

Specifications

Ratings

Coil

Item	Rated current (mA)	Coil resistance (Ω)	Must operate voltage	Must release voltage	Maximum voltage	Power consumption (W)
Rated voltage			Percentage of rated voltage			
12 VDC	308	39	75% max.	10% min.	110%	Approx. 3.7
24 VDC	154	156				

Note: 1. Rated current and coil resistance were measured at a coil temperature of 23°C with coil resistance of $\pm 15\%$.
 2. Operating characteristics were measured at a coil temperature of 23°C.
 3. The maximum allowable voltage is the maximum value of the fluctuation range for the Relay coil operating power supply and was measured at an ambient temperature of 23°C.
 There is, however, no continuous allowance.

Contacts

Relay, Relay with Auxiliary Contact Block

Model		G7Z-4A-□Z-R, G7Z-3A1B-□Z-R, G7Z-2A2B-□Z-R		
Item	Load	Resistive load	Inductive load $\cos\phi = 0.3$	Resistive load L/R = 1 ms
Contact structure		Single break		
Contact material		Ag alloy		
Rated load	NO	40 A at 440 VAC	22 A at 440 VAC	5 A at 110 VDC
	NC	25 A at 440 VAC	10 A at 440 VAC	5 A at 110 VDC
Rated carry current	NO	40 A *		
	NC	25 A		
Maximum contact voltage		480 VAC		125 VDC
Maximum contact current	NO	40 A	22 A	5 A
	NC	25 A	10 A	5 A
Maximum switching capacity	NO	17,600 VA	9,680 VA	550 W
	NC	11,000 VA	4,400 VA	550 W
Failure rate P value (reference value)		2 A at 24 VDC		

Note: The ratings for the auxiliary contact block mounted on the G7Z are the same as those for the G73Z auxiliary contact block.

* Set of Relay and Auxiliary Contact Block: 45 to 60°C; for the continuous carry current, reduce 40 A by 0.7 A/°C.

Auxiliary Contact Block

Model		G73Z-20Z-R, G73Z-11Z-R, G73Z-02Z-R		
Item	Load	Resistive load	Inductive load $\cos\phi = 0.3$	Resistive load L/R = 1 ms
Contact structure		Single break		
Contact material		Au clad + AgNi		
Rated load		1 A at 440 VAC	0.5 A at 440 VAC	0.5 A at 110 VDC
Rated carry current		1 A		
Maximum contact voltage		480 VAC		125 VDC
Maximum contact current		1 A	0.5 A	
Maximum switching capacity		440 VA	220 VA	55 W
Failure rate P value (reference value)		1 mA at 1 VDC		

Characteristics

Item	Classification	Relay with auxiliary contact block *5	Auxiliary contact block
	Model	G7Z-4A-□Z-R, G7Z-3A1B-□Z-R, G7Z-2A2B-□Z-R	G73Z-20Z-R, G73Z-11Z-R, G73Z-02Z-R
Contact resistance *1		400 mΩ max.	100 mΩ max.
Operating time *2		50 ms max.	
Release time *2		50 ms max.	
Maximum operating frequency	Mechanical	1,800 operations/h	
	Rated load	1,200 operations/h	
Insulation resistance *3		1,000 MΩ min.	
Dielectric strength	Between coil and contacts	4,000 VAC, 50/60 Hz for 1 min	---
	Between contacts of different polarity	4,000 VAC, 50/60 Hz for 1 min	
	Between contacts of the same polarity	2,000 VAC, 50/60 Hz for 1 min	
Impulse withstand voltage	Between coil and contacts	10 kV, 1.2 × 50 μs	---
	Between contacts of different polarity	10 kV, 1.2 × 50 μs	
	Between contacts of the same polarity	4.5 kV, 1.2 × 50 μs	3.0 kV, 1.2 × 50 μs
Vibration resistance	Destruction	10 to 55 to 10 Hz, 0.5-mm single amplitude (1.0-mm double amplitude)	
	Malfunction	NO: 10 to 55 to 10 Hz, 0.5-mm single amplitude (1.0-mm double amplitude) NC: 10 to 32 to 10 Hz, 0.5-mm single amplitude (1.0-mm double amplitude)	
Shock resistance	Destruction	Screw mounting: 700 m/s ² , DIN Track mounting: 500 m/s ²	
	Malfunction	NO: 100 m/s ² NC: 25 m/s ²	
Durability	Mechanical	1,000,000 operations min. (at 1,800 operations/h, contact no load)	
	Electrical *4	AC resistive load: 80,000 operations AC inductive load: 80,000 operations DC resistive load: 100,000 operations (at 1,200 operations/h, rated load)	
Failure rate (P level) (reference value) *6		2 A at 24 VDC	1 mA at 1 VDC
Ambient operating temperature		-25 to 60°C (with no icing or condensation)	
Ambient operating humidity		5% to 85%	
Weight		Approx. 330 g	Approx. 18 g

Note: The above values are initial values.

*1. The contact resistance for the Relay (G7Z) was measured with 1 A at 5 VDC using the voltage drop method.

The contact resistance for the auxiliary contact block (G73Z) was measured with 0.1 A at 5 VDC using the voltage drop method.

*2. The operate time was measured with the rated voltage imposed with any contact bounce ignored at the ambient temperature of 23°C.

*3. The insulation resistance was measured with a 1,000-VDC megohmmeter applied to the same places as those used for checking the dielectric strength.

*4. The electrical endurance was measured at an ambient temperature of 23°C.

*5. The specifications for the auxiliary contact block mounted on the G7Z are the same as those for the G73Z auxiliary contact block.

*6. The failure rate is based on an operating frequency of 1,800 operations/h.