# OMRON

🔊 🛞 👜 🕻 E LR

# Miniature Power Relays

# 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), an abundant lineup of models including latching relays that retain contact operation status (MYK) and sealed relays suitable for environments where dust and corrosive gases are present (MYQ/MYH) are also available.
- Selection is possible to suit the application, such as models with operation indicators and models with latching levers (MY plug-in terminals).
- \* 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 55 to 56 and Safety Precautions for All Relays.







MY

MYK

**MYQ·MYH** 







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

# Miniature Power Relay Types

MY Miniature Power Relays	From page 3
MYK Miniature Power Latching Relays	From page 24
MYQ/MYH Miniature Power Sealed Relays	From page 29

# **Common Information**

Common Options (Order Separately)	From page 35
Common Safety Precautions	From page 55

#### **Model List**

#### **Miniature Power Relays: MY**

				Plug-in terminals			PCB terminals	Case-surface
2			L <sub>TT</sub>	With operation indicator			mounting	
MΥ	Classification	Number of poles	Contacts			With latching lever	Г	
			Single	MY2	MY2N	MY2IN(S)	MY2-02	MY2F
	Other dead me dela	2	Bifurcated	MY2Z	MY2ZN			
	Standard models (compliant with	3	Single	МҮЗ	MY3N		MY3-02	MY3F
	Electrical Appliances		Single	MY4	MY4N	MY4IN(S)	MY4-02	MY4F
	and Material Safety Act)		Bifurcated	MY4Z	MY4ZN	MY4ZIN(S)	MY4Z-02	MY4ZF
			Crossbar bifurcated	MY4Z-CBG	MY4ZN-CBG			
	Models with built-in	2	Single	MY2-D	MY2N-D2	MY2IN-D2(S)		
	diode for coil surge		Bifurcated	MY2Z-D	MY2ZN-D2			
	absorption (compliant with	3	Single	MY3-D	MY3N-D2			
ΝY	Electrical Appliances		Single	MY4-D	MY4N-D2	MY4IN-D2(S)		
≤	and Material Safety Act)	4	Bifurcated	MY4Z-D	MY4ZN-D2	MY4ZIN-D2(S)		
N	Models with built-in CR	•	Single	MY2-CR	MY2N-CR			
	circuit for coil surge absorption	2	Bifurcated	MY2Z-CR	MY2ZN-CR			
	(compliant with		Single	MY4-CR	MY4N-CR	MY4IN-CR(S)		
	Electrical Appliances and Material Safety Act)	4	Bifurcated	MY4Z-CR	MY4ZN-CR	MY4ZIN-CR(S)		

Note: 1. The models in this table are UL/CSA certified. This is indicated with a certification mark on the products. (Except crossbar bifurcated models MY4Z-CBG

and MY4ZN-CBG) The standard models with plug-in terminals, models with built-in diodes for coil surge absorption, and models with built-in CR circuits for coil surge absorption were used in combination with the  $PYF\squareA-E$ ,  $PYF\square-S$  and  $PYF-\square-PU$  for the EC Declaration of Conformity. These products display the CE Marking. 2.

#### Miniature Power Latching Relays (MYK)

					PCB terminals
	Number				
Classification		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	F
Plastic Sealed Relays		Single	MYQ4	MYQ4N	MYQ4-02
Plastic Sealed Relays	4	Bifurcated	MYQ4Z		MYQ4Z-02
Hermetically Sealed		Single	MY4H		MY4H-0
Relays		Bifurcated	MY4ZH		MY4ZH-0

Refer to Front-connecting Sockets and Back-connecting Sockets in Common Options (Order Separately) on pages 35 and 37 for main unit and socket combinations.

**MYQ·MYH** 

# 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 55 to 56 and Safety Precautions for All Relays.

# **93' 🚯 🖄 CE**LR



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

# Features

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

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



Pink = AC voltage



• Distinguished using color-coded operation indicators (LED)

Mechanical operation indicator/LED operation indicator

# Example: MY4

Operation indicator (LED)

Red = AC voltage

Operation indicator (LED) Green = DC voltage

Example: MY4

**MYQ·MYH** 

MY

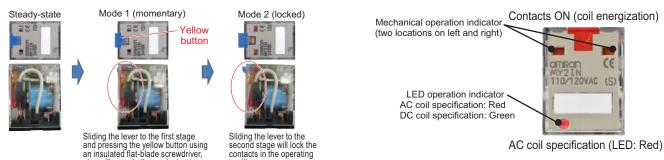
MYK

H



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

etc., will operate the contacts



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

Contact reliat	pility	Corrosion re	sistance	
	Contact structure		Contact material	Typical model
High 🛧	Crossbar bifurcated contacts	High 🛧	Au cladding + AgPd	MY4Z-CBG
	Bifurcated contacts		Au cladding + Ag alloy Au plating + Ag alloy	MY4Z MY2Z
	Single contacts		Au cladding + Ag alloy	MY4
Low		Low	Ag alloy	MY2

position.



# MY

# Model Number Structure

	Model Number Leg	end
	●Plug-in Terminals	
MY	Standard models	
~	M Y	(Example: MY4ZIN(S))
	(1)	
	(1) Number of poles	(2) Contacts (3) Options
	2: 2-pole 3: 3-pole	None:SingleNone:NoneZ:BifurcatedN:With operation indicator
	4: 4-pole	Z-CBG: Crossbar bifurcated IN(S): With operation indicator/latching lever
МҮК	Models with built-in diode M Y (1) (1) Number of poles/contact 2: 2-pole, single contacts	(Example: MY4ZIN-D2(S))
	2Z: 2-pole, bifurcated contain	cts N-D2: Built-in diode for coil surge absorption, with operation indicator
	<ul><li>3: 3-pole, single contacts</li><li>4: 4-pole, single contacts</li></ul>	IN-D2(S): Built-in diode for coil surge absorption, with operation indicator/latching lever
	4Z: 4-pole, bifurcated conta	cts
ϺϒϘ·ϺϒΗ	Models with built-in CR cir MY (1) (1) Number of poles/contacts 2: 2-pole, single contacts 2Z: 2-pole, bifurcated contacts	-CR: Models with built-in CR circuit for coil surge absorption
]	4: 4-pole, single contacts	IN-CR(S): Built-in CR circuit for coil surge absorption, with operation indicator/latching lever*
Common Options (Order Separately)	4Z: 4-pole, bifurcated conta	
ption	●PCB terminals/case s	surface mounted
ıs (Order	M Y	(Example: MY2-02)
Sepa	(1) Number of poles/contact	
Irate	2: 2-pole, single contacts	-02: PCB terminals
ly)	<ul><li>3: 3-pole, single contacts</li><li>4: 4-pole, single contacts</li><li>4Z: 4-pole, bifurcated contacts</li></ul>	F: Case-surface mounting

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

#### ●Plug-in Terminals

Without operation indicator

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

MY

#### With operation indicator

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

#### With operation indicator/latching lever

	Classification	Number of poles	Contacts	Model	Rated voltage
		2	Single	MY2IN(S)	100/110, 200/220 VAC
	Standard models	2	Single	WITZIN(3)	12, 24, 48 VDC
_	(compliant with		Single MY4IN(S)	100/110, 200/220 VAC	
	Electrical Appliances and Material Safety Act)			IVI I 4114(S)	12, 24, 48 VDC
		4	Bifurcated	nted MY4ZIN(S)	100/110, 200/220 VAC
			Bilurcaled		12, 24, 48 VDC
2	Models with built-in	2	Single	MY2IN-D2(S)	12, 24, 48 VDC
8	diode for coil surge absorption		Single	MY4IN-D2(S)	12, 24, 48 VDC
Common	(DC coil specification only)	4	Bifurcated	MY4ZIN-D2(S)	12, 24, 48 VDC
1 Options (Or	Models with built-in CR circuit for coil surge	4	Single	MY4IN-CR(S)	100/110, 200/220 VAC
	absorption (AC coil specification only)	4	Bifurcated	MY4ZIN-CR(S)	100/110, 200/220 VAC

#### PCB terminals

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

# •Case-surface mounting

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

MY

# **Ratings and Specifications**

#### Ratings **Operating Coils**

**MYQ·MYH** 

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

		Item	Rated cur	rrent (mA)	Coil resistance	Coil induc	ctance (H)	Must	Must	Maximum	Power
M	Rated	voltage (V)	50 Hz	60 Hz	(Ω)	Armature OFF	Armature ON	operate voltage (V)	release voltage (V)	voltage (V)	consumption (VA, W)
R		12	106.5	91	46	0.17	0.33				
		24	53.8	46	180	0.69	1.3			110% of	
	AC	100/110	11.7/12.9	10/11	3,750	14.54	24.6		30% min.*2		Approx. 0.9 to 1.3 (at 60 Hz)
	AC	110/120	9.9/10.8	8.4/9.2	4,430	19.2	32.1				
		200/220	6.2/6.8	5.3/5.8	12,950	54.75	94.07	80% max.*1			
		220/240	4.8/5.3	4.2/4.6	18,790	83.5	136.4	80% max. 1		rated voltage	
		12	72	2.7	165	0.73	1.37				
	DC	24	36	3.3	662	3.2	5.72		10% min.*2		Ammrov 0.0
	DC	48	17	7.6	2,725	10.6	21.0		10% mm. 2		Approx. 0.9
		100/110	8.7	/9.6	11,440	45.6	86.2				

Note: 1. The rated current and coil resistance are measured at a coil temperature of 23°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.

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

\*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
1	Standard models		Bifurcated	MY2Z	MY2ZN
	Models with built-in diode for	2	Bifurcated	MY2Z-D	MY2ZN-D2
Plug-in terminals	coil surge absorption (DC coil specification only)	3	Single	MY3-D	MY3N-D2
	Models with built-in CR circuit for coil surge absorption (AC coil specification only)	2	Bifurcated	MY2Z-CR	MY2ZN-CR

	Item	Rated cur	rrent (mA)	Coil resistance	Coil indu	ctance (H)	Must	Must	Maximum	Power
Rate	d 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				
	24	53.8	46	180	0.69	1.3				
AC	100/110	11.7/12.9	10/11	3,750	14.54	24.6		30% min.*2		Approx. 0.9 to 1.3 (at 60 Hz)
AC	110/120	9.9/10.8	8.4/9.2	4,430	19.2	32.1		30% mm. 2		
	200/220	6.2/6.8	5.3/5.8	12,950	54.75	94.07	80% max.*1		110% of	
	220/240	4.8/5.3	4.2/4.6	18,790	83.5	136.4	80% max. 1		rated voltage	
	12	7	5	160	0.73	1.37				
DC	24	36	6.9	650	3.2	5.72		100/ : *0		Ammany 0.0
DC	48	18	8.5	2,600	10.6	21.0	1	10% min.*2		Approx. 0.9
	100/110	9.1	/10	11,000	45.6	86.2				

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

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

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

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

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

Common Options (Order Separately)

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

	Item	Rated cur	rent (mA)	Coil resistance	Coil inductance (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)
	100/110	11.7/12.9	10/11	3,750	14.54	24.6				Approx.0.9
AC	200/220	6.2/6.8	5.3/5.8	12,950	54.75	94.07		30% min.*2	110% of	to 1.3 (at 60 Hz)
	12	7	5	160	0.73	1.37	80% max.*1		rated	
DC	24	37	.7	636	3.2	5.72		10% min.*2	voltage	Approx. 0.9
	48	18	9.8	2,560	10.6	21				

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.

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

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

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

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

Terminal Type	Classification	Number of poles	Contacts	Without operation indicator	With operation indicator
		3	Single	МҮЗ	MY3N
Plug-in terminals	Standard models	4	Crossbar bifurcated	MY4Z-CBG	MY4ZN-CBG
		2	Single	MY2-02	_
PCB terminals	Standard models	3	Single	MY3-02	—
FOD terminals	Stanuaru models		Single	MY4-02	—
		4	Bifurcated	MY4Z-02	—
		2	Single	MY2F	—
Case-surface mounting	Standard models	3	Single	MY3F	_
	Standard models	4	Single	MY4F	—
		4	Bifurcated	MY4ZF	—

	Item	Rated cur	rent (mA)	Coil resistance	Dil resistance Coil inductance (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				
	24	53.8	46	180	0.69	1.3				
	100/110	11.7/12.9	10/11	3,750	14.54	24.6		000/		Approx.0.9
AC	110/120	9.9/10.8	8.4/9.2	4,430	19.2	32.1		30% min.*2		to 1.3 (at 60 Hz)
	200/220	6.2/6.8	5.3/5.8	12,950	54.75	94.07	000/		110% of	× ,
	220/240	4.8/5.3	4.2/4.6	18,790	83.5	136.4	80% max.*1		rated voltage	
	12	7	5	160	0.73	1.37			Ŭ	
50	24	36	6.9	650	3.2	5.72	1	100/		A
DC	48	18	1.5	2,600	10.6	21.0		10% min.*2		Approx. 0.9
	100/110	9.1	/10	11,000	45.6	86.2	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).

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. \*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

MYK

ontact	Ratings	

Single

**Resistive load** 

5 A at 220 VAC 5 A at 24 VDC

5 A (10 A\*2)

5 A

Ag

1,100 VA

120 W

250 VAC, 125 VDC

Inductive load

 $\begin{array}{l} (\cos \phi = 0.4, \\ \text{L/R} = 7 \text{ ms}) \end{array}$ 

2 A at 220 VAC 2 A at 24 VDC

440 VA

48 W

#### Co

<	
= <	

Number of poles
(contact configuration)
Contact structure

Rated load Rated carry

current\*1 Maximum

switching voltage

MY

Load

	Maximum switching current
Z	Maximum switching power
$\overline{}$	Contact material
X	

Number of poles (contact configuration)					4-pole	(4PDT)				
Contact structure	Single		With Istabi	With latching lever (S)		Bifurcated		ng lever (S)	Crossbar bifurcated (CBG)	
Load	Resistive Ioad	Inductive load (cos $\phi$ = 0.4, L/R = 7 ms)	Resistive load	Inductive load (cos $\varphi$ = 0.4, L/R = 7 ms)	Resistive load	Inductive load (cos $\phi$ = 0.4, L/R = 7 ms)	Resistive load	Inductive load (cos $\varphi$ = 0.4, L/R = 7 ms)	Resistive load	Inductive load (cos φ = 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	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 220 VAC 3 A at 24 VDC	0.8 A at 220 VAC 1.5 A at 24 VDC	3 A at 250 VAC 3 A at 30 VDC	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	3 A (5 A*2)				3 A (5 A*2)				1 A	
Maximum switching voltage	250 VAC, 12	250 VAC, 125 VDC								
Maximum switching current	3 A								1 A	
Maximum switching power	660 VA 72 W	176 VA 36 W	1,250 VA 150 W	200 VA 45 W	660 VA 72 W	176 VA 36 W	1,250 VA 150 W	200 VA 45 W	220 VA 24 W	66 VA 12 W
Contact material	Au cladding -	+ Ag alloy							Au cladding -	- AgPd

2-pole (DPDT)

With latching lever (S)

**Resistive load** 

5 A at 250 VAC 5 A at 30 VDC

10 A

2,500 VA

300 W

Inductive load

(cos φ = 0.4, L/R = 7 ms)

2 A at 250 VAC 2 A at 30 VDC

500 VA

60 W

3-pole (3PDT)

Single

**Resistive load** 

5 A at 220 VAC 5 A at 24 VDC

250 VAC, 125 VDC

5 A

5 A

Ag

1,100 VA

120 W

Inductive load

(cos φ = 0.4, L/R = 7 ms)

2 A at 220 VAC 2 A at 24 VDC

440 VA

48 W

Bifurcated

**Resistive load** 

5 A at 220 VAC 5 A at 24 VDC

5 A

5 A

1,100 VA

Au plating + Ag

120 W

Inductive load

 $\begin{array}{l} (\cos \phi = 0.4, \\ \text{L/R} = 7 \text{ ms}) \end{array}$ 

2 A at 220 VAC 2 A at 24 VDC

440 VA

48 W

ct material Au cladding + Ag alloy

\*1. If you use a Socket, do not exceed the rated carry current of the Socket.
\*2. Values shown in parentheses are for the MY

(S) model with latching lever.

M V

MYK

#### **Characteristics**

Number of poles (contact configuration)		2-pole	(DPDT)	3-pole (3PDT)	4-pole (4PDT)				
	Contact tructure	Single	Bifurcated	Single	Single	Bifurcated	Crossbar bifurcated (CBG)		
Contact resistanc	e*1 *2	50 mΩ max.					100 mΩ max.		
Operate t	ime*3	20 ms max.							
Release t	ime*3	20 ms max.							
	Mechanical	18,000 operations/h							
witching requency	Rated load	1,800 operations/h							
nsulatior resistanc		100 M $\Omega$ min.							
c c	Between coil and contacts								
Dielectric	Between contacts of different polarity	2,000 VAC, 50/60 Hz fc	or 1 min						
c t	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		
/ibration	Destruction	10 to 55 to 10 Hz, 0.5-r	nm single amplitude (1.0	)-mm double amplitude)					
esistance	Malfunction	10 to 55 to 10 Hz, 0.5-r	nm single amplitude (1.0	)-mm double amplitude)					
hock I	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. (switching frequency: 18,000 operations/h)	AC: 50,000,000 operations min. DC: 100,000,000 operations min. (switching frequency: 18,000 operations/h)	AC: 20,000,000 operations min. DC: 20,000,000 operations min. (switching frequency: 18,000 operations/h)	AC: 50,000,000 operations min. DC: 50,000,000 operations min. (switching frequency: 18,000 operations/h)		
	Electrical*5	500,000 operations min. (rated load, switching frequency: 1,800 operations/h)	200,000 operations min. (rated load, switching frequency: 1,800 operations/h)	500,000 operations min. (rated load, switching frequency: 1,800 operations/h)	200,000 operations min. (rated load, switching frequency: 1,800 operations/h)	100,000 operations min. (rated load, switching frequency: 1,800 operations/h)	50,000 operations min (rated load, switching frequency: 1,800 operations/h)		
ailure rate		1 mA at 5 VDC	100 ?A at 1 VDC	1 mA at 5 VDC	1 mA at 1 VDC	100 ?A at 1 VDC	100 ?A at 1 VDC		
Veight		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.

Note: The data shown above are find 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: For 500 VDC applied to the same location as for dielectric strength measurement.
\*4. 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. \*5. \*6.

Classification		Standard models					in diode for coil sur CR circuit for coil su	
Contacts	Single/bifurcated			Crossbar/bifu	urcated (CBG)		Single/bifurcated	I
	Without			Without With operation	Without With operation indicator			
Features	operation indicator		With latching lever	operation indicator	indicator	operation indicator		With latching lever
Ambient operating temperature*1	–55 to 70°C	–55 to 60°C*2	–55 to 70°C	–25 to 70°C	-25 to 60°C	–55 to 60°C*2	–55 to 60°C*2	–55 to 70°C
Ambient operating humidity	5% to 85%					5% to 85%		

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

#### **Certified Standards •**UL certification (File No. E41515)

		•		-				
MY	Model	Standard number	Category	Listed/ Recognized	Operating Coil ratings	No. of poles	Contact ratings	Certified number of operations
	MY2 MY2N MY2IN(S) MY2N-D2 MY2-D2 MY2IN-D2(S) MY2-CR MY2N-CR	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
							1/6 HP, 250 VAC 1/8 HP, 265 VAC 1/10 HP, 120 VAC	1,000
							B300 Pilot Duty (Same polarity)	6,000
MYK	MY2Z MY2ZN MY2-02 MY2F MY2Z-D MY2Z-D2	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
	MY2Z-CR MY2ZN-CR						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 MY3-D	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
	MY3N-D2 MY3-02 MY3F						1/6 HP, 250 VAC	1,000
MYQ·MYH	MY4 MY4N MY4IN(S) MY4-D MY4IN-D2 MY4IN-D2(S) MY4Z MY4ZN MY4ZIN(S) MY4Z-D MY4Z-D MY4Z-D2 MY4ZN-D2 MY4ZIN-D2(S) MY4Z-CR MY4ZN-CR	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
	MY4ZIN-CR(S)							
Commor	MY4-02 MY4F MY4Z-02						1/6 HP, 250 VAC (Same polarity) 1/10 HP, 120 VAC (Same polarity)	1,000
Ξ I	MY4ZF		1				B300 Pilot Duty (Same polarity)	6,000

non Options (Order Separately)

#### ●CSA certification (File No. LR31928)

Model	Standard number	Class number	Operating Coil ratings	No. of poles	Contact ratings	Certified number of operations	Z
MY2 MY2N MY2IN(S) MY2N-D2 MY2-D2 MY2IN-D2(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	YM
MY2-CR MY2N-CR					1/6 HP, 250 VAC (Same polarity) 1/10 HP, 120 VAC (Same polarity)	1,000	
MY2Z MY2ZN MY2-02 MY2F MY2Z-D MY2Z-D2	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	
MY2Z-CR MY2ZN-CR					1/6 HP, 250 VAC 1/10 HP, 120 VAC	1,000	
MY3 MY3N MY3-D MY3N-D2 MY3-02	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, 24 VDC (Resistive)	6,000	MYK
MY3F					1/6 HP, 250 VAC	1,000	_
MY4 MY4N(S) MY4-D MY4-D2 MY4N-D2(S) MY4-CR	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	
MY4N-CR MY4IN-CR(S) MY4Z MY4ZN MY4ZIN(S) MY4Z-D MY4ZN-D2 MY4ZN-D2							MYQ·MYH
MY4ZIN-D2(S) MY4Z-C MY4ZN-CR					1/6 HP, 250 VAC (Same polarity) 1/10 HP, 120 VAC (Same polarity)	1,000	<b>X</b>
MY4ZIN-CR(S)					B300 Pilot Duty (Same polarity)	6,000	
MY4-02 MY4F MY4Z-02 MY4ZF	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	Comm

#### •TÜV Rheinland certification (Certification No. R50030059)

Model	Operating Coil ratings	Contact ratings	Certified number of operations
MY2Z MY2ZN MY2-02 MY2F MY2Z-D MY2Z-D2 MY2Z-CR MY2Z-CR	6 to 125 VDC, 6 to 240 VAC	5 A, 250 VAC (cos φ = 1.0)	100,000
MY3 MY3N MY3-D MY3N-D2 MY3-02 MY3F	_	5 A, 250 VAC (cos $\varphi$ = 1.0) 0.8 A, 250 VAC (cos $\varphi$ = 0.4)	
MY4-02 MY4F MY4Z-02 MY4ZF		3 A, 120 VAC (cos $\phi$ = 1.0) 0.8 A, 250 VAC (cos $\phi$ = 0.4)	

Common Options (Order Separately)

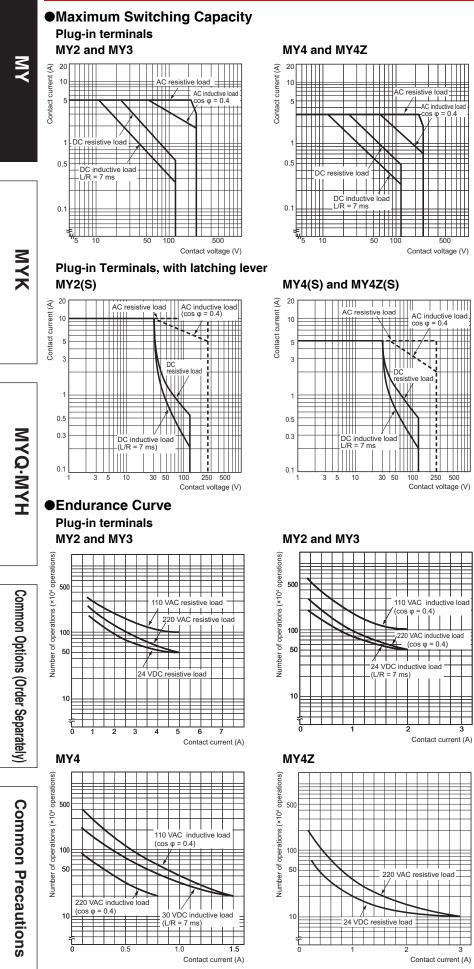
	Model	EMC Directiv	e Low Voltage Direct	ive Machinery Directiv	/e Safety Category
MY MY MY MY MY MY MY MY	2N 2IN(S) 2Z 2D 2N-D2 2N-D2 2IN-D2(S) 2-CR 2N-CR 2Z-CR 2ZN-CR 2ZN-CR 2ZN-CR	Not applicable	Applicable	Not applicable	1
MY MY MY MY MY	3 3N 3-D 3N-D2	-			
MY MY MY MY MY	4 4N 4IN(S) 4Z 4ZN 4ZIN(S) 4-D 4N-D2 4IN-D2(S)				
MY MY MY MY MY MY MY	4Z-D 4ZN-D2 4ZIN-D2(S) 4-CR 4N-CR 4Z-CR 4Z-CR 4ZN-CR				
●L	.R certifi	cation (Lloyd	's Register)	I	I
	Model	File No.	Environmental Category	Operating Coil ratings	Contact ratings
	woder	File NO.	Environmental Category	Operating Contrainings	Contact ratings

# ●LR certification (Lloyd's Register)

Model	File No.	Environmental Category	Operating Coil ratings	Contact ratings	Certified number of operations
MY2 MY2N MY2IN(S) MY2-D MY2N-D2 MY2IN-D2(S) MY2-CR MY2N-CR	File No.98/10014	ENV2,3	6 to 240 VAC 6 to 125 VDC	10 A, 250 VAC (Resistive) 2 A, 250 VAC (PF0.4) 10 A, 30 VDC (Resistive) 2 A, 30 VDC (L/R = 7 ms)	MY2: 50,000
MY2Z MY2ZN MY2Z-D MY2ZN-D2	File No.90/10270	ENV2,3	6 to 240 VAC 6 to 125 VDC	2 A, 30 VDC inductive load 2 A, 200 VAC inductive load	MY2: 50,000
MY4 MY4IN(S) MY4-D MY4IN-D2 MY4IN-D2 MY4IN-D2(S) MY4-CR MY4IN-CR MY4IN-CR MY4ZN MY4ZN MY4ZN-D2 MY4ZN-D2 MY4ZIN-D2(S) MY4Z-CR MY4ZIN-CR(S)	File No.98/10014	ENV2,3	6 to 240 VAC 6 to 125 VDC	5 A, 250 VAC (Resistive) 0.8 A, 250 VAC (PF0.4) 5 A, 30 VDC (Resistive) 1.5 A, 30 VDC (L/R = 7 ms)	MY4: 50,000

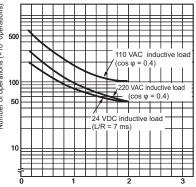
Model	Standard number	Certification No.	Operating Coil ratings	Contact ratings	Certified number of operations
MY2 MY2N MY2IN(S) MY2-D MY2N-D2 MY2IN-D2(S)	EN 61810-1	112467UG	6, 12, 24, 48/50, 100/110, 110/120, 200/220, 220/240 VAC	10A, 250 VAC (cos $\varphi$ = 1) 10A, 30 VDC (L/R = 0 ms)	MY2: 100,000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

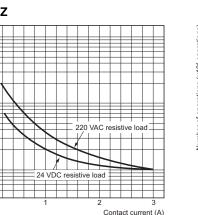
# **Engineering Data (Reference Value)**

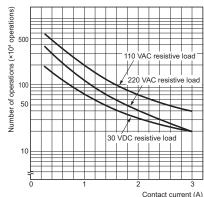


#### MY4Z-CBG € 20 Contact current 10 5 AC resistive load AC inductive load $\cos \varphi = 0.4$ N 0.5 DC resistive load 0.1 DC inductive loa 倝 5 10 50 100 500

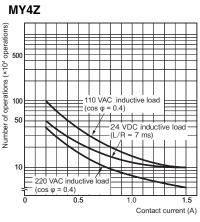
Contact voltage (V)







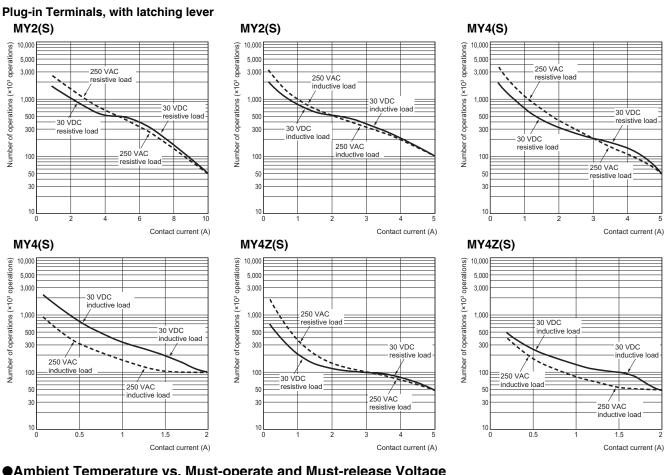
MY4



MY

MYK

**MYQ·MYH** 



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

#### MY2 AC Models

MY2(S)

10,000

5,000

3,000

1,000

500

300

100

50

30

10

n

MY4(S)

10,000

5.000

3,000

1,000

500

300

100

50

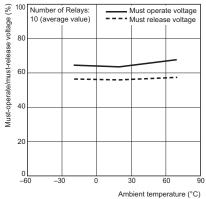
30

10

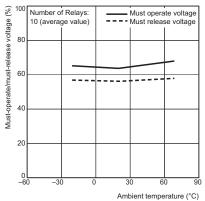
0

Number of operations (×10<sup>3</sup> operations)

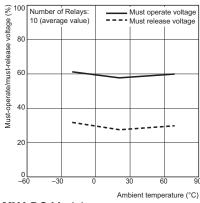
Number of operations (×10<sup>3</sup> operations)



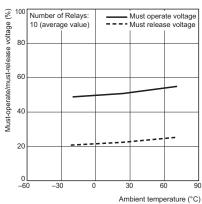
#### MY4 AC Models



#### MY2 DC Models



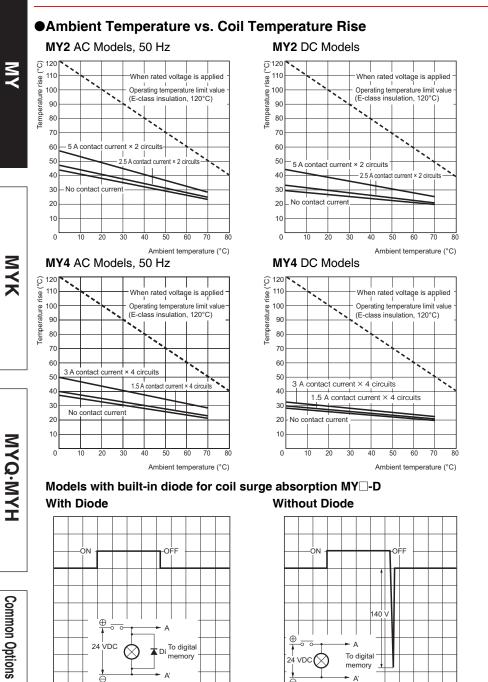
#### MY4 DC Models





**Common Options (Order Separately)** 

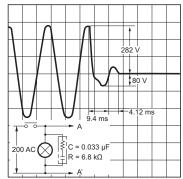


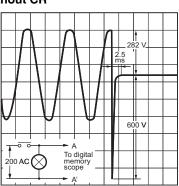


Note: 1.

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 2. 3.

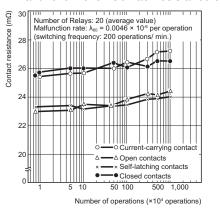
#### Models with built-in CR circuit for coil surge absorption MY -CR With CR Without CR



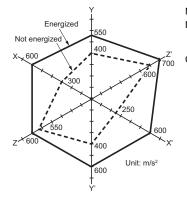


Contact Reliability Test MY4Z-CBG (Modified Allen Bradley Circuit) Contact load: 5 VDC, 1 mA resistive load

Malfunction level: Contact resistance of 100  $\Omega$ 



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



N = 20

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

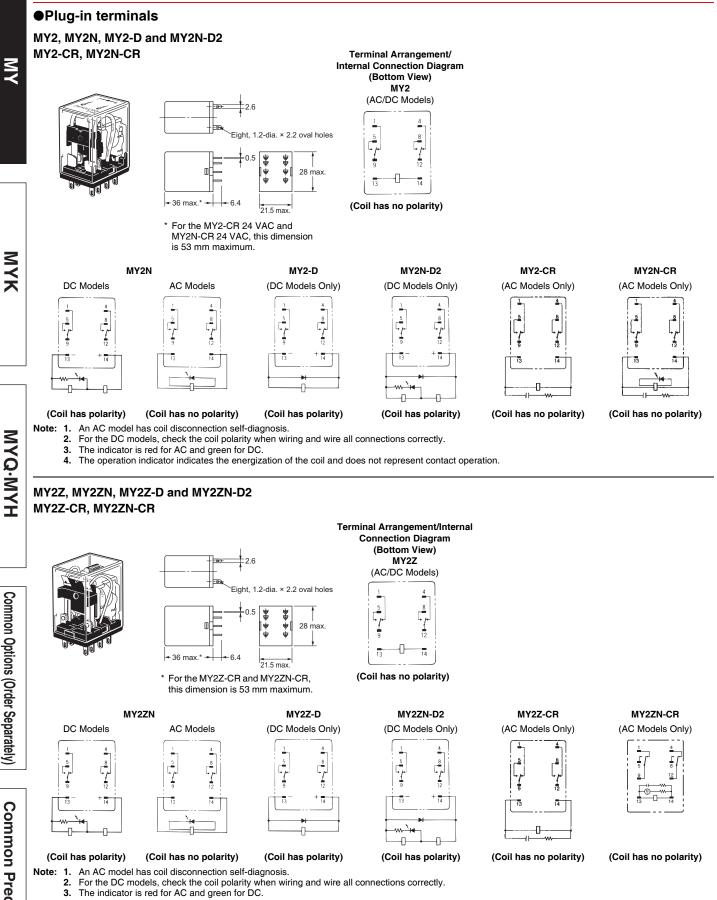
#### Shock direction



MYK

MY

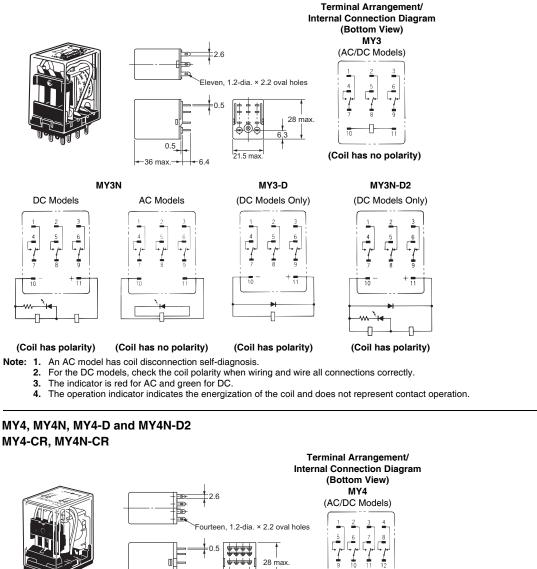
# **Dimensions**



4. The operation indicator indicates the energization of the coil and does not represent contact operation.

20

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



ſ 13

(Coil has no polarity)

14

MY4N-D2

(DC Models Only)

12

14

6

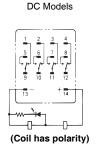
₽

(Coil has polarity)

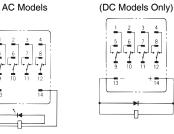
+36 max.\* + 6.4 21.5 max

\* For the MY4-CR 24 VAC and MY4N-CR 24 VAC/115 VAC, this dimension is 53 mm maximum.

MY4N



Note: 1.



(Coil has no polarity) (Coil has polarity)

An AC model has coil disconnection self-diagnosis. For the DC models, check the coil polarity when wiring and wire all connections correctly.

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

4. The operation indicator indicates the energization of the coil and does not represent contact operation.

MY4-D

6 8

10

-П

12 11

14

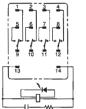
MY4-CR

(AC Models Only)

41-

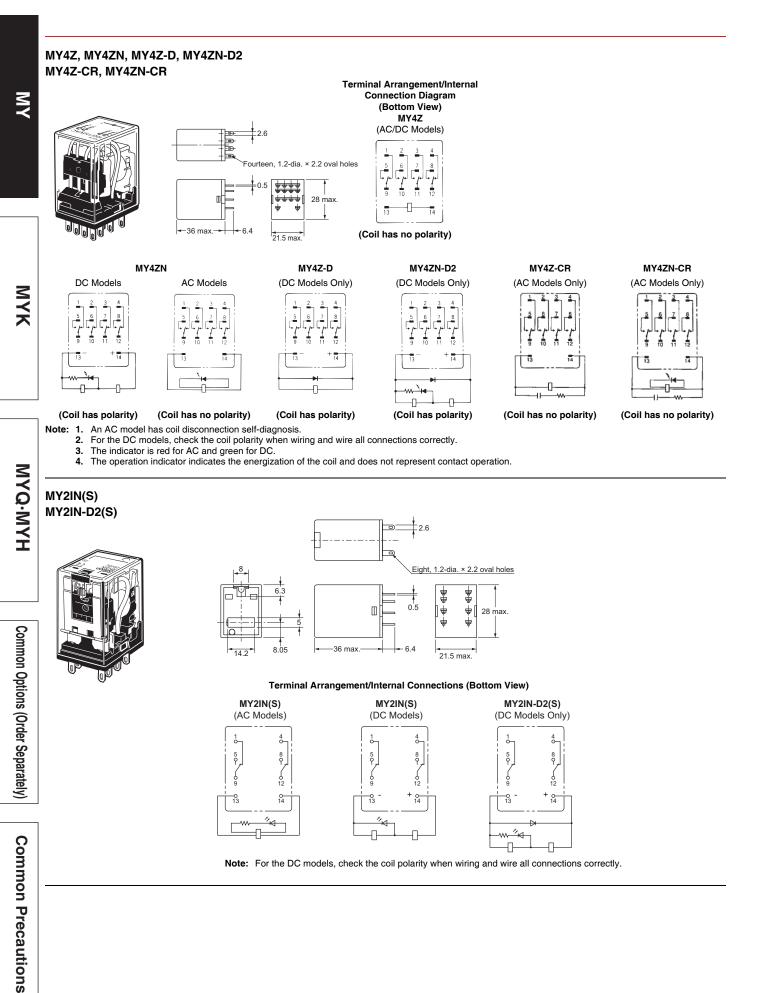
(Coil has no polarity)

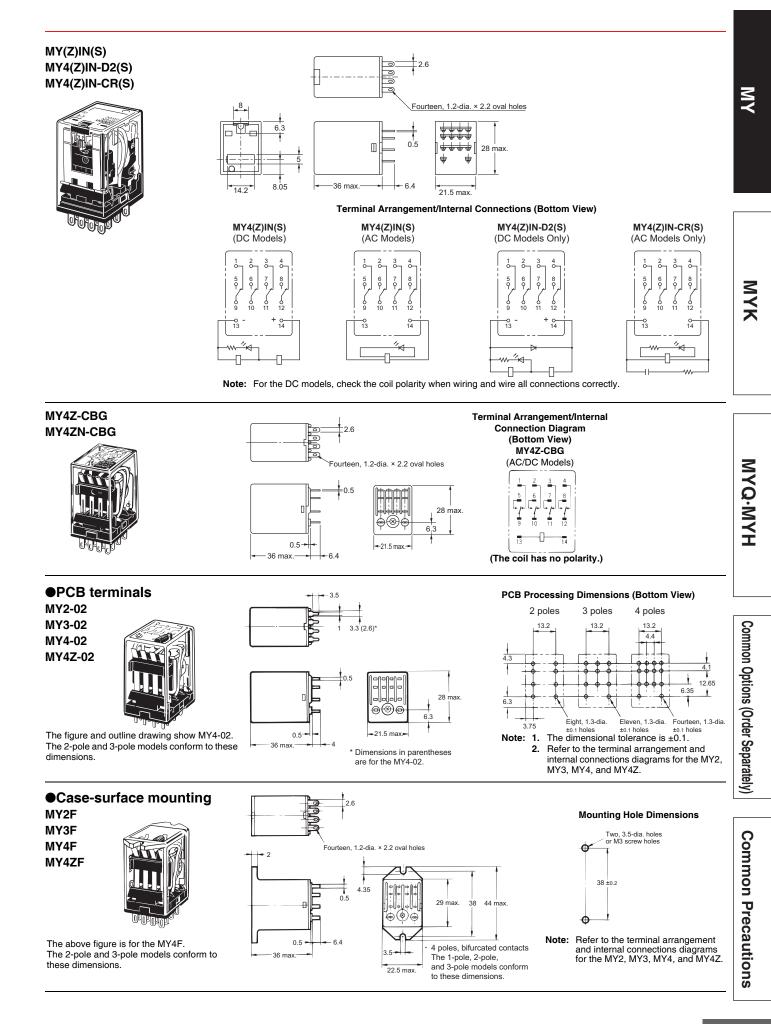
14



(Coil has no polarity)

MY





# Miniature Power Latching Relays

MYK

# Latching miniature power relays that retain contact operation status

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

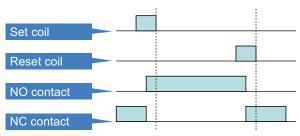
Refer to Safety Precautions on pages 55 to 56 and Safety Precautions for All Relays.

#### Features



#### Latching Relays MYK

Retains contact operation status.



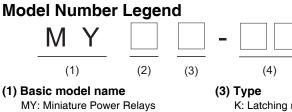
NO contact turns on when voltage is applied to the set coil and stays on even if voltage stops being applied to the set coil. NO contact turns off when voltage is applied to the reset coil, after which NC contact will turn on.\*

\*MYK features a magnetic lock system.

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



# **Model Number Structure**



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

	(4)
(3) T ⊮	<b>'ype</b> K: Latching relay

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

# **Ordering Information**

When your order, specify the rated voltage.

# Main unit

Plug-in terminals

( laceitication	Number of poles	Contacts	Model	Rated voltage	
Standard models (compliant with Electrical	0	Single	МҮ2К	12, 24, 100, 100/110 VAC	
Appliances and Material Safety Act)	2	Siligie	WIZK	12, 24, 48 VDC	

#### PCB terminals

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

#### **MYK**

MΥ

# **MYK**

# **Ratings and Specifications**

#### Ratings

#### Operating coil (AC)

$\leq$			Set coil			Reset coil					Power consu	nption (VA, W)	
<	•	Rated voltage (V)		e (V) Rated current (mA)		Coil resistance (mA)		Coil resistance ope	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)	(V)	voluge (V)			
		12	57	56	72	39	38.2	130		x.* 80% max. of rated		to 0.9	Approx. 0.2
	AC	24	27.4	26.4	320	18.6	18.1	550					to 0.5
		100	7.1	6.9	5,400	3.5	3.4	3,000	80% max.*		(at 60 Hz)	(at 60 Hz)	
		12	11	10	110	5	0	235	00 % IIIax.		voltage		
	DC	24	5	2	470	2	5	940			_	Approx. 1.3	Approx. 0.6
		48	2	7	1,800	1	6	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 loadInductive load ( $\cos \varphi = 0.4$ , L/R = 7					
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				
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	,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				
Between set/reset coils					
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)				
Destruction	1,000 m/s <sup>2</sup>				
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				
ating temperature*6	-55 to 60°C				
ating humidity	5% to 85%				
	Approx. 30 g				
	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         Malfunction         Electrical*4         value (reference value)*5         sting temperature*6				

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

1 A at 5 VDC using the voltage drop method.

With rated operating power applied, not including contact bounce. 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.

 Measurement conditions:
 \*2. Measurement conditions:
 \*3. Measurement conditions:
 \*4. Ambient temperature cond
 \*5. This value was measured
 \*6. With no icing or condensa With no icing or condensation.

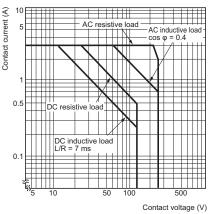
OMRON

MYK

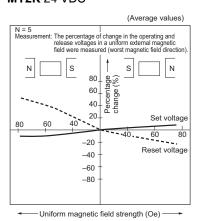
# **MYK**

# **Engineering Data (Reference Value)**

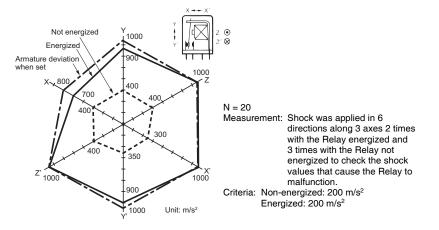
#### **Maximum Switching Capacity** MY2K(-02)



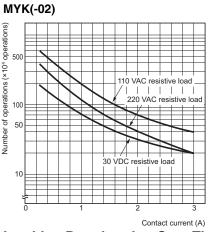
#### **Magnetic Interference** (External Magnetic Field) MY2K 24 VDC



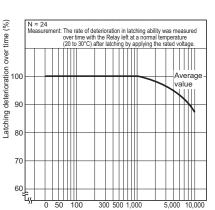
#### **Shock Malfunction** MY2K 100 VAC



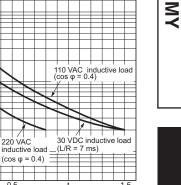
#### **Endurance Curve**











MYK(-02)

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

500

100

50

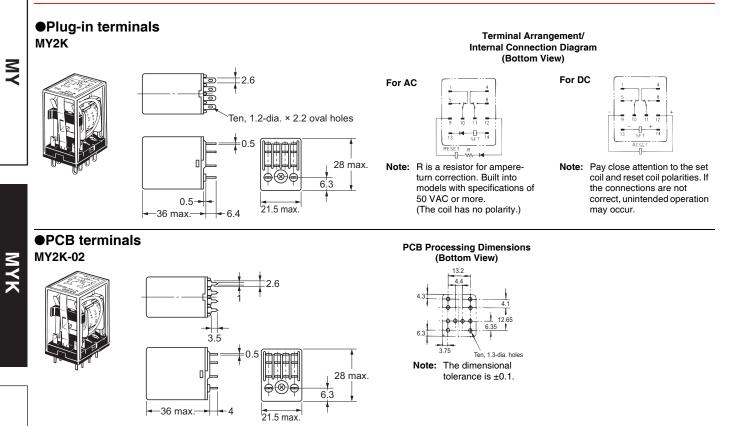
10

0.5

Contact current (A)

# MYK

# Dimensions



# **Miniature Power Sealed Relays** ΜΥQ/ΜΥΗ

# 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 55 to 56 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 🔨	h h Hermetically MYH sealed		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.

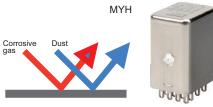
#### Plastic Sealed Relays: MYQ

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



#### Hermetically Sealed Relays: MYH

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





ϺϒႭ·ϺϒΗ

MYK

OMRON

**FL' (SP** 

MY

#### **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	4	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)		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	4	<b>D</b> <sup>1</sup>	MYQ4Z-02	100/110 VAC
and Material Safety Act)		Bifurcated	IVI T Q4Z-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	
			W14211	12, 24, 48, 100/110 VDC	

#### PCB terminals

Classification	Number of poles	Contacts	Model	Rated voltage
Standard models		Single	MY4H-0	110/120 VAC
(compliant with Electrical Appliances	4		W1411-0	24 VDC
and Material Safety Act)		Bifurcated	MY4ZH-0	24, 100/110 VDC

MY

MYK

# **MYQ·MYH**

# **Ratings and Specifications**

#### Operating coil (AC)

		Rated current (mA)		Coil	Coil indu	ctance (H)	Must snowsta	Mustralages	Maximum	Power	
Rated	voltage (V)	50 Hz	60 Hz	resistance (Ω)	Armature OFF	Armature ON	Must operate voltage (V)*1	Must release voltage (V)*2	Maximum voltage (V)	consumption (VA, W)	
	24	<b>24</b> 53.8 46 180 0.69 1.3				<b>~</b>					
	100/110	11.7/12.9	10/11	3,750	14.54	24.6			110% max. of rated voltage	Approx. 0.9 to 1.3 (at 60 Hz)	
AC	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				1.0 (ut 00 112)	
	220/240	4.8/5.3	4.2/4.6	18,790	83.5	136.4	80% max.				
	12	7	'5	165	0.734	1.37	-				
DC	24	36	5.9	650	3.2	5.72		10% min.			
DC	48	18	3.5	2,600	10.6	21.0		10% 11111.		Approx. 0.9	
	100/110	9.1	/10	11,000	45.6	86.0	]				

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

2.

The AC coil resistance and coil inductance values are for reference only. 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.

 There is variation between products, but actual values are 80% maximum. To ensure operation, apply at least 80% of the rated value.
 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 $\varphi$ = 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 110 VA 24 W 12 W					
Contact material	Au plating + Ag					

#### Hermetically Sealed Relays: MYH

Number of poles (contact configuration)	4-pole (4PDT)							
Contact structure	Si	ngle	Bifurcated					
Load	Resistive load	Inductive load (cos $\phi$ = 0.4, L/R = 7 ms)	Resistive load	Inductive load (cos $\phi$ = 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**

	Model			MYQ	МҮН			
ΥM	Contact resistance*1		50 mΩ max.					
	Operate time*2		20 ms max.					
	Release time*2		20 ms max.					
	Maximum	Mechanical	18,000 operations/h					
	switching frequency	Rated load	1,800 operations/h					
	Insulation resistance*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			
МҮК	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			
		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 resistance	Destruction	10 to 55 to 10 Hz, 0.5-mm single amplitude (1.0-mm double amplitude)					
		Malfunction	10 to 55 to 10 Hz, 0.5-mm single amplitude (1.0-mm double amplitude)					
	Shock resistance	Destruction	1,000 m/s <sup>2</sup>					
		Malfunction	200 m/s <sup>2</sup>					
	Endurance	Mechanical	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)		
MYQ	Failure rate P Level (reference value)*5		Single contacts: Bifurcated contacts:	1 mA at 1 VDC 100 ?A at 1 VDC	Single contacts: Bifurcated contacts:	100 ?A at 1 VDC 100 ?A at 100 mVDC		
	Ambient operating temperature*6		–55 to 60°C		-25 to 60°C			
	Ambient operating humidity		5% to 85%					
	Weight		Approx. 35 g		Approx. 50 g			

 Note:
 The data shown above are initial values.

 \*1.
 Measurement conditions:
 1 A at 5 VDC using the voltage drop method.

 \*2.
 Measurement conditions:
 With rated operating power applied, not including contact bounce.

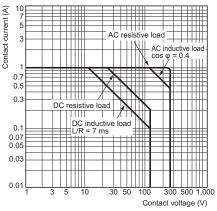
IntersectionWith rated operating power applied, not including contact bounce.Ambient temperature condition:23°CMeasurement conditions:For 500 VDC applied to the same location as for dielectric strength measurement.Ambient temperature condition:23°CThis value was measured at a switching frequency of 120 operations per minute.With no icing or condensation.

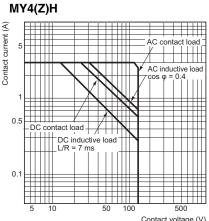
\*3. \*4. \*5. \*6.

#### **MYQ·MYH**

# **Engineering Data (Reference Value)**

#### **Maximum Switching Capacity** MYQ4(Z)





MY4H

500

100

50

10

110 VAC inductive load

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

(cos φ = 0.4)

Number of operations (x10<sup>4</sup> operations)

#### Contact voltage (V)

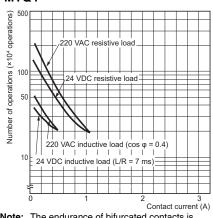
110 VAC re

24 VDC resistive load

-24 VDC inductive load -(L/R = 7 ms)

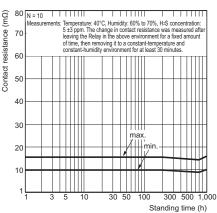
Contact current (A)

#### **Endurance Curve** MYQ4

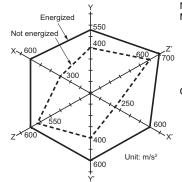


# Note: The endurance of bifurcated contacts is one-half that of single contacts.

#### H<sub>2</sub>S Gas Data MYQ4



#### **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

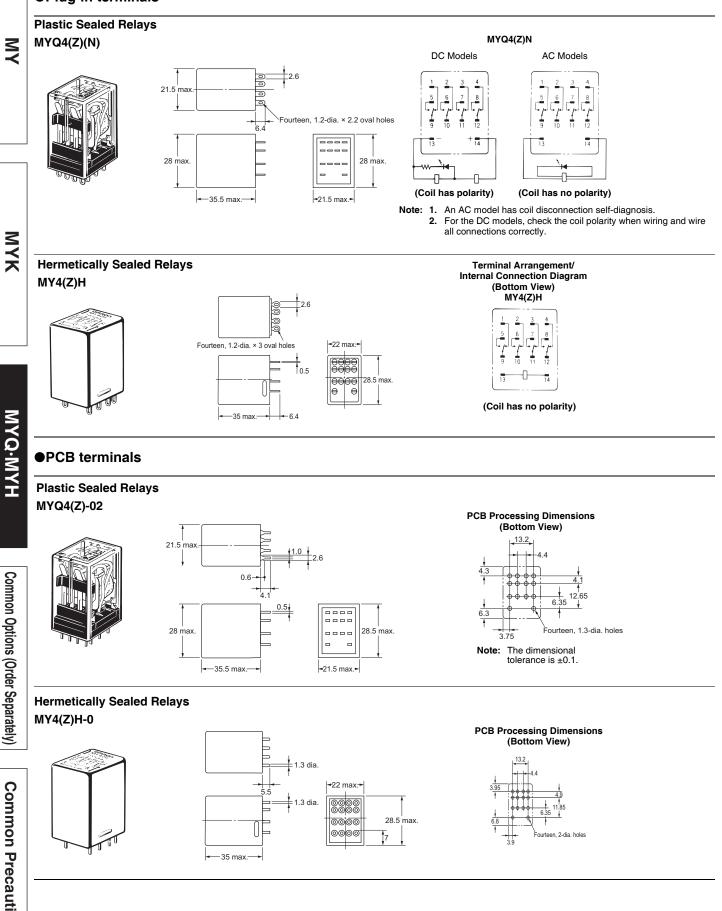




# **MYQ·MYH**

## **Dimensions**

#### Plug-in terminals



# MY/MYK/MYQ·MYH

 $\leq$ 

# **Common Options (Order Separately)**

# **Ordering Information**

#### **Front-mounting Sockets**

	•								
Applicable relay model*1	Mounting Method	Conductive part protection	Terminal Type	Applicable crimp terminal/ Electric wire	Appearance	Mode	Hold-down Clips/ Release Levers (Order Separately)		
	Mounted on a DIN track or with screws	Available	Push-In Plus Terminal	Ferrules Solid wire Stranded wire	<u>NEW</u>	PYF-08-PU*2 * MY2ZCR, MY2CR 24 VAC cannot be used	With release lever * Hold by release lever		
					<u>NEW</u>	PYF-08-PU-L*2		MYK	
			Screw terminal (M3 screw size)	Forked terminals Solid wire Stranded wire	NEW	PYFZ-08-E*4		K	
MY2□ MY2□(S)						PYF08A-E*4 Scheduled to be discontinued in March 2021	MY2⊡: PYC-A1 MY2IN(S): PYC-E1 MY2Z□-CR, MY2□-CR 24 VAC: Y92H-3		
MY2ZD-CR		Option (Terminal cover sold separately) *3		Round terminals Forked terminals Solid wire Stranded wire	NEW	PYFZ-08 * Terminal cover: PYCZ-C08		MYQ-MYH	
		None			87 ×	PYF08A Scheduled to be discontinued in March 2021			
	Mounted on a DIN track	Available	Screwless terminal (Clamp method)	Solid wire Stranded wire		PYF08S	PYCM-08S * MY2Z□-CR, MY2□-CR 24 VAC cannot be used * Hold by release lever	Common Option	
	Screw mounting only	None	ne Screw terminal (M3.5 screw size) Solid wire Stranded wire			PYF08M	PYC-P (MY2 Only) * MY2 -CR 24 VAC cannot be used		
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	ıs (Order Separately)	

\*1. The applicable relay model is a plug-in terminal type.
\*2. There are screw mounting holes in the DIN hooks on
\*3. Terminal cover type is PYCZ-C08. (Order Separately)
\*4. The finger-protection type (PYFZ-L-E, PYFLA-E) is a 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 43. The finger-protection type (PYFZ-\_-E, PYF\_A-E) is a type in which the terminal cover is integrated into the socket. Round terminals cannot be used. Use forked terminals or ferrules instead.

#### MY/MYK/MYQ·MYH

	Applicable relay model*1	Mounting Method	Conductive part protection	Terminal Type	Applicable crimp terminal/ Electric wire	Appearance	Mode	Hold-down Clips/ Release Levers (Order Separately)
ΥM				Push-In Plus Terminal	Ferrules Solid wire	<u>NEW</u>	PYF-14-PU*2 * MY4Z□-CBG-CR, MY4-CR 24 VAC, MY4N-CR 24 VAC/115 VAC cannot be used	With release lever * Hold by release lever
		Mounted on a DIN track or with screws	Available Option (Terminal cover sold separately) *3		Stranded wire	NEW	PYF-14-PU-L*2	MY4Z□-CBG-CR, MY4-CR 24 VAC, MY4N-CR 24 VAC/115 VA: Y92H-3 Other than those above: PYC-A1
Мүк	MY4 MY4 (S) MY4 H MY4 MY4 CBG-CR MY2K			Screw terminal (M3 screw size)	Forked terminals Solid wire Stranded wire	NEW	PYFZ-14-E*4	
							PYF14A-E*4 Scheduled to be discontinued in March 2021	
					Round terminals Forked terminals Solid wire Stranded wire	NEW PYFZ-14 * Terminal cover: PYCZ-C14		
Z								
MYQ-MYH			None			Ser.	PYF14A Scheduled to be discontinued in March 2021	
<b>–</b>		Mounted on a DIN track	Available	Screwless terminal (Clamp method)	Solid wire Stranded wire		PYF14S	PYCM-14S * MY4Z□-CBG-CR, MY4-CR 24 VAC, MY4N-CR 24 VAC/115 VAC cannot be used * Hold by release lever
Common Op		Screw mounting only	None	Screw terminal (M3.5 screw size)	Round terminals Forked terminals Solid wire Stranded wire		PYF14T	MY4Z⊡-CBG-CR: Y92H-3 Other than those above: 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-C14. (Order Separately) For details, refer to the *For Screw Terminal Sockets (PYFZ-08/PYFZ-14) Terminal covers* on page 43. The finger-protection type (PYFZ-\_-E, PYF\_A-E) is a type in which the terminal cover is integrated into the socket. Round terminals cannot be used. Use forked terminals or ferrules instead. \*1. \*2. \*3. \*4.

Back-mounting Sockets Applicable relay model*1	Terminal Type	Hold-down Clips	Appearance	Mode	-
	Solder terminals			PY08	ΥM
MY2□ MY2□(S)	Wrapping terminals Terminal length: 25 mm	Accessories (Order Separately)		PY08QN	
MY2ZCR	Wrapping terminals Terminal length: 20 mm	* MY2Z□-CR: PYC-1 Other than those above: PYC-P		PY08QN2	
	PCB terminals			PY08-02	МҮК
	Solder terminals			PY08-Y1	
MY2□ MY2□(S)	Wrapping terminals Terminal length: 25 mm			PY08QN-Y1	MYQ·MYH
	Wrapping terminals Terminal length: 20 mm	With Hold-down Clips*2		PY08QN2-Y1	Common Option
	Solder terminals			РҮ08-Ү3	Common Options (Order Separately)
MY2Z -CR	Wrapping terminals Terminal length: 25 mm			PY08QN-Y3	Common Preca

\*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.

	Applicable relay model*1	Terminal Type	Hold-down Clips	Appearance	Mode
ΥM	MY2Z□-CR	Wrapping terminals Terminal length: 20 mm	With Hold-down Clips*2		PY08QN2-Y3
			Accessories (Order Separately) * PYC-P		PY11
МҮК		Solder terminals	With Hold-down Clips*2		РҮ11-Ү1
			Accessories (Order Separately) * PYC-P		PY11QN
МҮQ·МҮН	МҮЗ□	Wrapping terminals Terminal length: 25 mm	With Hold-down Clips*2		PY11QN-Y1
Cor			Accessories (Order Separately) * PYC-P		PY11QN2
Common Options (Order Separately)		Wrapping terminals Terminal length: 20 mm	With Hold-down Clips*2		PY11QN2-Y1
arately)		PCB terminals	Accessories (Order Separately) * PYC-P		PY11-02
Comm	MY4□ MY4□(S) MY4□H	Solder terminals	Accessories (Order Separatelv)		PY14
<b>Common Precautions</b>	MYQ4⊟ MY4Z⊟-CBG-CR MY2K	Wrapping terminals Terminal length: 25 mm	Accessories (Order Separately) * MY4Z□-CBG-CR: PYC-1 Other than those above: PYC-P		PY14QN
tions	<ul> <li>*1. The applicable relay model is a</li> <li>*2. The hold-down clips for connect</li> </ul>	a plug-in terminal type. ting the relay and socket come	e as a set with the socket.		

38

Applicable relay model*1	Terminal Type	Hold-down Clips	Appearance	Mode	
MY4□ MY4□(S) MY4□H MYQ4□ MY4Z□-CBG-CR	Wrapping terminals Terminal length: 20 mm	Accessories (Order Separately) * MY4Z□-CBG-CR: PYC-1 Other than those above: PYC-P		PY14QN2	ΥM
MY2K	PCB terminals			PY14-02	
	Solder terminals			PY14-Y1	МҮК
MY4□ MY4□(S) MYQ4□ MYQ4□ MY2K	Wrapping terminals Terminal length: 25 mm			PY14QN-Y1	K
	Wrapping terminals Terminal length: 20 mm			PY14QN2-Y1	MYQ·MYH
	Solder terminals	With Hold-down Clips*2		PY14-Y3	Common Opti
MY4Z□-CBG-CR	Wrapping terminals Terminal length: 25 mm			PY14QN-Y3	Common Options (Order Separately)
*1. The applicable relay model is	Wrapping terminals Terminal length: 20 mm			PY14QN2-Y3	<b>Common Precautions</b>
<ul><li>*1. The applicable relay model is</li><li>*2. The hold-down clips for connection</li></ul>	a plug-in terminal type. ecting the relay and socket come	e as a set with the socket.			ns

	Hold-down Clip			
	Appearance*1	Model*2	Weight*3	Application
ΥM		РҮС-А1	Approx. 0.54 g	_
		PYC-E1	Approx. 0.6 g	For connecting relays and sockets
		РҮС-Р	Approx. 1.4 g	
MYK		PYC-S	Approx. 1.8 g	For connecting sockets, socket mounting plates, and relays
YM		Y92H-3*4	Approx. 0.7 g	For connecting models with built-in CR circuit for coil surge absorption
MYQ·MYH		PYC-1*5	Approx. 6 g	(MY2Z□-CR) and sockets

\*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.

# •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	
PYF-08-PU(-L) PYF-14PU(-L)	7.75 mm	7.75 mm terminals (common)			4	30.6		PYDN-7.75-040
				20	154.6	Red (R)	PYDN-7.75-200	
	31.0 mm	For Coil terminals	3.90 18.5 2.25 224.35 224.35	8	224.35	Blue (S) Yellow(Y)	PYDN-31.0-080	

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

#### Labels

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

# For Screwless Terminal Sockets (PYF08S/PYF14S)

#### Short Bars

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

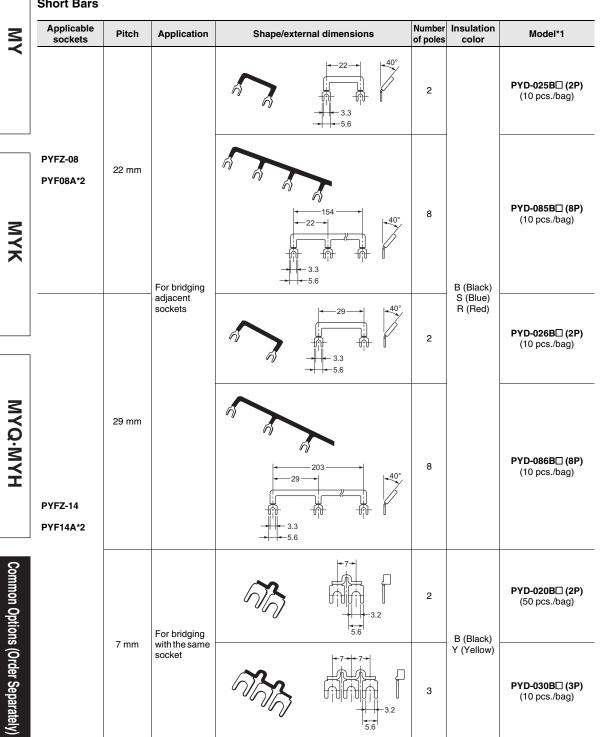
\*1. Replace the box ( $\Box$ ) in the model number with the code for the covering color.  $\Box$ Color selection: R = Red, B = Blue

#### 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



#### For Screw Terminal Sockets (PYFZ-08/PYF08A/PYFZ-14/PYF14A) Short Bars

\*1. Replace the box (□) in the model number with
\*2. Scheduled to be discontinued in March 2021. Replace the box ( $\Box$ ) in the model number with the code for the covering color.

# OMRON

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

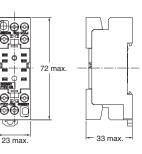
Applicable sockets	Appearance	Model
PYFZ-08		PYCZ-C08 (2 pcs/set)
PYFZ-14		PYCZ-C14 (1 pcs/set)

Note: These covers cannot be used for PYF08A and PYF14A. Use these covers in a combination with PYFZ-08 and PYFZ-14.

#### Dimensions with terminal cover

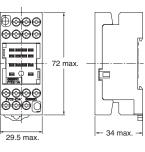
PYCZ-C08





PYCZ-C14





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

	Applicable Sockets	\$	Socket Mounting	Plates
Model	Model Models with hold-down clips		Number of sockets	Model
PY08 PY08QN	PY08-Y1, PY08-Y3 PY08QN-Y1, PY08QN-Y3	Û	1	PYP-1
PY08QN2 PY11 PY11QN PY11QN2	PY08QN2-Y1, PY08QN2-Y3 PY11-Y1 PY11QN-Y1 PY11QN2-Y1		18	PYP-18*
PY14 PY14QN PY14QN2	PY14-Y1, PY14-Y3 PY14QN-Y1, PY14QN-Y3		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 (1997)	PFP-M
Spacer			PFP-S

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

**MYQ·MYH** 

MY

MYK

(Unit: mm)

# **Ratings and Specifications**

# **Characteristics**

# Sockets

Ζ								Di	electric stren	gth							
MΥ	Model	Connection	Number of pins	Terminal Type	Ambient operating temperature	Ambient operating humidity	Continuous carry current	Between contact terminals of same polarity	Between contact terminals of different polarity	Between coil and contact terminals	Insulation resistance *1	Weight					
	PYF-08-PU			Push-In Plus Terminal	• 40 to 70°C		10 A*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 g					
	PYFZ-08						10 A	2,250 VAC	2,250 VAC	2,250 VAC		Approx. 32 g					
	PYFZ-08-E		8	Screw terminal			10 A	for 1 min	for 1 min	for 1 min	_	Approx. 32 g					
	PYF08A*4						7 A	2,000 VAC	2,000 VAC	2,000 VAC		Approx. 32 g					
	PYF08A-E *4				• 55 to 70°C		for 1 min	for 1 min	for 1 min		Approx. 32 g						
	PYF08M						5 A	1,500 VAC for 1 min	1,500 VAC for 1 min	1,500 VAC for 1 min	1,000 MΩ	Approx. 26 g					
	PYF11A	Front	11	Screw terminal			5 A	2,000 VAC for 1 min	2,000 VAC for 1 min	2,000 VAC for 1 min	min. (500 VAC)	Approx. 43 g					
2	PYF-14-PU			Push-In Plus Terminal	• 40 to 70°C		6 A	2,000 VAC	2,000 VAC	2,000 VAC		Approx. 87 g					
MYK	PYF14S			Screwless terminal	_		5 A	for 1 min	for 1 min	for 1 min		Approx. 62 g					
x	PYFZ-14	_		Screw terminal	• 55 to 70°C			2,250 VAC for 1 min	2,250 VAC for 1 min	2,250 VAC for 1 min	-	Approx. 50 g					
	PYFZ-14-E	_	14									Approx. 50 g					
	PYF14A *4	_					3 A	3 A 2,000 VAC for 1 min	2,000 VAC for 1 min	2,000 VAC for 1 min		Approx. 49 g					
	PYF14A-E *4	_										Approx. 49 g					
	PYF14T	-									100 MΩ min.	Approx. 53 g					
	PY08			Solder terminals	5% tc 			7 A 1,500 VAC for 1 min	1,500 VAC for 1 min	1,500 VAC for 1 min		Approx. 8 g					
	PY08-Y1											Approx. 9 g					
	PY08-Y3	-		Wrapping terminals (Terminal length: 25 mm)								Approx. 9 g					
	PY08QN	-										Approx. 12 g					
	PY08QN-Y1	-	8			5% to	7 A					Approx. 13 g					
	PY08QN-Y3	-		,		85%						Approx. 13 g					
$\leq$	PY08QN2	-		Wrapping terminals (Terminal length: 20 mm) PCB terminals								Approx. 11 g					
<b>~</b>	PY08QN2-Y1	-										Approx. 12 g					
ϺϒϘ·ϺϒΗ	PY08QN2-Y3 PY08-02	-										Approx. 12 g					
Ż	PY08-02 PY11	-	-	PCB terminals								Approx. 7 g					
	PY11-Y1	-		Solder terminals								Approx. 9 g Approx. 10 g					
-	PY11QN	-															
-	PYTIQN PY11QN-Y1	Back	11	4.4	11	11	11	11	Wrapping terminals (Terminal length: 25 mm)	• 55 to 70°C		5 A	1,500 VAC	1,500 VAC	1,500 VAC	100 MΩ	Approx. 13 g Approx. 14 g
	PY11QN-FT PY11QN2	Dack			- 55 10 70 0		3 4	for 1 min	for 1 min	for 1 min	min.	Approx. 14 g					
	PY11QN2-Y1	-		Wrapping terminals (Terminal length: 20 mm)								Approx. 12 g					
	PY11-02	-		PCB terminals	1							Approx. 13 g					
	PY14	-	-		-							Approx. 8 g Approx. 10 g					
0	PY14-Y1	-		Solder terminals	_							Approx. 10 g					
om	PY14-Y3	1										Approx. 11 g					
m	PY14QN	1	14 Wrapping terminals (Terminal length: 25 mm) 3 A Wrapping terminals (Terminal length:	(Terminal length:								Approx. 14 g					
n	PY14QN-Y1	1						1.500 VAC	1.500 VAC	1.500 VAC	100 MΩ	Approx. 15 g					
헐	PY14QN-Y3	1					3 A	for 1 min	for 1 min	for 1 min	min.	Approx. 15 g					
ion	PY14QN2	1		-							Approx. 13 g						
) si	PY14QN2-Y1								Approx. 14 g								
Pro	PY14QN2-Y3	1		20 mm)								Approx. 14 g					
der	PY14-02	1		PCB terminals	1							Approx. 9 g					
Common Options (Order Se	PY14QN2-Y1 PY14QN2-Y3	-		(Terminal length:								ŀ					

\*1. For 500 VDC applied to the same location as for dielectric strength measurement.
\*2. The carrying current of 10 A is for an ambient temperature of 55°C or below. At an ambient temperature of 70°C, the value is 7 A.
\*3. This model is a set including a socket and relay hold-down clips. This weight shown is the total including the socket and relay hold-down clips.
\*4. Scheduled to be discontinued in March 2021.

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

Application	Applicable sockets	Model	Maximum carry current	Ambient operating temperature	Ambient operating humidity	
	PYF-08-PU(-L)	PYDN-7.75-020		-40 to 70°C	5% to 85%	
		PYDN-7.75-030	20 A			
	PYF-14-PU(-L)	PYDN-7.75-040	20 A			
		PYDN-7.75-200				
Bridging contact terminals	PYFZ-08 PYF08A*	PYD-025B		-40 to 70°C (with no icing or condensation)	45% to 85% (with no icing or condensation)	
(common)		PYD-085B				
	PYFZ-14 PYF14A*	PYD-026B	20 A			
		PYD-086B	(However, 18 A when 70°C)			
		PYD-020B				
		PYD-030B				
	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%	

\*Scheduled to be discontinued in March 2021.

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

Model	Ratings	Class number	Standard number	
PYF-08-PU	10 A, 250 V			
PYF-14-PU	6 A, 250 V*			
PYF08S	10 A, 250 V			
PYF14S	5 A, 250 V	A, 250 V 3211 07		
PYFZ-08(-E)	10 A, 250 V		CSA C22.2 No14	
PYFZ-14(-E)	6 A, 250 V			
PY⊡ PYF⊡A(-E)	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	10 A, 250 V			
PYF-14-PU	6 A, 250 V*			
PYF08S PYF14S	10 A, 250 V		SWIV2	Descenition
PYFZ-08(-E)	10 A, 250 V	- UL508	500102	Recognition
PYFZ-14(-E)	6 A, 250 V			
PY□ PYF□A(-E)	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	10 A, 250 V*		B50207505	
PYF-14-PU	6 A, 250 V	EN 61984	R50327595	
PYFZ-08(-E)	10 A, 250 V	EN 01904	R50405329	
PYFZ-14(-E)	6 A, 250 V			

\*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

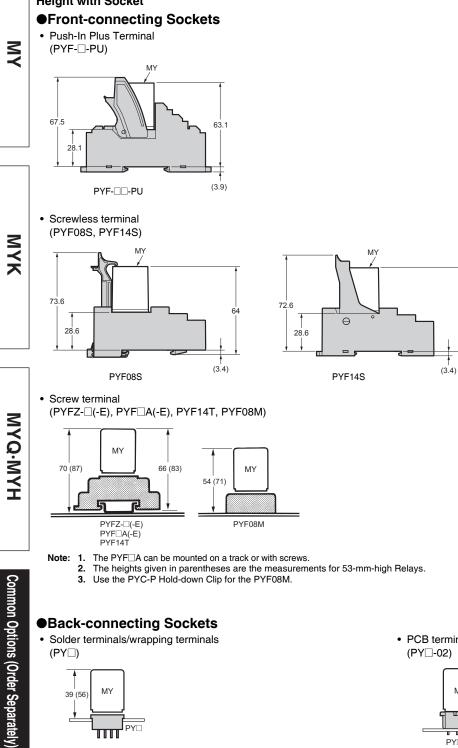
Model	Standard number	Certification No.
PYF08S	VDE0627 (EN61984)	40015509
PYF14	VDE0027 (EN01904)	40015509

MYK

≤ ×

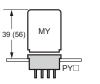
# Dimensions

# **Height with Socket**

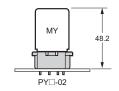


# Back-connecting Sockets

• Solder terminals/wrapping terminals (PY□)

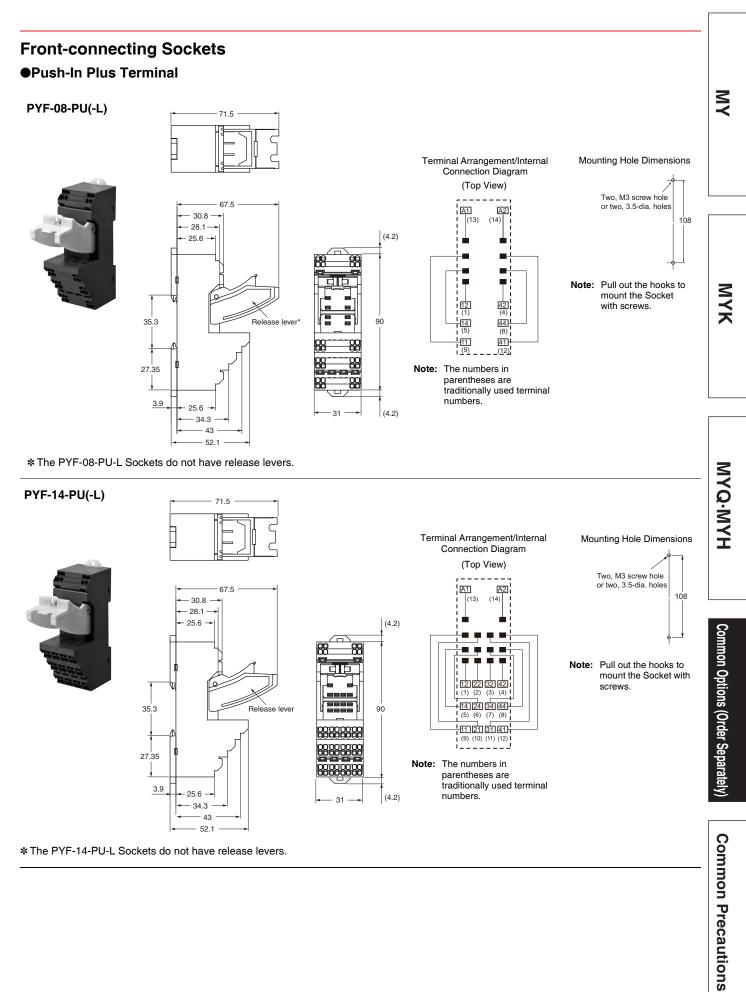




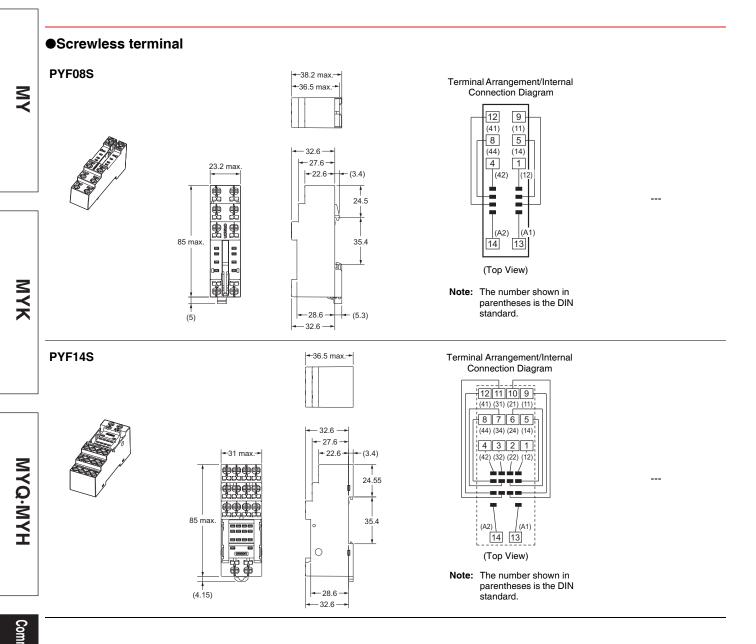


# 46

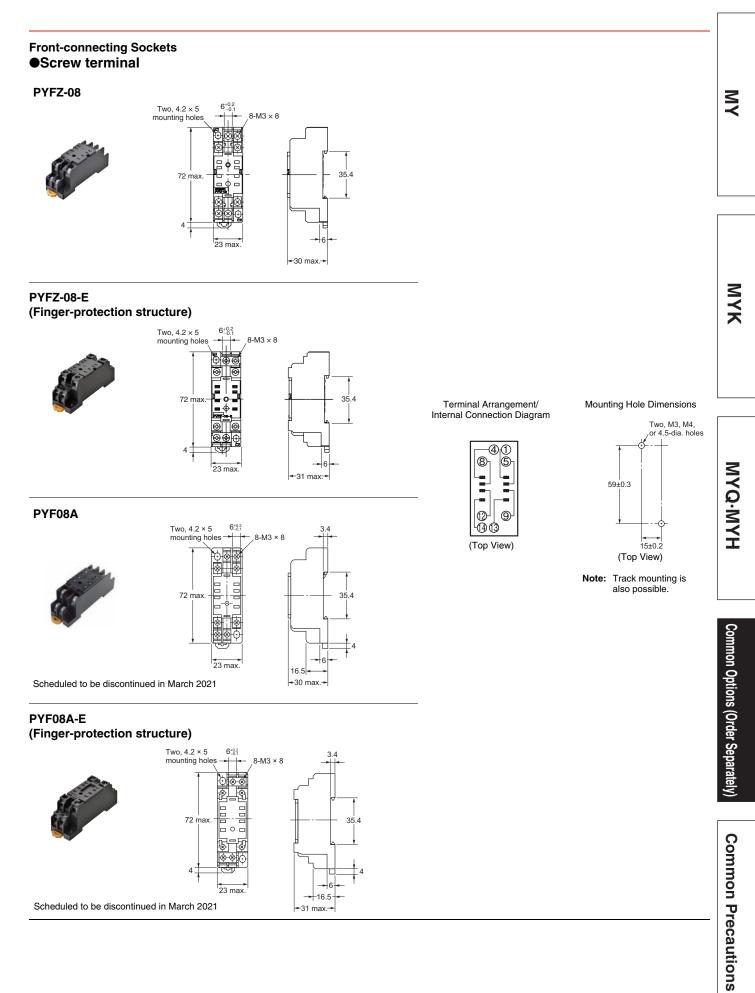
OMRON



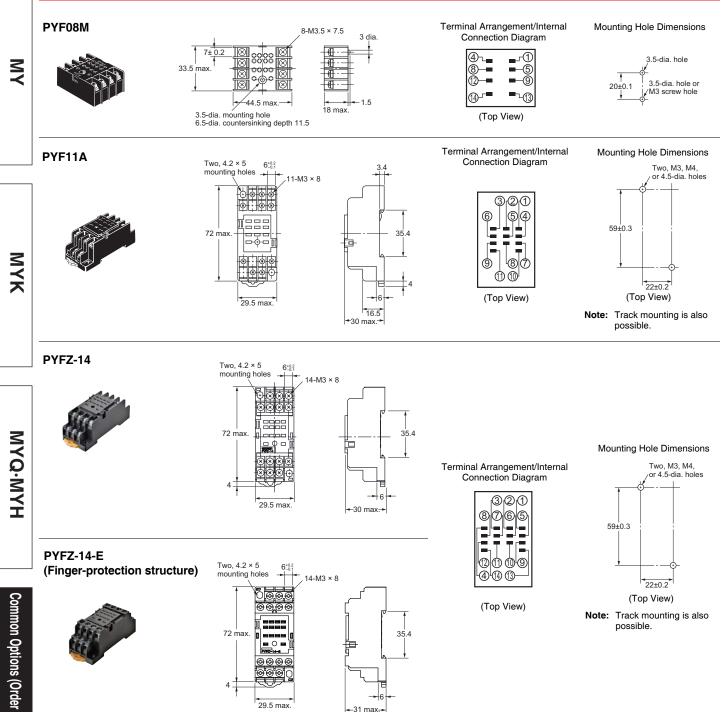
\* The PYF-14-PU-L Sockets do not have release levers.



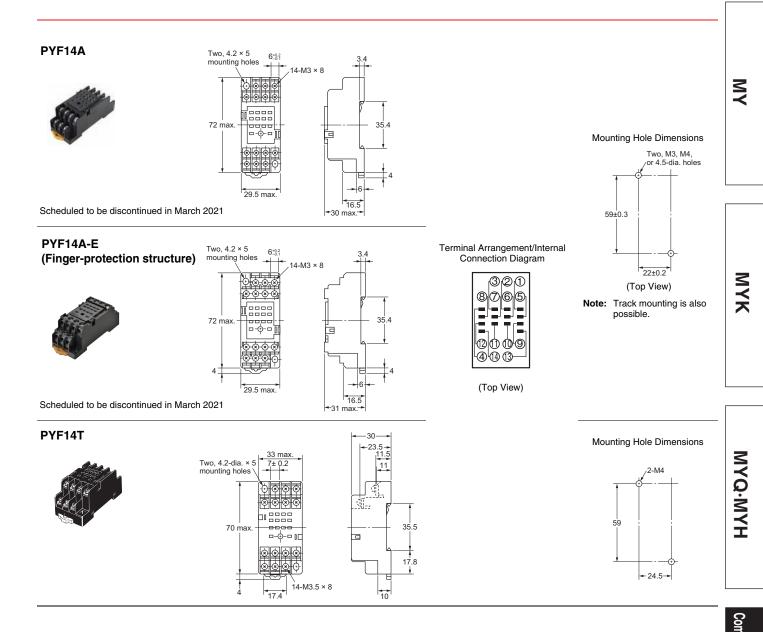
Common Options (Order Separately)

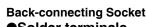


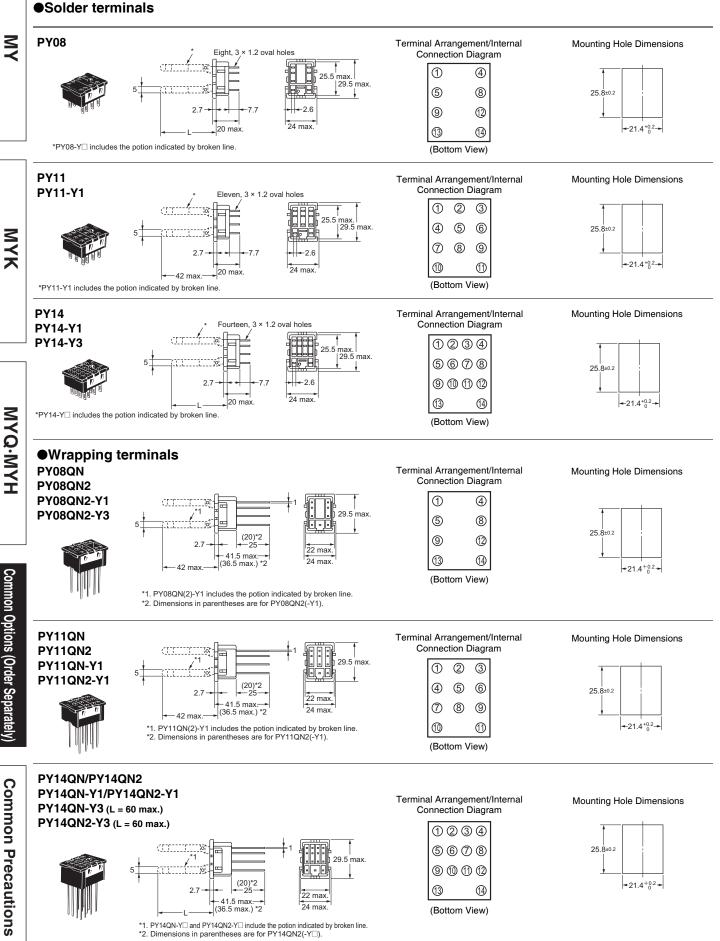
# OMRON

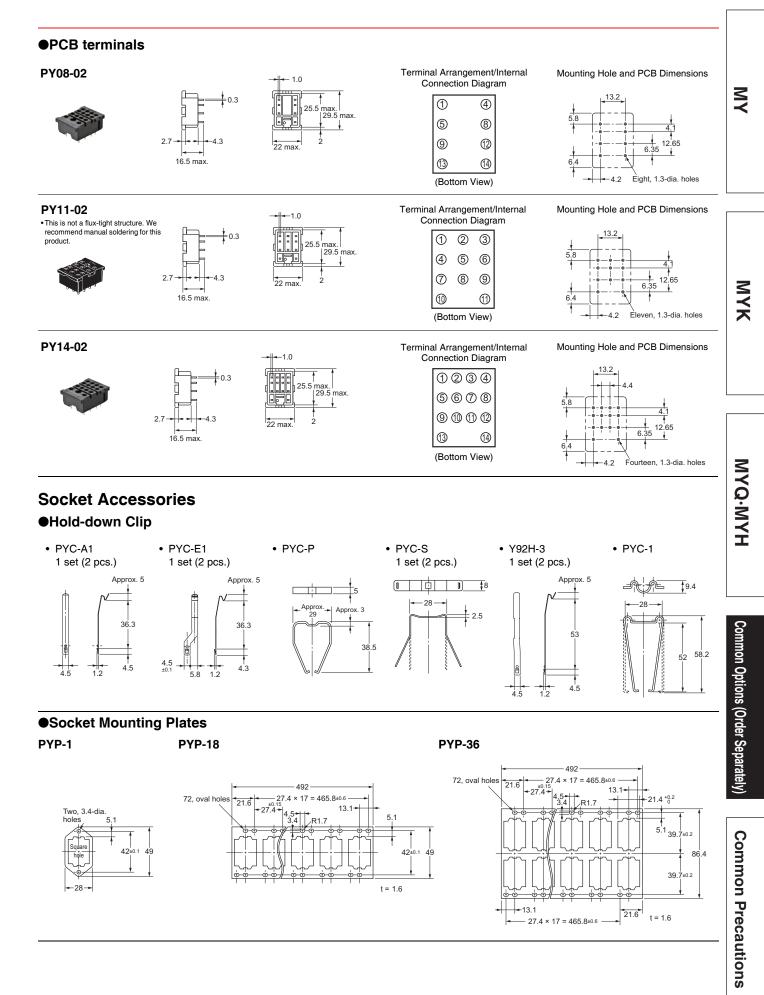


Common Options (Order Separately)

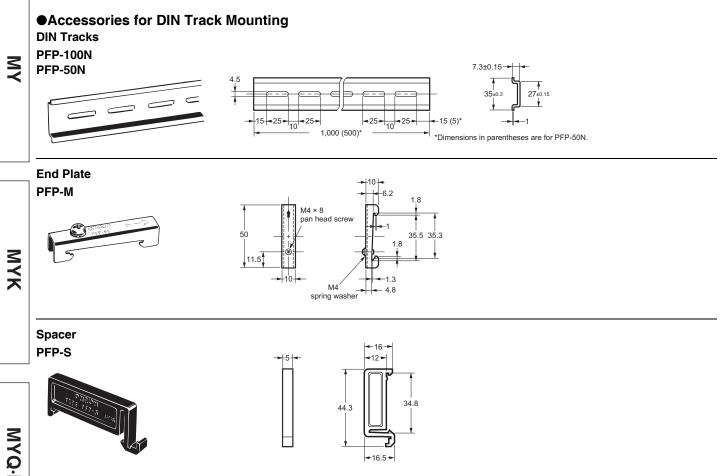








# ΜΥ/ΜΥΚ/ΜΥQ·ΜΥΗ



**MYQ·MYH** 

# **Safety Precautions**

# Relays

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

#### Warning Indications

	Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury, or may result in serious injury or death. Additionally there may be significant property damage.
	Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury or in property damage.
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

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

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.



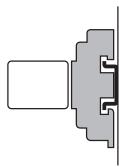
# **Precautions for Correct Use**

# 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□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.

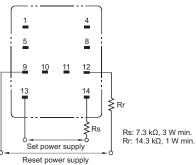
If there is the possibility of large voltage surges that could be applied to the elements from an external source, take any necessary surge absorption measures.

# 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.

# •Latching Relays (MYK)

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



- Do not apply a voltage to the set and reset coils at the same time. If you apply the rated voltage to both coils simultaneously, the Relay will be set.
- The minimum pulse width in the performance column is the value for the following measurement conditions: an ambient temperature of 23°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.

# **Optional Sockets (Order Separately)**

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

# **Front-connecting Sockets**

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

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

Hermetically Sealed Relays (MYH/MYQ)

pattern with enough space to prevent this problem.

result in short-circuiting or unintended operation.

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

Refer to the external dimensions of the Relay and design the PCB

Humid environments can cause insulation problems, which may

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

**Relays with PCB Terminals** 

**Application Environments** 

itself is made out of metal.

Solution

Solution

problem.

# 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), PYF08A(-E), PYF08M, PYF11A, PYFZ-14(-E), PYF14A(-E), PYF-14T)

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

# **Back-connecting Socket**

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

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

Common Options (Order Separately)

**Common Precautions** 

# **Terms and Conditions Agreement**

## Read and understand this catalog.

Please read and understand this catalog before purchasing the products. Please consult your OMRON representative if you have any questions or comments.

#### Warranties.

(a) Exclusive Warranty. Omron's exclusive warranty is that the Products will be free from defects in materials and workmanship for a period of twelve months from the date of sale by Omron (or such other period expressed in writing by Omron). Omron disclaims all other warranties, express or implied.

(b) Limitations. OMRON MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, ABOUT NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PRODUCTS. BUYER ACKNOWLEDGES THAT IT ALONE HAS DETERMINED THAT THE PRODUCTS WILL SUITABLY MEET THE REQUIREMENTS OF THEIR INTENDED USE.

Omron further disclaims all warranties and responsibility of any type for claims or expenses based on infringement by the Products or otherwise of any intellectual property right. (c) Buyer Remedy. Omron's sole obligation hereunder shall be, at Omron's election, to (i) replace (in the form originally shipped with Buyer responsible for labor charges for removal or replacement thereof) the non-complying Product, (ii) repair the non-complying Product, or (iii) repay or credit Buyer an amount equal to the purchase price of the non-complying Product; provided that in no event shall Omron be responsible for warranty, repair, indemnity or any other claims or expenses regarding the Products unless Omron's analysis confirms that the Products were properly handled, stored, installed and maintained and not subject to contamination, abuse, misuse or inappropriate modification. Return of any Products by Buyer must be approved in writing by Omron before shipment. Omron Companies shall not be liable for the suitability or unsuitability or the results from the use of Products in combination with any electrical or electronic components, circuits, system assemblies or any other materials or substances or environments. Any advice, recommendations or information given orally or in writing, are not to be construed as an amendment or addition to the above warranty.

See http://www.omron.com/global/ or contact your Omron representative for published information.

#### Limitation on Liability; Etc.

OMRON COMPANIES SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY CONNECTED WITH THE PRODUCTS, WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, NEGLIGENCE OR STRICT LIABILITY.

Further, in no event shall liability of Omron Companies exceed the individual price of the Product on which liability is asserted.

#### Suitability of Use.

Omron Companies shall not be responsible for conformity with any standards, codes or regulations which apply to the combination of the Product in the Buyer's application or use of the Product. At Buyer's request, Omron will provide applicable third party certification documents identifying ratings and limitations of use which apply to the Product. This information by itself is not sufficient for a complete determination of the suitability of the Product in combination with the end product, machine, system, or other application or use. Buyer shall be solely responsible for determining appropriateness of the particular Product with respect to Buyer's application, product or system. Buyer shall take application responsibility in all cases.

NEVER USE THE PRODUCT FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY OR IN LARGE QUANTITIES WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCT(S) IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.

#### **Programmable Products.**

Omron Companies shall not be responsible for the user's programming of a programmable Product, or any consequence thereof.

#### Performance Data.

Data presented in Omron Company websites, catalogs and other materials is provided as a guide for the user in determining suitability and does not constitute a warranty. It may represent the result of Omron's test conditions, and the user must correlate it to actual application requirements. Actual performance is subject to the Omron's Warranty and Limitations of Liability.

#### Change in Specifications.

Product specifications and accessories may be changed at any time based on improvements and other reasons. It is our practice to change part numbers when published ratings or features are changed, or when significant construction changes are made. However, some specifications of the Product may be changed without any notice. When in doubt, special part numbers may be assigned to fix or establish key specifications for your application. Please consult with your Omron's representative at any time to confirm actual specifications of purchased Product.

## Errors and Omissions.

Information presented by Omron Companies has been checked and is believed to be accurate; however, no responsibility is assumed for clerical, typographical or proofreading errors or omissions.

OMRON Corporation Industrial Automation Company Kyoto, JAPAN Contact: www.ia.omron.com

Authorized Distributor:

© OMRON Corporation 2018-2020 All Rights Reserved. In the interest of product improvement, specifications are subject to change without notice. CSM\_10\_6 Cat. No. J219-E1-05 0720 (0618) (O)