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## **Miniature Power Relays**

## MY/MYK/MYQ-MYH

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

- 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).
- 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.
- \* 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.













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

**Miniature Power Relays: MY** 

			Plug-in terminals		PCB terminals	Case-surface	
		With operation indicator			cator	4	mounting
Classification	Number of poles	Contacts			With latching lever	Г	
	2	Single	MY2	MY2N	MY2IN(S)	MY2-02	MY2F
Standard models	2	Bifurcated	MY2Z	MY2ZN			
(compliant with	3	Single	MY3	MY3N		MY3-02	МҮЗБ
Electrical Appliances		Single	MY4	MY4N	MY4IN(S)	MY4-02	MY4F
and Material Safety Act)	4	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	2	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 2 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□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	T
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
Disatio Cooled Dalays	4	Single	MYQ4	MYQ4N	MYQ4-02
Plastic Sealed Relays	4	Bifurcated	MYQ4Z		MYQ4Z-02
Hermetically Sealed	4	Single	МҮ4Н		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.

## **Miniature Power Relays**

#### 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.



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

#### **Features**

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

**Example: MY4** 

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

Distinguished using color-coded operation indicators (LED)



Coil tape Pink = AC voltage



Coil tape Blue = DC voltage



Operation indicator (LED) Red = AC voltage



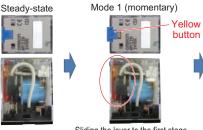


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Operation indicator (LED) Green = DC voltage



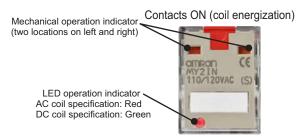
- 2. Latching levers convenient for circuit checking and MY(S) models equipped with mechanical operation indicators and operation indicators for monitoring operation status are available.
- · Latching lever operating procedure



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



· Mechanical operation indicator/LED operation indicator



AC coil specification (LED: Red)

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

Contact relia	bility	Corro	osion resistance	
	Contact structure		Contact material	Typical model
High 1	Crossbar bifurcated contacts	High	Au cladding + AgPd	MY4Z-CBG
	Bifurcated contacts		Au cladding + Ag allo Au plating + Ag allo	
	Single contacts		Au cladding + Ag allo	y MY4
Low	onigic contacts	Low	Ag alloy	MY2

#### **Model Number Structure**

#### Model Number Legend

#### Plug-in Terminals

#### Standard models

(Example: MY4ZIN(S)) (1)(2)(3)

#### (1) Number of poles

2: 2-pole

#### (2) Contacts

None: Single Bifurcated (3) Options None: None

With operation indicator IN(S): With operation indicator/latching lever

3: 3-pole 4: 4-pole

Z-CBG: Crossbar bifurcated

#### Models with built-in diode for coil surge absorption



#### (1) Number of poles/contacts

2: 2-pole, single contacts 2Z: 2-pole, bifurcated contacts

3: 3-pole, single contacts 4: 4-pole, single contacts

4Z: 4-pole, bifurcated contacts

#### (2) Options

-D: Models with built-in diode for coil surge absorption

N-D2: Built-in diode for coil surge absorption, with operation indicator

IN-D2(S): Built-in diode for coil surge absorption, with operation indicator/latching lever

#### Models with built-in CR circuit for coil surge absorption

M	Y			(Example: MY4ZIN-CR(S))
		(1)	(2)	

#### (1) Number of poles/contacts

2: 2-pole, single contacts 2Z: 2-pole, bifurcated contacts

4: 4-pole, single contacts

4Z: 4-pole, bifurcated contacts

(2) Options -CR: Models with built-in CR circuit for coil surge absorption

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\*

\*4-pole: Single/bifurcated contacts only

#### PCB terminals/case surface mounted

M	Y			(Example: MY2-02)
		(1)	(2)	

#### (1) Number of poles/contacts (2) Terminals

2: 2-pole, single contacts

3: 3-pole, single contacts

4: 4-pole, single contacts

4Z: 4-pole, bifurcated contacts

-02: PCB terminals

F: Case-surface mounting

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

#### ●Plug-in Terminals

#### Without operation indicator

Classification	Number of poles	Contacts	Model	Rated voltage
		Single	MY2	12, 24, 100/110, 110/120, 200/220, 220/240 VAC
	2	Single	IVI Y Z	12, 24, 48, 100/110 VDC
		Bifurcated	MY2Z	12, 24, 100/110, 110/120, 200/220, 220/240 VAC
		Bilurcateu	IVI Y ZZ	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	Siligle	IVITS	12, 24, 48, 100/110 VDC
Electrical Appliances		Cinale	MY4	12, 24, 100/110, 110/120, 200/220, 220/240 VAC
and Material Safety Act)	4	Single	IVI Y 4	12, 24, 48, 100/110 VDC
		Bifurcated	MY4Z	100/110, 110/120, 200/220, 220/240 VAC
				12, 24, 48, 100/110 VDC
		Crossbar bifurcated MY4Z-CBG	100/110, 110/120, 200/220 VAC	
			W142-CBG	12, 24, 48, 100/110 VDC
		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 circuit for coil surge absorption		Single	MY2-CR	100/110, 110/120, 200/220, 220/240 VAC
	2	Bifurcated	MY2Z-CR	100/110, 200/220 VAC,
		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

#### 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	IVI Y ZIN	12, 24, 48, 100/110 VDC
		Bifurcated	MY2ZN	12, 24, 100/110, 110/120, 200/220, 220/240 VAC
		Bilurcateu	IVI Y ZZIN	12, 24, 48, 100/110 VDC
Standard models	3	Cinale	MY3N	12, 24, 100/110, 110/120, 200/220, 220/240 VAC
(compliant with	3	Single	IVITOIN	12, 24, 48, 100/110 VDC
Electrical Appliances		Cinala	MY4N	12, 24, 100/110, 110/120, 200/220, 220/240 VAC
and Material Safety Act)		Single	IVI Y 4IN	12, 24, 48, 100/110 VDC
	4	Bifurcated	MY4ZN	24, 100/110, 110/120, 200/220, 220/240 VAC
				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 absorption	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 absorption	2	Single	MY2N-CR	100/110, 110/120, 200/220, 220/240 VAC
	2	Bifurcated	MY2ZN-CR	100/110, 200/220 VAC
	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		Siligie	WHZIN(S)	12, 24, 48 VDC
(compliant with		Cinale	MV/IN/C)	100/110, 200/220 VAC
Electrical Appliances	4	Single	MY4IN(S)	12, 24, 48 VDC
and Material Safety Act)	4	Bifurcated	MY4ZIN(S)	100/110, 200/220 VAC
				12, 24, 48 VDC
Models with built-in	2	Single	MY2IN-D2(S)	12, 24, 48 VDC
diode for coil surge absorption	4	Single	MY4IN-D2(S)	12, 24, 48 VDC
(DC coil specification only)	4	Bifurcated	MY4ZIN-D2(S)	12, 24, 48 VDC
Models with built-in CR circuit for coil surge absorption (AC coil specification only)	4	Single	MY4IN-CR(S)	100/110, 200/220 VAC
		Bifurcated	MY4ZIN-CR(S)	100/110, 200/220 VAC

#### ●PCB terminals

Classification	Number of poles		Model	Rated voltage
	2	Single	MY2-02	12, 24, 100/110, 110/120, 200/220, 220/240 VAC
			IVI T 2-U2	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	4	Single	MY4-02	12, 24, 100/110, 110/120, 200/220, 220/240 VAC
and Material Safety Act)				12, 24, 48, 100/110 VDC
		Bifurcated	MY4Z-02	100/110, 110/120, 200/220 VAC
			IVI T 42-U2	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
		Olligic	IVI Y Z F	12, 24, 48, 100/110 VDC
Standard models	3	Single	MY3F	24, 100/110, 200/220 VAC
(compliant with		Siligle	WITSI	24, 100/110 VDC
Electrical Appliances and Material Safety Act)		Cimala	MY4F	24, 100/110, 110/120, 200/220 VAC
and Material Salety Act)		Single	IVI T 4F	12, 24, 48, 100/110 VDC
	4	5"	MY4ZF	200/220 VAC
		Bifurcated	IVI T 42F	12, 24 VDC

#### **Ratings and Specifications**

#### **Ratings Operating Coils**

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

	Item	Rated cui	rrent (mA)	Coil resistance	Coil induc	tance (H)	Must	Must	Maximum	Power
Rated	voltage (V)	50 Hz	60 Hz	(Ω)	Armature OFF	Armature ON	operate voltage (V)	release voltage (V)	voltage (V)	consumption (VA, W)
	12	106.5	91	46	0.17	0.33				
	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		30% 11111. 2		
	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. i		rated voltage	
	12	72	2.7	165	0.73	1.37			Ü	
DC	24	36	6.3	662	3.2	5.72		10% min.*2		Approx 0.0
ЪС	48	17	7.6	2,725	10.6	21.0		10% 111111. 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).
  - Operating characteristics were measured at a coil temperature of 23°C
  - 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 (at a coil temperature of 23°C).
- 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 coil surge absorption	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 cur	rent (mA)	Coil resistance	Coil indu	ctance (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				
AC	100/110	11.7/12.9	10/11	3,750	14.54	24.6		30% min.*2		Approx. 0.9 to 1.3
AC	110/120	9.9/10.8	8.4/9.2	4,430	19.2	32.1		30% 111111. 2		(at 60 Hz)
	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	00% IIIax. I		rated voltage	
	12	7	5	160	0.73	1.37				
DC	24	36	5.9	650	3.2	5.72		10% min.*2		Ammun. 0.0
ыс	48	18	3.5	2,600	10.6	21.0		10% IIIII. 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
  - 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
- 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

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	2	Single	MY2IN-D2(S)
Plug-in terminals	coil surge absorption	4	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 indu	ctance (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		222/ 1 42		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 rated	to 1.3 (at 60 Hz)
	12	7	5	160	0.73	1.37	80% max.*1			
DC	24	37	'.7	636	3.2	5.72		10% min.*2	voltage	Approx. 0.9
	48	18	3.8	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.
  - 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. 4. The maximum voltage capacity was measured at an ambient temperature of 23  $^{\circ}$ C
- \*1. 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.

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	_
PCB terminals		3	Single	MY3-02	_
PCB terminals	Standard models	4	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	Coil induc	ctance (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				
AC	100/110	11.7/12.9	10/11	3,750	14.54	24.6		30% min.*2	110% of	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 /6 111111. 2		
	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	7	5	160	0.73	1.37				
DC	24	36	6.9	650	3.2	5.72		10% min.*2		A ===== 0.0
DC	48	18	3.5	2,600	10.6	21.0		10% 111111. 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 3.
  - 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.
- 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**

Number of poles (contact configuration)			2-pole	(DPDT)			3-pole	(3PDT)
Contact structure	Sin	igle	With latchi	ng lever (S)	Bifur	cated	Single	
Load	Resistive load	Inductive load (cos φ = 0.4, L/R = 7 ms)	Resistive load	Inductive load (cos φ = 0.4, L/R = 7 ms)	Resistive load	Inductive load (cos φ = 0.4, L/R = 7 ms)	Resistive load	Inductive load (cos φ = 0.4, L/R = 7 ms)
Rated load	5 A at 220 VAC 5 A at 24 VDC	2 A at 220 VAC 2 A at 24 VDC	5 A at 250 VAC 5 A at 30 VDC	2 A at 250 VAC 2 A at 30 VDC	5 A at 220 VAC 5 A at 24 VDC 2 A at 220 VAC 2 A at 24 VDC		5 A at 220 VAC 5 A at 24 VDC 2 A at 24 VDC	
Rated carry current*1	5 A (10 A*2)				5 A		5 A	
Maximum switching voltage	250 VAC, 125 VI	ОС					250 VAC, 125 VI	ос
Maximum switching current	5 A		10 A		5 A		5 A	
Maximum switching power	1,100 VA 120 W	440 VA 48 W	2,500 VA 500 VA 60 W		1,100 VA 120 W	440 VA 48 W	1,100 VA 120 W	440 VA 48 W
Contact material	Ag				Au plating + Ag		Ag	

Number of poles (contact configuration)											
Contact structure	Sir	Single			Rifu	cated			Crossbar bifurcated		
	<b></b>	.9.0	With latching lever (S)			Bilarcatea		ing 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 ( $\cos \phi = 0.4$ , 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	5 VDC									
Maximum switching current	3 A	Α								_	
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	

<sup>\*1.</sup> 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.

#### **Characteristics**

Number (contact con	of poles nfiguration)	2-pole	(DPDT)	3-pole (3PDT)		4-pole (4PDT)						
\$	Contact structure	Single	Bifurcated	Single	Single	Bifurcated	Crossbar bifurcated (CBG)					
Contact resistance	ce*1 *2	$50 \text{ m}\Omega$ max. $100 \text{ m}\Omega$ max.										
Operate t	time*3	20 ms max.										
Release t	time*3	20 ms max.										
	Mechanical	18,000 operations/h										
switching frequency	Rated load	1,800 operations/h										
Insulation resistance		100 MΩ min.	00 M $\Omega$ min.									
	Between coil and contacts											
Dielectric	Between contacts of different polarity											
	Between contacts of the same polarity	1,000 VAC at 50/60 Hz	for 1 min				700 VAC at 50/60 Hz for 1 min					
Vibration	Destruction	10 to 55 to 10 Hz, 0.5-r	mm single amplitude (1.0	O-mm double amplitude)			•					
resistance	Malfunction	10 to 55 to 10 Hz, 0.5-r	mm single amplitude (1.0	O-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)									
	Electrical*5	500,000 operations min. (rated load, switching frequency: 1,800 operations/h)	200,000 operations min. (rated load, switching frequency: 1,800 operations/h)	500,000 operations min. (rated load, switching frequency: 1,800 operations/h)	200,000 operations min. (rated load, switching frequency: 1,800 operations/h)	100,000 operations min. (rated load, switching frequency: 1,800 operations/h)	50,000 operations min. (rated load, switching frequency: 1,800 operations/h)					
Failure rat		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					
Weight		Approx. 35 g	Approx. 35 g	Approx. 35 g	Approx. 35 g	Approx. 35 g	Approx. 35 g					

- Note: The data shown above are initial values.
  \*1. Models with latching lever are 100 mΩ maximum.
  \*2. Measurement conditions: 1 A at 5 VDC using the voltage drop method.
  \*3. Measurement conditions: With rated operating power applied, not including contact bounce.
  \*4. Measurement conditions: For 500 VDC applied to the same location as for dielectric strength measurement.
  \*5. Applicat temperature condition: 23°C
- Ambient temperature condition: 23°C
  This value was measured at a switching frequency of 120 operations per minute.

Classification			Standard models		in diode for coil sur CR circuit for coil su			
Contacts		Single/bifurcated	ı	Crossbar/bifu	rcated (CBG)		Single/bifurcated	I
	Without	Without With operation ind		Without		Without	With operation indicator	
Features	operation indicator		With latching lever	operation in 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)

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
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 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
MY4 MY4N MY4IN(S) MY4-D MY4N-D2 MY4IN-D2(S) MY4Z MY4ZN MY4ZIN(S) MY4Z-D MY4ZN-D2 MY4ZIN-D2(S) MY4Z-CR MY4ZN-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
MY4-02 MY4F MY4Z-02						1/6 HP, 250 VAC (Same polarity) 1/10 HP, 120 VAC (Same polarity)	1,000
MY4ZF						B300 Pilot Duty (Same polarity)	6,000

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

Model	Standard number	Class number	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	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)  1/6 HP, 250 VAC (Same polarity)	6,000
MY2N-CR	<u></u>				1/10 HP, 120 VAC (Same polarity)	
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
MY3F					1/6 HP, 250 VAC	1,000
MY4 MY4N MY4N(S) MY4-D MY4N-D2 MY4IN-D2(S) MY4-CR MY4N-CR MY4IN-CR(S) MY4Z MY4ZN MY4ZIN(S) MY4Z-D MY4ZN-D2 MY4ZIN-D2(S)	C22.2 No.14	3211 07	6 to 240 VAC 6 to 125 VDC		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
MY4Z-C MY4ZN-CR					1/6 HP, 250 VAC (Same polarity) 1/10 HP, 120 VAC (Same polarity)	1,000
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

#### ●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 ( $\cos \phi = 1.0$ ) 0.8 A, 250 VAC ( $\cos \phi = 0.4$ )	
MY4-02 MY4F MY4Z-02 MY4ZF		3 A, 120 VAC ( $\cos \phi = 1.0$ ) 0.8 A, 250 VAC ( $\cos \phi = 0.4$ )	

## **●CE Marking**

Model	EMC Directive	Low Voltage Directive	Machinery Directive	Safety Category
MY2 MY2N MY2IN(S) MY2Z MY2ZN MY2-D MY2N-D2 MY2IN-D2(S) MY2-CR MY2N-CR MY2Z-CR MY2Z-CR MY2Z-CR MY2Z-CR MY2ZN-CR MY2ZN-D2 MY2ZN-D2	Not applicable	Applicable	Not applicable	1
MY3 MY3N MY3-D MY3N-D2 MY3F				
MY4N MY4IN(S) MY4Z MY4ZN MY4ZIN(S) MY4-D MY4N-D2 MY4IN-D2(S) MY4Z-D				
MY4ZN-D2 MY4ZIN-D2(S) MY4-CR MY4N-CR MY4Z-CR MY4ZN-CR MY4ZN-CR MY4F MY4ZF				

## ●LR certification (Lloyd's Register)

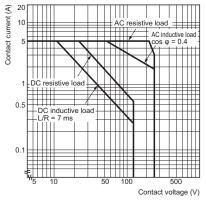
	Model	File No.	Environmental Category	Operating Coil ratings	Contact ratings	Certified number of operations
]	MY2 MY2N MY2IN(S) MY2-D MY2N-D2 MY2IN-D2(S) MY2-CR MY2N-CR	File No.98/10014	ENV2,3	6 to 240 VAC 6 to 125 VDC	10 A, 250 VAC (Resistive) 2 A, 250 VAC (PF0.4) 10 A, 30 VDC (Resistive) 2 A, 30 VDC (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 MY4N MY4IN(S) MY4-D MY4N-D2 MY4IN-D2(S) MY4-CR MY4IN-CR(S) MY4Z MY4ZN MY4ZN MY4ZN MY4ZN-D2 MY4ZIN-D2 MY4ZIN-D2(S) MY4Z-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 certification

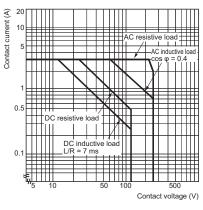
Model	Standard number	Certification No.	Operating Coil ratings	Contact ratings	Certified number of operations
MY2 MY2N MY2IN(S) MY2-D MY2N-D2 MY2IN-D2(S)	EN 61810-1	112467UG	6, 12, 24, 48/50, 100/110, 110/120, 200/220, 220/240 VAC	10A, 250 VAC ( $\cos \phi = 1$ ) 10A, 30 VDC (L/R = 0 ms)	MY2: 100,000 MY4: 100,000 MY4Z: 50,000 (AC)
MY2-CR MY2N-CR			6, 12, 24, 48, 100/110, 125 VDC		
MY4 MY4N MY4IN(S) MY4ZN MY4ZN MY4ZIN(S) MY4-D MY4ZN-D2 MY4IN-D2(S) MY4Z-D MY4Z-D2 MY4Z-D2 MY4Z-D2 MY4Z-D2 MY4-CR MY4N-CR MY4N-CR MY4N-CR MY4N-CR MY4N-CR MY4IN-CR(S) MY4Z-CR			6, 12, 24, 48/50, 100/110, 110/120, 200/220, 220/240 VAC 6, 12, 24, 48, 100/110, 125 VDC	5 A, 250 VAC (cos φ = 1) 5 A, 30 VDC (L/R = 0 ms)	

## **Engineering Data (Reference Value)**

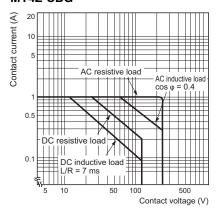
#### Maximum Switching Capacity Plug-in terminals MY2 and MY3



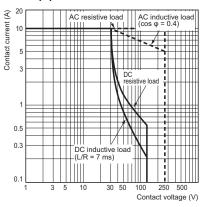
#### MY4 and MY4Z



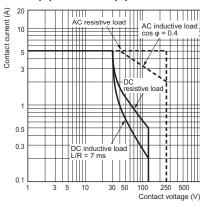
MY4Z-CBG



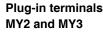
## Plug-in Terminals, with latching lever MY2(S)

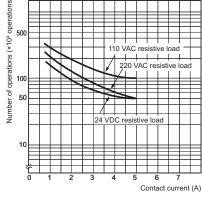


#### MY4(S) and MY4Z(S)

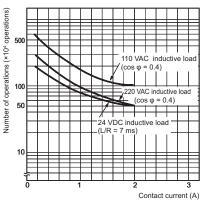


## ●Endurance Curve

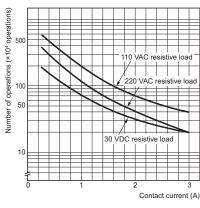




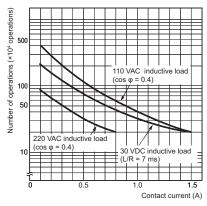




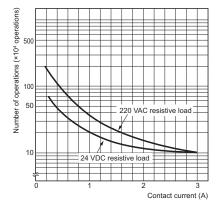
MY4



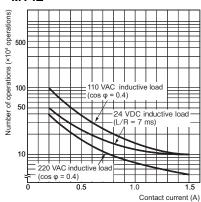
#### MY4



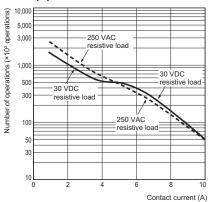
#### MY4Z



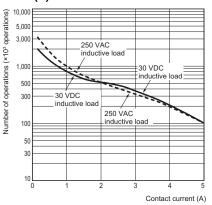
#### MY4Z



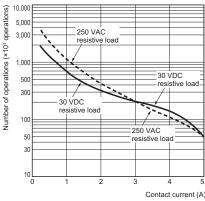
#### Plug-in Terminals, with latching lever MY2(S)



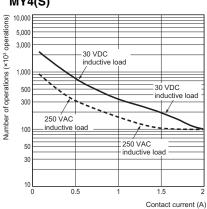
#### MY2(S)

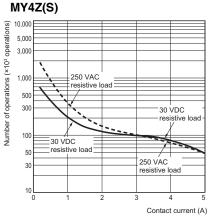


MY4(S)

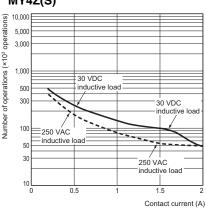


MY4(S)



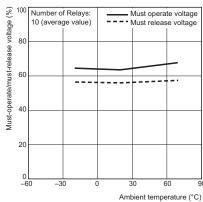


MY4Z(S)

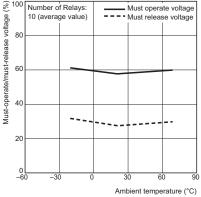


#### ● Ambient Temperature vs. Must-operate and Must-release Voltage

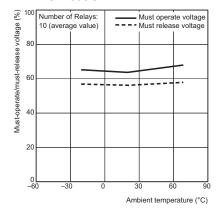
#### MY2 AC Models

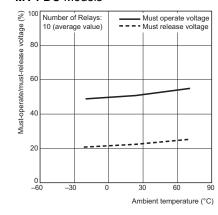


MY2 DC Models



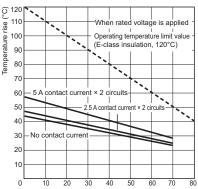
MY4 AC Models



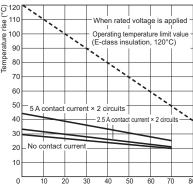


#### ● Ambient Temperature vs. Coil Temperature Rise

#### MY2 AC Models, 50 Hz

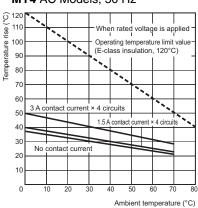


#### MY2 DC Models

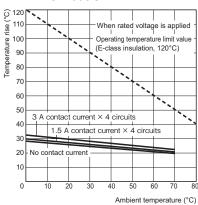


#### Ambient temperature (°C) Ambient temperature (°C)

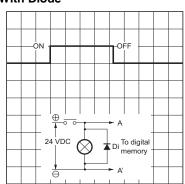
MY4 AC Models, 50 Hz



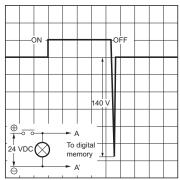
#### MY4 DC Models



#### Models with built-in diode for coil surge absorption MY□-D With Diode

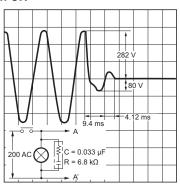


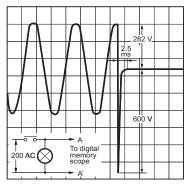
#### **Without Diode**



- 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

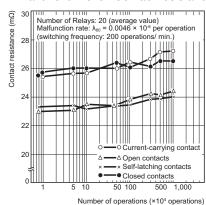
## Models with built-in CR circuit for coil surge absorption MY□-CR With CR Without CR





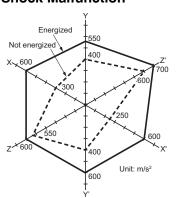
## ● Contact Reliability Test MY4Z-CBG (Modified Allen Bradley Circuit)

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/s², Energized: 200 m/s²

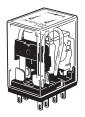
#### Shock direction

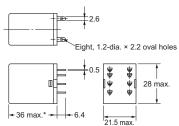


**Dimensions** (Unit: mm)

#### Plug-in terminals

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

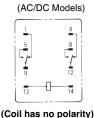


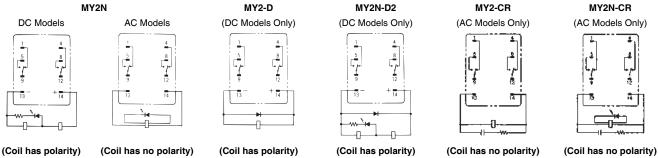


For the MY2-CR 24 VAC and MY2N-CR 24 VAC, this dimension

is 53 mm maximum.

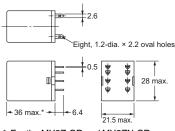
#### **Terminal Arrangement/** Internal Connection Diagram (Bottom View) MY2





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

#### MY2Z, MY2ZN, MY2Z-D and MY2ZN-D2 MY2Z-CR, MY2ZN-CR

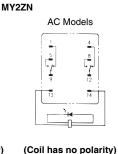


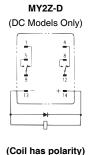
\* For the MY2Z-CR and MY2ZN-CR, this dimension is 53 mm maximum

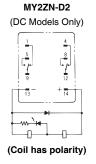
## Terminal Arrangement/Internal **Connection Diagram** (Bottom View) MY2Z (AC/DC Models)

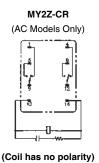
(Coil has no polarity)

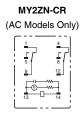
# DC Models











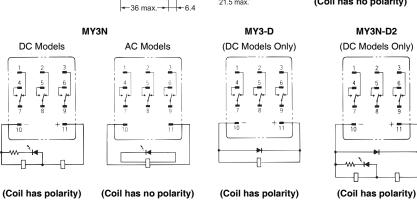
(Coil has no polarity)

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

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

## 

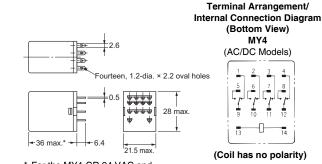
Terminal Arrangement/



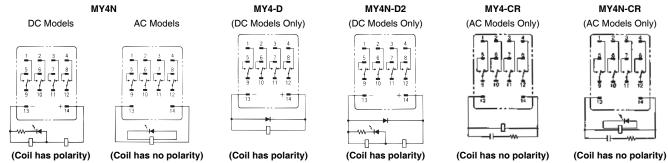
Note: 1. An AC model has coil disconnection self-diagnosis.

- 2. For the DC models, check the coil polarity when wiring and wire all connections correctly.
- 3. The indicator is red for AC and green for DC.
- 4. The operation indicator indicates the energization of the coil and does not represent contact operation.

## MY4, MY4N, MY4-D and MY4N-D2 MY4-CR, MY4N-CR

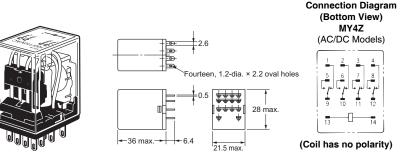


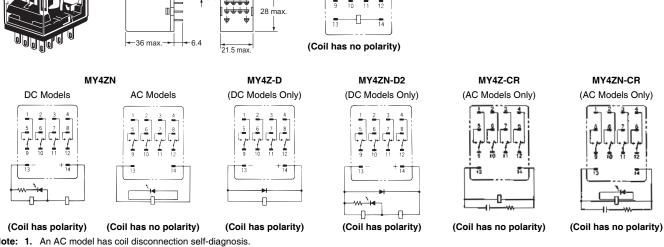
\* For the MY4-CR 24 VAC and MY4N-CR 24 VAC/115 VAC, this dimension is 53 mm maximum.



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

#### MY4Z, MY4ZN, MY4Z-D, MY4ZN-D2 MY4Z-CR, MY4ZN-CR



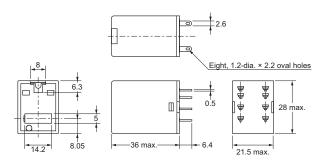


Terminal Arrangement/Internal

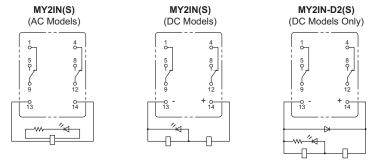
- - 2. For the DC models, check the coil polarity when wiring and wire all connections correctly.
  - The indicator is red for AC and green for DC.
  - The operation indicator indicates the energization of the coil and does not represent contact operation.

#### MY2IN(S) MY2IN-D2(S)

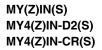




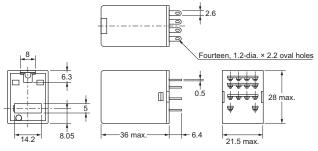
#### Terminal Arrangement/Internal Connections (Bottom View)



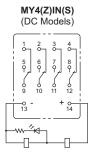
Note: For the DC models, check the coil polarity when wiring and wire all connections correctly.

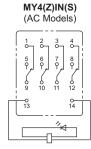


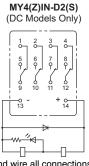


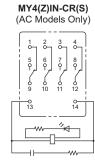


#### Terminal Arrangement/Internal Connections (Bottom View)





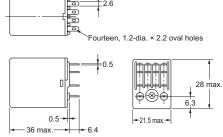


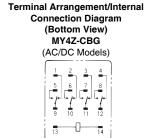


Note: For the DC models, check the coil polarity when wiring and wire all connections correctly.

#### MY4Z-CBG MY4ZN-CBG







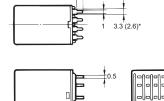
(The coil has no polarity.)

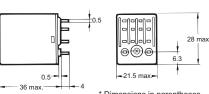
#### ●PCB terminals

MY2-02 MY3-02 MY4-02 MY4Z-02



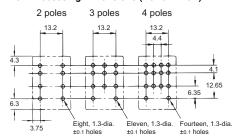
The figure and outline drawing show MY4-02. The 2-pole and 3-pole models conform to these dimensions.





\* Dimensions in parentheses are for the MY4-02.

#### PCB Processing Dimensions (Bottom View)



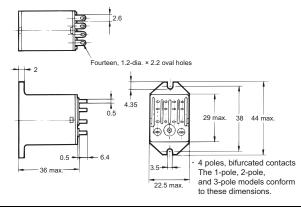
Note: 1. The dimensional tolerance is ±0.1.
 Refer to the terminal arrangement and internal connections diagrams for the MY2, MY3, MY4, and MY4Z.

#### **●**Case-surface mounting

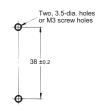
MY2F MY3F MY4F MY4ZF



The above figure is for the MY4F.
The 2-pole and 3-pole models conform to these dimensions.



#### **Mounting Hole Dimensions**



Note: Refer to the terminal arrangement and internal connections diagrams for the MY2, MY3, MY4, and MY4Z.

## 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.

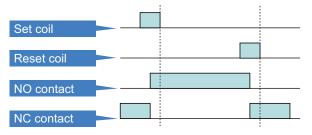
Refer to Safety Precautions on pages 55 to 56 and Safety Precautions for All Relays.



#### **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**

#### **Model Number Legend**



(1) Basic model name

MY: Miniature Power Relays

(3) Type

K: Latching relay

(2) Number of poles/contacts

2: 2-pole, single

(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

(:lassification	Number of poles	(:ontacte	Model	Rated voltage
Standard models (compliant with Electrical	,	Single	MY2K	12, 24, 100, 100/110 VAC
Appliances and Material Safety Act)	oliances and Material			12, 24, 48 VDC

#### **●PCB** terminals

Classification	Number of poles	Contacts	Model	Rated voltage
Standard models (compliant with Electrical	0	Single	MY2K-02	24, 100 VAC
Appliances and Material Safety Act)	es and Material		W 12K-02	12, 24 VDC

## **Ratings and Specifications**

#### **Ratings**

#### ●Operating coil (AC)

			Set	coil		Reset coil					Power consumption (VA, W)				
Rated v	oltage (V)		current A)	Coil resistance	Rated current (mA)				Coil resistance	Must operate voltage (V)	Must release voltage (V)	Maximum voltage (V)	Set coil	Reset coil	
	•	50 Hz	60 Hz	(Ω)	50 Hz	60 Hz	(Ω)	voltage (v)	voitage (v)						
	12	57	56	72	39	38.2	130		80% max.		Approx. 0.6 Approx. 0	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	80% max.*		110% max. of rated voltage	(at 60 Hz)	(at 60 Hz)			
	12	11	10	110	5	0	235	00 % IIIax. 00 % IIIa							
DC	24	5	2	470	2	5	940								Approx. 1.3
	48	2	7	1,800	1	6	3,000								

The rated current for AC is the value measured with a DC ammeter in half-wave rectification.

- 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.

- The maximum voltage capacity was measured at an ambient temperature of 23°C.
   \*There is variation between products, but actual values are 80% maximum.

#### ●Contact Ratings

Number of poles (contact configuration)	2-pole (DPDT)				
Contact structure	Single				
Load	Resistive load	Inductive load (cos 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			
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**

К.				
AC: 30 ms max., DC: 15 ms max.				
1,500 VAC at 50/60 Hz for 1 min				
10 to 55 to 10 Hz, 0.5-mm single amplitude (1.0-mm double amplitude)				
10 to 55 to 10 Hz, 0.5-mm single amplitude (1.0-mm double amplitude)				
vitching frequency: 18,000 operations/h)				
200,000 operations min. (at rated load, switching frequency: 1,800 operations/h)				
5% to 85%				
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.

Measurement conditions:

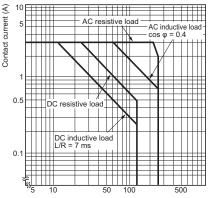
With rated operating power applied, not including contact bounce.
For 500 VDC applied to the same location as for dielectric strength measurement. Measurement conditions:

Ambient temperature condition: 23°C

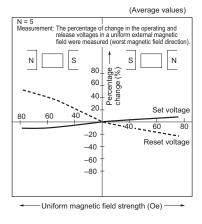
- This value was measured at a switching frequency of 120 operations per minute.
- With no icing or condensation.

## **Engineering Data (Reference Value)**

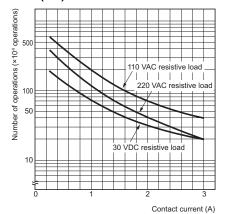
#### **Maximum Switching Capacity** MY2K(-02)



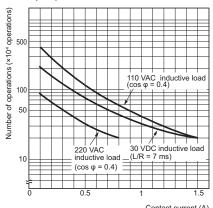
#### **Magnetic Interference** (External Magnetic Field) **MY2K** 24 VDC



#### **Endurance Curve** MYK(-02)

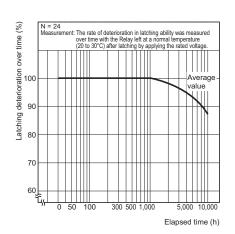


MYK(-02)



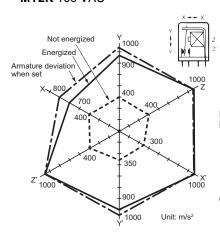
Contact current (A)

#### **Latching Deterioration Over Time** MY2K



**Shock Malfunction** 

MY2K 100 VAC



N = 20

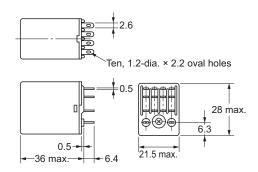
Measurement: Shock was applied in 6 directions along 3 axes 2 times with the Relay energized and 3 times with the Relay not energized to check the shock values that cause the Relay to

malfunction. Criteria: Non-energized: 200 m/s2 Energized: 200 m/s<sup>2</sup>

**Dimensions** (Unit: mm)

#### ●Plug-in terminals MY2K





#### Terminal Arrangement/ Internal Connection Diagram (Bottom View)

For AC



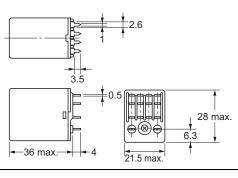
Note: R is a resistor for ampereturn correction. Built into models with specifications of 50 VAC or more. (The coil has no polarity.) For DC



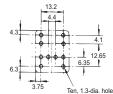
Note: Pay close attention to the set coil and reset coil polarities. If the connections are not correct, unintended operation may occur.

#### ●PCB terminals MY2K-02





## PCB Processing Dimensions (Bottom View)



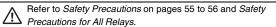
**Note:** The dimensional tolerance is ±0.1.

## **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 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	Seal performance Degree of protection		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

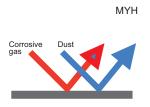
These realize excellent reliability even in environments where salt damage occurs or where dust is generated.





#### **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.





#### **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 terminals0: Hermetically sealed relays, PCB terminals

## **Ordering Information**

When your order, specify the rated voltage.

#### **Plastic Sealed Relays**

#### Plug-in terminals

Classification		Number of poles	Contacts			With operation indicator		
				Model	Rated voltage	Model	Rated voltage	
Standard models (compliant with		Single	MYQ4	100/110, 110/120, 200/220, 220/240 VAC	MYQ4N	24, 100/110, 110/120, 200/220, 220/240 VAC		
				24 VDC		12, 24, 48, 100/110 VDC		
	Electrical Appliances and Material Safety Act)	4 Bifurcated	Bifurcated	MYQ4Z	100/110, 110/120, 200/220 VAC			
					10.011/00			

#### ●PCB terminals

Classification	Number of poles	Contacts	Model	Rated voltage
Standard models (compliant with Electrical Appliances and Material Safety Act)	4	Single	MYQ4-02	50, 200/220, 220/240 VAC
			W 1 Q4-02	24 VDC
		Bifurcated	MYQ4Z-02	100/110 VAC
			W Y Q4Z-02	24, 48 VDC

#### **Hermetically Sealed Relays**

#### ●Plug-in terminals

Classification	Number of poles	Contacts	Model	Rated voltage
Standard models		Single	МҮ4Н	24, 100/110, 110/120 VAC
(compliant with Electrical Appliances and Material Safety Act)	4		IVI T 4F1	12, 24, 48, 100/110 VDC
		Bifurcated	MY4ZH	24, 100/110, 110/120 VAC
			IVI Y 4Z FI	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		W 14H-U	24 VDC
and Material Safety Act)		Bifurcated	MY4ZH-0	24, 100/110 VDC

## **Ratings and Specifications**

#### ●Operating coil (AC)

	Rated current (mA)		Coil	Coil indu	ctance (H)	Must sperate	Must release	Maximum	Power		
Rated	voltage (V)	50 Hz	60 Hz	resistance (Ω)	Armature OFF	Armature ON	Must operate voltage (V)*1	voltage (V)*2	voltage (V)	consumption (VA, W)	
	24	53.8	46	180	0.69	1.3					
	100/110	11.7/12.9	10/11	3,750	14.54	24.6					
AC	110/120	9.9/10.8	8.4/9.2	4,430	19.2	32.1	80% max.	30% m	30% min.		Approx. 0.9 to 1.3 (at 60 Hz)
	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			110% max. of rated voltage		
	12	75		165	0.734	1.37			raica voltage		
DC	24	36	6.9	650	3.2	5.72		10% min.		Approx. 0.9	
	48	18	3.5	2,600	10.6	21.0		10 /6 111111.		Αμμιολ. 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

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

#### **●**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 $\phi$ = 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	Siı	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				
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			

#### **Characteristics**

Model			MYQ		МҮН		
Contact resistance	e*1	50 m $Ω$ 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 resistar	nce*3	100 M $\Omega$ 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	700 VAC at 50/60 Hz for 1 min		
Vibration	Destruction	10 to 55 to 10 Hz, 0.	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 doubl	e amplitude)			
Shock resistance	Destruction	1,000 m/s <sup>2</sup>					
SHOCK resistance	Malfunction	200 m/s <sup>2</sup>	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 ?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:

\*2. Measurement conditions:

\*2. Measurement conditions:

\*3. Measurement conditions:

\*4. Measurement conditions:

\*5. Measurement conditions:

\*6. With rated operating power applied, not including contact bounce.

with rated operating power applied, not including contact bounce.

Ambient temperature condition:

Measurement conditions:

Ambient temperature conditions:

For 500 VDC applied to the same location as for dielectric strength measurement.

Ambient temperature condition:

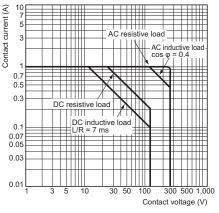
23°C

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

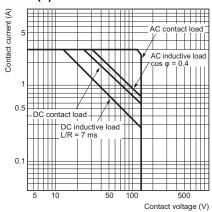
With no icing or condensation.

## **Engineering Data (Reference Value)**

## Maximum Switching Capacity MYQ4(Z)

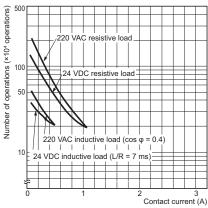


#### MY4(Z)H



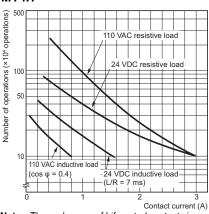
## **Endurance Curve**

#### MYQ4



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

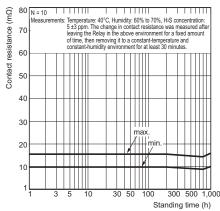
#### MY4H



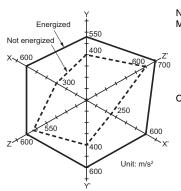
**Note:** The endurance of bifurcated contacts is one-half that of single contacts.

#### H₂S 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>

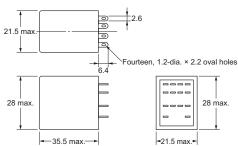
## Shock direction



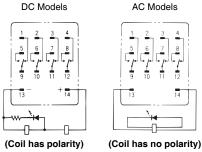
#### Plug-in terminals

#### **Plastic Sealed Relays** MYQ4(Z)(N)





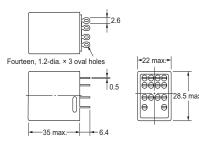
#### MYQ4(Z)N



- Note: 1. An AC model has coil disconnection self-diagnosis.
  2. For the DC models, check the coil polarity when wiring and wire all connections correctly.

#### **Hermetically Sealed Relays** MY4(Z)H





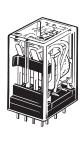
Terminal Arrangement/
Internal Connection Diagram (Bottom View) MY4(Z)H

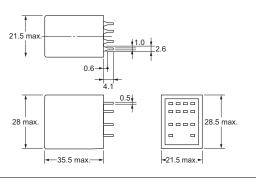


(Coil has no polarity)

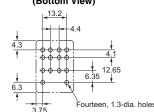
#### ●PCB terminals

#### **Plastic Sealed Relays** MYQ4(Z)-02





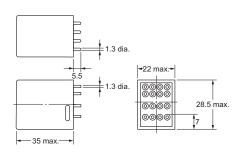
## PCB Processing Dimensions (Bottom View)



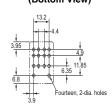
The dimensional Note: tolerance is  $\pm 0.1$ .

#### **Hermetically Sealed Relays** MY4(Z)H-0





#### **PCB Processing Dimensions** (Bottom View)



#### **Common Options (Order Separately)**

## **Ordering Information**

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

umber of pins	Applicable relay model*1	Terminal Type	Mounting Method	Appearance	Model
	MY2□ MY2IN(S)	Push-In Plus Terminal (Integrated socket with release lever)	Mounted on a DIN track or with screws*2		PYF-08-PU
	MY2Z□-CR	Push-In Plus Terminal (Without release lever)	Mounted on a DIN track or with screws*2		PYF-08-PU-L
	MY2□ MY2IN(S) MY2Z□-CR	Screwless terminal	Mounted on a DIN track		PYF08S
8	MY2□ MY2IN(S) MY2Z□-CR	Screw terminal Terminal cover structure*3 (M3 screw size)	Mounted on a DIN track or with screws		PYFZ-08
	MY2□ MY2IN(S) MY2Z□-CR	Screw terminal Finger-protection structure*4 (M3 screw size)	Mounted on a DIN track or with screws		PYFZ-08-E
	MY2□ MY2IN(S) MY2Z□-CR	Screw terminal (M3 screw size)	Mounted on a DIN track or with screws		PYF08A
	MY2□ MY2IN(S) MY2Z□-CR	Screw terminal Finger-protection structure*4 (M3 screw size)	Mounted on a DIN track or with screws		PYF08A-E
	MY2□ MY2IN(S) MY2Z□-CR	Screw terminal (M3.5 screw size)	Screw mounting only		PYF08M
11	мүз	Screw terminal (M3 screw size)	Mounted on a DIN track or with screws		PYF11A

There are screw mounting holes in the DIN hooks on the PYF- $\square$ -PU and P2RF- $\square$ -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- $\square$ -E, PYF $\square$ 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.

ımber of pins	Applicable relay model*1	Terminal Type	Mounting Method	Appearance	Model
	MY4□, MY4H MYQ4□, MY4□(S) MY2K	Push-In Plus Terminal (Integrated socket with release lever)	Mounted on a DIN track or with screws*2		PYF-14-PU
	MY4Z□-CBG-CR	Push-In Plus Terminal (Without release lever)	Mounted on a DIN track or with screws*2		PYF-14-PU-L
	MY4□, MY4H MYQ4□, MY4□(S) MY2K MY4Z□-CBG-CR	Screwless terminal	Mounted on a DIN track		PYF14S
	MY4□, MY4H MYQ4□, MY4□(S) MY2K MY4Z□-CBG-CR	Screw terminal Terminal cover structure*3 (M3 screw size)	Mounted on a DIN track or with screws		PYFZ-14
14	MY4□, MY4H MYQ4□, MY4□(S) MY2K MY4Z□-CBG-CR	Screw terminal Finger-protection structure*4 (M3 screw size)	Mounted on a DIN track or with screws		PYFZ-14-E
	MY4□, MY4H MYQ4□, MY4□(S) MY2K MY4Z□-CBG-CR	Screw terminal (M3 screw size)	Mounted on a DIN track or with screws		PYF14A
	MY4□, MY4H MYQ4□, MY4□(S) MY2K MY4Z□-CBG-CR	Screw terminal Finger-protection structure*4 (M3 screw size)	Mounted on a DIN track or with screws		PYF14A-E
		Screw terminal (M3.5 screw size)	Mounted on a DIN track or with screws		PYF14T

There are screw mounting holes in the DIN hooks on the PYF- $\square$ -PU and P2RF- $\square$ -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- $\square$ -E, PYF $\square$ 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.

## **Back-mounting Sockets**

Number of pins	Applicable relay model*1	Terminal Type	Appearance	Model	Appearance	Models with Hold-down Clips*2
	MY2□, MY2IN(S)	Solder terminals		PY08		PY08-Y1
	MY2Z□-CR					PY08-Y3
	MY2□, MY2IN(S)	Wrapping terminals	7			PY08QN-Y1
8	MY2Z□-CR	Terminal length: 25 mm		PY08QN		PY08QN-Y3
	MY2□, MY2IN(S)	Wrapping terminals	2 2	Byong No		PY08QN2-Y1
	MY2Z□-CR	Wrapping terminals Terminal length: 20 mm		PY08QN2		PY08QN2-Y3
	MY2□, MY2IN(S) MY2Z□-CR	PCB terminals		PY08-02	_	_
	мүз	Solder terminals		PY11		PY11-Y1
11	мүз	Wrapping terminals Terminal length: 25 mm		PY11QN		PY11QN-Y1
	муз	Wrapping terminals Terminal length: 20 mm		PY11QN2		PY11QN2-Y1
	муз	PCB terminals		PY11-02	_	_

<sup>\*1.</sup> 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.

Number of pins	Applicable relay model*1	Terminal Type	Appearance	Model	Appearance	Models with Hold-down Clips*2
	MY4□, MY4□(S), MY2K, MY4H, MYQ4□			PY14		PY14-Y1
	MY4Z⊡-CBG-CR	Solder terminals		PY14		PY14-Y3
	MY4□, MY4□(S), MY2K, MY4H, MYQ4□			PY14QN		PY14QN-Y1
14	MY4Z□-CBG-CR	Terminal length: 25 mm		PY 14QN		PY14QN-Y3
	MY4□, MY4□(S), MY2K, MY4H, MYQ4□	Wrapping terminals		PY14QN2		PY14QN2-Y1
	MY4Z⊡-CBG-CR	Terminal length: 20 mm		FIIMONZ		PY14QN2-Y3
	MY4□, MY4□(S), MY4Z□-CBG-CR MY2K, MY4H, MYQ4□	PCB terminals		PY14-02	_	_

<sup>\*1.</sup> 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.

## **Hold-down Clip**

Appearance*1	Model*2	Weight*3	Application
	PYC-A1	Approx. 0.54 g	
£ 5	PYC-E1	Approx. 0.6 g	For connecting relays and sockets
	РҮС-Р	Approx. 1.4 g	To connecting letays and sockets
	PYC-S	Approx. 1.8 g	For connecting sockets, socket mounting plates, and relays
	<b>Y92H-3</b> Approx. 0.7 g		For connecting models with built-in CR circuit for coil surge absorption
	PYC-1	Approx. 6 g	(MY□-CR) and sockets

<sup>\*1.</sup> 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.

#### **Socket Accessories Hold-down Clip**

### ●List of Hold-down Clip Models

#### For Front-connecting Sockets

	Mounting method		DIN track mounted/screw mounted							
	Terminal Type	Push-In Plu	us Terminal		Screw to	erminal (M3 sc	rew size)			erminal rew size)
	Applicable sockets	PYF-08-PU-L	PYF-14-PU-L	PYFZ-08(-E)	PYF08A(-E)	PYF11A	PYFZ-14(-E)	PYF14A(-E)	PYF14T	PYF08M
Num of pi		Hold-down Clip model*2	Hold-down Clip model*2	Hold-down Clip model*2	Hold-down Clip model*2	Hold-down Clip model*2	Hold-down Clip model*2	Hold-down Clip model*2	Hold-down Clip model*2	Hold-down Clip model*2
	MY2□*5	_	_	PYC-A1	PYC-A1	_	_	_	_	PYC-P
8	MY2IN(S)*3	_	_	PYC-E1	PYC-E1	_	_	_	_	_
	MY2Z□-CR	Y92H-3	_	Y92H-3	Y92H-3	_	_	_	_	_
11	I MY3	_	_	_	_	PYC-A1	_	_	_	_
14	MY4□*5, MY4(Z)H, MYQ4, MYQ4N, 1 MYQ4Z, MY4□(S), MY2K	_	_	_	_	_	PYC-A1	PYC-A1	PYC-A1	_
	MY4Z□-CBG-CR *4	_	Y92H-3	_	_	_	Y92H-3	Y92H-3	Y92H-3	_

#### For Back-connecting Sockets

Terminal Type		S	Solder terminals		Wrapping terminals (PY□QN terminal length: 25 mm, PY□QN2 terminal length: 20 mm)			PCB terminals		
	Applicable sockets	PY08	PY11	PY14	PY08QN(2)	PY11QN(2)	PY14QN(2)	PY08-02	PY11-02	PY14-02
Number of pins	Applicable relay model*1	Hold-down Clip model*2	Hold-down Clip model*2	Hold-down Clip model*2	Hold-down Clip model*2	Hold-down Clip model*2	Hold-down Clip model*2	Hold-down Clip model*2	Hold-down Clip model*2	Hold-down Clip model*2
8	MY2□*6 MY2IN(S)*3	PYC-P	_	_	PYC-P	_	_	PYC-P	_	_
	MY2Z□-CR	PYC-1	_	_	PYC-1	_	_	PYC-1	_	_
11	MY3	_	PYC-P	_	_	PYC-P	_	_	PYC-P	_
14	MY4□*6, MY4(Z)H, MYQ4, MYQ4N, MYQ4Z, MY4□(S), MY2K	_	_	PYC-P	_	_	РҮС-Р	_	_	PYC-P
	MY4Z□-CBG-CR *4	_	_	PYC-1	_	_	PYC-1	_	_	PYC-1

- The applicable relay model is a plug-in terminal type.
- This is the model of the applicable hold-down clips. Hold-down clips are sold in sets of two. However, PYC-P and PYC-1 contain just one hold-down clip. We recommend using PYC-E1 hold-down clips for MY2IN(S) relays with a latching lever. (If PYC-A1 is used with MY2IN(S), the latching lever will be blocked by the hold-down clip and the lever will not operate.)
- The release lever cannot be mounted if the relay height is 53 mm or more.
- If the relay height is 53 mm or more, 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 Y92H-3.
  \*6. 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□
	7.75 mm	terminals (common)	12 18.5	4	30.6	<del> </del>	PYDN-7.75-040□
PYF-08-PU(-L)			2.25	20	154.6		PYDN-7.75-200□
PYF-14PU(-L)	31.0 mm	For Coil terminals	3.90 18.5 18.5 2.25 224.35	8	224.35	Yellow(Y)	PYDN-31.0-080□

<sup>\*1.</sup> Replace the box ( $\square$ ) in the model number with the code for the covering color.  $\square$ 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	coils between sockets	1.2-dia. → Pitch → guide	2	Blue (B)	<b>PYDM-14S</b> □ (50 pcs./bag)

<sup>\*1.</sup> 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	54.4	PYCM-08S
PYF14S	52.5	PYCM-14S

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

Applicable sockets	Pitch	Application	Shape/external dimensions	Number of poles	Insulation color	Model*1
		For bridging	3.3 -5.6	2		<b>PYD-025B</b> □ <b>(2P)</b> (10 pcs./bag)
PYFZ-08 PYF08A	22 mm		3.3 -3.3 -5.6	8	B (Black) S (Blue) R (Red)	<b>PYD-085B</b> □ <b>(8P)</b> (10 pcs./bag)
		adjacent sockets	3.3	2		<b>PYD-026B</b> □ <b>(2P)</b> (10 pcs./bag)
PYFZ-14 PYF14A	29 mm		203 29 3.3 5.6	8		<b>PYD-086B</b> □ <b>(8P)</b> (10 pcs./bag)
	7 mm	For bridging	3.2	2	B (Black)	<b>PYD-020B</b> □ <b>(2P)</b> (50 pcs./bag)
		with the same socket	32	3	B (Black) Y (Yellow)	<b>PYD-030B</b> □ <b>(3P)</b> (10 pcs./bag)

<sup>\*1.</sup> 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)

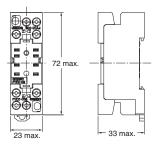
Note: These covers cannot be used for PYF08A and PYF14A. Use these covers in a combination with PYFZ-08 and PYFZ-14.

#### Dimensions with terminal cover

(Unit: mm)

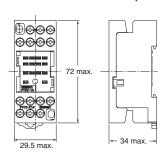
## PYCZ-C08











### Socket Mounting Plates (For Back-connecting Socket PY\(\subset \)/Solder Terminals, PY\(\subset \)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		1	PYP-1
PY08QN2 PY11 PY11QN PY11QN2	PY08QN2-Y1, PY08QN2-Y3 PY11-Y1 PY11QN-Y1 PY11QN-Y1		18	PYP-18*
PY14 PY1 PY14QN PY1	PY14-Y1, PY14-Y3 PY14QN-Y1, PY14QN-Y3 PY14QN2-Y1, PY14QN2-Y3		36	PYP-36*

<sup>\*</sup>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*		State Company	PFP-M
Spacer			PFP-S

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

# **Characteristics**

Sockets

۱.									electric stren	gth										
	Model		Number of pins	Terminal Type	Ambient operating temperature	iting operating	carry	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			10712	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					for 1 min	for 1 min	for 1 min		Approx. 32 g								
_	PYF08A			Screw terminal	55 to 70%		7 A	/ Δ '	2,000 VAC	2,000 VAC		Approx. 32 g								
	PYF08A-E				−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 ΜΩ	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								
.	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								
1	PYF14S		Screwless terminal		5 A	for 1 min	r 1 min for 1 min	for 1 min		Approx. 62 g										
	PYFZ-14				-55 to 70°C				6 A	2,250 VAC	2,250 VAC	2,250 VAC		Approx. 50 g						
`	PYFZ-14-E		14 Screw			3 A		for 1 min	for 1 min	for 1 min		Approx. 50 g								
	PYF14A			Screw terminal				2,000 VAC for 1 min	2,000 VAC for 1 min	2,000 VAC		Approx. 49 g								
	PYF14A-E						3 A			for 1 min		Approx. 49 g								
	PYF14T														-					
	PY08												Approx. 8 g							
	PY08-Y1			Solder terminals								Approx. 9 g								
_	PY08-Y3										Approx. 9 g									
	PY08QN			Wrapping terminals (Terminal length: 25 mm)				7 A 1,500 VAC for 1 min	1,500 VAC	1,500 VAC	100 MΩ min.	Approx. 12 g								
	PY08QN-Y1		8			5% to						Approx. 13 g								
	PY08QN-Y3 PY08QN2					85%		101 1 111111	101 1 111111	101 1 111111	111111.	Approx. 13 g								
	PY08QN2-Y1							Wrapping terminals								Approx. 11 g				
	PY08QN2-Y1		(Terminal leng	(Terminal length: 20 mm)	iength:							Approx. 12 g Approx. 12 g								
)	PY08-02			PCB terminals								Approx. 7 g								
	PY11			FOD terminais								Approx. 7 g								
	PY11-Y1	Solder terminals	Solder terminals								Approx. 10 g									
	PY11QN			Wronning terminals								Approx. 13 g								
	PY11QN-Y1	Back	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								
	PY11QN2	Duon	''	Wrapping terminals	-33 10 70 0		37	for 1 min	for 1 min	for 1 min	min.	Approx. 12 g								
	PY11QN2-Y1			(Terminal length: 20 mm)								Approx. 12 g								
	PY11-02		}	PCB terminals								Approx. 8 g								
	PY14											Approx. 10 g								
		l										, p								

Approx. 11 g

Approx. 11 g

Approx. 14 g

Approx. 15 g

Approx. 15 g

Approx. 13 g

Approx. 14 g

Approx. 14 g

Approx. 9 g

14

Solder terminals

Wrapping terminals

Wrapping terminals

(Terminal length: 25 mm)

(Terminal length: 20 mm)

PCB terminals

1,500 VAC

for 1 min

3 A

1,500 VAC

for 1 min

1,500 VAC

for 1 min

100  $M\Omega$ 

PY14-Y1

PY14-Y3

PY14QN

PY14QN-Y1

PY14QN-Y3

PY14QN2-Y1

PY14QN2-Y3

PY14QN2

PY14-02

<sup>\*1.</sup> 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.

#### **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) PYF-14-PU(-L)	PYDN-7.75-020□		-40 to 70°C	5% to 85%
		PYDN-7.75-030□	20 A		
		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%

## **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		CSA C22.2 No14	
PYF14S	5 A, 250 V	3211 07		
PYFZ-08(-E)	10 A, 250 V			
PYFZ-14(-E)	6 A, 250 V			
PY□ PYF□A(-E)	7 A, 250 V			

 $<sup>^{\</sup>star}$ 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		SWIV2	Recognition
PYF-14-PU	6 A, 250 V*			
PYF08S PYF14S	10 A, 250 V	111.500		
PYFZ-08(-E)	10 A, 250 V	UL508		
PYFZ-14(-E)	6 A, 250 V			
PY□ PYF□A(-E)	7 A, 250 V			

<sup>\*</sup>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*		R50327595	
PYF-14-PU	6 A, 250 V	EN 61984		
PYFZ-08(-E)	10 A, 250 V	EN 01904	R50405329	
PYFZ-14(-E)	6 A, 250 V			

 $<sup>^{\</sup>star}$ Ratings are for an ambient temperature of 55 $^{\circ}$ C or below. At an ambient temperature of 70 $^{\circ}$ C, the value is 7 A.

### ●VDE certification

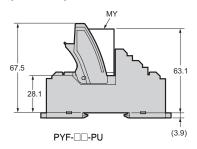
Model	Standard number	Certification No.	
PYF08S	VDE0627 (EN61984)	40015509	
PYF14	VDL0027 (LIN01904)	40015509	

## **Height with Socket**

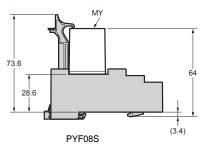
**Dimensions** 

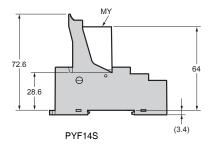
### Front-connecting Sockets

• Push-In Plus Terminal (PYF-□-PU)

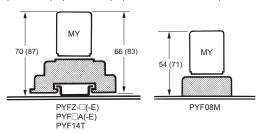


· Screwless terminal (PYF08S, PYF14S)





 Screw terminal (PYFZ- $\square$ (-E), PYF $\square$ A(-E), PYF14T, PYF08M)



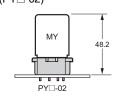
- Note: 1. The PYF $\square$ A can be mounted on a track or with screws.
  - The heights given in parentheses are the measurements for 53-mm-high Relays.
     Use the PYC-P Hold-down Clip for the PYF08M.

## Back-connecting Sockets

• Solder terminals/wrapping terminals (PY□)



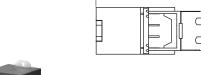
• PCB terminals (PY□-02)



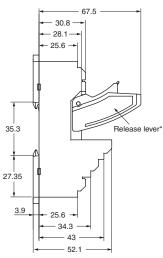
# **Front-connecting Sockets**

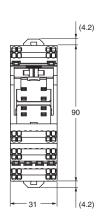
### ●Push-In Plus Terminal







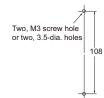




Terminal Arrangement/Internal Connection Diagram

Note: The numbers in parentheses are traditionally used terminal numbers.

# Mounting Hole Dimensions

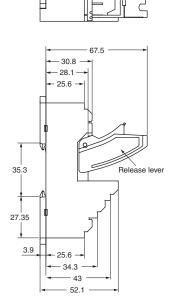


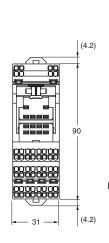
Note: Pull out the hooks to mount the Socket with screws.

\*The PYF-08-PU-L Sockets do not have release levers.

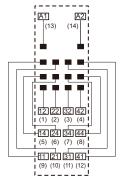
#### PYF-14-PU(-L)





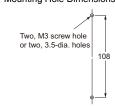


#### Terminal Arrangement/Internal Connection Diagram (Top View)



Note: The numbers in parentheses are traditionally used terminal numbers.

Mounting Hole Dimensions



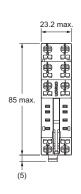
Note: Pull out the hooks to mount the Socket with screws.

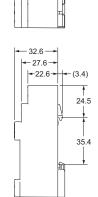
\*The PYF-14-PU-L Sockets do not have release levers.

# Screwless terminal

#### PYF08S







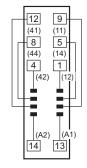
32.6

**-**36.5 max.**→** 

-38.2 max.-

←36.5 max.<del>→</del>

Terminal Arrangement/Internal Connection Diagram

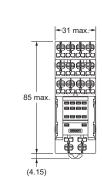


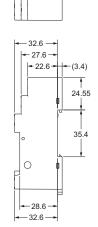
(Top View)

**Note:** The number shown in parentheses is the DIN standard.

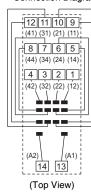
#### PYF14S







Terminal Arrangement/Internal Connection Diagram



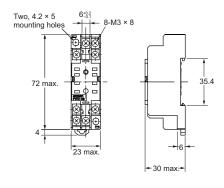
**Note:** The number shown in parentheses is the DIN standard.

# **Front-connecting Sockets**

## Screw terminal

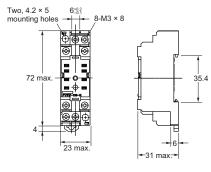
#### PYFZ-08



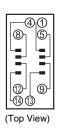


PYFZ-08-E (Finger-protection structure)

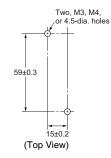




Terminal Arrangement/ Internal Connection Diagram



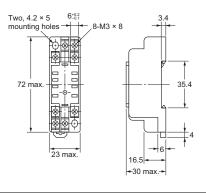
Mounting Hole Dimensions



Note: Track mounting is also possible.

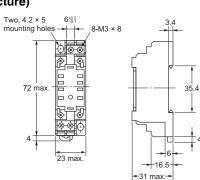
#### PYF08A





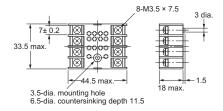
# PYF08A-E (Finger-protection structure)





#### PYF08M

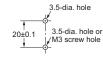




#### Terminal Arrangement/Internal Connection Diagram



Mounting Hole Dimensions



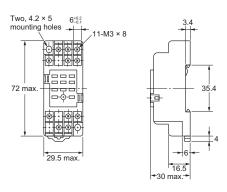
Mounting Hole Dimensions

22±0.2

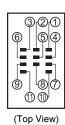
Two, M3, M4, or 4.5-dia. holes

PYF11A





Terminal Arrangement/Internal Connection Diagram

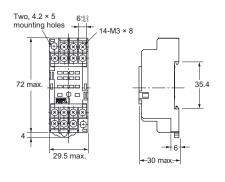


(Top View) Note: Track mounting is also possible.

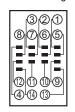
59±0.3





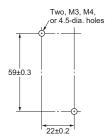


Terminal Arrangement/Internal Connection Diagram



(Top View)

Mounting Hole Dimensions

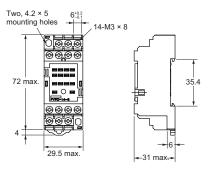


(Top View)

Note: Track mounting is also possible.

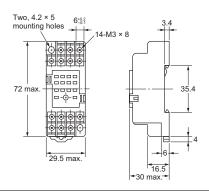
PYFZ-14-E (Finger-protection structure)





#### PYF14A



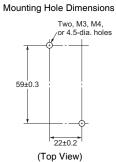


Terminal Arrangement/Internal Connection Diagram

321 8765

9000 L@\@ (B)

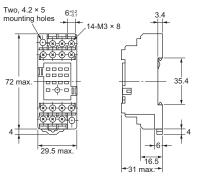
(Top View)

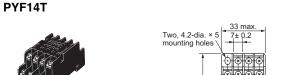


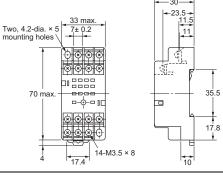
**Note:** Track mounting is also possible.

## PYF14A-E (Finger-protection structure)

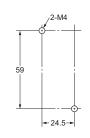








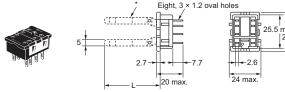
Mounting Hole Dimensions



# **Back-connecting Socket**

#### Solder terminals





\*PY08-Y□ includes the potion indicated by broken line

#### Terminal Arrangement/Internal Connection Diagram



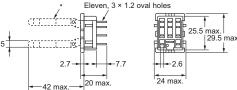
(Bottom View)

#### Mounting Hole Dimensions



**PY11** PY11-Y1



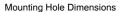


\*PY11-Y1 includes the potion indicated by broken line

Terminal Arrangement/Internal Connection Diagram



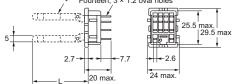
(Bottom View)





**PY14** PY14-Y1 PY14-Y3





\*PY14-Y includes the potion indicated by broken line.

Terminal Arrangement/Internal Connection Diagram



(Bottom View)

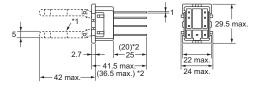
Mounting Hole Dimensions



# Wrapping terminals

PY08QN PY08QN2 **PY08QN2-Y1 PY08QN2-Y3** 





\*1. PY08QN(2)-Y1 includes the potion indicated by broken line. \*2. Dimensions in parentheses are for PY08QN2(-Y1).

#### Terminal Arrangement/Internal Connection Diagram



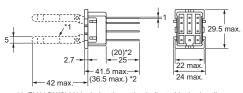
(Bottom View)

#### Mounting Hole Dimensions



**PY11QN** PY11QN2 PY11QN-Y1 **PY11QN2-Y1** 





\*1. PY11QN(2)-Y1 includes the potion indicated by broken line \*2. Dimensions in parentheses are for PY11QN2(-Y1).

Terminal Arrangement/Internal Connection Diagram



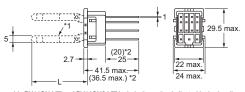
(Bottom View)

#### Mounting Hole Dimensions



PY14QN/PY14QN2 PY14QN-Y1/PY14QN2-Y1 **PY14QN-Y3** (L = 60 max.) PY14QN2-Y3 (L = 60 max.)





\*1. PY14QN-Y□ and PY14QN2-Y□ include the potion indicated by broken line.
\*2. Dimensions in parentheses are for PY14QN2(-Y□).

# Terminal Arrangement/Internal Connection Diagram



(Bottom View)

#### Mounting Hole Dimensions



#### PCB terminals

#### PY08-02



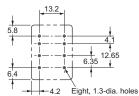




#### Terminal Arrangement/Internal Connection Diagram





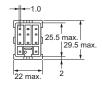


#### PY11-02

 This is not a flux-tight structure. We recommend manual soldering for this product.





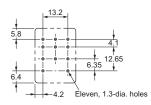


Terminal Arrangement/Internal Connection Diagram



(Bottom View)

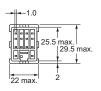
Mounting Hole and PCB Dimensions



PY14-02







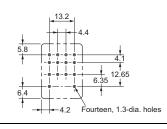
PYC-P

Terminal Arrangement/Internal Connection Diagram



(Bottom View)

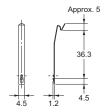
Mounting Hole and PCB Dimensions

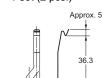


## **Socket Accessories**

### ●Hold-down Clip

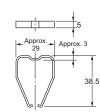
PYC-A1 1 set (2 pcs.)



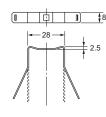


1.2

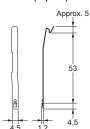




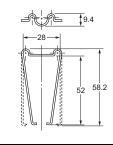
PYC-S 1 set (2 pcs.)



• Y92H-3 1 set (2 pcs.)

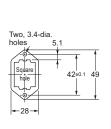


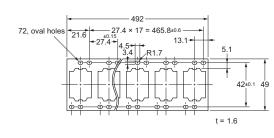
• PYC-1



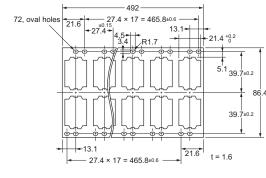
# **●**Socket Mounting Plates

PYP-18





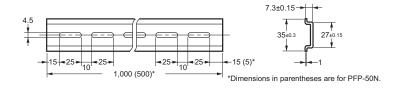
**PYP-36** 



# ●Accessories for DIN Track Mounting

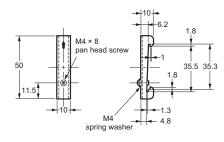
DIN Tracks PFP-100N PFP-50N





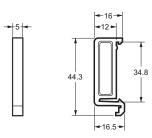
# End Plate PFP-M





Spacer PFP-S





# **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.

CAUTION

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**



General caution

Indicates the possibility of non-specified general cautions, warnings, and danger.



Electric shock caution

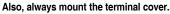
Used to warn of the risk of electric shock under specific conditions.



 High temperature caution
 Indicates the possibility of injuries by high temperature under specific conditions.

#### **↑** CAUTION

Do not touch terminal sections (i.e., current-carrying parts) while power is being supplied.



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.

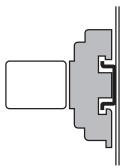
# **Precautions for Correct Use**

#### 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.

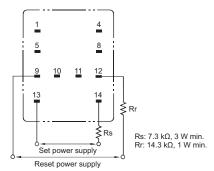
If there is the possibility of large voltage surges that could be applied to the elements from an external source, take any necessary surge absorption measures.

#### **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.

## ●Hermetically Sealed Relays (MYH/MYQ)

#### **Relays with PCB Terminals**

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

#### Solution

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

#### **Application Environments**

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

#### Solution

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

# **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- $\square$ -PU/P2RF- $\square$ -PU Data Sheet (Catalog No. SGFR-218).

Screwless Terminal Sockets (PYF08S, PYF14S)

Refer to Safety Precautions on the Screwless Terminal Socket PYF 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

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