# **Miniature Power Relays**

# MY/MYK/MYQ-MYH

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

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

Refer to Safety Precautions on pages 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 25
MYQ/MYH Miniature Power Sealed Relays	From page 30

# **Common Information**

Common Option	ns (Order Separately)	. From	page 36
<b>Common Safety</b>	Precautions	.From	page 55

# Miniature Power Relays: MY

			Plug-in terminals		PCB terminals	Case-surface	
			4	With operation indi	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	MY3F
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		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 absorption 2	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 EU 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	T
Disatis Casled Balays	_	Single	MYQ4	MYQ4N	MYQ4-02
Plastic Sealed Relays	4	Bifurcated	MYQ4Z		MYQ4Z-02
Hermetically Sealed		Single	MY4H		MY4H-0
Relays	4	Bifurcated	MY4ZH		MY4ZH-0

Refer to Front-connecting Sockets and Back-connecting Sockets in Common Options (Order Separately) on pages 36 and 38 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 types equipped with mechanical operation indicators and operation indicators for monitoring operation status are also available.
- Contact materials and contact structures can be selected based on contact reliability and corrosion resistance.
- \*Voltage is printed on white tape in the case of the Standard 3-pole model (MY3).

Refer to Safety Precautions on pages 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** 

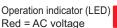
• Distinguished using color-coded coil tape\*

Example: MY2

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

· Distinguished using color-coded operation indicators (LED)







Operation indicator (LED) Green = DC voltage

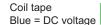




Coil tape



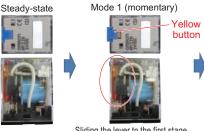






# 2. Latching levers convenient for circuit checking and types equipped with mechanical operation indicators and operation indicators for monitoring operation status are available.

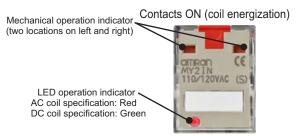
· Latching lever operating procedure



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	Corrosion re	sistance	
	Contact structure		Contact material	Typical model
High 1	Crossbar bifurcated contacts	High 🔨	Au cladding + AgPd	MY4Z-CBG
	Bifurcated contacts		Au cladding + Ag alloy Au plating + Ag alloy	MY4Z MY2Z
	Single contacts		Au cladding + Ag alloy	MY4
Low	Single 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 3: 3-pole 4: 4-pole

# (2) Contacts

None: Single Bifurcated

Z-CBG: Crossbar bifurcated

# (3) Options

None: None

With operation indicator

IN(S): With operation indicator/latching lever

# 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: 2-pole, single contacts

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

4Z: 4-pole, bifurcated contacts

# (2) Terminals

-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	Siligle	IVI I Z	12, 24, 48, 100/110 VDC
		Bifurcated	MY2Z	12, 24, 100/110, 110/120, 200/220, 220/240 VAC
		Diffurcated	IVI T ZZ	12, 24, 48, 100/110 VDC
Standard models	3	Cinalo	MY3	12, 24, 100/110, 110/120, 200/220, 220/240 VAC
(compliant with	3	Single	IVITS	12, 24, 48, 100/110 VDC
Electrical Appliances		Cinala	MY4	12, 24, 100/110, 110/120, 200/220, 220/240 VAC
and Material Safety Act)		Single	IVI Y 4	12, 24, 48, 100/110 VDC
		Bifurcated	MY4Z	100/110, 110/120, 200/220, 220/240 VAC
	4			12, 24, 48, 100/110 VDC
	ļ t	Crossbar bifurcated MY4Z-CBG	100/110, 110/120, 200/220 VAC	
			WIT4Z-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)		Single	MY4-D	12, 24, 48, 100/110 VDC
` '	4	Bifurcated	MY4Z-D	12, 24, 48, 100/110 VDC
Madala with huilt in CD		Single	MY2-CR	100/110, 110/120, 200/220, 220/240 VAC
Models with built-in CR circuit for coil surge absorption	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
		Cinalo	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
		Biluicateu	IVI I ZZIV	12, 24, 48, 100/110 VDC
Standard models	3	Cinals	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)	4	Single	IVI T 4IN	12, 24, 48, 100/110 VDC
		Bifurcated	MY4ZN	24, 100/110, 110/120, 200/220, 220/240 VAC
	4			12, 24, 48, 100/110 VDC
		Crossbar	MY47N-CRG	100/110, 200/220 VAC
		bifurcated		24 VDC
		Single	MY2N-D2	12, 24, 48, 100/110 VDC
Models with built-in	2	Bifurcated	MY2ZN-D2	12, 24, 100/110 VDC
diode for coil surge absorption	3	Single	MY3N-D2	12, 24, 100/110 VDC
(DC coil specification only)		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	_	Single	MY2N-CR	100/110, 110/120, 200/220, 220/240 VAC
	2	Bifurcated	MY2ZN-CR	100/110, 200/220 VAC
absorption	4	Single	MY4N-CR	100/110, 110/120, 200/220, 220/240 VAC
(AC 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	('Antacte	Model	Rated voltage
	2	Single	MY2IN(S)	100/110, 200/220 VAC
Standard models		Siligle	WITZIN(S)	12, 24, 48 VDC
(compliant with		Cinale	MV4IN(C)	100/110, 200/220 VAC
Electrical Appliances and Material Safety Act)	4	Single	MY4IN(S)	12, 24, 48 VDC
	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	_	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
		Siligle	WI I 2-02	12, 24, 48, 100/110 VDC
Standard models	3	Single	MY3-02	12, 24, 100/110, 110/120, 200/220, 220/240 VAC
(compliant with	3	Siligle		12, 24, 48, 100/110 VDC
Electrical Appliances		Single	MY4-02	12, 24, 100/110, 110/120, 200/220, 220/240 VAC
and Material Safety Act)	4	Siligle		12, 24, 48, 100/110 VDC
		Bifurcated	MY4Z-02	100/110, 110/120, 200/220 VAC
				12, 24, 48, 100/110 VDC

# ● Case-surface mounting

Classification	Number of poles		Model	Rated voltage
	2	Single	MY2F	24, 100/110, 110/120, 200/220, 220/240 VAC
		Siligle	IVITZF	12, 24, 48, 100/110 VDC
Standard models		Cim min	MY3F	100/110, 200/220 VAC
(compliant with		Single	WITSE	24, 100/110 VDC
Electrical Appliances and Material Safety Act)		Single Bifurcated	MY4F	24, 100/110, 110/120, 200/220 VAC
and Material Safety Act)			IVI T 4F	12, 24, 48, 100/110 VDC
	4		MY4ZF	200/220 VAC
			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 coil surge absorption	2	Single	MY2-D	MY2N-D2
Plug-in terminals			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	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			110% of	
AC	100/110	11.7/12.9	10/11	3,750	14.54	24.6		30% min.*2		Approx. 0.9 at 60 Hz to 1.3 at 50 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	00% max. 1		rated voltage	
	12	72	2.7	165	0.73	1.37			Ü	
DC	24	36	3.3	662	3.2	5.72		10% min.*2		Approx 0.0
ЪС	48	17	7.6	2,725	10.6	21.0		1070 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			110% of	
AC	100/110	11.7/12.9	10/11	3,750	14.54	24.6		30% min.*2		Approx. 0.9 at 60 Hz to
AC	110/120	9.9/10.8	8.4/9.2	4,430	19.2	32.1		30% min."2		1.3 at 50 Hz
	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	00 % IIIax. I		rated voltage	
	12	7	5	160	0.73	1.37				
DC	24	36	5.9	650	3.2	5.72		100/ min *0		Ammray 0.0
ЪС	48	18	3.5	2,600	10.6	21.0		10% min.*2		Approx. 0.9
	100/110	9.1	/10	11,000	45.6	86.2				

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

  - 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.

  \*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		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	rrent (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)	(VA, W)
AC	100/110	11.7/12.9	10/11	3,750	14.54	24.6		30% min.*2		Approx. 0.9 at 60 Hz to
AC	200/220	6.2/6.8	5.3/5.8	12,950	54.75	94.07		30% mm. 2	110% of	1.3 at 50 Hz
	12	7	5	160	0.73	1.37	80% max.*1		rated voltage	
DC	24	37	7.7	636	3.2	5.72		10% min.*2	voltago	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
  - 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.

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
		2	Single	MY2-02	_
DCB terminals	Standard models	3	Single	MY3-02	_
PCB terminals			Single	MY4-02	_
		4	Bifurcated	MY4Z-02	_
		2	Single	MY2F	_
Case-surface	Standard models	3	Single	MY3F	_
mounting	Standard models		Single	MY4F	_
		4	Bifurcated	MY4ZF	_

	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)	(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		200/ 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% min.*2	110% of	(at 60 Hz)
	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	60% max. 1		rated voltage	
	12	7	5	160	0.73	1.37				
DC	24	36	5.9	650	3.2	5.72		100/ min *0		A ===== 0.0
ьс	48	18.5 2,60		2,600	10.6	21.0		10% min.*2		Approx. 0.9
	100/110	9.1	/10	11,000	45.6	86.2				

- Note: 1. The rated current and coil resistance are measured at a coil temperature of 23°C with tolerances of +15%/-20% for AC rated current and ±15% for DC coil
  - 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.
- 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	ontact structure Single			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 220 VAC 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	oc .	
Maximum switching current	5 A		10 A		5 A		5 A		
Maximum switching power	1,100 VA 120 W 48 W 2,500 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				bifurcated
				With latching lever (S)		Bilarcatea		ing lever (S)	(CBG)	
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)	Resistive load	Inductive load (cos φ = 0.4, L/R = 7 ms)
Rated load	3 A at 220 VAC 3 A at 24 VDC	0.8 A at 220 VAC 1.5 A at 24 VDC	3 A at 250 VAC 3 A at 30 VDC	0.8 A at 250 VAC 1.5 A at 30 VDC	3 A at 220 VAC 3 A at 24 VDC	0.8 A at 220 VAC 1.5 A at 24 VDC	3 A at 250 VAC 3 A at 30 VDC	0.8 A at 250 VAC 1.5 A at 30 VDC	1 A at 220 VAC 1 A at 24 VDC	0.3 A at 220 VAC 0.5 A at 24 VDC
Rated carry current*1	3 A (5 A*2)				3 A (5 A*2)			1 A		
Maximum switching voltage	250 VAC, 12	5 VDC								
Maximum switching current	3 A (5 A*2)	A (5 A*2)								
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 <sub>l</sub>	plating + Ag*3	)					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.

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

# **Characteristics**

	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 m $Ω$ max.	•				100 mΩ max.				
Operate	time*3	20 ms max.									
Release	time*3	20 ms max.									
	Mechanical	18,000 operations/h									
switching frequency	Rated load	1,800 operations/h									
Insulatio resistano		100 M $\Omega$ min.									
	Between coil and contacts										
Dielectric	Between contacts of different polarity	2,000 VAC, 50/60 Hz fo	or 1 min								
	Between contacts of the same polarity	1,000 VAC at 50/60 Hz	for 1 min				700 VAC at 50/60 Hz for 1 min				
Vibration	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	nm single amplitude (1.0	0-mm double amplitude)							
Shock	Destruction	1,000 m/s <sup>2</sup>									
resistance	Malfunction	200 m/s <sup>2</sup>									
Endurance	Mechanical	AC: 50,000,000 operations min. DC: 100,000,000 operations min. DC: 100,000,000 operations min. DC: 100,000,000 operations min.									
	Electrical*6	500,000 operations min. (rated load, switching frequency: 1,800 operations/h)	200,000 operations min. (rated load, switching frequency: 1,800 operations/h)	500,000 operations min. (rated load, switching frequency: 1,800 operations/h)	200,000 operations min. (rated load, switching frequency: 1,800 operations/h)	100,000 operations min. (rated load, switching frequency: 1,800 operations/h)	50,000 operations min. (rated load, switching frequency: 1,800 operations/h)				
Failure rat		1 mA at 5 VDC	100 μA at 1 VDC	1 mA at 5 VDC	1 mA at 1 VDC	100 μA at 1 VDC	100 μA at 1 VDC				
Weight		Approx. 35 g	Approx. 35 g	Approx. 35 g	Approx. 35 g	Approx. 35 g	Approx. 35 g				

- Note: The data shown above are initial values.
  \*1. Models with latching lever are 100 mΩ maximum.
  \*2. Measurement conditions: 1 A at 5 VDC using the voltage drop method.
  \*3. Measurement conditions: With rated operating power applied, not including contact bounce.
  \*4. Measurement conditions: For 500 VDC applied to the same location as for dielectric strength measurement.
  \*5. Models with latching lever are 1,000 mΩ minimum.
  \*6. Ambient temperature condition: 23°C
  \*7. This value was presented in 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			Crossbar/bifu	rcated (CBG)		Single/bifurcated	ı
	Without	With operation	indicator	Without	With operation	Without	With operation	indicator
Features	operation indicator		With latching lever	operation indicator	indicator	operation indicator		With latching lever
Ambient operating temperature*1	-55 to 70°C	-55 to 60°C*2	-55 to 70°C	-25 to 70°C	-25 to 60°C	-55 to 60°C*2	-55 to 60°C*2	-55 to 70°C
Ambient operating humidity	5% to 85%					5% to 85%		

<sup>\*1.</sup> 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) MY2-D MY2N-D2 MY2IN-D2(S) MY2-CR MY2N-CR	UL508 NRNT2 Recognition 6 to 240 VAC 6 to 125 VDC 2		10 A, 250 VAC (General Use) 10 A, 30 VDC (General Use) 7 A, 240 VAC (General Use) 7 A, 24 VDC (Resistive) 5 A, 240 VAC (General Use) 5 A, 250 VAC (Resistive) 5 A, 30 VDC (Resistive) 3 A, 265 VAC (Resistive)	6,000			
						1/6 HP, 250 VAC 1/8 HP, 265 VAC 1/10 HP, 120 VAC	1,000
						B300 Pilot Duty (Same polarity)	6,000
MY2Z MY2ZN MY2-02 MY2F MY2Z-D MY2ZN-D2	UL508	NRNT2	Recognition	6 to 240 VAC 6 to 125 VDC	2	7 A, 240 VAC (General Use) 7 A, 24 VDC (Resistive) 5 A, 240 VAC (General Use) 5 A, 250 VAC (Resistive) 5 A, 30 VDC (Resistive) 3 A, 265 VAC (Resistive)	6,000
MY2Z-CR MY2ZN-CR	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 MY4N(S) MY4-D MY4N-D2 MY4IN-D2(S) MY4Z MY4ZIN MY4ZIN(S) MY4ZIN-D2 MY4ZIN-D2 MY4ZIN-D2(S) MY4Z-CR MY4ZIN-CR MY4ZIN-CR(S) MY4ZIN-CR(S)	UL508	NRNT2	Recognition	6 to 240 VAC 6 to 125 VDC	4	5 A, 28 VDC (General Use) (Same polarity) 5 A, 240 VAC (General Use) (Same polarity) 5 A, 30 VDC (Resistive) (Same polarity) 5 A, 250 VAC (Resistive) (Same polarity) 0.2 A, 120 VDC (Resistive) (Same polarity)	6,000
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) MY2-D MY2N-D2 MY2IN-D2(S)	72N 6 to 125 VDC 72IN(S) 72-D 72N-D2		7 A, 240 VAC (Resistive) 7 A, 24 VDC (Resistive) 5 A, 240 VAC (General Use) 5 A, 250 VAC (Resistive) 5 A, 30 VDC (Resistive)	6,000		
MY2-CR MY2N-CR					1/6 HP, 250 VAC (Same polarity) 1/10 HP, 120 VAC (Same polarity)	1,000
MY2Z MY2ZN MY2-02 MY2F MY2Z-D MY2ZN-D2	MY2Z C22.2 No.0, No.14 MY2ZN MY2-02 MY2F MY2Z-D		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 MY4N-D2(S) MY4-CR MY4IN-CR(S) MY4Z MY4ZN MY4ZN MY4ZIN(S) MY4Z-D MY4ZN-D2 MY4ZN-D2(S)	C22.2 No.14	3211 07	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	MY4F MY4Z-02		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)

		`	<u>'</u>
Model	Operating Coil ratings	Contact ratings	Certified number of operations
MY2Z MY2ZN MY2-02 MY2F MY2Z-D MY2ZN-D2 MY2ZN-CR MY2ZN-CR	6 to 125 VDC, 6 to 240 VAC	5 A, 250 VAC (cos φ = 1.0)	100,000
MY3 MY3N MY3-D MY3N-D2 MY3-02 MY3F		5 A, 250 VAC ( $\cos \varphi = 1.0$ ) 0.8 A, 250 VAC ( $\cos \varphi = 0.4$ )	
MY4-02 MY4F MY4Z-02 MY4ZF		3 A, 120 VAC ( $\cos \phi$ = 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 MY2N-CR MY2Z-CR MY2ZN-CR MY2Z-D MY2ZN-D2	Not applicable	Applicable  Applicable	Not applicable	1
MY2F  MY3  MY3N  MY3-D  MY3N-D2  MY3F  MY4  MY4N  MY4N  MY4IN(S)  MY4Z  MY4ZN  MY4ZIN(S)  MY4-D  MY4N-D2  MY4N-D2  MY4IN-D2(S)				
MY4Z-D MY4ZN-D2 MY4ZIN-D2(S) MY4-CR MY4N-CR MY4Z-CR MY4ZN-CR MY4ZN-CR MY4F MY4ZF				

# ●LR certification (Lloyd's Register)

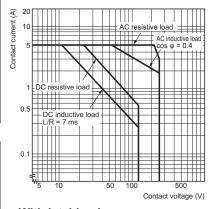
ı		` '	•
	Model	Environmental Category	Operating Coil ratings
	MY2 MY2N MY2IN(S) MY2-D MY2N-D2 MY2N-D2(S) MY2-CR MY2N-CR	ENV2,3	6 to 240 VAC 6 to 125 VDC
	MY2Z MY2ZN MY2Z-D MY2ZN-D2	ENV2,3	6 to 240 VAC 6 to 125 VDC
	MY4 MY4N MY4IN(S) MY4-D MY4N-D2 MY4IN-D2(S) MY4-CR MY4IN-CR(S) MY4Z MY4ZN MY4ZIN MY4ZIN MY4ZIN-D2 MY4ZIN-D2(S) MY4Z-CR MY4ZIN-CR(S)	ENV2,3	6 to 240 VAC 6 to 125 VDC

# ●VDE certification

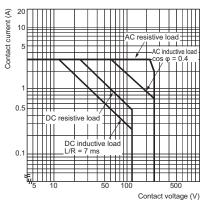
Model	Standard number	Certification No.	Operating Coil ratings	Contact ratings	Certified number of operations
MY2 MY2N MY2IN(S) MY2-D MY2N-D2 MY2IN-D2(S)	EN 61810-1	112467UG	6, 12, 24, 48/50, 100/110, 110/120, 200/220, 220/240 VAC	10A, 250 VAC (cos φ = 1) 10A, 30 VDC (L/R = 0 ms)	MY2: 100,000 MY4: 100,000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

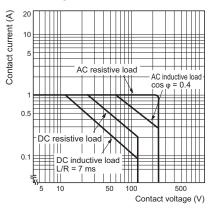
# •Maximum Switching Capacity MY2 and MY3



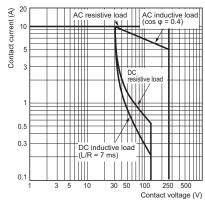
# MY4 and MY4Z



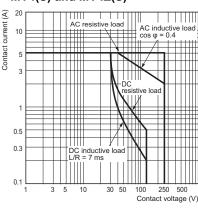
MY4Z-CBG



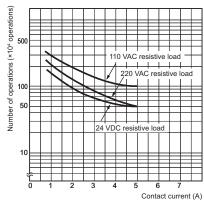
# With latching lever MY2(S)



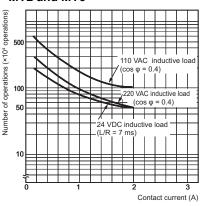
MY4(S) and MY4Z(S)



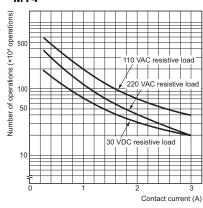
# ●Endurance Curve MY2 and MY3



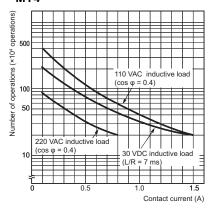
MY2 and MY3



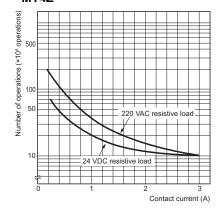
MY4



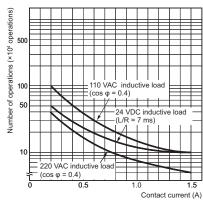
MY4



MY4Z



MY4Z



250 VAC

1.5

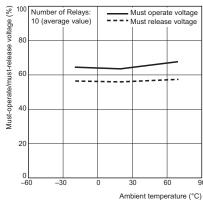
Contact current (A)

### With latching lever MY2(S) MY2(S) MY4(S) 10,000 operations) Number of operations (×103 operations) operations) 5,000 5,000 5,000 250 VAC 3,000 250 VAC 3,000 3,000 250 VAC Number of operations (×103 Number of operations (×10³ 1,000 1,000 30 VDC 1,000 30 VDC resistive load 30 VDC resistive load 500 500 500 30 VDC resistive load 300 300 30 VDC 300 - 30 VDC resistive load 250 VAC 250 VAC resistive load inductive load 250 VAC resistive lo 50 30 Contact current (A) MY4(S) MY4Z(S) MY4Z(S) Number of operations (×103 operations) Number of operations (×103 operations) operations) 5.000 5,000 5,000 3,000 3,000 3,000 30 VDC Number of operations (×103 inductive load 250 VAC resistive load 1,000 1,000 1,000 30 VDC inductive load inductive load 300 300 30 VDC resistive load 30 VDC 250 VAC inductive 100 100 100 250 VÁC 30 VDC

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

# MY2 AC Models

30



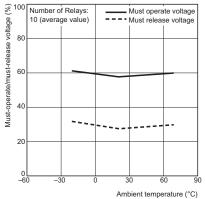
250 VAC inductive load

Contact current (A)

# MY2 DC Models

30

resistive load



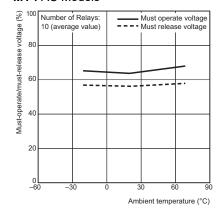
250 VAC

Contact current (A)

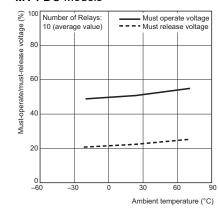
30

0.5

# MY4 AC Models

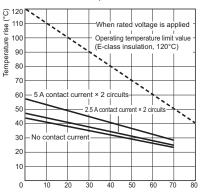


# MY4 DC Models

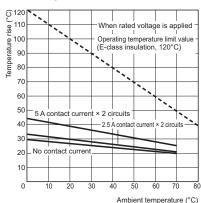


# ● Ambient Temperature vs. Coil Temperature Rise

# MY2 AC Models, 50 Hz



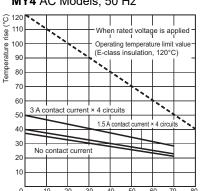
# MY2 DC Models



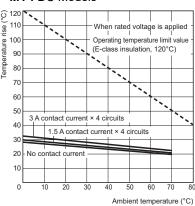
### Ambient temperature (°C)

## MY4 AC Models, 50 Hz



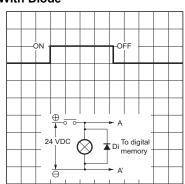


## MY4 DC Models

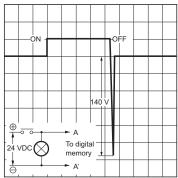


### Models with built-in diode for coil surge absorption MY□-D With Diode **Without Diode**

Ambient temperature (°C)

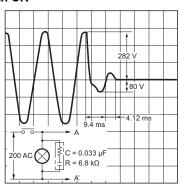


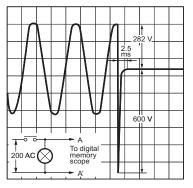




- Make sure that the polarity is correct.
  The release time will increase, but the 20-ms specification for standard models is satisfied.
  Diode properties: The diode has a reversed dielectric strength of 1,000 V.
  Forward current: 1 A

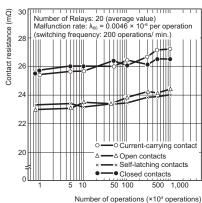
### Models with built-in CR circuit for coil surge absorption MY□-CR With CR Without CR





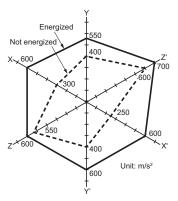
# ●Contact Reliability Test MY4Z-CBG (Modified Allen Bradley Circuit)

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**

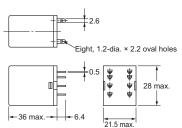


**Dimensions** (Unit: mm)

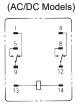
# ●Plug-in terminals

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

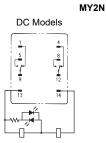




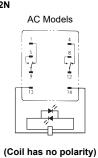
Terminal Arrangement/ Internal Connection Diagram (Bottom View) MY2

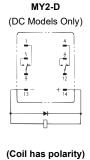


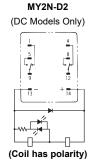
(Coil has no polarity)

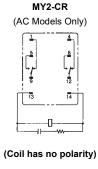


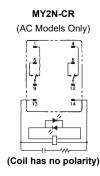
(Coil has no polarity)







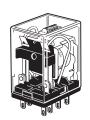


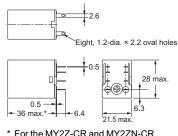


Note: 1. An AC model has coil disconnection self-diagnosis.

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



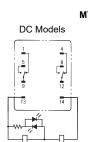


\* For the MY2Z-CR and MY2ZN-CR, this dimension is 53 mm maximum.

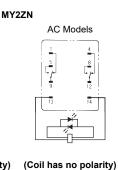
### Terminal Arrangement/Internal Connection Diagram (Bottom View)

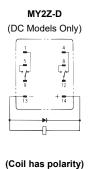
MY2Z (AC/DC Models)

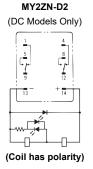
(Coil has no polarity)

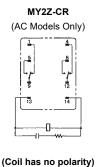


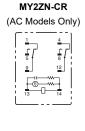
(Coil has no polarity)











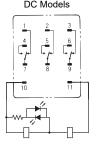
(Coil has no polarity)

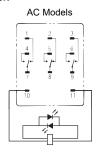
lote: 1. An AC model has coil disconnection self-diagnosis.

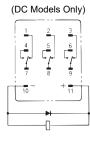
- An AC model has coll disconnection self-diag
   The indicator is red for AC and green for DC.
- 3. The operation indicator indicates the energization of the coil and does not represent contact operation.

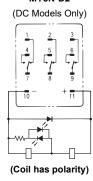
# MY3, MY3N, MY3-D, and MY3N-D2

# Internal Connection Diagram (Bottom View) MY3 (AC/DC Models) Eleven, 1.2-dia. × 2.2 oval holes Coil has no polarity) MY3N MY3-D MY3N-D2 DC Models Only) MY3N-D2 (DC Models Only)









Terminal Arrangement/

(Coil has no polarity)

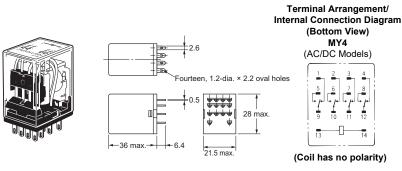
(Coil has no polarity)

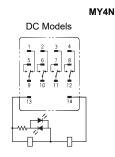
(Coil has polarity)

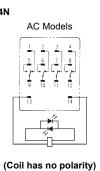
Note: 1. An AC model has coil disconnection self-diagnosis.

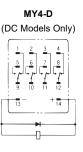
- The indicator is red for AC and green for DC.
- 3. The operation indicator indicates the energization of the coil and does not represent contact operation.

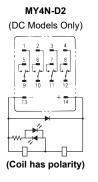
# MY4, MY4N, MY4-D and MY4N-D2 MY4-CR, MY4N-CR

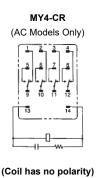


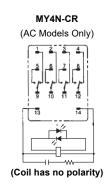








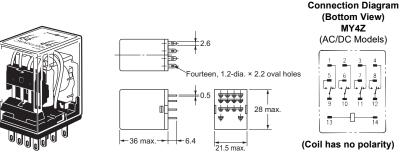


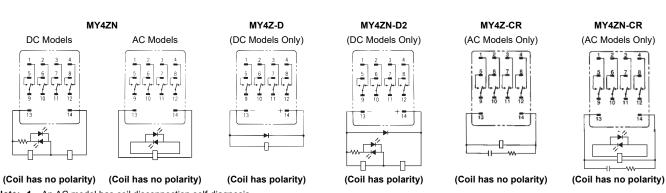


- (Coil has no polarity) (Coil has no polarity) (Coil has polarity)

  Note: 1. An AC model has coil disconnection self-diagnosis.
  - The indicator is red for AC and green for DC.
  - 3. 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



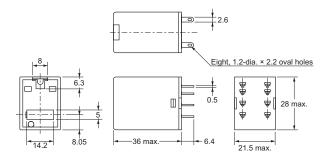


Terminal Arrangement/Internal

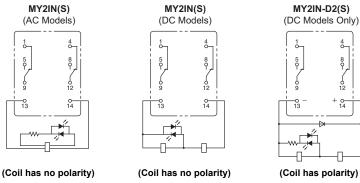
- Note: 1. An AC model has coil disconnection self-diagnosis.
  - 2. The indicator is red for AC and green for DC.
  - 3. The operation indicator indicates the energization of the coil and does not represent contact operation.

# MY2IN(S) MY2IN-D2(S)

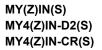




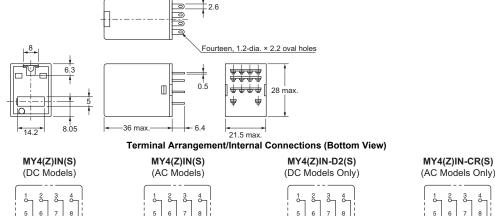
# Terminal Arrangement/Internal Connections (Bottom View)

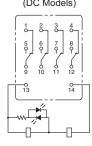


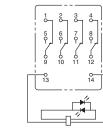
- Note: 1. An AC model has coil disconnection self-diagnosis.
  - 2. The indicator is red for AC and green for DC.
  - 3. The operation indicator indicates the energization of the coil and does not represent contact operation.

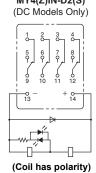


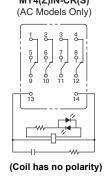








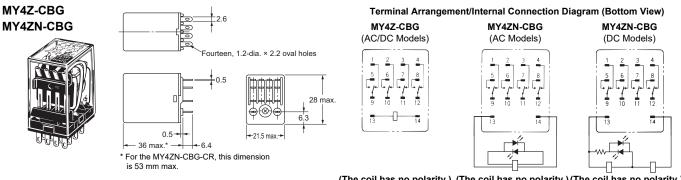




(Coil has no polarity)

(Coil has no polarity)

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



(The coil has no polarity.) (The coil has no polarity.) (The coil has no polarity.)

# ●PCB terminals

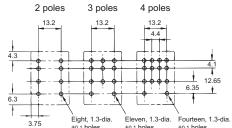
MY2-02 MY3-02 MY4-02 MY4Z-02



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

# 

# PCB Processing Dimensions (Bottom View)



Note: 1. The dimensional tolerance is ±0.1 holes

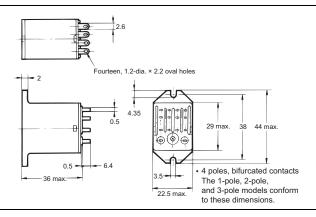
2. Refer to the terminal arrangement and internal connections diagrams for the MY2, MY3, MY4, and MY4Z.

# **●**Case-surface mounting

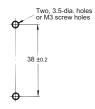
MY2F MY3F MY4F MY4ZF



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.

# Miniature Power Latching Relays

# MYK

# Latching miniature power relays that retain contact operation status

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

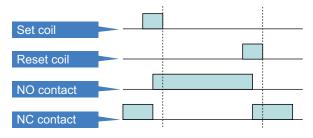
Refer to Safety Precautions on pages 55 to 56 and Safety Precautions for All Relays.



# **Features**

# Latching Relays MYK

Retains contact operation status.



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

\*MYK features a magnetic lock system.

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

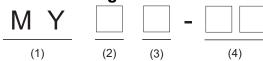






# **Model Number Structure**

# **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

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

# **●PCB** terminals

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

# **Ratings and Specifications**

# **Ratings**

# Operating coil

	Set coil			Rese	et coil				Power consur	Power consumption (VA, W)			
Rated v			(V) anstlay hat				current nA)	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) voltag	voitago (1)	voitago (1)						
	12	57	56	72	39	38.2	130				Approx. 0.6	Approx. 0.2	
AC	24	27.4	26.4	320	18.6	18.1	550		'		to 0.9	to 0.5	
	100	7.1	6.9	5,400	3.5	3.4	3,000	80% max.*	80% max.	110% max. of rated	(at 60 Hz)	(at 60 Hz)	
	12	11	10	110	5	50	235	00 % IIIax.	00 70 IIIax.	voltage		1	
DC	24	5	52	470	2	25	940					Approx. 1.3	Approx. 0.6
	48	2	.7	1,800	1	16	3,000				<u> </u>	1	

Note: 1. 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.

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

# 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**

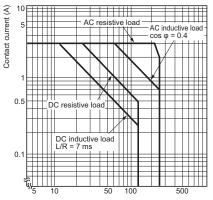
Contact resist	tance*1	$50$ m $\Omega$ max.				
C-4	Operate time*2	AC: 30 ms max., DC: 15 ms max.				
Set Minimum pulse width		AC: 60 ms, DC: 30 ms				
Reset	Release time*2	AC: 30 ms max., DC: 15 ms max.				
Reset	Minimum pulse width	AC: 60 ms, DC: 30 ms				
Maximum	Mechanical	18,000 operations/h			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

- **Note:** The data shown above are initial values. \*1. Measurement conditions: 1 A at 5 VI 1 A at 5 VDC using the voltage drop method.
- 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.

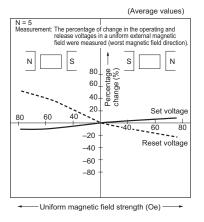
<sup>\*</sup>There is variation between products, but actual values are 80% maximum.

# **Engineering Data (Reference Value)**

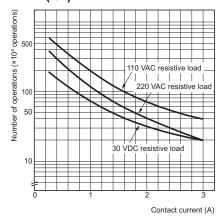
# **Maximum Switching Capacity** MY2K(-02)



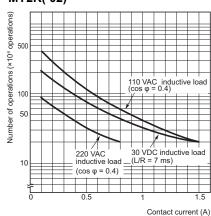
# **Magnetic Interference** (External Magnetic Field) **MY2K** 24 VDC



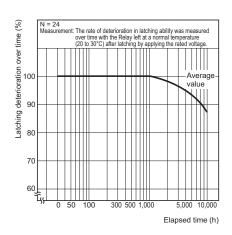
# **Endurance Curve** MY2K(-02)



MY2K(-02)

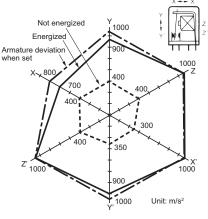


# **Latching Deterioration Over Time** MY2K 24 VDC



# **Shock Malfunction**

MY2K 100 VAC



N = 20

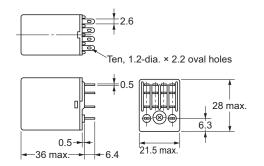
Measurement: Shock was applied in 6 directions along 3 axes 2 times with the Relay energized and 3 times with the Relay not energized to check the shock values that cause the Relay to malfunction.

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

**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.)

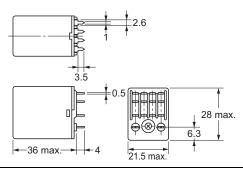
For DC



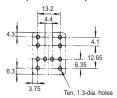
Note: Pay close attention to the set coil and reset coil polarities. If the connections are not correct, unintended operation may occur.

# ●PCB terminals MY2K-02





# PCB Processing Dimensions (Bottom View)



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

# **MYQ/MYH**

₹

Z X X

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

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

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



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

# **Features**

# **Highly Airtight Relays (Plug-in Terminals)**

Seal performance	Degree of protection	Typical relay	Features
High <b>个</b>	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

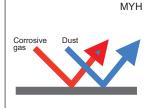
These realize excellent reliability even in environments where salt damage occurs or where dust is generated.





# **Hermetically Sealed Relays: MYH**

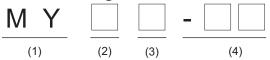
These realize excellent reliability even in environments where dust is generated or where corrosive gases (chloride gas, sulfuric gas, silicone gas, etc.) are present.





# **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

With operation indicator\* \*Only MYQ (plastic sealed relay)

# (4) Options, terminal type

None: Plug-in terminals

Plastic sealed relays, PCB terminals 02: 0: Hermetically sealed relays, PCB terminals

# **Ordering Information**

When your order, specify the rated voltage.

# **Plastic Sealed Relays**

# Plug-in terminals

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

# PCB terminals

Classification	Number of poles	Contacts	Model	Rated voltage
Standard models	4	Single	MYQ4-02	50, 200/220, 220/240 VAC
(compliant with			W 1 Q4-02	24 VDC
Electrical Appliances	-	Bifurcated	MVO47.02	100/110 VAC
and Material Safety Act)			MYQ4Z-02	24, 48 VDC

# **Hermetically Sealed Relays**

# Plug-in terminals

Classification	Number of poles	Contacts	Model	Rated voltage
Standard models		Single	MY4H	24, 100/110, 110/120 VAC
(compliant with			W 14F1	12, 24, 48, 100/110 VDC
Electrical Appliances	4	Bifurcated	MY4ZH	24, 100/110, 110/120 VAC
and Material Safety Act)				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		W11411-0	24 VDC
and Material Safety Act)		Bifurcated	MY4ZH-0	24, 100/110 VDC

# **Ratings and Specifications**

# Operating coil

	Rated voltage (V)		Rated cur	rrent (mA)	Coil	Coil indu	ctance (H)	Must apprets	Must release voltage (V)*2	Maximum voltage (V)	Power consumption (VA, W)
			50 Hz	60 Hz	resistance $(\Omega)$	Armature OFF	Armature ON	Must operate voltage (V)*1			
		24	53.8	46	180	0.69	1.3				
П	AC	100/110	11.7/12.9	10/11	3,750	14.54	24.6		30% min.	110% max. of rated voltage	Approx. 0.9 at 60 Hz to 1.3 at 50 Hz
П		110/120	9.9/10.8	8.4/9.2	4,430	19.2	32.1				
П		200/220	6.2/6.8	5.3/5.8	12,950	54.75	91.07				
		220/240	4.8/5.3	4.2/4.6	18,790	83.5	136.4	80% max.			
]		12	7	5	165	0.734	1.37				
	DC	24	36	3.9	650	3.2	5.72		10% min.		Approx. 0.9
		48	18	3.5	2,600	10.6	21.0		10 /0 111111.		Дрргох. 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)						
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)						
Contact structure	Sii	ngle	Bifu	rcated		
Load	Resistive load	Inductive load (cos $\phi$ = 0.4, L/R = 7 ms)	Resistive load	Inductive load (cos $\phi$ = 0.4, L/R = 7 ms)		
Rated load	3 A at 110 VAC 3 A at 24 VDC	0.8 A at 110 VAC 1.5 A at 24 VDC	3 A at 110 VAC 3 A at 24 VDC	0.8 A at 110 VAC 1.5 A at 24 VDC		
Rated carry current	3 A					
Maximum switching voltage	125 VAC 125 VDC					
Maximum switching current	3 A					
Maximum switching power	330 VA 88 VA 330 VA 88 VA 72 W 36 W					
Contact material	Au plating +	Ag				

# **Characteristics**

Model			MYQ	MYH				
Contact resistance	e*1	50 mΩ max.						
Operate time*2		20 ms max.						
Release time*2		20 ms max.						
Maximum	Mechanical	18,000 operations/h						
switching frequency	Rated load	1,800 operations/h						
Insulation resistan	nce*3	100 MΩ min.		·				
	Between coil and contacts	1,500 VAC at 50/60	Hz for 1 min	1,000 VAC at 50/60	Hz for 1 min			
Dielectric strength	Between contacts of different polarity	1,500 VAC at 50/60	Hz for 1 min	1,000 VAC at 50/60	Hz for 1 min			
	Between contacts of the same polarity	1,000 VAC at 50/60	Hz for 1 min	700 VAC at 50/60 Hz for 1 min				
Vibration	Destruction	10 to 55 to 10 Hz, 0	.5-mm single amplitude (1.0-mm double	e amplitude)				
resistance	Malfunction	10 to 55 to 10 Hz, 0	.5-mm single amplitude (1.0-mm double	e amplitude)				
Shock resistance	Destruction	1,000 m/s <sup>2</sup>	1,000 m/s <sup>2</sup>					
Shock resistance	Malfunction	200 m/s <sup>2</sup>						
Endurance	Mechanical	Single contacts: Bifurcated contacts:	AC: 50,000,000 operations min., DC: 100,000,000 operations min. : 5,000,000 operations min., (switching frequency: 18,000 operations/h)		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)		100,000 operations min. : 50,000 operations min. (at rated load, switching frequency: 1,800 operations/h)			
Failure rate P Level (reference value)*5		Single contacts: Bifurcated contacts:	1 mA at 1 VDC : 100 μA at 1 VDC	Bifurcated contacts:	100 μA at 1 VDC : 100 μA at 100 mVDC			
Ambient operating	y temperature*6	-55 to 60°C		-25 to 60°C				
Ambient operating	រ 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:

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

Ambient temperature condition: 23°C

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

Ambient temperature condition: For 500 VDC applied to the same location as for dielectric strength measurement.

Ambient temperature condition: 23°C

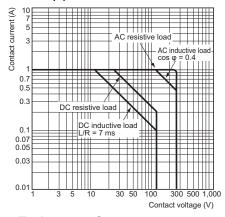
This value was measured at a switching frequency of 120 operations per minute.

With no icing or condensation.

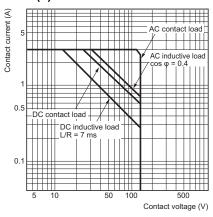
\*3. \*4. \*5.

# **Engineering Data (Reference Value)**

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

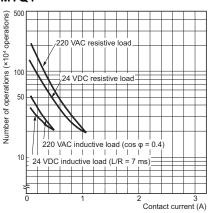


# MY4(Z)H



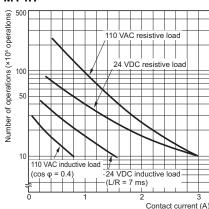
# **Endurance Curve**

# MYQ4



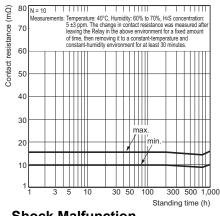
The endurance of bifurcated contacts is one-half that of single contacts.

# MY4H

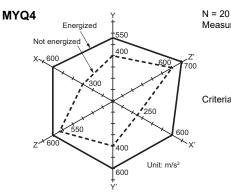


**Note:** The endurance of bifurcated contacts is one-half that of single contacts.

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



# **Shock Malfunction**



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/s<sup>2</sup>

### Shock direction

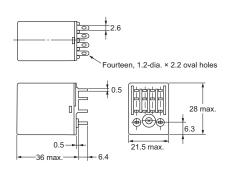


**Dimensions** (Unit: mm)

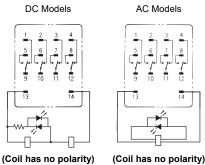
# ●Plug-in terminals

# Plastic Sealed Relays MYQ4(Z)(N)





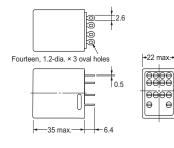
# MYQ4(Z)N



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

# Hermetically Sealed Relays MY4(Z)H







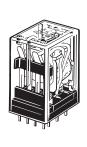
Terminal Arrangement/

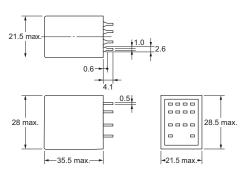


(Coil has no polarity)

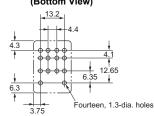
# PCB terminals

# Plastic Sealed Relays MYQ4(Z)-02





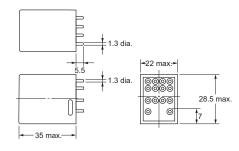
# PCB Processing Dimensions (Bottom View)



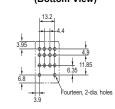
**Note:** The dimensional tolerance is ±0.1.

# Hermetically Sealed Relays MY4(Z)H-0





# PCB Processing Dimensions (Bottom View)



# **Common Options (Order Separately)**

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

# **Ordering Information**

# **Front-mounting Sockets**

Applicable relay model*1	Mounting Method	Conductive part protection	Terminal Type	Applicable crimp terminal/ Electric wire	Appearance	Mode	Hold-down Clips/ Release Levers (Order Separately)
MY2□ MY2□(S) MY2Z□-CR		ck or	Push-In Plus Terminal	Ferrules Solid wire Stranded wire		PYF-08-PU*2	With release lever * Hold by release lever
	Mounted on a					PYF-08-PU-L*2	
	DIN track or with screws		Screw terminal (M3 screw size)	Forked terminals Solid wire Stranded wire		PYFZ-08-E*4	MY2□: PYC-A1 MY2IN(S): PYC-E1
		Option (Terminal cover sold separately) *3		Round terminals Forked terminals Solid wire Stranded wire		PYFZ-08 * Terminal cover: PYCZ-C08	
	Mounted on a DIN track	Available	Screwless terminal (Clamp method)	Solid wire Stranded wire		PYF08S	PYCM-08S * Hold by release lever
	Screw mounting only	None	Screw terminal (M3.5 screw size)	Round terminals Forked terminals Solid wire Stranded wire		PYF08M	PYC-P (MY2□ Only)
MY3□	Mounted on a DIN track or with screws	None	Screw terminal (M3 screw size)	Round terminals Forked terminals Solid wire Stranded wire		PYF11A	PYC-A1

<sup>\*1.</sup> The applicable relay model is a plug-in terminal type.

\*2. There are screw mounting holes in the DIN hooks on the PYF-□□-PU and P2RF-□□-PU. Pull out the DIN hook tabs to mount the Sockets with screws.

\*3. Terminal cover type is PYCZ-C08. (Order Separately) For details, refer to the *For Screw Terminal Sockets (PYFZ-08/PYFZ-14) Terminal covers* on page 44.

\*4. The finger-protection type (PYFZ-□-E) is a type in which the terminal cover is integrated into the socket. Round terminals cannot be used. Use forked terminals or

Applicable relay model*1	Mounting Method	Conductive part protection	Terminal Type	Applicable crimp terminal/ Electric wire	Appearance	Mode	Hold-down Clips/ Release Levers (Order Separately)
		DIN track or	Push-In Plus Terminal	Ferrules Solid wire Stranded wire	PYF-14-PU*2	With release lever * Hold by release lever	
	Mounted on a DIN track or					PYF-14-PU-L*2	
MY4□ MY4□(S) MY4□H MYQ4□ MY4Z□-CBG-CR MY2K	Mounted on a DIN track		Screw terminal (M3 screw size)	Forked terminals Solid wire Stranded wire		PYFZ-14-E*4	PYC-A1
				Round terminals Forked terminals Solid wire Stranded wire		PYFZ-14 * Terminal cover: PYCZ-C14	
			Available	Screwless terminal (Clamp method)	Solid wire Stranded wire		PYF14S
	Mounted on a DIN track or with screws	None	Screw terminal (M3.5 screw size)	Round terminals Forked terminals Solid wire Stranded wire		PYF14T	PYC-A1

There are screw mounting holes in the DIN hooks on the PYF-—-PU and P2RF-—-PU. Pull out the DIN hook tabs to mount the Sockets with screws. Terminal cover type is PYCZ-C14. (Order Separately) For details, refer to the For Screw Terminal Sockets (PYFZ-08/PYFZ-14) Terminal covers on page 44. The finger-protection type (PYFZ-—-E) is a type in which the terminal cover is integrated into the socket. Round terminals cannot be used. Use forked terminals or ferrules instead.

## **Back-mounting Sockets**

Applicable relay model*1	Terminal Type	Hold-down Clips	Appearance	Mode
	Solder terminals			PY08
MY2□ MY2□(S)	Wrapping terminals Terminal length: 25 mm	Accessories (Order Separately)  * MY2Z□-CR: PYC-1	7- 1	PY08QN
MY2□(S) MY2Z□-CR	Wrapping terminals Terminal length: 20 mm	Other than those above: PYC-P*3		PY08QN2
	PCB terminals			PY08-02
	Solder terminals			PY08-Y1
MY2□ MY2□(S)	Wrapping terminals Terminal length: 25 mm			PY08QN-Y1
	Wrapping terminals Terminal length: 20 mm	With Hold-down Clips*2		PY08QN2-Y1
	Solder terminals			PY08-Y3
MY2Z□-CR	Wrapping terminals Terminal length: 25 mm			PY08QN-Y3

<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.
\*3. If an MY□(S) Relay with a Latching Lever is used in combination with a PY□□-02 Socket for Relays with PCB Terminals and a PYC-P Mounting Bracket, the lever will not constant. will not operate.

Applicable relay model*1	Terminal Type	Hold-down Clips	Appearance	Mode	
MY2Z□-CR	Wrapping terminals Terminal length: 20 mm	With Hold-down Clips*2		PY08QN2-Y3	
		Accessories (Order Separately) * PYC-P		PY11	
	Solder terminals	With Hold-down Clips*2		PY11-Y1	
		Accessories (Order Separately) *PYC-P		PY11QN	
MY3□	Wrapping terminals Terminal length: 25 mm	With Hold-down Clips*2		PY11QN-Y1	
		Accessories (Order Separately) *PYC-P		PY11QN2	_
	Wrapping terminals Terminal length: 20 mm	With Hold-down Clips*2		PY11QN2-Y1	
	PCB terminals	Accessories (Order Separately) * PYC-P		PY11-02	
MY4□ MY4□(S)	Solder terminals	Accessories (Order Separately)		PY14	
MY4□Ĥ <sup>′</sup> MYQ4□ MY4Z□-CBG-CR MY2K	Accessories (Order Separately)  * MY4Z□-CBG-CR: PYC-1  Other than those above: PYC-P  Wrapping terminals  Terminal length: 25 mm			PY14QN	_

<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.

Applicable relay model*1	Terminal Type	Hold-down Clips	Appearance	Mode
//Y4□ //Y4□(S) //Y4□H //YQ4□	Wrapping terminals Terminal length: 20 mm	Accessories (Order Separately)  * MY4Z□-CBG-CR: PYC-1  Other than those above: PYC-P*3		PY14QN2
IY4Z□-CBG-CR IY2K	PCB terminals	Other than those above. F1C-F 3		PY14-02
	Solder terminals			PY14-Y1
Y4□ Y4□(S) Y4□H YQ4□ Y2K	Wrapping terminals Terminal length: 25 mm			PY14QN-Y1
	Wrapping terminals Terminal length: 20 mm	With Hald down Oliveto		PY14QN2-Y1
	Solder terminals	With Hold-down Clips*2		PY14-Y3
lY4Z□-CBG-CR	Wrapping terminals Terminal length: 25 mm			PY14QN-Y3
	Wrapping terminals Terminal length: 20 mm			PY14QN2-Y3

<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.

\*3. If an MY□(S) Relay with a Latching Lever is used in combination with a PY□□-02 Socket for Relays with PCB Terminals and a PYC-P Mounting Bracket, the lever will not operate.

## **Hold-down Clip**

Appearance*1	Model*2	Weight*3	Application		
	PYC-A1	Approx. 0.54 g			
	PYC-E1	Approx. 0.6 g	For connecting relays and sockets		
	PYC-P	Approx. 1.4 g			
	PYC-S	Approx. 1.8 g	For connecting sockets, socket mounting plates, and relays		
	Y92H-3	Approx. 0.7 g	For connecting models with built-in CR circuit for coil surge absorption		
	PYC-1	Approx. 6 g	(MY2Z□-CR) and sockets		

<sup>\*1.</sup> The appearance shown is one in which the relay, socket, and hold-down clip are assembled.
\*2. Use the Hold-down clips as a set of two. For PYC-P, PYC-S, and PYC-1 use only one piece.
\*3. The weight shown above is the weight for one hold-down clip.

# ● 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 terminals (common)	18.5	3	22.85	Red (R)	PYDN-7.75-030□
	7.75 mm			4	30.6		PYDN-7.75-040□
PYF-08-PU(-L)				20	154.6		PYDN-7.75-200□
PYF-08-PU(-L) PYF-14PU(-L)	31.0 mm	For Coil terminals	3.90 18.5 12 12 12 1.57	8	224.35	Blue (S) 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 (P)	<b>PYDM-08S</b> □ (50 pcs./bag)
PYF14S	27.5 mm	coils between sockets	1.2-dia	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	28 52.5 29.6	PYCM-14S

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

Applicable sockets	Pitch	Application	Shape/external dimensions	Number of poles	Insulation color	Model*1	
	22 mm	For bridging	3.3	2		<b>PYD-025B</b> □ (10 pcs./bag)	
PYFZ-08			35° -22- -3.3 -5.6	8	B (Black)	<b>PYD-085B</b> □ (10 pcs./bag)	
		adjacent sockets	3.3 3.5 5.6	2	S (Blue) R (Red)	<b>PYD-026B</b> □ (10 pcs./bag)	
PYFZ-14	29 mm		203 29 35 35 35 35 5.6	8		<b>PYD-086B</b> □ (10 pcs./bag)	
		For bridging with the same	3.2	2	B (Black)	<b>PYD-020B</b> □ (50 pcs./bag)	
	7 mm	7 mm	with the same socket	3.2	3	Y (Yellow)	<b>PYD-030B</b> □ (10 pcs./bag)

<sup>\*1.</sup> Replace the box ( $\square$ ) in the model number with the code for the covering color.

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

#### **Terminal covers**

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

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

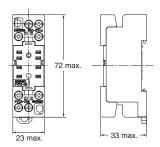
2. A short bar (optional) cannot be used attached to the upper section because it will interfere with the terminal cover.

#### Dimensions with terminal cover

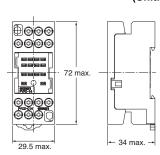
(Unit: mm)

## PYCZ-C08









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

	Applicable Sockets	Socket Mounting Plates		
Model	Models with hold-down clips	Appearance	Number of sockets	Model
PY08 PY08QN	PY08-Y1, PY08-Y3 PY08QN-Y1, PY08QN-Y3		1	PYP-1
PY08QN2 PY08Q PY11 PY11-N PY11QN PY11QN PY11QN2 PY11Q PY14-Y PY14QN PY14QN	PY08QN2-Y1, PY08QN2-Y3 PY11-Y1 PY11QN-Y1 PY11QN-Y1		18	PYP-18*
	PY11QN2-Y1 PY14-Y1, PY14-Y3 PY14QN-Y1, PY14QN-Y3 PY14QN2-Y1, PY14QN2-Y3		36	PYP-36*

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

## **Parts for Track Mounting**

Туре		Appearance	Model
DIN Tracks	1 m		PFP-100N
DIN Hacks	0.5 m		PFP-50N
End Plate*		State Transport	PFP-M
Spacer			PFP-S

Note: The track conforms to DIN standards.

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

## **Ratings and Specifications**

## **Characteristics**

## Sockets

T T		4	4	4	4	4	Die	electric strengt	,m^4	4	4
Model	Connection	Number of pins		Ambient operating temperature	Ambient operating humidity	Rated carry current	Between contact	Between contact terminals of	Between coil and	Insulation resistance *1*4	
PYF-08-PU	<u> </u>		Push-In Plus Terminal	-40 to 70°C		10 A*2	2,000 VAC		2,000 VAC		Approx. 80 g
PYF08S	1 '		Screwless terminal			107	for 1 min	for 1 min	for 1 min		Approx. 46 g
PYFZ-08	1	8			-	10 A	2,250 VAC	2,250 VAC	2,250 VAC		Approx. 32 g
PYFZ-08-E	1 '	1	Screw terminal	-55 to 70°C	1	107.	for 1 min	for 1 min	for 1 min		Approx. 32 g
PYF08M	1			-55 10 70 0		5 A	1,500 VAC for 1 min	1,500 VAC for 1 min	1,500 VAC for 1 min		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	1,000 MΩ min. (500 VAC)	Approx. 43 g
PYF-14-PU	1 '		Push-In Plus Terminal	-40 to 70°C	1	6 A	2,000 VAC	2,000 VAC	2,000 VAC	(500 v,	Approx. 87 g
PYF14S	1 '	1	Screwless terminal		1	5 A	for 1 min	for 1 min	for 1 min		Approx. 62 g
PYFZ-14	1 '	14			1	6 A	2,250 VAC		2,250 VAC		Approx. 50 g
PYFZ-14-E	1	'	Screw terminal	-55 to 70°C	1	07.	for 1 min	for 1 min	for 1 min		Approx. 50 g
PYF14T	_ '					3 A	2,000 VAC for 1 min	2,000 VAC for 1 min	2,000 VAC for 1 min		Approx. 53 g
PY08	ſ <u></u>				1						Approx. 8 g
PY08-Y1	1 '	1	Solder terminals		1			'			Approx. 9 g
PY08-Y3	1 '	1			1			•			Approx. 9 g
PY08QN	1 '	1	Wrapping terminals		1			'			Approx. 12 g
PY08QN-Y1	1 '	8	(Terminal length:		1	7 A	1,500 VAC	1,500 VAC	1,500 VAC	100 MΩ	Approx. 13 g
PY08QN-Y3	1		25 mm)		1	''	for 1 min	for 1 min	for 1 min	min.	Approx. 13 g
PY08QN2	1 '		Wrapping terminals		5% to						Approx. 11 g
PY08QN2-Y1	1 '	1	(Terminal length:		85%			'			Approx. 12 g
PY08QN2-Y3	4	1	20 mm)	_	1			'			Approx. 12 g
PY08-02	4		PCB terminals	_	-	<u> </u>					Approx. 7 g
PY11	4 '	1	Solder terminals		1			'			Approx. 9 g
PY11-Y1	4			4	-						Approx. 10 g
PY11QN	4 '		Wrapping terminals	7000	1		1,500 VAC	1,500 VAC	1,500 VAC	100 MΩ	Approx. 13 (
PY11QN-Y1	Back	11	(Terminal length: 25 mm)	-55 to 70°C	ı	5 A	for 1 min	for 1 min	for 1 min	min.	Approx. 14
PY11QN2	<b>4</b> '	1	Wrapping terminals (Terminal length: 20 mm)		1			'			Approx. 12
PY11QN2-Y1	<b>4</b> '	1	, ,	4	ı						Approx. 8 g
PY11-02	1		PCB terminals	4	1	<del> </del>					Approx. 8 g
PY14 PY14-Y1	1 '		Solder terminals		-						Approx. 10
PY14-Y1 PY14-Y3	1 '	1	Solder terminals		1			•			Approx. 11 Approx. 11
PY14-Y3 PY14QN	1 '		<u> </u>	+	1						Approx. 11 Approx. 14
PY14QN PY14QN-Y1	1 '	1	Wrapping terminals (Terminal length:		1		1,500 VAC	1,500 VAC	1,500 VAC	100 ΜΩ	Approx. 14 Approx. 15
PY14QN-Y1 PY14QN-Y3	1 '	14	25 mm)		-	3 A	1,500 VAC for 1 min	1,500 VAC for 1 min	1,500 VAC for 1 min	100 MΩ min.	Approx. 15
PY14QN-Y3 PY14QN2	1 '			†	-						Approx. 13
PY14QN2-Y1	1 '		Wrapping terminals (Terminal length:		-						Approx. 14
	1 '	1	(Terminal length: 20 mm)		ı						Approx. 12
PY14QN2-Y3	-			1	1	1			1		Αμριο

<sup>\*1.</sup> For 500 VDC applied to the same location as for dielectric strength measurement.

The carrying current of 10 A is for an ambient temperature of 55°C or below. At an ambient temperature of 70°C, the value is 7 A.
 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.
 The dielectric strength and insulation resistance values in the above table are for a single socket.

## **Socket Accessories**

## ● For Front-connecting Sockets

#### **Short Bars**

Application	Applicable sockets	Model	Maximum carry current	Ambient operating temperature	Ambient operating humidity	
		PYDN-7.75-020□				
	PYF-08-PU(-L)	PYDN-7.75-030□	20 A	-40 to 70°C	5% to 85%	
	PYF-14-PU(-L)	PYDN-7.75-040□	20 A	-40 to 70 C	370 10 6370	
		PYDN-7.75-200□				
Bridging contact terminals	PYFZ-08	PYD-025B□		-40 to 70°C (with no icing or condensation)		
(common)		PYD-085B□	20 A (However, 18 A when 70°C)		45% to 85% (with no icing or condensation)	
	PYFZ-14	PYD-026B□				
		PYD-086B□				
		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		
PYF14S	5 A, 250 V	5 A, 250 V 3211 07	
PYFZ-08(-E)	10 A, 250 V	021107	CSA C22.2 No14
PYFZ-14(-E)	6 A, 250 V		
PY□ PYF□A	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.

## ●UL certification (File No. E87929)

Model	Ratings	Standard number	Category	Listed/Recognized
PYF-08-PU	10 A, 250 V			
PYF-14-PU	6 A, 250 V*			
PYF08S PYF14S	10 A, 250 V	111 500	SWIV / 2	Recognition
PYFZ-08(-E)	10 A, 250 V	UL508	SWIV2	Recognition
PYFZ-14(-E)	6 A, 250 V			
PY□ PYF□A	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	K50327595	
<b>PYFZ-08(-E)</b> 10 A, 250 V		EN 0 1904	DE040E220	
PYFZ-14(-E)	6 A, 250 V		R50405329	

 $<sup>^{\</sup>star}$ 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

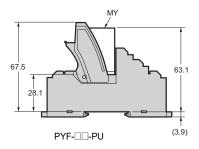
Model	Standard number	Certification No.	
PYF08S	VDE0627 (EN61984)	40015509	
PYF14	VDE0027 (EN01904)	40015509	

**Dimensions** (Unit: mm)

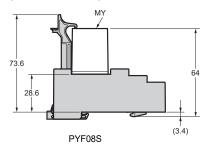
## **Height with Socket**

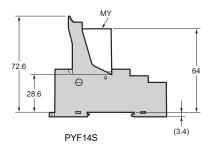
## Front-connecting Sockets

 Push-In Plus Terminal (PYF-□-PU)

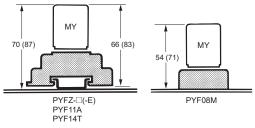


· Screwless terminal (PYF08S, PYF14S)





 Screw terminal (PYFZ-□(-E), PYF11A, PYF14T, PYF08M)



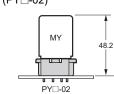
- Note: 1. The PYF11A can be mounted on a track or with screws.
  - The heights given in parentheses are the measurements for 53-mm-high Relays.
     Use the PYC-P Hold-down Clip for the PYF08M.

## Back-connecting Sockets

• Solder terminals/wrapping terminals (PY□)

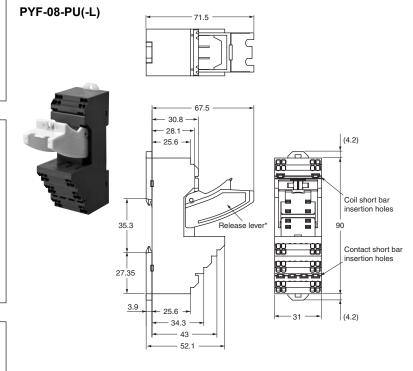


 PCB terminals (PY□-02)



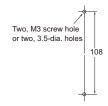
## **Front-connecting Sockets**

## ●Push-In Plus Terminal



Terminal Arrangement/Internal Connection Diagram

 Mounting Hole Dimensions

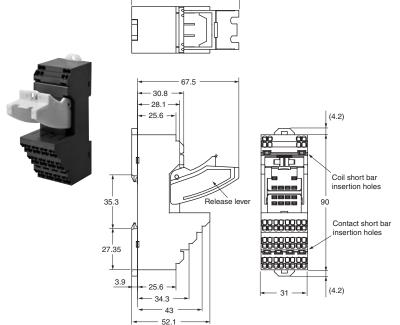


Note: Pull out the hooks to mount the Socket with screws.

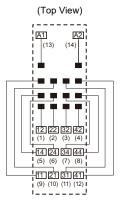
- Note: 1. The numbers in parentheses are traditionally used terminal numbers.
  - Insert the short bar into only the A1 or A2 side.
  - 3. Only the No. 11 and No. 41 terminals function as bridging contact terminals. The two insertion holes between the terminals are false terminals to allow for installation without having to fold out the short bar pins.

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



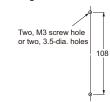


Terminal Arrangement/Internal Connection Diagram



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

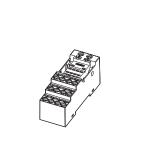
Mounting Hole Dimensions



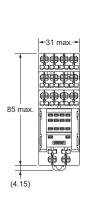
Note: Pull out the hooks to mount the Socket with screws.

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

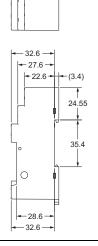
#### Screwless terminal PYF08S <del>---</del>38.2 max.-Terminal Arrangement/Internal Connection Diagram −36.5 max.<del>→</del> (41) (11) 8 5 32.6 (44) (14) - 27.6 -4 1 23.2 max <del>-</del>22.6--(3.4) (42) 24.5 85 max. 35.4 14 13 (Top View) Note: The number shown in



PYF14S



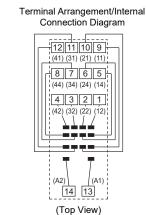
(5)



-28.6

36.5 max.→

32.6



parentheses is the DIN standard.

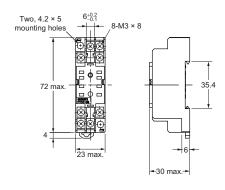
**Note:** The number shown in parentheses is the DIN standard.

## **Front-connecting Sockets**

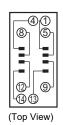
## Screw terminal

## PYFZ-08

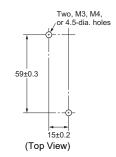




Terminal Arrangement/ Internal Connection Diagram



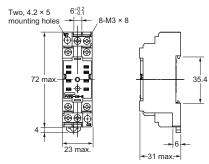
Mounting Hole Dimensions



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

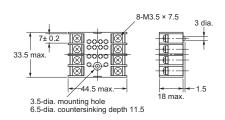
# PYFZ-08-E (Finger-protection structure)





PYF08M



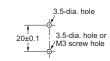


Terminal Arrangement/Internal Connection Diagram



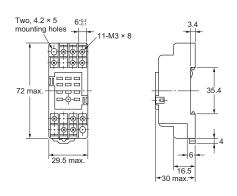
(Top View)

Mounting Hole Dimensions

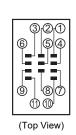


## PYF11A





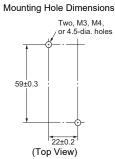
Terminal Arrangement/Internal Connection Diagram



(Top View)

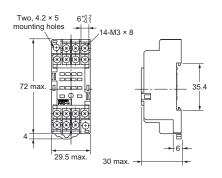
Note: Track mounting is also

possible.

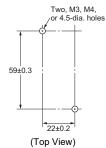


#### PYFZ-14





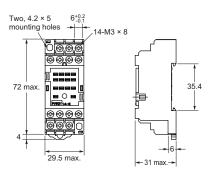
Mounting Hole Dimensions



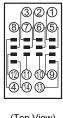
**Note:** Track mounting is also possible.

PYFZ-14-E (Finger-protection structure)





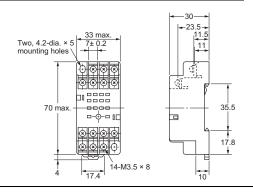
Terminal Arrangement/Internal Connection Diagram



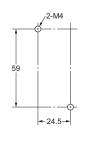
(Top View)

PYF14T



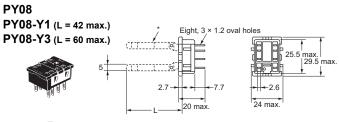


Mounting Hole Dimensions



## **Back-connecting Socket**

#### Solder terminals



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

# Terminal Arrangement/Internal Connection Diagram



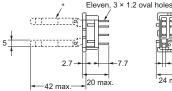
(Bottom View)

#### Mounting Hole Dimensions







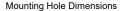


\*PY11-Y1 includes the potion indicated by broken line

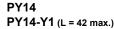
## Terminal Arrangement/Internal Connection Diagram

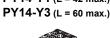


(Bottom View)











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

#### Terminal Arrangement/Internal Connection Diagram



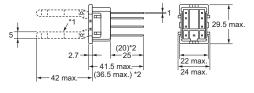
Mounting Hole Dimensions



## Wrapping terminals

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





24 max

24 max

25.5 max. | |29.5 max.

Fourteen, 3 × 1.2 oval holes

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

#### Terminal Arrangement/Internal Connection Diagram

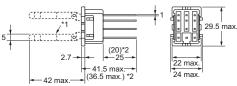


Mounting Hole Dimensions



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



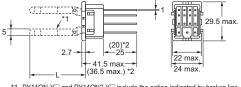
(Bottom View)

Mounting Hole Dimensions



PY14QN/PY14QN2 PY14QN-Y1 (L = 42 max.) **PY14QN2-Y1** (L = 42 max.) 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



Mounting Hole Dimensions

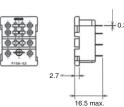


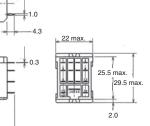
## ●PCB terminals

#### PY08-02

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





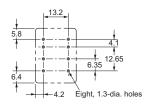


# Terminal Arrangement/Internal Connection Diagram



(Bottom View)

#### Mounting Hole and PCB Dimensions

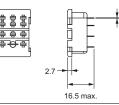


#### PY11-02

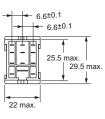
• This is not a flux-tight structure. We recommend manual soldering for this product.









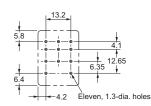


Terminal Arrangement/Internal Connection Diagram



(Bottom View)

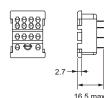
Mounting Hole and PCB Dimensions



#### PY14-02

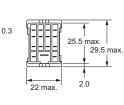
• This is not a flux-tight structure. We recommend manual soldering for this product.





• PYC-E1



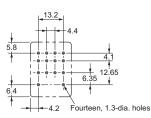


Terminal Arrangement/Internal Connection Diagram



(Bottom View)

Mounting Hole and PCB Dimensions

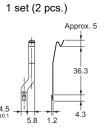


## **Socket Accessories**

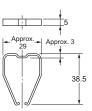
## ●Hold-down Clip

• PYC-A1

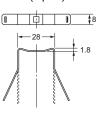
1 set (2 pcs.)



PYC-P



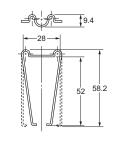
• PYC-S 1 set (2 pcs.)



 Y92H-3 1 set (2 pcs.)



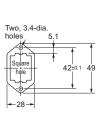
• PYC-1

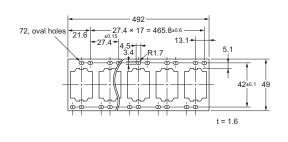


## Socket Mounting Plates

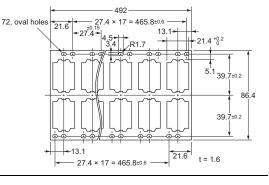
4.5

PYP-1 **PYP-18** 





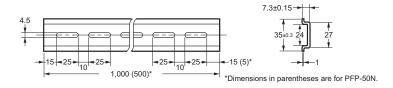
#### **PYP-36**



## Accessories for DIN Track Mounting

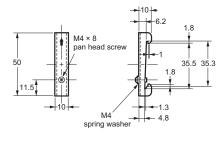
DIN Tracks PFP-100N PFP-50N





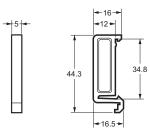
# End Plate PFP-M





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

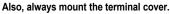
Used to warn of the risk of electric shock under specific conditions.



 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.



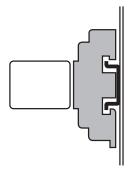
## **Precautions for Correct Use**

#### 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.

Mod	lel	Number of poles	Operating Coil ratings	Contact ratings
M	<b>′</b>	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 and CR elements built into the Relay are designed to absorb the reverse voltage from the Relay coil.

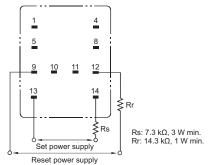
- These components do not absorb external surges such as those from other devices in the circuit or from lightning.
  - The diode and CR element will be destroyed if a large external surge voltage is applied.
  - If there is the possibility of large voltage surges that could be applied to the diode or element from an external source, take any necessary surge absorption measures.
- (2) Relays with a built-in diode have coil polarity. If the relay is connected with reverse polarity, the diode may be damaged when voltage is applied to the coil. Make sure that the polarity is correct.

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

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

## •Hermetically Sealed Relays (MYH)

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

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

#### Solution

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

#### **Application Environments**

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

#### Solution

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

## **Optional Sockets (Order Separately)**

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

## **Front-connecting Sockets**

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

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

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

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

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

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

- Use the following tightening torque for screws during wiring.
  - Model
     Tightening torque

     PYFZ-08
     PYFZ-14

     PYF11A
     0.78 to 1.18 N·m

     PYF14T
     PYFZ-08-E

     PYFZ-08-E
     0.59 to 0.88 N·m

     PYFZ-14-E
     \* Use a No. 1 screwdriver.
- Use the following wire diameters as a guide for wiring. (Select the appropriate wire diameter for the current used.)

Model	Recommend	Recommended wire diameter (mm²)		
PYFZ-08 PYFZ-14	Stranded wire	0.75 to 2.5 mm <sup>2</sup> AWG 18 to 14		
PYF11A PYF14T	Solid wire	0.75 to 1.5 mm <sup>2</sup> AWG 18 to 16		
PYFZ-08-E	Stranded wire	0.75 to 2.5 mm <sup>2</sup> AWG 18 to 14		
PYFZ-14-E	Solid wire	0.75 to 1.5 mm <sup>2</sup> AWG 18 to 16		

## **Back-connecting Socket**

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

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

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## **OMRON Corporation** Industrial Automation Company

Kyoto, JAPAN Contact: www.ia.omron.com

Regional Headquarters

OMRON EUROPE B.V.

Wegalaan 67-69, 2132 JD Hoofddorp The Netherlands Tel: (31) 2356-81-300 Fax: (31) 2356-81-388

OMRON ASIA PACIFIC PTE. LTD.

438B Alexandra Road, #08-01/02 Alexandra Technopark, Singapore 119968 Tel: (65) 6835-3011 Fax: (65) 6835-3011

OMRON ELECTRONICS LLC

2895 Greenspoint Parkway, Suite 200 Hoffman Estates, IL 60169 U.S.A. Tel: (1) 847-843-7900 Fax: (1) 847-843-7787

OMRON (CHINA) CO., LTD. Room 2211, Bank of China Tower, 200 Yin Cheng Zhong Road, PuDong New Area, Shanghai, 200120, China Tel: (86) 21-6023-0333 Fax: (86) 21-5037-2388 **Authorized Distributor:** 

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