

# General-purpose Relay MY

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

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



## Ordering Information

### ■ Relays

#### Standard Coil Polarity

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

#### Reverse Coil Polarity

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

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

↑  
Rated coil voltage

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

# Specifications

## ■ Coil Ratings

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

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

## ■ Contact Ratings

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

\* Reference value.

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

## ■ Characteristics

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

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

## ■ Life Expectancy Characteristics

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

## ■ Approved Standards

VDE, UL, CSA, IMQ, CE

## ■ Precautions

### Connections

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

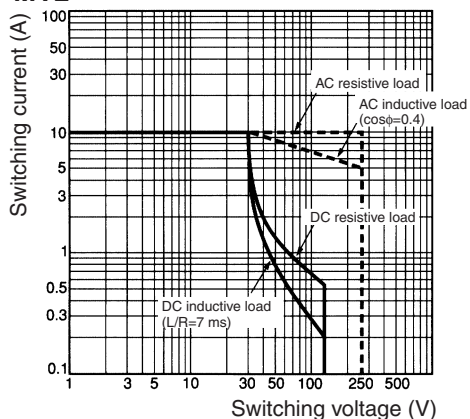
### Mounting

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

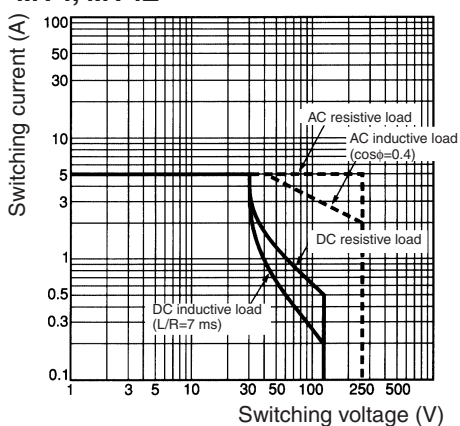
# Engineering Data

## Maximum Switching Power

MY2

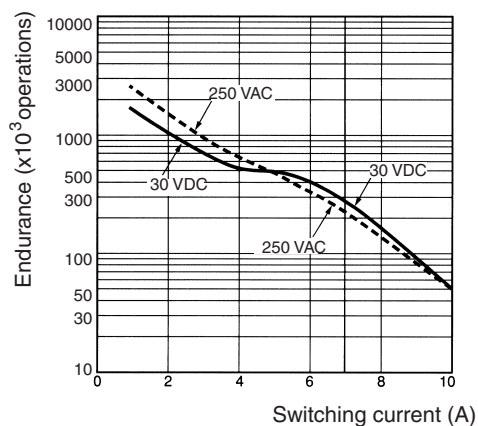


MY4, MY4Z

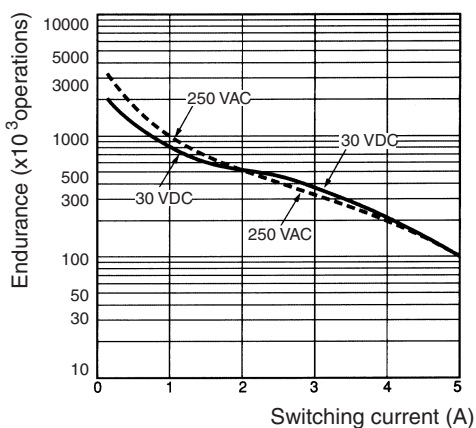


## Endurance

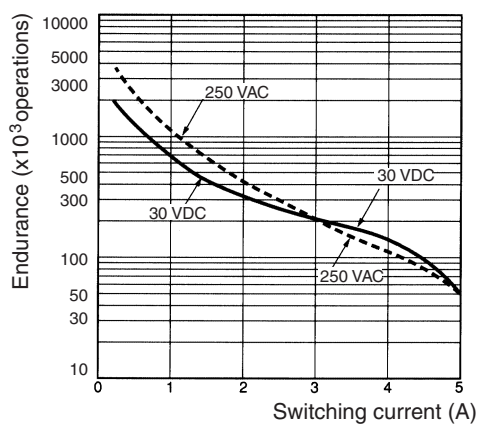
MY2 (Resistive Loads)



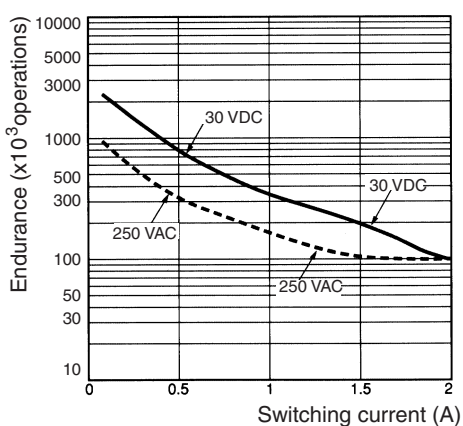
MY2 (Inductive Loads)



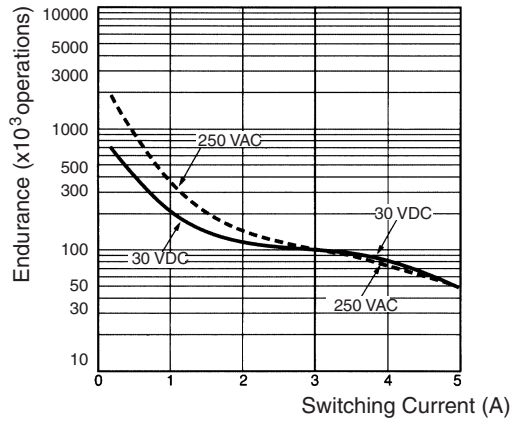
MY4 (Resistive Loads)



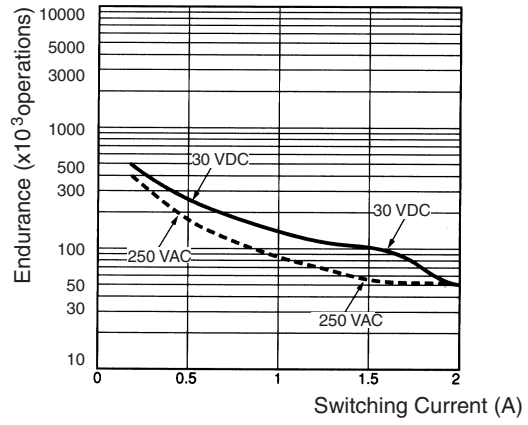
MY4 (Inductive Loads)



**MY4Z (Resistive Loads)**



**MY4Z (Inductive Loads)**

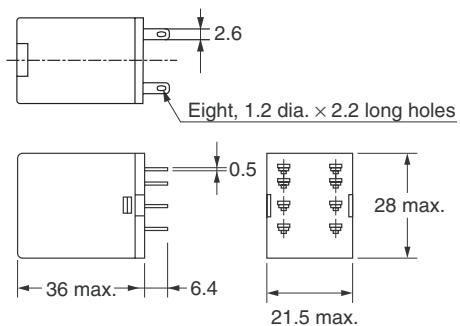
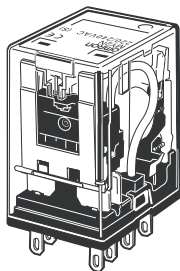


# Dimensions

Note: All units are in millimeters unless otherwise indicated.

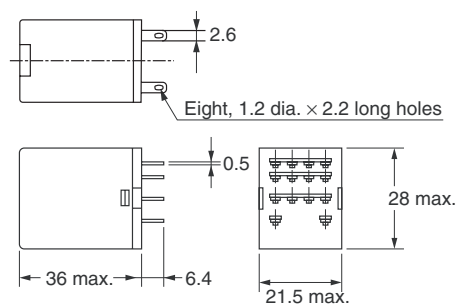
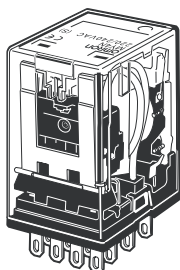
## 2-Pole Models

MY2N



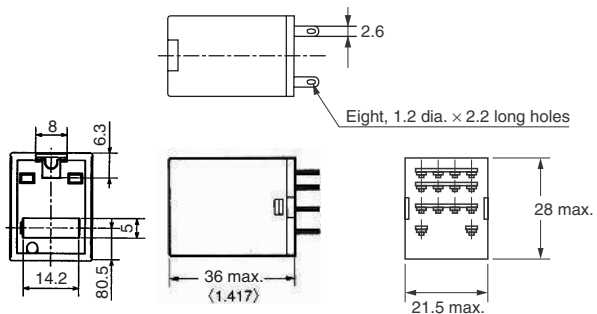
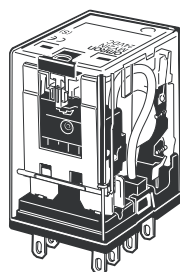
## 4-Pole Models

MY4N

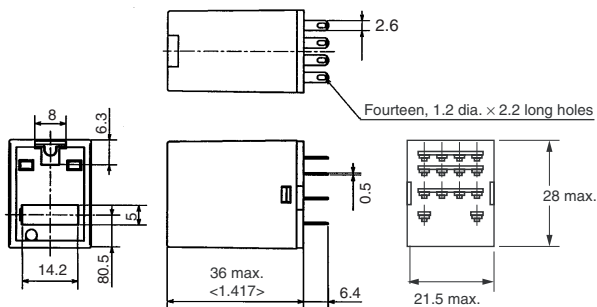
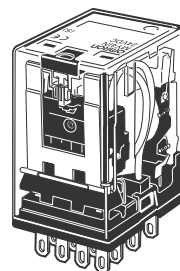


## Models with Test Button

MY2IN

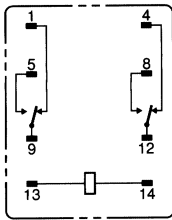


MY4IN

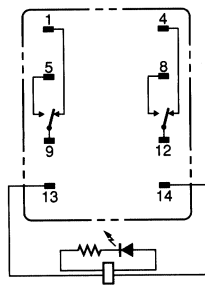


## Terminal Arrangement/Internal Connections (Bottom View)

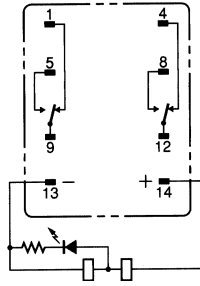
MY2



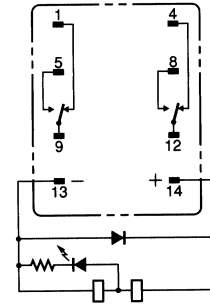
MY2N/MY2IN  
(AC Models)



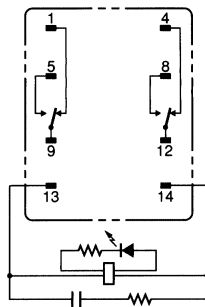
MY2N/MY2IN  
(DC Models)



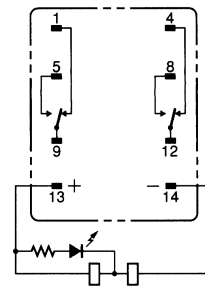
MY2N-D2/MY2IN-D2  
(DC Models Only)



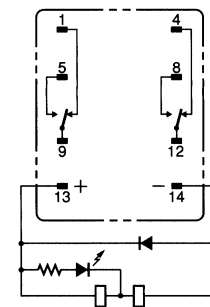
MY2N-CR/MY2IN-CR  
(AC Models Only)



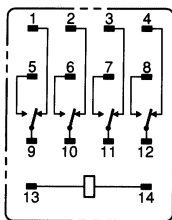
MY2N1/MY2IN1  
(DC Models Only)



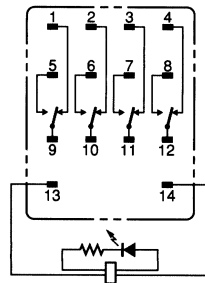
MY2N1-D2/MY2IN1-D2  
(DC Models Only)



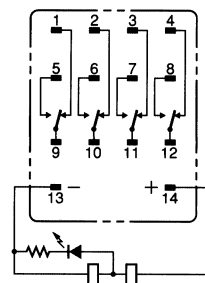
MY4(Z)



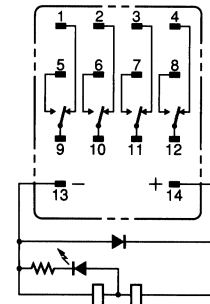
MY4(Z)N/MY4(Z)IN  
(AC Models)



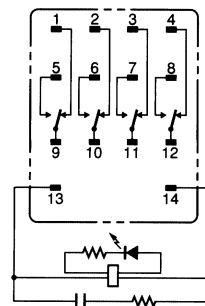
MY4(Z)N/MY4(Z)IN  
(DC Models)



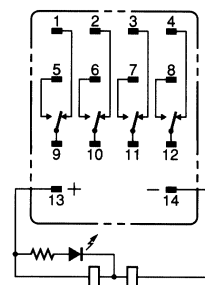
MY4(Z)N-D/MY4(Z)IN-D2  
(DC Models Only)



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



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



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

