## Miniature Power Relays MY

## New Latching Levers for Circuit Checking <br> Added to Our Best-selling MY General-purpose Relays

- Now lead-free to protect the environment.
- VDE certification (Germany).
- Different colors of coil tape for AC and DC models to more easily distinguish them.
- MY(S) models with latching levers added for easier circuit checking.


Refer to the Common Relay Precautions.

## Model Number Structure

| Classification | Structure <br> Number of poles | Relays with Plug-in Terminals |  | $\boxed{\square}$ | PCB terminals | Case-surface mounting$\square$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | With operation indicator | Without operation indicator | With latching lever |  |  |
| Standard models (compliant with Electrical Appliances and Material Safety Act) | 2 | MY2N* | MY2* | MY2IN(S)* | MY2-02 | MY2F |
|  | Bifurcated | MY2ZN | MY2Z |  |  |  |
|  | 3 | MY3N | MY3 |  | MY3-02 | MY3F |
|  | 4 | MY4N* | MY4* | MY4IN(S)* | MY4-02 | MY4F |
|  | Bifurcated | MY4ZN* | MY4Z* | MY4ZIN(S)* | MY4Z-02 | MY4ZF |
| Models with diode for coil surge absorption (DC coil specification only) | 2 | MY2N-D2* | MY2-D* | MY2IN-D2(S)* | --- | --- |
|  | Bifurcated | MY2ZN-D2 | MY2Z-D |  |  |  |
|  | 3 | MY3N-D2 | MY3-D |  |  |  |
|  | 4 | MY4N-D2* | MY4-D* | MY4IN-D2(S)* |  |  |
|  | Bifurcated | MY4ZN-D2* | MY4Z-D* | MY4ZIN-D2(S)* |  |  |
| Models with CR circuit for coil surge absorption (AC coil specification only) <br> - $\mathrm{H}-$ | 2 | MY2N-CR* | MY2-CR* |  | --- |  |
|  | $4 \begin{array}{ll} \\ & \\ & \text { Bifurcated }\end{array}$ | MY4N-CR* MY4ZN-CR* | MY4-CR* MY4Z-CR* | MY4IN-CR(S)* MY4ZIN-CR(S)* |  |  |
| Models with high contact reliability | 4 Bifurcated | --- | MY4Z-CBG | + |  |  |
| Plastic sealed models | $4 \begin{array}{ll}4 & \\ & \text { Bifurcated }\end{array}$ | MYQ4N | MYQ4 <br> MYQ4Z |  | MYQ4-02 <br> MYQ4Z-02 |  |
| Latching models (coil latching) | 2 |  | MY2K |  | MY2K-02 |  |
| Hermetic models | 4 <br> Bifurcated |  |  |  | MY4H-0 <br> MY4ZH-0 |  |

Note: 1. The models in this table are UL/CSA certified. This is indicated with a certification mark on the products.
(This does not include models with high contact reliability or plastic sealed, latching, or hermetically sealed models.)
2. Models with an asterisk (*) next to them are new versions.
3. The standard models with plug-in terminals, models with coil surge absorption diodes, and models with coil surge absorption CR circuits were used in combination with the PYF-E and PYFS (2-pole and 4-pole) for the EC Declaration of Conformity. These products display the CE Marking.
4. Products cannot be manufactured for the cells with a diagonal line. Ask your OMRON representative for details on manufacturing products for cells containing "---" in the above table.

[^0]
## Ordering Information

When your order, specify the rated voltage.

| Classification | Model | Rated voltage (V) |  |
| :---: | :---: | :---: | :---: |
|  |  | Standard products | Made-to-order items |
| Standard models | MY2 | 12, 24, 100/110, or 200/220 VAC | 110/120 or 220/240 VAC |
|  |  | 12, 24, 48, or 100/110 VDC |  |
| Models with built-in operation indicators | MY2N | 12, 24, 100/110, 110/120, 200/220, or 220/240 VAC |  |
|  |  | 12, 24, 48, or 100/110 VDC |  |
| Models with built-in diodes | MY2-D | 12, 24, or 100/110 VDC | 48 VDC |
| Models with built-in diodes and operation indicators | MY2N-D2 | 12, 24, 48, or 100/110 VDC |  |
| Models with built-in CR circuits | MY2-CR | 100/110 or 200/220 VAC | 110/120 or 220/240 VAC |
| Models with built-in CR circuits and operation indicators | MY2N-CR | 100/110 or 200/220 VAC | 110/120 or 220/240 VAC |

Note: 1. Ask your OMRON representative for details on the time required to deliver made-to-order products.
2. Ask your OMRON representative for details on product specifications and the ability to manufacture products with voltages other than the above coil specifications.
3. The above models and specifications are new versions in the MY Series.
4. Except for MY2(N)-CR Relays with the above voltage specifications, all Relays have a height of 53 mm or less. If Mounting Brackets are required, refer to page 33 for selection information.

## Ratings and Specifications

## Ratings

## Operating Coils (Standard Models)

| Item <br> Rated <br> voltage (V) |  | Rated current (mA) |  | Coil resistance $(\Omega)$ | Coil inductance (H) |  | Mustoperate voltage (V) | Mustrelease voltage (V) | Maximum voltage (V) | Power consumption (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 | $\begin{aligned} & \text { Approx. } 1.0 \text { to } 1.2 \\ & \text { (at } 60 \mathrm{~Hz} \text { ) } \end{aligned}$ |
|  | 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 |  |  |  | Approx. 0.9 to 1.1 |
|  | 200/220 | 6.2/6.8 | 5.3/5.8 | 12,950 | 54.75 | 94.07 |  |  |  | (at 60 Hz ) |
|  | 220/240 | 4.8/5.3 | 4.2/4.6 | 18,790 | 83.5 | 136.4 |  |  |  |  |
| DC | 12 | 72.7 |  | 165 | 0.73 | 1.37 |  | 10\% min. *2 |  | Approx. 0.9 |
|  | 24 | 36.3 |  | 662 | 3.2 | 5.72 |  |  |  |  |
|  | 48 | 17.6 |  | 2,725 | 10.6 | 21.0 |  |  |  |  |
|  | 100/110 | 8.7/9.6 |  | 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 the AC rated current and $\pm 15 \%$ 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 $23^{\circ} \mathrm{C}$.
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 $80 \%$ max.
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 $30 \%$ minimum for AC and $10 \%$ minimum for DC. To ensure release, use a value that is lower than the specified value.

## Contact Ratings

| Load | Resistive load | Inductive load <br> (cos $\varphi=\mathbf{0 . 4 , ~ L / R = 7 ~ m s ) ~}$ |
| :--- | :--- | :--- |
| Rated load | 5 A at 220 VAC <br> 5 A at 24 VDC | 2 A at 220 VAC <br> 2 A at 24 VDC |
| Rated carry current | 5 A |  |
| Maximum contact voltage | $250 \mathrm{VAC}, 125 \mathrm{VDC}$ |  |
| Maximum contact current | 5 A |  |
| Contact configuration | DPDT |  |
| Contact structure | Single |  |
| Contact materials | Ag |  |


| Item Type | Standard <br> models | Model with built-in operation <br> indicator, diode, or CR circuit |
| :--- | :--- | :--- |
| Ambient <br> operating <br> temperature*1 | -55 to $70^{\circ} \mathrm{C}$ | -55 to $60^{\circ} \mathrm{C}^{* 2}$ |
| Ambient <br> operating <br> humidity | $5 \%$ to $85 \%$ |  |

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

Characteristics

| Item | Type | Standard models | Models with builtin operation indicators | Models with built-in CR circuits | Models with built-in diodes | Model with built-in operation indicator and diode | Model with built-in operation indicator and CR circuit |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Contact resistance*1 |  | $50 \mathrm{~m} \Omega$ max. |  |  |  |  |  |
| Operation time*2 |  | 20 ms max . |  |  |  |  |  |
| Release time*2 |  | 20 ms max. |  |  |  |  |  |
| Maximum operating 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 | $2,000 \mathrm{VAC}$ at $50 / 60 \mathrm{~Hz}$ for 1 min . |  |  |  |  |  |
|  | Between contacts of different polarity |  |  |  |  |  |  |
|  | Between contacts of the same polarity | 1,000 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 ( $1.0-\mathrm{mm}$ 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 | AC: 50,000,000 operations min. DC: 100,000,000 operations min. (switching frequency: 18,000 operations/h) |  |  |  |  |  |
|  | Electrical*4 | 500,000 operations min. (rated load, switching frequency: 1,800 operations/h) |  |  |  |  |  |


| Item $\quad$ Number of poles | 2 poles |
| :--- | :---: |
| Failure rate $\mathbf{P}$ value <br> (reference value)*5 | 1 mA at 5 VDC |
| Weight | Approx. 35 g |

Note: These are initial values.
*1. Measurement conditions: 1 A at 5 VDC using the voltage drop method.
*2. Measurement conditions. With rated operating power applied
*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.

## MY2, MY2N, MY2-D, MY2N-D2, MY2-CR,

 and MY2N-CR

Eight, 1.2-dia. $\times 2.2$ oval holes


MY2-D
MY2N-D2

(The coil has no polarity.)



Terminal Arrangement/In ternal Connections (Bottom View) Standard Models


Note: 1. An AC model has coil disconnection selfdiagnosis.
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.
MY2-CR

MY2N-CR

(The coil has no polarity.)

(The coil has no polarity.)

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

Ordering Information
When your order, specify the rated voltage.

| Classification | Model | Rated voltage (V) |  |
| :---: | :---: | :---: | :---: |
|  |  | Standard products | Made-to-order items |
| Standard models | MY2Z | 100/110 or 200/220 VAC | 12, 24, 100/120, or 200/240 VAC |
|  |  | 12 or 24 VDC | 48 or 100/110 VDC |
| Models with built-in operation indicators | MY2ZN | 100/110 or 200/220 VAC | 12, 24, 100/120, or 200/240 VAC |
|  |  | 24 VDC | 12, 48, or 100/110 VDC |
| Models with built-in diodes | MY2Z-D | 24 VDC | 12 or 100/110 VDC |
| Models with built-in diodes and operation indicators | MY2ZN-D2 | 24 or 100/110 VDC | 12 VDC |
| Models with built-in CR circuits | MY2Z-CR |  | 100/110 or 200/220 VAC |
| Models with built-in CR circuits and operation indicators | MY2ZN-CR | 100/110 VAC | 200/220 VAC |

Note: 1. Ask your OMRON representative for details on the time required to deliver made-to-order products.
2. Ask your OMRON representative for details on product specifications and the ability to manufacture products with voltages other than the above coil specifications.

## Ratings and Specifications

## Ratings

Operating Coil (Standard Models)

| Item <br> Rated <br> voltage (V) |  | Rated current (mA) |  | Coil resistance $(\Omega)$ | Coil inductance (H) |  | Mustoperate voltage (V) | Mustrelease voltage (V) | Maximum voltage (V) | Power consumption (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 | Approx. 1.0 to 1.2 (at 60 Hz ) |
|  | 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 |  |  |  | Approx. 0.9 to 1.1 |
|  | 200/220 | 6.2/6.8 | 5.3/5.8 | 12,950 | 54.75 | 94.07 |  |  |  | (at 60 Hz ) |
|  | 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 the AC rated current and $\pm 15 \%$ 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 $23^{\circ} \mathrm{C}$.
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 $80 \%$ max.
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

| Load Item | Resistive load | Inductive load $(\cos \varphi=0.4, \mathrm{~L} / \mathrm{R}=7 \mathrm{~ms})$ |
| :---: | :---: | :---: |
| Rated load | 5 A at 220 VAC 5 A at 24 VDC | 2 A at 220 VAC 2 A at 24 VDC |
| Rated carry current | 5 A |  |
| Maximum contact voltage | 250 VAC, 125 VDC |  |
| Maximum contact current | 5 A |  |
| Contact configuration | DPDT |  |
| Contact structure | Bifurcated |  |
| Contact materials | Au plating + Ag |  |


| Item $\quad$ Type | Standard <br> models | Model with built-in operation <br> indicator, diode, or CR circuit |
| :--- | :--- | :--- |
| Ambient <br> operating <br> temperature*1 | -55 to $70^{\circ} \mathrm{C}$ | -55 to $60^{\circ} \mathrm{C} * 2$ |
| Ambient <br> operating <br> humidity | $5 \%$ to $85 \%$ |  |

*2. This limitation is due to the diode junction temperature and elements used.

Characteristics

| Item Type |  | Standard models | Models with builtin operation indicators | Models with built-in diodes | Model with built-in operation indicator and diode | Models with built-in CR circuits | Models with built-in CR circuits and operation indicators |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Contact resistance*1 |  | $50 \mathrm{~m} \Omega$ max. |  |  |  |  |  |
| Operation time*2 |  | 20 ms max. |  |  |  |  |  |
| Release time*2 |  | 20 ms max . |  |  |  |  |  |
| Maximum operating 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 | 2,000 VAC at $50 / 60 \mathrm{~Hz}$ for 1 min . |  |  |  |  |  |
|  | Between contacts of different polarity |  |  |  |  |  |  |
|  | Between contacts of the same polarity | $1,000 \mathrm{VAC}$ at $50 / 60 \mathrm{~Hz}$ for 1 min . |  |  |  |  |  |
| Vibration resistance | Destruction | 10 to 55 to $10 \mathrm{~Hz}, 0.5-\mathrm{mm}$ single amplitude ( $1.0-\mathrm{mm}$ 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 | 50,000,000 operations min. (operating frequency: 18,000 operations/h) |  |  |  |  |  |
|  | Electrical*4 | 200,000 operations min. (rated load, switching frequency: 1,800 operations/h) |  |  |  |  |  |


| Item $\quad$ Number of poles | 2 poles |
| :--- | :---: |
| Failure rate $\mathbf{P}$ value <br> (reference value)*5 | $100 \mu \mathrm{~A}$ at 1 VDC |
| Weight | Approx. 35 g |

Note: These are initial values.
*1. Measurement conditions: 1 A at 5 VDC using the voltage drop method.
*2. Measurement conditions: With rated operating power applied.
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.
Dimensions
(Unit: mm)

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



Eight, 1.2-dia. $\times 2.2$ oval holes


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

Terminal Arrangement/ Internal Connections (Bottom View) Standard Models

(The coil has no polarity.)

MY2ZN-D2

(Check the coil polarity when wining and wire all connections correctly.

$\binom{$ Check the coil polarity when wining }{ and wire all connections corectly. }


Note: 1. An AC model has coil disconnection selfdiagnosis.
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.

MY2Z-CR

(The coil has no polarity.)

Ordering Information
When your order, specify the rated voltage.

| Classification | Model | Rated voltage (V) |  |
| :---: | :---: | :---: | :---: |
|  |  | Standard products | Made-to-order items |
| Standard models | MY3 | 24, 100/110, 200/220, or 220/240 VAC | 12, or 110/120 VAC |
|  |  | 12, 24, or 100/110 VDC | 48 VDC |
| Models with built-in operation indicators | MY3N | 24, 100/110, 200/220, or 220/240 VAC | 12, or 110/120 VAC |
|  |  | 24 VDC | 12, 48, or 100/110 VDC |
| Models with built-in diodes | MY3-D | 24 VDC | 12 or 100/110 VDC |
| Models with built-in diodes and operation indicators | MY3N-D2 | 24 VDC | 12 or 100/110 VDC |

Note: 1. Ask your OMRON representative for details on the time required to deliver made-to-order products.
2. Ask your OMRON representative for details on product specifications and the ability to manufacture products with voltages other than the above coil specifications.

## Ratings and Specifications

## Ratings

Operating Coil (Standard Models)

| Rated <br> voltage ( <br> (V) |  | Rated current (mA) |  | Coil resistance $(\Omega)$ | Coil inductance (H) |  | Mustoperate voltage (V) | Mustrelease voltage (V) | Maximum voltage (V) | Power consumption(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 | Approx. 1.0 to 1.2 |
|  | 24 | 53.8 | 46 | 180 | 0.69 | 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 |  |  |  | Approx. 0.9 to 1.1 |
|  | 200/220 | 6.2/6.8 | 5.3/5.8 | 12,950 | 54.75 | 94.07 |  |  |  | (at 60 Hz ) |
|  | 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 the AC rated current and $\pm 15 \%$ 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 $23^{\circ} \mathrm{C}$.
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 $80 \%$ max.
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

| Item | Load | Resistive load |
| :--- | :--- | :--- |
| Rated load | Inductive load <br> (cos $\varphi=\mathbf{0 . 4 , ~ L / R ~}=7 \mathrm{~ms})$ |  |
| Rated carry current | 5 A at 220 VAC <br> 5 A at 24 VDC | 2 A at 220 VAC <br> 2 A at 24 VDC |
| Maximum contact voltage | $250 \mathrm{VAC}, 125 \mathrm{VDC}$ |  |
| Maximum contact current | 5 A |  |
| Contact configuration | 3 3PDT |  |
| Contact structure | Single |  |
| Contact materials | Ag |  |


| Item Type | Standard <br> models | Operation indicator and diode |
| :--- | :--- | :--- |
| Ambient <br> operating <br> temperature ${ }^{* 1}$ | -55 to $70^{\circ} \mathrm{C}$ | -55 to $60^{\circ} \mathrm{C}^{* 2}$ |
| Ambient <br> operating <br> humidity | $5 \%$ to $85 \%$ |  |

*2. This limitation is due to the diode junction temperature and elements used.

Characteristics

| Item Type |  | Standard models | Models with built-in operation indicators | Models with built-in diodes | Model with built-in operation indicator and diode |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Contact resistance*1 |  | $50 \mathrm{~m} \Omega$ max. |  |  |  |
| Operation time*2 |  | 20 ms max. |  |  |  |
| Release time*2 |  | 20 ms max . |  |  |  |
| Maximum operating 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 | 2,000 VAC at 50/60 Hz for 1 min . |  |  |  |
|  | Between contacts of different polarity |  |  |  |  |
|  | Between contacts of the same polarity | 1,000 VAC at 50/60 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) |  |  |  |
|  | Electrical*4 | 500,000 operations min. (rated load, switching frequency: 1,800 operations/h) |  |  |  |


| Item $\quad$ Number of poles | 3 poles |
| :--- | :---: |
| Failure rate P value <br> (reference value)*5 | 1 mA at 5 VDC |
| Weight | Approx. 35 g |

Note: These are initial values.
*1. Measurement conditions: 1 A at 5 VDC using the voltage drop method
*2. Measurement conditions: With rated operating power applied.
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.

## Dimensions

(Unit: mm)

MY3, MY3N, MY3-D, and MY3N-D2


Eleven, 1.2-dia. $\times 2.2$ oval holes


MY3-D
$\binom{$ Check the coil polarity when wining }{ and wire all connections correctly. }


MY3N-D2
(Check the coil polarity when wiring $\left.\begin{array}{l}\text { and wire all connections correctly. }\end{array}\right)$





Note: 1. An AC model has coil disconnection selfdiagnosis.
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.

Ordering Information
When your order, specify the rated voltage.

| Classification | Model | Rated voltage (V) |  |
| :---: | :---: | :---: | :---: |
|  |  | Standard products | Made-to-order items |
| Standard models | MY4 | 24, 100/110, or 200/220 VAC | 12, 110/120, or 220/240 VAC |
|  |  | 12, 24, 48, or 100/110 VDC |  |
| Models with built-in operation indicators | MY4N | 12, 24, 100/110, 110/120, 200/220, or 220/240 VAC |  |
|  |  | 12, 24, 48, or 100/110 VDC |  |
| Models with built-in diodes | MY4-D | 12, 24, 48, or 100/110 VDC |  |
| Models with built-in diodes and operation indicators | MY4N-D2 | 12, 24, or 100/110 VDC | 48 VDC |
| Models with built-in CR circuits | MY4-CR | 100/110 or 200/220 VAC | 110/120 or 220/240 VAC |
| Models with built-in CR circuits and operation indicators | MY4N-CR | 100/110, 110/120, or 200/220 VAC | 220/240 VAC |

Note: 1. Ask your OMRON representative for details on the time required to deliver made-to-order products.
2. Ask your OMRON representative for details on product specifications and the ability to manufacture products with voltages other than the above coil specifications.
3. The above models and specifications are new versions in the MY Series.
4. Except for MY4(N)-CR Relays with the above voltage specifications, all Relays have a height of 53 mm or less. If Mounting Brackets are required, refer to page 33 for selection information.

## Ratings and Specifications

## Ratings

Operating Coil (Standard Models)

| Rated <br> voltage (V) |  | Rated current (mA) |  | Coil resistance ( $\Omega$ ) | Coil inductance (H) |  | Mustoperate voltage (V) | Mustrelease voltage (V) | Maximum voltage (V) | Power consumption (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 | Approx. 1.0 to 1.2$($ at 60 Hz$)$ (at 60 Hz ) |
|  | 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 |  |  |  | Approx. 0.9 to 1.1 |
|  | 200/220 | 6.2/6.8 | 5.3/5.8 | 12,950 | 54.75 | 94.07 |  |  |  | (at 60 Hz ) |
|  | 220/240 | 4.8/5.3 | 4.2/4.6 | 18,790 | 83.5 | 136.4 |  |  |  |  |
| DC | 12 | 72.7 |  | 165 | 0.73 | 1.37 |  | 10\% min.*2 |  | Approx. 0.9 |
|  | 24 | 36.3 |  | 662 | 3.2 | 5.72 |  |  |  |  |
|  | 48 | 17.6 |  | 2,725 | 10.6 | 21.0 |  |  |  |  |
|  | 100/110 | 8.7/9.6 |  | 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 the AC rated current and $\pm 15 \%$ 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 $23^{\circ} \mathrm{C}$.
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 $80 \%$ max.
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

| Load | Resistive load | Inductive load <br> (cos $\varphi=\mathbf{0 . 4 , ~ L / R ~}=\mathbf{7} \mathbf{~ m s})$ |
| :--- | :--- | :--- |
| Rated load | 3 A at 220 VAC <br> 3 A at 24 VDC | 0.8 A at 220 VAC <br> 1.5 A at 24 VDC |
| Rated carry current | 3 A |  |
| Maximum contact voltage | $250 \mathrm{VAC}, 125 \mathrm{VDC}$ |  |
| Maximum contact current | 3 A |  |
| Contact configuration | 4PDT |  |
| Contact structure | Single |  |
| Contact materials | Au cladding + Ag alloy |  |


| Item Type | Standard <br> models | Model with built-in operation <br> indicator, diode, or CR circuit |
| :--- | :--- | :--- |
| Ambient <br> operating <br> temperature*1 | -55 to $70^{\circ} \mathrm{C}$ | -55 to $60^{\circ} \mathrm{C}^{* 2}$ |
| Ambient <br> operating <br> humidity | $5 \%$ to $85 \%$ |  |

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

## Characteristics

| Item Type |  | Standard models | Models with builtin operation indicators | Models with built-in CR circuits | Models with built-in diodes | Model with built-in operation indicator and diode | Model with built-in operation indicator and CR circuit |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Contact resistance*1 |  | $50 \mathrm{~m} \Omega$ max. |  |  |  |  |  |
| Operation time*2 |  | 20 ms max . |  |  |  |  |  |
| Release time*2 |  | 20 ms max . |  |  |  |  |  |
| Maximum operating 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 | 2,000 VAC at 50/60 Hz for 1 min . |  |  |  |  |  |
|  | Between contacts of different polarity |  |  |  |  |  |  |
|  | Between contacts of the same polarity | 1,000 VAC at 50/60 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) |  |  |  |  |  |
|  | Electrical*4 | 200,000 operations min. (rated load, switching frequency: 1,800 operations/h) |  |  |  |  |  |


| ItemNumber of poles | 4 poles |
| :--- | :---: |
| Failure rate P value <br> (reference value)*5 | 1 mA at 1 VDC |
| Weight | Approx. 35 g |

Note: These are initial values.
*1. Measurement conditions: 1 A at 5 VDC using the voltage drop method
*2. Measurement conditions: With rated operating power applied
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.

## Engineering Data

List of Actual Load Endurance (Refer to Engineering Data on page 20.)

| Model | Load type | Conditions | Switching frequency | Electrical durability (operations min.) |
| :---: | :---: | :---: | :---: | :---: |
| MY4 DC24V | AC magnetic switch | 35 VA at 100 VAC <br> Making current: 4 A , <br> Steady-state current: 0.35 A | ON: 1 s OFF: 3s | 500,000 |
|  | DC solenoid | 40 W at 24 VDC Steady-state current: $1.6 \mathrm{~A}, \mathrm{~L} / \mathrm{R}=10 \mathrm{~ms}$ Surge-absorbing diode connected | $\begin{aligned} & \text { ON: } 0.5 \mathrm{~s} \\ & \text { OFF: } 1.5 \mathrm{~s} \end{aligned}$ | 500,000 |
|  |  | 20 W at 24 VDC Steady-state current: $0.8 \mathrm{~A}, \mathrm{~L} / \mathrm{R}=10 \mathrm{~ms}$ Surge-absorbing diode connected | ON: 0.5 s OFF: 1.5 s | 1,000,000 |

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

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.

(The coil has no polarity.)
(The coil has no polarity.)

Ordering Information
When your order, specify the rated voltage.

| Classification | Model | Rated voltage (V) |  |
| :---: | :---: | :---: | :---: |
|  |  | Standard products | Made-to-order items |
| Standard models | MY4Z | 100/110 or 200/220 VAC | 110/120 or 220/240 VAC |
|  |  | 12, 24, 48, or 100/110 VDC |  |
| Models with built-in operation indicators | MY4ZN | 100/110 or 200/220 VAC | 24, 110/120, or 220/240 VAC |
|  |  | 24 or 100/110 VDC | 12 or 48 VDC |
| Models with built-in diodes | MY4Z-D | 24 or 100/110 VDC | 12 or 48 VDC |
| Models with built-in diodes and operation indicators | MY4ZN-D2 | 12, 24,48 , or 100/110 VDC |  |
| Models with built-in CR circuits | MY4Z-CR | 100/110 or 200/220 VAC | 110/120 or 220/240 VAC |
| Models with built-in CR circuits and operation indicators | MY4ZN-CR | 100/110 or 200/220 VAC | 110/120 or 220/240 VAC |

Note: 1. Ask your OMRON representative for details on the time required to deliver made-to-order products.
2. Ask your OMRON representative for details on product specifications and the ability to manufacture products with voltages other than the above coil specifications.
3. The above models and specifications are new versions in the MY Series.

## Ratings and Specifications

## Ratings

## Operating Coil (Standard Models)

| RatedRaltage ( <br> (V)vom |  | Rated current (mA) |  | Coil resistance $(\Omega)$ | Coil inductance (H) |  | Mustoperate voltage (V) | Release voltage (V) | Maximum voltage (V) | Power consumption (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 | $\begin{aligned} & \text { Approx. } 1.0 \text { to } 1.2 \\ & \text { (at } 60 \mathrm{~Hz} \text { ) } \end{aligned}$ |
|  | 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 |  |  |  | Approx. 0.9 to 1.1 |
|  | 200/220 | 6.2/6.8 | 5.3/5.8 | 12,950 | 54.75 | 94.07 |  |  |  | (at 60 Hz ) |
|  | 220/240 | 4.8/5.3 | 4.2/4.6 | 18,790 | 83.5 | 136.4 |  |  |  |  |
| DC | 12 | 72.7 |  | 165 | 0.73 | 1.37 |  | 10\% min.*2 |  | Approx. 0.9 |
|  | 24 | 36.3 |  | 662 | 3.2 | 5.72 |  |  |  |  |
|  | 48 | 17.6 |  | 2,725 | 10.6 | 21.0 |  |  |  |  |
|  | 100/110 | 8.7/9.6 |  | 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 the AC rated current and $\pm 15 \%$ for the DC coil resistance.
2. The $A C$ coil resistance and inductance values are reference values only (at 60 Hz ).
3. Operating characteristics were measured at a coil temperature of $23^{\circ} \mathrm{C}$.
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 $80 \%$ max.
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

| Item | Load | Resistive load |
| :--- | :--- | :--- |
| Rated load | Inductive load <br> (cos $\varphi=\mathbf{0 . 4 , ~ L / R ~ = ~} \mathbf{7 m s})$ |  |
| Rated carry current | 3 A at 220 VAC | 0.8 A at 220 VAC |
| 3 A at 24 VDC |  |  |
| 1.5 A at 24 VDC |  |  |


| Item Type | Standard <br> models | Model with built-in operation <br> indicator, diode, or CR circuit |
| :--- | :--- | :--- |
| Ambient <br> operating <br> temperature*1 | -55 to $70^{\circ} \mathrm{C}$ | -55 to $60^{\circ} \mathrm{C}$ |
| Ambient <br> operating <br> humidity | $5 \%$ to $85 \%$ |  |

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

Characteristics

| Item Type |  | Standard models | Models with builtin operation indicators | Models with built-in CR circuits | Models with built-in diodes | Model with built-in operation indicator and diode | Model with built-in operation indicator and CR circuit |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Contact resistance*1 |  | $50 \mathrm{~m} \Omega$ max. |  |  |  |  |  |
| Operation time*2 |  | 20 ms max. |  |  |  |  |  |
| Release time*2 |  | 20 ms max . |  |  |  |  |  |
| Maximum operating 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 | 2,000 VAC at $50 / 60 \mathrm{~Hz}$ for 1 min . |  |  |  |  |  |
|  | Between contacts of different polarity |  |  |  |  |  |  |
|  | Between contacts of the same polarity | 1,000 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 | 20,000,000 operations min. (switching frequency: 18,000 operations/h) |  |  |  |  |  |
|  | Electrical*4 | 100,000 operations min. (rated load, switching frequency: 1,800 operations/h) |  |  |  |  |  |


| Item $\quad$ Number of poles | 4 poles |
| :--- | :---: |
| Failure rate P value <br> (reference value) $)^{* 5}$ | $100 \mu \mathrm{~A}$ at 1 VDC |
| Weight | Approx. 35 g |

Note: These are initial values.
*1. Measurement conditions: 1 A at 5 VDC using the voltage drop method
*2. Measurement conditions: With rated operating power applied.
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.
Dimensions
MY4Z, MY4ZN, MY4Z-D, MY4ZN-D2, MY4Z-CR, and MY4ZN-CR



Note: 1. An AC model has coil disconnection selfdiagnosis.
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.

MY4Z-CR

(The coil has no polarity.)

MY4ZN-CR

(The coil has no polarity.)

Miniature Power Relays with Latching Levers: MY(S)
Refer to the standards certifications and compliance section of your OMRON website for the latest information on certified models.

Ordering Information
Be sure to clearly indicate the rated voltage and add "(S)" when you place your order. Example: MY2IN 110/110 VAC (S)

| Classification | Contact configuration | Model | Rated voltage (V) |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | Standard products | Made-to-order items |
| Models with built-in operation indicators | 2 | MY2IN (S) | - | 100/110 or 200/220 VAC |
|  |  |  | 12, 24, or 48 VDC | --- |
|  | 4 | MY4IN (S) | - | 100/110 or 200/220 VAC |
|  |  |  | 12, 24, or 48 VDC | --- |
|  | 4 bifurcated | MY4ZIN (S) | - | 100/110 or 200/220 VAC |
|  |  |  | - | 12, 24, or 48 VDC |
| Models with built-in diode for coil surge absorption | 2 | MY2IN-D2 (S) | 12 or 24 VDC | 48 VDC |
|  | 4 | MY4IN-D2 (S) | 24 VDC | 12 or 48 VDC |
|  | 4 bifurcated | MY4ZIN-D2 (S) | 24 VDC | 12 or 48 VDC |
| Models with built-in CR circuit for coil surge absorption | 4 | MY4IN-CR (S) | - | 100/110 or 200/220 VAC |
|  | 4 bifurcated | MY4ZIN-CR (S) | - | 100/110 or 200/220 VAC |

Note: 1. Ask your OMRON representative for details on the time required to deliver made-to-order products.
2. Ask your OMRON representative for details on product specifications and the ability to manufacture products with voltages other than the above coil specifications.

## Ratings and Specifications

## Ratings

## Operating Coil

| Item <br> Rated voltage (V) |  | Rated current (mA) |  | Coil resistance <br> ( $\Omega$ ) | Coil inductance ( H ) |  | Must-operate voltage (V) | Must-release voltage (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.* ${ }^{\text {1 }}$ | 30\% min.*2 | $110 \%$ of rated voltage | Approx. 0.9 to <br> 1.1 (at 60 Hz ) |
|  | 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 |  | Approx. 0.9 |
|  | 24 | 37.7 |  | 636 | 3.2 | 5.72 |  |  |  |  |
|  | 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 the AC rated current and $\pm 15 \%$ 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 $23^{\circ} \mathrm{C}$.
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 $80 \%$ max.
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

| Number of poles  <br> Item Load | 2 poles |  | 4 poles |  | 4 poles (bifurcated) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Resistive load $(\cos \varphi=1)$ | Inductive load (cos $\varphi=0.4, \mathrm{~L} / \mathrm{R}=7 \mathrm{~ms}$ ) | Resistive load $(\cos \varphi=1)$ | Inductive load (cos $\varphi=0.4, \mathrm{~L} / \mathrm{R}=7 \mathrm{~ms}$ ) | Resistive load $(\cos \varphi=1)$ | Inductive load (cos $\varphi=0.4, \mathrm{~L} / \mathrm{R}=7 \mathrm{~ms}$ ) |
| Rated load | 5 A at 250 VAC 5 A at 30 VDC | $\begin{aligned} & 2 \mathrm{~A} \text { at } 250 \mathrm{VAC} \\ & 2 \mathrm{~A} \text { at } 30 \mathrm{VDC} \end{aligned}$ | 3 A at 250 VAC <br> $3 A$ at 30 VDC | 0.8 A at 250 VAC 1.5 A at 30 VDC | 3 A at 250 VAC <br> 3 A at 30 VDC | 0.8 A at 250 VAC 1.5 A at 30 VDC |
| Rated carry current | $10 \mathrm{~A}^{*}$ |  | 5 A* $^{*}$ |  |  |  |
| Maximum contact voltage | 250 VAC, 125 VDC |  |  |  |  |  |
| Maximum contact current | 10 A |  | 5 A |  |  |  |
| Contact configuration | Single |  | Single |  | Bifurcated |  |
| Contact materials | Ag |  | Au cladding + Ag alloy |  | Au cladding + Ag alloy |  |

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

| Item | Type |
| :--- | :--- |
| Model with built-in operation indicator, diode, or CR circuit |  |
| Ambient operating temperature*1 | -55 to $60^{\circ} \mathrm{C}^{* 2}$ |
| Ambient operating humidity | $5 \%$ to $85 \%$ |

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

Characteristics

|  | Type | 2 poles | 4 poles | 4 poles (bifurcated) |
| :---: | :---: | :---: | :---: | :---: |
| Contact resistance*1 |  | $100 \mathrm{~m} \Omega$ max. |  |  |
| Operation time*2 |  | 20 ms max . |  |  |
| Release time*2 |  | 20 ms max. |  |  |
| Maximum operating frequency | Mechanical | 18,000 operations/h |  |  |
|  | Rated load | 1,800 operations/h |  |  |
| Insulation resistance*3 |  | 1,000 M 2 min . |  |  |
| Dielectric strength | Between coil and contacts | 2,000 VAC at $50 / 60 \mathrm{~Hz}$ for 1 min . |  |  |
|  | Between contacts of different polarity |  |  |  |
|  | Between contacts of the same polarity | $1,000 \mathrm{VAC}$ 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 | AC: 50,000,000 operations min., DC: 100,000,000 operations min. (switching frequency: 18,000 operations/h) |  | 20,000,000 operations min. (switching frequency: 18,000 operations/h) |
|  | Electrical*4 | 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) |
| Failure rate $P$ value (reference value)*5 |  | 1 mA at 5 VDC | 1 mA at 1 VDC | $100 \mu \mathrm{~A}$ at 1 VDC |
| Weight |  | Approx. 35 g |  |  |

Note: These are initial values.
*1. Measurement conditions: 1 A at 5 VDC using the voltage drop method
*2. Measurement conditions: When rated operating power is applied and ambient temperature is $23^{\circ} \mathrm{C}$
*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.

## List of Models

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.

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


Terminal Arrangement/Internal Connections (Bottom View)

MY4(Z)IN(S)
(DC Models)



MY4(Z)IN-D2(S) (DC Models Only)


MY4(Z)IN-CR(S) (AC Models Only)


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

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

Ordering Information
When your order, specify the rated voltage.

| Number of poles | Classification | Model | Rated voltage (V) |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | Standard products | Made-to-order items |
| 2 poles | Models with single contacts | MY2-02 | 100/110, 200/220, or 200/240 VAC | 12, 24,100 , or 110/120 VAC |
|  |  |  | 12, 24 or 48 VDC | 100/110 VDC |
| 3 poles | Models with single contacts | MY3-02 | 100/110 or 200/220 VAC | 12, 24, 110/120, or 220/240 VAC |
|  |  |  | 24 VDC | 12, 48, or 100/110 VDC |
| 4 poles | Models with single contacts | MY4-02 | 100/110 or 200/220 VAC | 12, $24,110 / 120$, or 220/240 VAC |
|  |  |  | 12, 24 or 100/110 VDC | 48 VDC |
|  | Bifurcated contacts | MY4Z-02 |  | 100/110, 110/120, or 200/220 VAC |
|  |  |  | 100/110 VDC | 12, 24, or 48 VDC |

Note: 1. Ask your OMRON representative for details on the time required to deliver made-to-order products,
2. Ask your OMRON representative for details on product specifications and the ability to manufacture products with voltages other than the above coil specifications.

## Ratings and Specifications

## Ratings

## Operating Coil (Standard Models)

| ItemRated voltage (V) |  | Rated current (mA) |  | Coil resistance ( $\Omega$ ) | Coil inductance ( H ) |  | Must-operate voltage (V) | Must-release voltage (V) | Maximum voltage (V) | Power consumption(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 | Approx. 1.0 to 1.2 (at 60 Hz ) |
|  | 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 |  |  |  | Approx. 0.9 to 1.1 |
|  | 200/220 | 6.2/6.8 | 5.3/5.8 | 12,950 | 54.75 | 94.07 |  |  |  | (at 60 Hz ) |
|  | 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 the AC rated current and $\pm 15 \%$ 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 $23^{\circ} \mathrm{C}$.
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 $80 \%$ max.
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 $D C$. To ensure release, use a value that is lower than the specified value.
Contact Ratings

| Number of poles Load Item | 2 or 3 poles |  | 4 poles |  | 4 poles, bifurcated contacts |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Resistive load | Inductive load $(\cos \varphi=0.4, \mathrm{~L} / \mathrm{R}=7 \mathrm{~ms})$ | Resistive load | Inductive load $(\cos \varphi=0.4, \mathrm{~L} / \mathrm{R}=7 \mathrm{~ms})$ | Resistive load | Inductive load $(\cos \varphi=0.4, \mathrm{~L} / \mathrm{R}=7 \mathrm{~ms})$ |
| Rated load | 5 A at 220 VAC 5 A at 24 VDC | $\begin{aligned} & \hline 2 \mathrm{~A} \text { at } 220 \mathrm{VAC} \\ & 2 \mathrm{~A} \text { at } 24 \mathrm{VDC} \end{aligned}$ | $\begin{aligned} & 3 \mathrm{~A} \text { at } 220 \mathrm{VAC} \\ & 3 \mathrm{~A} \text { at } 24 \mathrm{VDC} \end{aligned}$ | 0.8 A at 220 VAC <br> 1.5 A at 24 VDC | $\begin{array}{\|l\|} \hline 3 \mathrm{~A} \text { at } 220 \mathrm{VAC} \\ 3 \mathrm{~A} \text { at } 24 \mathrm{VDC} \end{array}$ | 0.8 A at 220 VAC <br> 1.5 A at 24 VDC |
| Rated carry current | 5 A |  | 3 A |  | 3 A |  |
| Maximum contact voltage | 250 VAC, 125 VDC |  | 250 VAC, 125 VDC |  | 250 VAC, 125 VDC |  |
| Maximum contact current | 5 A |  | 3 A |  | 3 A |  |
| Contact configuration | DPDT, 3PDT |  | 4PDT |  | 4PDT |  |
| Contact structure | Single |  | Single |  | Bifurcated |  |
| Contact materials | Ag |  | Au plating + Ag |  | Au plating + Ag |  |


| Item | Type |
| :--- | :--- |

with no IcIng or condensation.

Characteristics

| Item | Number of poles | 2 or 3 poles | 4 poles | 4 poles, bifurcated contacts |
| :---: | :---: | :---: | :---: | :---: |
| Contact resistance*1 |  | $50 \mathrm{~m} \Omega$ max. |  |  |
| Operation time*2 |  | 20 ms max. |  |  |
| Release time*2 |  | 20 ms max. |  |  |
| Maximum operating frequency | Mechanical | 18,000 operations/h |  |  |
|  | Rated load | 1,800 operations/h |  |  |
| Insulation resistance*3 |  | $100 \mathrm{M} \Omega$ min. |  |  |
| Dielectric strength | Between coil and contacts | 2,000 VAC at $50 / 60 \mathrm{~Hz}$ for 1 min . |  |  |
|  | Between contacts of different polarity |  |  |  |
|  | Between contacts of the same polarity | 1,000 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 | AC: 50,000,000 operations min. DC: 100,000,000 operations min. (switching frequency: 18,000 operations/h) |  | AC: 20,000,000 operations min. (switching frequency: 18,000 operations/h) |
|  | Electrical*4 | 500,000 operations min. (rated load, switching frequency: <br> 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) |


| Item $\quad$ Number of poles | 2 or 3 poles | 4 poles | 4 poles, bifurcated contacts |
| :--- | :--- | :--- | :--- |
| Failure rate P value (reference value)*5 | 1 mA at 5 VDC | 1 mA at 1 VDC | $100 \mu \mathrm{~A}$ at 1 VDC |
| Weight | Approx. 35 g |  |  |

Note: These are initial values.
*1. Measurement conditions: 1 A at 5 VDC using the voltage drop method
*2. Measurement conditions: With rated operating power applied.
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.

## Dimensions

(Unit: mm)
Relays with PCB Terminals

MY $\square-02$


The figures and dimensions given here are for the 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.

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

## Ordering Information

When your order, specify the rated voltage.

| Number of poles | Classification | Model | Rated voltage (V) |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | Standard products | Made-to-order items |
| 2 poles | Models with single contacts | MY2F | 24, 110/110, 100/120 or 200/220 VAC | 220/240 VAC |
|  |  |  | 12 or 24 VDC | 48 or 100/110 VDC |
| 3 poles | Models with single contacts | MY3F | 100/110 VAC | 24 or 200/220 VAC |
|  |  |  | - | 24 or 100/110 VDC |
| 4 poles | Models with single contacts | MY4F | 100/110 or 200/220 VAC | 24 or 110/120 VAC |
|  |  |  | 12 or 24 VDC | 48 or 100/110 VDC |
|  | Bifurcated contacts | MY4ZF | 200/220 VAC | --- |
|  |  |  | - | 12 or 24 VDC |

Note: 1. Ask your OMRON representative for details on the time required to deliver made-to-order products.
2. Ask your OMRON representative for details on product specifications and the ability to manufacture products with voltages other than the above coil specifications.

## Ratings and Specifications

## Ratings

Operating Coil (Standard Models)

|  |  | Rated cur | nt (mA) |  | Coil induc | tance (H) | Must-operate | Release | Maximum | Power consumption |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Rate | Oltage (V) | 50 Hz | 60 Hz | resistance ( $\Omega$ ) | Armature OFF | Armature ON | voltage (V) | voltage (V) | voltage (V) | (VA, W) |
| AC | 24 | 53.8 | 46 | 180 | 0.69 | 1.3 | 80\% max.*1 | 30\% min.*2 | $110 \%$ of rated voltage | Approx. 1.0 to 1.2 (at 60 Hz ) |
|  | 100/110 | 11.7/12.9 | 10/11 | 3,750 | 14.54 | 24.6 |  |  |  | Approx. 0.9 to 1.1 <br> (at 60 Hz ) |
|  | 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 the AC rated current and $\pm 15 \%$ 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 $23^{\circ} \mathrm{C}$.
3. 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 $80 \%$ max.
There is variation between products, but actual values are
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

|  Number of poles <br> Load  <br> Item  | 2 or 3 poles |  | 4 poles |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Resistive load | $\begin{gathered} \text { Inductive load } \\ (\cos \varphi=0.4, \mathrm{~L} / \mathrm{R}=7 \mathrm{~ms}) \end{gathered}$ | Resistive load | $\begin{gathered} \text { Inductive load } \\ (\cos \varphi=0.4, \mathrm{~L} / \mathrm{R}=7 \mathrm{~ms}) \end{gathered}$ |
| Rated load | 5 A at 220 VAC 5 A at 24 VDC | 2 A at 220 VAC 2 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 |
| Rated carry current | 5 A |  | 3 A |  |
| Maximum contact voltage | 250 VAC, 125 VDC |  | 250 VAC, 125 VDC |  |
| Maximum contact current | 5 A |  | 3 A |  |
| Contact configuration | DPDT, 3PDT |  | 4PDT |  |
| Contact structure | Single |  | Single |  |
| Contact materials | Ag |  | Au plating + Ag |  |


| Item | Type |
| :--- | :--- |
| Standard models |  |
| Ambient operating temperature* | -55 to $70^{\circ} \mathrm{C}$ |
| Ambient operating humidity | $5 \%$ to $85 \%$ |

* With no icing or condensation.

Characteristics

| Item | Number of poles | 2 or 3 poles | 4 poles |
| :---: | :---: | :---: | :---: |
| Contact resistance*1 |  | $50 \mathrm{~m} \Omega$ max. |  |
| Operation time*2 |  | 20 ms max. |  |
| Release time*2 |  | 20 ms max. |  |
| Maximum operating 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 | 2,000 VAC at $50 / 60 \mathrm{~Hz}$ for 1 min . |  |
|  | Between contacts of different polarity |  |  |
|  | Between contacts of the same polarity | 1,000 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 | AC: 50,000,000 operations min. DC: 100,000,000 operations min. (switching frequency: 18,000 operations/h) |  |
|  | Electrical*4 | 500,000 operations min. (rated load, switching frequency: 1,800 operations/h) | 200,000 operations min. (rated load, switching frequency: 1,800 operations/h) |


| Item Number of poles | 2 or 3 poles | 4 poles |
| :--- | :--- | :--- |
| Failure rate P value <br> (reference value) | 1 mA at 5 VDC | 1 mA at 1 VDC |
| Weight | Approx. 35 g |  |

Note: These are initial values
*1. Measurement conditions: 1 A at 5 VDC using the voltage drop method
*2. Measurement conditions: With rated operating power applied.
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.

## Dimensions

## Case-surface mounting

 MY $\square \mathbf{F}$

The above figure is for the MY4F.


## Mounting Hole Dimensions



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

## Engineering Data MY2, MY3, MY4, MY4Z, MY $\square$-02, and MY $\square F$

## Engineering Data

## Maximum Switching Capacity MY2 and MY3



MY4 and MY4Z


Endurance Curve

MY2 and MY3


MY4


MY4Z


MY2 and MY3


MY4


MY4Z


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


MY4 AC Models, 50 Hz


MY2 DC Models


MY4 DC Models


Ambient temperature $\left({ }^{\circ} \mathrm{C}\right)$
Models with built-in diodes
The diode absorbs surge from the coil. This type is best suited for applications with semiconductor circuits. With Diode


Without Diode


Note: 1. Mak
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 Circuits

With CR


Without CR


## Engineering Data MY(S)

## Engineering Data

## Maximum Switching Capacity MY2(S)



MY4(S) and MY4Z(S)


Endurance Curve


MY2(S)



Y4(S)


MY4Z(S)



Common Specifications for MY2, MY3, MY4, MY4Z, MY $\square$-02, MY $\square F$, and MY(S) Malfunctioning Shock


## Detailed Information on Models Certified for Safety Standards, MY2Z, MY3, MY $\square-02$, and MY $\square F$

- Refer to Model Number Structure on page 1 for a list of applicable models.
- The standard models are certified for UL and CSA standards.
- The rated values for safety standard certification are not the same as individually defined performance values. Always check the specifications before use.

TUV-certified Models (File No. R50030059)


| Model | Coil ratings | Number of poles | Contact ratings | Certified number of operations |
| :---: | :---: | :---: | :---: | :---: |
| MY $\square$ | $\begin{gathered} 6 \text { to } 125 \\ \text { VDC } \\ 6 \text { to } 240 \\ \text { VDC } \end{gathered}$ | 2 | $5 \mathrm{~A}, 250 \mathrm{VAC}(\cos \varphi=1.0)$ | 10,000 operations |
|  |  | 3 | $5 \mathrm{~A}, 250$ VAC $(\cos \varphi=1.0)$ $0.8 \mathrm{~A}, 250 \mathrm{VAC}(\cos \varphi=$ 0.4) |  |
|  |  | 4 | $3 \mathrm{~A}, 120 \mathrm{VAC}(\cos \varphi=1.0)$ $0.8 \mathrm{~A}, 120$ VAC $(\cos \varphi=$ 0.4) |  |

UL-certified Models (File No. E41515) Fis

| Model | Coil ratings | Number of poles | Contact ratings | Certified number of operations |
| :---: | :---: | :---: | :---: | :---: |
| MY | $\begin{gathered} 6 \text { to } 240 \\ \text { VAC } \\ 6 \text { to } 125 \\ \text { VDC } \end{gathered}$ | 2 | 7A, 240 VAC (General Use) | 6,000 |
|  |  |  | 7A, 24 VDC (Resistive) |  |
|  |  |  | 5A, 240 VAC (General Use) |  |
|  |  |  | 5A, 250 VAC (Resistive) |  |
|  |  |  | 5A, 30 VDC (Resistive) |  |
|  |  |  | 3A, 265 VAC (Resistive) |  |
|  |  |  | 1/6HP, 250 VAC | 1,000 |
|  |  |  | 1/8HP, 265 VAC |  |
|  |  |  | 1/10HP, 120 VAC |  |
|  |  |  | B300 Pilot Duty | 6,000 |
|  |  | 3 | 5A, 28 VDC (Resistive) | 6,000 |
|  |  |  | 5A, 240 VAC (General Use) |  |
|  |  |  | 1/6 HP, 250 VAC | 1,000 |
|  |  | 4 | 5A, 28 VDC (General Use) (Same polarity) | 6,000 |
|  |  |  | 5A, 240 VAC (General Use) (Same polarity) |  |
|  |  |  | 5A, 30 VDC (Resistive) (Same polarity) |  |
|  |  |  | 5A, 250 VAC (Resistive) (Same polarity) |  |
|  |  |  | 0.2A, 120 VDC (Resistive) (Same polarity) |  |
|  |  |  | 1/6HP, 250 VAC (Same polarity) | 1,000 |
|  |  |  | 1/10HP, 120 VAC (Same polarity) |  |
|  |  |  | B300 Pilot Duty (Same polarity) | 6,000 |

CSA-certified Models (File No. LR31928) (1)

| Model | Coil ratings | Number of poles | Contact ratings | Certified number of operations |
| :---: | :---: | :---: | :---: | :---: |
| MY | 6 to 240 <br> VAC <br> 6 to 125 <br> VDC | 2 | 7A, 240 VAC (Resistive) | 6,000 |
|  |  |  | 7A, 24 VDC (Resistive) |  |
|  |  |  | 5A, 240 VAC (General Use) |  |
|  |  |  | 5A, 250 VAC (Resistive) |  |
|  |  |  | 5A, 30 VDC (Resistive) |  |
|  |  |  | 1/6HP, 250 VAC | 1,000 |
|  |  |  | 1/10HP, 120 VAC |  |
|  |  | 3 | 5A, 28 VDC (Resistive) | 6,000 |
|  |  |  | 7A, 240 VAC (General Use) |  |
|  |  |  | 7A, 24 VDC (Resistive) |  |
|  |  |  | 5A, 240 VAC (General Use) |  |
|  |  |  | 1/6HP, 250 VAC | 1,000 |
|  |  | 4 | 7A, 240 VAC (General Use) (Same polarity) | 6,000 |
|  |  |  | 7A, 24 VDC (Resistive) (Same polarity) |  |
|  |  |  | 5A, 240 VAC (General Use) (Same polarity) |  |
|  |  |  | 5A, 30 VDC (Resistive) |  |
|  |  |  | 5A, 250 VAC (Resistive) (Same polarity) |  |
|  |  |  | 0.2A, 120 VDC (Resistive) |  |
|  |  |  | 1/6HP, 250 VAC | 1,000 |
|  |  |  | 1/10HP, 120 VAC |  |

- When ordering models that are certified for Lloyd's Register (LR) Standards, be sure to specify "LR-certified Model" with your order.

LR-certified Models (File No. 90/10270)

| Model | Coil ratings | Number <br> of poles | Contact ratings |
| :---: | :---: | :---: | :---: |
| MY $\square$ | 6 to 240 <br> VAC <br> 6 to 125 <br> VDC | 2 | 2 A, 30 VDC inductive load <br> 2 A, 200 VAC inductive load |
|  | 4 | 1.5 A, 30 VDC inductive load <br> 0.8 A, 200 VAC inductive load <br> $1.5 \mathrm{~A}, 115$ VAC inductive load |  |

Detailed Information on Models Certified for Safety Standards, MY2, MY4, MY4Z, and MY(S) Newly Released Models

- Refer to Model Number Structure on page 1 for a list of applicable models.

VDE-certified Models (Certificate No. 112467UG, EN 61810-1)

| Model | Coil ratings | Number of poles | Contact ratings | Certified number of operations |
| :---: | :---: | :---: | :---: | :---: |
| MY $\square$ <br> (New model) | $\begin{aligned} & \hline 6,12,24,48 / 50,100 / \\ & 110,110 / 120,200 / \end{aligned}$ | 2 | $10 \mathrm{~A}, 250 \operatorname{VAC}(\cos \varphi=1)$ <br> $10 \mathrm{~A}, 30 \mathrm{VDC}(\mathrm{L} / \mathrm{R}=0 \mathrm{~ms})$ | MY2: 10,000 operations MY4: 100,000 operations MY4Z: 50,000 operations (AC) |
|  | 6, 12, 24, 48, 100/ <br> 110, and 125 VDC | 4 | $5 \mathrm{~A}, 250 \mathrm{VAC}(\cos \varphi=1)$ <br> $5 \mathrm{~A}, 30 \mathrm{VDC}$ (L/R = 0 ms ) |  |

UL508-certified Models (File E41515)

| Model | Coil ratings | Number of poles | Contact ratings | Certified number of operations |
| :---: | :---: | :---: | :---: | :---: |
| MY $\square$ <br> (New model) | 6 to 240 VAC <br> 6 to 125 VDC | 2 | 10A, 250 VAC (General Use) | 6,000 |
|  |  |  | 10A, 30 VDC (General Use) |  |
|  |  |  | 7A, 240 VAC (General Use) |  |
|  |  |  | 7A, 24 VDC (Resistive) |  |
|  |  |  | 5A, 240 VAC (General Use) |  |
|  |  |  | 5A, 250 VAC (Resistive) |  |
|  |  |  | 5A, 30 VDC (Resistive) |  |
|  |  |  | 3A, 265 VAC (Resistive) |  |
|  |  |  | 1/6HP, 250 VAC | 1,000 |
|  |  |  | 1/8HP, 265 VAC |  |
|  |  |  | 1/10HP, 120 VAC |  |
|  |  |  | B300 Pilot Duty (Same polarity) | 6,000 |
|  |  | 4 | 5A, 28 VDC (General Use) (Same polarity) | 6,000 |
|  |  |  | 5A, 240 VAC (General Use) (Same polarity) |  |
|  |  |  | 5A, 30 VDC (Resistive) (Same polarity) |  |
|  |  |  | 5A, 250 VAC (Resistive) (Same polarity) |  |
|  |  |  | 0.2A, 120 VDC (Resistive) (Same polarity) |  |
|  |  |  | 1/6HP, 250 VAC (Same polarity) | 1,000 |
|  |  |  | 1/10HP, 120 VAC (Same polarity) |  |
|  |  |  | B300 Pilot Duty (Same polarity) | 6,000 |

CSA 22.2 No. 14-certified Models (File No. LR31928)

| Model | Coil ratings | Number of poles | Contact ratings | Certified number of operations |
| :---: | :---: | :---: | :---: | :---: |
| MY $\square$ <br> (New model) | 6 to 240 VAC <br> 6 to 125 VDC | 2 | 7A, 240 VAC (General Use) | 6,000 |
|  |  |  | 7A, 24 VDC (Resistive) |  |
|  |  |  | 5A, 240 VAC (General Use) |  |
|  |  |  | 5A, 250 VAC (Resistive) |  |
|  |  |  | 5A, 30 VDC (Resistive) |  |
|  |  |  | 3A, 265 VAC (Resistive) |  |
|  |  |  | 1/6HP, 250 VAC | 1,000 |
|  |  |  | 1/8HP, 265 VAC |  |
|  |  |  | 1/10HP, 120 VAC |  |
|  |  |  | B300 Pilot Duty (Same polarity) | 6,000 |
|  |  | 4 | 5A, 240 VAC (General Use) (Same polarity) | 6,000 |
|  |  |  | 5A, 28 VDC (General Use) (Same polarity) |  |
|  |  |  | 5A, 250 VAC (Resistive) (Same polarity) |  |
|  |  |  | 5A, 30 VDC (Resistive) (Same polarity) |  |
|  |  |  | 0.2A, 120 VDC (Resistive) (Same polarity) |  |
|  |  |  | 1/6HP, 250 VAC (Same polarity) | 1,000 |
|  |  |  | 1/10HP, 120 VAC (Same polarity) |  |
|  |  |  | B300 Pilot Duty (Same polarity) | 6,000 |

LR-certified Models (File No. 98/10014)

| Model | Coil ratings | Number of poles | Contact ratings | Certified number of operations |
| :---: | :---: | :---: | :---: | :---: |
| MY $\square$ <br> (New model) | 6 to 240 VAC <br> 6 to 125 VDC | 2 | $10 \mathrm{~A}, 250$ VAC (resistive) 2 A, 250 VAC (PF0.4) $10 \mathrm{~A}, 30$ VDC (resistive) $2 \mathrm{~A}, 30 \mathrm{VDC}$ ( $\mathrm{L} / \mathrm{R}=7 \mathrm{~ms}$ ) | MY2: 50,000 operations MY4: 50,000 operations |
|  |  | 4 | 5 A, 250 VAC (resistive) $0.8 \mathrm{~A}, 250$ VAC (PF0.4) $5 \mathrm{~A}, 30 \mathrm{VDC}$ (resistive) $1.5 \mathrm{~A}, 30 \mathrm{VDC}(\mathrm{L} / \mathrm{R}=7 \mathrm{~ms})$ |  |

## Miniature Power Relays: MY4Z-CBG

## Ordering Information

| Classification | Model | Rated voltage (V) |  |
| :--- | :--- | :--- | :--- |
|  |  | Standard products | Made-to-order items |
| Standard models | MY4Z-CBG | $\mathbf{1 0 0 / 1 1 0}$ or 200/220 VAC | $110 / 120$ VAC |
|  |  | $\mathbf{2 4}$ or 100/110 VDC | 12 or 48 VDC |
| Models with built-in <br> operation indicators | MY4ZN-CBG | - | $100 / 110$ or 200/220 VAC |
|  |  | - | 24 VDC |

Note: Ask your OMRON representative for details on the time required to deliver made-to-order products.

## Ratings and Specifications

## Ratings

Operating Coil

| ItemRated voltage (V) |  | Rated current (mA) |  | Coil resistance ( $\Omega$ ) | Coil inductance (H) |  | Must-operate voltage (V) | Must-release voltage (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 | $\begin{aligned} & \text { 110\% of } \\ & \text { rated } \\ & \text { voltage } \end{aligned}$ | $\begin{aligned} & \text { Approx. } 0.9 \text { to } 1.1 \\ & (\text { at } 60 \mathrm{~Hz}) \end{aligned}$ |
|  | 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 |  |  |  |  |
| DC | 12 | 75 |  | 160 | 0.73 | 1.37 |  | 10\% min.*2 |  | Approx. 0.9 |
|  | 24 | 36.9 |  | 650 | 3.2 | 5.72 |  |  |  |  |
|  | 100/110 | 9.1/10 |  | 11,000 | 45.60 | 86.20 |  |  |  |  |

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 the AC rated current and $\pm 15 \%$ for the DC coil resistance.
2. The AC coil resistance and inductance values are reference values 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 $80 \%$ max.
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

| Item | Road | $\begin{array}{l}\text { Inductive load } \\ \text { (cos } \varphi=0.4, ~ L / R ~\end{array}=7 \mathrm{~ms}$ ) |
| :--- | :--- | :--- |$\}$

## Characteristics

| Contact resistance*1 |  | $100 \mathrm{~m} \Omega$ max. |
| :---: | :---: | :---: |
| Operation time*2 |  | 20 ms max. |
| Release time*2 |  | 20 ms max. |
| Maximum operating frequency | Mechanical | 18,000 operations/h |
|  | Electrical | 1,800 operations/h |
| Insulation resistance*3 |  | $100 \mathrm{M} \Omega$ |
| Dielectric strength | Between coil and contacts | 2,000 VAC at $50 / 60 \mathrm{~Hz}$ for 1 min . |
|  | Between contacts of different polarity |  |
|  | Between contacts of the same polarity | 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 ( $1.0-\mathrm{mm}$ double amplitude) |
|  | Malfunction | 10 to 55 to $10 \mathrm{~Hz}, 0.5-\mathrm{mm}$ single amplitude ( $1.0-\mathrm{mm}$ double amplitude) |
| Shock resistance | Destruction | $1,000 \mathrm{~m} / \mathrm{s}^{2}$ |
|  | Malfunction | $200 \mathrm{~m} / \mathrm{s}^{2}$ |
| Endurance | Mechanical | 5,000,000 operations min. (operating frequency: 18,000 operations/hr) |
|  | Electrical*4 | 50,000 operations min. (switching frequency: 1,800 operations $/ \mathrm{h}$ ) at rated load |
| Failure rate P value (reference value)*5 |  | $100 \mu \mathrm{~A}$ at 1 VDC |
| Ambient operating temperature |  | -25 to $70^{\circ} \mathrm{C}$ (with no icing or condensation) |
| Ambient operating 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. 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.

## Engineering Data

## Engineering Data

## Maximum Switching Capacity

MY4Z-CBG


Contact Reliability Test (Modified Allen Bradley Circuit)
Contact load: 5 VDC, 1 mA resistive load
Malfunction criteria level: Contact resistance of $100 \Omega$


## Dimensions

## MY4Z-CBG



Terminal Arrangement/Internal Connections (Bottom View) Standard Models


## Safety Precautions

Refer to the Common Relay Precautions.

## Applicable Sockets

Use only combinations of OMRON Relays and Sockets.

## Plastic Sealed Relays: MYQ

## Ordering Information

## Relays with Plug-in or Soldered

 TerminalsWhen your order, specify the rated voltage.

| Classification ${ }^{\text {Type }}$ |  | 4 poles |  |
| :---: | :---: | :---: | :---: |
|  |  | Model | Rated voltage (V) |
| Models with single contacts | Standard models | MYQ4 | 100/110, 110/ <br> 120, 200/220, or 220/240 VAC |
|  |  |  | 24 VDC |
|  | Models with builtin operation indicators | MYQ4N | $\begin{aligned} & 24,100 / 110, \\ & 110 / 120, \\ & 200 / 220, \text { or } \\ & 220 / 240 \text { VAC } \end{aligned}$ |
|  |  |  | $12,24,48$, or 100/110 VDC |
| Bifurcated contacts | Standard models | MYQ4Z | $\begin{aligned} & \text { 100/110, } \\ & \text { 110/120, or } \\ & \text { 200/220 VAC } \end{aligned}$ |
|  |  |  | 12 or 24 VDC |

Relays with PCB Terminals

| Type | 4 poles |  |
| :--- | :--- | :--- |
|  | Model | Rated voltage <br> (V) |
| Models with <br> single contacts | MYQ4-02 | $50,200 / 220$, or <br> $220 / 240$ VAC |
|  |  |  |
| Bifurcated <br> contacts | MYQ4Z-02 | $100 / 110$ VAC |
|  |  |  |

## Ratings and Specifications

## Ratings

Operating Coil

| ItemRated voltage (V) |  | Rated current (mA) |  | Coil resistance ( $\Omega$ ) | Coil inductance (H) |  | Mustoperate voltage (V) | Mustrelease voltage (V) | Maximum voltage (V) | Power consumpti on (VA, W) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 50 Hz | 60 Hz |  | Armature OFF | Armature ON |  |  |  |  |
| AC | 24 | 53.8 | 46 | 180 | 0.69 | 1.3 | $\begin{aligned} & 80 \% \\ & \text { max.*1 } \end{aligned}$ | $\begin{aligned} & 30 \% \\ & \text { min.*2 } \end{aligned}$ | $110 \%$ of rated voltage | Approx. <br> 1.0 to <br> 1.2 (at <br> $60 \mathrm{~Hz})$ |
|  | 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 |  | 160 | 0.734 | 1.37 |  | $\begin{aligned} & 10 \% \\ & \text { min.*2 } \end{aligned}$ |  | 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 AC rated current and $\pm 15 \%$ for DC coil resistance.
2. The AC coil resistance and coil inductance values are reference values 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 $80 \%$ max.
There is variation between products, but actual values are
*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

| Type <br> Item | Resistive load | $\begin{gathered} \text { Inductive load } \\ (\cos \varphi=0.4, \mathrm{~L} / \mathrm{R}=7 \mathrm{~ms}) \end{gathered}$ |
| :---: | :---: | :---: |
| 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 contact voltage | 250 VAC, 125 VDC |  |
| Maximum contact current | 1 A |  |
| Maximum switching capacity (reference value) | 220 VAC, 24 W | 110 VAC, 12 W |
| Failure rate $P$ value (reference value) | Single contacts: 1 mA at 1 VDC, Bifurcated contacts: $100 \mu \mathrm{~A}$ at 1 VDC |  |
| Contact structure | Single/bifurcated |  |
| Contact materials | Au plating + Ag |  |

* This value was measured at a switching frequency of 120 operations per minute.

| Ambient operating temperature | -55 to $60^{\circ} \mathrm{C}^{*}$ |
| :--- | :--- |
| Ambient operating humidity | $5 \%$ to $85 \%$ |

* With no icing or condensation.


## Characteristics

| Contact resistance*1 |  | $50 \mathrm{~m} \Omega$ max. |
| :---: | :---: | :---: |
| Operation time*2 |  | 20 ms max . |
| Release time*2 |  | 20 ms max . |
| Maximum operating frequency | Mechanical | 18,000 operations/h |
|  | Rated load | 1,800 operations/h |
| Dielectric strength | Between coil and contacts | 1,500 VAC at $50 / 60 \mathrm{~Hz}$ for 1 min . |
|  | Between contacts of different polarity | $1,500 \mathrm{VAC}$ 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 . |
| Insulation resistance*3 |  | $100 \mathrm{M} \Omega \mathrm{min}$. |
| 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 | AC: 50,000,000 operations ( $5,000,000^{* 4}$ ) min., DC: 100,000,000 operations $\left(5,000,000^{* 4}\right) \mathrm{min}$. (switching frequency: 18,000 operations/h) |
|  | Electrical*5 | 200,000 operations min. ( 100,000 operations ${ }^{* 4}$ ) (rated load, switching frequency: 1,800 operations/h) |
| Weight |  | Approx. 35 g |

Note: The values at the left 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 Ambient temperature condition: $23^{\circ} \mathrm{C}$
*3. Measurement conditions: For 500 VDC applied to the same location as for dielectric strength
measurement
*4. This value is for bifurcated contacts.
*5. Ambient temperature condition: $23^{\circ} \mathrm{C}$

## Engineering Data

## Engineering Data

Maximum Switching Capacity MYQ4(Z)


Endurance Curve
MYQ4


Note: The durability of bifurcated contacts is one-half that of single contacts.
$\mathrm{H}_{2} \mathrm{~S}$ Gas Data
MYQ4


Malfunctioning Shock


Dimensions

## Relays with Plug-in Terminals

 or Soldered TerminalsMYQ4(Z)(N)


Relays with PCB Terminals MYQ4(Z)-02


PCB Processing Dimensions


Terminal Arrangement/Internal Connections (Bottom View) Standard Models


## Safety Precautions

- For models with built-in operation indicators, check the coil polarity when wiring and wire all connections correctly (DC operation).
- Use only combinations of OMRON Relays and Sockets
- The UL and CSA certifications for this model are the same as for the MY402.


## 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.

## Latching Relays MYK <br> Ordering information

## Relays with Plug-in or Soldered Terminals

| Number of poles <br> Classification | 2 poles |  |
| :---: | :---: | :---: |
|  | Model | Rated voltage (V) |
|  |  | 12 VAC |
|  |  | 24 VAC |
|  |  | 100 VAC |
|  |  | $100 / 110 \mathrm{VAC}$ |
|  |  | 12 VDC |
|  |  | 24 VDC |

Relays with PCB Terminals

| Number of poles | 2 poles |  |
| :---: | :---: | :---: |
| Classification | Model | Rated voltage (V) |
| Standard models |  | 24 VAC |
|  |  | 100 VAC |
|  |  | 12 VDC |
|  |  | 24 VDC |

## Ratings and Specifications

## Ratings

Operating Coil

|  |  |  | Set co |  |  | Reset |  |  |  |  | Power cons | ption (VA, W) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Rated cu | ent (mA) | Coil | Rated cu | ent (mA) | Co | Set voltage | Reset | Maximum |  |  |
| Rated | tage (V) | 50 Hz | 60 Hz | resistance ( $\Omega$ ) | 50 Hz | 60 Hz | resistance ( $\Omega$ ) |  |  |  | Set coil | Reset coil |
| AC | 12 | 57 | 56 | 72 | 39 | 38.2 | 130 | 80\% max. | 80\% max. | $110 \%$ max. of rated voltage | $\begin{aligned} & \text { Approx. } 0.6 \\ & \text { to } 0.9 \\ & \text { (at } 60 \mathrm{~Hz} \text { ) } \end{aligned}$ | $\begin{aligned} & \text { Approx. } 0.2 \\ & \text { to } 0.5 \\ & \text { (at } 60 \mathrm{~Hz} \text { ) } \end{aligned}$ |
|  | 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 |  |
|  | 24 | 52 |  | 470 | 25 |  | 940 |  |  |  |  | Approx. 0.6 |
|  | 48 | 27 |  | 1,800 | 16 |  | 3,000 |  |  |  |  |  |

Note: 1. The rated current for AC 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 the AC rated current and $\pm 15 \%$ for the DC 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 $23^{\circ} \mathrm{C}$.

## Contact Ratings

| Item | Resistive load | Inductive load <br> (cos $\varphi=0.4$, L/R $=7 \mathrm{~ms})$ |
| :--- | :--- | :--- |
| Rated load | 3 A at 220 VAC <br> 3 A at 24 VDC | 0.8 A at 220 VAC <br> 1.5 A at 24 VDC |
| Rated carry <br> current | 3 A |  |
| Maximum contact <br> voltage | 250 VAC, 125 VDC |  |
| Maximum contact <br> current | 3 A | 3 A |
| Contact structure | Single |  |
| Contact materials | Au plating + Ag |  |


| Ambient operating <br> temperature | -55 to $60^{\circ} \mathrm{C}^{*}$ |
| :--- | :--- |
| Ambient operating <br> humidity | $5 \%$ to $85 \%$ |

* With no icing or condensation.


## Characteristics

| Contact resistance*1 |  | $50 \mathrm{~m} \Omega$ max. |
| :---: | :---: | :---: |
| Set | Time*2 | AC: 30 ms max., DC: 15 ms max. |
|  | Minimum pulse width | AC: 60 ms , DC: 30 ms |
| Reset | Time*2 | AC: 30 ms max., DC: 15 ms max. |
|  | Minimum pulse width | AC: 60 ms , DC: 30 ms |
| Maximum operating frequency | Mechanical | 18,000 operations/h |
|  | Rated load | 1,800 operations/h |
| Insulation resistance*3 |  | $100 \mathrm{M} \Omega$ |
| Dielectric strength | Between coil and contacts | 1,500 VAC at $50 / 60 \mathrm{~Hz}$ for 1 min . |
|  | Between contacts of different polarity |  |
|  | Between contacts of the same polarity | $1,000 \mathrm{VAC}$ at $50 / 60 \mathrm{~Hz}$ for 1 min . |
|  | Between set/ reset coils |  |
| Vibration resistance | Destruction | 10 to 55 to $10 \mathrm{~Hz}, 0.5-\mathrm{mm}$ single amplitude ( $1.0-\mathrm{mm}$ double amplitude) |
|  | Malfunction | 10 to 55 to $10 \mathrm{~Hz}, 0.5-\mathrm{mm}$ single amplitude ( $1.0-\mathrm{mm}$ double amplitude) |
| Shock resistance | Destruction | 1,000 m/s ${ }^{2}$ |
|  | Malfunction | $200 \mathrm{~m} / \mathrm{s}^{2}$ |
| Endurance | Mechanical | 100,000,000 operations min. (switching frequency: 18,000 operations/h) |
|  | Electrica**4 | 200,000 operations min. (at 1,800 operations/hr, rated load) |
| Failure rate P value (reference value)*5 |  | 1 mA at 1 VDC |
| Weight |  | Approx. 30 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.
*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.

## Engineering Data

## Engineering Data

MY2K(-02)

Maximum Switching Capacity


MY2K 100 VAC
Malfunctioning Shock


Endurance Curve


Contact current (A)

MY2K 24 VDC
Magnetic Interference (External Magnetic Field)


Latching Deterioration Over Time



Measurement: Shock was applied 2 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 m/s²

Dimensions
Relays with Plug-in Terminals
or Soldered Terminals
MY2K


Ten, 1.2-dia. $\times 2.2$ oval holes


## Relays with PCB Terminals

 MY2K-02

PCB Processing Dimensions (Bottom View) For DC
Note: The dimensional tolerance is $\pm 0.1$.


Terminal Arrangement/Internal Connections (Bottom View)

For AC


Note: R is a resistor for ampereturn correction. This resistor is built-in to $50-$ VAC and higher models. (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.
(Unit: mm)

## Safety Precautions

- 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. The performance values given here may not be satisfied due to use over time and a reduction in latching performance due to changes in the ambient temperature or in the conditions of the application circuit.
For actual use, apply the rated operating voltage with a pulse width based on the actual load and reset the Relay at least once per year to prevent degradation over time.
- 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.


## 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.

## Hermetically Sealed Relays: MYH

Ordering Information

Relays with Plug-in or Soldered Terminals

| Type | 4 poles |  |
| :--- | :--- | :--- |
|  | Model | Rated voltage (V) |
| Models with single <br> contacts | MY4H | $24,100 / 110$, or 110/120 VAC |
|  |  | $12,24,48$, or $100 / 110$ VDC |
| Bifurcated contacts | MY4ZH | $24,100 / 110$, or $110 / 120$ VAC |
|  |  | $12,24,48$, or $100 / 110$ VDC |

Relays with PCB Terminals

| Type | 4 poles |  |
| :--- | :---: | :---: |
|  | Model | Rated voltage (V) |
| Models with single <br> contacts | MY4H-0 | $110 / 120$ VAC |
|  |  |  |
| Bifurcated <br> contacts | MY4ZH-0 | 24 or $100 / 110$ VDC |

## Ratings and Specifications

## Ratings

Operating Coil

| Item <br> Rated voltage (V) |  | Rated current (mA) |  | Coil resistance ( $\Omega$ ) | Coil inductance ( H ) |  | Must-operate voltage (V) | Must-release voltage (V) | 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.*1 | 30\% min.*2 | $\begin{aligned} & 110 \% \text { of } \\ & \text { rated voltage } \end{aligned}$ | Approx. 1.0 to 1.2 (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 |  |  |  |  |
| 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 the AC rated current and $\pm 15 \%$ for the DC coil resistance.
2. The AC coil resistance and inductance values are reference values 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 $80 \%$ max.
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

| Ltem | Models with single contacts |  | Bifurcated contacts |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Resistive load | $\begin{aligned} & \text { Inductive load } \\ & \cos \varphi=0.4 \\ & L / R=7 \mathrm{~ms} \end{aligned}$ | Resistive load | $\begin{aligned} & \text { Inductive load } \\ & \cos \varphi=0.4 \\ & L / R=7 \mathrm{~ms} \end{aligned}$ |
| Rated load | 3 A at 110 VAC 3 A at 24 VDC | $\begin{aligned} & \hline 0.8 \mathrm{~A} \text { at } 110 \mathrm{VAC} \\ & 1.5 \mathrm{~A} \text { at } 24 \mathrm{VDC} \end{aligned}$ | $\begin{aligned} & 3 \mathrm{~A} \text { at } 110 \mathrm{VAC} \\ & 3 \mathrm{~A} \text { at } 24 \mathrm{VDC} \end{aligned}$ | $\begin{array}{\|l\|} \hline 0.8 \mathrm{~A} \text { at } 110 \mathrm{VAC} \\ 1.5 \mathrm{~A} \text { at } 24 \mathrm{VDC} \\ \hline \end{array}$ |
| Rated carry current | 3 A |  | 3 A |  |
| Maximum contact voltage | $\begin{aligned} & \hline 125 \text { VAC } \\ & 125 \text { VDC } \end{aligned}$ |  | $\begin{aligned} & 125 \text { VAC } \\ & 125 \text { VDC } \end{aligned}$ |  |
| Maximum contact current | 3 A |  | 3 A |  |
| Contact structure | Single |  | Bifurcated |  |
| Contact materials | Au plating + Ag |  |  |  |
| Ambient operating temperature | -25 to $60^{\circ} \mathrm{C}^{*}$ |  |  |  |
| Ambient operating humidity | 5\% to 85\% |  |  |  |

* With no icing or condensation.


## Characteristics

| Contact resistance*1 |  | $50 \mathrm{~m} \Omega$ max. |
| :---: | :---: | :---: |
| Operation time*2 |  | 20 ms max . |
| Release time*2 |  | 20 ms max . |
| Maximum operating 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 | 1,000 VAC at $50 / 60 \mathrm{~Hz}$ for 1 min . <br> (700 VAC between contacts of the same polarity.) |
|  | Between contacts of different polarity |  |
| Vibration resistance | Destruction | 10 to 55 to $10 \mathrm{~Hz}, 0.5-\mathrm{mm}$ single amplitude ( $1.0-\mathrm{mm}$ double amplitude) |
|  | Malfunction | 10 to 55 to $10 \mathrm{~Hz}, 0.5-\mathrm{mm}$ single amplitude ( $1.0-\mathrm{mm}$ double amplitude) |
| Shock resistance | Destruction | $1,000 \mathrm{~m} / \mathrm{s}^{2}$ |
|  | Malfunction | $200 \mathrm{~m} / \mathrm{s}^{2}$ |
| Endurance | Mechanical | $50,000,000$ operations ( $5,000,000$ operations**) min. (operating frequency: 18,000 operations $/ \mathrm{h}$ ) |
|  | Electrica** | 100,000 operations ( 50,000 operations*4) min. rated load, switching frequency: 1,800 operations/h) |
| Failure rate P value (reference value)* ${ }^{* 6}$ |  | Single contacts: $100 \mu \mathrm{~A}$ at 1 VDC Bifurcated contacts: $100 \mu \mathrm{~A}$ at 100 mVDC |
| Weight |  | Approx. 50 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.
Ambient temperature condition: $23^{\circ} \mathrm{C}$
*3. Measurement conditions: For 500 VDC applied to the same location as for dielectric strength measurement
$* 4$. This value is for bifurcated contacts.
*5. Ambient temperature condition: $23^{\circ} \mathrm{C}$
*6. This value was measured at a switching frequency of 120 operations per minute.

## Engineering Data

## Engineering Data Maximum Switching Capacity MY4(Z)H



Endurance Curve MY4H


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

## Dimensions

Relays with Plug-in Terminals or Soldered Terminals


## Safety Precautions

## PCB Design for Hermetically Sealed Relays

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.

## Applicable Sockets

Use only combinations of OMRON Relays and Sockets.

## Application Environment for Hermetically Sealed Relays

Humid environments can cause insulation problems, which may result in shortcircuiting 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 insulating beads and cause short-circuiting or unintended operation due to poor insulation.

## 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.

Options (Order Separately)

## Connection Socket and Mounting Bracket Selection Table

| Type | Front-mounting Sockets |  |  |  | Back-mounting Sockets |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Track or screw mounting |  | Screw mounting only <br> - $-=$ | Screwless Socket | Solder terminals |  | Wrapping terminals |  |  |  | Relays with PCB <br> Terminals |
|  | --- | Terminal cover structure |  |  | Without |  | Without Brac | Mounting kets | With Moun | g Brackets |  |
|  | Screw terminal size: M3 |  | Screw terminal size: M3.5 |  | Brackets | Brackets | Terminal length: 25 mm | $\begin{array}{c\|} \text { Terminal } \\ \text { length: } 20 \mathrm{~mm} \end{array}$ | Terminal length: 25 mm | Terminal length: 20 mm |  |
| $\begin{array}{\|l\|} \hline \text { MY2口 } \\ \text { MY2(S) } \end{array}$ | $\begin{aligned} & \hline \text { PYF08A } \\ & \text { (PYC-A1) } \end{aligned}$ | PYF08A-E (PYC-A1) | $\begin{aligned} & \text { PYF08M } \\ & \text { (PYC-P) } \end{aligned}$ | PYF08S | $\begin{gathered} \text { PY08 } \\ \text { (PYC-P) } \end{gathered}$ | PY08-Y1 | $\begin{aligned} & \text { PY08QN } \\ & \text { (PYC-P) } \end{aligned}$ | PY08QN2 (PYC-P) | PY08QN-Y1 | PY08QN2-Y1 | $\begin{aligned} & \text { PY08-02 } \\ & \text { (PYC-P) } \end{aligned}$ |
| MY2Z $\square$-CR | PYF08A (Y92H-3) | PYF08A-E <br> (Y92H-3) |  |  | $\begin{gathered} \hline \text { PY08 } \\ \text { (PYC-1) } \end{gathered}$ | PY08-Y3 | PY08QN (PYC-1) | PY08QN2 (PYC-1) |  |  | $\begin{aligned} & \text { PY08-02 } \\ & \text { (PYC-1) } \end{aligned}$ |
| MY3 $\square$ | PYF11A (PYC-A1) |  |  |  | $\begin{gathered} \hline \text { PY11 } \\ \text { (PYC-P) } \end{gathered}$ | PY11-Y1 | PY11QN (PYC-P) | PY11QN2 (PYC-P) | PY11QN-Y1 | PY11QN2-Y1 | PY11-02 <br> (PYC-P) |
| MY4 $\square$ <br> MY4(S) <br> MY4Z <br> MY4Z-CBG <br> MYQ4 <br> MY4H <br> MY4ZH <br> MY2K $\square$ | Screw terminal size: M3 |  |  | PYF14S | $\begin{gathered} \text { PY14 } \\ \text { (PYC-P) } \end{gathered}$ | PY14-Y1 | PY14QN (PYC-P) | PY14QN2 (PYC-P) | PY14QN-Y1 | PY14QN2-Y1 | PY14-02 (PYC-P) |
|  | $\begin{aligned} & \text { PYF14A } \\ & \text { (PYC-A1) } \end{aligned}$ | PYF14A-E (PYC-A1) |  |  |  |  |  |  |  |  |  |
|  | Screwterminal size: M3.5 |  |  |  |  |  |  |  |  |  |  |
|  | $\begin{aligned} & \text { PYF14T } \\ & \text { (PYC-A1) } \end{aligned}$ |  |  |  |  |  |  |  |  |  |  |

Note: 1. The information in parentheses is the model number of the applicable Mounting Bracket. Mounting Brackets are sold in sets of two. However, the PYC-P is just one Mounting Bracket.
2. The PYF $\square A-E$ has a terminal cover with finger protection. Round terminals cannot be used. Use forked terminals or ferrules instead.
3. Refer to Common Socket and DIN Track Products for the external dimensions of the Socket Relays.
. The Mounting Brackets are applicable for Relays with a height of 36 mm or less. If the Relay height is greater than 53 mm , use $\mathrm{Y} 92 \mathrm{H}-3$ for the Front-mounting Socket and PYC-1 for the Back-mounting Socket. (The Y92H-3 is a set of two Brackets and the PYC-1 is just one Bracket.)
5. Refer to PYF $\square \square S / P 2 R F-\square$-S for details on Screwless Sockets.
6. The terminal cover is integrated into the Socket.

If an MY $\square(S)$ Relay with a Latching Lever is used in combination with a PY $\square \square-02$ Socket for Relays with PCB Terminals and a PYC-P Mounting Brackets, the lever will not operate.
8. We recommends using the PYC-E1 Mounting Bracket for a MY2(S) Relay with Latching Lever. (If the PYC-A1 is used with the MY2(S), the latching lever will be blocked by the Mounting Bracket and the lever will not operate.)
Mounting Heights with Sockets (Unit: mm)
Front-mounting Sockets Back-mounting Screwless Sockets Sockets


Note: 1. The PYF $\square A$ 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 Mounting Bracket for the PYF08M.

Socket Mounting Plate ( $\mathrm{t}=1.6$ ) (Unit: mm)
Use a Socket Mounting Plate to mount multiple connection Sockets in a row.

| Item |  | Applicable Sockets |
| :--- | :--- | :--- | :--- | :--- | :--- |

## PYP-1



PYP-18


PYP-36


## Compliance with Electrical Appliances and Material Safety Act

- All 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 <br> poles | Coil ratings | Contact ratings |
| :---: | :---: | :---: | :---: |
| MY | 1 <br> 2 | 6 to 220 VAC <br> 6 <br> to 120 VDC | 5 A, 200 VAC |
|  | $4^{*}$ | 6 to 110 VAC <br> 6 to 120 VDC | 3 A, 115 VAC |

* Under the Electrical Appliances and Material Safety Act, do not use any 4pole models 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.


## Safety Precautions

## Refer to the Common Relay Precautions.

## 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 attach case-surface-mounted models (MY $\square \mathrm{F}$ ) and tighten the screws securely (tightening torque: $0.98 \mathrm{~N} \cdot \mathrm{~m}$ ).


## Using MY-series Relays with 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 poor contact. In this case, we recommend using the MY4Z-CBG Series, which has high contact reliability for microloads (Refer to page 25.)

## 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.

## 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 min.


## 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.

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.

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[^0]:    Refer to Connection Socket and Mounting Bracket Selection Table on page 33 in Options for information on the possible combinations of Models with Plug-in Terminals and Sockets.

