Miniature Power Relays

CSM_MY_DS_E_9_2

New Latching Levers for Circuit Checking Added to Our Best-selling MY General-purpose Relays

- Reduces wiring work by 60% when combined with the PYF-PU Push-In Plus Socket (according to actual OMRON measurements).
- Now lead-free to protect the environment.
- VDE certification (Germany).
- Different colors of coil tape for AC and DC models to more easily distinguish them.
- MY(S) models with latching levers added for easier circuit checking.



Refer to the Common Relay Precautions.







Model Number Structure

	Relays with F	Plug-in Terminals	PCB terminals	Case-surface mounting		
Classification	Number of poles	With operation indicator	Without operation indicator	With latching lever		
	2	MY2N*	MY2*	MY2IN(S)*	MY2-02	MY2F
Standard models (compliant with	Bifurcated	MY2ZN	MY2Z			
Electrical Appliances and	3	MY3N	MY3		MY3-02	MY3F
Material Safety Act)	4	MY4N*	MY4*	MY4IN(S)*	MY4-02	MY4F
	Bifurcated	MY4ZN*	MY4Z*	MY4ZIN(S)*	MY4Z-02	MY4ZF
	2	MY2N-D2*	MY2-D*	MY2IN-D2(S)*		
Models with diode for coil surge	Bifurcated	MY2ZN-D2	MY2Z-D			
absorption (DC coil specification only)	3	MY3N-D2	MY3-D			
<i>"</i> →⊢	4	MY4N-D2*	MY4-D*	MY4IN-D2(S)*		
	Bifurcated	MY4ZN-D2*	MY4Z-D*	MY4ZIN-D2(S)*		
Models with CR circuit for coil	2	MY2N-CR*	MY2-CR*			
surge absorption (AC coil specification only)	4	MY4N-CR*	MY4-CR*	MY4IN-CR(S)*		
· H-₩-	Bifurcated	MY4ZN-CR*	MY4Z-CR*	MY4ZIN-CR(S)*		
Models with high contact reliability	4 Bifurcated		MY4Z-CBG			
Plastic sealed models	4	MYQ4N	MYQ4		MYQ4-02	
Fiasuc Sealed Illodeis	Bifurcated		MYQ4Z		MYQ4Z-02	
Latching models (coil latching)	2		MY2K		MY2K-02	
Hermetic models	4		мү4н		MY4H-0	
Hermede models	Bifurcated		MY4ZH		MY4ZH-0	

The models in this table are UL/CSA certified. This is indicated with a certification mark on the products.

(This does not include models with high contact reliability or plastic sealed, latching, or hermetically sealed models.)

Models with an asterisk (*) next to them are new versions.

The standard models with plug-in terminals, models with coil surge absorption diodes, and models with coil surge absorption CR circuits were used in combination with the PYF□A-E, PYF□-S and PYF-□-PU for the EC Declaration of Conformity. These products display the CE Marking.

Products cannot be manufactured for the cells with a diagonal line. Ask your OMRON representative for details on manufacturing products for cells containing "--" in the above table. in the above table.

Refer to Connection Socket and Mounting Bracket Selection Table on page 33 in Options for information on the possible combinations of Models with Plug-in Terminals and Sockets.

Miniature Power Relays: MY2







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

Ordering Information

When your order, specify the rated voltage.

Classification	Model	Rated voltage (V)				
Classification	Wodei	Standard products	Made-to-order items			
Standard models	MY2	12, 24, 100/110, or 200/220 VAC	110/120 or 220/240 VAC			
Standard models	IVI Y Z	12, 24, 48, or 100/110 VDC				
Models with built-in operation indicators	MY2N	12, 24, 100/110, 110/120, 200/220, or 220/240 VAC				
Models with built-in operation indicators	IVI Y ZIV	12, 24, 48, or 100/110 VDC				
Models with built-in diodes	MY2-D	12, 24, or 100/110 VDC	48 VDC			
Models with built-in diodes and operation indicators	MY2N-D2	12, 24, 48, or 100/110 VDC				
Models with built-in CR circuits	MY2-CR	100/110 or 200/220 VAC	110/120 or 220/240 VAC			
Models with built-in CR circuits and operation indicators	MY2N-CR	100/110 or 200/220 VAC	110/120 or 220/240 VAC			

Note: 1. Ask your OMRON representative for details on the time required to deliver made-to-order products.

- 2. Ask your OMRON representative for details on product specifications and the ability to manufacture products with voltages other than the above coil specifications.
- 3. The above models and specifications are new versions in the MY Series.
- 4. Except for MY2(N)-CR Relays with the above voltage specifications, all Relays have a height of 53 mm or less. If Mounting Brackets are required, refer to page 33 for selection information.

Ratings and Specifications

Ratings

Operating Coils (Standard Models)

	Item Rated current (mA)		Coil resistance	Coil induc	ctance (H)	Must-	Must-	Maximum	Power consumption	
Rate volta	ed age (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				Approx. 0.9 to 1.3 (at 60 Hz)
AC	100/110	11.7/12.9	10/11	3,750	14.54	24.6		30% min. *2	110% of rated voltage	
AC	110/120	9.9/10.8	8.4/9.2	4,430	19.2	32.1	80% max. *1	00 /6 Hilli.		
	200/220	6.2/6.8	5.3/5.8	12,950	54.75	94.07				
	220/240	4.8/5.3	4.2/4.6	18,790	83.5	136.4				
	12	72	2.7	165	0.73	1.37				
DC	24	36	5.3	662	3.2	5.72		10% min. *2		Approx. 0.9
DC	48	17	'.6	2,725	10.6	21.0		10% mm. **		Approx. 0.9
	100/110	8.7/	9.6	11,440	45.6	86.2	1			

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

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

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

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% max.

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

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

specified value.

Contact Ratings

Contact natings	_				
Load Item	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			
Rated carry current	5 A				
Maximum contact voltage	250 VAC, 125 VDC				
Maximum contact current	5 A				
Contact configuration	DPDT				
Contact structure	Single				
Contact materials	Ag				

Type Item	Standard models	Model with built-in operation indicator, diode, or CR circuit
Ambient operating temperature*1	−55 to 70°C	-55 to 60°C*2
Ambient operating humidity	5% to 85%	

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

Item	Туре	Standard models	Models with built- in operation indicators	Models with built-in CR circuits	Models with built-in diodes	Model with built-in operation indicator and diode	Model with built-in operation indicator and CR circuit	
Contact res	istance*1	50 mΩ max.						
Operation ti	me*2	20 ms max.						
Release tim	e*2	20 ms max.						
Maximum	Mechanical	18,000 operation	ons/h					
operating frequency	Rated load	1,800 operation	ns/h					
Insulation re	esistance*3	100 M Ω min.						
	Between coil and contacts							
Dielectric strength	Between contacts of different polarity	2,000 VAC at 50/60 Hz for 1 min.						
J	Between contacts of the same polarity	1,000 VAC at 50/60 Hz for 1 min.						
Vibration	Destruction	10 to 55 to 10 h	dz, 0.5-mm single amp	olitude (1.0-mm d	ouble amplitude)			
resistance	Malfunction	10 to 55 to 10 h	tz, 0.5-mm single amp	olitude (1.0-mm d	ouble amplitude)	1		
Shock	Destruction	1,000 m/s ²						
resistance	Malfunction	200 m/s ²						
Endurance	Mechanical	DC: 100,000,00	AC: 50,000,000 operations min. DC: 100,000,000 operations min. (switching frequency: 18,000 operations/h)					
	Electrical*4	500,000 operat (rated load, swi	ions min. tching frequency: 1,80	00 operations/h)				

Item Number of poles	2 poles	l
Failure rate P value (reference value)*5	1 mA at 5 VDC	
Weight	Approx. 35 g	1

Note: These are initial values.

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

 *2. Measurement conditions: With rated operating power applied.

 Ambient temperature condition: 23° C

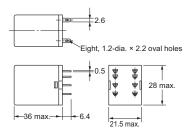
 *3. Measurement conditions: For 500 VDC applied to the same location as for dielectric strength

- *4. Ambient temperature condition: 23°C *5. This value was measured at a switching frequency of 120 operations per minute.

Dimensions (Unit: mm)

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



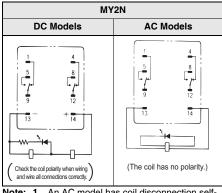


Terminal Arrangement/Internal Connections (Bottom View) Standard Models



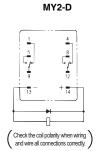
(The coil has no polarity.)

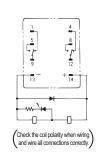
MY2N-D2

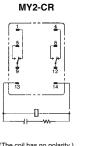


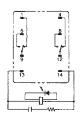
- Note: 1. An AC model has coil disconnection self-

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









MY2N-CR

(The coil has no polarity.)

(The coil has no polarity.)

Miniature Power Relays: MY2Z



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

Ordering Information When your order, specify the rated voltage.

Classification	Model	Rated voltage (V)			
Classification	Wodei	Standard products	Made-to-order items		
Standard models	MY2Z	100/110 or 200/220 VAC	12, 24, 100/120, or 200/240 VAC		
Standard models	IVI 1 ZZ	12 or 24 VDC	48 or 100/110 VDC		
Madele with built in eneration indicators	MY2ZN	100/110 or 200/220 VAC	12, 24, 100/120, or 200/240 VAC		
Models with built-in operation indicators	IVI Y ZZIN	24 VDC	12, 48, or 100/110 VDC		
Models with built-in diodes	MY2Z-D	24 VDC	12 or 100/110 VDC		
Models with built-in diodes and operation indicators	MY2ZN-D2	24 or 100/110 VDC	12 VDC		
Models with built-in CR circuits	MY2Z-CR		100/110 or 200/220 VAC		
Models with built-in CR circuits and operation indicators	MY2ZN-CR	100/110 VAC	200/220 VAC		

Note: 1. Ask your OMRON representative for details on the time required to deliver made-to-order products.

2. Ask your OMRON representative for details on product specifications and the ability to manufacture products with voltages other than the above coil specifications.

Ratings and Specifications

Ratings

Operating Coil (Standard Models)

	Item			Cail resistance	Coil induc	tance (H)	Must-	Must-	Maximum	Dawer consumption
Rate volta	d ige (V)	50 Hz	60 Hz	Coil resistance (Ω)	Armature OFF	Armature ON	operate voltage (V)	release voltage (V)	voltage (V)	Power consumption (VA, W)
	12	106.5	91	46	0.17	0.33	- 80% max.*1	30% min.*2		
	24	53.8	46	180	0.69	1.3			110% of rated voltage	Approx. 0.9 to 1.3 (at 60 Hz)
AC	100/110	11.7/12.9	11.7/12.9 10/11	3,750	14.54	24.6				
AC	110/120	9.9/10.8	8.4/9.2	4,430	19.2	32.1				
	200/220	6.2/6.8	5.3/5.8	12,950	54.75	94.07				
	220/240	4.8/5.3	4.2/4.6	18,790	83.5	136.4				
	12	75	;	160	0.73	1.37				
DC	24	36.	9	650	3.2	5.72		10% min.*2		Approx 0.0
DC	48	18.	5	2,600	10.6	21.0		10% Min.**		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 the AC rated current and ±15% for the DC coil resistance.

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

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

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% max.

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 specified value.

Contact Ratings

Contact Hattings					
Load Item	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			
Rated carry current	5 A				
Maximum contact voltage	250 VAC, 125 VDC				
Maximum contact current	5 A				
Contact configuration	DPDT				
Contact structure	Bifurcated				
Contact materials	Au plating + Ag				

Type Item	Standard models	Model with built-in operation indicator, diode, or CR circuit
Ambient operating temperature*1	–55 to 70° C	-55 to 60° C*2
Ambient operating humidity	5% to 85%	

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

Item	Туре	Standard models	Models with built- in operation indicators	Models with built-in diodes	Model with built-in operation indicator and diode	Models with built-in CR circuits	Models with built-in CR circuits and operation indicators			
Contact res	istance*1	50 m Ω max.								
Operation ti	me*2	20 ms max.								
Release tim	e*2	20 ms max.								
Maximum	Mechanical	18,000 opera	tions/h							
operating frequency	Rated load	1,800 operation	1,800 operations/h							
Insulation re	esistance*3	100 M Ω min.								
	Between coil and contacts									
Dielectric strength	Between contacts of different polarity	2,000 VAC at 50/60 Hz for 1 min.								
J	Between contacts of the same polarity	1,000 VAC at 50/60 Hz for 1 min.								
Vibration	Destruction	10 to 55 to 10	Hz, 0.5-mm single ar	nplitude (1.0-mm	double amplitude)					
resistance	Malfunction	10 to 55 to 10	5 to 10 Hz, 0.5-mm single amplitude (1.0-mm double amplitude)							
Shock	Destruction	1,000 m/s ²								
resistance Malfunction 200 m/s ²										
Endurance	Mechanical	50,000,000 o	50,000,000 operations min. (operating frequency: 18,000 operations/h)							
Lituurance	Electrical*4	200,000 oper	ations min. (rated load	l, switching frequ	ency: 1,800 operations/h)	1				

Item Number of poles	2 poles		
Failure rate P value (reference value)*5	100 μA at 1 VDC		
Weight	Approx. 35 g		

Note: These are initial values.

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

 *2. Measurement conditions: With rated operating power applied.

 Ambient temperature condition: 23° C

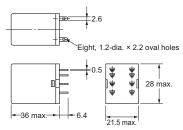
 *3. Measurement conditions: For 500 VDC applied to the same location as for dielectric strength measurement.

 *4. Ambient temperature condition: 23° C
- *5. This value was measured at a switching frequency of 120 operations per minute.

Dimensions (Unit: mm)

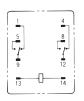
MY2Z, MY2ZN, MY2Z-D, MY2ZN-D2, MY2Z-CR, and MY2ZN-CR



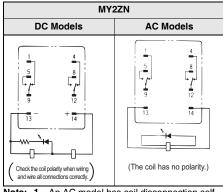


* For the MY2Z-CR and MY2ZN-CR, this dimension is 53 mm max.

Terminal Arrangement/ Internal Connections (Bottom View) Standard Models

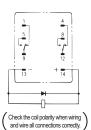


(The coil has no polarity.)

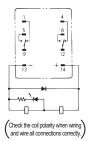


- Note: 1. An AC model has coil disconnection self
 - diagnosis.
 For the DC models, check the coil polarity when
 - wiring and wire all connections correctly. The indicator is red for AC and green for DC. The operation indicator indicates the
 - energization of the coil and does not represent contact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

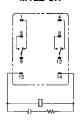
MY2Z-D



MY2ZN-D2



MY2Z-CR



(The coil has no polarity.)



MY2ZN-CR

(The coil has no polarity.)

Miniature Power Relays: MY3



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

Ordering Information When your order, specify the rated voltage.

Classification	Model	Rated voltage (V)			
Classification	Model	Standard products	Made-to-order items		
Standard models	МҮЗ	24, 100/110, 200/220, or 220/240 VAC	12, or 110/120 VAC		
Standard models	IVITS	12, 24, or 100/110 VDC	48 VDC		
Madela with built in an aution indicators	музи	24, 100/110, 200/220, or 220/240 VAC	12, or 110/120 VAC		
Models with built-in operation indicators		24 VDC	12, 48, or 100/110 VDC		
Models with built-in diodes	МҮ3-D	24 VDC	12 or 100/110 VDC		
Models with built-in diodes and operation indicators	MY3N-D2	24 VDC	12 or 100/110 VDC		

Note: 1. Ask your OMRON representative for details on the time required to deliver made-to-order products.
2. Ask your OMRON representative for details on product specifications and the ability to manufacture products with voltages other than the above coil

Ratings and Specifications

Ratings

Operating Coil (Standard Models)

	Item			Cail resistance	Coil induc	Coil inductance (H)		Must-	Maximum	D
Rate volta	d ige (V)	50 Hz	60 Hz	Coil resistance (Ω)	Armature OFF	Armature ON	operate voltage (V)	release voltage (V)	voltage (V)	Power consumption (VA, W)
	12	106.5	91	46	0.17	0.33				
	24	53.8	46	180	0.69	1.3				
AC	100/110	11.7/12.9	10/11	3,750	14.54	24.6	80% max.*1	30% min.*2	110% of rated voltage	Approx. 0.9 to 1.3 (at 60 Hz)
AC	110/120	9.9/10.8	8.4/9.2	4,430	19.2	32.1				
	200/220	6.2/6.8	5.3/5.8	12,950	54.75	94.07				
	220/240	4.8/5.3	4.2/4.6	18,790	83.5	136.4	00 % IIIax. · ·			
	12	75	,	160	0.73	1.37				
DC	24	36.	9	650	3 .2	5.72		10% min.*2		
DC	48	18.	5	2,600	10.6	21.0		10% Min.**		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 the AC rated current and ±15% for the DC coil resistance.

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

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

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% max.

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 specified value.

Contact Ratings

Load Item	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
Rated carry current	5 A	
Maximum contact voltage	250 VAC, 125 VDC	;
Maximum contact current	5 A	
Contact configuration	3PDT	
Contact structure	Single	
Contact materials	Ag	<u>-</u>

Type Item	Standard models	Operation indicator and diode
Ambient operating temperature*1	–55 to 70° C	-55 to 60° C*2
Ambient operating humidity	5% to 85%	

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

Item	Туре	Standard models	Models with built-in operation indicators	Models with built-in diodes	Model with built-in operation indicator and diode				
Contact res	istance*1	50 m Ω max.							
Operation ti	me*2	20 ms max.							
Release tim	e*2	20 ms max.							
Maximum	Mechanical	18,000 operations/h							
operating frequency	Rated load	1,800 operations/h							
Insulation re	esistance*3	100 MΩ min.							
	Between coil and contacts								
Dielectric strength	Between contacts of different polarity	2,000 VAC at 50/60 Hz for 1 min.							
J. J	Between contacts of the same polarity	1,000 VAC at 50/60 Hz for 1 min.							
Vibration	Destruction	10 to 55 to 10 Hz, 0.5-mm single amplitude (1.0-mm double amplitude)							
resistance	Malfunction	10 to 55 to 10 Hz, 0.5-mm single amplitude (1.0-mm double amplitude)							
Shock	Destruction	1,000 m/s ²							
resistance	Malfunction	200 m/s ²							
Endurance	Mechanical	DC: 100,000,000 operat	AC: 50,000,000 operations min. DC: 100,000,000 operations min. (switching frequency: 18,000 operations/h)						
	Electrical*4	500,000 operations min.	(rated load, switching frequence	y: 1,800 operations/h)					

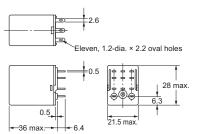
Item Number of poles	3 poles		
Failure rate P value (reference value)*5	1 mA at 5 VDC		
Weight	Approx. 35 g		

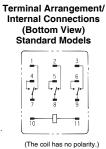
Note: These are initial values.

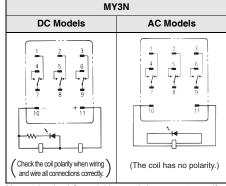
Dimensions (Unit: mm)

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



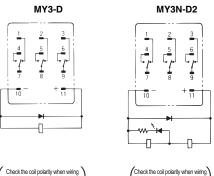






- Note: 1. An AC model has coil disconnection self-

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



Check the coil polarity when wiring and wire all connections correctly.

Check the coil polarity when wiring and wire all connections correctly.

Miniature Power Relays: MY4







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

Ordering Information When your order, specify the rated voltage.

Classification	Model	Rated voltage (V)			
Classification	Wodei	Standard products	Made-to-order items		
Standard models	MY4	24, 100/110, or 200/220 VAC	12, 110/120, or 220/240 VAC		
Standard models	IVI T 4	12, 24, 48, or 100/110 VDC			
Madela with built in aparation indicators	MY4N	12, 24, 100/110, 110/120, 200/220, or 220/240 VAC			
Models with built-in operation indicators	IVI Y 4IN	12, 24, 48, or 100/110 VDC			
Models with built-in diodes	MY4-D	12, 24, 48, or 100/110 VDC			
Models with built-in diodes and operation indicators	MY4N-D2	12, 24, or 100/110 VDC	48 VDC		
Models with built-in CR circuits	MY4-CR	100/110 or 200/220 VAC	110/120 or 220/240 VAC		
Models with built-in CR circuits and operation indicators	MY4N-CR	100/110, 110/120, or 200/220 VAC	220/240 VAC		

Note: 1. Ask your OMRON representative for details on the time required to deliver made-to-order products.
2. Ask your OMRON representative for details on product specifications and the ability to manufacture products with voltages other than the above coil

as your own of representative for details of product specifications and all delays in additional specifications.
The above models and specifications are new versions in the MY Series.
Except for MY4(N)-CR Relays with the above voltage specifications, all Relays have a height of 53 mm or less. If Mounting Brackets are required, refer to page 33 for selection information.

Ratings and Specifications

Ratings

Operating Coil (Standard Models)

	Item Rated current (r		ent (mA)	Coil resistance	Coil induc	ctance (H)	Must-	Must-	Maximum	Power consumption
Rate volta	d ige (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	3,750 14.54 24.6	30% min.*2	in #2	Approx. 0.9 to 1.3		
AC	110/120	9.9/10.8	8.4/9.2	4,430	19.2	32.1	80% max.*1	30 % Hilli.	110% of rated voltage	(at 60 Hz)
	200/220	6.2/6.8	5.3/5.8	12,950	54.75	94.07				
	220/240	4.8/5.3	4.2/4.6	18,790	83.5	136.4	00% IIIax.			
	12	72.	7	165	0.73	1.37				
DC	24	36.	3	662	3.2	5.72		10% min.*2		A 0.0
ьс	48	17.	6	2,725	10.6	21.0	10% min.*		10% Min.*-	Approx. 0.9
	100/110	8.7/9	9.6	11,440	45.6	86.2				

The rated current and coil resistance are measured at a coil temperature of 23° C with tolerances of +15%/-20% for the AC rated current and $\pm15\%$ for the DC coil resistance.

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

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

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

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

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

oomaot maningo								
Load Item	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 contact voltage	250 VAC, 125 VDC							
Maximum contact current	3 A							
Contact configuration	4PDT							
Contact structure	Single							
Contact materials	Au cladding + Ag a	lloy						

Type Item	Standard models	Model with built-in operation indicator, diode, or CR circuit
Ambient operating temperature*1	–55 to 70° C	-55 to 60° C*2
Ambient operating humidity	5% to 85%	

*1. With no icing or condensation.

*2. This limitation is due to the diode junction temperature and elements used.

Item	Туре	Standard models	Models with built- in operation indicators	Models with built-in CR circuits	Models with built-in diodes	Model with built-in operation indicator and diode	Model with built-in operation indicator and CR circuit		
Contact res	istance*1	50 m Ω max.	50 mΩ max.						
Operation ti	me*2	20 ms max.							
Release tim	e*2	20 ms max.							
Maximum	Mechanical	18,000 opera	ations/h						
operating frequency	Rated load	1,800 operat	ions/h						
Insulation re	esistance*3	100 M Ω min.							
	Between coil and contacts								
Dielectric strength	Between contacts of different polarity	2,000 VAC at 50/60 Hz for 1 min.							
J	Between contacts of the same polarity	1,000 VAC at 50/60 Hz for 1 min.							
Vibration	Destruction	10 to 55 to 10	0 Hz, 0.5-mm single a	mplitude (1.0-mr	n double amplitu	de)			
resistance	Malfunction	10 to 55 to 10 Hz, 0.5-mm single amplitude (1.0-mm double amplitude)							
Shock	Destruction	1,000 m/s ²							
resistance	Malfunction	200 m/s ²							
Endurance	Mechanical	DC: 100,000	AC: 50,000,000 operations min. DC: 100,000,000 operations min. (switching frequency:: 18,000 operations/h)						
	Electrical*4	200,000 oper (rated load, s	rations min. witching frequency: 1	,800 operations/h	٦)				

ItemNumber of poles	4 poles		
Failure rate P value (reference value)*5	1 mA at 1 VDC	*	
Weight	Approx. 35 g	*	

Note: These are initial values.

Engineering Data

List of Actual Load Endurance (Refer to Engineering Data on page 20.)

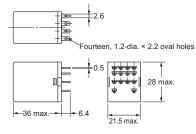
Model	Load type	Conditions	Switching frequency	Electrical durability (operations min.)
	AC magnetic switch	35 VA at 100 VAC Making current: 4 A, Steady-state current: 0.35 A	ON: 1s OFF: 3s	500,000
MY4 DC24V	DC colonaid	40 W at 24 VDC Steady-state current: 1.6 A, L/R = 10 ms Surge-absorbing diode connected	ON: 0.5s OFF: 1.5s	500,000
	DC solenoid	20 W at 24 VDC Steady-state current: 0.8 A, L/R = 10 ms Surge-absorbing diode connected	ON: 0.5s OFF: 1.5s	1,000,000

Dimensions (Unit: mm)

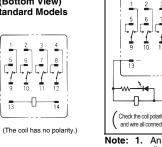
MY4, MY4N, MY4-D, MY4N-D2, MY4-CR, and MY4N-CR

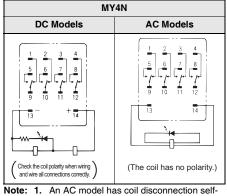
Terminal Arrangement/ Internal Connections (Bottom View) Standard Models





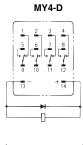




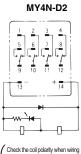


- diagnosis.

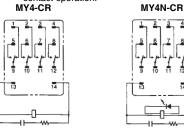
 For the DC models, check the coil polarity when wiring and wire all connections correctly. The indicator is red for AC and green for DC. The operation indicator indicates the energization of the coil and does contact operation.







Check the coil polarity when wiring and wire all connections correctly.



(The coil has no polarity.)

(The coil has no polarity.)

Miniature Power Relays: MY4Z







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

Ordering Information When your order, specify the rated voltage.

Classification	Model	Rated voltage (V)			
Classification	Wodei	Standard products	Made-to-order items		
Standard models	MY4Z	100/110 or 200/220 VAC	110/120 or 220/240 VAC		
Standard models	IVI Y 4Z	12, 24, 48, or 100/110 VDC			
	MV47N	100/110 or 200/220 VAC	24, 110/120, or 220/240 VAC		
Models with built-in operation indicators	MY4ZN	24 or 100/110 VDC	12 or 48 VDC		
Models with built-in diodes	MY4Z-D	24 or 100/110 VDC	12 or 48 VDC		
Models with built-in diodes and operation indicators	MY4ZN-D2	12, 24, 48, or 100/110 VDC			
Models with built-in CR circuits	MY4Z-CR	100/110 or 200/220 VAC	110/120 or 220/240 VAC		
Models with built-in CR circuits and operation indicators	MY4ZN-CR	100/110 or 200/220 VAC	110/120 or 220/240 VAC		

Note: 1. Ask your OMRON representative for details on the time required to deliver made-to-order products.
2. Ask your OMRON representative for details on product specifications and the ability to manufacture products with voltages other than the above coil

specifications.

3. The above models and specifications are new versions in the MY Series.

Ratings and Specifications

Ratings

Operating Coil (Standard Models)

	Item	Rated curr	ent (mA)	Coil resistance	Coil induc	tance (H)	Must-	Release	Maximum	Dower consumption	
Rate volta	d ige (V)	50 Hz	60 Hz	(Ω)	Armature OFF	Armature ON	operate voltage (V)	voltage (V)	voltage (V)	Power consumption (VA, W)	
	12	106.5	91	46	0.17	0.33					
	24	53.8	46	180	0.69	1.3			6 min.*2 110% of rated voltage		
AC	100/110	11.7/12.9	10/11	3,750	14.54	24.6		30% min.*2		Approx. 0.9 to 1.3	
AC	110/120	9.9/10.8	8.4/9.2	4,430	19.2	32.1				(at 60 Hz)	
	200/220	6.2/6.8	5.3/5.8	12,950	54.75	94.07	80% max.*1			110% of rated	110% of rated
	220/240	4.8/5.3	4.2/4.6	18,790	83.5	136.4	00% IIIax.				
	12	72.	7	165	0.73	1.37			% min.*2		
DC	24	36.	3	662	3.2	5.72		100/ min *2		Ammer: 0.0	
DC	48	17.	6	2,725	10.6	21.0		10% min.™²		Approx. 0.9	
	100/110	8.7/9	9.6	11,440	45.6	86.2					

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

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

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

3. Operating characteristics were measured at a coli 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% max.

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

oomaar namigo					
Load Item	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 contact voltage	250 VAC, 125 VDC				
Maximum contact current	3 A				
Contact configuration	4PDT				
Contact structure	Bifurcated				
Contact materials	Au cladding + Ag alloy				

Type Item	Standard models	Model with built-in operation indicator, diode, or CR circuit
Ambient operating temperature*1	–55 to 70° C	–55 to 60° C
Ambient operating humidity	5% to 85%	

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

Item	Туре	Standard models	Models with built- in operation indicators	Models with built-in CR circuits	Models with built-in diodes	Model with built-in operation indicator and diode	Model with built-in operation indicator and CR circuit		
Contact res	istance*1	50 m $Ω$ max.							
Operation ti	me*2	20 ms max.							
Release tim	e*2	20 ms max.							
Maximum	Mechanical	18,000 opera	tions/h						
operating frequency	Rated load	1,800 operati	1,800 operations/h						
Insulation re	esistance*3	100 M Ω min.							
	Between coil and contacts								
Dielectric strength	Between contacts of different polarity	2,000 VAC at	2,000 VAC at 50/60 Hz for 1 min.						
og	Between contacts of the same polarity		1,000 VAC at 50/60 Hz for 1 min.						
Vibration	Destruction	10 to 55 to 10	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	Shock Destruction		1,000 m/s ²						
resistance	Malfunction	200 m/s ²							
Endurance	Mechanical		20,000,000 operations min. (switching frequency: 18,000 operations/h)						
Endurance	Electrical*4	100,000 oper (rated load, s	ations min. witching frequency: 1,	300 operations/h)					

Item Number of poles	4 poles
Failure rate P value (reference value)*5	100 μA at 1 VDC
Weight	Approx. 35 g

Note: These are initial values.

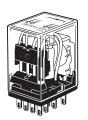
- measurement.

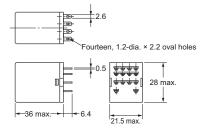
 *4. Ambient temperature condition: 23° C

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

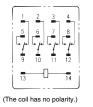
Dimensions (Unit: mm)

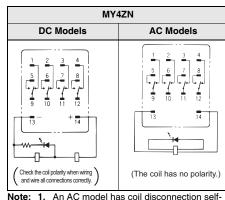
MY4Z, MY4ZN, MY4Z-D, MY4ZN-D2, MY4Z-CR, and MY4ZN-CR











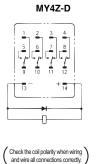
- Note: 1. An AC model has coil disconnection self-

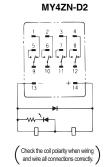
 - diagnosis.

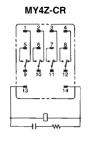
 For the DC models, check the coil polarity when wiring and wire all connections correctly.

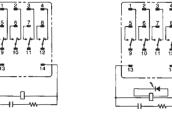
 The indicator is red for AC and green for DC.

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









(The coil has no polarity.)

(The coil has no polarity.)

MY4ZN-CR

Miniature Power Relays with Latching Levers: MY(S) → ⊕ ← ← LR







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

Ordering Information

Be sure to clearly indicate the rated voltage and add "(S)" when you place your order. Example: MY2IN 110/110 VAC (S)

Classification	Contact configuration	Model	Rated	voltage (V)
Classification	Contact configuration	wodei	Standard products	Made-to-order items
	2	MVOIN (C)		100/110 or 200/220 VAC
	2	MY2IN (S)	12, 24, or 48 VDC	
Models with built-in operation	4	MY4IN (S)	_	100/110 or 200/220 VAC
indicators	4	W141N (5)	12, 24, or 48 VDC	
	4 bifurcated	MV/47INI (C)	_	100/110 or 200/220 VAC
	4 bifurcated MY4ZIN (S)		_	12, 24, or 48 VDC
	2	MY2IN-D2 (S)	12 or 24 VDC	48 VDC
Models with built-in diode for coil surge absorption	4	MY4IN-D2 (S)	24 VDC	12 or 48 VDC
	4 bifurcated	MY4ZIN-D2 (S)	24 VDC	12 or 48 VDC
Models with built-in CR circuit	4	MY4IN-CR (S)	_	100/110 or 200/220 VAC
for coil surge absorption	4 bifurcated	MY4ZIN-CR (S)	_	100/110 or 200/220 VAC

Ask your OMRON representative for details on the time required to deliver made-to-order products.

Ask your OMRON representative for details on product specifications and the ability to manufacture products with voltages other than the above coil specifications.

Ratings and Specifications

Ratings

Operating Coil

	Item	Rated cur	rent (mA)	Coil resistance			Must-operate	Must-release	Maximum	Power consumption	
Rated	voltage (V)	50 Hz	60 Hz	(Ω)			voltage (V)	voltage (V)	voltage (V)	(VA, W)	
AC!	100/110	11.7/12.9	10/11	3,750	14.54	24.6		ra	110% of rated	Approx. 0.9 to	
AC:	200/220	6.2/6.8	5.3/5.8	12,950	54.75	94.07				1.3 (at 60 Hz)	
	12	7	5	160	0.73	1.37	80% max.*1			rated	
DC!	24	37	7.7	636	3.2	5.72				Approx. 0.9	
	48	18	.8	2,560	10.6	21					

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

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

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

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

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

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

Number of poles	2 poles		4 p	oles	4 poles (bifurcated)		
Load Item	Resistive load (cos φ = 1)	Inductive load (cos ϕ = 0.4, L/R = 7 ms)	Resistive load (cos φ = 1)	Inductive load (cos ϕ = 0.4, L/R = 7 ms)	Resistive load (cos φ = 1)	Inductive load (cos ϕ = 0.4, L/R = 7 ms)	
Rated load	5 A at 250 VAC 5 A at 30 VDC	2 A at 250 VAC 2 A at 30 VDC	3 A at 250 VAC 3 A at 30 VDC	0.8 A at 250 VAC 1.5 A at 30 VDC	3 A at 250 VAC 3 A at 30 VDC	0.8 A at 250 VAC 1.5 A at 30 VDC	
Rated carry current	10 A*		5 A*				
Maximum contact voltage	250 VAC, 125 VDC						
Maximum contact current	10 A		5 A				
Contact configuration	Single		Single		Bifurcated		
Contact materials	Ag Au cladding + Ag alloy Au cladding			Au cladding + Ag allo	У		

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

Type Item	Model with built-in operation indicator, diode, or CR circuit
Ambient operating temperature*1	-55 to 70° C*2
Ambient operating humidity	5% to 85%

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

Item	Туре	2 poles	4 poles	4 poles (bifurcated)			
Contact resis	stance*1	100 m Ω max.					
Operation tir	me*²	20 ms max.					
Release time	9* 2	20 ms max.					
Maximum	Mechanical	18,000 operations/h					
operating frequency	Rated load	1,800 operations/h					
Insulation re	sistance*3	1,000 MΩ min.					
	Between coil and contacts						
Dielectric strength	Between contacts of different polarity	f 2,000 VAC at 50/60 Hz for 1 min.					
	Between contacts of the same polarity	1,000 VAC at 50/60 Hz for 1 min.					
Vibration	Destruction	10 to 55 to 10 Hz, 0.5-mm single amplitude	e (1.0-mm double amplitude)				
resistance	Malfunction	10 to 55 to 10 Hz, 0.5-mm single amplitude	e (1.0-mm double amplitude)				
Shock	Destruction	1,000 m/s ²					
resistance	Malfunction	200 m/s ²					
	Mechanical AC: 50,000,000 operations min., DC: 100,0 frequency: 18,000 operations/h)		000,000 operations min. (switching	20,000,000 operations min. (switching frequency: 18,000 operations/h)			
Endurance	Electrical*4	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)			
Failure rate P value (reference value)*5		1 mA at 5 VDC	1 mA at 1 VDC	100 μA at 1 VDC			
Weight		Approx. 35 g					
Mate. Thosa	are initial values						

- Note: These are initial values.

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

 *2. Measurement conditions: When rated operating power is applied and ambient temperature is 23° C

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

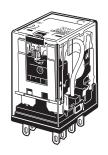
 *4. Ambient temperature condition: 23° C

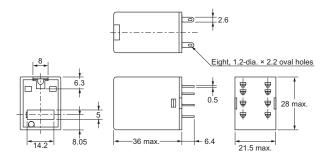
 *5. This value was measured at a switching frequency of 120 operations per minute.

Dimensions (Unit: mm)

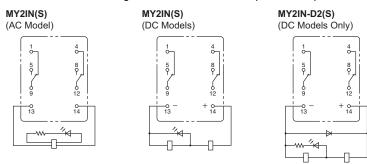
List of Models

MY2IN (S) MY2IN-D2 (S)





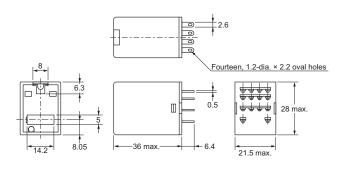
Terminal Arrangement/Internal Connections (Bottom View)



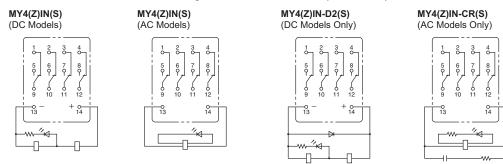
Note: For the DC models, check the coil polarity when wiring and wire all connections correctly.

MY4 (Z) IN (S) MY4 (Z) IN-D2 (S) MY4 (Z) IN-CR (S)





Terminal Arrangement/Internal Connections (Bottom View)



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

Relays with PCB Terminals: MY□-02



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

Ordering Information When your order, specify the rated voltage.

Number	Classification	Model	Rate	ed voltage (V)
of poles	Classification	Wodei	Standard products	Made-to-order items
2 poles	Models with single	MY2-02	100/110, 200/220, or 200/240 VAC	12, 24, 100, or 110/120 VAC
: poies	contacts	IVI Y 2-02	12, 24 or 48 VDC	100/110 VDC
0 nalaa	Models with single	MV2 02	100/110 or 200/220 VAC	12, 24, 110/120, or 220/240 VAC
3 poles	contacts	MY3-02	24 VDC	12, 48, or 100/110 VDC
	Models with single	MV4 00	100/110 or 200/220 VAC	12, 24, 110/120, or 220/240 VAC
l nalaa	contacts	MY4-02	12, 24 or 100/110 VDC	48 VDC
4 poles Bifurcated contacts	Differential contests	MV47.00		100/110, 110/120, or 200/220 VAC
	E	cts MY4Z-02	100/110 VDC	12, 24, or 48 VDC

Ask your OMRON representative for details on the time required to deliver made-to-order products.
 Ask your OMRON representative for details on product specifications and the ability to manufacture products with voltages other than the above coil specifications.

Ratings and Specifications

Ratings

Operating Coil (Standard Models)

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

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

The AC con 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.
 There is variation between products, but actual values are 80% max.
 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	Number of poles 2 or 3 poles		4	1 poles	4 poles, bifurcated contacts	
Load Item	Resistive load	Inductive load ($\cos \phi = 0.4$, L/R = 7 ms)	Resistive load	Inductive load (cos ϕ = 0.4, L/R = 7 ms)	Resistive load	Inductive load (cos ϕ = 0.4, L/R = 7 ms)
Rated load	5 A at 220 VAC 5 A at 24 VDC	2 A at 220 VAC 2 A at 24 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 220 VAC 3 A at 24 VDC	0.8 A at 220 VAC 1.5 A at 24 VDC
Rated carry current	5 A		3 A		3 A	
Maximum contact voltage	250 VAC, 125 VE	C	250 VAC, 125 VDC		250 VAC, 125 VDC	
Maximum contact current	5 A		3 A		3 A	
Contact configuration	DPDT, 3PDT		4PDT		4PDT	
Contact structure	Single		Single		Bifurcated	
Contact materials	Ag		Au plating + Ag		Au plating + Ag	

Type Item	Standard models
Ambient operating temperature*	–55 to 70° C
Ambient operating humidity	5% to 85%

* With no icing or condensation.

Item	Number of poles	2 or 3 poles	4 poles	4 poles, bifurcated contacts			
Contact resistance	* 1	50 mΩ max.					
Operation time*2		20 ms max.					
Release time*2		20 ms max.					
Maximum	Mechanical	18,000 operations/h					
operating frequency	Rated load	1,800 operations/h					
Insulation resistan	ce*3	100 M Ω min.					
	Between coil and contacts						
Dielectric strength	Between contacts of different polarity	2,000 VAC at 50/60 Hz for 1 min.					
oog	Between contacts of the same polarity	1,000 VAC at 50/60 Hz for 1 min.					
Vibration	Destruction	10 to 55 to 10 Hz, 0.5-mm single amplitude (1.0-mm double amplitude)					
resistance	Malfunction	10 to 55 to 10 Hz, 0.5-mm single amplitude (1.0-mm double amplitude)					
Shock resistance	Destruction	1,000 m/s ²					
SHOCK resistance	Malfunction	200 m/s ²					
Endurance	Mechanical	AC: 50,000,000 operations min. DC: 100,000,000 operations min. (switching frequency: 18,000 operations/h)		AC: 20,000,000 operations min. (switching frequency: 18,000 operations/h)			
Lindurance	Electrical*4	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)			

Item Nur	mber of poles	2 or 3 poles	4 poles	4 poles, bifurcated contacts
Failure rate P value (reference va	lue)*5	1 mA at 5 VDC	1 mA at 1 VDC	100 μA at 1 VDC
Weight		Approx. 35 g		

Note: These are initial values.

- Note: These are initial values.

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

 *2. Measurement conditions: With rated operating power applied.

 Ambient temperature condition: 23° C

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

 *4. Ambient temperature condition: 23° C

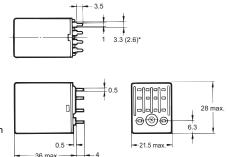
 *5. This value was measured at a switching frequency of 120 operations per minute.

Dimensions (Unit: mm)

Relays with PCB Terminals MY□-02

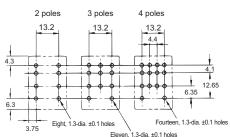


The figures and dimensions given here are for the MY4-02. The 2-pole and 3-pole models conform to these dimensions.



*Dimensions in parentheses are for the MY4-02.

PCB Processing Dimensions (Bottom View)



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

Case-surface-mounting Relays: MY□F



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

Ordering Information When your order, specify the rated voltage.

Number of poles	Classification	Model	Rated voltage (V)			
Number of poles	Classification	Model	Standard products	Made-to-order items		
Models with single		MY2F	24, 110/110, 100/120 or 200/220 VAC	220/240 VAC		
2 poles	contacts	WYZF	12 or 24 VDC	48 or 100/110 VDC		
Models w	Models with single	MY3F	100/110 VAC	24 or 200/220 VAC		
3 poles	contacts	IVI T OF		24 or 100/110 VDC		
	Models with single	MY4F	100/110 or 200/220 VAC	24 or 110/120 VAC		
4 poles	contacts	IVI T 4F	12 or 24 VDC	48 or 100/110 VDC		
	Bifurcated contacts	MY4ZF	200/220 VAC			
	Dilurcaled contacts	IVI T 42F		12 or 24 VDC		

Ask your OMRON representative for details on the time required to deliver made-to-order products.

Ask your OMRON representative for details on product specifications and the ability to manufacture products with voltages other than the above coil specifications.

Ratings and Specifications

Ratings

Operating Coil (Standard Models)

	Item	Item Rated current (mA) Coil Coil inductance (H)		Must-operate	Release	Maximum	Power consumption			
Rated	voltage (V)	50 Hz	60 Hz	resistance (Ω)	Armature OFF	Armature ON	voltage (V)	voltage (V)	voltage (V)	(VA, W)
	24	53.8	46	180	0.69	1.3			110% of rated voltage	Approx. 0.9 to 1.3 (at 60 Hz)
•	100/110	11.7/12.9	10/11	3,750	14.54	24.6				
AC	110/120	9.9/10.8	8.4/9.2	4,430	19.2	32.1		30% min.*2		
•	200/220	6.2/6.8	5.3/5.8	12,950	54.75	94.07				
•	220/240	4.8/5.3	4.2/4.6	18,790	83.5	136.4	80% max.*1			
	12	75	i	160	0.73	1.37				
DC	24	36.	9	650	3.2	5.72		10% min.*2		
DC	48	18.	5	2,600	10.6	21.0				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 the AC rated current and ±15% for the DC coil resistance.

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

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

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% max.

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

Number of poles	2 or 3 poles		4 poles		
Load Item	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	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	5 A		3 A		
Maximum contact voltage	250 VAC, 125 VDC		250 VAC, 125 VDC		
Maximum contact current	5 A		3 A		
Contact configuration	DPDT, 3PDT		4PDT		
Contact structure	Single		Single		
Contact materials	Ag		Au plating + Ag		

Type Item	Standard models
Ambient operating temperature*	–55 to 70° C
Ambient operating humidity	5% to 85%

* With no icing or condensation.

Item	Number of poles	2 or 3 poles 4 poles		
Contact resis	stance*1	50 mΩ max.		
Operation tin	ne*2	20 ms max.		
Release time	* 2	20 ms max.		
Maximum	Mechanical	18,000 operations/h		
operating frequency	Rated load	1,800 operations/h		
Insulation res	sistance*3	100 MΩ min.		
	Between coil and contacts			
Dielectric strength	Between contacts of different polarity	2,000 VAC at 50/60 Hz for 1 min.		
	Between contacts of the same polarity	1,000 VAC at 50/60 Hz for 1 min.		
Vibration	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 ²		
resistance	Malfunction	200 m/s ²		
Endurance	Mechanical	AC: 50,000,000 operations min. DC: 100,000,000 operations min. (switching frequency: 18,000 operations/h)		
Lindulatice	Electrical*4	500,000 operations min. (rated load, switching frequency: 1,800 operations/h)	200,000 operations min. (rated load, switching frequency: 1,800 operations/h)	

Item Number of poles	2 or 3 poles	4 poles
Failure rate P value (reference value)	1 mA at 5 VDC	1 mA at 1 VDC
Weight	Approx. 35 g	

Note: These are initial values.

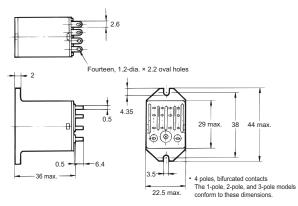
- *1. Measurement conditions: 1 A at 5 VDC using the voltage drop method *2. Measurement conditions: With rated operating power applied. Ambient temperature condition: 23° C
- *3. Measurement conditions: For 500 VDC applied to the same location as for dielectric strength measurement.
- ***4.** Ambient temperature condition: 23° C
- ***5.** This value was measured at a switching frequency of 120 operations per minute.

Dimensions (Unit: mm)

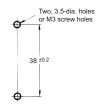
Case-surface mounting MY□F



The above figure is for the MY4F.



Mounting Hole Dimensions

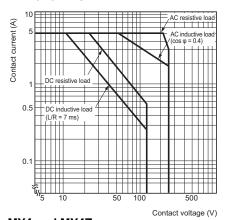


Note: Refer to the terminal arrangement and internal connections diagrams for the MY2, MY3, MY4, and MY4Z.

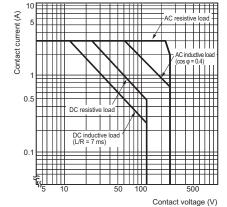
Engineering Data MY2, MY3, MY4, MY4Z, MY□-02, and MY□F

Engineering Data

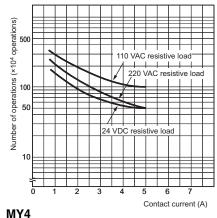
Maximum Switching Capacity MY2 and MY3



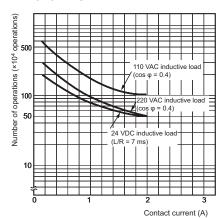
MY4 and MY4Z

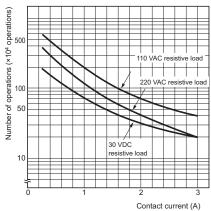


Endurance Curve MY2 and MY3

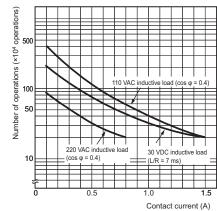


MY2 and MY3

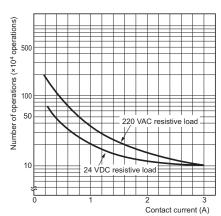




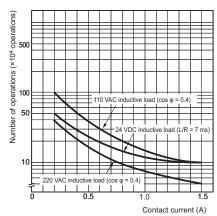
MY4



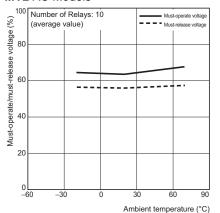
MY4Z



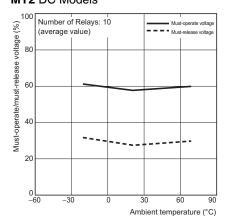
MY4Z



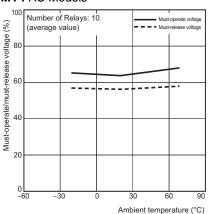
Ambient Temperature vs. Must-operate and Must-release Voltage MY2 AC Models



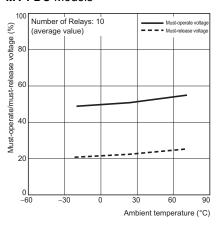
MY2 DC Models



MY4 AC Models

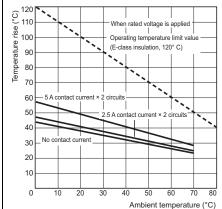


MY4 DC Models

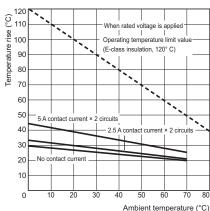


Ambient Temperature vs. Coil Temperature Rise

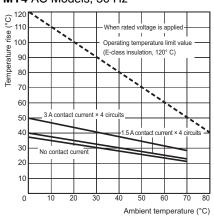
MY2 AC Models, 50 Hz



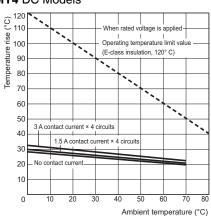
MY2 DC Models



MY4 AC Models, 50 Hz

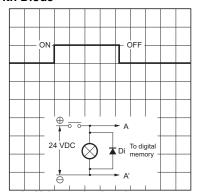


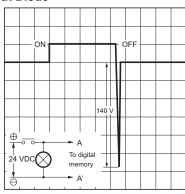
MY4 DC Models



Models with built-in diodes

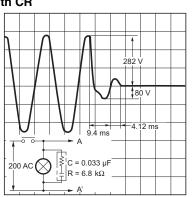
The diode absorbs surge from the coil. This type is best suited for applications with semiconductor circuits. With Diode Without Diode With Diode



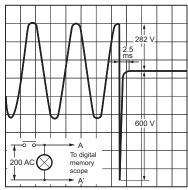


- Make sure that the polarity is correct. Note:
 - The release time will increase, but the 20-ms specification for standard models is satisfied. Diode properties: The diode has a reversed dielectric strength of 1,000 V. Forward current: 1 A

Models with Built-in CR Circuits With CR



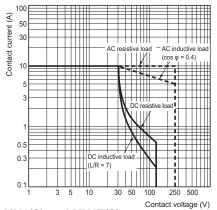
Without CR



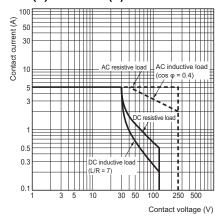
Engineering Data MY(S)

Engineering Data

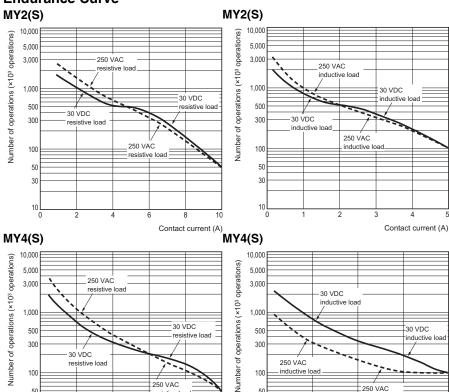
Maximum Switching Capacity MY2(S)

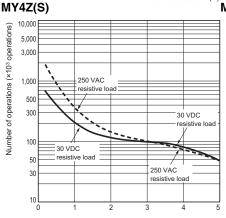


MY4(S) and MY4Z(S)



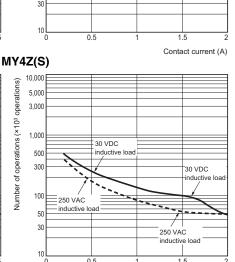
Endurance Curve





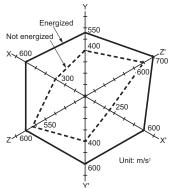
250 VAC

Contact current (A)



250 VAC

Common Specifications for MY2, MY3, MY4, MY4Z, MY□-02, MY□F, and MY(S) **Malfunctioning Shock**



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,

50

30

Energized: 200 m/s²

Shock direction



Contact current (A)

Detailed Information on Models Certified for Safety Standards, MY2Z, MY3, MY□-02, and MY□F

- Refer to Model Number Structure on page 1 for a list of applicable models.
- The standard models are certified for UL and CSA standards.
 The rated values for safety standard certification are not the same as individually defined performance values. Always check the specifications before use.

TUV-certified Models (File No. R50030059)

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Model	Coil ratings	Number of poles	Contact ratings	Certified number of operations
		2	5 A, 250 VAC ($\cos \varphi = 1.0$)	
MY□	6 to 125 VDC 6 to 240	3	5 A, 250 VAC ($\cos \phi$ = 1.0) 0.8 A, 250 VAC ($\cos \phi$ = 0.4)	10,000 operations
	VDC	4	3 A, 120 VAC ($\cos \phi = 1.0$) 0.8 A, 120 VAC ($\cos \phi = 0.4$)	

UL-certified Models (File No. E41515)

Model	Coil ratings	Number of poles	Contact ratings	Certified number of operations
			7A, 240 VAC (General Use)	
			7A, 24 VDC (Resistive)	
			5A, 240 VAC (General Use)	6,000
			5A, 250 VAC (Resistive)	0,000
			5A, 30 VDC (Resistive)	
		2	3A, 265 VAC (Resistive)	
			1/6HP, 250 VAC	
			1/8HP, 265 VAC	1,000
			1/10HP, 120 VAC	
			B300 Pilot Duty	6,000
		to 240 VAC to 125 VDC	5A, 28 VDC (Resistive)	6,000
	0.1- 0.40		5A, 240 VAC (General Use)	0,000
MY			1/6 HP, 250 VAC	1,000
IVIT	6 to 125 VDC		5A, 28 VDC (General Use) (Same polarity)	6,000
			5A, 240 VAC (General Use) (Same polarity)	
			5A, 30 VDC (Resistive) (Same polarity)	
		4	5A, 250 VAC (Resistive) (Same polarity)	
			0.2A, 120 VDC (Resistive) (Same polarity)	
			1/6HP, 250 VAC (Same polarity)	1,000
			1/10HP, 120 VAC (Same polarity)	1,000
			B300 Pilot Duty (Same polarity)	6,000

CSA-certified Models (File No. LR3192

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Model	Coil ratings	Number of poles	Contact ratings	Certified number of operations
			7A, 240 VAC (Resistive)	
			7A, 24 VDC (Resistive)	
			5A, 240 VAC (General Use)	6,000
		2	5A, 250 VAC (Resistive)	
			5A, 30 VDC (Resistive)	
			1/6HP, 250 VAC	1,000
			1/10HP, 120 VAC	1,000
			5A, 28 VDC (Resistive)	
	6 to 240 VAC	AC 125	7A, 240 VAC (General Use)	6,000
			7A, 24 VDC (Resistive)	0,000
			5A, 240 VAC (General Use)	
MY	6 to 125		1/6HP, 250 VAC	1,000
	VDC		7A, 240 VAC (General Use) (Same polarity)	
			7A, 24 VDC (Resistive) (Same polarity)	6,000
			5A, 240 VAC (General Use) (Same polarity)	
		4	5A, 30 VDC (Resistive)	
			5A, 250 VAC (Resistive) (Same polarity)	
			0.2A, 120 VDC (Resistive)	
			1/6HP, 250 VAC	1,000
			1/10HP, 120 VAC	1,000

[•] When ordering models that are certified for Lloyd's Register (LR) Standards, be sure to specify "LR-certified Model" with your order.

LR-certified Models (File No. 90/10270)

Model	Coil ratings	Number of poles	Contact ratings
	6 to 240 VAC	2	2 A, 30 VDC inductive load 2 A, 200 VAC inductive load
MY□	6 to 125 VDC	4	1.5 A, 30 VDC inductive load 0.8 A, 200 VAC inductive load 1.5 A, 115 VAC inductive load

Detailed Information on Models Certified for Safety Standards, MY2, MY4, MY4Z, and MY(S) Newly Released Models

• Refer to *Model Number Structure on page 1* for a list of applicable models. **VDE-certified Models (Certificate No. 112467UG, EN 61810-1)**

Model	Coil ratings	Number of poles	Contact ratings	Certified number of operations
MY□	6, 12, 24, 48/50, 100/ 110, 110/120, 200/	2	,	MY2: 10,000 operations
(New model)	220, and 220/240 VAC 6, 12, 24, 48, 100/ 110, and 125 VDC	4	E A OFO \/AO / + 4\	MY4: 100,000 operations MY4Z: 50,000 operations (AC)

UL508-certified Models (File E41515)

Model	Coil ratings	Number of poles	Contact ratings	Certified number of operations
			10A, 250 VAC (General Use)	
			10A, 30 VDC (General Use)	
			7A, 240 VAC (General Use)	
			7A, 24 VDC (Resistive)	0.000
			5A, 240 VAC (General Use)	6,000
		2	5A, 250 VAC (Resistive)	
		2	5A, 30 VDC (Resistive)	
			3A, 265 VAC (Resistive)	1
		1/6HP, 250 VAC		
MY□	6 to 240 VAC		1/8HP, 265 VAC	1,000
(New model)	6 to 125 VDC		1/10HP, 120 VAC	
			B300 Pilot Duty (Same polarity)	6,000
			5A, 28 VDC (General Use) (Same polarity)	
			5A, 240 VAC (General Use) (Same polarity)	
			5A, 30 VDC (Resistive) (Same polarity)	6,000
		4	5A, 250 VAC (Resistive) (Same polarity)	
		4	0.2A, 120 VDC (Resistive) (Same polarity)	
			1/6HP, 250 VAC (Same polarity)	1,000
			1/10HP, 120 VAC (Same polarity)	1,000
			B300 Pilot Duty (Same polarity)	6,000

CSA 22.2 No. 14-certified Models (File No. LR31928)

Model	Coil ratings	Number of poles	Contact ratings	Certified number of operations
			7A, 240 VAC (General Use)	
			7A, 24 VDC (Resistive)	
			5A, 240 VAC (General Use)	0.000
			5A, 250 VAC (Resistive)	6,000
		2	5A, 30 VDC (Resistive)	
		2	3A, 265 VAC (Resistive)	
			1/6HP, 250 VAC	1,000
	6 to 240 VAC 6 to 125 VDC		1/8HP, 265 VAC	
MY□			1/10HP, 120 VAC	
(New model)			B300 Pilot Duty (Same polarity)	6,000
			5A, 240 VAC (General Use) (Same polarity)	6,000
			5A, 28 VDC (General Use) (Same polarity)	
			5A, 250 VAC (Resistive) (Same polarity)	
		4	5A, 30 VDC (Resistive) (Same polarity)	
		4	0.2A, 120 VDC (Resistive) (Same polarity)	1
			1/6HP, 250 VAC (Same polarity)	1.000
			1/10HP, 120 VAC (Same polarity)	1,000
			B300 Pilot Duty (Same polarity)	6,000

LR-certified Models (File No. 98/10014)

Model	Coil ratings	Number of poles	Contact ratings	Certified number of operations
MY□ 6 to 240 VAC	2	10 A, 250 VAC (resistive) 2 A, 250 VAC (PF0.4) 10 A, 30 VDC (resistive) 2 A, 30 VDC (L/R = 7 ms)	MY2: 50,000 operations	
(New model)	6 to 125 VDC	4	5 A, 250 VAC (resistive) 0.8 A, 250 VAC (PF0.4) 5 A, 30 VDC (resistive) 1.5 A, 30 VDC (L/R = 7 ms)	MY4: 50,000 operations

Miniature Power Relays: MY4Z-CBG

Ordering Information When your order, specify the rated voltage.

Classification	Classification Model	Rated voltage (V)		
Classification		Standard products	Made-to-order items	
Standard models	MY4Z-CBG	100/110 or 200/220 VAC	110/120 VAC	
Standard models		24 or 100/110 VDC	12 or 48 VDC	
Models with built-in	MY4ZN-CBG		100/110 or 200/220 VAC	
operation indicators		-	24 VDC	

Note: Ask your OMRON representative for details on the time required to deliver made-to-order products.

Ratings and Specifications

Ratings

Operating Coil

Item Rated voltage (V)		Rated curr	ent (mA)	Coil	Coil induc	tance (H)	Must-operate	Must-release	Maximum	Power consumption
) 50 Hz 60 Hz		resistance (Ω)	Armature OFF	Armature ON	voltage (V)	voltage (V)	voltage (V)	(VA, W)
	100/110	11.7/12.9	10/11	3,750	14.54	24.6		30% min.*2		Approx. 0.9 to 1.3 (at 60 Hz)
AC	110/120	9.9/10.8	8.4/9.2	4,430	19.2	32.1	80% max.*1			
•	200/220	6.2/6.8	5.3/5.8	12,950	54.75	94.07			110% of rated	
	12	75	i	160	0.73	1.37			voltage	
DC	24	36.	9	650	3.2	5.72				Approx. 0.9
	100/110	9.1/10		11,000	45.60	86.20				

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

Note: 1. The rated current and coll resistance are measured at a contemporation of DC coil resistance.

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

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

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

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

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

Load Item	Resistive load	Inductive load (cos ϕ = 0.4, L/R = 7 ms)		
Rated load	1 A at 220 VAC 0.3 A at 220 VAC 1 A at 24 VDC 0.5 A at 24 VDC			
Rated carry current	1 A			
Maximum contact voltage	250 VAC, 125 VDC			
Maximum contact current	1 A 1 A			
Contact structure	Crossbar bifurcated			
Contact materials	Au cladding + AgPd			

Characteristics

Contact resis	tance*1	100 mΩ max.			
		7.00			
Operation tin	1e*2	20 ms max.			
Release time	\$ 2	20 ms max.			
Maximum	Mechanical	18,000 operations/h			
operating frequency	Electrical	1,800 operations/h			
Insulation res	sistance*3	100 ΜΩ			
Dielectric	Between coil and contacts Between contacts	2,000 VAC at 50/60 Hz for 1 min.			
strength	of different polarity				
	Between contacts of the same polarity	700 VAC at 50/60 Hz for 1 min.			
Vibration	Destruction	10 to 55 to 10 Hz, 0.5-mm single amplitude (1.0-mm double amplitude)			
resistance	Malfunction	10 to 55 to 10 Hz, 0.5-mm single amplitude (1.0-mm double amplitude)			
Shock	Destruction	1,000 m/s ²			
resistance	Malfunction	200 m/s ²			
Endurance	Mechanical	5,000,000 operations min. (operating frequency: 18,000 operations/hr)			
Liluurance	Electrical*4	50,000 operations min. (switching frequency: 1,800 operations/h) at rated load			
Failure rate P value (reference value)*		100 μA at 1 VDC			
Ambient opera	ting temperature	-25 to 70°C (with no icing or condensation)			
Ambient ope	rating humidity	5% to 85%			
Weight		Approx. 35 g			
Note: The above	o valuos are initial valu				

The above values are initial values.

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

*2. Measurement conditions: With rated operating power applied, not including contact bounce. Ambient temperature conditions: 23° C

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

*4. Ambient temperature condition: 23° C

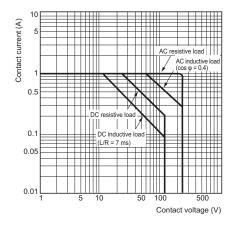
*5. This value was measured at a switching frequency of 120 operations per minute.

Engineering Data

Engineering Data

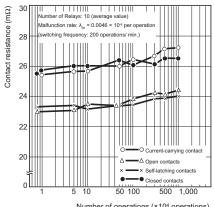
Maximum Switching Capacity

MY4Z-CBG



Contact Reliability Test (Modified Allen Bradley Circuit)

Contact load: 5 VDC, 1 mA resistive load Malfunction criteria level: Contact resistance of 100 $\boldsymbol{\Omega}$

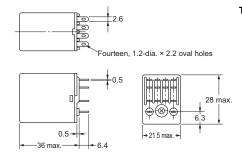


Number of operations (×10⁴ operations)

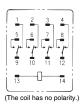
Dimensions (Unit: mm)

MY4Z-CBG





Terminal Arrangement/Internal Connections (Bottom View) Standard Models



Safety Precautions

Refer to the Common Relay Precautions.

Applicable Sockets

Use only combinations of OMRON Relays and Sockets.

Plastic Sealed Relays: MYQ

Ordering Information

Relays with Plug-in or Soldered **Terminals**

When your order, specify the rated voltage.

	Туре	4 poles		
Classification	n	Model	Rated voltage (V)	
	Standard models	MYQ4	100/110, 110/ 120, 200/220, or 220/240 VAC	
Models			24 VDC	
with single contacts	with built- in	MYQ4N	24, 100/110, 110/120, 200/220, or 220/240 VAC	
	operation indicators		12, 24, 48, or 100/110 VDC	
Bifurcated contacts	Standard models	MYQ4Z	100/110, 110/120, or 200/220 VAC	
			12 or 24 VDC	

Relays with PCB Terminals

Туре	4	4 poles		
Classification	Model	Rated voltage (V)		
Models with single contacts	MYQ4-02	50, 200/220, or 220/240 VAC		
single contacts		24 VDC		
Bifurcated	MYQ4Z-02	100/110 VAC		
contacts	MYQ4Z-02	24 or 48 VDC		

Ratings and Specifications

Ratings

Operating Coil

	Item	Rated cur	rent (mA)	Coil resis-	Coil indu	ctance (H)	Must-	Must-	Maximum	Power
Rated	voltage (V)	50 Hz	60 Hz	tance (Ω)	Armature OFF	Armature ON	operate voltage (V)	release voltage (V)	voltage (V)	on (VA, W)
	24	53.8	46	180	0.69	1.3				
	100/110	11.7/12.9	10/11	3,750	14.54	24.6		30% min.*2	110% of	Approx. 0.9 to 1.3 (at 60 Hz)
AC	110/120	9.9/10.8	8.4/9.2	4,430	19.2	32.1				
	200/220	6.2/6.8	5.3/5.8	12,950	54.75	91.07	000/			
	220/240	4.8/5.3	4.2/4.6	18,790	83.5	136.4	80% max.*1		rated	
	12	7	5	160	0.734	1.37			voltage	
DC	24	36	6.9	650	3.2	5.72		10% min.*2		Approx.
ЪС	48	18	3.5	2,600	10.6	21.0				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

1. The fated current and coil resistance are measured at a coil temperature of 23°C with tolerances of ±15%-20% for AC rated current and ±15% for DC coil resistance.
 2. The AC coil resistance and coil inductance values are reference values only.
 3. Operating characteristics were measured at a coil temperature of 23°C.
 4. The maximum voltage capacity was measured at an ambient temperature of 23°C.
 *1. There is variation between products, but actual values are 80% max.

 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

_					
Type Item	Resistive load	Inductive load (cos φ = 0.4, L/R = 7 ms)			
Rated load	1 A at 220 VAC, 1 A at 24 VDC	0.5 A at 220 VAC, 0.5 A at 24 VDC			
Rated carry current	1 A				
Maximum contact voltage	250 VAC, 125 VDC				
Maximum contact current	1 A				
Maximum switching capacity (reference value)	220 VAC, 24 W 110 VAC, 12 W				
Failure rate P value (reference value)	Single contacts: 1 mA at 1 VDC, Bifurcated contacts: 100 µA at 1 VDC				
Contact structure	Single/bifurcated				
Contact materials	Au plating + Ag				

^{*} This value was measured at a switching frequency of 120 operations per minute.

Ambient operating temperature	−55 to 60° C*
Ambient operating humidity	5% to 85%

^{*} With no icing or condensation.

Characteristics

			_		
Contact resistance*1		50 m $Ω$ max.	Ī		
		20 ms max.	1		
		20 ms max.	1		
Maximum	Mechanical	18,000 operations/h			
operating frequency	Rated load	1,800 operations/h			
	Between coil and contacts	1,500 VAC at 50/60 Hz for 1 min.	1		
Dielectric strength	Between contacts of different polarity	1,500 VAC at 50/60 Hz for 1 min.	1		
.	Between contacts of the same polarity	1,000 VAC at 50/60 Hz for 1 min.			
Insulation resistance*3		100 MΩ min.	:		
Vibration	Destruction	10 to 55 to 10 Hz, 0.5-mm single amplitude (1.0-mm double amplitude)			
resistance	Malfunction	10 to 55 to 10 Hz, 0.5-mm single amplitude (1.0-mm double amplitude)			
Shock	Destruction	1,000 m/s ²	1		
resistance	Malfunction	200 m/s ²],		
Mechanical Endurance		AC: 50,000,000 operations (5,000,000*4) min., DC: 100,000,000 operations (5,000,000*4) min. (switching frequency: 18,000 operations/h)	-		
Lindurance	Electrical*5	200,000 operations min. (100,000 operations*4) (rated load, switching frequency: 1,800 operations/h)	:		
Weight		Approx. 35 g	1		

Note: The values at the left are initial

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

method
*2. Measurement conditions: With rated operating power applied, not including contact bounce. Ambient temperature condition: 23° C

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

measurement.

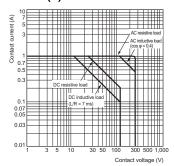
*4. This value is for bifurcated contacts.

*5. Ambient temperature condition: 23° C

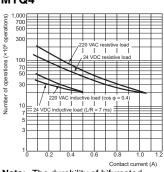
Engineering Data

Engineering Data

Maximum Switching Capacity MYQ4(Z)

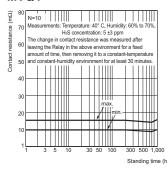


Endurance Curve MYQ4



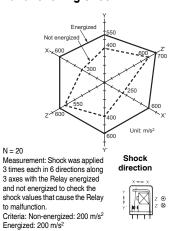
The durability of bifurcated contacts is one-half that of single contacts.

H₂S Gas Data MYQ4



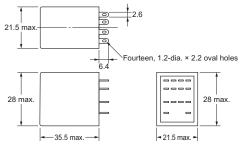
Malfunctioning Shock

N = 20



Dimensions (Unit: mm)

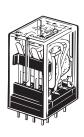
Relays with Plug-in Terminals or Soldered Terminals MYQ4(Z)(N)

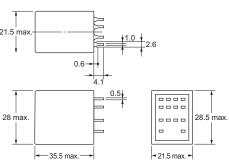


MYQ4(Z)N					
DC Models	AC Models				
Check the coil polarity when wiring and wire all connections correctly.	(The coil has no polarity.)				

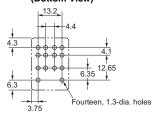
- Note: 1. An AC model has coil disconnection selfdiagnosis
 - For the DC models, check the coil polarity when wiring and wire all connections

Relays with PCB Terminals MYQ4(Z)-02



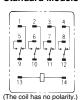


PCB Processing Dimensions (Bottom View)



Note: The dimensional tolerance is ± 0.1 .

Terminal Arrangement/Internal Connections (Bottom View) Standard Models



Safety Precautions

- For models with built-in operation indicators, check the coil polarity when wiring and wire all connections correctly (DC operation).
- Use only combinations of OMRON Relays and Sockets.
- The UL and CSA certifications for this model are the same as for the MY4-

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.

Latching Relays MYK

Ordering information When your order, specify the rated voltage.

Relays with Plug-in or Soldered Terminals

Number of poles	2 poles			
Classification	Model	Rated voltage (V)		
		12 VAC		
		24 VAC		
		100 VAC		
Standard models	MY2K	100/110 VAC		
		12 VDC		
		24 VDC		
		48 VDC		

Relays with PCB Terminals

Number of poles	2 poles			
Classification	Model	Rated voltage (V)		
		24 VAC		
Standard models	MY2K-02	100 VAC		
Standard models	WI 121X-02	12 VDC		
		24 VDC		

Ratings and Specifications

Ratings

Operating Coil

	ltem -		Set coil			Reset coil					Power consumption (VA, W)		
	iteiii	Rated current (mA)		Coil	Rated current (mA)		Coil	Set voltage (V)	Reset voltage (V)	Maximum voltage (V)	Set coil	Reset coil	
Rated v	oltage (V)	50 Hz	60 Hz	resistance (Ω)	50 Hz	60 Hz	resistance (Ω)	(-)	1090 (1)	30 (1)	Set con	neset con	
	12	57	56	72	39	38.2	130			110% max. of	Approx. 0.6	Approx. 0.2	
AC	24	27.4	26.4	320	18.6	18.1	550				to 0.9 (at 60 Hz)	to 0.5 (at 60 Hz)	
	100	7.1	6.9	5,400	3.5	3.4	3,000	80% max.	80% max.				
	12	11	10	110	5	0	235	00 /6 IIIax.	00 /6 IIIax.	rated voltage			
DC	24	52		470	2	5	940				Approx. 1.3	Approx. 0.6	
	48	27		1,800	1	6	3,000						

Note: 1. The rated current for AC is the value measured with a DC ammeter in half-wave rectification.

2. The rated current and coil resistance are measured at a coil temperature of 23°C with toleran

- The rated current for AC is the value measured with a DC animeter in hall-wave rectinication.
 The rated current and coil resistance are measured at a coil temperature of 23°C with tolerances of +15%/–20% for the AC rated current and ±15% for the DC coil resistance.
 The AC coil resistance is a reference value only.
 Operating characteristics were measured at a coil temperature of 23°C.
 The maximum voltage capacity was measured at an ambient temperature of 23°C.

Contact Ratings

Resistive load	Inductive load ($\cos \varphi = 0.4$, L/R = 7 ms)		
3 A at 220 VAC 3 A at 24 VDC	0.8 A at 220 VAC 1.5 A at 24 VDC		
3 A			
250 VAC, 125 VDC			
3 A	3 A		
Single			
Au plating + Ag			
	3 A at 220 VAC 3 A at 24 VDC 3 A 250 VAC, 125 VDC 3 A Single		

Ambient operating temperature	–55 to 60° C*
Ambient operating humidity	5% to 85%

^{*} With no icing or condensation.

Characteristics

Contact resis	stance*1	50 m $Ω$ max.		
Set	Time*2	AC: 30 ms max., DC: 15 ms max.		
361	Minimum pulse width	AC: 60 ms, DC: 30 ms		
Reset	Time ^{#2}	AC: 30 ms max., DC: 15 ms max.		
neset	Minimum pulse width	AC: 60 ms, DC: 30 ms		
Maximum	Mechanical	18,000 operations/h		
operating frequency	Rated load	1,800 operations/h		
Insulation re	sistance*3	100 ΜΩ		
	Between coil and contacts	1,500 VAC at 50/60 Hz for 1 min.		
Dielectric	Between contacts of different polarity	1,000 1710 01 00 112 101 1 111111.		
strength	Between contacts of the same polarity	1.000 VAC at 50/60 Hz for 1 min.		
	Between set/ reset coils	1,000 VAC at 30/00 112 101 1 111111.		
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 ²		
resistance	Malfunction	200 m/s ²		
Endurance	Mechanical	100,000,000 operations min. (switching frequency: 18,000 operations/h)		
Lituurance	Electrical*4	200,000 operations min. (at 1,800 operations/hr, rated load)		
Failure rate P value (reference value)*5		1 mA at 1 VDC		
Weight		Approx. 30 g		
Note: The ah	ove values are initial v	aluaa		

- Note: The above values are initial values.

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

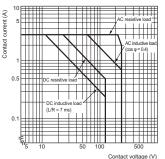
 2. Measurement conditions: With rated operating power applied, not including contact bounce.

 3. Measurement conditions: For 500 VDC applied to the same location as for dielectric strength measurement.
- *4. Ambient temperature condition: 23° C
 *5. This value was measured at a switching frequency of 120 operations per minute.

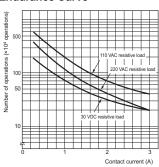
Engineering Data

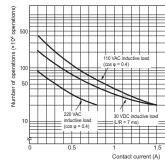
Engineering Data

MY2K(-02) Maximum Switching Capacity

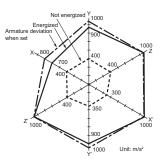


Endurance Curve





MY2K 100 VAC Malfunctioning Shock





N = 20 Measurement: Shock was applied 2 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.

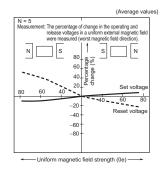
Criteria: Non-energized: 200 m/s² Energized: 200 m/s²

PCB Processing Dimensions

(Bottom View)

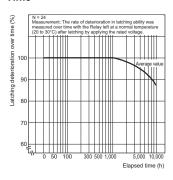
The dimensional

MY2K 24 VDC Magnetic Interference (External Magnetic Field)



(Unit: mm)

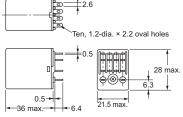
Latching Deterioration Over Time



Dimensions

Relays with Plug-in Terminals or Soldered Terminals



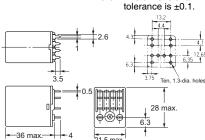


Terminal Arrangement/Internal Connections (Bottom View)

Note: R is a resistor for ampereturn correction. This resistor is built-in to 50-VAC and higher models. (The coil has no polarity.)

Relays with PCB Terminals MY2K-02





Note:

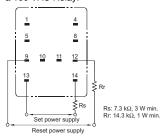
For DC



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

Safety Precautions

 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. The performance values given here may not be satisfied due to use over time and a reduction in latching performance due to changes in the ambient temperature or in the conditions of the application circuit. For actual use, apply the rated operating voltage with a pulse width based on the actual load and reset the

pulse width based on the actual load and reset the Relay at least once per year to prevent degradation over time.

If the Relay is used in an environment with strong

 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.

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.

Hermetically Sealed Relays: MYH

Ordering Information When your order, specify the rated voltage.

Relays with Plug-in or Soldered Terminals

Туре	4 poles		
Classification	Model	Rated voltage (V)	
Models with single	МУ4Н	24, 100/110, or 110/120 VAC	
contacts	1011-411	12, 24, 48, or 100/110 VDC	
Bifurcated contacts	MY4ZH	24, 100/110, or 110/120 VAC	
Billicated Contacts	IVI I 4ZM	12, 24, 48, or 100/110 VDC	

Relays with PCB Terminals

Туре	4 poles			
Classification	Model	Rated voltage (V)		
Models with single	MY4H-0	110/120 VAC		
contacts	W 1411-0	24 VDC		
Bifurcated contacts	MY4ZH-0	24 or 100/110 VDC		

Ratings and Specifications

Ratings

Operating Coil

	Item Rated current (mA)		Item Rated current (mA) Coil Coil inductance (H)		tance (H)	Must-operate	Must-release	Maximum	Power consumption	
Rated	voltage (V)	oltage (V) 50 Hz 60 H		resistance (Ω)	Armature OFF	Armature ON	voltage (V)	voltage (V)	voltage (V)	(VA, W)
	24	53.8	46	180	0.69	1.3				Approx. 0.9 to 1.3 (at 60 Hz)
AC	100/110	11.7/12.9	10/11	3,750	14.54	24.6		30% min.*2		
	110/120	9.9/10.8	8.4/9.2	4,430	19.2	32.1				
	12	75	,	160	0.73	1.37	80% max.*1		110% of rated voltage	
DC	24	36.9		650	3.2	5.72		10% min.*2	raiou roilage	A 0.0
ВС	48	18.5		2,600	10.6	21.0				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 the AC rated current and ±15% for the DC coil resistance.
The AC coil resistance and inductance values are reference values only

Operating characteristics were measured at a coil temperature of 23°C.
 The maximum voltage capacity was measured at an ambient temperature of 23°C.
 There is variation between products, but actual values are 80% max.
 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

Load		ith single acts	Bifurcated contacts		
Item	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 110 VAC 3 A at 24 VDC	0.8 A at 110 VAC 1.5 A at 24 VDC	
Rated carry current	3 A		3 A		
Maximum contact voltage	125 VAC 125 VDC		125 VAC 125 VDC		
Maximum contact current	3 A		3 A		
Contact structure	Single		Bifurcated		
Contact materials	Au plating + A	Ag	-		
A	·		-		
Ambient operating temperature	-25 to 60° C*				

^{*} With no icing or condensation.

5% to 85%

Ambient operating

humidity

Characteristics

Contact re	sistance*1	50 mΩ max.
Operation	time*2	20 ms max.
Release ti	me*2	20 ms max.
Maximum	Mechanical	18,000 operations/h
operating frequency	Rated load	1,800 operations/h
Insulation	resistance*4	100 M Ω min.
Dielectric	Between coil and contacts	1,000 VAC at 50/60 Hz for 1 min.
strength	Between contacts of different polarity	(700 VAC between contacts of the same polarity.)
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 ²
resistance	Malfunction	200 m/s ²
Endurance	Mechanical	50,000,000 operations (5,000,000 operations*4) min. (operating frequency: 18,000 operations/h)
Lindurance	Electrical*5	100,000 operations (50,000 operations*4) min. rated load, switching frequency: 1,800 operations/h)
Failure rate P value (reference value)*6		Single contacts: 100 µA at 1 VDC Bifurcated contacts: 100 µA at 100 mVDC
Weight		Approx. 50 g

Note: The above values are initial values.

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

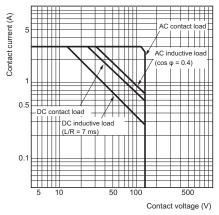
Ambient temperature condition: 23° C

*3. Measurement conditions: For 500 VDC applied to the same location as for dielectric *3. Measurement containers to soo vos applications as strength measurement.
*4. This value is for bifurcated contacts.
*5. Ambient temperature condition: 23° C
*6. This value was measured at a switching frequency of 120 operations per minute.

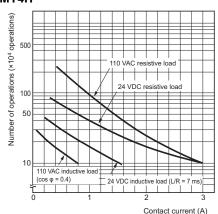
Engineering Data

Engineering Data

Maximum Switching Capacity MY4(Z)H



Endurance Curve MY4H

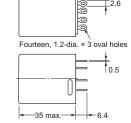


Note: The durability of bifurcated contacts is one-half that of single contacts.

Dimensions (Unit: mm)

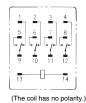
Relays with Plug-in Terminals or Soldered Terminals





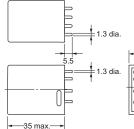


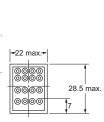
Terminal Arrangement/ Internal Connections (Bottom View)



Relays with PCB Terminals







(Bottom View) 13.2 4.4 3.95 1 11.85 6.8 Fourteen, 2-dia. holes

PCB Processing Dimensions

Safety Precautions

PCB Design for Hermetically Sealed Relays

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.

Applicable Sockets

Use only combinations of OMRON Relays and Sockets.

Application Environment for Hermetically Sealed Relays

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 insulating beads and cause short-circuiting or unintended operation due to poor insulation.

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.

Options (Order Separately)

Connection Socket and Mounting Bracket Selection Table (The possible combinations of models with plug-in terminals and sockets)

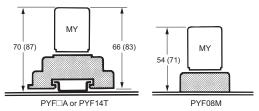
	Connecting method		Front-mou	unting Socke	ts (PYF⊡)								
	Mounting method	Track	or screw mou	unting	Screw mounting only	Track or screw mounting	Back-mounting Sockets (PY□)						
			Screw te	erminals						Wrapping terminals			
	Terminal Type	Screw terminal size: M3	Screw terminal size: M3 (finger protection structure) *2		minal size: 3.5	Push-In Plus Terminal Block *3	Solder terminals		Terminal length: 25 mm		Terminal length: 20 mm		Relays with PCB Terminals *4
Number of pins		(Sold	separately: H	old-down Cli	ps) *1	With Release Lever	Without With Mounting Mounting Brackets *1 Brackets		Without Mounting Brackets *1	With Mounting Brackets	Without Mounting Brackets *1	With Mounting Brackets	(Sold separately: Hold-down Clips) *1
	MY2□ (except for MY2K□ and MY2Z□-CR)	PYF08A (PYC-A1)	PYF08A-E (PYC-A1)		PYF08M (PYC-P)		PY08 (PYC-P)	PY08-Y1	PY08QN (PYC-P)	PY08QN-Y1	PY08QN2 (PYC-P)	PY08QN2-Y1	PY08-02 (PYC-P)
8	MY2I(S) *5	PYF08A (PYC-E1)	PYF08A-E (PYC-E1)		(P1C-P)	PYF-08-PU	(P10-P)		(P1C-P)		(P1C-P)		(P1C-P)
	MY2Z□-CR *6	PYF08A (Y92H-3)	PYF08A-E (Y92H-3)				PY08 (PYC-1)	PY08-Y3	PY08QN (PYC-1)		PY08QN2 (PYC-1)		PY08-02 (PYC-1)
11	МҮ3□	PYF11A (PYC-A1)					PY11 (PYC-P)	PY11-Y1	PY11QN (PYC-P)	PY11QN-Y1	PY11QN2 (PYC-P)	PY11QN2-Y1	PY11-02 (PYC-P)
14	MY4H MY4H MYQ4 MY4(S) MY2K	PYF14A (PYC-A1)	PYF14A-E (PYC-A1)	PYF14T (PYC-A1)		PYF-14-PU	PY14 (PYC-P)	PY14-Y1	PY14QN (PYC-P)	PY14QN-Y1	PY14QN2 (PYC-P)	PY14QN2-Y1	PY14-02 (PYC-P)

Note: Refer to Common Socket and DIN Track Products for the external dimensions of the Socket Relays and details on Hold-down Clips.

- *1. The information in parentheses is the model number of the applicable Mounting Bracket. Mounting Brackets are sold in sets of two. However, the PYC-P is just one Mounting Bracket.
- The PYF A-E has a terminal cover with finger protection. The Socket and Terminal Cover are integrated into one unit. Round terminals cannot be used. Use forked terminals or ferrules instead.
- *3. A Push-In Plus Terminal Block Socket functions as a release lever to hold or remove a Relay. Refer to PYF- D-PU/P2RF- D-PU for details.
- *4. If an MY I(S) Relay with a Latching Lever is used in combination with a PY -02 Socket for Relays with PCB Terminal Socket and PYC-P Mounting Brackets, the lever will not operate.
- *5. We recommends using the PYC-E1 Mounting Bracket for a MY2I(S) Relay with Latching Lever. (If the PYC-A1 is used with the MY2I(S), the latching lever will be blocked by the Mounting Bracket and the lever will not operate.)
- *6. The Mounting Brackets are applicable for Relays with a height of 36 mm or less. If the Relay height is greater than 53 mm, use Y92H-3 for the Front-mounting Socket and PYC-1 for the Back-mounting Socket. (The Y92H-3 is a set of two Brackets and the PYC-1 is just one Bracket.)

Mounting Heights with Sockets (Unit: mm)

Front-mounting Sockets Screw terminal (PYF□A (-E), PYF14T, PYF08M)

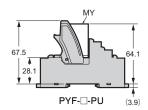


- Note: 1. The PYF□A can be mounted on a track or with screws. The heights given in parentheses are the measurements
 - for 53-mm-high Relays.
 3. Use the PYC-P Mounting Bracket for the PYF08M.

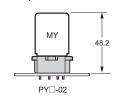
Back-mounting Sockets Solder terminals/Wrapping terminals (PY□)



Push-In Plus Terminal Block Sockets (PYF-□-PU)



Relays with PCB Terminals (PY□-02)



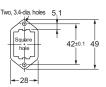
Socket Mounting Plate (t = 1.6) (Unit: mm)

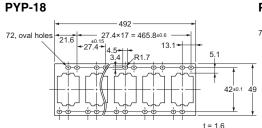
Use a Socket Mounting Plate to mount multiple connection Back-mounting Sockets in a row.

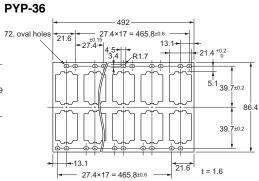
Item	Type Applicable Sockets		For mounting 8 Sockets	For mounting 36 Sockets	
Without Mounting Brackets	PY08, PY08QN(2), PY11, PY11QN(2), PY14, and PY14QN(2)				N
With Mounting Brackets	PY08-Y1, PY08QN(2)-Y1, PY11-Y1, PY11QN(2)-Y1, PY14-Y1, and PY14QN(2)-Y1	PYP-1	PYP-18	PYP-36	IN

Note: You can cut the PYP-18 and PYP-36 to any required length.

PYP-1







The minimum order for the PYP-1 is 10 pieces.

Compliance with Electrical Appliances and Material Safety Act

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

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

* Under the Electrical Appliances and Material Safety Act, do not use any 4-pole models 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.

Safety Precautions

Refer to the Common Relay Precautions.

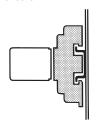
Precautions for Correct Use

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 attach case-surface-mounted models (MY□F) and tighten the screws securely (tightening torque: 0.98 N•m).

Using MY-series Relays with 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 poor contact. In this case, we recommend using the MY4Z-CBG Series, which has high contact reliability for microloads (Refer to page 25.)

About the Built-in Diode and CR Elements

The diode or CR element that are built into the Relay are designed to absorb the reverse voltage from the Relay coil. If a large surge in voltage is applied to the diode or CR element from an external source, the element will be destroyed. If there is the possibility of large voltage surges that could be applied to the elements from an external source, take any necessary surge absorption measures

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 min.

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.

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.

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