

Ratchet Relay

G4Q-212S AC24



Image

Ratchet relay, 2 poles, Cover, Plug-in terminal, 24 VAC

Coil ratings	24 VAC 50 Hz 307 mA 24 VAC 60 Hz 266 mA
Contact form	DPDT
Contact method	Single
Contact material	Ag alloy
Contact rated load	220 VAC 5 A (Resistive load) 220 VAC 3 A (Inductive load (cosφ = 0.4)) 24 VDC 5 A (Resistive load) 24 VDC 4 A (Inductive load (L/R = 7 ms))
Terminal structure	Plug-in terminal

Ratings / Performance

As of July 25, 2024

Ratings

Degree of protection		Closed type (cover)
Terminal structure		Plug-in terminal
Coil	Coil ratings	24 VAC 50 Hz 307 mA 24 VAC 60 Hz 266 mA
	Coil resistance	8.7 Ω
	Operate voltage (Set voltage)	80 % max.
	Release voltage (Reset voltage)	10 % min.
	Maximum voltage	110 %
	Power consumption	Approx. 13.5 VA Initial/Approx. 6.4 VA Rating
Contact	Contact rated load	220 VAC 5 A (Resistive load) 220 VAC 3 A (Inductive load (cosφ = 0.4)) 24 VDC 5 A (Resistive load) 24 VDC 4 A (Inductive load (L/R = 7 ms))
	Max. contact voltage	250 VAC 250 VDC
	Max. contact current	AC: 5 A DC: 5 A
	Maximum switching power	1100 VA (Resistive load) 660 VA (Inductive load (cosφ = 0.4)) 120 W (Resistive load) 100 W (Inductive load (L/R = 7 ms))
	Contact form	DPDT
	Contact method	Single
	Contact material	Ag alloy

Performance

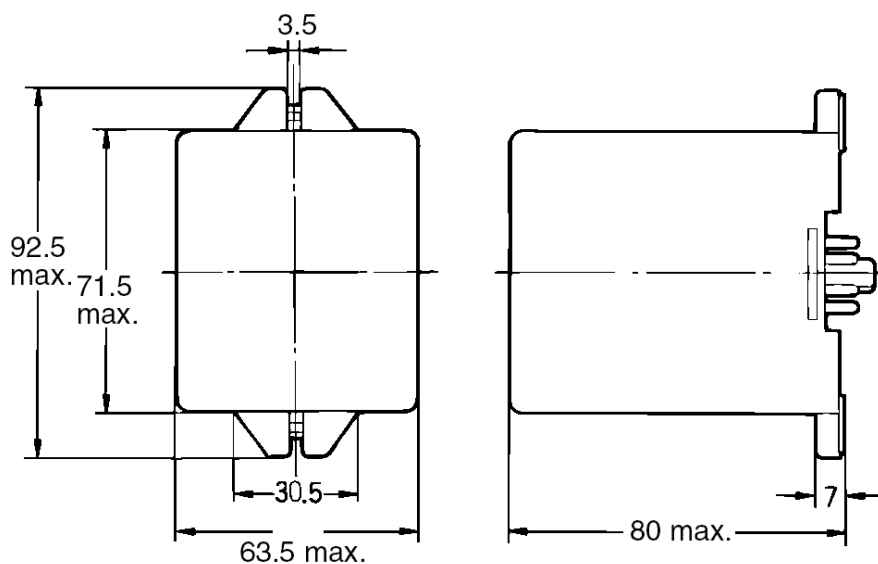
Contact resistance	50 mΩ max. (Voltage drop method with 5 VDC 1 A)
Operating time	60 ms max. (With rated operating power applied, 23 °C, not including contact bounce)
Maximum operating frequency	Mechanical: 1200 time/hour Rated load: 1200 time/hour
Insulation resistance	Between coil and contacts: 100 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: 1000 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, 0.25-mm single amplitude (0.5-mm double amplitude)
Shock resistance (destruction)	500 m/s ²
Shock resistance (Malfunction)	100 m/s ²
Endurance (Mechanical)	5,000,000 steps min. (switching frequency 1,200 operations/h)
Endurance (Electrical)	500,000 steps min. (23 °C, Rated load, switching frequency 1,200 operations/h)
Failure rate	100 mA at 5 VDC (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 %
Weight	Approx. 340 g
Mounting method	Socket
Applicable socket	8PFA1/ PL08

As of July 25, 2024

Dimensions

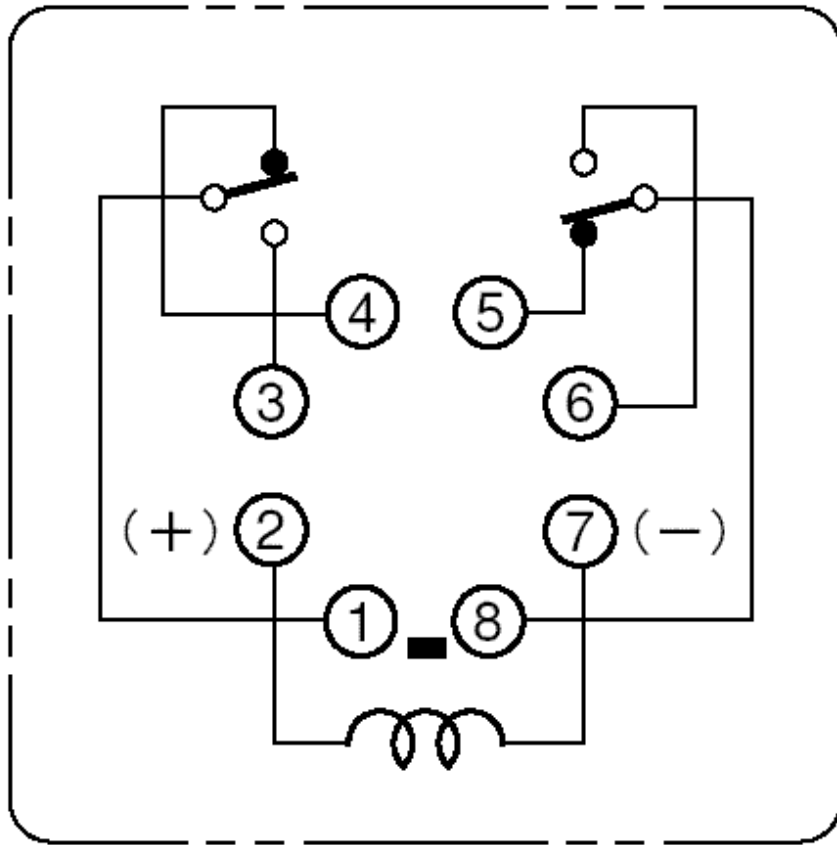
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Outline drawing



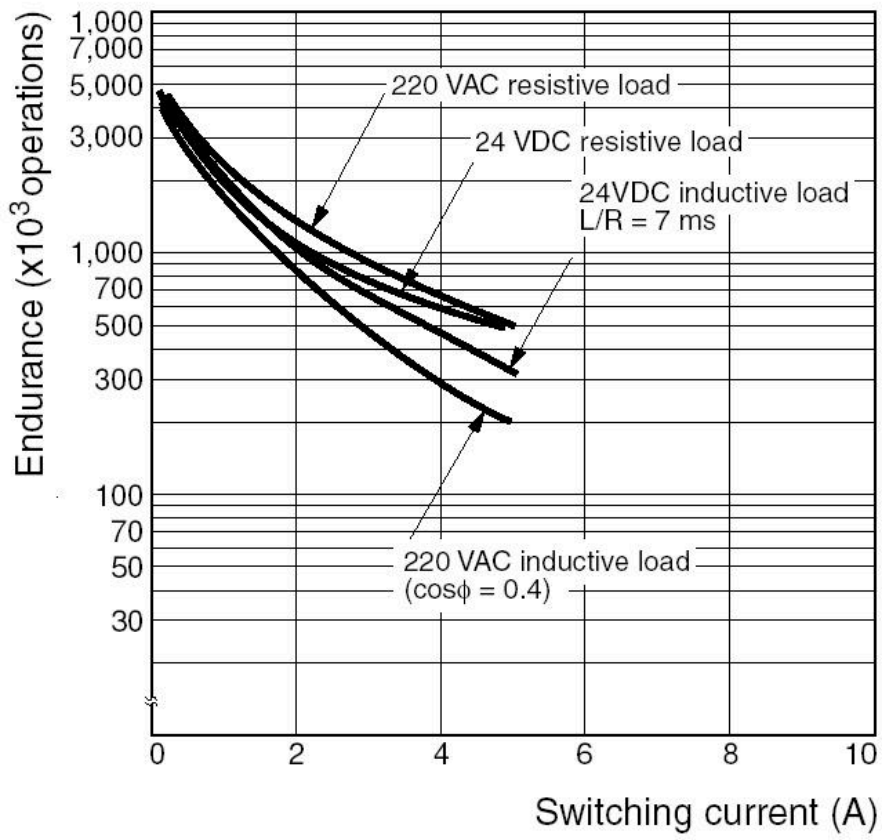
Terminal arrangement and internal connection

Terminal arrangement and internal connection



Characteristic chart

Electrical life curve



As of July 25, 2024