

General-purpose Relay MY

Versatile, Multi-featured, Miniature Power Relay for Sequence Control and Power Switching Applications

- Models with lockable test buttons now available.
- Multiple features available, including operation indicators (mechanical and LED indicators), lockable test button, built-in diode and CR (surge suppression), bifurcated contacts, etc.
- Environment-friendly cadmium-free contacts.
- Wide range of Sockets (PY, PYF Series) and optional parts.
- Max. Switching Current: 2-pole: 10 A, 4-pole: 5 A
- Provided with nameplate.
- RoHS Compliant.



Ordering Information

■ Relays

Standard Coil Polarity

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

Reverse Coil Polarity

Type	Contact form	Model	
		Plug-in socket/solder terminals	
		With LED indicator	With LED indicator and lockable 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(s), followed by "(S)". Rated coil voltages are given in the coil ratings table.
Example: MY2 AC12(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.

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				
	48/50 V*	24.7/25.7 mA	21.1/22.0 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 to 1.1 VA (60 Hz)
	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				
										0.9 W

- Note:**
- 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.
 - Performance characteristic data are measured at a coil temperature of 23°C.
 - AC coil resistance and impedance are provided as reference values (at 60 Hz).
 - Power consumption drop was measured for the above data. When driving transistors, check leakage current and connect a bleeder resistor if required.
 - 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 (cosφ = 1)	Inductive load (cosφ = 0.4, L/R = 7 ms)	Resistive load (cosφ = 1)	Inductive load (cosφ = 0.4, L/R = 7 ms)	Resistive load (cosφ = 1)	Inductive load (cosφ = 0.4, L/R = 7 ms)
Rated load	5 A, 250 VAC 5 A, 30 VDC	2 A, 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
Min. permissible load*	5 VDC, 1 mA		1 VDC, 1 mA		1 VDC, 100 μA	

* Reference value.

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 ² (approx. 100G) Malfunction:200 m/s ² (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	5% to 85% RH
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.	500,000 operations min.
4-pole	DC:100,000,000 operations min.	200,000 operations min.
4-pole (bifurcated)	20,000,000 operations min.	100,000 operations min.

■ Approved Standards

VDE, UL, CSA, CE
(CE marking is provided only on non-PCB terminal versions)

■ Precautions

Connections

Do not reverse polarity when connecting DC-operated Relays with built-in diodes or indicators or high-sensitivity DC-operated Relays.

Mounting

Whenever possible, mount Relays so that it is not subject to vibration or shock in the same direction as that of contact movement.

Accessories (order separately)

■ Track-mounted Screwless Clamp Terminal Sockets

Item	Model			
	4-pole		2-pole	
Socket	PYF14S		PYF08S	
Clip & release lever	PYCM-14S		PYCM-08S	
Nameplate	R99-11 Nameplate for MY			
Socket bridge	PYDM-14SR	PYDM-14SB	PYDM-08SR	PYDM-08SB

Note: For complete specifications, see the datasheet at Omron's Knowledge Center on our website: www.knowledge.omron.com.

■ Sockets

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

■ Socket Specifications

Item	Pole	Model	Carry current	Dielectric withstand voltage	Insulation resistance (see note 2)
Screwless clamp terminal socket	2	PYF08S	10 A	2,000 VAC, 1 min	Less than 1,000 MΩ
	4	PYF14S	5 A		
Track-mounted socket	2	PYF08A-E	7 A	2,000 VAC, 1 min	1,000 MΩ min.
		PYF08A-N (see note 3)	7 A (see note 4)		
	4	PYF14A-E	5 A		
		PYF14A-N (see note 3)	5 A (see note 4)		
Back-connecting socket	2	PY08(-Y1)	7 A	1,500 VAC, 1 min	100 MΩ min.
		PY08-02			
	4	PY14(-Y1)	3 A		
		PY14-02			

- Note:**
- The values given above are initial values.
 - The values for insulation resistance were measured at 500 V at the same place as the dielectric strength.
 - The maximum operating ambient temperature for the PYF08A-N and PYF14A-N is 55°C.
 - When using the PYF08A-N or PYF14A-N at an operating ambient temperature exceeding 40°C, reduce the current to 60%.
 - The MY2(S) can be used at 70°C with a carry current of 7 A.

■ Socket Hold-down Clip Pairing

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