General Purpose Relay
MK

- Exceptionally reliable general purpose relay.
- Long life (minimum 100,000 electrical operations) assured by silver contacts.
- Built-in operation indicator (mechanical, LED), diode surge suppression, Varistor surge suppression.
- The contact operation can be easily checked by mechanical indicator and/or push-to-test button options.
- Conforms to CENELEC standards.
- VDE approved versions available.

Ordering Information

To Order: Select the part number and add the desired coil voltage rating (e.g., MK3P5-S-*AC120*).

Type	Terminal	Coil	Contact form	Model	
				Mechanical indicator	Mechanical indicator & push-to-test button
Standard	Plug-in	AC/DC	DPDT	**MK2P-I**	**MK2P-S**
			3PDT	**MK3P-5-I**	**MK3P-5-S**
LED indicator			DPDT	**MK2PN-I**	**MK2PN-S**
			3PDT	**MK3PN-5-I**	**MK3PN-5-S**
LED indicator and diode		DC	DPDT	**MK2PND-I**	**MK2PND-S**
			3PDT	**MK3PND-5-I**	**MK3PND-5-S**
LED indicator and varistor		AC	DPDT	**MK2PNV-I**	**MK2PNV-S**
			3PDT	**MK3PNV-5-I**	**MK3PNV-5-S**
Diode		DC	DPDT	**MK2PD-I**	**MK2PD-S**
			3PDT	**MK3PD-5-I**	**MK3PD-5-S**
Varistor		AC	DPDT	**MK2PV-I**	**MK2PV-S**
			3PDT	**MK3PV-5-I**	**MK3PV-5-S**

Note: 1. Reverse polarity versions available on DC coil types. Consult your OMRON representative for further information.
2. VDE approved versions are available. Consult your OMRON representative for further information.

■ Accessories (Order separately)

To Order: Select the appropriate part numbers for sockets, clips, and mounting tracks (if required) from the available types chart.

Track Mounted Sockets

Relay type	Model		
	Socket	Relay hold-down clip	Mounting track/end plate
SPDT DPDT	**PF083A-E**	**PFC-A1**	**PFP-100N** or **PFP-50N** and **PFP-M** (end plate)
3PDT	**PF113A-E**	**PFC-A1**	**PFP-100N** or **PFP-50N** and **PFP-M** (end plate)

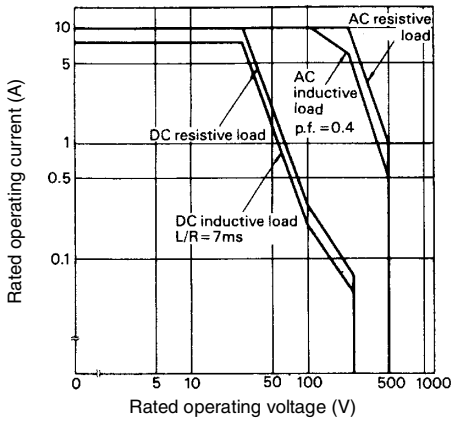
■ Characteristics

Contact resistance		50 mΩ max.
Operate time		AC: 20 ms max. DC: 30 ms max.
Release time		20 ms max.
Operating frequency	**Mechanical**	18,000 operations/hour
	Electrical	1,800 operations/hour (under rated load)
Insulation resistance		100 MΩ min. (at 500 VDC)
Dielectric strength		2,500 VAC, 50/60 Hz for 1 minute between coil and contacts 1,000 VAC, 50/60 Hz for 1 minute between contacts of same poles, between terminals of the same polarity 2,500 VAC, 50/60 Hz for 1 minute between current-carrying parts, noncurrent-carrying parts, and terminals of opposite polarity
Vibration	**Mechanical durability**	10 to 55 Hz, 1.50 mm (0.06 in) double amplitude
	Malfunction durability	10 to 55 Hz, 1.00 mm (0.04 in) double amplitude
Shock	**Mechanical durability**	1,000 m/s^2 (approx. 100 G)
	Malfunction durability	100 m/s^2 (approx. 10 G)
Ambient temperature		Operation: -10° to 40°C (14° to 104°F)
Humidity		35 to 85% RH
Service Life	**Mechanical**	10 million operations min. (at operating frequency of 18,000 operations/hour)
	Electrical	100,000 operations at rated load (at operating frequency of 1,800 operations/hour)
Weight		Approx. 85 g (3.0 oz)

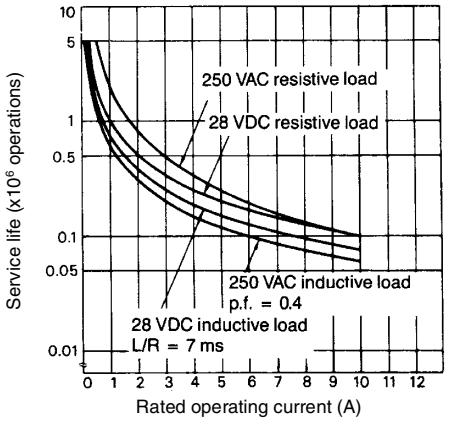
Note: Data shown are of initial value.

■ Characteristic Data

Maximum switching capacity
MK2P-S

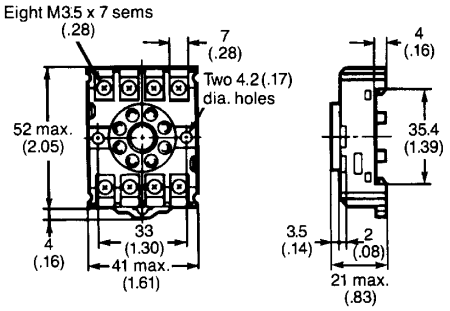


Electrical service life
MK2P-S, MK3P5-S

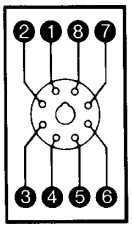


■ Accessories

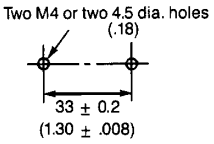
Track mounted socket
PF083A-E (conforming to DIN EN 50022)



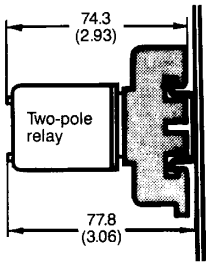
Terminal arrangement



Mounting holes

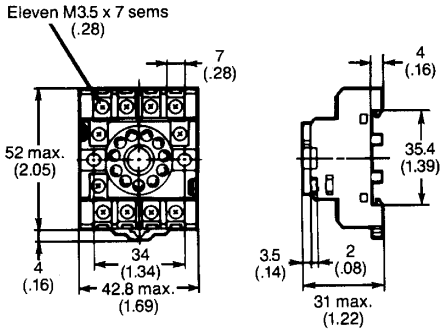


Mounting dimensions of relay with socket

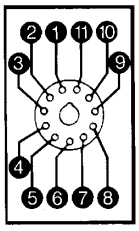


Note: Model PF083A-E can be used as a front connecting socket.

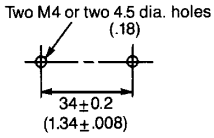
Track mounted socket
PF113A-E (conforming to DIN EN 50022)



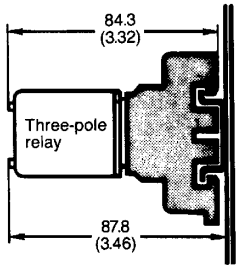
Terminal arrangement



Mounting holes



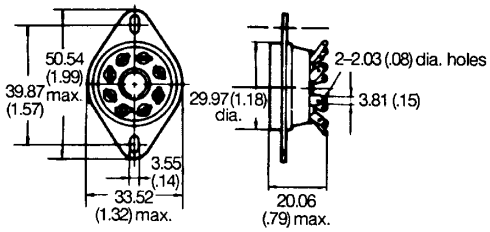
Mounting dimensions of relay with socket



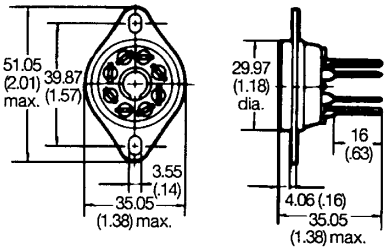
Note: Model PF113A-E can be used as a front connecting socket.

Back connecting socket
MK2 sockets (8 pin)

PL08 (UL File No. E87929)
Solder terminals

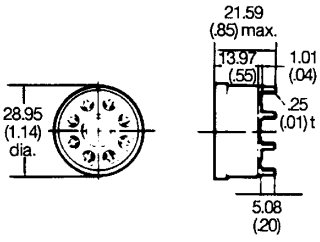


PL08-Q
Wire wrap terminals

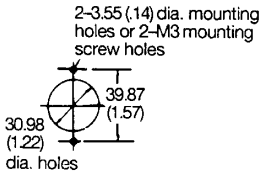


Printed circuit board socket

PLE08-0

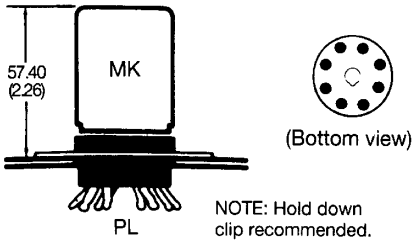


Mounting holes
PL08



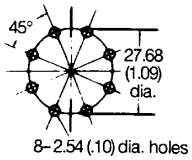
Mounting holes and panel cut-out applies to PL08 and PL08-Q

PL08 type sockets and MK2 relay
Total height dimension



NOTE: Hold down clip recommended.

Recommended PCB layout
PLE08-0



■ Approvals

UL (File No. E41515)/CSA (File Nos. LR41408 and LR335535)

Type	Contact form	Coil ratings	Contact ratings
MK2P-I, -S	DPDT	6 to 250 VAC 6 to 110 VDC	10 A, 250 VAC, Resistive
			10 A, 28 VDC, Resistive
			7 A, 250 VAC, Inductive
MK3P5-I, -S	3PDT	6 to 250 VAC 6 to 110 VDC	10 A, 120 VAC, Resistive
			10 A, 28 VDC, Resistive
			10 A, 250 VAC, Resistive
			7 A, 250 VAC, Inductive

SEV, DEMKO

Type	Contact form	Coil ratings	Contact ratings
MK2P-I, -S	DPDT	6 to 110 VDC	10 A, 250 VAC (NO) (cosø = 1)
			5 A, 250 VAC (NC) (cosø = 1)
			10 A, 280 VDC (NO)
MK3P5-I, -S	3PDT	6 to 240 VAC	5 A, 280 VDC (NC)
			7 A, 250 VAC (cosø = 0.4)

TUV (File No. R9051410)

Type	Contact form	Coil ratings	Contact ratings
MK2P-I, -S	DPDT	6, 12, 24, 48, 100, 110 VDC	10 A, 250 VAC (NO) (cosø = 1)
			5 A, 250 VAC (NC) (cosø = 1)
			10 A, 280 VDC (NO)
MK3P5-I, -S	3PDT	6, 12, 24, 50, 110, 115, 120, 200, 220, 230, 240 VAC	5 A, 280 VDC (NC)
			7 A, 250 VAC (cosø = 0.4)

Note: 1. The rated values approved by each of the safety standards (e.g., UL and CSA) may be different from the performance characteristics individually defined in this catalog.

2. VDE, Nemko and Semko versions are available. Please consult your OMRON representative for further information.

3. In the interest of product improvement, specifications are subject to change.

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   (iii) Use in consumer products or any use in significant quantities.
   (iv) Systems, machines and equipment that could present a risk to life or property. Please know and observe all prohibitions of use applicable to this product.

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