# OMRON

# Miniature Power Relays MY Series

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

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

Refer to Safety Precautions on pages 63 to 64 and Safety Precautions for All Relays.





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

# Miniature Power Relay Types

MY-GS-R Miniature Power Relays	. From page 4
MY(S) Miniature Power Relays	From page 14
MYK Miniature Power Latching Relays	From page 33
MYQ/MYH Miniature Power Sealed Relays	. From page 38

# **Common Information**

Common Options (Order Separately)	From page 44
Common Safety Precautions	From page 63

MY(S)

MYK

MYQ-MYH

# MY/MYK/MYQ·MYH

# **Model List**

# Selection **MY-GS-R** Use this as reference when selecting the model. **Firstly Choice!** This general-purpose model can be used for a wide range of applications **MY-GS-R** MY(S) page 4 MYK Choose this model Choose this model Choose this model in an if you want to properly if you want to maintain environment with a large control a microload! the operation status of amount of corrosive gases and dust! the contact! MY□Z **Bifurcated contacts** MYK Latching Relays MYQ Plastic Sealed Relays MY Z-CBG Crossbar bifurcated MYH Hermetically Sealed Relays contacts page 38 page 33 page 14 MYQ-MYH

2

Common Options (Order Separately)

**Common Precautions** 

# MY/MYK/MYQ·MYH

# **Miniature Power Relays: MY**

Classification Number of poles		Number				Plug-in terminals			Case-surface		
		of poles	Conta	acts	Standard	With operation indicator	With latching lever	PCB terminals	mounting		
		2	Single		MY2-GS-R	MY2N-GS-R	MY2IN-GS-R	MY2-02	MY2F	-	
		2	Bifurcated		MY2Z	MY2ZN				-	
		3	Single		MY3	MY3N		MY3-02	MY3F	-	
Standard mod	els		Single		MY4-GS-R	MY4N-GS-R	MY4IN-GS-R	MY4-02	MY4F	- L	
			Bifurcated	Type 1	MX(47(0)	MY4ZN(S)	MY4ZIN(S)	MY4Z-02	MV/75		
		4	Bifurcated	Type 2	MY4Z(S)	MY4ZN1(S)	MY4ZIN1(S)	WIY42-02	MY4ZF		
			Crossbar bit	furcated	MY4Z-CBG	MY4ZN-CBG				-	
	2           Type 1           -           +           3	Single			MY2N-D2-GS-R	MY2IN-D2-GS-R			-		
			2	Bifurcated			MY2ZN-D2				-
odels with		3	Single			MY3N-D2				-	
uilt-in diode	13 14 A1 A2		Single			MY4N-D2-GS-R	MY4IN-D2-GS-R			-	
or coil surge		4	Bifurcated			MY4ZN-D2(S)	MY4ZIN-D2(S)			-	
bsorption	Type 2	2	Single			MY2N-D1-GS-R	MY2IN-D1-GS-R			-	
	÷ ⊙	÷ •		Single			MY4N-D1-GS-R	MY4IN-D1-GS-R			
	13 14 A1 A2	4	Bifurcated			MY4ZN1-D2(S)	MY4ZIN1-D2(S)			- [	
odels with		2	Single			MY2N-CR-GS-R	MY2IN-CR-GS-R			- г	
uilt-in CR cire		4	Single			MY4N-CR-GS-R	MY4IN-CR-GS-R			-	
oil surge abs	orption	4	Bifurcated			MY4ZN-CR(S)	MY4ZIN-CR(S)			-	

# Miniature Power Latching Relays (MYK)

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

# Miniature Power Sealed Relays (MYQ/MYH)

			Plug-in terminals		PCB terminals
Classification	Number of poles	Contacts		With operation indicator	
Directio Secled Delays		Single	MYQ4	MYQ4N	MYQ4-02
Plastic Sealed Relays	4	Bifurcated	MYQ4Z		MYQ4Z-02
Hermetically Sealed		Single	MY4H		MY4H-0
Relays	4	Bifurcated	MY4ZH		MY4ZH-0

Refer to Front-connecting Sockets and Back-connecting Sockets in Common Options (Order Separately) on pages 44 and 46 for main unit and socket combinations.

**М** Υ

# Miniature Power Relays

MY(S)

MYK

MYQ-MYH

Common Options (Order Separately)

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

# • A lineup of models with latching levers added for easier circuit checking.

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

Refer to the Common Relay Precautions.

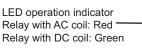
# Features

# **Common to all specifications**

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

Mechanical indicators (one on left and one on right) Contacts ON (coil energized)

Contacts OFF (coil de-energized)





Relay with AC Coil (LED: Red)



Relay with AC Coil (LED: Red)



Relay with DC Coil (LED: Green)

# With latching lever

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

# Latching lever operating method

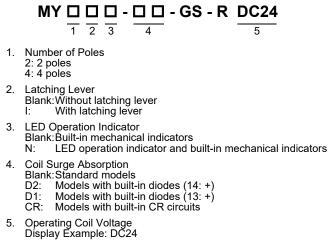
	Normal State	Mode 1: Momentary State	Mode 2: Locked State
When seen from the top		Yellow button	
When seen from the side			
Operation Description		Slide the lever one step and press the yellow button with an insulated tool to operate the contacts.	If you slide the lever two steps, the contacts lock in the operation positio

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# List of Models

# Miniature Power Relays (MY-GS-R)

				Plug-in (octal pi	ns) terminals	
Catagony		Number	Contact		With operation ind	icator
Category		of poles	structure			With latching lever
Standard models		2		MY2-GS-R	MY2N-GS-R	MY2IN-GS-R
Stanuaru moueis		4		MY4-GS-R	MY4N-GS-R	MY4IN-GS-R
	Type 1 ⊖ ⊕ <sup>13</sup> 14 <sup>14</sup> 42	2			MY2N-D2-GS-R	MY2IN-D2-GS-R
Models with built-in diodes			4	Single		MY4N-D2-GS-R
for coil surge absorption	Type 2	2	Single		MY2N-D1-GS-R	MY2IN-D1-GS-R
	$\begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \end{array} \\ 13 \end{array} \\ 13 \end{array} \\ \begin{array}{c} 14 \\ 14 \end{array} \\ \begin{array}{c} 14 \end{array} \\ \end{array} \\ \begin{array}{c} 14 \end{array} \\ \end{array} \\ \begin{array}{c} 14 \end{array} \\ \begin{array}{c} 14 \end{array} \\ \begin{array}{c} 14 \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{c} 14 \end{array} \\ \end{array} $	4			MY4N-D1-GS-R	MY4IN-D1-GS-R
Models with built-in CR circuits for coil		2			MY2N-CR-GS-R	MY2IN-CR-GS-R
surge absorption		4			MY4N-CR-GS-R	MY4IN-CR-GS-R

MYK

# **Ordering Information**

MY(S)

MYK

# Main unit Standard model without operation indicator

Number of poles	Model	Rated voltage (V)
2	MY2-GS-R	12, 24, 48, 100/110, 110/120, 200/220, 220/240 VAC 6, 12, 24, 48, 100/110 VDC
4	MY4-GS-R	12, 24, 48, 100/110, 110/120, 200/220, 220/240 VAC 6, 12, 24, 48, 100/110 VDC

# Standard model with operation indicator

Number of poles	Model	Rated voltage (V)
2	MY2N-GS-R	12, 24, 48, 100/110, 110/120, 200/220, 220/240 VAC 6, 12, 24, 48, 100/110, 220 VDC
4	MY4N-GS-R	12, 24, 48, 100/110, 110/120, 200/220, 220/240 VAC 6, 12, 24, 48, 100/110, 220 VDC

# Standard model with operation indicator and latching lever

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

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

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

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

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

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

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

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

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

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

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

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

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

# **Ratings and Specifications**

# Ratings

# Main unit

# **Operating Coil**

-	-										
ltem		Rated cu	irrent (mA)	Coil resistance	Coil indu	ctance (H)	Must-operate voltage	Must-release voltage	Maximum voltage	Power consumption	S-R
Rated	l voltage	50 Hz	60 Hz	(Ω)	Armature OFF	Armature ON	Perce	ntage of rated v	oltage	(VA, Ŵ)	
	12	106.5	91	46	0.17	0.33					
	24	53.8	46	180	0.69	1.3	-				
	48	25.7	21.1	788	3.22	5.66	-				
AC	100/110	11.7/12.9	10.0/11.0	3,750	14.54	24.6	-	30% min. <b>*</b> 2		Approx. 0.9 to 1.3 (at 60 Hz)	
	110/120	9.9/10.8	8.4/9.2	4,430	19.2	32.1	-			1.0 (ut 00 112)	
	200/220	6.2/6.8	5.3/5.8	12,950	54.75	94.07	-				Ξ
	220/240	5.2/6.2	4.3/5.0	15,920	83.5	136.4	80% max. <b>*</b> 1		110%		
	6	146 (151)		41.0 (39.8)	0.17	0.33			11070		
	12	72.7 (75)		165 (160)	0.73	1.37	-				(S)
	24	36.3 (37.7)		662 (636)	3.2	5.72	-			Approx. 0.9	
DC	48	17.6 (18.8)		2,725 (2,560)	10.6	21.0		10% min. <b>*</b> 2		, ippick. 0.0	
	100/110	8.7 (9.0)/9.6	S (9.9)	11,440 (11,100)	45.6	86.2	1				
	220	3.6		60,394	362.3	452.9				Approx. 0.8	

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

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

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

The values in parentheses for the rated currents and coil voltages of DC coils are for models with LED operation indicators. 4.

5. The maximum voltage capacity was measured at an ambient temperature of 23°C.

**\*1.** There is variation between products, but actual values are 80% max.

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

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

### Contacts

		2 poles			4 poles	
	Resistiv	e load	Inductive load (cos φ = 0.4, L/R = 7 ms)	Resist	ive load	Inductive load (cos φ = 0.4, L/R = 7 ms)
Contact configuration	DPDT			4PDT		
Contact structure	Single			•		
Contact material	Ag					
Rated load	10 A at 250 VAC 10 A at 30 VDC	5 A at 220 VAC 5 A at 24 VDC	2 A at 220 VAC 2 A at 24 VDC	6 A at 250 VAC 6 A at 30 VDC	3 A at 220 VAC 3 A at 24 VDC	0.8 A at 220 VAC 1.5 A at 24 VDC
Electrical endurance *1	100,000 operations	500,000 operations		30,000 operations	200,000 operations	S
Rated carry current	10 A			6 A *2		
Maximum contact voltage	250 VAC, 220 VDC			250 VAC, 220 VDC		
Maximum contact current	10 A			6 A *2		
Maximum switching capacity	2,500 VA 300 W		440 VA 48 W	1,500 VA 180 W		176 VA 36 W
Minimum load (reference values) *3	1 mA at 5 VDC					
<ul> <li>k1. Rated load, switching fractional structure</li> <li>k2. 4 poles of 6 A is for an associate structure</li> <li>k3. These values are guides the structure</li> <li>These values will dependent of the structure</li> <li>k3. These values are guides as a structure</li> </ul>	ambient temperature o s for the switchable lin id on the switching fre	of 50°C. At an ambientits for minute load	ent temperature of levels, such as in e	70°C, the value is 3 electronic circuits. A	3 A. Actual characterist	

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# Characteristics Main unit

		2 poles	4 poles
Contact resistance *1		100 mΩ max.	
Operation time *2		20 ms max.	
Release time *2		20 ms max.	
Maximum operating	Mechanical	18, 000 operations/h	
frequency	Rated load	2,400 operations/h	
Insulation resistance >	\$3	1,000 MΩ min.	
	Between coil and contacts	2,000 VAC at 50/60 Hz for 1 min.	
Dielectric strength	Between contacts of different polarity	2,000 VAC at 50/60 Hz for 1 min.	
	Between contacts of the same polarity	1,000 VAC at 50/60 Hz for 1 min.	
Vibration resistance	Destruction	10 to 55 to 10 Hz, Double amplitude: 1.0 mm	
VIDIATION TESISTANCE	Malfunction	10 to 55 to 10 Hz, Double amplitude: 1.0 mm	
Shock resistance	Destruction	1,000 m/s <sup>2</sup> (approx. 100 G)	
Shock resistance	Malfunction	200 m/s <sup>2</sup> (Approx. 20 G)	
Mechanical endurance	•	50,000,000 operations (switching frequency: 18,000	operations/h)
Ambient operating ten	nperature	Standard models: $-55$ to $70^{\circ}$ C (with no icing or cond Models with LED operation indicators: $-40$ to $70^{\circ}$ C (v	
Ambient humidity		5% to 85%	
Weight		Approx. 35 g	

Note: The above values are initial values.

\*1. Measurement conditions: 1 A at 5 VDC using the voltage drop method.
\*2. Measurement conditions: With rated operating power applied, not including contact bounce time.

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

# **Certified Ratings for Models Certified for Safety Standards**

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

# Main unit

# **UL-certified Models: UL508**

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

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

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

### VDE-certified Models: EN 61810-1

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

# **CQC-certified Models**

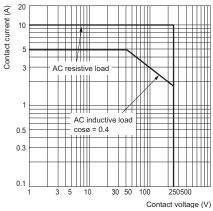
Model	Standard number	Certification No.
MY-GS	GB/T 21711.1	CQC18002198531
LR certification (Llo		Operating Coil ratings
LR certification (Llo Model	eyd's Register) Environmental Category ENV2. 3	Operating Coil ratings

MYK

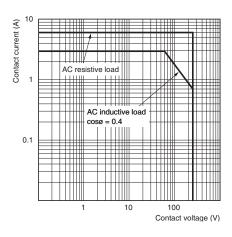
MYQ-MYH

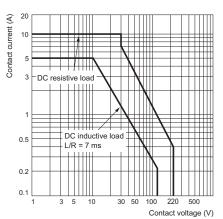
# Engineering Data (Reference Value)

# Maximum Switching Capacity MY2

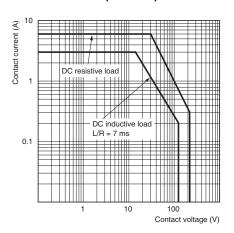














# **Endurance Curve** 10,000 5,000 3,000 1,000 500 300

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MY(S)

MYK

MYQ-MYH

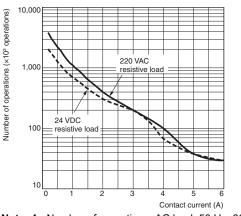
220 VAC esistive load 24 VDC resistive load 100 50 30 10

4

6

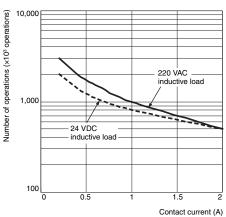
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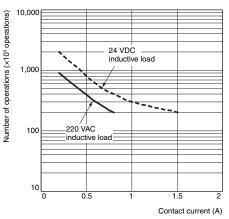
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Note: 1. Number of operations: AC load, 50 Hz, 80% 2. Switching condition: NO or NC

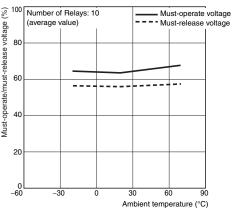
# 



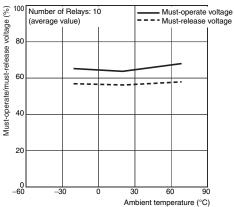


# Ambient Temperature vs. Must-operate and Must-release Voltage

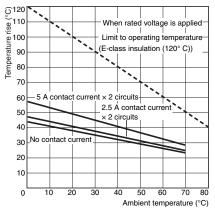
# 



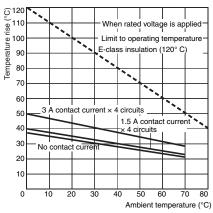
### MY4D---GS-R AC Models

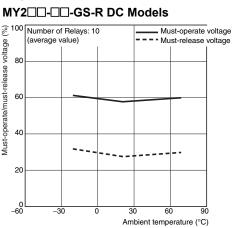


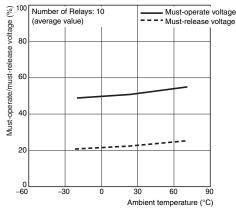
# Ambient Temperature vs. Coil Temperature Rise MY2D-D-GS-R AC Models, 50 Hz



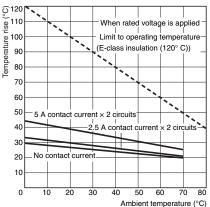
MY40-0-GS-R AC Models, 50 Hz



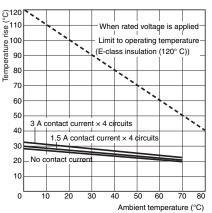




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# MY40-0-GS-R DC Models

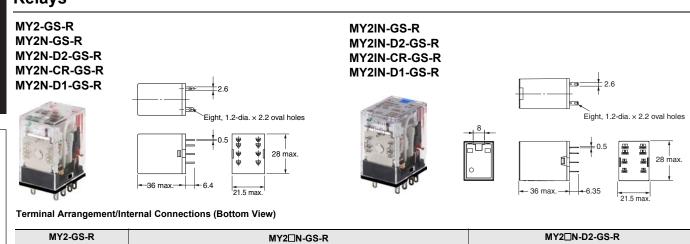


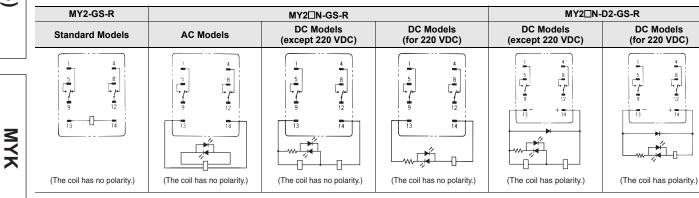
# Dimensions

# Relays

MY-GS-R

MY(S)





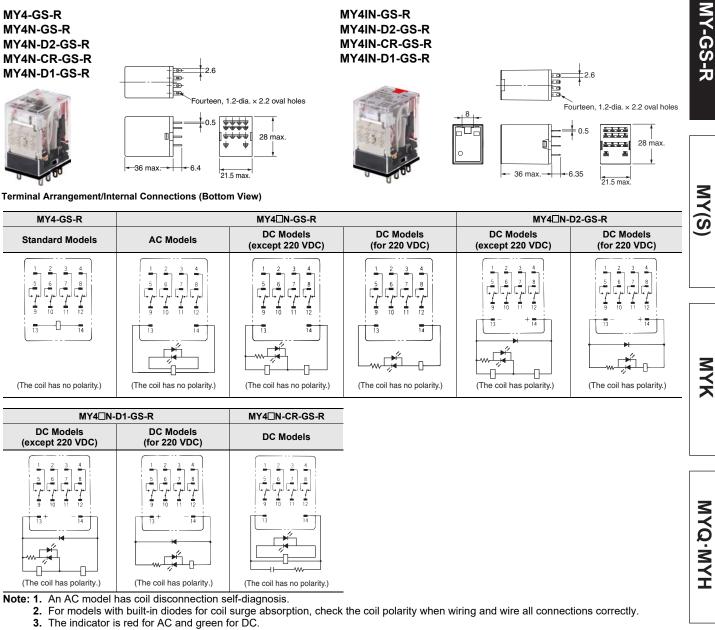
	MY2⊡N-	D1-GS-R	MY2 N-CR-GS-R
	DC Models (except 220 VDC)	DC Models (for 220 VDC)	AC Models
MYQ-MYH			
	(The coil has polarity.)	(The coil has polarity.)	(The coil has no polarity.)

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

2. For models with built-in diodes for coil surge absorption, check the coil polarity when wiring and wire all connections correctly.

**3.** The indicator is red for AC and green for DC.

4. The LED operation indicators indicate the energization of the coil and do not necessarily represent contact operation.



4. The LED operation indicators indicate the energization of the coil and do not necessarily represent contact operation.

# **Miniature Power Relays** MY(S)

# Best-selling, general-purpose relays

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

Refer to Safety Precautions on pages 63 to 64 and Safety Precautions for All Relays.





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

# Features

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

Example: MY4

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



· Latching lever operating procedure

Blue = DC voltage

Coil tape

· Distinguished using color-coded operation indicators (LED)



Red = AC voltage

# Example: MY4





Operation indicator (LED) Green = DC voltage

MYK

MY-GS-R

MY(S)

MYQ-MYH

**Common Precautions** 

14



Steady-state

Pink = AC voltage



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

Mode 1 (momentary)

# Sliding the lever to the second stage will lock the contacts in the operating

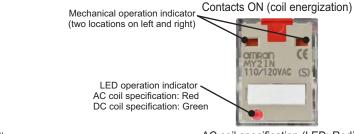
position

Mode 2 (locked)

DC coil specificatior

2. Latching levers convenient for circuit checking and MY(S) models equipped with mechanical operation indicators and operation indicators for monitoring operation status are available.

· Mechanical operation indicator/LED operation indicator

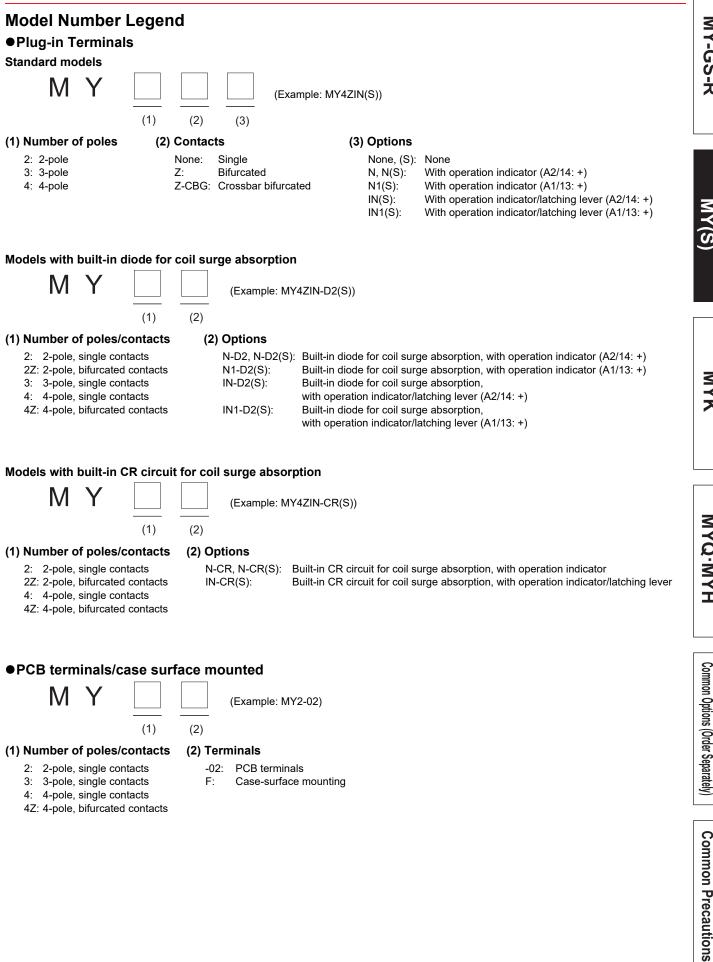


AC coil specification (LED: Red)

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

Contact relia	bility		Corrosion re	Corrosion resistance		
	Contact structure			Contact material	Typical model	
High 🛧	Crossbar bifurcated contacts	and the second se	High 🔨	Au cladding + AgPd	MY4Z-CBG	
	Bifurcated contacts	lotel		Au cladding + Ag alloy Au plating + Ag alloy	MY4Z MY2Z	
	Single contacts			Au cladding + Ag alloy	MY4	
Low	Single contacts	Jan Contraction	Low	Ag alloy	MY2	

# Model Number Structure



MY-GS-R

MY(S

MYK

MYQ-MYH

# Ordering Information When your order, specify the rated voltage.

●Plug-in Terminals Without operation indicator

Classification	Number of poles	Contacts	Model	Rated voltage
		Single	MV2(C)	6, 12, 24, 48/50, 110/120, 220/240 VAC
	2	Single	MY2(S)	6, 12, 24, 48, 100/110 VDC
Standard models	2	Diference	MY2Z	12, 24, 110/120, 220/240 VAC
		Bifurcated		12, 24, 100/110 VDC
	2	Single	MV2	12, 24, 110/120, 220/240 VAC
	3		MY3	12, 24, 48, 100/110 VDC
Standard models		Single	MX(4(0)	6, 12, 24, 48/50, 110/120, 220/240 VAC
			MY4(S)	6, 12, 24, 48, 100/110 VDC
	4	Bifurcated	MY4Z(S)	6, 12, 24, 48/50, 110/120, 220/240 VAC
	4	Difurcated	WIT42(3)	6, 12, 24, 48, 100/110 VDC
		Crossbar bifurcated	MY4Z-CBG	100/110, 110/120, 200/220 VAC
		Crosspar piturcated	WIT42-CBG	12, 24, 48, 100/110 VDC

# With operation indicator

	Classific	Classification		Cont	tacts	Model	Rated voltage
						MV2N/C)	6, 12, 24, 48/50, 110/120, 220/240 VAC
_				Single	Type 1	MY2N(S)	6, 12, 24, 48, 100/110 VDC
MYK			2		Type 2	MY2N1(S)	6, 12, 24, 48, 100/110 VDC
$\mathbf{x}$				Difumented		MYOZNI	110/120, 220/240 VAC
				Bifurcated		MY2ZN	24 VDC
				Single		MY3N	24, 110/120, 220/240 VAC
				Single			12, 24, 48, 100/110 VDC
	Standard models		d models			MY4N(S)	6, 12, 24, 48/50, 110/120, 220/240 VAC
		4		Single	Type 1	WIT4N(3)	6, 12, 24, 48, 100/110 VDC
					Type 2	MY4N1(S)	6, 12, 24, 48, 100/110 VDC
2						MY4ZN(S)	6, 12, 24, 48/50, 110/120, 220/240 VAC
2	2		4	Bifurcated	Type 1	WI 42N(3)	6, 12, 24, 48, 100/110 VDC
MYQ-MYH					Type 2	MY4ZN1(S)	6, 12, 24, 48, 100/110 VDC
ż				Crossbar bifurcated		MY4ZN-CBG	100/110, 200/220 VAC
⋜						WIT4ZN-CBG	24 VDC
I			2	Single		MY2N-D2(S)	6, 12, 24, 48, 100/110 VDC
		Type 1		Bifurcated		MY2ZN-D2	24 VDC
	Models with	⊖ ⊕	3	Single		MY3N-D2	12, 24, 48 VDC
	built-in diode	13 14 A1 A2	4	Single		MY4N-D2(S)	6, 12, 24, 48, 100/110 VDC
3	for coil surge		4	Bifurcated		MY4ZN-D2(S)	6, 12, 24, 48, 100/110 VDC
nmo	absorption	Type 2	2	Single		MY2N1-D2(S)	6, 12, 24, 48, 100/110 VDC
		÷ ⊝	4	Single		MY4N1-D2(S)	6, 12, 24, 48, 100/110 VDC
tions		13 14 A1 A2	4	Bifurcated		MY4ZN1-D2(S)	6, 12, 24, 48, 100/110 VDC
	Models with		2	Single		MY2N-CR(S)	110/120, 220/240 VAC
der s	built-in CR circ		4	Single		MY4N-CR(S)	110/120, 220/240 VAC
Common Options (Order Separately)	coil surge abso	orption	4	Bifurcated		MY4ZN-CR(S)	110/120, 220/240 VAC

MY-GS-R

# With operation indicator/latching lever

Classific	ation	Number of poles	Contacts		Model	Rated voltage	
					MY2IN(S)	6, 12, 24, 48/50, 110/120, 220/240 VAC	
		2	Single	Type 1		6, 12, 24, 48, 100/110 VDC	
				Type 2	MY2IN1(S)	6, 12, 24, 48, 100/110 VDC	
					MY/(INI/O)	6, 12, 24, 48/50, 110/120, 220/240 VAC	
Standard mode	els		Single	Type 1	MY4IN(S)	6, 12, 24, 48, 100/110 VDC	
				Type 2	MY4IN1(S)	6, 12, 24, 48, 100/110 VDC	
		4			MY4ZIN(S)	6, 12, 24, 48/50, 110/120, 220/240 VAC	
			Bifurcated	Type 1	WI 1 +2/14(3)	6, 12, 24, 48, 100/110 VDC	
				Type 2	MY4ZIN1(S)	6, 12, 24, 48, 100/110 VDC	
	Type 1	2	U U		MY2IN-D2(S)	6, 12, 24, 48, 100/110 VDC	
Models with	÷ ÷				MY4IN-D2(S)	6, 12, 24, 48, 100/110 VDC	
built-in diode	13 14 A1 A2	4	Bifurcated		MY4ZIN-D2(S)	6, 12, 24, 48, 100/110 VDC	
for coil surge	Type 2	2	Single		MY2IN1-D2(S)	6, 12, 24, 48, 100/110 VDC	
absorption	÷		Single		MY4IN1-D2(S)	6, 12, 24, 48, 100/110 VDC	
	13 14 A1 A2	4	Bifurcated		MY4ZIN1-D2(S)	6, 12, 24, 48, 100/110 VDC	
Models with		2	Single		MY2IN-CR(S)	110/120, 220/240 VAC	
built-in CR circ	uit for		Single		MY4IN-CR(S)	110/120, 220/240 VAC	
coil surge absorption		4	Bifurcated		MY4ZIN-CR(S)	110/120, 220/240 VAC	

# PCB terminals

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

# •Case-surface mounting

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

MY-GS-R

MY(S)

MYK

# **Ratings and Specifications**

# Ratings **Operating Coils**

Terminal Type	Classification	Number of poles	Contacts	Without operation indicator	With operation indicator	With latching lever
		2	Single	MY2(S)	MY2N(S), MY2N1(S)	MY2IN(S), MY2IN1(S)
-	Standard models	4	Single	MY4(S)	MY4N(S), MY4N1(S)	MY4IN(S), MY4IN1(S)
			Bifurcated	MY4Z(S)	MY4ZN(S), MY4ZN1(S)	MY4ZIN(S), MY4ZIN1(S)
	Models with built-in diode for	2	Single		MY2N-D2(S), MY2N1-D2(S)	MY2IN-D2(S), MY2IN1-D2(S)
Plug-in terminals			Single		MY4N-D2(S), MY4N1-D2(S)	MY4IN-D2(S), MY4IN1-D2(S)
terminais	coil surge absorption	4	Bifurcated		MY4ZN-D2(S), MY4ZN1-D2(S)	MY4ZIN-D2(S), MY4ZIN1-D2(S)
	Models with	2	Single		MY2N-CR(S)	MY2IN-CR(S)
	built-in CR circuit for coil surge absorption		Single		MY4N-CR(S)	MY4IN-CR(S)
		4	Bifurcated		MY4ZN-CR(S)	MY4ZIN-CR(S)

Rated current (mA) Coil inductance (H) Must Must Item Power **Coil resistance** Maximum consumption (VA, W) operate release **(**Ω) Armature OFF voltage (V) 50 Hz 60 Hz Armature ON Rated voltage (V) voltage (V) voltage (V) 214.1 183 12.2 0.04 0.08 6 12 106.5 91 46 0.17 0.33 Approx. 0.9 24 53.8 46 180 0.69 1.30 AC 30% min.\*2 to 1.3 48/50 24.7/25.7 21.1/22.0 788 3.22 5.66 (at 60 Hz) 110/120 9.9/10.8 8.4/9.2 4,430 19.20 32.1 110% of 220/240 4.8/5.3 4.2/4.6 18,790 83.50 136.4 80% max.\*1 rated voltage 6 151 39.8 0.17 0.33 75 160 1.37 12 0.73 DC 24 37.7 636 3.20 5.72 10% min.\*2 Approx. 0.9 48 2,560 10.60 18.8 21.0 100/110 9.0/9.9 11,100 45.60 86.2

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

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

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

4. The maximum voltage capacity was measured at an ambient temperature of 23°C. 5. Power consumption drop was measured for the above data. When driving transistors, check leakage current and connect a bleeder resistor if required.

\*1. There is variation between products, but actual values are 80% maximum.

To ensure operation, apply at least 80% of the rated value (at a coil temperature of 23°C). \*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.

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

	ltem	Rated curr	rent (mA)	Coil resistance	Coil induc	tance (H)	Must	Must	Maximum	Power
Rated	voltage (V)	50 Hz 60 Hz		(Ω)	Armature OFF	Armature ON	operate voltage (V)	release voltage (V)	voltage (V)	consumption (VA, W)
	12	106.5	91	46	0.17	0.33	<u> </u>	<u> </u>		
	24	53.8	46	180	0.69	1.3	ן ו	1	l – – – – – – – – – – – – – – – – – – –	
AC	100/110	11.7/12.9	10/11	3,750	14.54	24.6	· · · · · · · · · · · · · · · · · · ·	30% min.*2	1	Approx.0.9 to 1.3
AC	110/120	9.9/10.8	8.4/9.2	4,430	19.2	32.1	ו ו	30% mm. Z	1	(at 60 Hz)
	200/220	6.2/6.8	5.3/5.8	12,950	54.75	94.07	80% max.*1	1	110% of	
	220/240	4.8/5.3	4.2/4.6	18,790	83.5	136.4	50 % max. 1	1	rated voltage	
	12	75	5	160	0.73	1.37	ן ד		וייו	
DC	24	36.	·.9	650	3.2	5.72	ו ו	10% min *2	1	Approx 0.0
DC	48	18.	3.5	2,600	10.6	21.0	1	10% min.*2	1	Approx. 0.9
	100/110	9.1/	/10	11,000	45.6	86.2	1	1		

Note: 1. The rated current and coil resistance are measured at a coil temperature of 23°C with tolerances of +15%/-20% for AC rated current and ±15% for DC coil resistance. The AC coil resistance and inductance values are reference values only (at 60 Hz). Operating characteristics were measured at a coil temperature of 23°C.

2.

3.

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

MY(S)

# **Contact Ratings**

Number of poles (contact configuration)		2-pole	(DPDT)		3-pole (3PDT)		
Contact structure	Sir	ngle	Bifur	cated	Single		
Load	d Resistive load Inductive load $(\cos \phi = 0.4, L/R = 7 ms)$		Resistive load	Inductive load (cos φ = 0.4, L/R = 7 ms)	Resistive load	Inductive load (cos φ = 0.4, L/R = 7 ms)	
Rated load	5 A at 250 VAC 5 A at 30 VDC	2 A at 250 VAC 2 A at 30 VDC	5 A at 220 VAC 5 A at 24 VDC	2 A at 220 VAC 2 A at 24 VDC	5 A at 220 VAC 5 A at 24 VDC	2 A at 220 VAC 2 A at 24 VDC	
Rated carry current*1	10 A		5 A		5 A		
Maximum switching voltage	250 VAC, 125 VDC				250 VAC, 125 VDC		
Maximum switching current	10 A		5 A		5 A		
Maximum switching power	2,500 VA 300 W	500 VA 60 W	1,100 VA 120 W	440 VA 48 W	1,100 VA 120 W	440 VA 48 W	
Contact material	Ag		Au plating + Ag		Ag		

Number of poles (contact configuration)	4-pole (4PDT)						
Contact structure	Sir	ngle	Bifu	rcated	Crossbar bif	L/R = 7 ms)	
Load	Resistive load	Inductive load (cos φ = 0.4, L/R = 7 ms)	Resistive load	Inductive load (cos φ = 0.4, L/R = 7 ms)	Resistive load	(cos φ = 0.4,	
Rated load	3 A at 250 VAC 3 A at 30 VDC	0.8 A at 250 VAC 1.5 A at 30 VDC	3 A at 250 VAC 3 A at 30 VDC	0.8 A at 250 VAC 1.5 A at 30 VDC	1 A at 220 VAC 1 A at 24 VDC	0.3 A at 220 VAC 0.5 A at 24 VDC	
Rated carry current*1	5 A				1 A		
Maximum switching voltage	250 VAC, 125 VDC						
Maximum switching current	5 A				1 A		
Maximum switching power	1,250 VA 150 W	200 VA 45 W	1,250 VA 150 W	200 VA 45 W	220 VA 24 W	66 VA 12 W	
Contact material	Au cladding + Ag al	loy		Au cladding + AgPd			

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

MYK

# **Characteristics**

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

Note: The data shown above are initial values.
\*1. Models with latching lever are 100 mΩ maximum.
\*2. Measurement conditions: 1 A at 5 VDC using the voltage drop method.
\*3. Measurement conditions: With rated operating power applied, not including contact bounce.

\*2. \*3. \*4. \*5. \*6. Measurement conditions: For 500 VDC applied to the same location as for dielectric strength measurement.

Ambient temperature condition: 23°C

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

Number of poles (contact configuration)	2-pole (DPDT)			3-pole	(3PDT)	4-pole (4PDT)				
Contact structure	Sin	gle	Bifur	cated	ted Single Single/bifurcated		ifurcated	Crossbar bifurcated (CBG)		
Operation indicator	Without operation indicator	With operation indicator								
Ambient operating temperature*1	-55 to +70%	-55 to +70% -{		-55 to +60%*2	-55 to +70%	-55 to +60% *2	-55 to +70%		-55 to +70%	-55 to +60%
Ambient operating humidity	5 to 85%RH	5 to 85%RH								

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

# **Certified Standards**

# •UL certification (File No. E41515)

MY-GS-R	Model	Standard number	Category	Listed/ Recognized	Operating Coil ratings	No. of poles	Contact ratings	Certified number of operations
	MY2□(S) MY2□-D2(S) MY2□-CR(S)	UL508	NRNT2	Recognition	6 to 240 VAC 6 to 125 VDC	2	10 A, 250 VAC (General Use) 10 A, 30 VDC (General Use) 7 A, 240 VAC (General Use) 7 A, 24 VDC (Resistive) 5 A, 240 VAC (General Use) 5 A, 250 VAC (Resistive) 5 A, 30 VDC (Resistive) 3 A, 265 VAC (Resistive)	6,000
NVIS.							1/6 HP, 250 VAC 1/8 HP, 265 VAC 1/10 HP, 120 VAC	1,000
K							B300 Pilot Duty (Same polarity)	6,000
(2)	MY2Z□ MY2-02 MY2F	UL508	NRNT2	Recognition	6 to 240 VAC 6 to 125 VDC	2	7 A, 240 VAC (General Use) 7 A, 24 VDC (Resistive) 5 A, 240 VAC (General Use) 5 A, 250 VAC (Resistive) 5 A, 30 VDC (Resistive) 3 A, 265 VAC (Resistive)	6,000
							1/6 HP, 250 VAC 1/8 HP, 265 VAC 1/10 HP, 120 VAC	1,000
							B300 Pilot Duty (Same polarity)	6,000
-	MY3 MY3N-D2	UL508	NRNT2	Recognition	6 to 240 VAC 6 to 125 VDC	3	5 A, 28 VDC (Resistive) 5 A, 240 VAC (General Use)	6,000
	MY3-02 MY3F						1/6 HP, 250 VAC	1,000
МҮК	MY4_(S) MY4D2(S) MY4CR(S) MY402 MY4_F	UL508	NRNT2	Recognition	6 to 240 VAC 6 to 125 VDC	4	5 A, 28 VDC (General Use) (Same polarity) 5 A, 240 VAC (General Use) (Same polarity) 5 A, 30 VDC (Resistive) (Same polarity) 5 A, 250 VAC (Resistive) (Same polarity) 0.2 A, 120 VDC (Resistive) (Same polarity)	6,000
							1/6 HP, 250 VAC (Same polarity) 1/10 HP, 120 VAC (Same polarity)	1,000
							B300 Pilot Duty (Same polarity)	6,000

MYQ·MYH

Model	Standard number	Class number	Operating Coil ratings	No. of poles	Contact ratings	Certified number of operations
MY2□(S) MY2□-D2(S) MY2□-CR(S)	C22.2 NO.0, No.14		6 to 240 VAC 6 to 125 VDC	2	7 A, 240 VAC (Resistive) 7 A, 24 VDC (Resistive) 5 A, 240 VAC (General Use) 5 A, 250 VAC (Resistive) 5 A, 30 VDC (Resistive)	6,000
					1/6 HP, 250 VAC (Same polarity) 1/10 HP, 120 VAC (Same polarity)	1,000
MY2Z MY2-02 MY2F	C22.2 NO.0, No.14		6 to 240 VAC 6 to 125 VDC	2	7 A, 240 VAC (General Use) (Same polarity) 7 A, 24 VDC (Resistive) (Same polarity) 5 A, 240 VAC (General Use) (Same polarity) 5 A, 30 VDC (Resistive) 5 A, 250 VAC (Resistive) (Same polarity) 0.2 A, 120 VDC (Resistive)	6,000
					1/6 HP, 250 VAC 1/10 HP, 120 VAC	1,000
MY3 MY3N-D2 MY3-02 MY3F	C22.2 NO.0, No.14	-	6 to 240 VAC 6 to 125 VDC	3	5 A, 28 VDC (Resistive) 5 A, 240 VAC (General Use) 7 A, 240 VAC (General Use) 7 A, 240 VAC (General Use) 7 A, 24 VDC (Resistive)	6,000
					1/6 HP, 250 VAC	1,000
MY4⊟(S) MY4⊡-D2(S) MY4⊡-CR(S)	C22.2 No.14	3211 07	6 to 240 VAC 6 to 125 VDC	4	5 A, 240 VAC (General Use) (Same polarity) 5 A, 28 VDC (General Use) (Same polarity) 5 A, 250 VAC (Resistive) (Same polarity) 5 A, 30 VDC (Resistive) (Same polarity) 0.2 A, 120 VDC (Resistive) (Same polarity)	6,000
					1/6 HP, 250 VAC (Same polarity) 1/10 HP, 120 VAC (Same polarity)	1,000
					B300 Pilot Duty (Same polarity)	6,000
MY4⊡-02 MY4⊡F	C22.2 NO.0, No.14	3211 07	6 to 240 VAC 6 to 125 VDC	4	7 A, 240 VAC (General Use) (Same polarity) 7 A, 24 VDC (Resistive) (Same polarity) 5 A, 240 VAC (General Use) (Same polarity) 5 A, 30 VDC (Resistive) 5 A, 250 VAC (Resistive) (Same polarity) 0.2 A, 120 VDC (Resistive)	6,000
					1/6 HP, 250 VAC 1/10 HP, 120 VAC	1,000

# •TÜV Rheinland certification (Certification No. R50030059)

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

### ~~~ 4:£; /=:1 NI. 1 024020 43

J

●CE Marki	●CE Marking									
Model	EMC Directive	Low Voltage Directive	Machinery Directive	Safety Category						
MY2 (S) MY2D2(S) MY2CR(S) MY2Z - MY2ZN-D2 MY2F	Not applicable	Applicable	Not applicable	1						
MY3 MY3N-D2 MY3F										
MY4□(S) MY4□-D2(S) MY4□-CR(S) MY4□F										

# MY(S)

# •LR certification (Lloyd's Register)

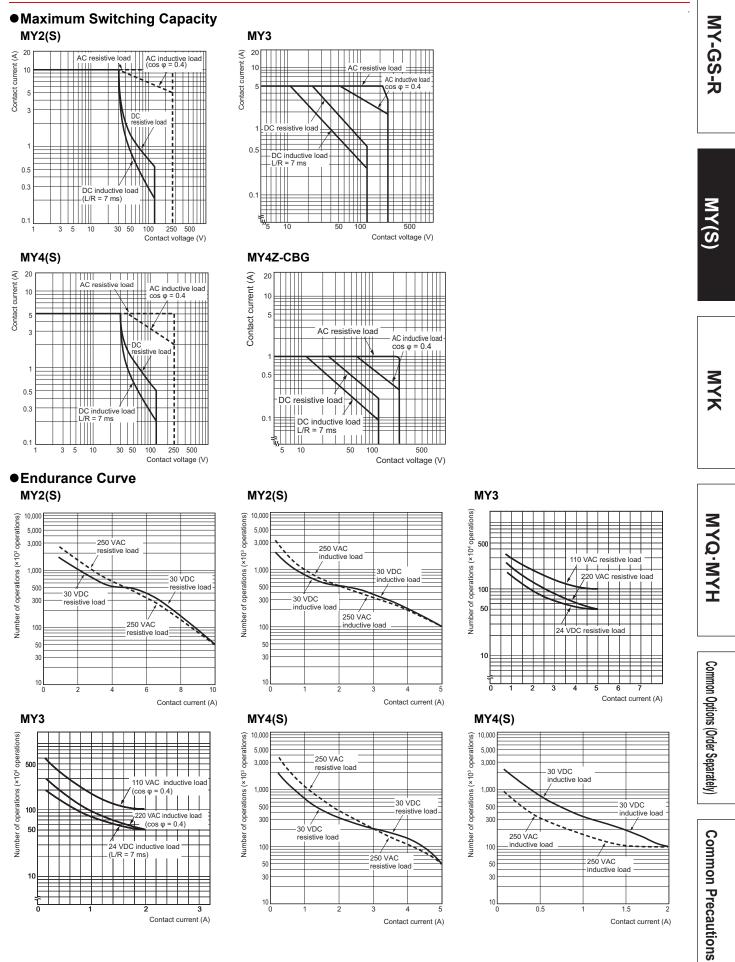
Model	Environmental Category	Operating Coil ratings
MY2□(S) MY2□-D2(S) MY2□-CR(S)	ENV2,3	6 to 240 VAC 6 to 125 VDC
MY2Z MY2ZN-D2	ENV2,3	6 to 240 VAC 6 to 125 VDC
MY4□(S) MY4□-D2(S) MY4□-CR(S)	ENV2,3	6 to 240 VAC 6 to 125 VDC

# •VDE certification

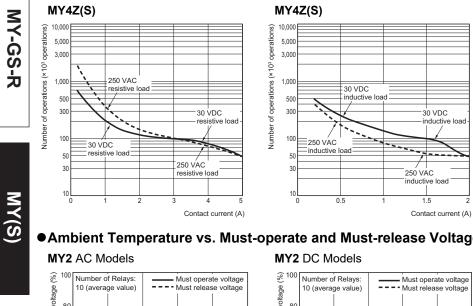
Z	Model	Standard number	Certification No.	Operating Coil ratings	Contact ratings	Certified number of operations
ΥK	MY2□(S) MY2□-D2(S) MY2□-CR(S)	EN 61810-1	112467UG	6, 12, 24, 48/50, 100/110, 110/120, 200/220, 220/240 VAC	10A, 250 VAC (cos φ = 1) 10A, 30 VDC (L/R = 0 ms)	MY2: 100,000 MY4: 100,000 MY4Z: 50,000 (AC)
				6, 12, 24, 48, 100/110, 125 VDC		
MYQ.	MY4□(S) MY4□-D2(S) MY4□-CR(S)	-		6, 12, 24, 48/50, 100/110, 110/120, 200/220, 220/240 VAC	5 A, 250 VAC ( $\cos \varphi = 1$ ) 5 A, 30 VDC (L/R = 0 ms)	
HAW				6, 12, 24, 48, 100/110, 125 VDC		

Common Options (Order Separately)

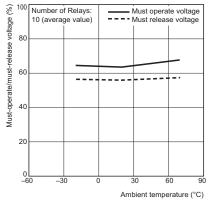
# Engineering Data (Reference Value)



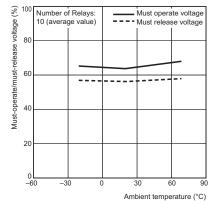
# OMRON

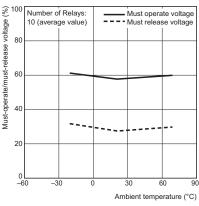


# •Ambient Temperature vs. Must-operate and Must-release Voltage



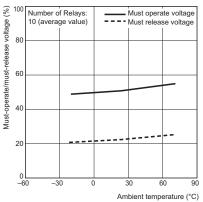
# MY4 AC Models





2

# MY4 DC Models



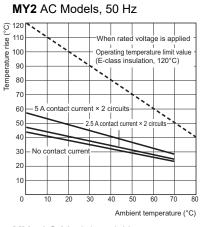
Common Options (Order Separately)

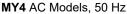
MYK

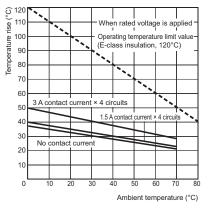
MYQ-MYH

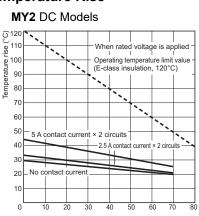
# OMRON

# Ambient Temperature vs. Coil Temperature Rise



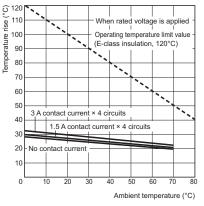




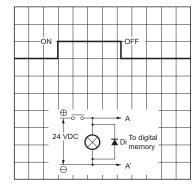








### Models with built-in diode for coil surge absorption MY -D With Diode Without Diode



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	DN -				FF	
				_		
			Î			Γ
				Г		Г

А To digital

memory

A'

40

Note: 1. 2.

Make sure that the polarity is correct. The release time will increase, but the 20-ms specification for standard models is satisfied. Diode properties: The diode has a reversed dielectric strength of 1,000 V. Forward current: 1 A 3.

0

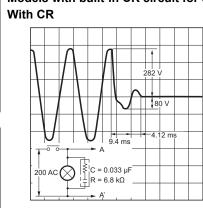


**MY-GS-R** 

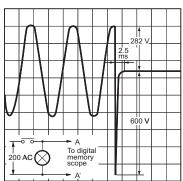
MY(S)

МКК

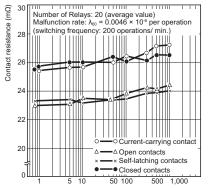
MYQ-MYH



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



# •Contact Reliability Test MY4Z-CBG (Modified Allen Bradley Circuit) Contact load: 5 VDC, 1 mA resistive load Malfunction level: Contact resistance of 100 Ω



Number of operations (×10<sup>4</sup> operations)

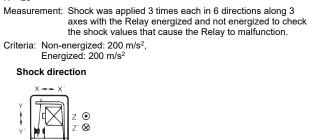
# Common Specifications for MY2, MY3, MY4, MY4Z, MY□-02, MY□F, and MY(S) ●Shock Malfunction

### Energized Not energized X 600 X X 600 X X 600 X X 600 X X X 600 X X X X 600 X

# N = 20

700

500



Common Options (Order Separately)

(Unit: mm)

**MY-GS-R** 

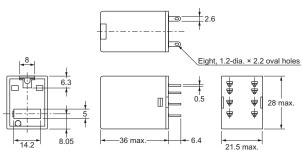
MY(S)

# Dimensions

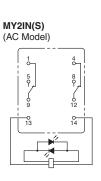
# Plug-in terminals

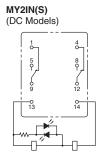
MY2⊡(S)



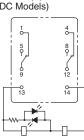


**Note:** The picture is lockable test button type.





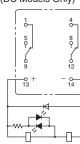
MY2IN1(S) (DC Models)



MY2IN-D2(S) (DC Models Only)

Terminal Arrangement/Internal Connections (Bottom View)

MY2IN1-D2(S) (DC Models Only)



0-14

MY2IN-CR (AC Models Only)

> 1 C

5 9

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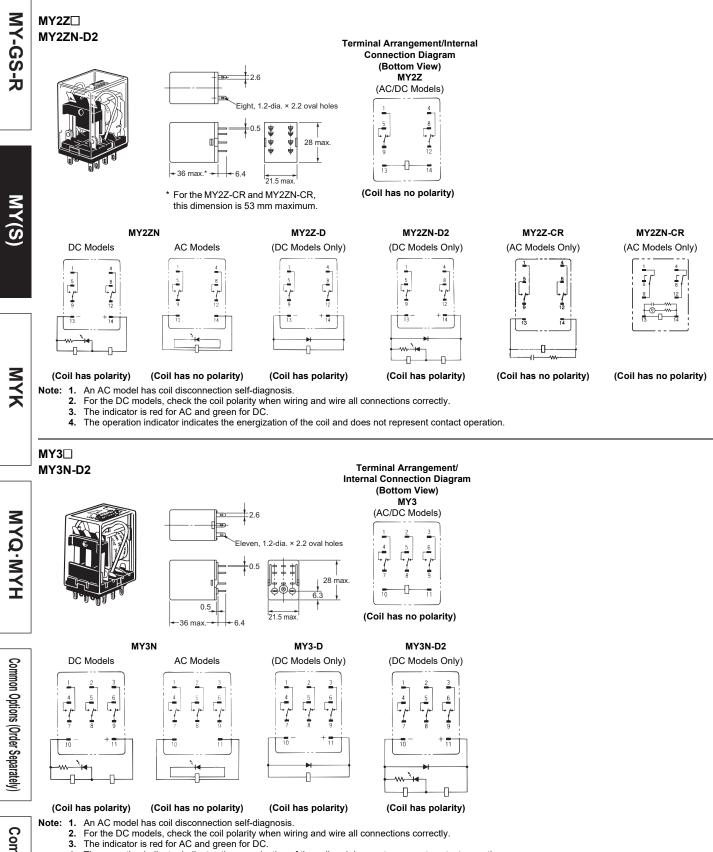
-0 13

MYQ-MYH

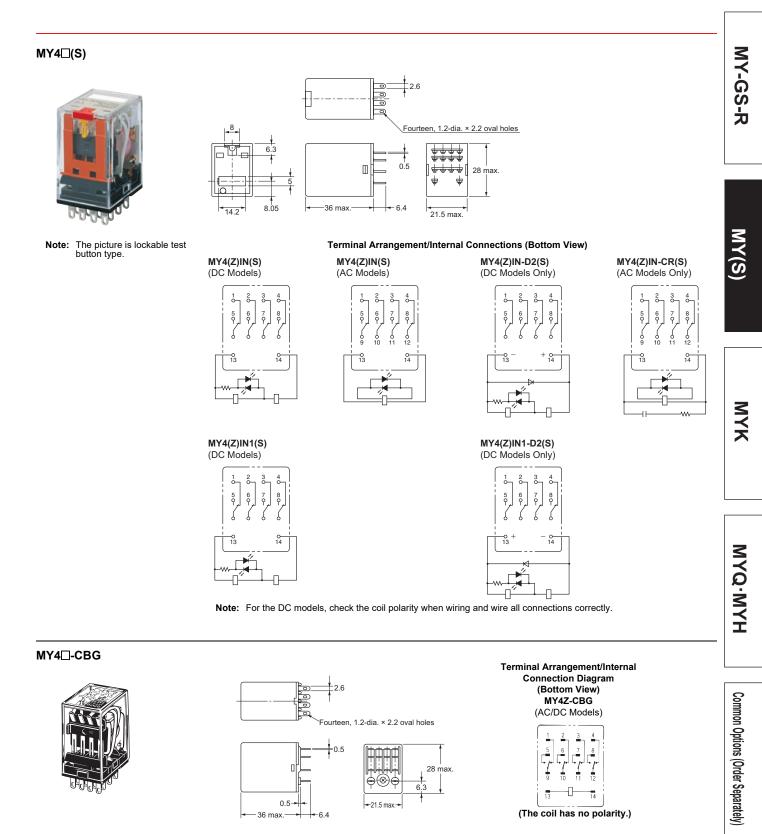
**М** Υ

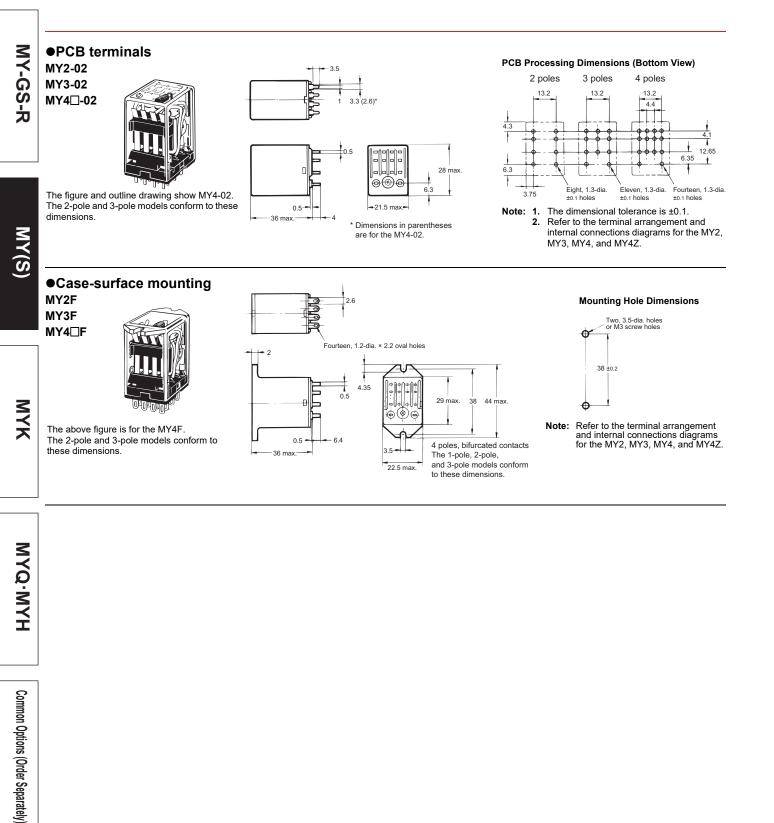
Common Options (Order Separately)

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



# OMRON





# Miniature Power Latching Relays

# Latching miniature power relays that retain contact operation status

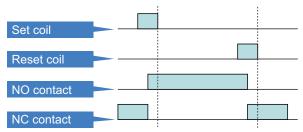
- A low power consumption type that retains contacts using a magnetic lock system.
- Equipped with mechanical operation indicators to make operation status easy-to-see.

Refer to Safety Precautions on pages 63 to 64 and Safety Precautions for All Relays.

# Features

# Latching Relays MYK

Retains contact operation status.



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

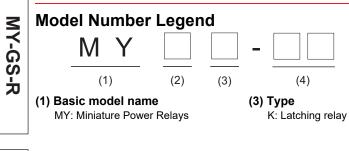
\*MYK features a magnetic lock system.

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



# MYK

# **Model Number Structure**



(2) Number of poles/contacts 2: 2-pole, single

(4) Optio	ons, terminal type
None:	Plug-in terminals
02:	PCB terminals

# **Ordering Information**

When your order, specify the rated voltage.

# Main unit

# Plug-in terminals

Classification	Number of poles	Contacte	Model	Rated voltage	
Standard models (compliant with Electrical	2	Single	МҮ2К	12, 24, 100, 100/110 VAC	
Appliances and Material Safety Act)		Single	WITZK	12, 24, 48 VDC	

# PCB terminals

	Classification	Number of poles	Contacte	Model	Rated voltage
2	Standard models (compliant with Electrical	2	Olarada	MY2K-02	24, 100 VAC
5	Appliances and Material Safety Act)	2	Single	WIT2R-02	12, 24 VDC

MYQ-MYH

MY(S)

# **Ratings and Specifications**

# Ratings Operating coil

Rated voltage (V)		Set coil			Reset coil						Power consumption (VA, W)	
		Rated current (mA)		Coil resistance	Rated current (mA)		Coil resistance	Must operate voltage (V)	Must release voltage (V)	Maximum voltage (V)	Set coil	Reset coil
		50 Hz	60 Hz	(Ω)	50 Hz	60 Hz	(Ω)	voluge (v)	voltage (v)			
AC	12	57	56	72	39	38.2	130	- 80% max.*	80% max.	110% max. of rated	Approx. 0.6 to 0.9 (at 60 Hz)	Approx. 0.2 to 0.5 (at 60 Hz)
	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	00% max.	60% max.	voltage	Approx. 1.3	Approx. 0.6
	24	52		470	25		940					
	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°C with tolerances of +15%/-20% for AC rated current and ±15% for DC coil resistance. The AC coil resistance is a reference value only. Operating characteristics were measured at a coil temperature of 23°C.

3.

4.

5. The maximum voltage capacity was measured at an ambient temperature of 23°C.

\*There is variation between products, but actual values are 80% maximum.

# Contact Ratings

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

# **Characteristics**

ance*1	50 mΩ max.	∣⋜		
Operate time*2	AC: 30 ms max., DC: 15 ms max.			
Minimum pulse width	AC: 60 ms, DC: 30 ms			
Release time*2	AC: 30 ms max., DC: 15 ms max.			
Minimum pulse width	AC: 60 ms, DC: 30 ms	Ì		
Mechanical	18,000 operations/h			
Rated load	1,800 operations/h			
stance*3	100 MΩ min.			
Between coil and contacts Between contacts of different polarity	1,500 VAC at 50/60 Hz for 1 min	Commo		
Between contacts of the same polarity	1,000 VAC at 50/60 Hz for 1 min	Common Options		
Between set/reset coils				
Destruction	10 to 55 to 10 Hz, 0.5-mm single amplitude (1.0-mm double amplitude)	Orde		
Malfunction	10 to 55 to 10 Hz, 0.5-mm single amplitude (1.0-mm double amplitude)	er Se		
Destruction	1,000 m/s <sup>2</sup>	para		
Malfunction	200 m/s <sup>2</sup>	(Order Separately		
Mechanical	100,000,000 operations min. (switching frequency: 18,000 operations/h)			
Electrical*4	200,000 operations min. (at rated load, switching frequency: 1,800 operations/h)			
value (reference value)*5	1 mA at 1 VDC	C		
iting temperature*6	-55 to 60°C			
iting humidity	5% to 85%	ommon		
	Approx. 30 g	P		
	Operate time*2         Minimum pulse width         Release time*2         Minimum pulse width         Mechanical         Rated load         stance*3         Between coil and contacts of different polarity         Between contacts of the same polarity         Between set/reset coils         Destruction         Malfunction         Destruction         Malfunction         Electrical*4         value (reference value)*5         ting temperature*6	Operate time*2       AC: 30 ms max., DC: 15 ms max.         Minimum pulse width       AC: 60 ms, DC: 30 ms         Release time*2       AC: 30 ms max., DC: 15 ms max.         Minimum pulse width       AC: 60 ms, DC: 30 ms         Mechanical       18,000 operations/h         Rated load       1,800 operations/h         stance*3       100 MΩ min.         Between coil and contacts Between contacts of different polarity       1,500 VAC at 50/60 Hz for 1 min         Between contacts of the same polarity       1,000 VAC at 50/60 Hz for 1 min         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)         Malfunction       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)         Malfunction       10 to 55 to 10 Hz, 0.5-mm single amplitude (1.0-mm double amplitude)         Malfunction       200 m/s <sup>2</sup> Mechanical       100,000,000 operations min. (switching frequency: 18,000 operations/h)         Electrical*4       200,000 operations min. (at rated load, switching frequency: 1,800 operations/h)         value (reference value)*5       1 mA at 1 VDC         titing temperature*6       -55 to 60°C		

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

1 A at 5 VDC using the voltage drop method.

\*2. Measurement conditions:

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

Ambient temperature condition: 23°C

\*3. \*4. \*5. \*6. This value was measured at a switching frequency of 120 operations per minute.

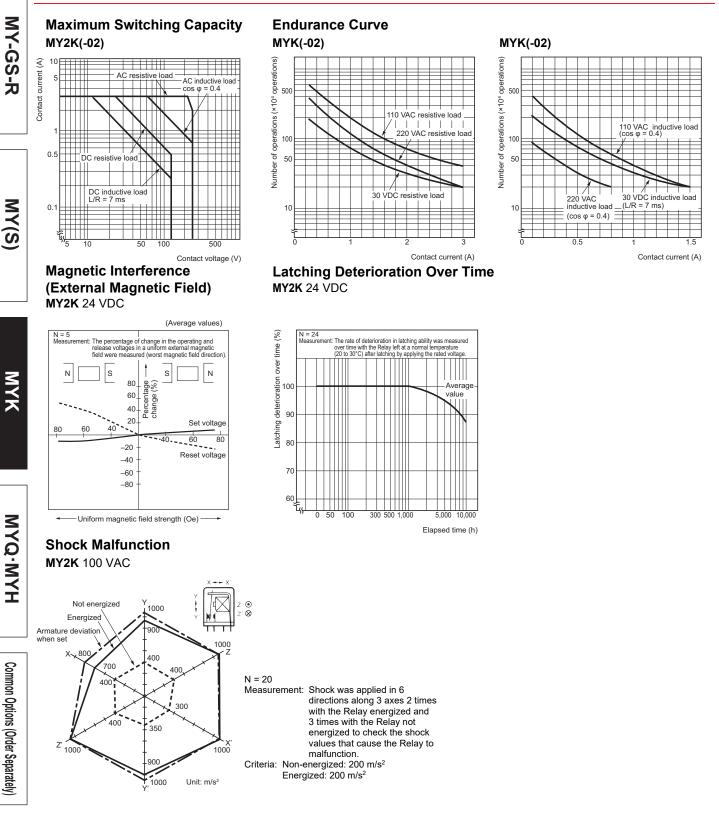
With no icing or condensation.

**MYK** 

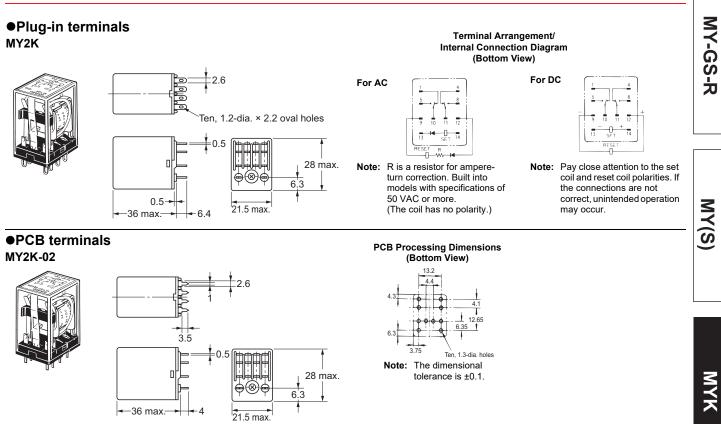
**MY-GS-R** 

# MYK

# **Engineering Data (Reference Value)**



# Dimensions



# **Miniature Power Sealed Relays** MYQ/MYH

MY(S)

MYK

MYQ-MYH

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

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

Refer to Safety Precautions on pages 63 to 64 and Safety Precautions for All Relays.



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

# **Features**

# Highly Airtight Relays (Plug-in Terminals)

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

# Plastic Sealed Relays: MYQ

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



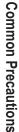


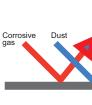


# Hermetically Sealed Relays: MYH

MYH

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



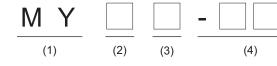




# MYQ·MYH

# **Model Number Structure**

## Model Number Legend



# (1) Basic model name

MY: Miniature Power Sealed Relays

#### (2) Contacts/seals

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

## (3) **Type**

 None:
 None

 N:
 With operation indicator\*

 \*Only MYQ (plastic sealed relay)

#### (4) Options, terminal type

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

# **Ordering Information**

When your order, specify the rated voltage.

## **Plastic Sealed Relays**

#### •Plug-in terminals

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

### •PCB terminals

Classification	Number of poles	Contacts	Model	Rated voltage
Standard models		Single	MYQ4-02	50, 200/220, 220/240 VAC
(compliant with		Single	WIT Q4-02	24 VDC
Electrical Appliances and Material Safety Act)	4	Bifurcated	MYQ4Z-02	100/110 VAC
			WITQ42-02	24, 48 VDC

## **Hermetically Sealed Relays**

## Plug-in terminals

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

#### PCB terminals

Classification	Number of poles	Contacts	Model	Rated voltage
Standard models (compliant with Electrical Appliances and Material Safety Act)		Single	MY4H-0	110/120 VAC
	4	Single	WI 40-0	24 VDC
		Bifurcated	MY4ZH-0	24, 100/110 VDC

МЧК

MY(S)

## **MYQ·MYH**

# **Ratings and Specifications**

## Operating coil

voltage (V)	50 Hz	60 Hz	resistance	Armature	Armature	Must operate	Must release	Maximum	consumption
			(Ω)	OFF	ON	voltage (V)*1	voltage (V)*2	voltage (V)	(VA, W)
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		30% min.	110% max. of	
200/220	6.2/6.8	5.3/5.8	12,950	54.75	91.07				
220/240	4.8/5.3	4.2/4.6	18,790	83.5	136.4	80% max.			
12	75		165	0.734	1.37	-	10% min.		Approx. 0.9
24	36.9		650	3.2	5.72				
48	18.5		2,600	10.6	21.0				
100/110	9.1/10		11,000	45.6	86.0				
	110/120 200/220 220/240 12 24 48	110/120         9.9/10.8           200/220         6.2/6.8           220/240         4.8/5.3           12         7           24         36           48         18	110/120         9.9/10.8         8.4/9.2           200/220         6.2/6.8         5.3/5.8           220/240         4.8/5.3         4.2/4.6           12         75           24         36.9           48         18.5	110/120         9.9/10.8         8.4/9.2         4,430           200/220         6.2/6.8         5.3/5.8         12,950           220/240         4.8/5.3         4.2/4.6         18,790           12         75         165           24         36.9         650           48         18.5         2,600	110/120         9.9/10.8         8.4/9.2         4,430         19.2           200/220         6.2/6.8         5.3/5.8         12,950         54.75           220/240         4.8/5.3         4.2/4.6         18,790         83.5           12         75         165         0.734           24         36.9         650         3.2           48         18.5         2,600         10.6	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           12         75         165         0.734         1.37           24         36.9         650         3.2         5.72           48         18.5         2,600         10.6         21.0	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           12         75         165         0.734         1.37           24         36.9         650         3.2         5.72           48         18.5         2,600         10.6         21.0	110/120         9.9/10.8         8.4/9.2         4,430         19.2         32.1         30% min.           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           12         75         165         0.734         1.37           24         36.9         650         3.2         5.72           48         18.5         2,600         10.6         21.0	110/120         9.9/10.8         8.4/9.2         4,430         19.2         32.1         30% min.           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           12         75         165         0.734         1.37           24         36.9         650         3.2         5.72           48         18.5         2,600         10.6         21.0

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

2.

3.

4. The maximum voltage capacity was measured at an ambient temperature of 23°C.

\*1. There is variation between products, but actual values are 80% maximum. To ensure operation, apply at least 80% of the rated value.
\*2. There is variation between products, but actual values are 30% minimum for AC and 10% minimum for DC. To ensure release, use a value that is lower than the specified value.

#### Contact Ratings ... ~ .....

Plastic Sealed	Relays:	MYQ
----------------	---------	-----

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

## Hermetically Sealed Relays: MYH Number of poles

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

MYK

## **Characteristics**

Character	istics					YM			
Model			MYQ MYH						
Contact resistant	ce*1	50 m $\Omega$ max.				GS			
Operate time*2		20 ms max.	20 ms max.						
Release time*2		20 ms max.				לל			
Maximum Mechanical		18,000 operations/h							
switching frequency	Rated load	1,800 operations/h							
Insulation resista	ince*3	100 MΩ min.							
	Between coil and contacts	1,500 VAC at 50/60	Hz for 1 min	1,000 VAC at 50/60	Hz for 1 min				
Dielectric strength	Between contacts of different polarity	1,500 VAC at 50/60	Hz for 1 min	1,000 VAC at 50/60	Hz for 1 min	MY			
	Between contacts of the same polarity	1,000 VAC at 50/60	Hz for 1 min	700 VAC at 50/60 Hz for 1 min					
Vibration Destruction		10 to 55 to 10 Hz, 0.5-mm single amplitude (1.0-mm double amplitude)							
resistance	Malfunction	10 to 55 to 10 Hz, 0.5-mm single amplitude (1.0-mm double amplitude)							
Shock resistance	Destruction	1,000 m/s <sup>2</sup>							
SHOCK resistance	Malfunction	200 m/s <sup>2</sup>							
Endurance	Mechanical	Single contacts: Bifurcated contacts:	AC: 50,000,000 operations min., DC: 100,000,000 operations min. 5,000,000 operations min., DC: 5,000,000 operations min. (switching frequency: 18,000 operations/h)	Single contacts: Bifurcated contacts:	50,000,000 operations min. 5,000,000 operations min. (switching frequency: 18,000 operations/h)				
	Electrical*4	Single contacts: Bifurcated contacts:	200,000 operations min. 100,000 operations min. (at rated load, switching frequency: 1,800 operations/h)	Single contacts: Bifurcated contacts:	100,000 operations min. 50,000 operations min. (at rated load, switching frequency: 1,800 operations/h)	МХК			
Failure rate P Lev	vel (reference value)*5	Single contacts: Bifurcated contacts:	1 mA at 1 VDC 100 μA at 1 VDC	Single contacts: Bifurcated contacts:	100 μA at 1 VDC 100 μA at 100 mVDC				
Ambient operatin	g temperature*6	-55 to 60°C		-25 to 60°C					
Ambient operatin	g humidity	5% to 85%							
Weight		Approx. 35 g		Approx. 50 g		L			

Note: The data shown above are initial values. \*1. Measurement conditions:\*2. Measurement conditions:

A at 5 VDC using the voltage drop method. With rated operating power applied, not including contact bounce.

Ambient temperature conditions: 23°C Ambient temperature conditions: For 500 VDC applied to the same location as for dielectric strength measurement. Ambient temperature condition: 23°C This value was measured at a switching frequency of 120 operations per minute. With no icing or condensation.

\*3. \*4. \*5. \*6.

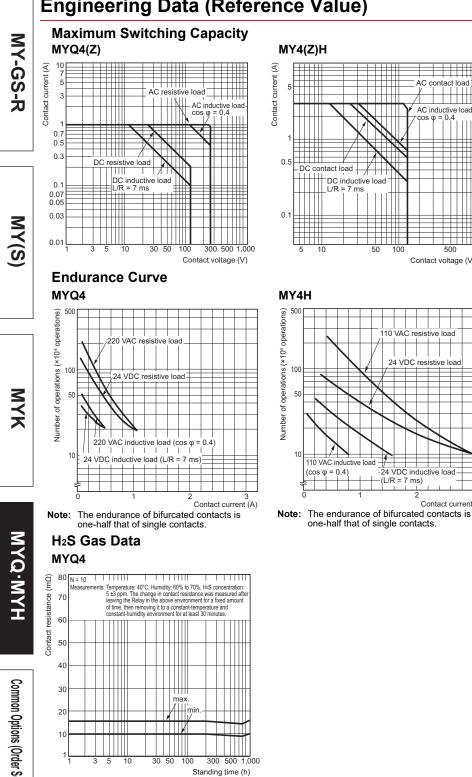
**MYQ·MYH** 

Common Options (Order Separately)

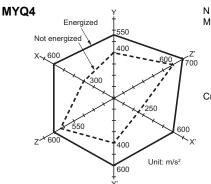
**Common Precautions** 

# **MYQ·MYH**

# **Engineering Data (Reference Value)**



## **Shock Malfunction**



N = 20

Measurement: Shock was applied 3 times each in 6 directions along 3 axes with the Relay energized and not energized to check the shock values that cause the Relay to malfunction. Criteria: Non-energized: 200 m/s<sup>2</sup> Energized: 200 m/s<sup>2</sup>

#### Shock direction

AC contact load

AC inductive load m = 0.4

500

Contact voltage (V)

110 VAC

24 VDC resistive lo

24 VDC inductive load

Contact current (A)

-(L/R = 7 ms)



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# **MYQ·MYH**

(Unit: mm)

#### **Dimensions** Plug-in terminals MY-GS-R **Plastic Sealed Relays** MYQ4(Z)N MYQ4(Z)(N) DC Models AC Models -26 -7 -7 6 6 8 •/ -<u>7</u> -7 8 Fourteen, 1.2-dia. × 2.2 oval holes 10 0.5 14 14 13 28 ⊕(⊗)⊕ 6.3 MY(S) 0.5 21.5 max 36 max 64 (Coil has no polarity) (Coil has no polarity) Note: An AC model has coil disconnection self-diagnosis. Terminal Arrangement/ Internal Connection Diagram (Bottom View) MY4(Z)H **Hermetically Sealed Relays** MY4(Z)H 00 3 4 5 6 8 MYK Fourteen, 1.2-dia. × 3 oval hol -22 max-12 10 1 0.5 13 11 14 0000 28.5 max Ð ⊜ (Coil has no polarity) -35 max PCB terminals **Plastic Sealed Relays MYQ·MYH** MYQ4(Z)-02 PCB Processing Dimensions (Bottom View) 13.2 21.5 .0 0.6-1 1 12.65 6.35 6.3 28 max ourteen, 1.3-dia. holes 28.5 max \_\_\_\_ Common Options (Order Separately) 3.75 Note: The dimensional tolerance is ±0.1. -35.5 max.--21.5 max.-**Hermetically Sealed Relays** MY4(Z)H-0 PCB Processing Dimensions (Bottom View) =1.3 dia. +22 max.+ 5.5 1.3 dia. 0000 **Common Precautions** 0000 28.5 max ÛĘ 0000 17 urteen, 2-dia, holes -35 max.

# **Common Options (Order Separately)**

# **Ordering Information**

## **Front-mounting Sockets**

**MY-GS** 

ל	Applicable relay model*1	Mounting Method	Conductive part protection	Terminal Type	Applicable crimp terminal/ Electric wire	Appearance	Model	Hold-down Clips/ Release Levers (Order Separately)	
				Push-In Plus	Ferrules Solid wire		PYF-08-PU*2	With release lever * Hold by release lever	
MY(S)				Terminal	Stranded wire		PYF-08-PU-L*2		
<u> </u>	Mounted on a DIN track or with screws Forked	Forked terminals		PYFZ-08-E*4					
	MY2□ MY2□(S) MY2Z□-CR	Option (Terminal cover sold separately) *3		Screw terminal (M3 screw size)	Solid wire Stranded wire	Girden and	PYF08A-N	MY2IN(S): PYC-E1	
МҮК				Round terminals Forked terminals Solid wire Stranded wire	Contraction of the second	PYFZ-08 * Terminal cover: PYCZ-C08	-		
2		Mounted on a DIN track	Available	Screwless terminal (Clamp method)	Solid wire Stranded wire		PYF08S	PYCM-08S * Hold by release lever	
MYQ-MYI	MY3□	Mounted on a DIN track or with screws	None	Screw terminal (M3 screw size)	Round terminals Forked terminals Solid wire Stranded wire		PYF11A	PYC-A1	

 The applicable relay model is a plug-in terminal type.
 There are screw mounting holes in the DIN hooks on the PYF-\_\_\_PU and P2RF-\_\_PU. Pull out the DIN hook tabs to mount the Sockets with screws.
 Terminal cover type is PYCZ-C08. (Order Separately) For details, refer to the *For Screw Terminal Sockets (PYFZ-08/PYFZ-14) Terminal covers* on page 51.
 The finger-protection type (PYFZ-\_-E) is a type in which the terminal cover is integrated into the socket. Round terminals cannot be used. Use forked terminals or ferrules instead.

I

Applicable relay model*1	Mounting Method	Conductive part protection	Terminal Type	Applicable crimp terminal/ Electric wire	Appearance	Model	Hold-down Clips/ Release Levers (Order Separately)	MY-GS-R
			Push-In Plus	Ferrules Solid wire		PYF-14-PU*2	With release lever * Hold by release lever	S-R
MY4□ MY4□(S) MY4□H MYQ4□ MY4Z□-CBG-CR MY2K			Terminal	Stranded wire		PYF-14-PU-L*2		
	Mounted on a DIN track or with screws Mounted on a DIN track	Available		Forked terminals		PYFZ-14-E*4	-	MY(S)
		Option (Terminal cover sold separately) *3	Screw terminal (M3 screw size)	Solid wire Stranded wire		PYF14A-N	- PYC-A1	3)
				Round terminals Forked terminals Solid wire Stranded wire		PYFZ-14 * Terminal cover: PYCZ-C14		
		Available	Screwless terminal (Clamp method)	Solid wire Stranded wire	A A A A A A A A A A A A A A A A A A A	PYF14S	PYCM-14S * Hold by release lever	МҮК
	Mounted on a DIN track or with screws	None	Screw terminal (M3.5 screw size)	Round terminals Forked terminals Solid wire Stranded wire		PYF14T	PYC-A1	
MY2	Mounted on a DIN track or with screws			Colid wire		PYF14-ESS-B		MYQ
and MY4		DIN track or	Available	Rise-Up terminal	Solid wire Stranded wire		PYF14-ESN-B	PYC-35-B

The applicable relay model is a plug-in terminal type.
 There are screw mounting holes in the DIN hooks on the PYF-\_\_PU and P2RF-\_\_PU. Pull out the DIN hook tabs to mount the Sockets with screws.
 Terminal cover type is PYCZ-C14. (Order Separately) For details, refer to the *For Screw Terminal Sockets (PYFZ-08/PYFZ-14) Terminal covers* on page 51.
 The finger-protection type (PYFZ-\_-E) is a type in which the terminal cover is integrated into the socket. Round terminals cannot be used. Use forked terminals or ferrules instead.

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

\*1. The applicable relay model is a plug-in terminal type.
\*2. The hold-down clips for connecting the relay and socket come as a set with the socket.
\*3. If a Relay with a Latching Lever is used in combination with a PY□□-02 Socket for Relays with PCB Terminals and a PYC-P Mounting Bracket, the lever will not operate.

Terminal Type	Hold-down Clips	Appearance	Model	_   1	
Solder terminals	Accessories (Order Separately) * PYC-P		PY11		
Wrapping terminals Terminal length: 25 mm	Accessories (Order Separately) * PYC-P		PY11QN		
Wrapping terminals Terminal length: 20 mm	Accessories (Order Separately) * PYC-P		PY11QN2		
PCB terminals	Accessories (Order Separately) * PYC-P		PY11-02	MY(S)	
Solder terminals		and a d	PY14		
Wrapping terminals Terminal length: 25 mm	Accessories (Order Separately) * MY4Z□-CBG-CR: PYC-1	y) PY14QN			
Wrapping terminals Terminal length: 20 mm	Other than those above: PYC-P*3		PY14QN2		
PCB terminals			PY14-02		
Solder terminals			PY14-Y1		
Wrapping terminals Terminal length: 25 mm	With Hold-down Clips*2		PY14QN-Y1	Comment of Principal Comments	
Wrapping terminals Terminal length: 20 mm			PY14QN2-Y1	ot	
	Wrapping terminals         Terminal length: 25 mm         Wrapping terminals         PCB terminals         Solder terminals         Wrapping terminals         Terminal length: 25 mm         Wrapping terminals         Terminal length: 25 mm         Wrapping terminals         Terminal length: 20 mm         PCB terminals         PCB terminals         Solder terminals         Wrapping terminals         Terminal length: 20 mm         PCB terminals         Varapping terminals         Verapping terminals         Verapping terminals         Solder terminals         Wrapping terminals         Wrapping terminals         Wrapping terminals         Wrapping terminals         Wrapping terminals	Solder terminals       * PYC-P         Wrapping terminals       Accessories (Order Separately)         Terminal length: 20 mm       Accessories (Order Separately)         PCB terminals       Accessories (Order Separately)         PCB terminals       Accessories (Order Separately)         Solder terminals       Accessories (Order Separately)         Varapping terminals       Accessories (Order Separately)         Solder terminals       Accessories (Order Separately)         Wrapping terminals       Accessories (Order Separately)         Ymapping terminals       Accessories (Order Separately)         PCB terminals       Accessories (Order Separately)         PCB terminals       Bodder terminals         Varapping terminals       Wrapping terminals         Wrapping terminals       With Hold-down Clips*2         Wrapping terminals       With Hold-down Clips*2	Solder terminals       • PYC-P       • • PYC-P         Wrapping terminals       Accessories (Order Separately)       • • PYC-P         Wrapping terminals       Accessories (Order Separately)       • • PYC-P         PCB terminals       Accessories (Order Separately)       • • PYC-P         Solder terminals       Accessories (Order Separately)       • • PYC-P         Wrapping terminals       Accessories (Order Separately)       • • • PYC-P         Wrapping terminals       Accessories (Order Separately)       • • • • • • • • • • • • • • • • • • •	Solder terminals     *PYC-P     ****     ****     P***       Wrapping terminals     Accessories (Order Separately)     ****     P***       Wrapping terminals     Accessories (Order Separately)     ****     P***       PCB terminals     Accessories (Order Separately)     ****     P***       PCB terminals     Accessories (Order Separately)     ****     P***       Solder terminals     Accessories (Order Separately)     ****     P***       Vrapping terminals     Accessories (Order Separately)     ****     P***       Wrapping terminals     Accessories (Order Separately)     ****     P***       Wrapping terminals     *****     P****     P****       Wrapping terminals     ******     P*****     P*****       Wrapping terminals     ***********     P********     P*********       PCB terminals     ******************************     P************************************	

Z	Hold-down Clip									
<b>≺</b>	Appearance*1	Model*2	Weight*3	Application						
MY-GS-R		РҮС-А1	Approx. 0.54 g							
		PYC-E1	Approx. 0.6 g	- For connecting relays and sockets						
MY(S)		РҮС-Р	Approx. 1.4 g							
		PYC-S	Approx. 1.8 g	For connecting sockets, socket mounting plates, and relays						
<b>М</b> Ч		Y92H-3*4	Approx. 0.7 g	For connecting models with built-in circuit for coil surge absorption						
MYQ		PYC-1*5	Approx. 6 g	(MY2Z⊡-CR) and sockets						

**N**-MAH

\*1. The appearance shown is one in which the relay, socket, and hold-down clip are assembled.
\*2. Hold-down clips are used in sets of two. However, PYC-P and PYC-1.
\*3. The weight shown above is the weight for one hold-down clip.
\*4. MY2-CR 24 VAC, MY2N-CR 24 VAC, MY4-CR 24 VAC and MY4N-CR 24 VAC/115 VAC use in combination with hold-down clip Y92H-3.
\*5. MY2-CR 24 VAC, MY2N-CR 24 VAC, MY4-CR 24 VAC and MY4N-CR 24 VAC/115 VAC use in combination with hold-down clip PYC-1.

Common Options (Order Separately)

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## •Front-connecting Socket Accessories For Push-In Plus Terminal Sockets (PYF-08-PU(-L)/PYF-14-PU(-L)) Short Bars

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

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

#### Labels

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

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

#### For Screwless Terminal Sockets (PYF08S/PYF14S)

## Short Bars

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

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

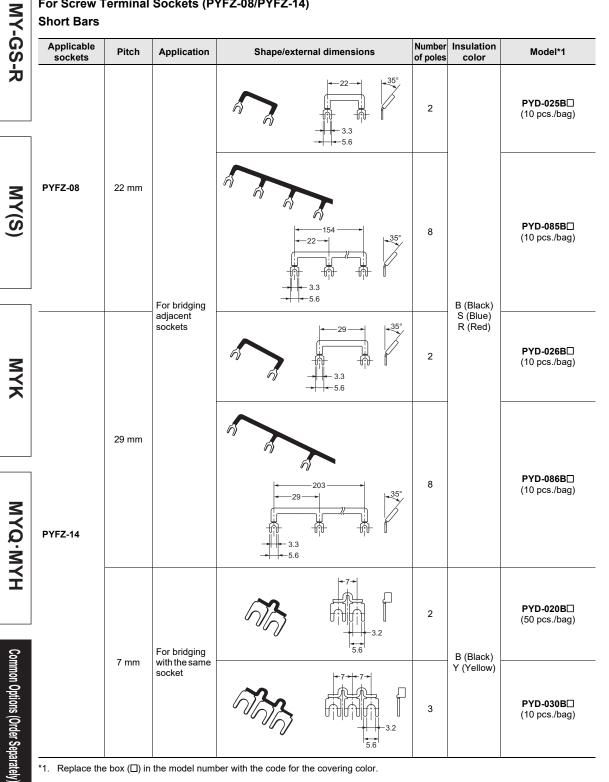
#### Labels

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

#### **Release Levers**

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





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

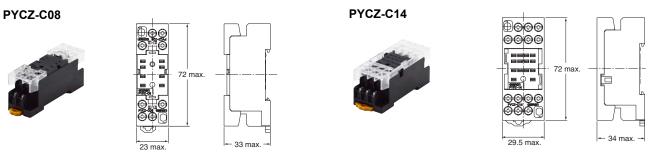
## For Screw Terminal Sockets (PYFZ-08/PYFZ-14) **Terminal covers**

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

Note: 1. These covers cannot be used for PYF08A and PYF14A.

2. A short bar (optional) cannot be used attached to the upper section because it will interfere with the terminal cover.

#### Dimensions with terminal cover



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

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

\*You can cut the PYP-18 and PYP-36 to any required length.

#### Parts for Track Mounting

Туре		Appearance	Model
DIN Tracks	1 m		PFP-100N
DIN Tracks	0.5 m		PFP-50N
End Plate*		Contraction of the second	PFP-M
Spacer			PFP-S

Note: The track conforms to DIN standards.

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

Common Options (Order Separately)

MYK

**MY-GS-R** 

MY(S)

(Unit: mm)

# **Ratings and Specifications**

# **Characteristics**

## MY-( Sockets

GS-R Model							Die	lectric strengt	th *4				
	Model	Connection	Number of pins	Terminal Type	Ambient operating temperature	Ambient operating humidity	Continuous carry current	Between contact terminals of same polarity	Between contact terminals of different polarity	Between coil and contact terminals	Insulation resistance *1 *4	Weight	
	PYF-08-PU			Push-In Plus Terminal	−40 to 70°C		10 4*2	2,000 VAC	2,000 VAC	2,000 VAC		Approx. 80 g	
	PYF08S			Screwless terminal			10 A*2	for 1 min	for 1 min	for 1 min		Approx. 46	
	PYFZ-08		8		−55 to 70°C		10 A	2,250 VAC	2,250 VAC	2,250 VAC		Approx. 32 g	
	PYFZ-08-E			Screw terminal			10 A	for 1 min	for 1 min	for 1 min		Approx. 32 g	
7	PYF08A-N				−55 to 55°C		7 A*3	2,000 VAC for 1 min	2,000 VAC for 1 min	2,000 VAC for 1 min		Approx. 32 g	
MY(S)	PYF11A	Front	11	Screw terminal	−55 to 70°C		5 A	2,000 VAC for 1 min	2,000 VAC for 1 min	2,000 VAC for 1 min	1,000 MΩ min.	Approx. 43 g	
S	PYF-14-PU	FIOIL		Push-In Plus Terminal	-40 to 70°C		6 A	2,000 VAC	2,000 VAC	2,000 VAC	(500 VAC)	Approx. 87 g	
	PYF14S			Screwless terminal			5 A	for 1 min	for 1 min	for 1 min	(000 010)	Approx. 62 g	
	PYFZ-14				−55 to 70°C		6 A	2,250 VAC	2,250 VAC	2,250 VAC		Approx. 50 g	
	PYFZ-14-E		14				077	for 1 min	for 1 min	for 1 min		Approx. 50 g	
	PYF14A-N			Screw terminal	−55 to 55°C		5 A*3	2,000 VAC for 1 min	2,000 VAC for 1 min	2,000 VAC for 1 min		Approx. 50 g	
	PYF14T				−55 to 70°C		3 A	2,000 VAC for 1 min	2,000 VAC for 1 min	2,000 VAC for 1 min		Approx. 53 g	
	PY08			Solder terminals								Approx. 8 g	
2	PY08-Y1				-							Approx. 9 g	
MYK	PY08QN	_			Wrapping terminals (Terminal length:		5% to						Approx. 12
え	PY08QN-Y1		8	25 mm)		85%		1,500 VAC for 1 min	1,500 VAC for 1 min	1,500 VAC for 1 min	100 MΩ min.	Approx. 13	
	PY08QN2	-			Wrapping terminals							111111.	Approx. 11
	PY08QN2-Y1			(Terminal length: 20 mm) PCB terminals								Approx. 12	
	PY08-02	-			-							Approx. 7 g	
	PY11	-		Solder terminals								Approx. 9 g	
	PY11QN			Wrapping terminals (Terminal length: 25 mm)			1.500 VAC	VAC 1.500 VAC	1.500 VAC	100 MΩ	Approx. 13		
MYQ-MYH	PY11QN2	<ul> <li>Back</li> </ul>	11	Wrapping terminals (Terminal length: 20 mm)	-55 to 70°C		5 A	for 1 min	for 1 min	for 1 min	min.	Approx. 12	
<b>≍</b>	PY11-02			PCB terminals								Approx. 8 g	
<u> </u>	PY14			Solder terminals								Approx. 10 g	
Z	PY14-Y1											Approx. 11 g	
≍ ∣	PY14QN			Wrapping terminals								Approx. 14 g	
	PY14QN-Y1	PY14QN-Y1	14	(Terminal length: 25 mm)			3 A	1,500 VAC	1,500 VAC for 1 min	1,500 VAC	100 MΩ	Approx. 15 g	
	PY14QN2			Wrapping terminals	1			for 1 min		for 1 min	min.	Approx. 13 g	
	PY14QN2-Y1			(Terminal length: 20 mm)								Approx. 14 g	
S	PY14-02			PCB terminals								Approx. 9 g	
Common Opti	Model	Co	nnection	Number of p	ins Ter	minal Type	Con	tinuous carr	y Dielect	ric strength		ation ince *1	
<u>a</u>		-						current			resista	ince 1	

Rise-Up terminal

For 500 VDC applied to the same location as for dielectric strength measurement. The carrying current of 10 A is for an ambient temperature of 55°C or below. At an ambient temperature of 70°C, the value is 7 A. When using the PYF08A-N or PYF14A-N at an ambient operating temperature exceeding 40°C, reduce the continuous carry current to 60%.

>3 kV

>5 MΩ

12 A

\*1. \*2. \*3. \*4.

PYF14-ESS-B

PYF14-ESN-B

Front

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

# OMRON

#### **Socket Accessories** •For Front-connecting Sockets **Short Bars**

Application	Applicable sockets	Model	Maximum carry current	Ambient operating temperature	Ambient operating humidity	
		PYDN-7.75-020				
	PYF-08-PU(-L)	PYDN-7.75-030	20 A	-40 to 70°C	5% to 85%	
	PYF-14-PU(-L)	PYDN-7.75-040	20 A	-40 10 70 C		
		PYDN-7.75-200				
Bridging contact terminals	PYFZ-08	PYD-025B		-40 to 70°C (with no icing or condensation)	45% to 85% (with no icing or condensation)	
common)		PYD-085B				
	PYFZ-14	PYD-026B	20 A			
		PYD-086B	(However, 18 A when 70°C)			
	F 1FZ-14	PYD-020B	,			
		PYD-030B				3
	PYF-08-PU(-L) PYF-14-PU(-L)	PYDN-31.0-080	20 A	-40 to 70°C	5% to 85%	
For Coil terminals	PYF08S	PYDM-08S	10 A	-40 to 70°C	5% to 85%	
	PYF14S	PYDM-14S	10 A	-40 to 70°C	5% to 85%	

## **Certified Standards** •CSA certification (File No. LR031928)

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

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

## ●UL certification (File No. E87929)

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

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

## •TÜV Rheinland certification

Model	Ratings	Standard number	Certification No.
PYF-08-PU(-L)	10 A, 250 V*		R50327595
PYF-14-PU(-L)	6 A, 250 V	EN 61984	K00027090
PYFZ-08(-E)	10 A, 250 V	EN 01904	R50405329
PYFZ-14(-E)	6 A, 250 V		R50405329

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

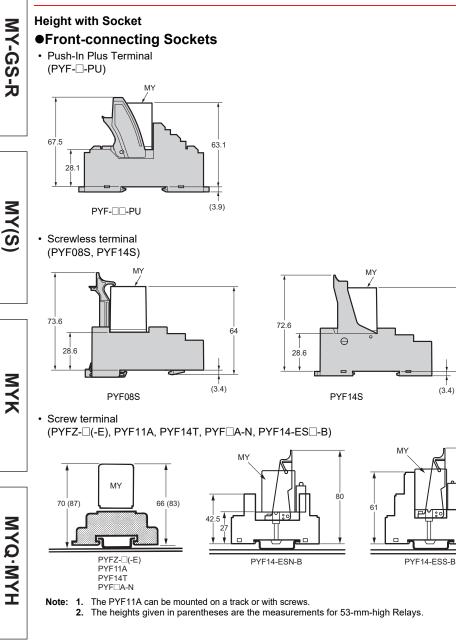
## •VDE certification

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

### Others

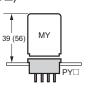
Model	Standards	File No.
PYF14-ESN-B	UL508	E244189
PYF14-ESS-B	CSA22.2	LR225761

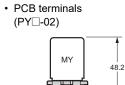
# Dimensions



## Back-connecting Sockets

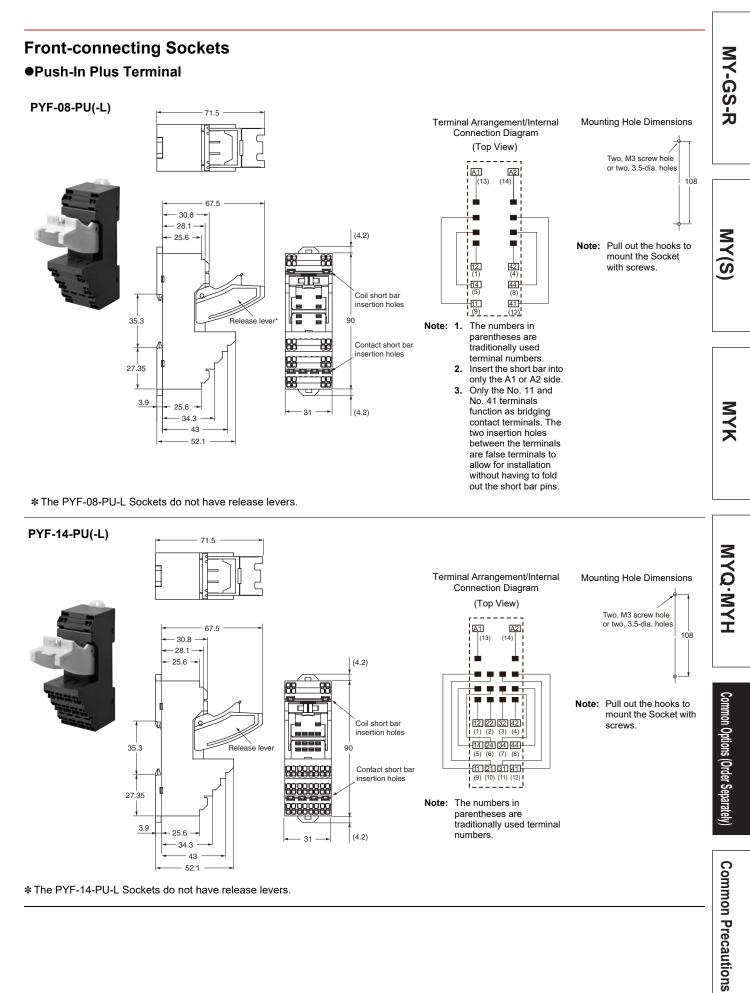
• Solder terminals/wrapping terminals (PY\_)

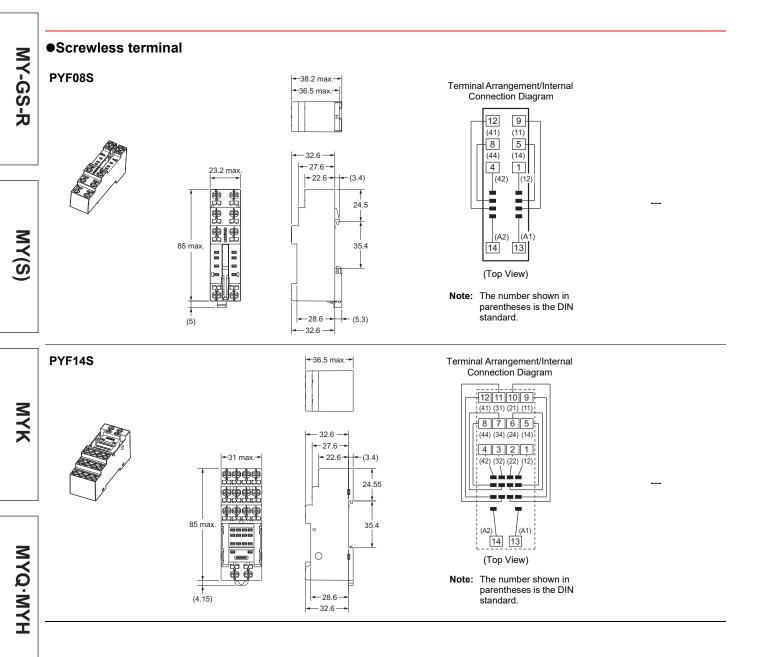




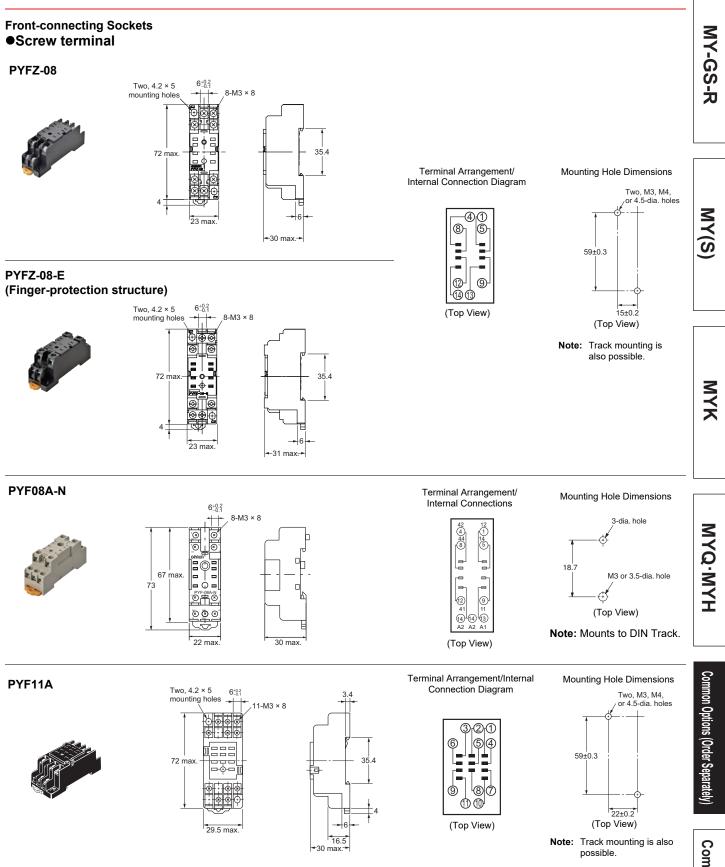
**0 0 0 0** PY⊡-02

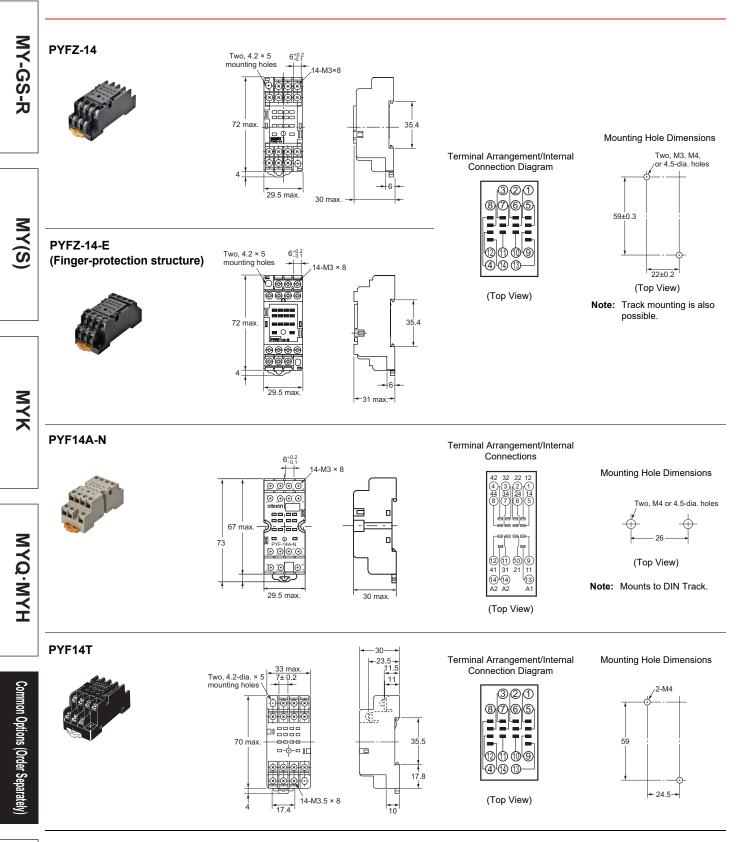
Common Options (Order Separately)



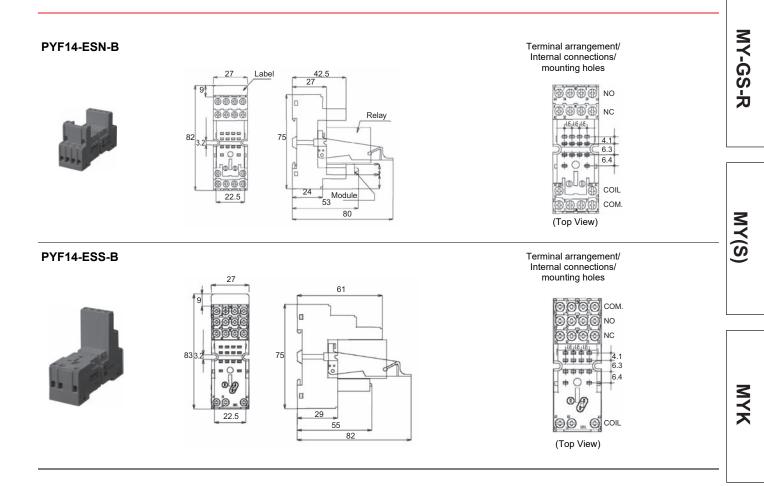


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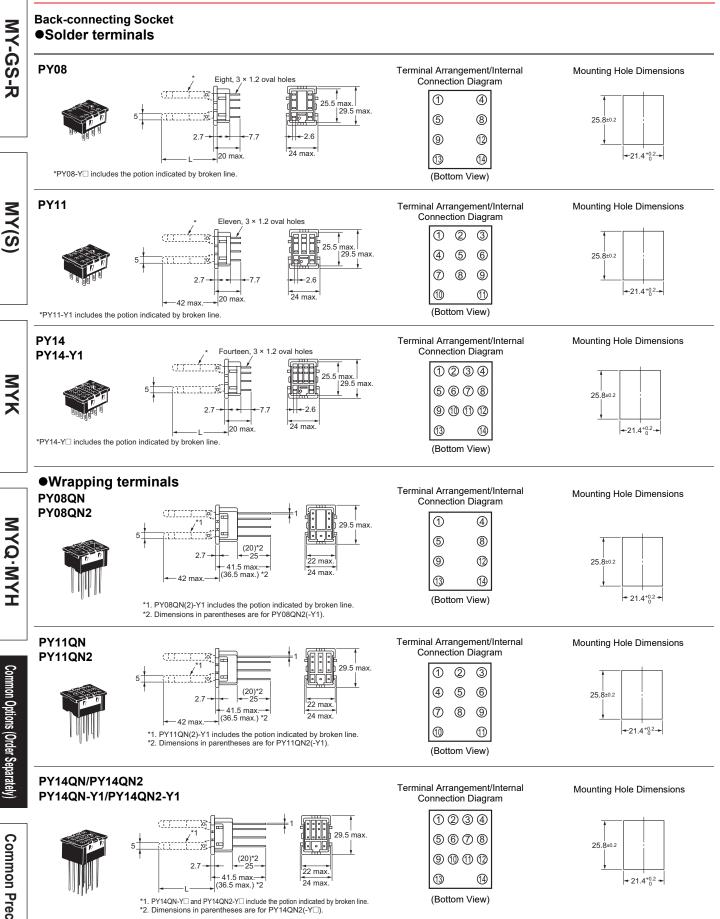


Common Precautions

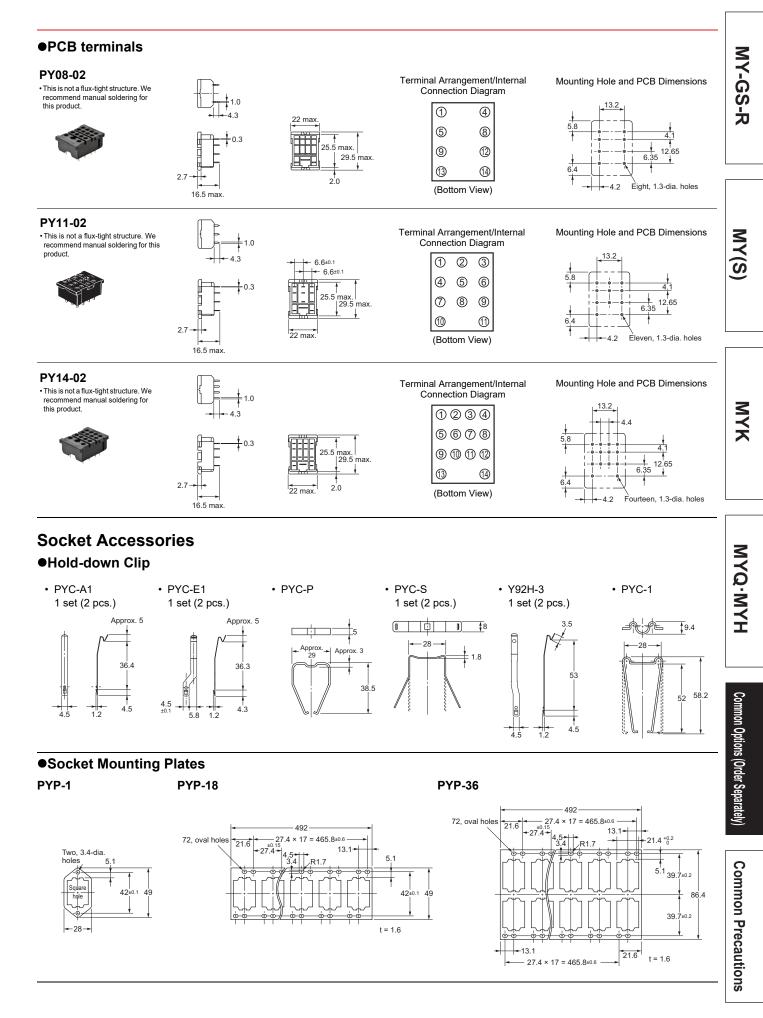


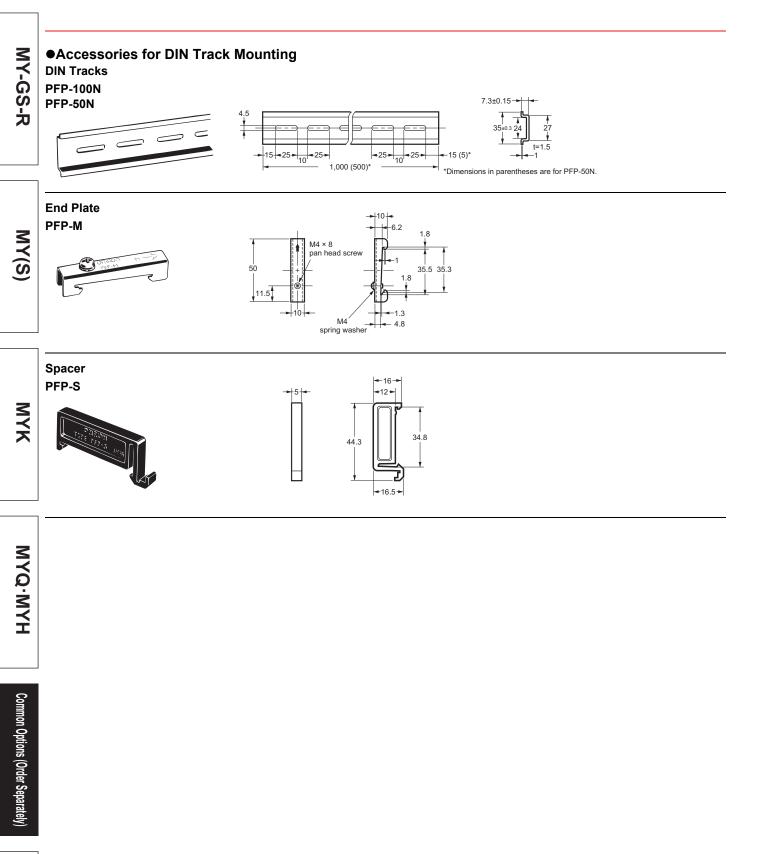
MYQ-MYH

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## OMRON





# **Safety Precautions**

## Relays

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

#### Warning Indications

	Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury, or may result in serious injury or death. Additionally there may be significant property damage.
	Indicates a potenti10_ally hazardous situation which, if not avoided, may result in minor or moderate injury or in property damage.
Precautions for Correct Use	Supplementary comments on what to do or avoid doing, to prevent failure to operate, malfunction, or undesirable effects on product performance.

#### Meaning of Product Safety Symbols

$\triangle$	<ul> <li>General caution</li> <li>Indicates the possibility of non-specified general cautions, warnings, and danger.</li> </ul>	
	• Electric shock caution Used to warn of the risk of electric shock under specific conditions.	
High temperature caution Indicates the possibility of injuries by high temperature caution under specific conditions.		

Do not touch terminal sections (i.e., current-carrying parts)

while power is being supplied.

Also, always mount the terminal cover.



Touching current-carrying parts may result in electric shock.

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



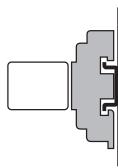
## **Precautions for Correct Use**

## Handling

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

## Installation

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



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

## •Relay Replacement

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

## Applicable Sockets

Use only combinations of OMRON Relays and Sockets.

#### Attaching and Removing Relay Hold-down Clips

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

## •Compliance with Electrical Appliances and Material Safety Act

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

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

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

## Miniature Power Relays: MY

#### Latching Levers

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

## About the Built-in Diode and CR Elements

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

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

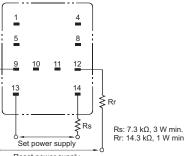
## Using Microloads with Infrequent Operation

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



MY-GS-R

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



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

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

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

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

# Optional Sockets (Order Separately)

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

# Front-connecting Sockets

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

Tightening torque

Refer to Safety Precautions on the Push-In Plus Terminal Block Socket PYF-\_-PU/P2RF-\_-PU Data Sheet (Catalog No. SGFR-218).

## Screwless Terminal Sockets (PYF08S, PYF14S)

Refer to Safety Precautions on the Screwless Terminal Socket PYF S/P2RF-S Data Sheet (Catalog No. CDRR-011).

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

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

Use the following tightening torque for screws during wiring.

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

	Model	Tightening tor
	PYFZ-08 PYFZ-14	0.78 to 1.18 N⋅m
	PYFZ-08-E PYFZ-14-E	0.59 to 0.88 N·m * Use a No. 1 screwdriver.
_		

appropriate wire diameter for the current used.)			en useu.)
	Model	Recommended wire diameter (mm <sup>2</sup> )	
	PYFZ-08	Stranded wire	0.75 to 2.5 mm <sup>2</sup> AWG 18 to 14

PYFZ-08	Stranded wire	0.75 to 2.5 mm <sup>2</sup> AWG 18 to 14
PYFZ-14	Solid wire	0.75 to 1.5 mm <sup>2</sup> AWG 18 to 16
PYFZ-08-E	Stranded wire	0.75 to 2.5 mm <sup>2</sup> AWG 18 to 14
PYFZ-14-E	Solid wire	0.75 to 1.5 mm <sup>2</sup> AWG 18 to 16

## Back-connecting Socket

## Solder Terminal Sockets (PY08(-Y1/-Y3), PY11(-Y1/-Y3))

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

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

#### Hermetically Sealed Relays (MYH) **Relays with PCB Terminals**

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

#### Solution

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

#### **Application Environments**

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

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

MYQ-MYH

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 MY-GS-R
MY(S)
МҮК
MYQ-MYH
Common Options (Order Separately)
<b>Common Precautions</b>

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