G9TA

AC Power Latching Relay

60 A High power latching relay

- High power switching, Compact size
- High magnetic latching force provides vibration resistance
- Low contact resistance

RoHS Compliant

NEW

Model Number Structure

G9TA-□ 1 A □
1 2 3 4

1. Relay Function
   U: Single-winding latching
   K: Double-winding latching
2. Number of poles
   1: 1-Pole
3. Contact Form
   A: SPST-NO
4. Terminal shape
   TH: M5 securing screw
   TW: Welding terminals

Application Examples

- Smart Meter
- Lighting control
- PV Inverter
- EV Charger

Ordering Information

Classification	Contact Form	Terminal Shape	Enclosure rating	Model	Rated coil voltage	Minimum packing unit
Single coil	SPST-NO	M5 securing screw	Flux protection	G9TA-U1ATH	12 VDC	25 pcs/tray
		Welding terminals		G9TA-U1ATW		
Double coils		M5 securing screw		G9TA-K1ATH	12 VDC	
		Welding terminals		G9TA-K1ATW		

Note. When ordering, add the rated coil voltage to the model number.
Example: G9TA-U1ATH DC12
Rated coil voltage
However, the notation of the coil voltage on the product case as well as on the packing will be marked as[][] VDC.

Ratings

● Coil

Single-winding Latching Type

Item / Rated Voltage	(V)	Rated current (mA)	Coil resistance (Ω)	Must set voltage	Must reset voltage	Max. voltage	Power consumption	
				% of rated voltage			Set coil (W)	Reset coil (W)
DC	12	83	145	80% max.	80% max.	110% max.	Approx. 1.0	

Double-winding Latching Type

Item / Rated Voltage	(V)	Rated current (mA)		Coil resistance (Ω)		Must set voltage	Must reset voltage	Max. voltage	Power consumption	
		Set coil	Reset coil	Set coil	Reset coil	% of rated voltage			Set coil (W)	Reset coil (W)
DC	12	217	217	55	55	80% max.	80% max.	110% max.	Approx. 2.6	Approx. 2.6

Note 1. The rated current and coil resistance were measured at a coil temperature of 23°C with tolerances of ± 10%.
Note 2. The operating characteristics are measured at a coil temperature of 23°C.
Note 3. The maximum permissible 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.

● Contacts

Item / Model / Load	G9TA-U1A□ /G9TA-K1A□	
	Resistive load	Inductive load (PF=0.5)
Contact type	SPST-NO	
Contact material	Ag Alloy	
Rated load	60 A at 250 VAC	
Rated carry current	60 A	
Max. switching voltage	250 VAC	
Max. switching current	60 A	

Characteristics

Item		G9TA-U1A□	G9TA-K1A□
Contact resistance *1		2 mΩ max.	
Set time *2		30 ms max.	20 ms max.
Reset time *2		30 ms max.	20 ms max.
Minimum pulse width		100 ms	
Maximum pulse width		1,000 ms	
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 the same polarity	1,500 VAC, 50/60 Hz for 1 min	
Impulse withstand voltage	Between coil and contacts	6 kV	
Vibration resistance	Destruction	10 to 150 to 10 Hz, f < 60 Hz: Constant amplitude 0.075 mm, f > 60 Hz: Constant acceleration 9.8 m/s^2	
	Malfunction	10 to 55 to 10 Hz, 0.75 mm single amplitude (1.5 mm double amplitude)	
Shock resistance	Destruction	1,000 m/s^2	
	Malfunction	100 m/s^2	
Durability	Mechanical	100,000 operations min. (at 7,200 operations/h)	
	Electrical *4	5,000 operations, resistive load and then 5,000 operations, inductive load (PF=0.5) (operation: ON for 10 sec, OFF for 20 sec) *5	
Ambient operating temperature		-40 to 85°C (with no icing or condensation)	
Ambient operating humidity		5 to 85%	
Weight		Approx. 42 g	

Note. The values given above are initial values.

*1. Measurement conditions: 24 VDC, 1 A, voltage drop method.

*2. Measurement conditions: Rated operating voltage applied, not including contact bounce.
Ambient temperature: 23°C

*3. Measurement conditions: The insulation resistance was measured with a 500 VDC megohm meter at the same locations as the dielectric strength was measured.

*4. Contact your OMRON sales representative for Electrical Durability technical data.

*5. The characteristic meets IEC62055-31 test requirement.