.69 | 1.3 |  |  |  |  |
|  | 100/110 | 11.7/12.9 | 10/11 | 3,750 | 14.54 | 24.6 |  |  |  | Approx. 0.9 |
|  | 110/120 | 9.9/10.8 | 8.4/9.2 | 4,430 | 19.2 | 32.1 |  |  |  | $\text { (at } 60 \mathrm{~Hz} \text { ) }$ |
|  | 200/220 | 6.2/6.8 | 5.3/5.8 | 12,950 | 54.75 | 94.07 |  |  |  |  |
|  | 220/240 | 4.8/5.3 | 4.2/4.6 | 18,790 | 83.5 | 136.4 |  |  |  |  |
|  | 12 |  |  | 165 | 0.73 | 1.37 |  |  |  |  |
|  | 24 |  |  | 662 | 3.2 | 5.72 |  |  |  |  |
| DC | 48 |  |  | 2,725 | 10.6 | 21.0 |  | 10\% min.*2 |  | pprox. 0.9 |
|  | 100/110 |  |  | 11,440 | 45.6 | 86.2 |  |  |  |  |

Note: 1. The rated current and coil resistance are measured at a coil temperature of $23^{\circ} \mathrm{C}$ with tolerances of $+15 \% /-20 \%$ for AC rated current and $\pm 15 \%$ for 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 $23^{\circ} \mathrm{C}$.
4. The maximum voltage capacity was measured at an ambient temperature of $23^{\circ} \mathrm{C}$.
*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 $23^{\circ} \mathrm{C}$ ).
*2. There is variation between products, but actual values are $10 \%$ 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 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Plug-in terminals |  | Standard models |  |  | 2 | Bifurcated |  | MY2Z |  |  | MY2ZN |  |  |
|  |  | Models with built-in diode for coil surge absorption (DC coil specification only) |  |  | 2 | Bifurcated |  | MY2Z-D |  |  | MY2ZN-D2 |  |  |
| ItemRated voltage (V) |  | Rated current (mA) |  | Coil resistance <br> $(\Omega)$ |  |  | Coil inductance (H) |  |  | Must operate voltage (V) | Must release voltage (V) | Maximum voltage (V) | Powerconsumption(VA, W) |
|  |  | 50 Hz | 60 Hz |  |  |  | Armature OFF |  | Armature ON |  |  |  |  |
| AC | 12 | 106.5 | 91 | 46 |  |  | 0.17 |  | 0.33 | 80\% max. ${ }^{*} 1$ | 30\% min.*2 | $110 \%$ of rated voltage | $\begin{gathered} \text { Approx. } 0.9 \\ \text { to } 1.3 \\ \text { (at } 60 \mathrm{~Hz} \text { ) } \end{gathered}$ |
|  | 24 | 53.8 | 46 |  | 180 |  | 0.69 |  | 1.3 |  |  |  |  |
|  | 100/110 | 11.7/12.9 | 10/11 |  | 3,750 |  | 14.54 |  | 24.6 |  |  |  |  |
|  | 110/120 | 9.9/10.8 | 8.4/9.2 |  | 4,430 |  | 19.2 |  | 32.1 |  |  |  |  |
|  | 200/220 | 6.2/6.8 | 5.3/5.8 |  | 12,950 |  | 54.75 |  | 94.07 |  |  |  |  |
|  | 220/240 | 4.8/5.3 | 4.2/4.6 |  | 18,790 |  | 83.5 |  | 136.4 |  |  |  |  |
| DC | 12 | 75 |  |  | 160 |  | 0.73 |  | 1.37 |  | 10\% min.*2 |  | Approx. 0.9 |
|  | 24 | 36.9 |  |  | 650 |  | 3.2 |  | 5.72 |  |  |  |  |
|  | 48 | 18.5 |  |  | 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 $23^{\circ} \mathrm{C}$ with tolerances of $+15 \% /-20 \%$ for AC rated current and $\pm 15 \%$ for 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 $23^{\circ} \mathrm{C}$.
4. The maximum voltage capacity was measured at an ambient temperature of $23^{\circ} \mathrm{C}$.
*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 $10 \%$ minimum for DC. To ensure release, use a value that is lower than the specified value.

| Terminal Type | Classification | Number of poles | Contacts | With latching lever |
| :---: | :---: | :---: | :---: | :---: |
| Plug-in terminals | Standard models | 2 | Single | MY2IN(S) |
|  |  | 4 | Single | MY4IN(S) |
|  |  |  | Bifurcated | MY4ZIN(S) |
|  | Models with built-in diode for coil surge absorption (DC coil specification only) | 2 | Single | MY2IN-D2(S) |
|  |  | 4 | Single | MY4IN-D2(S) |
|  |  |  | Bifurcated | MY4ZIN-D2(S) |
|  | Models with built-in CR circuit for coil surge absorption (AC coil specification only) | 2 | Single | MY4IN-CR(S) |
|  |  | 4 | Bifurcated | MY4ZIN-CR(S) |


| Item <br> Rated voltage (V) |  | Rated current (mA) |  | Coil resistance ( $\Omega$ ) | Coil inductance (H) |  | Must operate voltage (V) | Mustreleasevoltage (V) | Maximum voltage (V) | Power consumption (VA, W) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 50 Hz | 60 Hz |  | Armature OFF | Armature ON |  |  |  |  |
| AC | 100/110 | 11.7/12.9 | 10/11 | 3,750 | 14.54 | 24.6 | 80\% max.*1 | 30\% min.*2 | $110 \%$ of rated voltage | $\begin{gathered} \text { Approx. } 0.9 \\ \text { to } 1.3 \\ \text { (at } 60 \mathrm{~Hz} \text { ) } \\ \hline \end{gathered}$ |
|  | 200/220 | 6.2/6.8 | 5.3/5.8 | 12,950 | 54.75 | 94.07 |  |  |  |  |
| DC | 12 | 75 |  | 160 | 0.73 | 1.37 |  | 10\% min.*2 |  |  |
|  | 24 | 37.7 |  | 636 | 3.2 | 5.72 |  |  |  | Approx. 0.9 |
|  | 48 | 18.8 |  | 2,560 | 10.6 | 21 |  |  |  |  |

Note: 1. The rated current and coil resistance are measured at a coil temperature of $23^{\circ} \mathrm{C}$ with tolerances of $+15 \% /-20 \%$ for $A C$ rated current and $\pm 15 \%$ for $D C$ 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 $23^{\circ} \mathrm{C}$.
4. The maximum voltage capacity was measured at an ambient temperature of $23^{\circ} \mathrm{C}$.
*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 $10 \%$ minimum for $D C$. To ensure release, use a value that is lower than the specified value.


Note: 1. The rated current and coil resistance are measured at a coil temperature of $23^{\circ} \mathrm{C}$ with tolerances of $+15 \% /-20 \%$ for $A C$ rated current and $\pm 15 \%$ for $D C$ 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 $23^{\circ} \mathrm{C}$.
4. The maximum voltage capacity was measured at an ambient temperature of $23^{\circ} \mathrm{C}$.
*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 $A C$ and $10 \%$ minimum for DC. To ensure release, use a value that is lower than the specified value.

## Contact Ratings

| Number of poles (contact configuration) Contact structure | 2-pole (DPDT) |  |  |  |  |  | 3-pole (3PDT) <br> Single |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Single |  | With latching lever (S) |  | Bifurcated |  |  |  |
|  | Resistive load | Inductive load ( $\cos \varphi=0.4$, L/R $=7 \mathrm{~ms}$ ) | Resistive load | Inductive load $(\cos \varphi=0.4$, L/R = 7 ms ) | Resistive load | Inductive load ( $\cos \varphi=0.4$, L/R $=7 \mathrm{~ms}$ ) | Resistive load | Inductive load ( $\cos \varphi=0.4$, $\mathrm{L} / \mathrm{R}=7 \mathrm{~ms}$ ) |
| Rated load | $\begin{aligned} & 5 \mathrm{~A} \text { at } 220 \mathrm{VAC} \\ & 5 \mathrm{~A} \text { at } 24 \mathrm{VDC} \end{aligned}$ | $\begin{aligned} & 2 \mathrm{~A} \text { at } 220 \mathrm{VAC} \\ & 2 \mathrm{~A} \text { at } 24 \mathrm{VDC} \end{aligned}$ | $\begin{aligned} & 5 \mathrm{~A} \text { at } 250 \mathrm{VAC} \\ & 5 \mathrm{~A} \text { at } 30 \mathrm{VDC} \end{aligned}$ | $\begin{aligned} & 2 \mathrm{~A} \text { at } 250 \mathrm{VAC} \\ & 2 \mathrm{~A} \text { at } 30 \mathrm{VDC} \end{aligned}$ | $\begin{aligned} & 5 \mathrm{~A} \text { at } 220 \mathrm{VAC} \\ & 5 \mathrm{~A} \text { at } 24 \mathrm{VDC} \end{aligned}$ | $\begin{aligned} & 2 \mathrm{~A} \text { at } 220 \mathrm{VAC} \\ & 2 \mathrm{~A} \text { at } 24 \mathrm{VDC} \end{aligned}$ | 5 A at 220 VAC <br> 5 A at 24 VDC | $\begin{aligned} & 2 \mathrm{~A} \text { at } 220 \mathrm{VAC} \\ & 2 \mathrm{~A} \text { at } 24 \mathrm{VDC} \end{aligned}$ |
| Rated carry current*1 | $5 \mathrm{~A}\left(10 \mathrm{~A}^{*} 2\right)$ |  |  |  | 5 A |  | 5 A |  |
| Maximum switching voltage | 250 VAC, 125 VDC |  |  |  |  |  | 250 VAC, 125 VDC |  |
| Maximum switching current | 5 A |  | 10 A |  | 5 A |  | 5 A |  |
| Maximum switching power | $\begin{aligned} & \hline 1,100 \mathrm{VA} \\ & 120 \mathrm{~W} \\ & \hline \end{aligned}$ | $\begin{aligned} & 440 \mathrm{VA} \\ & 48 \mathrm{~W} \end{aligned}$ | $\begin{aligned} & 2,500 \mathrm{VA} \\ & 300 \mathrm{~W} \\ & \hline \end{aligned}$ | $\begin{aligned} & 500 \mathrm{VA} \\ & 60 \mathrm{~W} \end{aligned}$ | $\begin{array}{\|l\|} \hline 1,100 \mathrm{VA} \\ 120 \mathrm{~W} \\ \hline \end{array}$ | $\begin{aligned} & 440 \mathrm{VA} \\ & 48 \mathrm{~W} \end{aligned}$ | $\begin{aligned} & 1,100 \mathrm{VA} \\ & 120 \mathrm{~W} \\ & \hline \end{aligned}$ | $\begin{aligned} & 440 \mathrm{VA} \\ & 48 \mathrm{~W} \end{aligned}$ |
| Contact material | Ag |  |  |  | Au plating + Ag |  | Ag |  |


| Number of poles (contact configuration) <br> Contact structure <br> Load | 4-pole (4PDT) |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Single |  | With latching lever (S) |  | Bifurcated |  | With latching lever (S) |  | Crossbar bifurcated (CBG) |  |
|  | Resistive load | Inductive load ( $\cos \varphi=0.4$, L/R $=7 \mathrm{~ms}$ ) | Resistive load | Inductive load $(\cos \varphi=0.4$, L/R $=7 \mathrm{~ms}$ ) | $\begin{aligned} & \text { Resistive } \\ & \text { load } \end{aligned}$ | Inductive load $(\cos \varphi=0.4$, $\mathrm{L} / \mathrm{R}=7 \mathrm{~ms}$ ) | Resistive load | Inductive load $(\cos \varphi=0.4$, L/R $=7 \mathrm{~ms}$ ) | $\begin{gathered} \text { Resistive } \\ \text { load } \end{gathered}$ | Inductive load $(\cos \varphi=0.4$, L/R $=7 \mathrm{~ms}$ ) |
| Rated load | $\begin{aligned} & 3 \text { A at } 220 \mathrm{VAC} \\ & 3 \mathrm{~A} \text { at } 24 \mathrm{VDC} \end{aligned}$ | $\begin{aligned} & 0.8 \mathrm{~A} \text { at } 220 \mathrm{VAC} \\ & 1.5 \mathrm{~A} \text { at } 24 \mathrm{VDC} \end{aligned}$ | $\begin{aligned} & 3 \mathrm{~A} \text { at } 250 \mathrm{VAC} \\ & 3 \mathrm{~A} \text { at } 30 \mathrm{VDC} \end{aligned}$ | $\begin{aligned} & 0.8 \mathrm{~A} \text { at } 250 \mathrm{VAC} \\ & 1.5 \mathrm{~A} \text { at } 30 \mathrm{VDC} \end{aligned}$ | 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 | $\begin{aligned} & 0.8 \mathrm{~A} \text { at } 250 \mathrm{VAC} \\ & 1.5 \mathrm{~A} \text { at } 30 \mathrm{VDC} \end{aligned}$ | $\begin{aligned} & 1 \text { A at } 220 \text { VAC } \\ & 1 \mathrm{~A} \text { at } 24 \mathrm{VDC} \end{aligned}$ | $\begin{aligned} & 0.3 \mathrm{~A} \text { at } 220 \mathrm{VAC} \\ & 0.5 \mathrm{~A} \text { at } 24 \mathrm{VDC} \end{aligned}$ |
| Rated carry current*1 | 3 A (5 ${ }^{*} 2$ ) |  |  |  | 3 A (5 A 2 ) |  |  |  | 1 A |  |
| Maximum switching voltage | 250 VAC, 125 VDC |  |  |  |  |  |  |  |  |  |
| Maximum switching current | 3 A |  |  |  |  |  |  |  | 1 A |  |
| Maximum switching power | $\begin{aligned} & 660 \mathrm{VA} \\ & 72 \mathrm{~W} \end{aligned}$ | $\begin{aligned} & 176 \mathrm{VA} \\ & 36 \mathrm{~W} \end{aligned}$ | $\begin{aligned} & \text { 1,250 VA } \\ & 150 \mathrm{~W} \end{aligned}$ | $\begin{aligned} & 200 \mathrm{VA} \\ & 45 \mathrm{~W} \end{aligned}$ | $\begin{aligned} & 660 \mathrm{VA} \\ & 72 \mathrm{~W} \end{aligned}$ | $\begin{aligned} & \hline 176 \mathrm{VA} \\ & 36 \mathrm{~W} \end{aligned}$ | $\begin{aligned} & \text { 1,250 VA } \\ & 150 \mathrm{~W} \end{aligned}$ | $\begin{aligned} & 200 \mathrm{VA} \\ & 45 \mathrm{~W} \end{aligned}$ | $\begin{aligned} & 220 \mathrm{VA} \\ & 24 \mathrm{~W} \end{aligned}$ | $\begin{aligned} & 66 \mathrm{VA} \\ & 12 \mathrm{~W} \end{aligned}$ |
| Contact material | Au cladding + Ag alloy |  |  |  |  |  |  |  | Au cladding + AgPd |  |

*1. If you use a Socket, do not exceed the rated carry current of the Socket.
*2. Values shown in parentheses are for the $\mathrm{MY} \square(\mathrm{S})$ model with latching lever.

## Characteristics

| Number of poles (contact configuration) |  | 2-pole (DPDT) |  | 3-pole (3PDT) | 4-pole (4PDT) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Contact structure | Single | Bifurcated | Single | Single | Bifurcated | Crossbar bifurcated (CBG) |
| Contact resistance*1 *2 |  | $50 \mathrm{~m} \Omega$ max. |  |  |  |  | $100 \mathrm{~m} \Omega$ max. |
| Operate time*3 |  | 20 ms max. |  |  |  |  |  |
| Release time*3 |  | 20 ms max . |  |  |  |  |  |
| Maximum switching frequency | Mechanical | 18,000 operations/h |  |  |  |  |  |
|  | Rated load | 1,800 operations/h |  |  |  |  |  |
| Insulation resistance*4 |  | $100 \mathrm{M} \Omega \mathrm{min}$. |  |  |  |  |  |
| Dielectric strength | Between coil and contacts <br> Between contacts of different polarity | 2,000 VAC, $50 / 60 \mathrm{~Hz}$ for 1 min |  |  |  |  |  |
|  | Between contacts of the same polarity | 1,000 VAC at $50 / 60 \mathrm{~Hz}$ for 1 min |  |  |  |  | 700 VAC at $50 / 60 \mathrm{~Hz}$ for 1 min |
| Vibration resistance | Destruction | 10 to 55 to $10 \mathrm{~Hz}, 0.5-\mathrm{mm}$ single amplitude (1.0-mm double amplitude) |  |  |  |  |  |
|  | Malfunction | 10 to 55 to $10 \mathrm{~Hz}, 0.5-\mathrm{mm}$ single amplitude (1.0-mm double amplitude) |  |  |  |  |  |
| Shock resistance | Destruction | $1,000 \mathrm{~m} / \mathrm{s}^{2}$ |  |  |  |  |  |
|  | Malfunction | $200 \mathrm{~m} / \mathrm{s}^{2}$ |  |  |  |  |  |
| 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: 50,000,000 operations min. DC: 50,000,000 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 $P$ value (reference value)*6 |  | 1 mA at 5 VDC | $100 \mu \mathrm{~A}$ at 1 VDC | 1 mA at 5 VDC | 1 mA at 1 VDC | $100 \mu \mathrm{~A}$ at 1 VDC | $100 \mu \mathrm{~A}$ 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 $100 \mathrm{~m} \Omega$ 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: $23^{\circ} \mathrm{C}$
*6. This value was measured at a switching frequency of 120 operations per minute.

| Classification | Standard models |  |  |  |  | Models with built-in diode for coil surge absorption (-D)/ Models with built-in CR circuit for coil surge absorption (-CR) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Contacts | Single/bifurcated |  |  | Crossbar/bifurcated (CBG) |  | Single/bifurcated |  |  |
|  | Without | With operation | ndicator |  | With operation | Without | With operation | ndicator |
| Features | operation indicator |  | With latching lever | operation indicator |  | operation indicator |  | With latching lever |
| Ambient operating temperature*1 | -55 to $70^{\circ} \mathrm{C}$ | -55 to $60^{\circ}{ }^{*}$ * | -55 to $70^{\circ} \mathrm{C}$ | -25 to $70^{\circ} \mathrm{C}$ | -25 to $60^{\circ} \mathrm{C}$ | -55 to $60^{\circ} \mathrm{C}^{*} 2$ | -55 to $60^{\circ} \mathrm{C}^{*} 2$ | -55 to $70^{\circ} \mathrm{C}$ |
| Ambient operating humidity | 5\% to 85\% |  |  |  |  | 5\% to 85\% |  |  |

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

## Certified Standards

## OUL certification (File No. E41515)

| Model | Standard number | Category | Listed/ Recognized | Operating Coil ratings | No. of poles | Contact ratings | Certified number of operations |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MY2 <br> MY2N <br> MY2IN(S) <br> MY2N-D2 <br> MY2-D2 <br> MY2IN-D2(S) <br> MY2-CR <br> MY2N-CR | UL508 | NRNT2 | Recognition | $\begin{aligned} & 6 \text { to } 240 \text { VAC } \\ & 6 \text { to } 125 \text { VDC } \end{aligned}$ | 2 | $10 \mathrm{~A}, 250$ VAC (General Use) $10 \mathrm{~A}, 30$ VDC (General Use) <br> 7 A, 240 VAC (General Use) <br> 7 A, 24 VDC (Resistive) <br> 5 A, 240 VAC (General Use) <br> 5 A, 250 VAC (Resistive) <br> 5 A, 30 VDC (Resistive) <br> 3 A, 265 VAC (Resistive) | 6,000 |
|  |  |  |  |  |  | $\begin{aligned} & \text { 1/6 HP, } 250 \text { VAC } \\ & \text { 1/8 HP, } 265 \text { VAC } \\ & 1 / 10 \mathrm{HP}, 120 \text { VAC } \end{aligned}$ | 1,000 |
|  |  |  |  |  |  | B300 Pilot Duty (Same polarity) | 6,000 |
| MY2Z <br> MY2ZN <br> MY2-02 <br> MY2F <br> MY2Z-D <br> MY2Z-D2 | UL508 | NRNT2 | Recognition | $\begin{aligned} & 6 \text { to } 240 \text { VAC } \\ & 6 \text { to } 125 \text { VDC } \end{aligned}$ | 2 | 7 A, 240 VAC (General Use) <br> 7 A, 24 VDC (Resistive) <br> 5 A, 240 VAC (General Use) <br> 5 A, 250 VAC (Resistive) <br> 5 A, 30 VDC (Resistive) <br> 3 A, 265 VAC (Resistive) | 6,000 |
| $\begin{aligned} & \text { MY2Z-CR } \\ & \text { MY2ZN-CR } \end{aligned}$ |  |  |  |  |  | 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 <br> MY3N <br> MY3-D <br> MY3N-D2 <br> MY3-02 <br> MY3F | UL508 | NRNT2 | Recognition | $\begin{aligned} & 6 \text { to } 240 \text { VAC } \\ & 6 \text { to } 125 \text { VDC } \end{aligned}$ | 3 | 5 A, 28 VDC (Resistive) <br> 5 A, 240 VAC (General Use) <br> 1/6 HP, 250 VAC | 6,000 1,000 |
| MY4 <br> MY4N <br> MY4IN(S) <br> MY4-D <br> MY4N-D2 <br> MY4IN-D2(S) <br> MY4Z <br> MY4ZN <br> MY4ZIN(S) <br> MY4Z-D <br> MY4ZN-D2 <br> MY4ZIN-D2(S) <br> MY4Z-CR <br> MY4ZN-CR <br> MY4ZIN-CR(S) <br> MY4-02 <br> MY4F <br> MY4Z-02 <br> MY4ZF | UL508 | NRNT2 | Recognition | $\begin{aligned} & 6 \text { to } 240 \mathrm{VAC} \\ & 6 \text { to } 125 \text { VDC } \end{aligned}$ | 4 | 5 A, 28 VDC (General Use) (Same polarity) 5 A, 240 VAC (General Use) (Same polarity) <br> 5 A, 30 VDC (Resistive) (Same polarity) <br> 5 A, 250 VAC (Resistive) (Same polarity) <br> 0.2 A, 120 VDC (Resistive) (Same polarity) | 6,000 <br>  <br>  <br>  <br> 1,000 <br> 6,000 |

## OCSA certification (File No. LR31928)

| Model | Standard number | Class number | Operating Coil ratings | No. of poles | Contact ratings | Certified number of operations |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MY2 <br> MY2N <br> MY2IN(S) <br> MY2N-D2 <br> MY2-D2 <br> MY2IN-D2(S) | C22.2 NO.0, No. 14 |  | $\begin{aligned} & 6 \text { to } 240 \text { VAC } \\ & 6 \text { to } 125 \text { VDC } \end{aligned}$ | 2 | 7 A, 240 VAC (Resistive) <br> 7 A, 24 VDC (Resistive) <br> 5 A, 240 VAC (General Use) <br> 5 A, 250 VAC (Resistive) <br> 5 A, 30 VDC (Resistive) | 6,000 |
| MY2-CR <br> MY2N-CR |  |  |  |  | 1/6 HP, 250 VAC (Same polarity) 1/10 HP, 120 VAC (Same polarity) | 1,000 |
| MY2Z <br> MY2ZN <br> MY2-02 <br> MY2F <br> MY2Z-D <br> MY2Z-D2 <br> MY2Z-CR <br> MY2ZN-CR | C22.2 NO.0, No. 14 |  | 6 to 240 VAC <br> 6 to 125 VDC | 2 | 7 A, 240 VAC (General Use) (Same polarity) <br> 7 A, 24 VDC (Resistive) (Same polarity) <br> 5 A, 240 VAC (General Use) (Same polarity) <br> 5 A, 30 VDC (Resistive) <br> 5 A, 250 VAC (Resistive) (Same polarity) <br> 0.2 A, 120 VDC (Resistive) | 6,000 |
|  |  |  |  |  | 1/6 HP, 250 VAC 1/10 HP, 120 VAC | 1,000 |
| MY3 <br> MY3N <br> MY3-D <br> MY3N-D2 <br> MY3-02 <br> MY3F | C22.2 NO.0, No. 14 |  | $\begin{aligned} & 6 \text { to } 240 \text { VAC } \\ & 6 \text { to } 125 \text { VDC } \end{aligned}$ | 3 | 5 A, 28 VDC (Resistive) <br> 5 A, 240 VAC (General Use) <br> 7 A, 240 VAC (General Use) <br> 7 A, 24 VDC (Resistive) | 6,000 |
|  |  |  |  |  | 1/6 HP, 250 VAC | 1,000 |
| MY4 <br> MY4N <br> MY4N(S) <br> MY4-D <br> MY4N-D2 <br> MY4IN-D2(S) <br> MY4-CR <br> MY4N-CR <br> MY4IN-CR(S) <br> MY4Z <br> MY4ZN <br> MY4ZIN(S) <br> MY4Z-D <br> MY4ZN-D2 <br> MY4ZIN-D2(S) <br> MY4Z-C <br> MY4ZN-CR <br> MY4ZIN-CR(S) | C22.2 No. 14 | 321107 | 6 to 240 VAC <br> 6 to 125 VDC | 4 | 5 A, 240 VAC (General Use) (Same polarity) 5 A, 28 VDC (General Use) (Same polarity) 5 A, 250 VAC (Resistive) (Same polarity) 5 A, 30 VDC (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 |
| $\begin{aligned} & \text { MY4-02 } \\ & \text { MY4F } \\ & \text { MY4Z-02 } \\ & \text { MY4ZF } \end{aligned}$ | C22.2 NO.0, No. 14 | 321107 | $\begin{aligned} & 6 \text { to } 240 \text { VAC } \\ & 6 \text { to } 125 \text { VDC } \end{aligned}$ | 4 | 7 A, 240 VAC (General Use) (Same polarity) <br> 7 A, 24 VDC (Resistive) (Same polarity) <br> 5 A, 240 VAC (General Use) (Same polarity) <br> 5 A, 30 VDC (Resistive) <br> 5 A, 250 VAC (Resistive) (Same polarity) <br> 0.2 A, 120 VDC (Resistive) | 6,000 |
|  |  |  |  |  | $\begin{aligned} & \text { 1/6 HP, } 250 \text { VAC } \\ & 1 / 10 \mathrm{HP}, 120 \mathrm{VAC} \end{aligned}$ | 1,000 |

-TÜV Rheinland certification (Certification No. R50030059)

| Model | Operating Coil ratings | Contact ratings | Certified number of operations |
| :---: | :---: | :---: | :---: |
| MY2Z | $\begin{aligned} & 6 \text { to } 125 \text { VDC, } \\ & 6 \text { to } 240 \text { VAC } \end{aligned}$ | $5 \mathrm{~A}, 250 \mathrm{VAC}(\cos \varphi=1.0)$ | 100,000 |
| MY2ZN |  |  |  |
| MY2-02 MY2F |  |  |  |
| MY2Z-D |  |  |  |
| MY2Z-D2 |  |  |  |
| MY2Z-CR |  |  |  |
| MY2ZN-CR |  |  |  |
| MY3 |  | $5 \mathrm{~A}, 250 \mathrm{VAC}(\cos \varphi=1.0)$ |  |
| MY3N |  | $0.8 \mathrm{~A}, 250 \mathrm{VAC}(\cos \varphi=0.4)$ |  |
| MY3-D |  |  |  |
| MY3N-D2 |  |  |  |
| MY3-02 |  |  |  |
| MY3F |  |  |  |
| MY4-02 |  | $3 \mathrm{~A}, 120 \mathrm{VAC}(\cos \varphi=1.0)$ |  |
| MY4F |  | $0.8 \mathrm{~A}, 250 \mathrm{VAC}(\cos \varphi=0.4)$ |  |
| MY4Z-02 |  |  |  |
| MY4ZF |  |  |  |

-CE Marking


## OLR certification (Lloyd's Register)

| Model | File No. | Environmental Category | Operating Coil ratings | Contact ratings | Certified number of operations |
| :---: | :---: | :---: | :---: | :---: | :---: |
| MY2 <br> MY2N <br> MY2IN(S) <br> MY2-D <br> MY2N-D2 <br> MY2IN-D2(S) <br> MY2-CR <br> MY2N-CR | File No.98/10014 | ENV2,3 | $\begin{aligned} & 6 \text { to } 240 \text { VAC } \\ & 6 \text { to } 125 \text { VDC } \end{aligned}$ | 10 A, 250 VAC (Resistive) 2 A, 250 VAC (PF0.4) 10 A, 30 VDC (Resistive) $2 \mathrm{~A}, 30 \mathrm{VDC}(\mathrm{L} / \mathrm{R}=7 \mathrm{~ms})$ | MY2: <br> 50,000 |
| MY2Z <br> MY2ZN <br> MY2Z-D <br> MY2ZN-D2 | File No.90/10270 | ENV2,3 | 6 to 240 VAC <br> 6 to 125 VDC | 2 A, 30 VDC inductive load 2 A, 200 VAC inductive load | MY2: <br> 50,000 |
| MY4 <br> MY4N <br> MY4IN(S) <br> MY4-D <br> MY4N-D2 <br> MY4IN-D2(S) <br> MY4-CR <br> MY4N-CR <br> MY4IN-CR(S) <br> MY4Z <br> MY4ZN <br> MY4ZIN(S) <br> MY4Z-D <br> MY4ZN-D2 <br> MY4ZIN-D2(S) <br> MY4Z-CR <br> MY4ZN-CR <br> MY4ZIN-CR(S) | File No.98/10014 | ENV2,3 | 6 to 240 VAC <br> 6 to 125 VDC | 5 A, 250 VAC (Resistive) $0.8 \mathrm{~A}, 250$ VAC (PF0.4) 5 A, 30 VDC (Resistive) $1.5 \mathrm{~A}, 30 \mathrm{VDC}(\mathrm{L} / \mathrm{R}=7 \mathrm{~ms})$ | $\begin{aligned} & \text { MY4: } \\ & 50.000 \end{aligned}$ |

## -VDE certification

| Model | Standard number | Certification No. | Operating Coil ratings | Contact ratings | Certified number of operations |
| :---: | :---: | :---: | :---: | :---: | :---: |
| MY2 <br> MY2N <br> MY2IN(S) <br> MY2-D <br> MY2N-D2 <br> MY2IN-D2(S) <br> MY2-CR <br> MY2N-CR | EN 61810-1 | 112467UG | 6, 12, 24, $48 / 50$, $100 / 110$, $110 / 120$, $200 / 220$, $220 / 240$ VAC $6,12,24$, $48,100 / 110$, 125 VDC | $\begin{aligned} & 10 \mathrm{~A}, 250 \mathrm{VAC}(\cos \varphi=1) \\ & 10 \mathrm{~A}, 30 \mathrm{VDC}(\mathrm{~L} / \mathrm{R}=0 \mathrm{~ms}) \end{aligned}$ | MY2: <br> 100,000 <br> MY4: <br> 100,000 <br> MY4Z: <br> 50,000 (AC) |
| MY4 <br> MY4N <br> MY4IN(S) <br> MY4Z <br> MY4ZN <br> MY4ZIN(S) <br> MY4-D <br> MY4ZN-D2 <br> MY4IN-D2(S) <br> MY4Z-D <br> MY4Z-D2 <br> MY4ZIN-D2(S) <br> MY4-CR <br> MY4N-CR <br> MY4IN-CR(S) <br> MY4Z-CR <br> MY4ZN-CR <br> MY4ZIN-CR(S) |  |  | $\begin{aligned} & \hline 6,12,24, \\ & 48 / 50, \\ & 100 / 110, \\ & 110 / 120, \\ & 200 / 220, \\ & 220 / 240 \text { VAC } \\ & 6,12,24, \\ & 48,100 / 110, \\ & 125 \text { VDC } \end{aligned}$ | $5 \mathrm{~A}, 250 \mathrm{VAC}(\cos \varphi=1)$ <br> $5 \mathrm{~A}, 30 \mathrm{VDC}(\mathrm{L} / \mathrm{R}=0 \mathrm{~ms})$ |  |

## Engineering Data (Reference Value)

- Maximum Switching Capacity

Plug-in terminals
MY2 and MY3


Plug-in Terminals, with latching lever
MY2(S)

MY4 and MY4Z


MY4(S) and MY4Z(S)


MY4Z-CBG



- Endurance Curve

Plug-in terminals

## MY2 and MY3





MY4Z


MY4


MY4Z


Plug-in Terminals, with latching lever

## MY2(S)



MY4(S)


MY2(S)


MY4Z(S)


## MY4(S)



MY4Z(S)

-Ambient Temperature vs. Coil Temperature Rise

MY2 AC Models, 50 Hz


Ambient temperature $\left({ }^{\circ} \mathrm{C}\right)$
MY4 AC Models, 50 Hz


## MY2 DC Models



MY4 DC Models


Models with built-in diode for coil surge absorption MY $\square$-D

With Diode


Without Diode


Note: 1. Make sure that the polarity is correct.
2. The release time will increase, but the $20-\mathrm{ms}$ specification for standard models is satisfied.
3. Diode properties: The diode has a reversed dielectric strength of $1,000 \mathrm{~V}$.

Forward current: 1 A

Models with built-in CR circuit for coil surge absorption MY $\square$-CR

With CR


Without CR



Number of operations ( $\times 10^{4}$ operations)
Common Specifications for MY2, MY3, MY4, MY4Z, MY $\square-02$, MY $\square F$, and MY(S) -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.
Criteria: Non-energized: $200 \mathrm{~m} / \mathrm{s}^{2}$, Energized: $200 \mathrm{~m} / \mathrm{s}^{2}$
Shock direction


## -Plug-in terminals

MY2, MY2N, MY2-D and MY2N-D2

MY2-CR, MY2N-CR
Terminal Arrangement/ Internal Connection Diagram
(Bottom View)
MY2
(AC/DC Models)


DC Models

(Coil has polarity)

MY2N


$$
\text { AC Models } \quad \text { (DC Models Only) }
$$


(Coil has no polarity)

MY2-D

(Coil has polarity)

MY2N-D2
(DC Models Only)

(Coil has polarity)

MY2-CR
(AC Models Only)

(Coil has no polarity)

MY2N-CR (AC Models Only)

(Coil has no polarity)

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

MY2Z, MY2ZN, MY2Z-D and MY2ZN-D2
MY2Z-CR, MY2ZN-CR


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

MY3, MY3N, MY3-D, and MY3N-D2
Terminal Arrangement/ Internal Connection Diagram
(Bottom View)
MY3
(Coil has polarity) (Coil has no polarity) (Coil has polarity) (Coil has polarity)
Note: 1. An AC model has coil disconnection self-diagnosis.
2. For the DC models, check the coil polarity when wiring and wire all connections correctly.
3. 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.

MY4, MY4N, MY4-D and MY4N-D2
MY4-CR, MY4N-CR

DC Models MY4N $\quad$ AC Models

(Coil has polarity)

(Coil has no polarity)

(Coil has polarity)

(Coil has polarity)

(Coil has no polarity)

MY4N-CR (AC Models Only)

(Coil has no polarity)
Note: 1. An AC model has coil disconnection self-diagnosis
2. For the DC models, check the coil polarity when wiring and wire all connections correctly.
3. The indicator is red for $A C$ and green for DC.
4. The operation indicator indicates the energization of the coil and does not represent contact operation.

MY4Z, MY4ZN, MY4Z-D, MY4ZN-D2 MY4Z-CR, MY4ZN-CR


Terminal Arrangement/Internal
Connection Diagram (Bottom View) MY4Z (AC/DC Models)


MY4Z-CR
(AC Models Only)

(Coil has no polarity)

MY4ZN-CR (AC Models Only)

(Coil has no polarity)

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

## MY2IN(S) MY2IN-D2(S)



Terminal Arrangement/Internal Connections (Bottom View)


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

MY(Z)IN(S)
MY4(Z)IN-D2(S)
MY4(Z)IN-CR(S)


MY4Z-CBG


Terminal Arrangement/Internal
Connection Diagram
(Bottom View) MY4Z-CBG (AC/DC Models)

-PCB terminals


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


* Dimensions in parentheses are for the MY4-02.

PCB Processing Dimensions (Bottom View)


Note: 1. The dimensional tolerance is $\pm 0.1$.
2. Refer to the terminal arrangement and internal connections diagrams for the MY2, MY3, MY4, and MY4Z.

Case-surface mounting MY2F
MY3F
MY4F
MY4ZF


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

$\begin{aligned} & \text { Note: } \text { Refer to the terminal arrangement } \\ & \text { and internal connections diagrams }\end{aligned}$ for the MY2, MY3, MY4, and MY4Z

## 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 53 to 54 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)

(2)

(3)

(4)
(1) Basic model name MY: Miniature Power Relays
(2) Number of poles/contacts

2: 2-pole, single
(4) Options, terminal type

None: Plug-in terminals
02: PCB terminals

Ordering Information When your orete, spectry the rated volage.

## Main unit

-Plug-in terminals

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

## -PCB terminals

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

## MYK

## Ratings and Specifications

## Ratings

## -Operating coil (AC)

| Rated voltage (V) |  | Set coil |  |  | Reset coil |  |  | Must operate voltage (V) | Must release voltage (V) | Maximum voltage (V) | Power consumption (VA, W) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Rated current (mA) |  | Coil resistance ( $\Omega$ ) | Rated current (mA) |  | Coil resistance ( $\Omega$ ) |  |  |  | Set coil | Reset coil |
|  |  | 50 Hz | 60 Hz |  | 50 Hz | 60 Hz |  |  |  |  |  |  |
| AC | 12 | 57 | 56 | 72 | 39 | 38.2 | 130 | 80\% max.* | 80\% max. | $\begin{gathered} 110 \% \text { max. } \\ \text { of rated } \\ \text { voltage } \end{gathered}$ | $\begin{gathered} \text { Approx. } 0.6 \\ \text { to } 0.9 \\ \text { (at } 60 \mathrm{~Hz} \text { ) } \end{gathered}$ | $\begin{aligned} & \text { Approx. } 0.2 \\ & \text { to } 0.5 \\ & \text { (at } 60 \mathrm{~Hz} \text { ) } \end{aligned}$ |
|  | 24 | 27.4 | 26.4 | 320 | 18.6 | 18.1 | 550 |  |  |  |  |  |
|  | 100 | 7.1 | 6.9 | 5,400 | 3.5 | 3.4 | 3,000 |  |  |  |  |  |
| DC | 12 | 110 |  | 110 | 50 |  | 235 |  |  |  | Approx. 1.3 | Approx. 0.6 |
|  | 24 | 52 |  | 470 | 25 |  | 940 |  |  |  |  |  |
|  | 48 | 27 |  | 1,800 | 16 |  | 3,000 |  |  |  |  |  |

Note: 1. The rated current for $A C$ is the value measured with a DC ammeter in half-wave rectification.
2. The rated current and coil resistance are measured at a coil temperature of $23^{\circ} \mathrm{C}$ with tolerances of $+15 \% /-20 \%$ for $A C$ rated current and $\pm 15 \%$ for $D C$ coil resistance.
3. The AC coil resistance is a reference value only.
4. Operating characteristics were measured at a coil temperature of $23^{\circ} \mathrm{C}$.
5. The maximum voltage capacity was measured at an ambient temperature of $23^{\circ} \mathrm{C}$
*There is variation between products, but actual values are $80 \%$ maximum.

## -Contact Ratings

| Number of poles (contact configuration) | 2-pole (DPDT) |  |
| :---: | :---: | :---: |
| Contact structure |  | gle |
| Load | Resistive load | Inductive load ( $\cos \varphi=0.4, \mathrm{~L} / \mathrm{R}=7 \mathrm{~ms}$ ) |
| Rated load | $\begin{array}{\|l} \hline 3 \mathrm{~A} \text { at } 220 \mathrm{VAC} \\ 3 \mathrm{~A} \text { at } 24 \mathrm{VDC} \end{array}$ | 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 | $\begin{aligned} & 660 \mathrm{VA} \\ & 72 \mathrm{~W} \end{aligned}$ | $\begin{aligned} & 176 \text { VA } \\ & 36 \text { W } \end{aligned}$ |
| Contact material | Au plating + Ag |  |

## Characteristics

| Contact resistance*1 |  | 50 |
| :---: | :---: | :---: |
| Set | Operate time*2 | AC |
|  | Minimum pulse width | AC |
| Reset | Release time*2 | AC |
|  | Minimum pulse width | AC |
| Maximum switching frequency | Mechanical | 18 |
|  | Rated load | 1,8 |
| Insulation resistance*3 |  | 10 |
| Dielectric strength | Between coil and contacts Between contacts of different polarity | 1 |
|  | Between contacts of the same polarity | 1. |
|  | Between set/reset coils |  |
| Vibration resistance | Destruction | 10 |
|  | Malfunction | 10 |
| Shock resistance | Destruction | 1,000 |
|  | Malfunction | 20 |
| Endurance | Mechanical | 100 |
|  | Electrical*4 | 200 |
| Failure rate $P$ value (reference value)*5 |  | 1 |
| Ambient operating temperature*6 |  | -5 |
| Ambient operating humidity |  | 5\% |
| Weight |  | Ap |


| $50 \mathrm{~m} \Omega$ max. |
| :--- |
| AC: 30 ms max., DC: 15 ms max. |
| AC: 60 ms, DC: 30 ms |
| AC: 60 ms max., DC: 15 ms max. |
| 18,000 operations $/ \mathrm{h}$ |
| 1,800 operations $/ \mathrm{h}$ |
| $100 \mathrm{M} \Omega$ min. |
| $1,500 \mathrm{VAC}$ at $50 / 60 \mathrm{~Hz}$ for 1 min |
| $1,000 \mathrm{VAC}$ at $50 / 60 \mathrm{~Hz}$ for 1 min |
| 10 to 55 to $10 \mathrm{~Hz}, 0.5-\mathrm{mm}$ single amplitude (1.0-mm double amplitude) |
| 10 to 55 to $10 \mathrm{~Hz}, 0.5-\mathrm{mm}$ single amplitude (1.0-mm double amplitude) |
| $1,000 \mathrm{~m} / \mathrm{s}^{2}$ |
| $200 \mathrm{~m} / \mathrm{s}^{2}$ |
| $100,000,000$ operations min. (switching frequency: 18,000 operations/h) |
| 200,000 operations min. (at rated load, switching frequency: 1,800 operations $/ \mathrm{h})$ |
| 1 mA at 1 VDC |
| -55 to $60^{\circ} \mathrm{C}$ |
| $5 \%$ to $85 \%$ |
| Approx. 30 g |

Note: The data shown above 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.
*3. Measurement conditions: For 500 VDC applied to the same location as for dielectric strength measurement
*4. Ambient temperature condition: $23^{\circ} \mathrm{C}$
*5. This value was measured at a switching frequency of 120 operations per minute
*6. With no icing or condensation.

## Engineering Data (Reference Value)

## Maximum Switching Capacity MY2K(-02)



Magnetic Interference (External Magnetic Field) MY2K 24 VDC


## Shock Malfunction

MY2K 100 VAC


## Endurance Curve

MYK(-02)


## Latching Deterioration Over Time

 MY2K

MYK(-02)


## MYK

## -Plug-in terminals

MY2K
Terminal Arrangement/ Internal Connection Diagram (Bottom View)


## -PCB terminals

## PCB Processing Dimensions

## MY2K-02




Note: The dimensional
tolerance is $\pm 0.1$.

## 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 Safety Precautions on pages 53 to 54 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.

## Features

## Highly Airtight Relays (Plug-in Terminals)

| Seal performance | Degree of protection | Typical relay | Features |
| :---: | :---: | :---: | :--- |
| High |  | MYH | Sealing with metals, the glass case and base, etc. with inert gases (N2) inside <br> makes it airtight structure which provides the external casing with durability <br> against harmful corrosion, and prevents corrosive gases from intruding inside <br> relays. |
| Lealed |  |  |  |

## 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)

(3)

(4)
(1) Basic model name MY: Miniature Power Sealed Relays
(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
(3) Type

None: None
$\mathrm{N}: \quad$ With operation indicator* *Only MYQ (plastic sealed relay)
(4) Options, terminal type

None: Plug-in terminals
02: Plastic sealed relays, PCB terminals
0: $\quad$ Hermetically sealed relays, PCB terminals

## Ordering Information

When your order, specify the rated voltage.

## Plastic Sealed Relays

-Plug-in terminals

| Classification | Number of poles | Contacts | Model | Rated voltage | With operation indicator |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Model | Rated voltage |
| Standard models (compliant with Electrical Appliances and Material Safety Act) | 4 | Single | MYQ4 | $\begin{aligned} & \hline \text { 100/110, 110/120, } \\ & 200 / 220,220 / 240 \text { VAC } \end{aligned}$ | MYQ4N | 24, 100/110, 110/120, 200/220, 220/240 VAC |
|  |  |  |  | 24 VDC |  | 12, 24, 48, 100/110 VDC |
|  |  | Bifurcated | MYQ4Z | $\begin{aligned} & \text { 100/110, 110/120, } \\ & \text { 200/220 VAC } \end{aligned}$ |  |  |
|  |  |  |  | 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 |
|  |  |  |  | 24, 48 VDC |

Hermetically Sealed Relays

- Plug-in terminals

| Classification | Number <br> of poles | Contacts | Model | Rated voltage |
| :--- | :--- | :--- | :--- | :--- |
| Standard models <br> (compliant with | Electrical Appliances <br> and Material Safety Act) | Single |  | $24,100 / 110,110 / 120$ VAC |
|  |  |  | MY4ZH | $24,24,48,100 / 110$ VDC |
|  |  |  |  |  |

OPCB 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 (AC)

| Rated voltage (V) |  | Rated current (mA) |  | Coil resistance ( $\Omega$ ) | Coil inductance (H) |  | Must operate voltage (V)*1 | Must release voltage (V)*2 | Maximum voltage (V) | Power consumption (VA, W) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 50 Hz | 60 Hz |  | Armature OFF | Armature ON |  |  |  |  |
| AC | 24 | 53.8 | 46 | 180 | 0.69 | 1.3 | 80\% max. | 30\% min. | 110\% max. of rated voltage | Approx. 0.9 to 1.3 (at 60 Hz ) |
|  | 100/110 | 11.7/12.9 | 10/11 | 3,750 | 14.54 | 24.6 |  |  |  |  |
|  | 110/120 | 9.9/10.8 | 8.4/9.2 | 4,430 | 19.2 | 32.1 |  |  |  |  |
|  | 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 |  |  |  |  |
| DC | 12 | 75 |  | 165 | 0.734 | 1.37 |  | 10\% min. |  | Approx. 0.9 |
|  | 24 | 36.9 |  | 650 | 3.2 | 5.72 |  |  |  |  |
|  | 48 | 18.5 |  | 2,600 | 10.6 | 21.0 |  |  |  |  |
|  | 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 $23^{\circ} \mathrm{C}$ with tolerances of $+15 \% /-20 \%$ for $A C$ rated current and $\pm 15 \%$ for $D C$ coil resistance.
2. The $A C$ coil resistance and coil inductance values are for reference only.
3. Operating characteristics were measured at a coil temperature of $23^{\circ} \mathrm{C}$.
4. The maximum voltage capacity was measured at an ambient temperature of $23^{\circ} \mathrm{C}$.
*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) <br> Contact structure <br> Load | 4-pole (4PDT) |  |
| :---: | :---: | :---: |
|  | Single/bifurcated |  |
|  | Resistive load | Inductive load $(\cos \varphi=0.4, \mathrm{~L} / \mathrm{R}=7 \mathrm{~ms})$ |
| 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 | $\begin{aligned} & 250 \text { VAC } \\ & 125 \text { VDC } \end{aligned}$ |  |
| Maximum switching current | 1 A |  |
| Maximum switching power | $\begin{aligned} & 220 \mathrm{VA} \\ & 24 \mathrm{~W} \end{aligned}$ | $\begin{aligned} & 110 \mathrm{VA} \\ & 12 \mathrm{~W} \end{aligned}$ |
| Contact material | Au plating + Ag |  |

Hermetically Sealed Relays: MYH

| Number of poles (contact configuration) Contact structure <br> Load | 4-pole (4PDT) |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Single |  | Bifurcated |  |
|  | Resistive load | Inductive load ( $\cos \varphi=0.4$, L/R = 7 ms ) | Resistive load | Inductive load ( $\cos \varphi=0.4$, $\mathrm{L} / \mathrm{R}=7 \mathrm{~ms}$ ) |
| Rated load | 3 A at <br> 110 VAC <br> 3 A at <br> 24 VDC | $\begin{aligned} & 0.8 \mathrm{~A} \text { at } \\ & 110 \mathrm{VAC} \\ & 1.5 \mathrm{~A} \text { at } \\ & 24 \mathrm{VDC} \end{aligned}$ | $\begin{array}{\|l} \hline 3 \mathrm{~A} \text { at } \\ 110 \mathrm{VAC} \\ 3 \mathrm{~A} \text { at } \\ 24 \text { VDC } \end{array}$ | 0.8 A at <br> 110 VAC <br> 1.5 A at <br> 24 VDC |
| Rated carry current | 3 A |  |  |  |
| Maximum switching voltage | $\begin{aligned} & 125 \text { VAC } \\ & 125 \text { VDC } \end{aligned}$ |  |  |  |
| Maximum switching current | 3 A |  |  |  |
| Maximum switching power | $\begin{aligned} & 330 \mathrm{VA} \\ & 72 \mathrm{~W} \end{aligned}$ | $\begin{aligned} & 88 \mathrm{VA} \\ & 36 \mathrm{~W} \end{aligned}$ | $\begin{aligned} & \hline 330 \mathrm{VA} \\ & 72 \mathrm{~W} \end{aligned}$ | $\begin{aligned} & \hline 88 \mathrm{VA} \\ & 36 \mathrm{~W} \end{aligned}$ |
| Contact material | Au plating + Ag |  |  |  |

Characteristics

| Model |  | MYQ | MYH |
| :---: | :---: | :---: | :---: |
| Contact resistance*1 |  | $50 \mathrm{~m} \Omega$ max. |  |
| Operate time*2 |  | 20 ms max. |  |
| Release time*2 |  | 20 ms max. |  |
| Maximum switching frequency | Mechanical | 18,000 operations/h |  |
|  | Rated load | 1,800 operations/h |  |
| Insulation resistance*3 |  | $100 \mathrm{M} \Omega \mathrm{min}$. |  |
| Dielectric strength | Between coil and contacts | 1,500 VAC at $50 / 60 \mathrm{~Hz}$ for 1 min | 1,000 VAC at $50 / 60 \mathrm{~Hz}$ for 1 min |
|  | Between contacts of different polarity | 1,500 VAC at $50 / 60 \mathrm{~Hz}$ for 1 min | 1,000 VAC at $50 / 60 \mathrm{~Hz}$ for 1 min |
|  | Between contacts of the same polarity | 1,000 VAC at $50 / 60 \mathrm{~Hz}$ for 1 min | 700 VAC at $50 / 60 \mathrm{~Hz}$ for 1 min |
| Vibration resistance | Destruction | 10 to 55 to $10 \mathrm{~Hz}, 0.5-\mathrm{mm}$ single amplitude (1.0-mm double amplitude) |  |
|  | Malfunction | 10 to 55 to $10 \mathrm{~Hz}, 0.5-\mathrm{mm}$ single amplitude (1.0-mm double amplitude) |  |
| Shock resistance | Destruction | 1,000 m/s ${ }^{2}$ |  |
|  | Malfunction | $200 \mathrm{~m} / \mathrm{s}^{2}$ |  |
| Endurance | Mechanical | $\begin{array}{ll}\text { Single contacts: } & \text { AC: } 50,000,000 \text { operations min., } \\ & \text { DC: } 100,000,000 \text { operations min. }\end{array}$ <br> Bifurcated contacts: 5,000,000 operations min., DC: 5,000,000 operations min. (switching frequency: 18,000 operations/h) | Single contacts: $\quad 50,000,000$ operations min . <br> Bifurcated contacts: 5,000,000 operations min. (switching frequency: 18,000 operations/h) |
|  | Electrical*4 | Single contacts: $\quad 200,000$ operations min . <br> Bifurcated contacts: 100,000 operations min. (at rated load, switching frequency: 1,800 operations/h) | Single contacts: 100,000 operations min. Bifurcated contacts: 50,000 operations min. (at rated load, switching frequency: 1,800 operations/h) |
| Failure rate P Level (reference value)*5 |  | $\begin{array}{ll}\text { Single contacts: } & 1 \mathrm{~mA} \text { at } 1 \text { VDC } \\ \text { Bifurcated contacts: } & 100 \mu \mathrm{~A} \text { at } 1 \text { VDC }\end{array}$ | $\begin{array}{ll}\text { Single contacts: } & 100 \mu \mathrm{~A} \text { at } 1 \text { VDC } \\ \text { Bifurcated contacts: } & 100 \mu \mathrm{~A} \text { at } 100 \mathrm{mVDC}\end{array}$ |
| Ambient operating temperature*6 |  | -55 to $60^{\circ} \mathrm{C}$ | -25 to $60^{\circ} \mathrm{C}$ |
| Ambient operating humidity |  | 5\% to 85\% |  |
| Weight |  | Approx. 35 g | Approx. 50 g |

Note: The data shown above are initial values.
*1. Measurement conditions: $\quad 1 \mathrm{~A}$ at 5 VDC using the voltage drop method.
*2. Measurement conditions: With rated operating power applied, not including contact bounce.
Ambient temperature condition: $23^{\circ} \mathrm{C}$
*3. Measurement conditions: For 500 VDC applied to the same location as for dielectric strength measurement
*4. Ambient temperature condition: $23^{\circ} \mathrm{C}$
*5. This value was measured at a switching frequency of 120 operations per minute.
*6. With no icing or condensation.

## Engineering Data (Reference Value)

Maximum Switching Capacity

MYQ4(Z)


Endurance Curve MYQ4


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

MY4(Z)H


MY4H


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

## MYQ.MYH

## Dimensions

## -Plug-in terminals



## -PCB terminals

Plastic Sealed Relays
MYQ4(Z)-02


PCB Processing Dimensions


Note: The dimensional
tolerance is $\pm 0.1$

Hermetically Sealed Relays
MY4(Z)H-0
PCB Processing Dimensions (Bottom View)


## Common Options (Order Separately)

## Ordering Information

## Front-mounting Sockets

| Number <br> of pins | Applicable relay model*1 | Terminal Type | Mounting Method |
| :--- | :--- | :--- | :--- | :--- |

[^0]MY/MYK/MYQ•MYH

## Back-mounting Sockets



| Number of pins | Applicable relay model*1 | Terminal Type | Appearance | Model | Appearance | Models with Hold-down Clips*2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 14 | MY4 $\square$, MY4 $\square(S)$, MY2K, <br> MY4H, MYQ4 | Solder terminals |  | PY14 |  | PY14-Y1 |
|  | MY4Z $\square$-CBG-CR |  |  |  |  | PY14-Y3 |
|  | MY4 $\square$, MY4 $\square(S)$, MY2K, MY4H, MYQ4 $\square$ | Wrapping terminals <br> Terminal length: 25 mm |  | PY14QN |  | PY14QN-Y1 |
|  | MY4Z $\square$-CBG-CR |  |  |  |  | PY14QN-Y3 |
|  | MY4 $\square$, MY4 $\square$ (S), MY2K, MY4H, MYQ4 | Wrapping terminals <br> Terminal length: 20 mm |  | PY14QN2 |  | PY14QN2-Y1 |
|  | MY4Z $\square$-CBG-CR |  |  |  |  | PY14QN2-Y3 |
|  | MY4 $\square$, MY4 $\square(S)$, MY4Z $\square$-CBG-CR MY2K, MY4H, MYQ4 | PCB terminals |  | PY14-02 | - | - |

*1. The applicable relay model is a plug-in terminal type.
*2. The hold-down clips for connecting the relay and socket come as a set with the socket.

MY/MYK/MYQ.MYH

Hold-down Clip

*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.

## Socket Accessories

## Hold-down Clip

-List of Hold-down Clip Models

## For Front-connecting Sockets

| Mounting method <br> Terminal Type Applicable sockets |  | DIN track mounted/screw mounted |  |  |  |  |  | Screw mounting only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Push-In Plus Terminal |  | Screw terminal (M3 screw size) |  |  | Screw terminal (M3.5 screw size) |  |
|  |  | PYF-08-PU-L | PYF-14-PU-L | PYF08A(-E) | PYF11A | PYF14A(-E) | PYF14T | PYF08M |
| Number of pins | Applicable relay model*1 | Hold-down Clip model*2 | Hold-down Clip model*2 | Hold-down Clip model*2 | Hold-down Clip model*2 | Hold-down Clip model*2 | Hold-down Clip model*2 | Hold-down Clip model*2 |
| 8 | MY2 $\square$ | - | - | PYC-A1 | - | - | - | PYC-P |
|  | MY2IN(S)*3 | - | - | PYC-E1 | - | - | - | - |
|  | MY2Z $\square$-CR | Y92H-3 | - | Y92H-3 | - | - | - | - |
| 11 | MY3 | - | - | - | PYC-A1 | - | - | - |
| 14 | MY4 $\square$, <br> MY4(Z)H, <br> MYQ4, <br> MYQ4N, <br> MYQ4Z, <br> MY4 $\square(S)$, <br> MY2K | - | - | - | - | PYC-A1 | PYC-A1 | - |
|  | $\underset{* 4}{\text { MY4Z } \square \text {-CBG-CR }}$ | - | Y92H-3 | - | - | Y92H-3 | Y92H-3 | - |

## For Back-connecting Sockets

| Terminal Type |  | Solder terminals |  |  | Wrapping terminals (PY $\square$ QN terminal length: 25 mm , PY $\square$ QN2 terminal length: $\mathbf{2 0} \mathbf{~ m m}$ ) |  |  | PCB terminals |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | PY08 | PY11 | PY14 | PY08QN(2) | PY11QN(2) | PY14QN(2) | PY08-02 | PY11-02 | PY14-02 |
| Number of pins | Applicable relay model*1 | Hold-down Clip model*2 | Hold-down Clip model*2 | Hold-down Clip model*2 | Hold-down Clip model*2 | Hold-down Clip model*2 | Hold-down Clip model*2 | Hold-down Clip model*2 | Hold-down Clip model*2 | Hold-down Clip model*2 |
| 8 | $\begin{aligned} & \text { MY2 } \square \\ & \text { MY2IN(S)*3 } \end{aligned}$ | PYC-P | - | - | PYC-P | - | - | PYC-P | - | - |
|  | MY2Z $\square$-CR | PYC-1 | - | - | PYC-1 | - | - | PYC-1 | - | - |
| 11 | MY3 | - | PYC-P | - | - | PYC-P | - | - | PYC-P | - |
| 14 | MY4 $\square$, <br> MY4(Z)H, <br> MYQ4, <br> MYQ4N, <br> MYQ4Z, <br> MY4 $\square$ (S), MY2K | - | - | PYC-P | - | - | PYC-P | - | - | PYC-P |
|  | $\begin{aligned} & \text { MY4Z } \square \text {-CBG-CR } \\ & { }^{2} 4 \end{aligned}$ | - | - | PYC-1 | - | - | PYC-1 | - | - | PYC-1 |

*1. The applicable relay model is a plug-in terminal type.
*2. This is the model of the applicable hold-down clips. Hold-down clips are sold in sets of two. However, PYC-P and PYC-1 contain just one hold-down clip.
*3. We recommend using PYC-E1 hold-down clips for MY2IN(S) relays with a latching lever.
(If PYC-A1 is used with MY2IN(S), the latching lever will be blocked by the hold-down clip and the lever will not operate.)
*4. The release lever cannot be mounted if the relay height is 53 mm or more.
If the relay height is 53 mm or more, use in combination with hold-down clip Y92H-3.

## -Front-connecting Socket Accessories

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

| Applicable sockets | Pitch | Application | Shape/external dimensions | Number of poles | $\begin{gathered} \mathrm{L} \\ \text { (Length) } \end{gathered}$ | Insulati on color | Model*1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PYF-08-PU(-L)PYF-14PU(-L) | 7.75 mm | Bridging contact terminals (common) | 3.90 | 2 | 15.1 | Red (R) <br> Blue (S) <br> Yellow(Y) | PYDN-7.75-020 $\square$ |
|  |  |  | S | 3 | 22.85 |  | PYDN-7.75-030 $\square$ |
|  |  |  |  | 4 | 30.6 |  | PYDN-7.75-040 $\square$ |
|  |  |  | $\stackrel{\rightharpoonup}{2.25}$ | 20 | 154.6 |  | PYDN-7.75-200 $\square$ |
|  | 31.0 mm | For Coil terminals |  | 8 | 224.35 |  | PYDN-31.0-080 $\square$ |

*1. Replace the box $(\square)$ in the model number with the code for the covering color. $\square$ Color selection: $R=$ Red, $S=B l u e, Y=$ Yellow
Labels

| Applicable sockets | Model |
| :--- | :---: |
| PYF-08-PU(-L) | XW5Z-P4.0LB1 |
| PYF-14PU(-L) | (1 sheet/60 pieces) |

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 coils between sockets | Insulation $\qquad$ | 2 | Red (R) <br> Blue (B) | PYDM-08S <br> (50 pcs./bag) |
| PYF14S | 27.5 mm |  |  | 2 |  | PYDM-14S <br> (50 pcs./bag) |

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

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

## Release Levers

Applicable sockets

For Screw Terminal Sockets (PYF08A/PYF14A)
Short Bars

| Applicable sockets | Pitch | Application | Shape/external dimensions | Number of poles | Insulation color | Model* ${ }^{\text {1 }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | For bridging adjacent sockets |  | 2 |  | PYD-025B $\square$ (2P) $(10 \mathrm{pcs} . / \mathrm{bag})$ <br> (10 pcs./bag) |
| PYF08A | 22 mm |  |  | 8 |  | PYD-085B $\square$ (8P) $(10 \mathrm{pcs} . / \mathrm{bag})$ <br> (10 pcs./bag) |
| PYF14A |  |  | 5) | 2 | S (Blue) R (Red) | $\text { PYD-026B } \square \text { (2P) }$ (10 pcs./bag) |
|  | 29 mm |  |  | 8 |  | PYD-086B $\square(8 \mathrm{P})$ $(10$ pcs./bag) |
|  | 7 mm | For bridging with the same socket |  | 2 | B (Black) <br> Y (Yellow) | $\begin{aligned} & \text { PYD-020B } \square(2 P) \\ & (50 \mathrm{pcs} . / \mathrm{bag}) \end{aligned}$ |
|  |  |  |  | 3 |  | $\begin{aligned} & \text { PYD-030B } \square \text { (3P) } \\ & (10 \mathrm{pcs} . / \mathrm{bag}) \end{aligned}$ |

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

Socket Mounting Plates (For Back-connecting Socket PY $\square /$ Solder Terminals, PY $\square \mathbf{Q N}(2) /$ Wrapping Terminals)

| Applicable Sockets |  | Socket Mounting Plates |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Model | Models with hold-down clips | Appearance | Number of sockets | Model |
| PY08 <br> PY08QN <br> PY08QN2 <br> PY11 <br> PY11QN <br> PY11QN2 <br> PY14 <br> PY14QN <br> PY14QN2 | ```PY08-Y1, PY08-Y3 PY08QN-Y1, PY08QN-Y3 PY08QN2-Y1, PY08QN2-Y3 PY11-Y1 PY11QN-Y1 PY11QN2-Y1 PY14-Y1, PY14-Y3 PY14QN-Y1, PY14QN-Y3 PY14QN2-Y1, PY14QN2-Y3``` | - | 1 | PYP-1 |
|  |  |  | 18 | PYP-18* |
|  |  |  | 36 | PYP-36* |

*You can cut the PYP-18 and PYP-36 to any required length.
Parts for Track Mounting

| Type |  | Appearance | Model |
| :---: | :---: | :---: | :---: |
| DIN Tracks | 1 m |  | PFP-100N |
|  | 0.5 m |  | PFP-50N |
| End Plate* |  |  | PFP-M |
| Spacer |  |  | PFP-S |

Note: The track conforms to DIN standards.
*When mounting DIN track, please use End Plate (Model PFP-M).

Ratings and Specifications

## Characteristics

## Sockets

|  |  |  |  |  |  |  |  | electric streng |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 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 | Weight |
| PYF-08-PU | Front | 8 | Push-In Plus Terminal | -40 to $70^{\circ} \mathrm{C}$ | $10 A^{*} 2$ <br> $10 A^{*} 2$ <br> 7 A |  | $\begin{aligned} & 2,000 \text { VAC } \\ & \text { for } 1 \text { min } \end{aligned}$ | $\begin{aligned} & 2,000 \text { VAC } \\ & \text { for } 1 \mathrm{~min} \end{aligned}$ | $2,000 \text { VAC }$ <br> for 1 min | $\begin{aligned} & 1,000 \mathrm{M} \Omega \\ & \min . \\ & (500 \mathrm{VAC}) \end{aligned}$ | Approx. 80 g |
| PYF08S |  |  | Screwless terminal | -55 to $70^{\circ} \mathrm{C}$ |  |  | Approx. 46 g |  |  |  |
| PYF08A |  |  | Screw terminal |  |  |  | Approx. 32 g |  |  |  |
| PYF08A-E |  |  |  |  |  |  | Approx. 32 g |  |  |  |
| PYF08M |  |  |  |  |  | 5 A |  | $\begin{aligned} & 1,500 \text { VAC } \\ & \text { for } 1 \text { min } \end{aligned}$ | $\begin{aligned} & 1,500 \text { VAC } \\ & \text { for } 1 \mathrm{~min} \end{aligned}$ |  | $\begin{aligned} & \text { 1,500 VAC } \\ & \text { for } 1 \text { min } \end{aligned}$ | Approx. 26 g |
| PYF11A |  | 11 | Screw terminal |  |  |  |  | $\begin{aligned} & 2,000 \text { VAC } \\ & \text { for } 1 \mathrm{~min} \end{aligned}$ | $\begin{aligned} & \text { 2,000 VAC } \\ & \text { for } 1 \text { min } \end{aligned}$ |  | $2,000 \text { VAC }$ <br> for 1 min | Approx. 43 g |
| PYF-14-PU |  | 14 | Push-In Plus Terminal | -40 to $70^{\circ} \mathrm{C}$ |  | 6 A |  |  |  |  |  | Approx. 87 g |
| PYF14S |  |  | Screwless terminal | -55 to $70^{\circ} \mathrm{C}$ |  | 5 A | Approx. 62 g |  |  |  |  |
| PYF14A |  |  | Screw terminal |  |  |  | Approx. 49 g |  |  |  |  |
| PYF14A-E |  |  |  |  |  | 3 A | Approx. 49 g |  |  |  |  |
| PYF14T |  |  |  |  |  |  | Approx. 53 g |  |  |  |  |
| PY08 | Back | 8 | Solder terminals | -55 to $70^{\circ} \mathrm{C}$ | $\begin{aligned} & \text { 5\% to } \\ & 85 \% \end{aligned}$ | 7 A | $\begin{aligned} & 1,500 \text { VAC } \\ & \text { for } 1 \mathrm{~min} \end{aligned}$ | $\begin{aligned} & 1,500 \text { VAC } \\ & \text { for } 1 \mathrm{~min} \end{aligned}$ | $\begin{aligned} & \text { 1,500 VAC } \\ & \text { for } 1 \text { min } \end{aligned}$ | $100 \mathrm{M} \Omega$ min. | Approx. 8 g |
| PY08-Y1 |  |  |  |  |  |  |  |  |  |  | Approx. 9 g |
| PY08-Y3 |  |  |  |  |  |  |  |  |  |  | Approx. 9 g |
| PY08QN |  |  | Wrapping terminals (Terminal length: 25 mm ) |  |  |  |  |  |  |  | Approx. 12 g |
| PY08QN-Y1 |  |  |  |  |  |  |  |  |  |  | Approx. 13 g |
| PY08QN-Y3 |  |  |  |  |  |  |  |  |  |  | Approx. 13 g |
| PY08QN2 |  |  | Wrapping terminals |  |  |  |  |  |  |  | Approx. 11 g |
| PY08QN2-Y1 |  |  | (Terminal length: |  |  |  |  |  |  |  | Approx. 12 g |
| PY08QN2-Y3 |  |  | 20 mm ) |  |  |  |  |  |  |  | Approx. 12 g |
| PY08-02 |  |  | PCB terminals |  |  |  |  |  |  |  | Approx. 7 g |
| PY11 |  |  |  |  |  |  |  |  |  |  | Approx. 9 g |
| PY11-Y1 |  |  |  |  |  |  |  |  |  |  | Approx. 10 g |
| PY11QN |  |  | Wrapping terminals |  |  |  |  |  |  |  | Approx. 13 g |
| PY11QN-Y1 |  | 11 | (Terminal length: 25 mm ) |  |  | 5 A | for 1 min | for 1 min | for 1 min | min. | Approx. 14 g |
| PY11QN2 |  |  | Wrapping terminals |  |  |  |  |  |  |  | Approx. 12 g |
| PY11QN2-Y1 |  |  | (Terminal length: 20 mm ) |  |  |  |  |  |  |  | Approx. 13 g |
| PY11-02 |  |  | PCB terminals |  |  |  |  |  |  |  | Approx. 8 g |
| PY14 |  | 14 | Solder terminals |  |  | 3 A | $\begin{aligned} & 1,500 \text { VAC } \\ & \text { for } 1 \mathrm{~min} \end{aligned}$ | $\begin{aligned} & 1,500 \mathrm{VAC} \\ & \text { for } 1 \mathrm{~min} \end{aligned}$ | $1,500 \mathrm{VAC}$ <br> for 1 min | $\begin{aligned} & 100 \mathrm{M} \Omega \\ & \text { min. } \end{aligned}$ | Approx. 10 g |
| PY14-Y1 |  |  |  |  |  |  |  |  |  |  | Approx. 11 g |
| PY14-Y3 |  |  |  |  |  |  |  |  |  |  | Approx. 11 g |
| PY14QN |  |  | Wrapping terminals (Terminal length: 25 mm ) |  |  |  |  |  |  |  | Approx. 14 g |
| PY14QN-Y1 |  |  |  |  |  |  |  |  |  |  | Approx. 15 g |
| PY14QN-Y3 |  |  |  |  |  |  |  |  |  |  | Approx. 15 g |
| PY14QN2 |  |  | Wrapping terminals (Terminal length: 20 mm ) |  |  |  |  |  |  |  | Approx. 13 g |
| PY14QN2-Y1 |  |  |  |  |  |  |  |  |  |  | Approx. 14 g |
| PY14QN2-Y3 |  |  |  |  |  |  |  |  |  |  | Approx. 14 g |
| PY14-02 |  |  | PCB terminals |  |  |  |  |  |  |  | Approx. 9 g |

*1. For 500 VDC applied to the same location as for dielectric strength measurement.
*2. The carrying current of 10 A is for an ambient temperature of $55^{\circ} \mathrm{C}$ or below. At an ambient temperature of $70^{\circ} \mathrm{C}$, the value is 7 A .
*3. This model is a set including a socket and relay hold-down clips. This weight shown is the total including the socket and relay hold-down clips.

## Socket Accessories

## For Front-connecting Sockets

## Short Bars

| Application | Applicable sockets | Model | Maximum carry current | Ambient operating temperature | Ambient operating humidity |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Bridging contact terminals (common) | $\begin{aligned} & \text { PYF-08-PU(-L) } \\ & \text { PYF-14-PU(-L) } \end{aligned}$ | PYDN-7.75-020 $\square$ | 20 A | -40 to $70^{\circ} \mathrm{C}$ | 5\% to 85\% |
|  |  | PYDN-7.75-030 $\square$ |  |  |  |
|  |  | PYDN-7.75-040 $\square$ |  |  |  |
|  |  | PYDN-7.75-200 $\square$ |  |  |  |
|  | PYF08A | PYD-025B $\square$ | 20 A <br> (However, 18 A when $70^{\circ} \mathrm{C}$ ) | -40 to $70^{\circ} \mathrm{C}$ (with no icing or condensation) | $45 \%$ to $85 \%$ (with no icing or condensation) |
|  |  | PYD-085B $\square$ |  |  |  |
|  | PYF14A | PYD-026B $\square$ |  |  |  |
|  |  | PYD-086B $\square$ |  |  |  |
|  |  | PYD-020B $\square$ |  |  |  |
|  |  | PYD-030B $\square$ |  |  |  |
| For Coil terminals | $\begin{aligned} & \text { PYF-08-PU(-L) } \\ & \text { PYF-14-PU(-L) } \end{aligned}$ | PYDN-31.0-080 $\square$ | 20 A | -40 to $70^{\circ} \mathrm{C}$ | 5\% to 85\% |
|  | PYF08S | PYDM-08S $\square$ | 10 A | -40 to $70^{\circ} \mathrm{C}$ | 5\% to 85\% |
|  | PYF14S | PYDM-14S $\square$ | 10 A | -40 to $70^{\circ} \mathrm{C}$ | 5\% to $85 \%$ |

## Certified Standards

-CSA certification (File No. LR031928)

| Model | Ratings | Class number | Standard number |
| :--- | :--- | :--- | :---: |
| PYF-08-PU | $10 \mathrm{~A}, 250 \mathrm{~V}$ |  |  |
| PYF-14-PU | $6 \mathrm{~A}, 250 \mathrm{~V}^{*}$ |  |  |
| PYF08S | $10 \mathrm{~A}, 250 \mathrm{~V}$ | 321107 | CSA C22.2 No14 |
| PYF14S | $5 \mathrm{~A}, 250 \mathrm{~V}$ |  |  |
| PY $\square$ | $7 \mathrm{~A}, 250 \mathrm{~V}$ |  |  |

*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 | $10 \mathrm{~A}, 250 \mathrm{~V}$ | UL508 | SWIV2 | Recognition |
| PYF-14-PU | $6 \mathrm{~A}, 250 \mathrm{~V}^{*}$ |  |  |  |
| PYF08S PYF14S | $10 \mathrm{~A}, 250 \mathrm{~V}$ |  |  |  |
| $\begin{aligned} & \text { PY } \square \\ & \text { PYF } \square \mathbf{A ( - E )} \end{aligned}$ | $7 \mathrm{~A}, 250 \mathrm{~V}$ |  |  |  |

*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 | $10 \mathrm{~A}, 250 \mathrm{~V}^{*}$ |  |  |
| PYF-14-PU | $6 \mathrm{~A}, 250 \mathrm{~V}$ |  |  |

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

## - VDE certification

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

Height with Socket
-Front-connecting Sockets

- Push-In Plus Terminal
(PYF- $\square$-PU)

- Screwless terminal (PYF08S, PYF14S)

- Screw terminal
(PYF $\square A(-E)$, PYF14T, PYF08M)


Note: 1. The PYF $\square \mathrm{A}$ can be mounted on a track or with screws.
2. The heights given in parentheses are the measurements for 53 -mm-high Relays
3. Use the PYC-P Hold-down Clip for the PYF08M.

## -Back-connecting Sockets

- Solder terminals/wrapping terminals (PY $\square$ )

- PCB terminals (PY $\square-02$ )



## Front-connecting Sockets

-Push-In Plus Terminal


## -Screwless terminal

PYF08S


## Terminal Arrangement/Internal

 Connection Diagram
(Top View)
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

## NW

## PYF08A



PYF08A-E
(Finger-protection structure)


Terminal Arrangement/ Internal Connection Diagram

(Top View)

Mounting Hole Dimensions


Note: Track mounting is also possible

## PYF08M



Terminal Arrangement/Internal Connection Diagram

(Top View)

## PYF11A




Terminal Arrangement/Internal Connection Diagram

(Top View)

Mounting Hole Dimensions


Note: Track mounting is also possible.


PYF14A-E (Finger-protection structure)


Terminal Arrangement/Internal Connection Diagram

(Top View)


Note: Track mounting is also possible.

Mounting Hole Dimensions


## Back-connecting Socket

 -Solder terminals
## NW

## PY08


*PY08-Y $\square$ includes the potion indicated by broken line

Terminal Arrangement/Internal Connection Diagram

| $(1)$ | $(4)$ |
| :--- | :--- |
| $(5)$ | $(8)$ |
| $(9)$ | (12) |
| $(13)$ | (14) |

(Bottom View)

Mounting Hole Dimensions


PY11
PY11-Y1
*PY11-Y1 includes the potion indicated by broken line.

Terminal Arrangement/Internal Connection Diagram

| (1) | (2) | (3) |
| :--- | :--- | :--- |
| (4) | (5) | (6) |
| (7) | (8) | (9 |
| (10) |  | (11) |
| (Bottom View) |  |  |

Terminal Arrangement/Internal Connection Diagram

| (1) (2) (3) (4) |  |
| :---: | :---: |
| (5) (6) (7) (8) |  |
|  |  |
| (13) | (14) |

(Bottom View)

Mounting Hole Dimensions


PY14
PY14-Y1
PY14-Y3

*PY14-Y $\square$ includes the potion indicated by broken line.

Terminal Arrangement/Internal Connection Diagram
(Bottom View)

| $(1)$ | $(4)$ |
| :--- | :--- |
| $(5)$ | $(8)$ |
| $(9)$ | $(12)$ |
| $(13)$ | (14) |

Mounting Hole Dimensions

## PY08QN

ing terminals

PY08QN2
PY08QN2-Y1
PY08QN2-Y3


## PY14QN/PY14QN2

PY14QN-Y1/PY14QN2-Y1
PY14QN-Y3 (L = 60 max.)

## PY14QN2-Y3 (L = 60 max.)

Terminal Arrangement/Internal Connection Diagram

| $(1)$ | (2) | $(3)$ |
| :--- | :--- | :--- |
| 4 | $(5)$ | $(6)$ |
| $(7)$ | 8 | $(9)$ |
| 10 |  | $(1)$ |

(Bottom View)

Mounting Hole Dimensions

*2. Dimensions in parentheses are for PY14QN2(-Y $\square)$.


Terminal Arrangement/Internal Connection Diagram

| (1) (2) (3) (4) |
| :---: |
| (5) (6) (7) (8) |
| (9) (1) (1) (1) |
| (13) (14) |

(Bottom View)

Mounting Hole Dimensions


## -PCB terminals

PY08-02

Terminal Arrangement/Internal Connection Diagram

| $(1)$ | (4) |
| :--- | :--- |
| (5) | (8) |
| (9) | (12) |
| (3) | (14) |

(Bottom View)

Terminal Arrangement/Internal Connection Diagram

| (1) | (2) | $(3)$ |
| :--- | :--- | :--- |
| (4) | (5) | $(6)$ |
| $(7)$ | $(8)$ | $(9)$ |
| $(10)$ |  | $(11)$ |

(Bottom View)

Terminal Arrangement/Internal Connection Diagram

| (1) | (2) | (3) |
| :--- | :--- | :--- |
| (4) |  |  |
| (5) | (6) | (7) |
| (8) |  |  |
| (9) | (10) | (11) |
| (12) |  |  |

(Bottom View)


Mounting Hole and PCB Dimensions


## Socket Accessories

-Hold-down Clip

- PYC-A1
1 set (2 pcs.)

- PYC-E1
- PYC-P 1 set (2 pcs.)

- PYC-S
1 set (2 pcs.)

- Y92H-3
- PYC-1 1 set (2 pcs.)




## -Socket Mounting Plates

## PYP-1



PYP-18


PYP-36


## -Accessories for DIN Track Mounting

DIN Tracks


## 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.
Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury or in property damage.
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 non-specified general |
| cautions, warnings, and danger. |

## $\triangle$ 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

## OHandling

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).

## Olnstallation

- 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.


[^1]
## -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 <br> of poles | Operating Coil <br> ratings | Contact ratings |
| :---: | :---: | :---: | :---: |
| MY | 1 | 6 to 220 VAC | 5 A, 200 VAC |
|  | 3 | 6 to 120 VDC | 2 |
|  | $4^{\star}$ | 6 to 110 VAC <br> 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.

## OMiniature 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 $23^{\circ} \mathrm{C}$ 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.


## -Hermetically Sealed Relays (MYH/MYQ) 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))
Refer to Safety Precautions on the Push-In Plus Terminal Block Socket PYF- $\square \square$-PU/P2RF- $\square \square$-PU Data Sheet (Catalog No. SGFR-218).

-Screwless Terminal Sockets (PYF08S, PYF14S)<br>Refer to Safety Precautions on the Screwless Terminal Socket PYF $\square \square S /$ P2RF- $\square \square$ S Data Sheet (Catalog No. CDRR-011).

-Screw Terminal Sockets (PYF08A(-E), PYF08M, PYF11A, PYF14A(-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

## 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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[^0]:    *1. The applicable relay model is a plug-in terminal type.
    *2. There are screw mounting holes in the DIN hooks on the PYF- $\square \square-$ PU and P2RF- $\square \square$-PU. Pull out the DIN hook tabs to mount the Sockets with screws.
    *3. The finger-protection type (PYF $\square A-E)$ is a type in which the terminal cover is integrated into the socket. Round terminals cannot be used. Use forked terminals or ferrules instead.

[^1]:    - Use two M3 screws to mount the case-surface mounting (MY $\square$ F) and tighten them securely. (Appropriate tightening torque: $0.98 \mathrm{~N} \cdot \mathrm{~m}$ )

