

## Characteristics

| Item                        | Type                                   | Standard models                                                                                                 | Models with built-in 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 mΩ 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 MΩ 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 Hz, 0.5-mm single amplitude (1.0-mm double amplitude)                                            |                                           |                                  |                             |                                                   |                                                        |
|                             | Malfunction                            | 10 to 55 to 10 Hz, 0.5-mm single amplitude (1.0-mm double amplitude)                                            |                                           |                                  |                             |                                                   |                                                        |
| Shock resistance            | Destruction                            | 1,000 m/s <sup>2</sup>                                                                                          |                                           |                                  |                             |                                                   |                                                        |
|                             | Malfunction                            | 200 m/s <sup>2</sup>                                                                                            |                                           |                                  |                             |                                                   |                                                        |
| Endurance                   | Mechanical                             | AC: 50,000,000 operations min.<br>DC: 100,000,000 operations min.<br>(switching frequency: 18,000 operations/h) |                                           |                                  |                             |                                                   |                                                        |
|                             | Electrical*4                           | 500,000 operations min.<br>(rated load, switching frequency: 1,800 operations/h)                                |                                           |                                  |                             |                                                   |                                                        |

| Item                                     | Number of poles | 2 poles       |
|------------------------------------------|-----------------|---------------|
| Failure rate P value (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°C

\*3. Measurement conditions: For 500 VDC applied to the same location as for dielectric strength measurement.

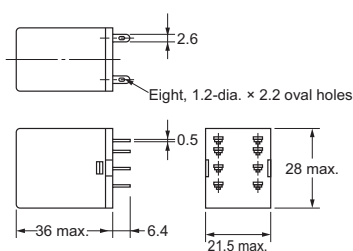
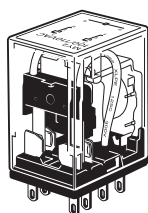
\*4. Ambient temperature condition: 23°C

\*5. This value was measured at a switching frequency of 120 operations per minute.

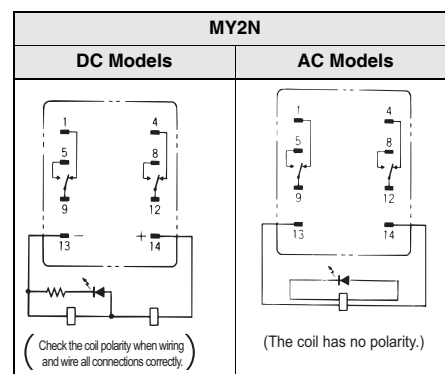
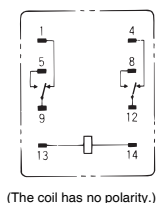
## Dimensions

(Unit: mm)

MY2, MY2N, MY2-D, MY2N-D2, MY2-CR, and MY2N-CR

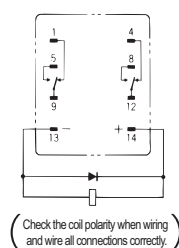


Terminal Arrangement/Internal Connections (Bottom View) Standard Models

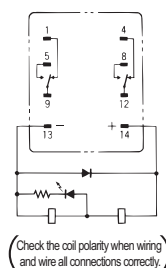


- Note:**
1. An AC model has coil disconnection self-diagnosis.
  2. For the DC models, check the coil polarity when wiring and wire all connections correctly.
  3. The indicator is red for AC and green for DC.
  4. The operation indicator indicates the energization of the coil and does not represent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

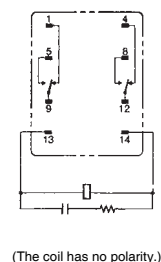
MY2-D



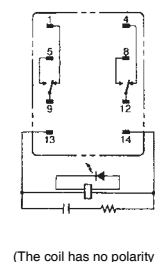
MY2N-D2



MY2-CR



MY2N-CR



# Miniature Power Relays: MY2Z



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)

| Rated voltage (V) | Item    | Rated current (mA) |         | Coil resistance (Ω) | 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. 0.9 to 1.3 (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        |                          |                          |                       |                               |
|                   | 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               | 10% min.*2               | 110% of rated voltage | 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°C with tolerances of +15%/–20% for the AC rated current and ±15% for the DC coil resistance.

2. The AC coil resistance and inductance values are reference values only (at 60 Hz).

3. Operating characteristics were measured at a coil temperature of 23°C.

4. The maximum voltage capacity was measured at an ambient temperature of 23°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                  | Inductive load (cos φ = 0.4, L/R = 7 ms) |
|-------------------------|------|---------------------------------|------------------------------------------|
| 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 VAC, 125 VDC                |                                          |
| Maximum contact current |      | 5 A                             |                                          |
| Contact configuration   |      | DPDT                            |                                          |
| Contact structure       |      | Bifurcated                      |                                          |
| Contact materials       |      | Au plating + Ag                 |                                          |

| Item                            | Type | Standard models | Model with built-in operation indicator, diode, or CR circuit |
|---------------------------------|------|-----------------|---------------------------------------------------------------|
| Ambient operating temperature*1 |      | –55 to 70° C    | –55 to 60° 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.