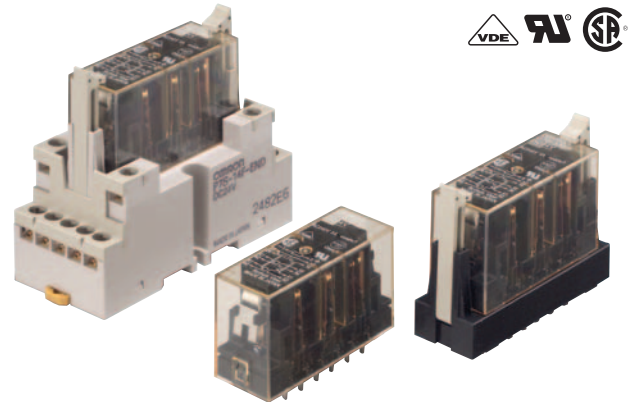



Relays with Forcibly Guided Contacts and High Switching Capacity of 10A

- Relays with forcibly guided contacts (EN50205 Class A, certified by VDE).
- Supports the CE marking of machinery (Machinery Directive).
- Helps avoid hazardous machine status when used as part of an interlocking circuit.
- Track-mounting and Back-mounting Sockets are available.



For the most recent information on models that have been certified for safety standards, refer to your OMRON website.

 Be sure to read the "Safety Precautions" on page 4 and the "Precautions for All Relays with Forcibly Guided Contacts".

Model Number Structure

Model Number Legend

G7S-□A□B-E
1 2

1. NO Contact Poles

- 4: 4PST-NO
- 3: 3PST-NO

2. NC Contact Poles

- 2: DPST-NC
- 3: 3PST-NC

Ordering Information

Relays with Forcibly Guided Contacts

Type	Poles	Contact configuration	Rated voltage	Model
Standard	6 poles	4PST-NO, DPST-NC	24 VDC	G7S-4A2B-E
		3PST-NO, 3PST-NC		G7S-3A3B-E

Sockets

Type4	Rated voltage	Model
Track-mounting	24 VDC	P7S-14F-END
Back-mounting	---	P7S-14P-E

Specifications

Ratings

Coil

Rated voltage	Item	Rated current (mA)	Coil resistance (Ω)	Max. voltage (V)	Power consumption (W)
24 VDC		30	800	110%	Approx. 0.8

Note: 1. The rated current and coil resistance are measured at a coil temperature of 23°C with tolerances of ±15%.
 2. The maximum voltage is based on an ambient operating temperature of 23°C maximum.

Contacts

Item	Load	Resistive load
Rated load	NO contact	10 A at 250 VAC 10 A at 30 VDC
	NC contact	6 A at 250 VAC 6 A at 30 VDC
Rated carry current	NO contact	10 A
	NC contact	6 A
Maximum switching voltage		250 VAC, 30 VDC
Maximum switching current	NO contact	10 A
	NC contact	6 A

G7S-□-E Characteristics of Sockets

Model	P7S-14F-END	P7S-14P-E
Continuous current	10 A	
Dielectric strength	2000 VAC for 1 min. between terminals	
Insulation resistance	1000 MΩ min. *	
Weight	Approx. 110g	Approx. 25g

Note: Use the P7S-14F-END in the ambient humidity range of 25 to 85%, the P7SA-14P-E in the ambient humidity range of 5 to 85%.

* Measurement conditions: Measurement of the same points as for the dielectric strength at 500 VDC.

Characteristics

Contact resistance *1		100 mΩ max.
Operating time *2		50 ms max.
Release time *2		50 ms max.
Must operate voltage		80% max.
Must release voltage		10% min.
Maximum operating frequency	Mechanical	18,000 operations/h
	Rated load	1,800 operations/h
Insulation resistance *3		100 MΩ min.
Dielectric strength *4 *5		Between coil and contacts: Between coil and pole 3 or coil and pole 4: 4,000 VAC, 50/60 Hz for 1 min Other than the above: 2,500 VAC, 50/60 Hz for 1 min Between different poles: Between pole 1, 3, or 5 and pole 2, 4, or 6: 4,000 VAC, 50/60 Hz for 1 min Other than the above: 2,500 VAC, 50/60 Hz for 1 min Between contacts of same polarity: 1,500 VAC, 50/60 Hz for 1 min
Vibration resistance	Destruction	10 to 55 to 10 Hz, 0.75-mm single amplitude (1.5-mm double amplitude)
	Malfunction	10 to 55 to 10 Hz, 0.375-mm single amplitude (0.75-mm double amplitude)
Shock resistance	Destruction	1,000 m/s ²
	Malfunction	100 m/s ²
Durability *6	Mechanical	10,000,000 operations min. (at approx. 18,000 operations/h)
	Electrical	100,000 operations min. (at the rated load and approx. 1,800 operations/h)
Inductive load switching capability *7 (IEC60947-5-1)	NO Contact	AC15 AC240V 5A DC13 DC24V 2A
	NC Contact	AC15 AC240V 3A DC13 DC24V 2A
Failure rate (P level) (reference value *8)		5 VDC, 1 mA
Ambient operating temperature		-25 to 70°C (with no icing or condensation)
Ambient operating humidity		5% to 85%
Weight		Approx. 65 g

Note: 1. The above values are initial values.

2. Performance characteristics are based on a coil temperature of 23°C.

*1. Measurement conditions: 5 VDC, 10 mA, voltage drop method.

*2. Measurement conditions: Rated voltage operation

Ambient operating temperature: 23°C

Contact bounce time is not included.

*3. The insulation resistance was measured with a 500-VDC megohmmeter at the same locations as the dielectric strength was measured.

*4. When using a P7S Socket, the dielectric strength between coil and contacts and between different poles is 2,000 VAC, 50/60 Hz for 1 min.

*5. The coil refers to terminals 0-1, pole 1 refers to terminals 13-14, pole 2 refers to terminals 23-24, pole 3 refers to terminals 33-34, pole 4 refers to terminals 41-42 or 43-44, pole 5 refers to terminals 51-52, and pole 6 refers to terminals 61-62.

*6. The durability is for an ambient temperature of 15 to 35°C and an ambient humidity of 25% to 75%.

*7. AC15: $\cos\phi = 0.3$, DC13: L/R = 96-ms

*8. The failure rate is based on an operating frequency of 60 operations/min.