

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 | 2. Number of poles |
| U: Single-winding latching | 1: 1-Pole |
| K: Double-winding latching | |
| 3. Contact Form | 4. Terminal shape |
| A: SPST-NO | 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

| 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 ² | |
| | Malfuction | 10 to 55 to 10 Hz, 0.75 mm single amplitude (1.5 mm double amplitude) | |
| Shock resistance | Destruction | 1,000 m/s ² | |
| | Malfuction | 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.