Power Relay

MM4XP-D DC100/110

Image

Power relay, 4 poles, DC-switching type, Plug-in terminal, Models with built-in diodes, 100/110 VDC

Coil ratings	100 VDC 22 mA 110 VDC 24.5 mA
Coil surge killer	Diode
Contact form	4PDT
Contact method	Single
Contact material	Ag
Contact rated load	110 VDC 7 A (Resistive load) 110 VDC 6 A (Inductive load (L/R = 7 ms))
Terminal structure	Plug-in terminal

Ratings / Performance

As of July 25, 2024

Ratings

Coil surge killer		Diode
Degree of protection		Closed type (cover)
Terminal structure		Plug-in terminal
Coil	**Coil ratings**	100 VDC 22 mA 110 VDC 24.5 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**	110 VDC 7 A (Resistive load) 110 VDC 6 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	20 VA 800 W (Resistive load) 660 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 ℃, not including contact bounce)
Reset time	100 ms max. (With rated operating power applied, 23 ℃, 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 ℃, 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 ℃ (with no freezing or condensation)
Ambient humidity (Operating)	5 to 85 %
Mounting method	Socket
Applicable socket	14PFA/ PL15

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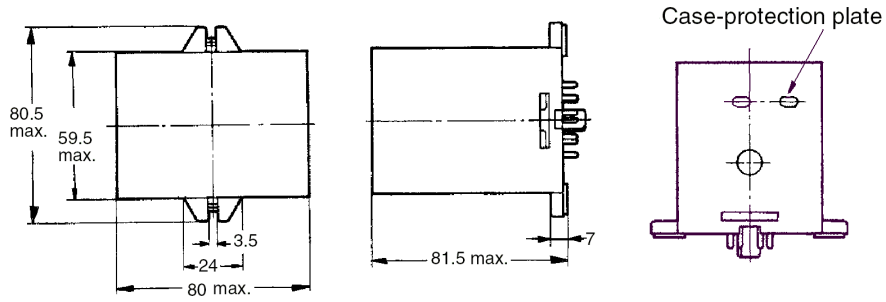
Dimensions

As of July 25, 2024

Outline drawing



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Terminal arrangement and internal connection

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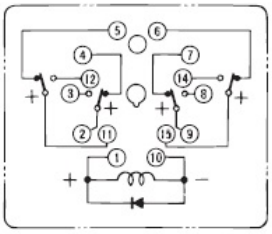
Terminal arrangement and internal connection



Make sure that all common connections have the same polarity for the MM□XP-N/-D. The markings of the common connections on the casing all show "+" but the polarity of the common connections can be either negative or positive as long as they are all the same.

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Characteristic chart

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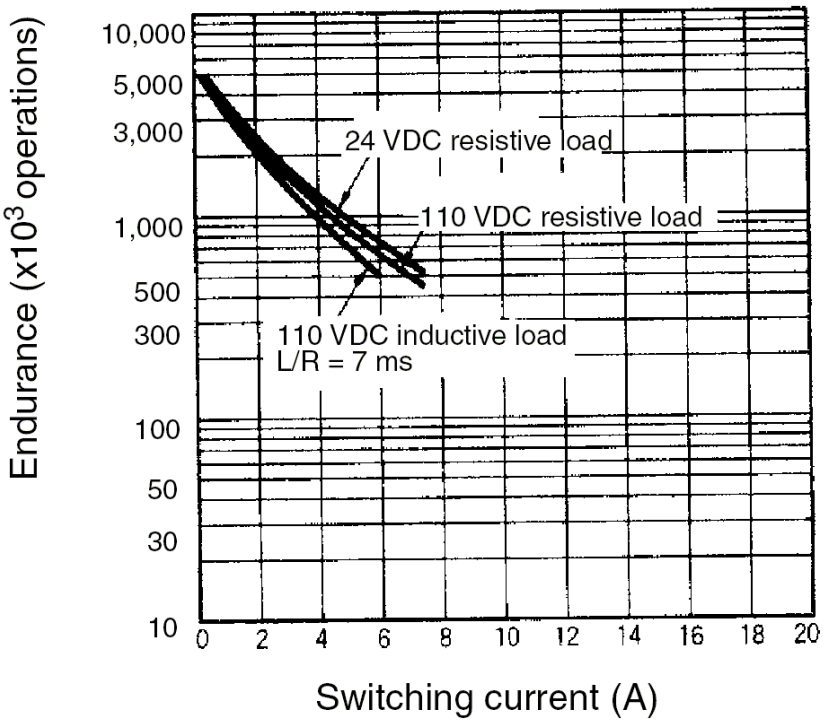
Electrical life curve



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