

G9TB

AC Power Latching Relay

120 A Compact and high power latching relay

- High power switching: 120 A, 276 VAC
- Compact size: 37 mm x 43 mm x 22 mm
- Low temperature-rise
- High overcurrent capability, conforming to IEC62055-31 UC3



NEW

RoHS Compliant

Model Number Structure

G9TB- $\frac{1}{1} \frac{A}{2} \frac{-}{3} \frac{E}{4} \frac{-}{5}$

- | | | |
|--|--------------------|-----------------|
| 1. Relay Function | 2. Number of poles | 3. Contact Form |
| U: Single-winding latching
K: Double-winding latching | 1: 1-Pole | A: SPST-NO |
| 4. Terminal shape | 5. Classification | |
| TH: M8 securing screw
TW: Welding terminals | E: High capacity | |

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	M8 securing screw	Flux protection	G9TB-U1ATH-E	12 VDC	25 pcs/tray
		Welding terminals		G9TB-U1ATW-E		
M8 securing screw		G9TB-K1ATH-E		12 VDC		
Welding terminals		G9TB-K1ATW-E				

Note. When ordering, add the rated coil voltage to the model number.

Example: G9TB-U1ATH-E 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	225	53.3	80% max.	80% max.	110% max.	Approx. 2.7	

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				Set coil (W)	Reset coil (W)
		% of rated voltage								
DC	12	451	451	26.6	26.6	80% max.	80% max.	110% max.	Approx. 5.4	Approx. 5.4

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

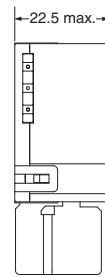
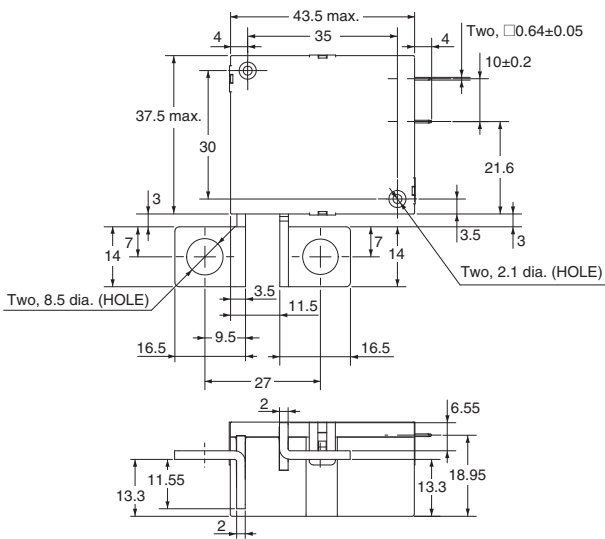
Item	Model Load	G9TB-U1A -E/G9TB-K1A -E	
		Resistive load	Inductive load (PF=0.5)
Contact type		SPST-NO	
Contact material		Ag Alloy	
Rated load		120 A at 276 VAC	100 A at 276 VAC
Rated carry current		120 A	
Max. switching voltage		276 VAC	
Max. switching current		120 A	100 A

G9TB

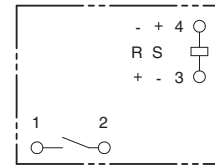
Dimensions

(Unit: mm)

G9TB-U1ATH-E

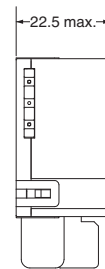
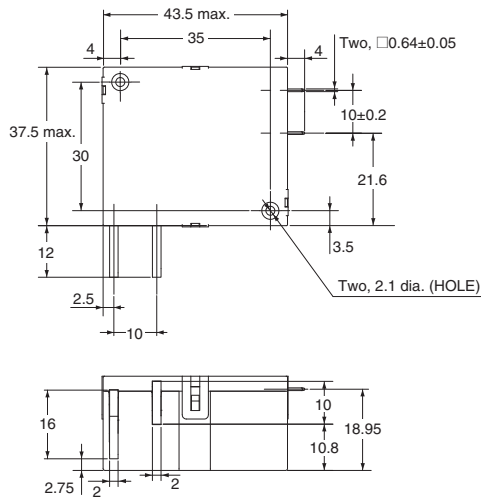


Terminal arrangement/Internal Connections (TOP VIEW)

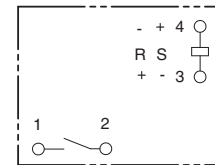


Check carefully the coil polarity of the Relay.

G9TB-U1ATW-E

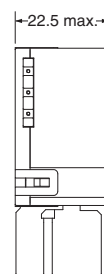
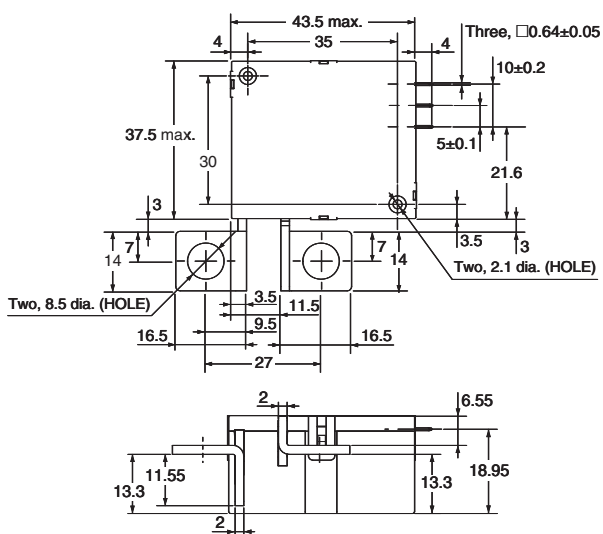


Terminal arrangement/Internal Connections (TOP VIEW)

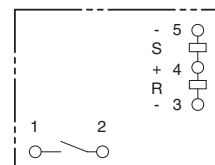


Check carefully the coil polarity of the Relay.

G9TB-K1ATH-E

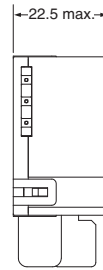
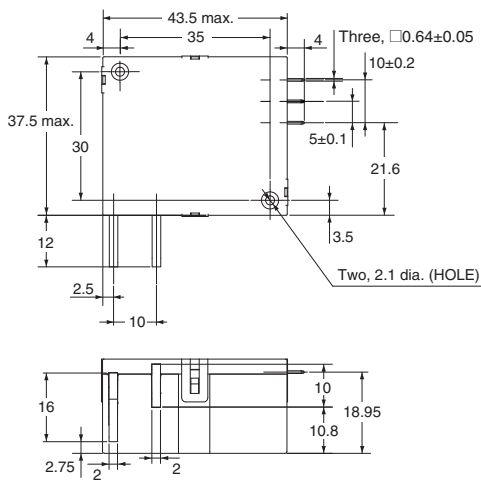


Terminal arrangement/Internal Connections (TOP VIEW)

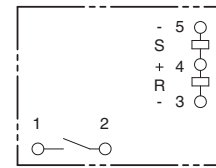


Check carefully the coil polarity of the Relay.

G9TB-K1ATW-E



Terminal arrangement/Internal Connections (TOP VIEW)



Check carefully the coil polarity of the Relay.

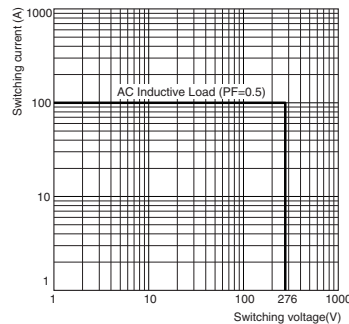
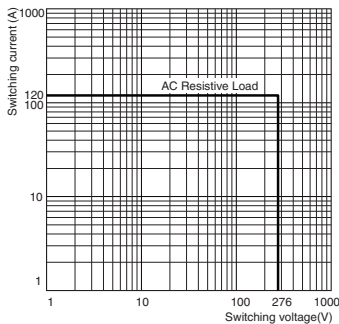
- Note 1. Relay is delivered as "set" status unless specified otherwise. However, the status may change due to the shock from transportation or mounting operations. Therefore, it is recommended the relay should be set to the expected status via a power supply before being used.
- Note 2. In order to maintain "set" or "reset" status, the energizing voltage to coil & the pulse width shouldn't lower than the rated value.
- Note 3. Do not energize both of set and reset coil simultaneously.
- Note 4. Energizing time longer than 1,000 ms should be avoided.

Engineering Data

Maximum Switching Capacity

G9TB-U1A -E

G9TB-K1A -E



Safety Precautions

- Please refer to "PCB Relays Common Precautions" for correct use.

Correct Use

Installation

- The relay contacts are polarized. Incorrect wiring may cause a failure to break the circuit. Wire the Relay with care.
- Install the Relays in locations that are as dry as possible and have as little dust, dirt, and harmful gas.
- Using the Relay under high temperature, high humidity, or harmful gas may deteriorate its performance characteristics due to condensation or corrosive materials, resulting in failure or burn damage to the Relay.

Wiring

- Be sure to tighten all screws to the appropriate torque given below.
- Loose screws may result in burning due to abnormal heat generation during energization.
- M8 screws : 8.82 to 9.80 N·m
- Use a spring washer in order to prevent deformation and it from loosening.
- Allow suitable slack on leads when wiring, and do not apply excessive force to the terminals.

Relay Service Life

- The electrical durability of these Relays is specified as the number of load switching operations under a resistive load and OMRON-specified standard testing conditions.
The coil drive circuit, ambient environment, switching frequency, or load conditions (e.g., inductive load or capacitor load) may reduce the service life and possibly lead to failure to break. Always confirm the service life in the actual equipment.

• Application examples provided in this document are for reference only. In actual applications, confirm equipment functions and safety before using the product.
• Consult your OMRON representative before using the product under conditions which are not described in the manual or applying the product to nuclear control systems, railroad systems, aviation systems, vehicles, combustion systems, medical equipment, amusement machines, safety equipment, and other systems or equipment that may have a serious influence on lives and property if used improperly. Make sure that the ratings and performance characteristics of the product provide a margin of safety for the system or equipment, and be sure to provide the system or equipment with double safety mechanisms.

Note: Do not use this document to operate the Unit.