

Power Relay

MM4PN DC100/110

Power relay, With operation indicator, 4 poles, With Case, Plug-In terminal, 100/110 VDC



Image

Coil ratings	100 VDC 22.2 mA 110 VDC 24.7 mA
Operating indicator	Neon lump
Contact form	4PDT
Contact method	Single
Contact material	Ag
Contact rated load	220 VAC 7.5 A (Resistive load (cosφ = 1)) 220 VAC 7.5 A (Inductive load (cosφ = 0.4)) 24 VDC 5 A (Resistive load) 24 VDC 5 A (Inductive load (L/R = 7 ms))
Terminal structure	Plug-in terminal

Ratings / Performance

As of July 25, 2024

Ratings

Operating indicator		Neon lump
Degree of protection		Closed type (cover)
Terminal structure		Plug-in terminal
Coil	Coil ratings	100 VDC 22.2 mA 110 VDC 24.7 mA
	Coil resistance	4500 Ω
	Operate voltage (Set voltage)	70 % max.
	Release voltage (Reset voltage)	10 % min.
	Maximum voltage	110 %
	Power consumption	Approx. 2.7 W
Contact	Contact rated load	220 VAC 7.5 A (Resistive load (cosφ = 1)) 220 VAC 7.5 A (Inductive load (cosφ = 0.4)) 24 VDC 5 A (Resistive load) 24 VDC 5 A (Inductive load (L/R = 7 ms))
	Max. contact voltage	250 VAC 250 VDC
	Max. contact current	AC: 7.5 A DC: 7.5 A
	Maximum switching power	1700 VA (Resistive load (cosφ = 1)) 1700 VA (Inductive load (cosφ = 0.4)) 120 W (Resistive load) 120 W (Inductive load (L/R = 7 ms))
	Contact form	4PDT

Contact method	Single
Contact material	Ag

Performance

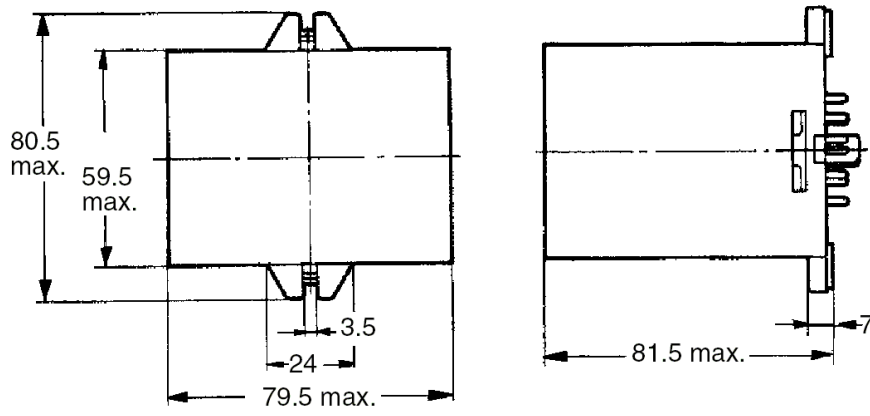
Contact resistance	50 mΩ max. (Voltage drop method with 5 VDC 1 A)
Operating time	50 ms max. (With rated operating power applied, 23 °C, not including contact bounce)
Reset time	30 ms max. (With rated operating power applied, 23 °C, not including contact bounce)
Maximum operating frequency	Mechanical: 7200 time/hour Rated load: 1800 time/hour
Insulation resistance	Between coil and contacts: 100 MΩ min. (at 500 VDC) Between contacts of different polarity: 100 MΩ min. (at 500 VDC) Between contacts of same polarity: 100 MΩ min. (at 500 VDC)
Dielectric strength	Between coil and contacts: 2000 VAC 50/60 Hz 1 min Between contacts of different polarity: 2000 VAC 50/60 Hz 1 min Between contacts of same polarity: 1500 VAC 50/60 Hz 1 min
Vibration resistance (destruction)	10 to 55 to 10 Hz, 0.75 mm single amplitude (1.5 mm double amplitude)
Vibration resistance (Malfunction)	10 to 55 to 10 Hz, 0.5-mm single amplitude (1-mm double amplitude)
Shock resistance (destruction)	1000 m/s ²
Shock resistance (Malfunction)	100 m/s ²
Endurance (Mechanical)	5,000,000 operations min. (switching frequency 7,200 operations/h)
Endurance (Electrical)	500,000 operations min. (23 °C, Rated load, switching frequency 1,800 operations/h)
Failure rate	5 VDC 10 mA (failure level: Preference value, Switching frequency: 60 operations per minute)
Ambient temperature (Operating)	-10 to 55 °C (with no freezing or condensation)
Ambient humidity (Operating)	5 to 85 %
Mounting method	Socket
Applicable socket	14PFA/ PL15

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Dimensions

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Outline drawing

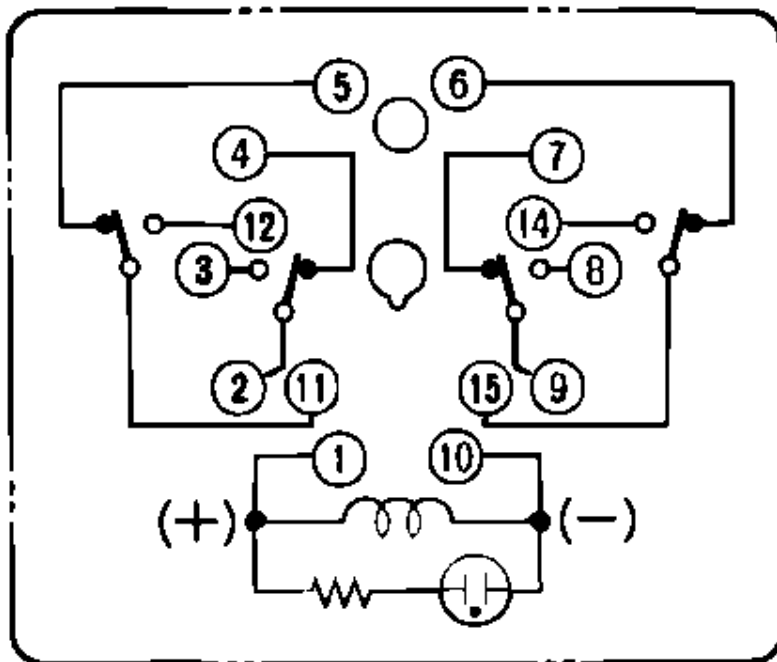


As of July 25, 2024

Terminal arrangement and internal connection

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Terminal arrangement and internal connection

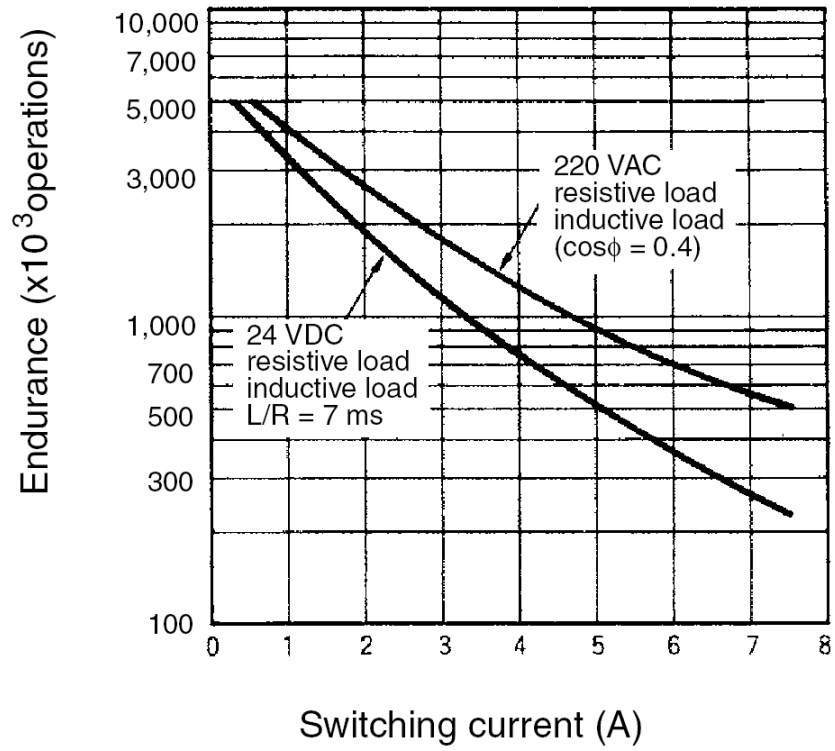


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Characteristic chart

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Electrical life curve



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