OMRON

Latching Relay

MKK–P

Magnetic Latching Relay Ideal for Memory Circuits

- Magnetic materials allow long, continuous holding times.
- Key characteristics unaffected by aging assure long service life.
- High vibration and shock resistance.
- Built–in operation indicator for easy relay operation monitoring.

Ordering Information

Contact form	Plug-in type
DPDT	MK2KP

Note: When ordering, add the rated coil voltage (listed in "Specifications") to the model number as shown below:

Example: MK2KP AC 240

Rate of coil voltage

Specifications

■ Time Ranges

Rates voltage (v)		Item										
		Set coil			Reset coil			Must set voltage	Must reset voltage	Maxium voltage	Power consumption (VA, W)	
		Rated current (mA)	Coil resistance (W)	Coil inductance (ref. value) (H) Armature ON	Rated current (mA)	Coil resistance (W)	Coil inductance (ref. value) (H) Armature OFF	% of rated voltage			Set coil	Reset coil
AC	6	286	4.8	0.05	29	78	0.16	80 max.	80 max.	110	Approx. 1.5 to 2	Approx. 0.1 to 0.7
	12	128	25	0.22	14.4	325	0.59					
	24	66	105	0.88	10.8	965	1.09					
	50	31	410	3.93	3.2	8,450	5.03					
	100	17.8	1,670	13.4	3.6	13,350	13.8					
	110	19.6	1,670	13.5	4	13,350	15.1					
	120	19	1,900	15.1	4.2	12,400	16.7					
	200	9.8	6,200	48.9	3.2	27,350	29.2					
	220	10.6	6,200	49.8	3.5	27,350	35.3					
	240	10.4	7,400	54.9	3.4	29,100	53.2					
DC	6	390	13	0.056	92.5	64	0.013				Approx. 2.3 to 2.7	Approx. 0.5 to 1.2
	12	205	52	0.23	50	240	0.05					
	24	110	210	0.90	22.8	1,050	0.20					
	48	48.5	990	4.13	23.4	2,050	0.20					
	100	24	4,160	16.5	10.3	9,740	1.25					
	110	26.4	4,160	16.5	11.3	9,740	1.25					

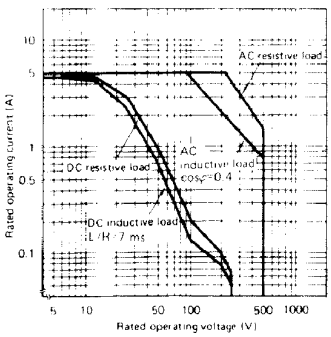
Note:
1. The rated current and coil resistance are measured at a coil temperature of 23%C with tolerances of +15%, –20% for rated current, and +15% for rated coil resistance.
2. The rated current and performance characteristics are measured at a coil temperature of 5 to 35%C.
3. Peak reverse voltage of the built-in diode is 1,000 V.

Contact ratings

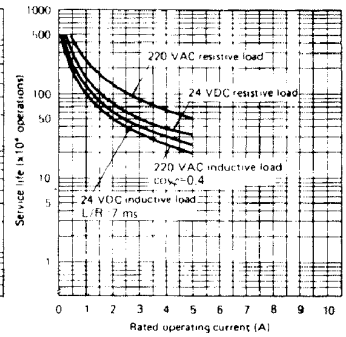
Item / Load	Resistive load (cosm=1)	Inductive load (cosm=0.4; L/R = 7 ms)
Rated load	220 VAC 5 A 24 VDC 3 A	220 VAC 2 A 24 VDC 2.5 A
Carry current	5 A	
Max. operating voltage	500 VAC 250 VDC	
Max. operating current	5 A	AC 5 A DC 4.6 A
Max. switching capacity	1,100 VA, 72 W	440 VA, 60 W
Minimum permissible load	1 VDC 1 mA (reference value)	

Engineering Data

Maximum switching capacity



Electrical service life

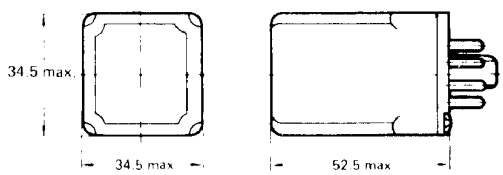


Characteristics

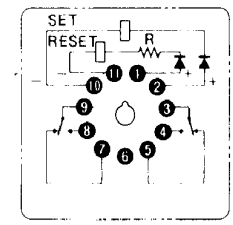
Contact resistance	50 mg max.
Operate time	30 ms max.
Release time	30 ms max.
Operating frequency	Mechanical: 1,800 operations/hour Under rated load: 1,800 operations/hour
Insulation resistance	100 Mg min. (at 500 VDC)
Dielectric strength	2,000 VAC, 50/60 Hz for 1 minute (1,000 VAC between contacts of the same polarity and between set and reset coils)
Vibration	Mechanical durability: 10 to 55 Hz; 1.5 mm double amplitude Malfunction durability: 10 to 55 Hz; 1.0 mm double amplitude
Shock	Mechanical durability: 500 m/s^2 (approx. 50 G) Malfunction durability: 100 m/s^2 (approx. 10 G)
Ambient temperature	Operating: –10 to 40%C
Humidity	35 to 85% RH
Service life	Mechanical: 5,000,000 operations min. (at operating frequency of 1,800 operations/hour) Electrical See "CHARACTERISTIC DATA".
Weight	Approx. 85 g

Note: The data shown above are initial values.

Dimensions



Terminal arrangement/Internal connections (bottom view)



NOTE:
1. R is a resistor for ampere-turn compensation, and is incorporated in the relays rated at 50 VAC or above and 48 VDC or above.
2. Pay attention to the polarity of the set and reset coils, as incorrect connection of positive and negative terminals will result in malfunctioning of the relay.

■ Sockets (Order Separately)

DIN Rail (track) mounted Socket

PF083A-E
PF113A-E