

# 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

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

### Application Examples

- Smart Meter
- PV Inverter
- Lighting control
- 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

Rated Voltage	Item (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

Rated Voltage	Item (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	
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 <sup>2</sup>	
	Malfuction	10 to 55 to 10 Hz, 0.75 mm single amplitude (1.5 mm double amplitude)	
Shock resistance	Destruction	1,000 m/s <sup>2</sup>	
	Malfuction	100 m/s <sup>2</sup>	
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.