OMRON Industrial Automation | Global

Print

Relays with Forcibly Guided Contacts

G7SA-5A1B DC24

No Image Available

Image

Safety relay, 5PST-NO, SPST-NC, 24 VDC

Coil ratings	24 VDC 20.8 mA
Contact form	5PST-NO/SPST-NC
Contact material	Au plating + Ag alloy
Contact rated load	250 VAC 6 A (Resistive load) 30 VDC 6 A (Resistive load)
Terminal structure	PCB terminal

Ratings / Performance

As of July 25, 2024

Ratings

Degree of protection		Flux tight
Terminal structure		PCB terminal
Coil	**Coil ratings**	24 VDC 20.8 mA
	Coil resistance	1152 Ω
	Operate voltage (Set voltage)	75 % max.
	Release voltage (Reset voltage)	10 % min.
	Maximum voltage	110 %
	Power consumption	Approx. 500 mW
Contact	**Contact rated load**	250 VAC 6 A (Resistive load) 30 VDC 6 A (Resistive load)
	Max. contact voltage	250 VAC 125 VDC
	Max. contact current	AC: 6 A DC: 6 A
	Contact form	5PST-NO/SPST-NC
	Contact material	Au plating + Ag alloy

Performance

Contact resistance	100 mΩ max. (Voltage drop method with 5 VDC 1 A)
Operating time	20 ms max. (With rated operating power applied, 23 ℃, not including contact bounce)
Reset time	20 ms max. (With rated operating power applied, 23 ℃, not including contact bounce)

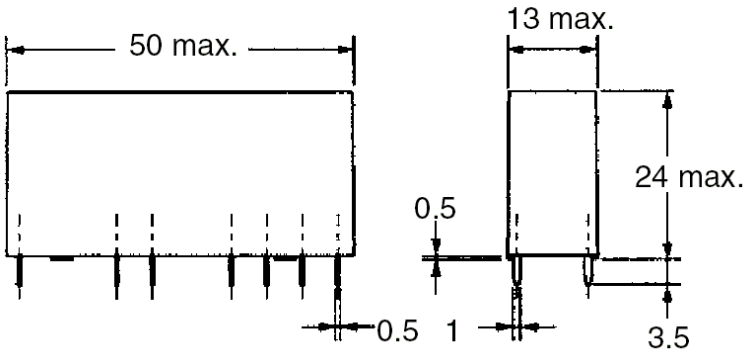
Maximum operating frequency	Mechanical: 36000 time/hour Rated load: 1800 time/hour
Insulation resistance	Between coil and contacts: 1000 MΩ min. (at 500 VDC) Between contacts of different polarity: 1000 MΩ min. (at 500 VDC) Between contacts of same polarity: 1000 MΩ min. (at 500 VDC)
Dielectric strength	Between coil and contacts: 4000 VAC 50/60 Hz 1 min Between contacts of different polarity (Between pole 3 and pole 5_pole 4 and pole 6_pole 5 and pole 6): 2500 VAC 50/60 Hz 1 min Between contacts of different polarity (Except for between pole 3 and pole 5_pole 4 and pole 6_pole 5 and pole 6): 4000 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, 0.75 mm single amplitude (1.5 mm double amplitude)
Shock resistance (destruction)	1000 m/s^2
Shock resistance (Malfunction)	100 m/s^2
Endurance (Mechanical)	10,000,000 operations min. (switching frequency 36,000 operations/h)
Endurance (Electrical)	100,000 operations min. (rated load)
Failure rate	5 VDC 1 mA (failure level: Preference value, Switching frequency: 300 operations per minute)
Ambient temperature (Operating)	-40 to 85 ℃ (with no freezing or condensation)
Ambient humidity (Operating)	5 to 85 %
Weight	Approx. 25 g
Mounting method	Socket, Soldering
Applicable socket	P7SA-14F/ P7SA-14F-ND/ P7SA-14P/ P7SA-14F-ND-PU

As of July 25, 2024

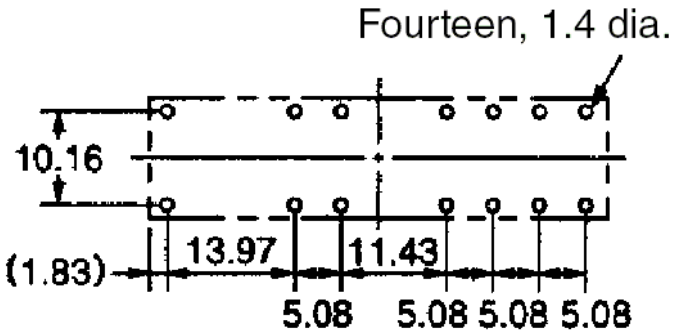
Dimensions

As of July 25, 2024

Outline drawing



Mounting hole dimensions

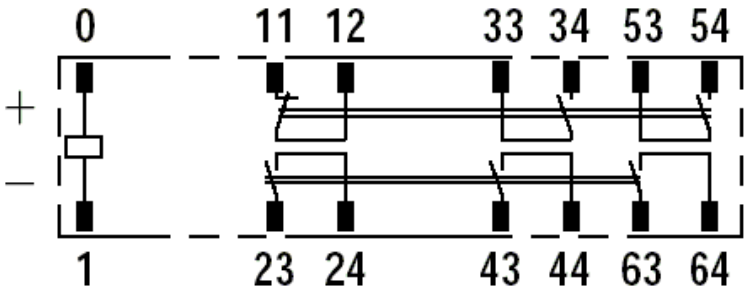


As of July 25, 2024

Terminal arrangement and internal connection

As of July 25, 2024

Terminal arrangement and internal connection



As of July 25, 2024