Specifications

Ratings

Coil

Item / Rated voltage	Rated current (mA)	Coil resistance (Ω)	Must operate voltage	Must release voltage	Maximum voltage	Power consumption (W)
			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 ±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

Item	Model / Load	G7Z-4A-□Z-R, G7Z-3A1B-□Z-R, G7Z-2A2B-□Z-R		
		Resistive load	Inductive load cosϕ = 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

Item / Load	Model	G73Z-20Z-R, G73Z-11Z-R, G73Z-02Z-R		
		Resistive load	Inductive load cosϕ = 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 / Model		Relay with auxiliary contact block ✻5 G7Z-4A-□Z-R, G7Z-3A1B-□Z-R, G7Z-2A2B-□Z-R	Auxiliary contact block 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.