# OMRON

# Miniature Power Relays MY/MYK/MYQ-MYH

# 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 54 to 55 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.

# Miniature Power Relay Types

MY Miniature Power Relays	From	page	3
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# **Common Information**

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МҮК

MY

# **Model List**

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

			Plug-in terminals		PCB terminals	Case-surface	
			L <sub>TT</sub>	With operation indi	cator	L <sub>FF</sub>	mounting
Classification	Number of poles	Contacts			With latching lever	ſ	
	•	Single	MY2	MY2N	MY2IN(S)	MY2-02	MY2F
Otom doubles dolo	2	Bifurcated	MY2Z	MY2ZN			
(compliant with	3	Single	MY3	MY3N		MY3-02	MY3F
Electrical Appliances		Single	MY4	MY4N	MY4IN(S)	MY4-02	MY4F
and Material Safety Act)	4	Bifurcated	MY4Z	MY4ZN	MY4ZIN(S)	MY4Z-02	MY4ZF
7		Crossbar bifurcated	MY4Z-CBG	MY4ZN-CBG			
Models with built-in diode for coil surge	2	Single	MY2-D	MY2N-D2	MY2IN-D2(S)		
		Bifurcated	MY2Z-D	MY2ZN-D2			
absorption (compliant with	3	Single	MY3-D	MY3N-D2			
Electrical Appliances		Single	MY4-D	MY4N-D2	MY4IN-D2(S)		
and Material Safety Act)	4	Bifurcated	MY4Z-D	MY4ZN-D2	MY4ZIN-D2(S)		
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)		
and Material Safety Act)	4	Bifurcated	MY4Z-CR	MY4ZN-CR	MY4ZIN-CR(S)		
	Classification Standard models (compliant with Electrical Appliances and Material Safety Act) Models with built-in diode for coil surge absorption (compliant with Electrical Appliances and Material Safety Act) Models with built-in CR circuit for coil surge absorption (compliant with Electrical Appliances and Material Safety Act)	Number of polesClassificationof polesStandard models (compliant with Electrical Appliances and Material Safety Act)3Models with built-in diode for coil surge absorption (compliant with Electrical Appliances and Material Safety Act)2Models with built-in diode for coil surge absorption (compliant with Electrical Appliances and Material Safety Act)2Models with built-in CR circuit for coil surge absorption (compliant with Electrical Appliances and Material Safety Act)2	Number of polesContactsClassificationof polesContactsStandard models (compliant with Electrical Appliances 	Plug-in terminals         Number of poles Contacts         Classification       Plug-in terminals         Standard models       Single       MY2         Standard models         (compliant with       2       Single       MY2         3       Single       MY3         Electrical Appliances       3       Single       MY4         and Material Safety Act)       4       Bifurcated       MY4Z-CBG         Models with built-in diode for coil surge absorption (compliant with Electrical Appliances and Material Safety Act)       2       Single       MY2-D         3       Single       MY2-D       3       Single       MY4-D         Models with built-in CR circuit for coil surge absorption (compliant with Electrical Appliances and Material Safety Act)       2       Single       MY4-D         Bifurcated       MY2-D       Bifurcated       MY2-D       Bifurcated       MY2-CR         Models with built-in CR circuit for coil surge absorption (compliant with Electrical Appliances and Material Safety Act)       2       Single       MY2-CR         Bifurcated       MY2-CR       Electrical Appliances and Material Safety Act)       Bifurcated       MY2-CR	Plug-in terminalsClassificationNumber of polesPlug-in terminalsStandard models (compliant with Electrical Appliances and Material Safety Act)2SingleMY2MY2N3SingleMY3MY3N44SingleMY4MY4N8MitrcatedMY4ZMY4N8MitrcatedMY4ZMY4ZNCrossbar bifurcatedMY4ZMY4ZNCrossbar bifurcatedMY4Z-CBGMY4ZN-CBGModels with built-in diode for coil surge absorption (compliant with Electrical Appliances and Material Safety Act)2SingleMY2-D4SingleMY4-DMY3N-D24SingleMY4-DMY4N-D2Models with built-in CR circuit for coil surge absorption (compliant with Electrical Appliances and Material Safety Act)2SingleMY4-D4SingleMY2-CRMY2N-D24SingleMY2-CRMY2N-CR6BifurcatedMY2-CRMY2N-CR6Mith built-in CR circuit for coil surge absorption (compliant with Electrical Appliances and Material Safety Act)2Single4SingleMY2-CRMY2N-CRMY2N-CR8BifurcatedMY2-CRMY2N-CR8BifurcatedMY2-CRMY2N-CR8BifurcatedMY4-CRMY4N-CR8BifurcatedMY4-CRMY4N-CR8BifurcatedMY4-CRMY4N-CR	Number of poles         Single         MY2         With operation indicator           Standard models (compliant with Electrical Appliances and Material Safety Act)         2         Single         MY2         MY2N         MY2IN(S)           Models with built-in diode for coil surge absorption (compliant with Electrical Appliances and Material Safety Act)         2         Single         MY4         MY4N         MY4IN(S)           Models with built-in diode for coil surge absorption (compliant with Electrical Appliances and Material Safety Act)         2         Single         MY2-D         MY2N-D2         MY2IN-D2(S)           Models with built-in diode for coil surge absorption (compliant with Electrical Appliances and Material Safety Act)         2         Single         MY4-D         MY2N-D2         MY2IN-D2(S)           Models with built-in compliant with Electrical Appliances and Material Safety Act)         2         Single         MY4-D         MY4N-D2         MY4IN-D2(S)           Models with built-in CR circuit for coil surge absorption (compliant with Electrical Appliances and Material Safety Act)         2         Single         MY4-D         MY4N-D2         MY4IN-D2(S)           Models with built-in CR circuit for coil surge absorption (compliant with Electrical Appliances and Material Safety Act)         2         Single         MY2-D         MY4Z-D         MY4ZN-D2         MY4ZIN-D2(S)         MY4IN-D2(S)           B	Number of poles         Standard models compliant with Electrical Appliances and Material Safety Act)         Single         MY2         MY2N         MY2IN(S)         MY2-02           3         Single         MY3         MY3N         MY3-02         MY3-02           Bifurcated         MY4Z         MY4N         MY4IN(S)         MY4-02           3         Single         MY4Z         MY4N         MY4IN(S)         MY4-02           4         Bifurcated         MY4Z         MY4ZN         MY4ZIN(S)         MY42-02           Models with built-in diode for coil surge absorption (compliant with Electrical Appliances and Material Safety Acti         Single         MY2-D         MY2N-D2         MY2IN-D2(S)           3         Single         MY3-D         MY3-D         MY4N-D2         MY4IN-D2(S)           3         Single         MY3-D         MY3N-D2         MY4IN-D2(S)         MY4IN-D2(S)           3         Single         MY4-D         MY4Z-D2         MY4IN-D2(S)         MY4IN-D2(S)         MY4IN-D2(S)           4         Bifurcated         MY2-CR         MY2N-CR         MY2N-CR         MY4IN-D2(S)           Bifurcated         MY2-CR         MY2N-CR         MY4IN-D2(S)         MY4IN-D2(S)         MY4IN-D2(S)         MY4IN-D2(S)         MY4I

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

The find 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□A-E, PYF□-S and PYF-□-PU for the EC Declaration of Conformity. These products display the CE Marking.

# Miniature Power Latching Relays (MYK)

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

# Miniature Power Sealed Relays (MYQ/MYH)

	Plug-in terminals				PCB terminals	
		Number				
٦	Classification	of poles	Contacts		With operation indicator	
	Plastic Scaled Polavs	4	Single	MYQ4	MYQ4N	MYQ4-02
	Plastic Sealed Relays	1	Bifurcated	MYQ4Z		MYQ4Z-02
	Hermetically Sealed		Single	MY4H		MY4H-0
	Relays	4	Bifurcated	MY4ZH		MY4ZH-0

Refer to Front-connecting Sockets and Back-connecting Sockets in Common Options (Order Separately) on pages 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 types equipped with mechanical operation indicators and operation indicators for monitoring operation status are also 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 54 to 55 and Safety Precautions for All Relays.



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

# Features

#### 1. More easily distinguished AC/DC coil voltage specifications • Distinguished using color-coded operation indicators (LED)

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



· Latching lever operating procedure



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

Contact relia	ability	_ Corrosion re	Corrosion resistance			
	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		
			Au cladding + Ag alloy	MY4		
Low		Low	Ag alloy	MY2		

position.

# Common Options (Order Separately)



MYK

MYQ-MYH

# MY

# Model Number Structure

M	Model Number Lege ●Plug-in Terminals Standard models	nd
¥	M Y	(Example: MY4ZIN(S))
	(1) Number of poles	(2) Contacts (3) Options
	2: 2-pole	None: Single None: None
	3: 3-pole	Z: Bifurcated N: With operation indicator Z-CBG: Crossbar bifurcated IN(S): With operation indicator/latching lever
МΥК	Models with built-in diode for M Y (1) (1) Number of poles/contact 2: 2-pole, single contacts 2Z: 2-pole, bifurcated contacts 3: a pole single contacts	or coil surge absorption         (Example: MY4ZIN-D2(S))         (2)         s       (2) Options         -D:       Models with built-in diode for coil surge absorption         s       N-D2:         Built-in diode for coil surge absorption, with operation indicator         N-D2:       Built-in diode for coil surge absorption, with operation indicator
	4: 4-pole, single contacts	in-D2(3). Built-in didde for con surge absorption, with operation indicatoriatening level
ϺϒϘ·ϺϒΗ	42: 4-pole, birurcated contact Models with built-in CR circ M Y (1) (1) Number of poles/contact 2: 2-pole, single contacts	s uit for coil surge absorption (Example: MY4ZIN-CR(S)) (2) s (2) officients -CR: Models with built-in CR circuit for coil surge absorption
Common (	<ul><li>2Z: 2-pole, bifurcated contact</li><li>4: 4-pole, single contacts</li><li>4Z: 4-pole, bifurcated contact</li></ul>	<ul> <li>N-CR: Built-in CR circuit for coil surge absorption, with operation indicator IN-CR(S): Built-in CR circuit for coil surge absorption, with operation indicator/latching lever*</li> <li>*4-pole: Single/bifurcated contacts only</li> </ul>
Optic	●PCB terminals/case s	urface mounted
ons (Order S	M Y (1)	(Example: MY2-02)
epar	(1) Number of poles/contact	s (2) Terminals
ately)	<ol> <li>2-pole, single contacts</li> <li>3-pole, single contacts</li> <li>4-pole, single contacts</li> <li>4Z: 4-pole, bifurcated contact</li> </ol>	-02: PCB terminals F: Case-surface mounting s

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

## Plug-in Terminals

Without operation indicator

Classification	Number of poles	Contacts	Model	Rated voltage
		Single	MV2	12, 24, 100/110, 110/120, 200/220, 220/240 VAC
	2	Single	WI 1 2	12, 24, 48, 100/110 VDC
	-	Bifurcated	MV27	12, 24, 100/110, 110/120, 200/220, 220/240 VAC
		Difficated		12, 24, 48, 100/110 VDC
Standard models	3	Single	MV3	12, 24, 100/110, 110/120, 200/220, 220/240 VAC
(compliant with	J	Single	WIT 5	12, 24, 48, 100/110 VDC
Electrical Appliances		Single	MVA	12, 24, 100/110, 110/120, 200/220, 220/240 VAC
and Material Safety Act)		Single	WI I 4	12, 24, 48, 100/110 VDC
		Bifurcated Crossbar	MY4Z	100/110, 110/120, 200/220, 220/240 VAC
	4			12, 24, 48, 100/110 VDC
				100/110, 110/120, 200/220 VAC
		bifurcated	WIT42-CBG	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 coll surge	3	Single	MY3-D	12, 24, 100/110 VDC
(DC coil specification only)	4	Single	MY4-D	12, 24, 48, 100/110 VDC
	-	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
		Olive set a		12, 24, 100/110, 110/120, 200/220, 220/240 VAC
	_	Single	MY2N	12, 24, 48, 100/110 VDC
	2	Difurente d	MYOZNI	12, 24, 100/110, 110/120, 200/220, 220/240 VAC
		Bifurcated	WIY ZZN	12, 24, 48, 100/110 VDC
Standard models	~	Circula	MYZNI	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		Olive set a	MY4N	12, 24, 100/110, 110/120, 200/220, 220/240 VAC
and Material Safety Act)		Single		12, 24, 48, 100/110 VDC
		Bifurcated	MY4ZN	24, 100/110, 110/120, 200/220, 220/240 VAC
	4			12, 24, 48, 100/110 VDC
		Crossbar bifurcated	MY4ZN-CBG	100/110, 200/220 VAC
				24 VDC
	2	Single	MY2N-D2	12, 24, 48, 100/110 VDC
Models with built-in		Bifurcated	MY2ZN-D2	12, 24, 100/110 VDC
diode for coil surge	3	Single	MY3N-D2	12, 24, 100/110 VDC
(DC coil specification only)	4	Single	MY4N-D2	12, 24, 48, 100/110 VDC
	4	Bifurcated	MY4ZN-D2	12, 24, 48, 100/110 VDC
Models with built-in CR circuit for coil surge	2	Single	MY2N-CR	100/110, 110/120, 200/220, 220/240 VAC
	2	Bifurcated	MY2ZN-CR	100/110, 200/220 VAC
absorption	4	Single	MY4N-CR	100/110, 110/120, 200/220, 220/240 VAC
(AC coll specification only)	4	Bifurcated	MY4ZN-CR	100/110, 110/120, 200/220, 220/240 VAC

#### With operation indicator/latching lever

M	With operation indicator/latching lever							
íQ.	Classification	Number of poles	Contacts	Model	Rated voltage			
$\leq$		2	Single	MV2IN(S)	100/110, 200/220 VAC			
H	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)	4		WIT4IN(3)	12, 24, 48 VDC			
			Bifurcated	MY4ZIN(S)	100/110, 200/220 VAC			
					12, 24, 48 VDC			
C	Models with built-in	2	Single	MY2IN-D2(S)	12, 24, 48 VDC			
om	diode for coil surge		Single	MY4IN-D2(S)	12, 24, 48 VDC			
mon	(DC coil specification only)	4	Bifurcated	MY4ZIN-D2(S)	12, 24, 48 VDC			
Options (O	Models with built-in CR circuit for coil surge	4	Single	MY4IN-CR(S)	100/110, 200/220 VAC			
	absorption (AC coil specification only)		Bifurcated	MY4ZIN-CR(S)	100/110, 200/220 VAC			

#### PCB terminals

Classification	Number of poles	Contacts	Model	Rated voltage
	2	Single	MV2 02	12, 24, 100/110, 110/120, 200/220, 220/240 VAC
	2	Single	WIT2-02	12, 24, 48, 100/110 VDC
Standard models (compliant with	3	Single	MY3-02	12, 24, 100/110, 110/120, 200/220, 220/240 VAC
				12, 24, 48, 100/110 VDC
Electrical Appliances		Single	MY4-02	12, 24, 100/110, 110/120, 200/220, 220/240 VAC
and Material Safety Act)				12, 24, 48, 100/110 VDC
	4	Bifurcated	MY4Z-02	100/110, 110/120, 200/220 VAC
				12, 24, 48, 100/110 VDC

# ●Case-surface mounting

Classification	Number of poles	Contacts	Model	Rated voltage
	2	Single	MY2F	24, 100/110, 110/120, 200/220, 220/240 VAC
				12, 24, 48, 100/110 VDC
Standard models (compliant with	3	Single	MY3F	100/110, 200/220 VAC
				24, 100/110 VDC
Electrical Appliances		Single	MY4F	24, 100/110, 110/120, 200/220 VAC
and Material Safety Act)				12, 24, 48, 100/110 VDC
	4	Bifurcated	MV47E	200/220 VAC
				12, 24 VDC

MY

# **Ratings and Specifications**

#### **Ratings Operating Coils**

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-	-
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MYQ-MYH

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

	Item Rated voltage (V)		Item         Rated current (mA)           roltage (V)         50 Hz         60 Hz		Coil resistance	Coil induc	ctance (H)	Must	Must	Maximum	Power
Z					(Ω)	Armature OFF	Armature ON	operate voltage (V)	release voltage (V)	voltage (V)	consumption (VA, W)
$\mathbf{F}$		12	106.5	91	46	0.17	0.33				
		24	53.8	46	180	0.69	1.3			110% of rated voltage	Approx. 0.9 to 1.3 (at 60 Hz)
	AC	100/110	11.7/12.9	10/11	3,750	14.54	24.6		20% min *2		
		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	900/ max *1			
		220/240	4.8/5.3	4.2/4.6	18,790	83.5	136.4	00% max. 1			
		12	72	.7	165	0.73	1.37			5	
	DC	24	36	.3	662	3.2	5.72		100/ main *2		Ammrov 0.0
	DC	48	17	.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
	Standard models	2	Bifurcated	MY2Z	MY2ZN
	Models with built-in diode for	2	Bifurcated	MY2Z-D	MY2ZN-D2
Plug-in terminals	(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 voltage (V)		Rated current (mA)		Coil resistance	Coil indu	ctance (H)	Must	Must	Maximum	Power
		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			110% of rated voltage	Approx. 0.9 to 1.3 (at 60 Hz)
	100/110	11.7/12.9	10/11	3,750	14.54	24.6		200/ min *2		
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	900/ max *1			
	220/240	4.8/5.3	4.2/4.6	18,790	83.5	136.4	00% max. 1			
	12	7	5	160	0.73	1.37			Ŭ	
DC	24	36	6.9	650	3.2	5.72		100/ min *2		
DC	48	18.5		2,600	10.6	21.0	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). Operating characteristics were measured at a coil temperature of 23°C. The maximum voltage capacity was measured at an ambient temperature of 23°C. 2.

3.

4.

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

Common Options (Order Separately)

Terminal Type	Classification	Number of poles	Contacts	With latching lever
	Standard models	2	Single	MY2IN(S)
		4	Single	MY4IN(S)
		7	Bifurcated	MY4ZIN(S)
	Models with built-in diode for coil surge absorption (DC coil specification only)	2	Single	MY2IN-D2(S)
Plug-in terminals			Single	MY4IN-D2(S)
		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 voltage (V)		Rated cur	rent (mA)	Coil resistance	Coil induc	ctance (H)	Must	Must	Maximum	Power
		50 Hz	60 Hz	(Ω)	Armature OFF	Armature ON	operate voltage (V)	release voltage (V)	voltage (V)	(VA, W)
	100/110	11.7/12.9	10/11	3,750	14.54	24.6		30% min.*2		Approx.0.9
AC	200/220	6.2/6.8	5.3/5.8	12,950	54.75	94.07			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	voitage	Approx. 0.9
	48	18	3.8	2,560	10.6	21	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.

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	MY3	MY3N
Plug-in terminals	Standard models	4	Crossbar bifurcated	MY4Z-CBG	MY4ZN-CBG
	Standard models	2	Single	MY2-02	—
DCB terminals		3	Single	MY3-02	_
PCD terminals			Single	MY4-02	-
		4	Bifurcated	MY4Z-02	—
		2	Single	MY2F	_
Case-surface	Standard modela	3	Single	MY3F	_
mounting	Stanuaru models	4	Single	MY4F	—
		4	Bifurcated	MY4ZF	_

Item Rated voltage (V)		Rated current (mA)		Coil resistance	Coil induc	ctance (H)	Must	Must	Maximum	Power
		50 Hz	60 Hz	(Ω)	Armature OFF	Armature ON	operate voltage (V)	release voltage (V)	voltage (V)	(VA, W)
	12	106.5	91	46	0.17	0.33			110% of	
	24	53.8	46	180	0.69	1.3				
	100/110	11.7/12.9	10/11	3,750	14.54	24.6		200/ 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	90% max *1			
	220/240	4.8/5.3	4.2/4.6	18,790	83.5	136.4	00% max. 1		voltage	
	12	7	5	160	0.73	1.37				
DC	24	36	6.9	650	3.2	5.72		10% min *2		A
DC	48	18	18.5		10.6	21.0	1070 11111. 2			Applox. 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.

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

Operating characteristics were measured at a coil temperature of 23°C.
 The maximum voltage capacity was measured at an ambient temperature of 23°C.

The maximum voltage capacity was measured at an ambient temperatur
 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

#### **Contact Ratings**

Load

Number of poles

(contact configuration) **Contact structure** 

Rated load Rated carry

current\*1 Maximum

switching voltage Maximum

switching current Maximum

switching power

**Contact material** 

<	
_	

MY

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

(cos φ = 0.4, L/R = 7 ms)

2 A at 220 VAC 2 A at 24 VDC

440 VA

48 W

~	
$\sim$	

ズ

Number of poles (contact configuration)		4-pole (4PDT)													
Contact structure	e:.	agla			Difu	rootod			Crossbar	bifurcated					
	31	igie	With latch	ing lever (S)	ыш	Caleu	With latching lever (S)		(CBG)						
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)	Resistive load	Inductive load (cos $\phi$ = 0.4, L/R = 7 ms)	Resistive load	Inductive load (cos $\phi$ = 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)	3 A (5 A*2)				1 A					
Maximum switching voltage	250 VAC, 12	5 VDC													
Maximum switching current	3 A (5 A*2)								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		+ An allov (Au	nlatina + Aa*3	)					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

(cos φ = 0.4, L/R = 7 ms)

2 A at 220 VAC 2 A at 24 VDC

440 VA

48 W

\*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.

\*3. For MY -02 relays with PCB terminals and MY F case-surface-mounting relays.

M V

MYK

## **Characteristics**

Number of poles (contact configuration structure Contact resistance*1 *2 Operate time*3 Release time*3 Maximum frequency Resistance*4*5 Dielectric strength Strength	of poles	2-pole	(DPDT)	3-pole (3PDT)		4-pole (4PDT)							
5	Contact structure	Single	Bifurcated	Single	Single	Bifurcated	Crossbar bifurcated (CBG)						
Contact resistance	:e*1 *2	50 m $\Omega$ max.					100 mΩ max.						
Operate t	time*3	20 ms max.											
Release t	time*3	20 ms max.											
Maximum	Mechanical	18,000 operations/h											
frequency	Rated load	d 1,800 operations/h											
Insulation resistance	n :e*4*5	100 MΩ min.											
	Between coil and contacts												
Dielectric strength	Between contacts of different polarity	2,000 VAC, 50/60 Hz fo	,000 VAC, 50/60 Hz for 1 min										
	Between contacts of the same polarity	1,000 VAC at 50/60 Hz	1,000 VAC at 50/60 Hz for 1 min 700 VAC at 50/60 Hz for 1 min 700 VAC at 50/60 Hz for 1 min										
Vibration	Destruction	10 to 55 to 10 Hz, 0.5-mm single amplitude (1.0-mm double amplitude)											
resistance	Malfunction	10 to 55 to 10 Hz, 0.5-n	nm single amplitude (1.0	0-mm double amplitude)									
Shock	Destruction	1,000 m/s <sup>2</sup>											
resistance	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: 5,000,000 operations min. DC: 5,000,000 operations min. (switching frequency: 18,000 operations/h)						
	Electrical*6	500,000 operations min. (rated load, switching frequency: 1,800 operations/h)	200,000 operations min. (rated load, switching frequency: 1,800 operations/h)	500,000 operations min. (rated load, switching frequency: 1,800 operations/h)	200,000 operations min. (rated load, switching frequency: 1,800 operations/h)	100,000 operations min. (rated load, switching frequency: 1,800 operations/h)	50,000 operations min. (rated load, switching frequency: 1,800 operations/h)						
Failure rat (reference	te P value value)*7	1 mA at 5 VDC	100 µA at 1 VDC	1 mA at 5 VDC	1 mA at 1 VDC	100 µA at 1 VDC	100 µA at 1 VDC						
Weight		Approx. 35 g	Approx. 35 g	Approx. 35 g	Approx. 35 g	Approx. 35 g	Approx. 35 g						
Note: The 1. Model 2. Measu 3. Measu 4. Measu 5. Model 6. Ambie	e data sho Is with latc urement co urement co urement co Is with latc int tempera	wn above are initial valu hing lever are 100 m $\Omega$ n onditions: 1 A at 5 VDC I onditions: With rated ope onditions: For 500 VDC a hing lever are 1,000 m $\Omega$ ature condition: 23°C	es. naximum. using the voltage drop n rrating power applied, no applied to the same loca minimum.	nethod. ot including contact bour tion as for dielectric stre	nce. Ingth measurement.								

\*7. This value was measured at a switching frequency of 120 operations per minute.

Classification			Standard models		Models with built- Models with built-in	in diode for coil sur CR circuit for coil su	ge absorption (-D)/ rge absorption (-CR)		
Contacts		Single/bifurcated	I	Crossbar/bifu	rcated (CBG)		Single/bifurcated		
	Without	With operation indicator		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) MY2-D MY2N-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
МУК	MY2Z MY2ZN MY2-02 MY2F MY2Z-D MY2ZN-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 MY3N-D2 MY3-02	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
	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 MY4ZN-D2 MY4ZN-D2 MY4ZIN-D2(S) MY4Z-CR MY4ZIN-CR MY4ZIN-CR(S)	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
	MY4-02						1/6 HP, 250 VAC (Same polarity)	1,000
š	MY4Z-02						1/10 HP, 120 VAC (Same polarity)	
3	MY4ZF						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) MY2-D MY2N-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	Υ
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 MY2ZN-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	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	МҮК
MY3F					1/6 HP, 250 VAC	1,000	
MY4 MY4N MY4N(S) MY4-D	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)	6,000	
MY4N-D2 MY4IN-D2(S) MY4-CR MY4N-CR MY4IN-CR(S) MY4Z MY4ZN MY4ZIN(S) MY4Z-D MY4Z-D					0.2 A, 120 VDC (Resistive) (Same polarity)		MYQ-
MY4ZIN-D2(S) MY4Z-C MY4ZN-CR					1/6 HP, 250 VAC (Same polarity) 1/10 HP, 120 VAC (Same polarity)	1,000	YM
MY4ZIN-CR(S)					B300 Pilot Duty (Same polarity)	6,000	I
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	Comi

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

Model	Operating Coil ratings	Contact ratings	Certified number of operations
MY2Z MY2ZN MY2-02 MY2F MY2Z-D MY2ZN-D2 MY2Z-CR MY2ZN-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 ( $\cos \varphi = 1.0$ ) 0.8 A, 250 VAC ( $\cos \varphi = 0.4$ )	

	●CE Marki	ng			
	Model	EMC Directiv	e Low Voltage Direct	ive Machinery Directiv	ve Safety Category
MV	MY2 MY2N MY2IN(S) MY2Z MY2ZN MY2-D MY2N-D2 MY2IN-D2(S) MY2-CR MY22-CR MY2Z-CR MY2ZN-CR	Not applicable	Applicable	Not applicable	1
	MY2Z-D MY2ZN-D2 MY2F				
M Υ	MY3 MY3N MY3-D MY3N-D2 MY3F				
	MY4 MY4N MY4IN(S) MY4Z MY4ZN MY4ZIN(S) MY4-D MY4N-D2 MY4N-D2 MY4IN-D2(S)				
	MY4Z-D MY4ZN-D2 MY4ZIN-D2(S) MY4-CR MY4N-CR				
MYC	MY4Z-CR MY4ZN-CR MY4F MY4ZF				
	●LR certifi	cation (Lloyd	l's Register)		
5	Model	File No.	Environmental Category	Operating Coil ratings	Contact ratings
┺│	MY2	File No.98/10014	ENV2,3	6 to 240 VAC	10 A, 250 VAC (Resistive)

# ●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) MY4IN(S) MY4IN-D2 MY4IN-D2(S) MY4-CR MY4IN-CR MY4IN-CR(S) MY4Z MY4ZN MY4ZIN(S) MY4ZIN(S) MY4Z-D MY4ZIN-D2 MY4ZIN-D2(S) MY4ZN-CR MY4ZIN-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

●VDE cert	ification				
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 φ = 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			6, 12, 24, 48/50, 100/110, 110/120, 200/220	5 A, 250 VAC ( $\cos \varphi = 1$ ) 5 A, 30 VDC (L/R = 0 ms)	
MY42IN(S) MY4-D MY4N-D2 MY4IN-D2(S) MY4Z-D MY4ZN-D2 MY4ZN-D2			220/240 VAC 6, 12, 24, 48, 100/110, 125 VDC		
MY4ZIN-D2(S) MY4-CR MY4N-CR MY4IN-CR(S) MY4Z-CR MY4ZN-CR MY4ZIN-CR(S)					

# **Engineering Data (Reference Value)**











#### With latching lever MY2(S) 10,000 Number of operations (×10<sup>3</sup> operations) 5,000 3,000 250 VAC resistive load 1,000 30 VDC resistive load 500 30 VDC resistive load 300 250 VAC resistive load 100 50 30 10 n 4 6 Contact current (A) MY4(S)











#### MY4Z(S)



MY

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

MY2 AC Models

10,000

5.000

3,000

1,000

500

300

100

50

30

10

0

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



#### MY4 AC Models



# MY2 DC Models



#### MY4 DC Models



Common Options (Order Separately)





Note: 1.

18

#### memory A' A'

To digital

 $\propto$ 24 VDC

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.

à

#### 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



#### Shock direction



# **Dimensions**



# OMRON

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







MY

MYK

OMRON





# 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 54 to 55 and Safety Precautions for All Relays.

# Features



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.



MYQ-MYH

# **Model Number Structure**



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

_	(4)
(3) T	<b>ype</b>
⊬	(: 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

Classification	Number of poles	Contacts	Model	Rated voltage
Standard models (compliant with Electrical	۰ د	Single	MV2K	12, 24, 100, 100/110 VAC
Appliances and Material Safety Act)	2		MY2K	12, 24, 48 VDC

#### PCB terminals

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

# **MYK**

MΥ

# **MYK**

MY

MYK

# **Ratings and Specifications**

#### Ratings

#### Operating coil

			Set	coil		Rese	t coil				Power consumption (VA,		
Rated	voltage (V)	Rated current (mA)		Coil resistance	Rated current (mA)		Coil resistance	Must operate	release	Maximum voltage (V)	Set coil	Reset coil	
		50 Hz	60 Hz	(52)	50 Hz	60 Hz	(52)	voltage (v)	voltage (v)				
	12	57	56	72	39	38.2	130				Approx, 0.6	Approx. 0.2	
AC	24	27.4	26.4	320	18.6	18.1	550				to 0.9	to 0.5	
	100	7.1	6.9	5,400	3.5	3.4	3,000	90% mov *	90% may	110% max.	(at 60 Hz)	(at 60 Hz)	
	12	11	10	110	5	50	235	80% max." 80% max. of rated voltage	voltage				
DC	24	5	2	470	2	25	940			Ū	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	Sin	gle			
Load	Resistive load	Inductive load (cos $\varphi$ = 0.4, L/R = 7 ms)			
Rated load	3 A at 220 VAC 3 A at 24 VDC	0.8 A at 220 VAC 1.5 A at 24 VDC			
Rated carry current	3 A				
Maximum switching voltage	250 VAC, 125 VDC				
Maximum switching current	3 A				
Maximum switching power	660 VA 72 W	176 VA 36 W			
Contact material	Au plating + Ag				

# Characteristics

Contact resistance*1		50 mΩ max.				
•	Operate time*2	AC: 30 ms max., DC: 15 ms max.				
Set	Minimum pulse width	AC: 60 ms, DC: 30 ms				
Deset	Release time*2	AC: 30 ms max., DC: 15 ms max.				
Reset	Minimum pulse width	AC: 60 ms, DC: 30 ms				
Maximum	Mechanical	18,000 operations/h				
switching frequency	Rated load	1,800 operations/h				
Insulation resist	tance*3	100 MΩ min.				
Dielectric	Between coil and contacts Between contacts of different polarity	1,500 VAC at 50/60 Hz for 1 min				
strength	Between contacts of the same polarity	1,000 VAC at 50/60 Hz for 1 min				
	Between set/reset coils					
Vibration	Destruction	10 to 55 to 10 Hz, 0.5-mm single amplitude (1.0-mm double amplitude)				
resistance	Malfunction	10 to 55 to 10 Hz, 0.5-mm single amplitude (1.0-mm double amplitude)				
Shock	Destruction	1,000 m/s <sup>2</sup>				
resistance	Malfunction	200 m/s <sup>2</sup>				
Enduranco	Mechanical	100,000,000 operations min. (switching frequency: 18,000 operations/h)				
Endurance	Electrical*4	200,000 operations min. (at rated load, switching frequency: 1,800 operations/h)				
Failure rate P va	alue (reference value)*5	1 mA at 1 VDC				
Ambient operat	ing temperature*6	-55 to 60°C				
Ambient operat	ing humidity	5% to 85%				
Weight		Approx. 30 g				

**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

 Measurement conditions:
 \*2. Measurement conditions:
 \*3. Measurement conditions:
 \*4. Ambient temperature cond
 \*5. This value was measured
 \*6. With no icing or condensa This value was measured at a switching frequency of 120 operations per minute.

With no icing or condensation.

# **Engineering Data (Reference Value)**

# Maximum Switching Capacity MY2K(-02)



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



#### Shock Malfunction MY2K 100 VAC



## Endurance Curve



Latching Deterioration Over Time MY2K 24 VDC







MYK

MY

# MYK

# Dimensions



MYQ·MYH

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

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

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

Refer to Safety Precautions on pages 54 to 55 and Safety Precautions for All Relays.



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

# **Features**

# Highly Airtight Relays (Plug-in Terminals)

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

# Plastic Sealed Relays: MYQ

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



## Hermetically Sealed Relays: MYH

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





**FL' (SP** 

MYK

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

# S → Ordering Information

When your order, specify the rated voltage.

# **Plastic Sealed Relays**

Plug-in terminals

	Classification	Number	Contacta			With operation indicator		
	Classification	of poles	Contacto	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	
	Compliant with 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	4	Single	MXO4 02	50, 200/220, 220/240 VAC
(compliant with			WIT Q4-02	24 VDC
Electrical Appliances		Bifurcated	MXO47.02	100/110 VAC
and Material Safety Act)			WIT Q4Z-U2	24, 48 VDC

#### Hermetically Sealed Relays ●Plug-in terminals

Classification	Number of poles	Contacts	Model	Rated voltage	
Standard models (compliant with Electrical Appliances and Material Safety Act)		Single	MY4H	24, 100/110, 110/120 VAC 12, 24, 48, 100/110 VDC	
	4	Bifurcated	МҮ47Н	24, 100/110, 110/120 VAC	
				12, 24, 48, 100/110 VDC	

#### •PCB terminals

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

MY

# **MYQ·MYH**

# **Ratings and Specifications**

#### Operating coil

Rated voltage (V)		Rated cur	rrent (mA)	Coil	Coil indu	ctance (H)	Mustanerate	Mustralages	Maximum	Power	
		50 Hz	60 Hz	resistance (Ω)	Armature OFF	Armature ON	voltage (V)*1	voltage (V)*2	voltage (V)	consumption (VA, W)	S
	24	53.8	46	180	0.69	1.3			110% max. of		~
	100/110	11.7/12.9	10/11	3,750	14.54	24.6				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					
	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			Taled Vollage		
DC	24	36	5.9	650	3.2	5.72		100/		A	
DC	48	18	8.5	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/b	ifurcated			
Load	Resistive load	Inductive load (cos φ = 0.4, L/R = 7 ms)			
Rated load	1 A at 220 VAC 1 A at 24 VDC	0.5 A at 220 VAC 0.5 A at 24 VDC			
Rated carry current	1 A				
Maximum switching voltage	250 VAC 125 VDC				
Maximum switching current	1 A				
Maximum switching power	220 VA 24 W	110 VA 12 W			
Contact material	Au plating + Ag				

#### Hermetically Sealed Relays: MYH

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

МΥК

## **Characteristics**

MY FR MS	Model			MYQ		МҮН		
2	Contact resistance	•*1	50 mΩ max.		1			
$\mathbf{z}$	Operate time*2		20 ms max.					
	Release time*2		20 ms max.					
MY AM AM	Maximum	Mechanical	18,000 operations/h					
	switching frequency	Rated load	1,800 operations/h					
	Insulation resistan	ice*3	100 MΩ min.					
		Between coil and contacts	1,500 VAC at 50/60	Hz for 1 min	1,000 VAC at 50/60	Hz for 1 min		
	Dielectric strength	Between contacts of different polarity	1,500 VAC at 50/60	Hz for 1 min	1,000 VAC at 50/60	Hz for 1 min		
		Between contacts of the same polarity	1,000 VAC at 50/60	Hz for 1 min	700 VAC at 50/60 H	z for 1 min		
	Vibration Destruction		10 to 55 to 10 Hz, 0.5-mm single amplitude (1.0-mm double amplitude)					
МҮК	resistance	Malfunction	10 to 55 to 10 Hz, 0.5-mm single amplitude (1.0-mm double amplitude)					
	Shock resistance	Destruction	1,000 m/s <sup>2</sup>					
	Onock resistance	Malfunction	200 m/s <sup>2</sup>					
	Endurance	Mechanical	Single contacts: Bifurcated contacts:	AC: 50,000,000 operations min., DC: 100,000,000 operations min. 5,000,000 operations min., DC: 5,000,000 operations min. (switching frequency: 18,000 operations/h)	Single contacts: Bifurcated contacts:	50,000,000 operations min. 5,000,000 operations min. (switching frequency: 18,000 operations/h)		
		Electrical*4	Single contacts: Bifurcated contacts:	200,000 operations min. 100,000 operations min. (at rated load, switching frequency: 1,800 operations/h)	Single contacts: Bifurcated contacts:	100,000 operations min. 50,000 operations min. (at rated load, switching frequency: 1,800 operations/h)		
	Failure rate P Leve	el (reference value)*5	Single contacts: Bifurcated contacts:	1 mA at 1 VDC 100 μA at 1 VDC	Single contacts: Bifurcated contacts:	100 μA at 1 VDC 100 μA at 100 mVDC		
$\leq$	Ambient operating	temperature*6	-55 to 60°C		-25 to 60°C			
6	Ambient operating	humidity	5% to 85%					
	Weight		Approx. 35 g		Approx. 50 g			
HAM	Note: The data shown above are initial value *1. Measurement conditions: 1 A at 5 *2. Measurement conditions: With rate		es. VDC using the voltage ed operating power ap	e drop method. plied, not including contact bounce.				

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

Intersurement conditions:with 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



# OMRON

MY

# **Common Options (Order Separately)**

For details on Sockets and Hold-down Clips, refer to the data sheet for Common Sockets.

# **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)	
MY2□ MY2□(S) MY2Z□-CR		Available Mounted on a DIN track or with screws Option (Terminal cover sold separately) *3	Push-In Plus	Ferrules	<u>NEW</u>	PYF-08-PU*2 * MY2Z□-CR, MY2□-CR 24 VAC cannot be used	With release lever * Hold by release lever	
	Mounted on a DIN track or with screws		Terminal	Stranded wire	<u>NEW</u>	PYF-08-PU-L*2		МУК
			Screw terminal (M3 screw size)	Forked terminals Solid wire Stranded wire	NEW	PYFZ-08-E*4	MY2⊡: PYC-A1 MY2IN(S): PYC-E1 MY2Z⊡-CR, MY2⊡-CR 24 VAC: Y92H-3	
				Round terminals Forked terminals Solid wire Stranded wire	<u>NEW</u>	PYFZ-08 * Terminal cover: PYCZ-C08		YM
	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	Q-MYH
	Screw mounting only	None	Screw terminal (M3.5 screw size)	Round terminals Forked terminals 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	Common Opt

\*1. The applicable relay model is a plug-in terminal type.

The approach of the ping in boles 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) is a type in which the terminal cover is integrated into the socket. Round terminals cannot be used. Use forked terminals or

ferrules instead.

	Applicable relay model*1	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 * MY4ZN-CBG-CR, MY4-CR 24 VAC, MY4N-CR 24 VAC/115 VAC cannot be used	With release lever * Hold by release lever
			Available		Stranded wire	<u>NEW</u>	PYF-14-PU-L*2	
		Mounted on a DIN track or						-
МУК	MY4□ MY4□(S) MY4□H MYQ4□	with screws		Screw terminal	Forked terminals Solid wire Stranded wire	NEW	PYFZ-14-E*4	MY4Z□-CBG-CR, MY4-CR 24 VAC, MY4N-CR 24 VAC/115 VA: Y92H-3 Other than those above: PYC-A1
	MY4Z⊡-CBG-CR MY2K		Option (Terminal cover sold separately) *3	(M3 screw size)	Round terminals Forked terminals Solid wire Stranded wire	NEW	<b>PYFZ-14</b> * Terminal cover: PYCZ-C14	
Z		Mounted on a DIN track	Available	Screwless terminal (Clamp method)	Solid wire Stranded wire	e e e e e e e e e e e e e e e e e e e	PYF14S	PYCM-14S * MY4Z□-CBG-CR, MY4-CR 24 VAC, MY4N-CR 24 VAC/115 VAC cannot be used * Hold by release lever
YQ·MYH		Mounted on a DIN track or with screws	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

\*1. The applicable relay model is a plug-in terminal type.
 \*2. 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.
 \*3. 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.
 \*4. The finger-protection type (PYFZ-\_-E) is a type in which the terminal cover is integrated into the socket. Round terminals cannot be used. Use forked terminals or ferrules instead.

Back-mounting Sockets					
Applicable relay model*1	Terminal Type	Hold-down Clips	Appearance	Mode	
	Solder terminals			PY08	ΥM
MY2D	Wrapping terminals Terminal length: 25 mm	Accessories (Order Separately)		PY08QN	
MY2Z_(S) MY2ZCR	Wrapping terminals Terminal length: 20 mm	Other than those above: PYC-P		PY08QN2	
	PCB terminals			PY08-02	МҮК
	Solder terminals			PY08-Y1	
		_			ϺϒϘ·ϺϒΗ
MY2□ MY2□(S)	Wrapping terminals Terminal length: 25 mm			PY08QN-Y1	
	Wrapping terminals Terminal length: 20 mm	With Hold-down Clips*2		PY08QN2-Y1	Common Optio
	Solder terminals			РҮ08-Ү3	ns (Order Separately)
MY2Z□-CR	Wrapping terminals Terminal length: 25 mm			PY08QN-Y3	Common Prec

\*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
MΥ	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		PY11-Y1
			Accessories (Order Separately) * PYC-P		PY11QN
MYQ·MYH	MY3□	Wrapping terminals Terminal length: 25 mm	With Hold-down Clips*2		PY11QN-Y1
Cor			Accessories (Order Separately) * PYC-P		PY11QN2
nmon Options (Order Sep		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)	Solder terminals	Accessories (Order Separately)		PY14
on Precaut	MY4UH MYQ4 MY4ZO-CBG-CR MY2K	Wrapping terminals Terminal length: 25 mm	* 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>	ו plug-in terminal type. ting the relay and socket come:	e as a set with the socket.		

Applicable relay model*1	Terminal Type	Hold-down Clips	Appearance	Mode	
MY4□ MY4□(S) MY4□H MYQ4□	Wrapping terminals Terminal length: 20 mm	Accessories (Order Separately) * MY4Z□-CBG-CR: PYC-1 Other than those above: PYC-P		PY14QN2	MY
MY4Z⊡-CBG-CR MY2K	PCB terminals			PY14-02	
	Solder terminals			PY14-Y1	YM
MY4□ MY4□(S) MY4□H MYQ4□ MY2K	Wrapping terminals Terminal length: 25 mm			PY14QN-Y1	<b>X</b>
	Wrapping terminals Terminal length: 20 mm	With Hold down Oline*2		PY14QN2-Y1	ϺϒϘ·ϺϒΗ
	Solder terminals	With Hold-down Clips 2		PY14-Y3	Common Optio
MY4Z⊡-CBG-CR	Wrapping terminals Terminal length: 25 mm			PY14QN-Y3	ns (Order Separately)
*1. The applicable relay model is a	Wrapping terminals Terminal length: 20 mm			PY14QN2-Y3	<b>Common Precaution</b>
<sup>2</sup> . The hold-down clips for connect	cting the relay and socket come	as a set with the socket.			S

	Hold-down Clip					
	Appearance*1	Model*2	Weight*3	Application		
ΥM		PYC-A1	Approx. 0.54 g			
		PYC-E1	Approx. 0.6 g	For connecting relays and sockets		
		РҮС-Р	Approx. 1.4 g	r of connecting relays and sockets		
МΥК		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		
YQ·MYH		PYC-1*5	Approx. 6 g	(MY22∟-CR) and sockets		

The appearance shown is one in which the relay, socket, and hold-down clip are assembled.
 Hold-down clips are used in sets of two. However, PYC-P and PYC-1.
 The weight shown above is the weight for one hold-down clip.
 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.
 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	Shape/external dimensions	Number of poles	L (Length)	Insulati on color	Model*1
		Bridging contact terminals (common)	3.90	2	15.1	Red (R)	PYDN-7.75-020
				3	22.85		PYDN-7.75-030
	7.75 mm			4	30.6		PYDN-7.75-040
PYF-08-PU(-L)				20	154.6		PYDN-7.75-200
PYF-14PU(-L)	31.0 mm	For Coil terminals		8	224.35	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	Insulation	2	Red (R)	<b>PYDM-08S</b> □ (50 pcs./bag)
PYF14S	27.5 mm	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

MΥ

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

Short Bars

Z	Applicable sockets	Pitch	Application	Shape/external dimensions	Number of poles	Insulation color	Model*1
~					2		<b>PYD-025B⊡ (2P)</b> (10 pcs./bag)
МХК	PYFZ-08	22 mm	For bridging	3.3 +5.6	8	B (Black)	<b>PYD-085B⊡ (8P)</b> (10 pcs./bag)
			adjacent sockets		2	S (Blue) R (Red)	<b>PYD-026B⊡ (2P)</b> (10 pcs./bag)
ϺϒϘ·ϺϒΗ	PYFZ-14	29 mm		$\begin{array}{c} & & & \\ & & & & \\ & & & \\ &$	8		<b>PYD-086B⊡ (8P)</b> (10 pcs./bag)
Common Option			For bridging		2	B (Black)	<b>PYD-020B□ (2P)</b> (50 pcs./bag)
s (Order Separately)		7 mm	with the same socket		3	Y (Yellow)	<b>PYD-030B⊡ (3P)</b> (10 pcs./bag)

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

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

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

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

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

#### Dimensions with terminal cover



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

Applicable Sockets		Socket Mounting Plates			
Model	Models with hold-down clips	Appearance	Number of sockets	Model	
PY08 PY08QN	PY08-Y1, PY08-Y3 PY08QN-Y1, PY08QN-Y3	(	1	PYP-1	
PY08QN2         PY08QN2-Y1, PY08QN2-Y3           PY11         PY11-Y1           PY11QN         PY11QN-Y1           PY11QN2         PY11QN2-Y1           PY14         PY14-Y1, PY14-Y3           PY14QN         PY14QN-Y1, PY14QN-Y3           PY14QN2         PY14QN2-Y1, PY14QN2-Y3	PY08QN2-Y1, PY08QN2-Y3 PY11-Y1 PY11QN-Y1 PY11QN2-Y1		18	PYP-18*	
		36	PYP-36*		

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

#### Parts for Track Mounting

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

Note: The track conforms to DIN standards.

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

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# **Ratings and Specifications**

#### **Characteristics**

#### Sockets

							Dielectric strength*4		th*4				
	Model	Connection	Number of pins	Terminal Type	Ambient operating temperature	Ambient operating humidity	Rated carry current	Between contact terminals of same polarity	Between contact terminals of different polarity	Between coil and contact terminals	Insulation resistance *1*4	Weight	
	PYF-08-PU			Push-In Plus Terminal	-40 to 70°C		10 4*2	2,000 VAC	2,000 VAC	2,000 VAC		Approx. 80	
	PYF08S			Screwless terminal			10 A 2	for 1 min	for 1 min	for 1 min		Approx. 46	
	PYFZ-08		8				10 A	2,250 VAC	2,250 VAC	2,250 VAC		Approx. 32	
	PYFZ-08-E	_		Screw terminal	EE to 70°C		1077	for 1 min	for 1 min	for 1 min		Approx. 32	
	PYF08M				-55 10 70 C		5 A	1,500 VAC for 1 min	1,500 VAC for 1 min	1,500 VAC for 1 min		Approx. 26	
	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	1,000 MΩ min.	Approx. 43	
	PYF-14-PU	_		Push-In Plus Terminal	-40 to 70°C		6 A	2,000 VAC	2,000 VAC	2,000 VAC	(500 VAC)	Approx. 87	
	PYF14S			Screwless terminal			5 A	for 1 min	for 1 min	for 1 min		Approx. 62	
	PYFZ-14		14				6 1	2,250 VAC	2,250 VAC	2,250 VAC		Approx. 50	
	PYFZ-14-E			Screw terminal	-55 to 70°C		0 A	for 1 min	for 1 min	for 1 min		Approx. 50	
	PYF14T						3 A	2,000 VAC for 1 min	2,000 VAC for 1 min	2,000 VAC for 1 min		Approx. 53	
	PY08											Approx. 8 g	
	PY08-Y1			Solder terminals								Approx. 9 g	
	PY08-Y3 PY08QN											Approx. 9 g	
			Wrapping terminals					1,500 VAC for 1 min	1,500 VAC for 1 min	100 MΩ min.	Approx. 12		
	PY08QN-Y1	_	8	(Terminal length: 25 mm)			7 A 1,500 VAC for 1 min				Approx. 13		
	PY08QN-Y3	_	Ũ								Approx. 13		
	PY08QN2	_		V (		Wrapping terminals		5% to					Approx. 11
	PY08QN2-Y1	_			(Terminal length:		85%					Approx. 12	
	PY08QN2-Y3	-			_							Approx. 12	
	PY08-02	_		PCB terminals		5						Approx. 7 g	
	PY11	_		Solder terminals			5 A 1,500 VAC for 1 min		00 VAC 1,500 VAC 1,500 VAC 1 min for 1 min for 1 min		: 100 MΩ min.	Approx. 9 g	
	PT11-T1	_			-55 to 70°C					1,500 VAC for 1 min		Approx. 10	
•	PYTTQN PYTTQN V1	Back	11	Wrapping terminals (Terminal length: 25 mm)				1,500 VAC for 1 min				Approx. 13	
	PY110N2	Dack		(*)								Δpprox 12	
	PY110N2-Y1	_		(Terminal length: 20 mm)								Δpprox. 12	
	PY11-02	-		PCB terminals								Approx. 8 a	
	PY14	-		-								Approx. 10	
	PY14-Y1			Solder terminals								Approx. 11	
	PY14-Y3	_										Approx. 11	
	PY14QN			Wrapping terminals								Approx. 14	
	PY14QN-Y1		14	(Terminal length:			2.4	1,500 VAC	1,500 VAC	1,500 VAC	100 MΩ	Approx. 15	
	PY14QN-Y3		14	25 mm)	_		3 A	for 1 min	for 1 min	for 1 min	min.	Approx. 15	
	PY14QN2			Wrapping terminals								Approx. 13	
	PY14QN2-Y1	_		(Terminal length:								Approx. 14	
	PY14QN2-Y3	_		∠u mm)								Approx. 14	
	PY14-02			PCB terminals								Approx. 9 g	

**Common Precautions** 

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

Application	Applicable sockets	Model	Maximum carry current	Ambient operating temperature	Ambient operating humidity
		PYDN-7.75-020			
	PYF-08-PU(-L)	PYDN-7.75-030	20.4	40 to 70°C	5% to 95%
	PYF-14-PU(-L)	PYDN-7.75-040	20 A	-40 to 70°C	5% 10 85%
		PYDN-7.75-200			
Bridging contact terminals (common)	PYFZ-08 PYFZ-14	PYD-025B		-40 to 70°C (with no icing or condensation)	45% to 85% (with no icing or condensation)
		PYD-085B			
		PYD-026B	20 A		
		PYD-086B	70°C)		
		PYD-020B	, ,		
		PYD-030B			
For Coil terminals	PYF-08-PU(-L) PYF-14-PU(-L)	PYDN-31.0-080	20 A	-40 to 70°C	5% to 85%
	PYF08S	PYDM-08S	10 A	-40 to 70°C	5% to 85%
	PYF14S	PYDM-14S	10 A	-40 to 70°C	5% to 85%

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

Model	Ratings	Class number	Standard number
PYF-08-PU	10 A, 250 V		
PYF-14-PU	6 A, 250 V*		
PYF08S	10 A, 250 V		
PYF14S	5 A, 250 V	3211.07	CSA C22.2 No14
PYFZ-08(-E)	10 A, 250 V	021101	
PYFZ-14(-E)	6 A, 250 V		
PY⊡ PYF⊡A	7 A, 250 V		

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

#### **•**UL certification (File No. E87929)

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

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

#### •TÜV Rheinland certification

Model	Ratings	Standard number	Certification No.	
PYF-08-PU	10 A, 250 V*		D50227505	
PYF-14-PU	6 A, 250 V	EN 61094	R30327393	
PYFZ-08(-E)	-E) 10 A, 250 V		B50405220	
PYFZ-14(-E)	6 A, 250 V		R50405329	

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

#### ●VDE certification

Model	Standard number	Certification No.	
PYF08S		40015500	
PYF14	VDE0027 (EN01904)	40015509	

# **Dimensions**

#### **Height with Socket**





#### Back-connecting Sockets

 Solder terminals/wrapping terminals (PY□)







# OMRON



(4.2)

Note: The numbers in

numbers.

parentheses are traditionally used terminal

27.35

3.9

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

25.6

· 34.3 ----- 43 --- 52.1 Common Precautions



Common Options (Order Separately)





Common Options (Order Separately)







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Common Options (Order Separately)

# 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

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

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 (MYDF) 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.

Common Options (Order Separately)

MYQ-MYH

#### •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.
- If the Relay is used in an environment with strong magnetic fields, the surrounding magnetic field can demagnetize the magnetic body and cause unintended operation. Therefore, do not use these Relays in environments with strong magnetic fields.

# **Optional Sockets (Order Separately)**

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

## **Front-connecting Sockets**

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

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

#### Screwless Terminal Sockets (PYF08S, PYF14S)

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

#### Screw Terminal Sockets (PYFZ-08(-E), PYF08M, PYF11A, PYFZ-14(-E), PYF-14T)

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

- Use the following tightening torque for screws during wiring.
- Use the following wire diameters as a guide for wiring. (Select the appropriate wire diameter for the current used.)

Model	Tightening torque	Model	Recommen	ded wire diameter (mm <sup>2</sup> )
PYFZ-08 PYFZ-14	0.78 to 1.18 N·m	PYFZ-08 PYFZ-14	Stranded wire	0.75 to 2.5 mm <sup>2</sup> AWG 18 to 14
PYF11A PYF14T		PYF11A PYF14T	Solid wire	0.75 to 1.5 mm <sup>2</sup> AWG 18 to 16
PYFZ-08-E PYFZ-14-E	0.59 to 0.88 N⋅m	PYFZ-08-E PYFZ-14-E	Stranded wire	0.75 to 2.5 mm <sup>2</sup> AWG 18 to 14
	* Use a No. 1 screwdriver.		Solid wire	0.75 to 1.5 mm <sup>2</sup> AWG 18 to 16

#### **Back-connecting Socket**

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

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

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

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

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

Hermetically Sealed Relays (MYH)

#### **Application Environments**

**Relays with PCB Terminals** 

itself is made out of metal.

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

#### Solution

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

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