

Versatile, Multi-featured, Two-and Four-Pole Miniature Power Relays for Sequence Control and Power Switching Applications

- Increased reliability through automated production
- Multiple features available, including LED indicator, test button, bifurcated contacts, built-in diode and CR (surge suppression)
- Max. switching current: two-pole/10 A, four-pole/5 A
- Environment-friendly cadmium-free contacts
- Built-in operation indicator and name-plate is standard



## Ordering Information

### ■ RELAYS

#### Standard Coil Polarity

Type	Contact form	Part number		
		Plug-in socket/Solder terminals		
		Standard with LED indicator	With LED indicator and test button	Without LED indicator
Standard	DPDT	<b>MY2N</b>	<b>MY2IN</b>	<b>MY2</b>
	4PDT	<b>MY4N</b>	<b>MY4IN</b>	<b>MY4</b>
	4PDT (bifurcated)	<b>MY4ZN</b>	<b>MY4ZIN</b>	<b>MY4Z</b>
With built-in diode (DC only)	DPDT	<b>MY2N-D2</b>	<b>MY2IN-D2</b>	---
	4PDT	<b>MY4N-D2</b>	<b>MY4IN-D2</b>	---
	4PDT (bifurcated)	<b>MY4ZN-D2</b>	<b>MY4ZIN-D2</b>	---
With built-in CR (220/240 VAC, 110/120 VAC only)	DPDT	<b>MY2N-CR</b>	<b>MY2IN-CR</b>	---
	4PDT	<b>MY4N-CR</b>	<b>MY4IN-CR</b>	---
	4PDT (bifurcated)	<b>MY4ZN-CR</b>	<b>MY4ZIN-CR</b>	---

Note: 1. When ordering, add the rated coil voltage to the model number. Rated coil voltages are given in the coil ratings table.

Example: MY2 AC6(S)

↑  
Rated coil voltage

2. Arc barrier standard on all four-pole relays.
3. Other models also available, such as, three-pole versions, flangemount, PCB, etc. Contact your Omron Representative for details.

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Ordering Information - continued from previous page

### Reverse Coil Polarity

Type	Contact form	Part number	
		Plug-in socket/Solder terminals	
		With LED indicator	With LED indicator and test button
Standard (DC only)	DPDT	MY2N1	MY2IN1
	4PDT	MY4N1	MY4IN1
	4PDT (bifurcated)	MY4ZN1	MY4ZIN1
With built-in diode (DC only)	DPDT	MY2N1-D2	MY2IN1-D2
	4PDT	MY4N1-D2	MY4IN1-D2
	4PDT (bifurcated)	MY4ZN1-D2	MY4ZIN1-D2

Note: 1. When ordering, add the rated coil voltage to the model number. Rated coil voltages are given in the coil ratings table.

Example: MY2 AC6(S)

↑  
Rated coil voltage

2. Arc barrier standard on all four-pole relays.

## Specifications

### COIL RATINGS

Rated voltage	Rated current		Coil resistance	Inductance (reference value)		Must operate	Must release	Max. voltage	Power consumption (approx.)	
	50 Hz	60 Hz		Arm. OFF	Arm. ON					
AC	6 V*	214.1 mA	183 mA	12.2 Ω	0.04 H	0.08 H	80% max.	30% min.	110%	1.0 to 1.2 VA (60 Hz)
	12 V	106.5 mA	91 mA	46 Ω	0.17 H	0.33 H				
	24 V	53.8 mA	46 mA	180 Ω	0.69 H	1.30 H				
	48 V*	25.7 mA	22 mA	788 Ω	3.22 H	5.66 H				
	110/120 V	9.9/10.8 mA	8.4/9.2 mA	4,430 Ω	19.20 H	32.1 H				
	220/240 V	4.8/5.3 mA	4.2/4.6 mA	18,790 Ω	83.50 H	136.4 H				
DC	6 V*	151 mA		39.8 Ω	0.17 H	0.33 H	10% min.		0.9 W	
	12 V	75 mA		160 Ω	0.73 H	1.37 H				
	24 V	37.7 mA		636 Ω	3.20 H	5.72 H				
	48 V*	18.8 mA		2,560 Ω	10.60 H	21.0 H				
	100/110 V	9.0/9.9 mA		11,100 Ω	45.60 H	86.2 H				

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

2. Performance characteristic data are measured at a coil temperature of 23°C.

3. AC coil resistance and impedance are provided as reference values (at 60 Hz).

4. Power consumption drop was measured for the above data. When driving transistors, check leakage current and connect a bleeder resistor if required.

5. Rated voltage denoted by "\*" will be manufactured upon request. Ask your OMRON representative.

## CONTACT RATINGS

Item	2-pole		4-pole		4-pole (bifurcated)	
	Resistive load ( $\cos\phi = 1$ )	Inductive load ( $\cos\phi = 0.4$ , L/R = 7 ms)	Resistive load ( $\cos\phi = 1$ )	Inductive load ( $\cos\phi = 0.4$ , L/R = 7 ms)	Resistive load ( $\cos\phi = 1$ )	Inductive load ( $\cos\phi = 0.4$ , L/R = 7 ms)
Rated load	5A, 250 VAC 5A, 30 VDC	2A, 250 VAC 2 A, 30 VDC	3 A, 250 VAC 3 A, 30 VDC	0.8 A, 250 VAC 1.5 A, 30 VDC	3 A, 250 VAC 3 A, 30 VDC	0.8 A, 250 VAC 1.5 A, 30 VDC
Carry current	10 A (See Note.)		5 A (See Note.)			
Max. switching voltage	250 VAC 125 VDC		250 VAC 125 VDC			
Max. switching current	10 A		5 A			
Max. switching capacity	2,500 VA 300 W	1,250 VA 300 W	1,250 VA 150 W	500 VA 150 W	1,250 VA 150 W	500 VA 150 W

Note: Do not exceed the carry current of a Socket in use.

## CHARACTERISTICS

Contact resistance	100 mΩ max.	
Operate time	20 ms max.	
Release time	20 ms max.	
Max. operating frequency	Mechanical	18,000 operations/hr
	Electrical	1,800 operations/hr (under rated load)
Insulation resistance	1,000 MΩ min. (at 500 VDC)	
Dielectric withstand voltage	2,000 VAC, 50/60 Hz for 1.0 min (1,000 VAC between contacts of same polarity)	
Vibration resistance	Destruction: 10 to 55 Hz, 1.0 mm double amplitude Malfunction: 10 to 55 Hz, 1.0 mm double amplitude	
Shock resistance	Destruction: 1,000 m/s <sup>2</sup> (approx. 100G) Malfunction: 200 m/s <sup>2</sup> (approx. 20G)	
Life expectancy	See the following table.	
Ambient temperature	Operating	-55°C to 70°C (-67°F to 158°F) with no icing (See Note.)
Ambient humidity	Operating	35% to 85%
Weight	Approx. 35 g	

Note: The values given above are initial values.

## LIFE EXPECTANCY CHARACTERISTICS

Pole	Mechanical life (at 18,000 operations/hr)	Electrical life (at 1,800 operations/hr under rated load)
2-pole	AC: 50,000,000 operations min. DC: 100,000,000 operations min.	500,000 operations min.
4-pole		200,000 operations min.
4-pole (bifurcated)	20,000,000 operations min.	100,000 operations min.

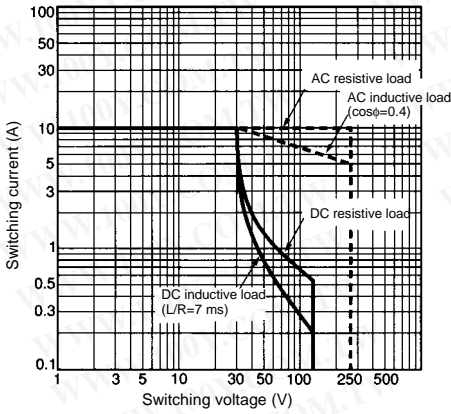
## APPROVED STANDARDS

VDE, UL, CSA, IMQ, CE

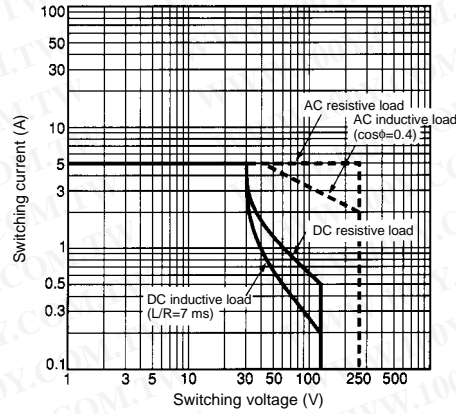
# Engineering Data

## MAXIMUM SWITCHING CAPACITY

MY2

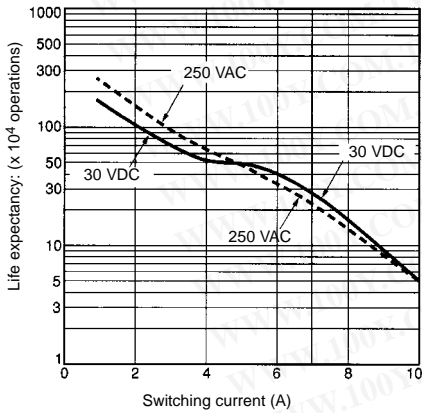


MY4, MY4Z

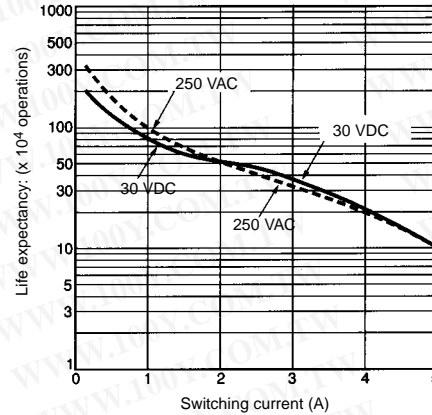


## LIFE EXPECTANCY

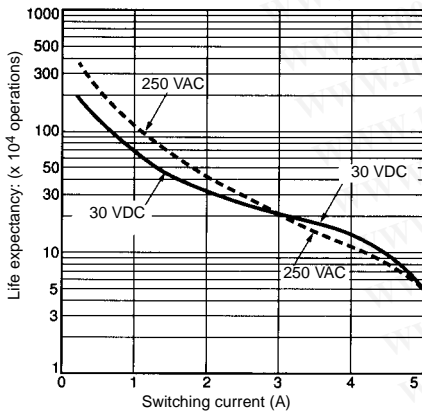
MY2 (Resistive Loads)



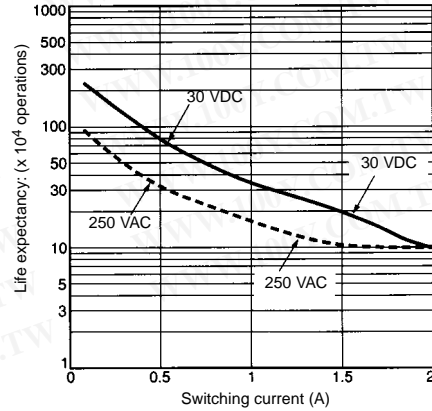
MY2 (Inductive Loads)



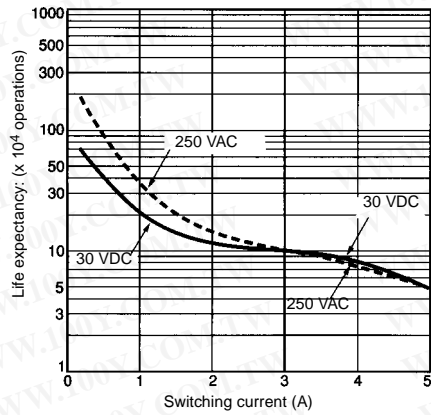
MY4 (Resistive Loads)



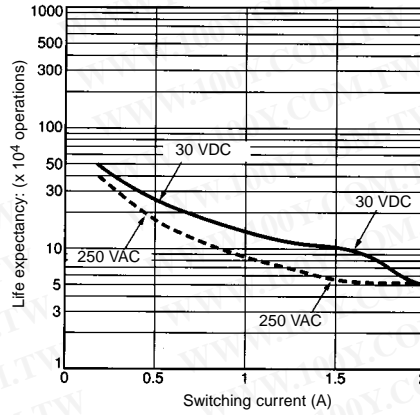
MY4 (Inductive Loads)



**MY4Z (Resistive Loads)**



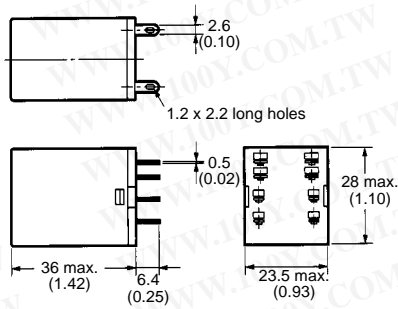
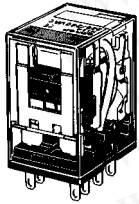
**MY4Z (Inductive Loads)**



**Dimensions**

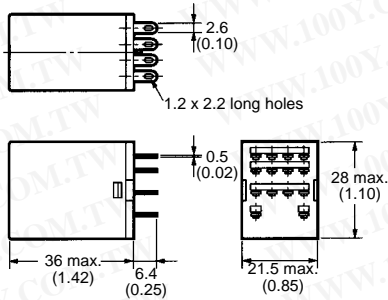
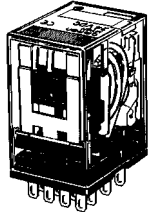
Unit: mm (inch)

**2-POLE MODELS**

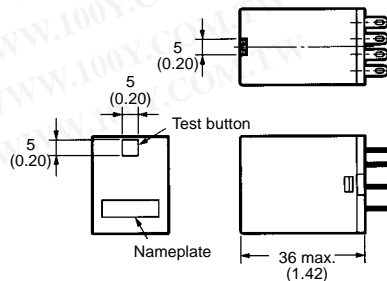
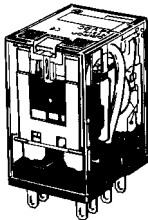


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**4-POLE MODELS**



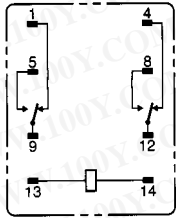
**MODELS WITH TEST BUTTON**



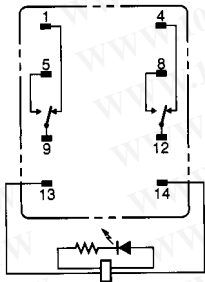


■ TERMINAL ARRANGEMENT/INTERNAL CONNECTIONS (BOTTOM VIEW)

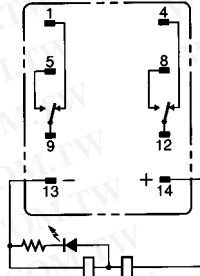
MY2



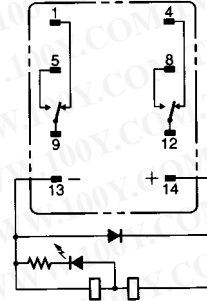
MY2N/MY2IN  
(AC Models)



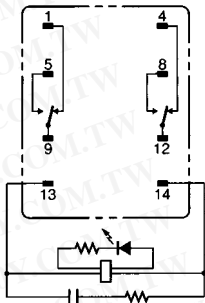
MY2N/MY2IN  
(DC Models)



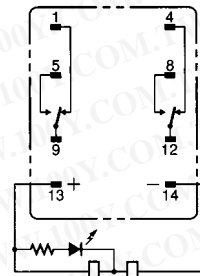
MY2N-D2/MY2IN-D2  
(DC Models Only)



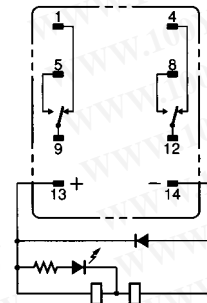
MY2N-CR/MY2IN-CR  
(AC Models Only)



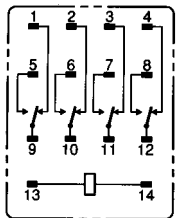
MY2N1/MY2IN1  
(DC Models Only)



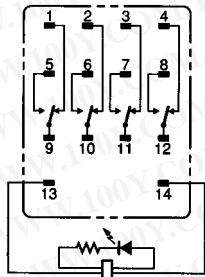
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(DC Models Only)



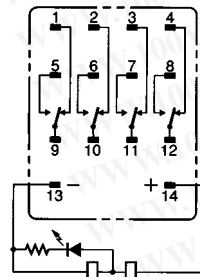
MY4(Z)



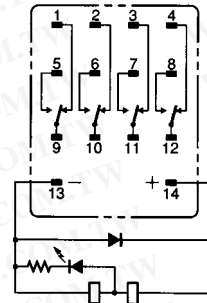
MY4(Z)N/MY4(Z)IN  
(AC Models)



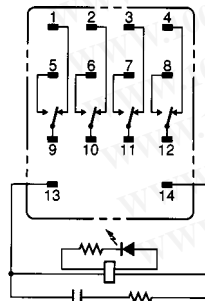
MY4(Z)N/MY4(Z)IN  
(DC Models)



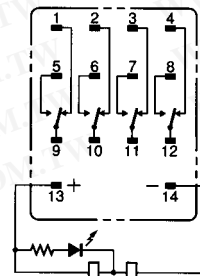
MY4(Z)N-D/MY4(Z)IN-D2  
(DC Models Only)



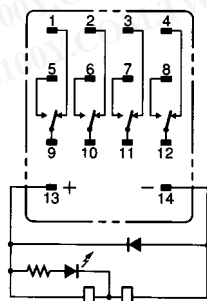
MY4(Z)N-CR/MY4(Z)IN-CR  
(AC Models Only)



MY4(Z)N1/MY4(Z)IN1  
(DC Models Only)



MY4(Z)N1-D2/MY4(Z)IN1-D2  
(DC Models Only)



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## Accessories (order separately)

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### ■ SOCKETS

Poles	Front-mounting Socket (DIN-track/screw mounting)	Back-mounting Socket		
		Solder terminals		PCB terminals
		Without clip	With clip	
2	PYF08A-E	PY08	PY08-Y1	PY08-02
4	PYF14A-E	PY14	PY14-Y1	PY14-02

### ■ SOCKET HOLD-DOWN CLIP PAIRING

Relay type	Poles	Front-connecting Socket (DIN-track/screw mounting)		Back-connecting Socket			
		Solder terminals		Solder terminals		PCB terminals	
		Socket	Clip	Socket	Clip	Socket	Clip
Without 2-pole test button	2	PYF08A-E	PYC-A1	PY08	PYC-P	PY08-02	PYC-P
	4	PYF14A-E		PY14	PYC-P2	PY14-02	PYC-P2
2-pole test button	2	PYF08A-E	PYC-E1	PY08	PYC-P2	PY08-02	PYC-P2

### ■ MOUNTING PLATES FOR SOCKETS

Socket model	For 1 Socket	For 18 Sockets	For 36 Sockets
PY08, PY14	PYP-1	PYP-18	PYP-36

Note: PYP-18 and PYP-36 can be cut into any desired length in accordance with the number of Sockets.

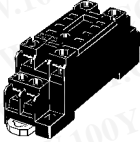
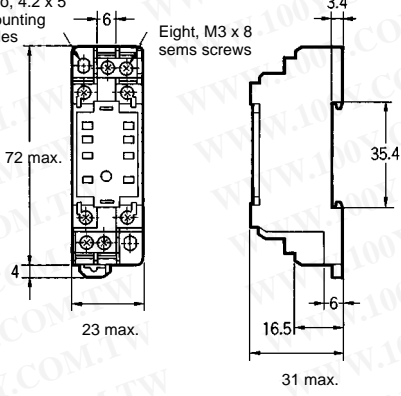
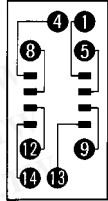
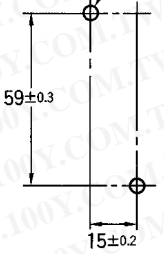

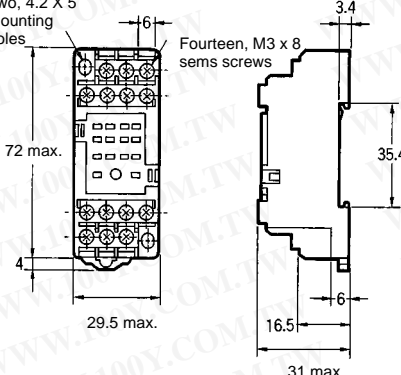
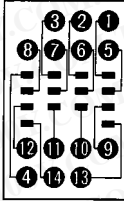
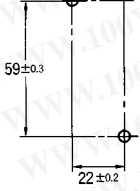

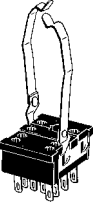
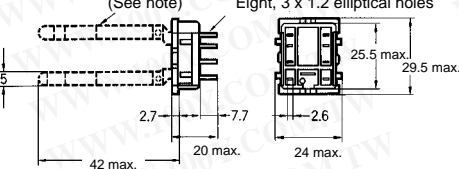
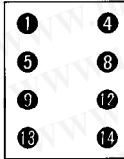
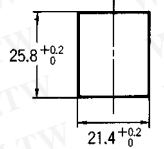

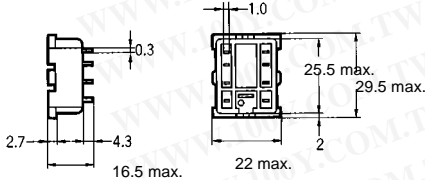
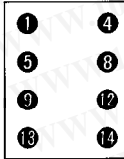
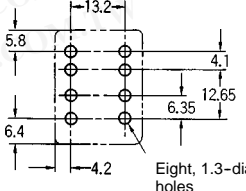
### ■ DIN RAIL TRACK AND ACCESSORIES

Description	Part number
Mounting Rail (length = 500 mm)	PFP-50N
Mounting Rail (length = 1,000 mm)	PFP-100N, PFP-100N2
End Plate	PFP-M
Spacer	PFP-S

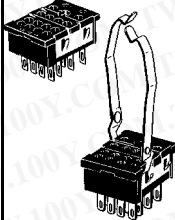
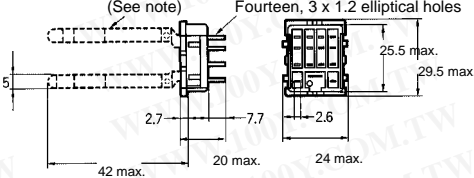
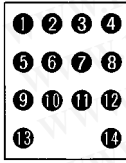
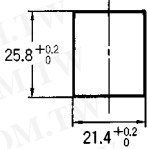

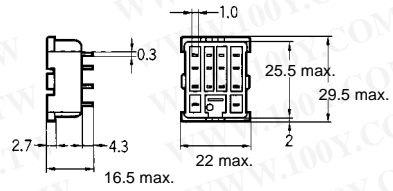
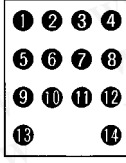
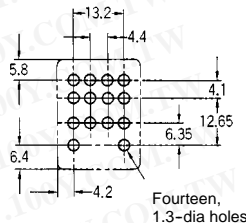
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# Dimensions

Unit: mm (inch)

Socket	Dimensions	Terminal arrangement/Internal connections (top view)	Mounting holes
<p>PYF08A-E</p> 	<p>Two, 4.2 x 5 mounting holes</p> <p>Eight, M3 x 8 sems screws</p> 		<p>Two, M3, M4, or 4.5-dia holes</p>  <p>(TOP VIEW)</p> <p><b>Note:</b> Track mounting is also possible. Refer to page NO TAG for supporting tracks.</p>
<p>PYF14A-E</p> 	<p>Two, 4.2 X 5 mounting holes</p> <p>Fourteen, M3 x 8 sems screws</p> 		<p>Two, M3, M4, or 4.5-dia holes</p>  <p>(TOP VIEW)</p> <p><b>Note:</b> Track mounting is also possible. Refer to page NO TAG for supporting tracks.</p>
<p>PY08/PY08-Y1</p>  	<p>(See note)</p> <p>Eight, 3 x 1.2 elliptical holes</p>  <p><b>Note:</b> The PY08-Y1 includes sections indicated by dotted lines.</p>		
<p>PY08-02</p> 			 <p>Eight, 1.3-dia holes</p>

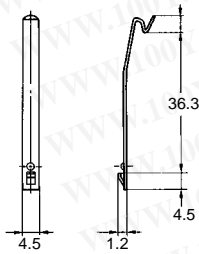


Socket	Dimensions	Terminal arrangement/Internal connections (top view)	Mounting holes
	 <p>(See note) Fourteen, 3 x 1.2 elliptical holes</p> <p>Note: The PY14-Y1 includes sections indicated by dotted lines.</p>		
			 <p>Fourteen, 1.3-dia holes</p>

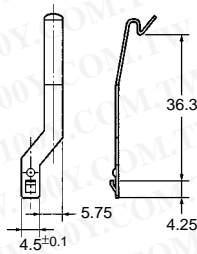
Note: Use a panel with plate thickness of 1 to 2 mm for mounting the Sockets.

■ HOLD-DOWN CLIPS

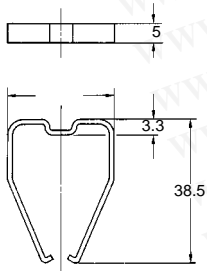
PYC-A1



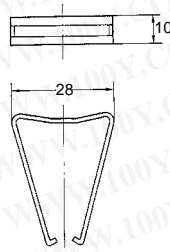
PYC-E1



PYC-P



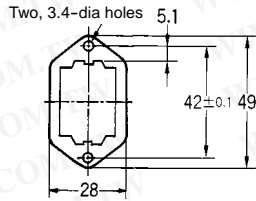
PYC-P2



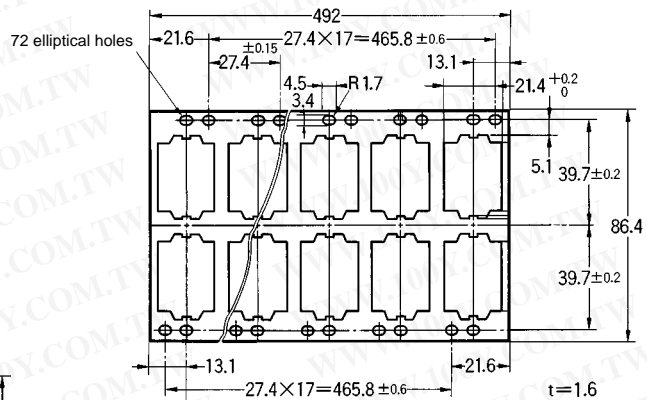
勝特力材料 886-3-5753170  
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■ MOUNTING PLATES FOR BACK-CONNECTING SOCKETS

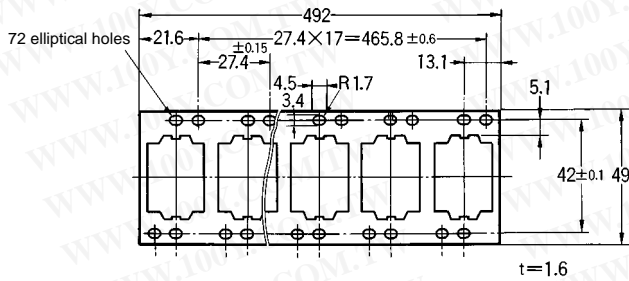
PYP-1



PYP-36



PYP-18

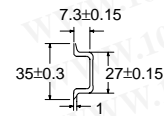
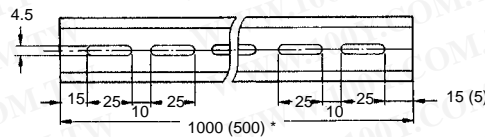
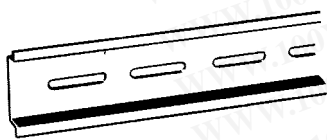


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■ MOUNTING TRACK AND ACCESSORIES

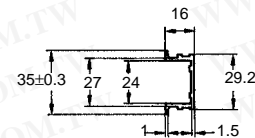
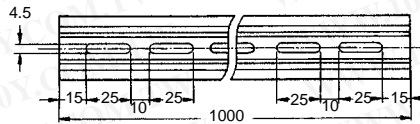
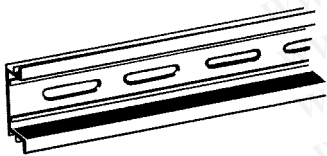
Din rail track

PFP-50N/PFP-100N

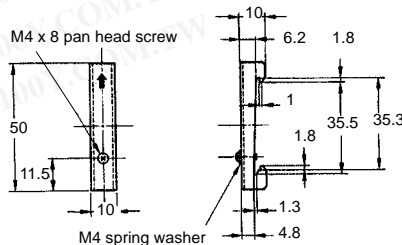
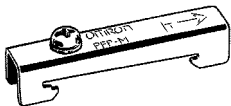


Note: The figure in the parentheses is for PFP-50N.

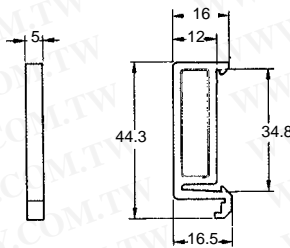
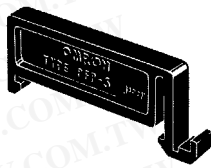
PFP-100N2



End plate



Spacer



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## ■ APPROVALS

### UL recognized type (File no. E41515)

Type	Contact form	Coil ratings	Contact ratings
MY□	DPDT	6 to 240 VAC, 6 to 120 VDC	5 A, 120 VAC (resistive)
			5 A, 28 VDC (resistive)
			5 A, 240 VAC (inductive)
	3PDT		5 A, 28 VDC (resistive)
			5 A, 240 VAC (resistive)
			3 A, 28 VDC (resistive)
	4PDT		3 A, 120 VAC (inductive)
			1.5 A, 240 VAC (inductive)
			5 A, 240 VAC (inductive, same polarity)
			5 A, 28 VDC (resistive, same polarity)
MY2K-□	DPDT	5 to 120 VAC, 5 to 48 VDC	3 A, 240 VAC (resistive)
			3 A, 28 VDC (resistive)

### CSA certified type (File no. LR31928)

Type	Contact form	Coil ratings	Contact ratings
MY□	DPDT, 3PDT	6 to 240 VAC, 6 to 120 VDC	5 A, 28 VDC (resistive)
			5 A, 240 VAC (inductive)
	4PDT		3 A, 28 VDC (resistive)
			3 A, 240 VAC (inductive)
			5 A, 240 VAC (inductive, same polarity)
			5 A, 28 VDC (resistive, same polarity)
MY2K-□	DPDT	5 to 120 VAC, 5 to 48 VDC	3 A, 240 VAC (general purpose)
			3 A, 28 VDC (resistive)

### LR (Lloyd's register) approved type (File no. 563KOB-204524)

Type	Contact form	Coil ratings	Contact ratings
MY□	DPDT	6 to 240 VAC, 6 to 120 VDC	2 A, 30 VDC (inductive)
			2 A, 200 VAC (inductive)
	4PDT		1.5 A, 30 VDC (inductive)
			0.8 A, 200 VAC (inductive)
			1.5 A, 115 VAC (inductive)