

High-power Relay that Breaks 15 A, Carries 20 A and Withstands 55-A Inrush

- Miniature, built-in use relay ideal for switching motor load, lamp load, heater, etc.
- Creepage distance of more than 2 mm.
- Upper mounting bracket type for easy wiring and mounting.



RC

Ordering Information

Contact form	Load contact terminal	Coil terminal	Model
SPST-NO	Quick connect #250	Quick connect #110	G4B-112T-US
		Quick connect #187	G4B-112T1-US
		PCB board	G4B-112TP-US
SPDT		Quick connect #110	G4B-112T-C-US
		Quick connect #187	G4B-112T1-C-US
		PC board	G4B-112TP-C-US

Note: 1. When ordering, add the rated coil voltage listed below to the model number.

Example: G4B-112T-US, 100 VAC

Rated coil voltage

■ Coil Ratings

Rated voltage	Rated current		Resistance	Must operate voltage	Must release voltage	Max. voltage	Power consumption (approx.)
	50 Hz	60 Hz					
AC	6 V	254 mA	217 mA	80% max.	30% min.	110%	1.3VA (60 Hz)
	12 V	126.5 mA	108 mA				
	24 V	63 mA	54 mA				
	50 V	30.5 mA	26 mA				
	100 V	15.2 mA	13 mA				
	120 V	12.6 mA	10.8 mA				
DC	6 V	200 mA		30 Ω	10% min.		1.2 W
	12 V	89 mA		135 Ω			
	24 V	50 mA		480 Ω			
	48 V	25 mA		1,920 Ω			
	100 V	12 mA		8,300 Ω			

Note: The rated current is measured at a coil temperature of 23°C with tolerances of ±15% for DC rated current and +15%, -20% for AC rated current, and ±15% for rated coil resistance.

■ Contact Ratings

Load	Resistive load ($\cos\phi = 1$)	Inductive load ($\cos\phi = 0.4$) (L/R = 7ms)
Rated load	15 A at 220 VAC 15 A at 24 VDC	10 A at 220 VAC 7 A at 24 VDC
Rated carry current	20 A	
Max. switching voltage	250 VAC 125 VDC	
Max. switching current	15 A	
Max. switching power	3300 VA 360 W	2,200 VA 168 W
Min. permissible load (ref. value)	100 mA at 5 VDC	

■ Characteristics

Contact resistance	30 mΩ max.
Operate time	20 ms max.
Release time	20 ms max.
Operating frequency	Mechanical: 18,000 operations/hour Electrical: 1,800 operations/hour (under rated load)
Insulation resistance	100 MΩ min. (at 500 VDC)
Dielectric strength	2,000 VAC, 50/60 Hz for 1 minute (1,000 VAC between noncontinuous contacts)
Vibration resistance	Mechanical: 10 to 55 Hz, 1.5 mm double amplitude Malfunction: 10 to 55 Hz, 1.5 mm double amplitude
Shock resistance	Mechanical: 1,000 m/s ² Malfunction: 200 m/s ²
Ambient temperature	Operating: -10°C to 55°C (with no icing)
Ambient humidity	35% to 85%
Life expectancy	Mechanical: 10,000,000 operations min. (at operating frequency of 18,000 operations/hour) Electrical: 200,000 operations min. (at operating frequency of 1,800 operations/hour under rated load)
Weight	Approx. 44 g

Note: The data shown above are initial values.

■ Actual Load Ratings (Reference Only)

Type of Load	Conditions	Life expectancy
AC motor	100 VAC ($\cos\phi=1$) 600 W Inrush: 55 A Steady state: 15 A	100,000 operations min.

Note: The data shown above are based on the test for G4B-112T1.

■ Approved Standard

UL508 923 Recognitions (File No. E41643)

Model	Coil ratings	Contact ratings	Operations
G4B-()-US	6 to 240 VAC 6 to 120 VDC	15 A, 28 VDC (Resistive) 15 A, 120 VAC (General use) 10 A, 240 VAC (General use) 1 HP, 120 VAC	6 x 10 ³
		TV-5, 120 VAC	25 x 10 ³

CSA C22.2 No. 14 (File No. LR31928)

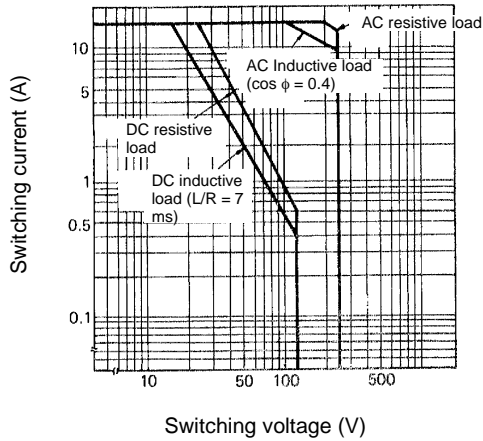
Model	Coil ratings	Contact ratings	Operations
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TÜV (File No. R9650822, VDE0435)

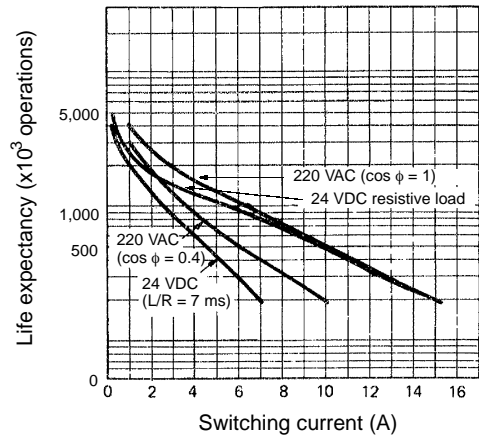
Model	Coil ratings	Contact ratings	Operations
G4B-()	5, 6, 9, 12, 24, 48, 100, 110, 120 VDC 6, 12, 24, 100, 120, 200, 220 VAC	15 A, 250 VAC ($\cos\phi=1.0$) 10 A, 250 VAC ($\cos\phi=0.4$)	200 x 10 ³

Engineering Data

Maximum Switching Power



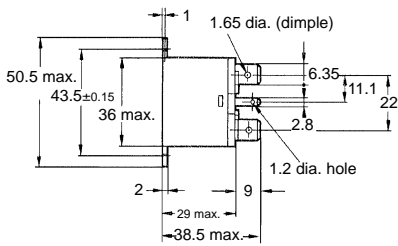
Electrical Life Expectancy



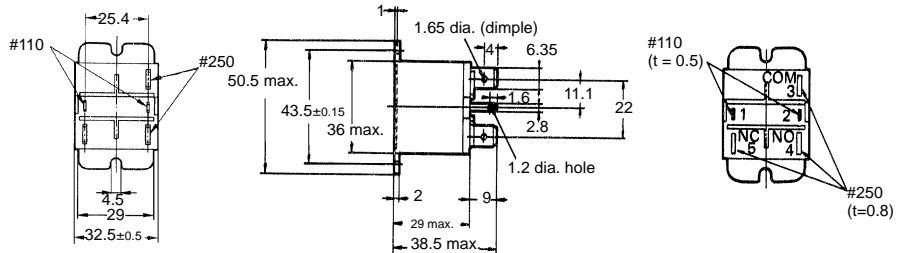
Dimensions

Note: All units are in millimeters unless otherwise indicated.

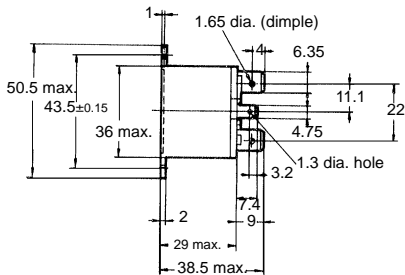
G4B-112T-US



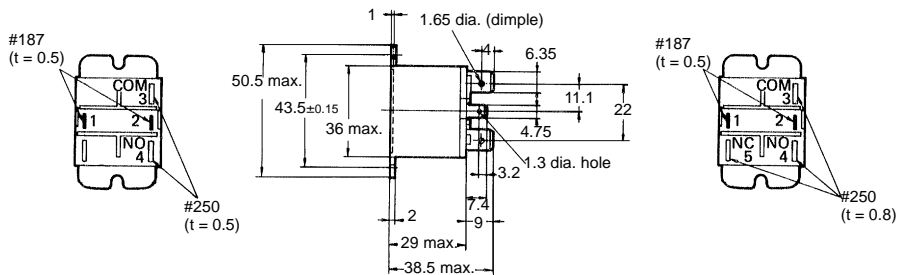
G4B-112T-C-US



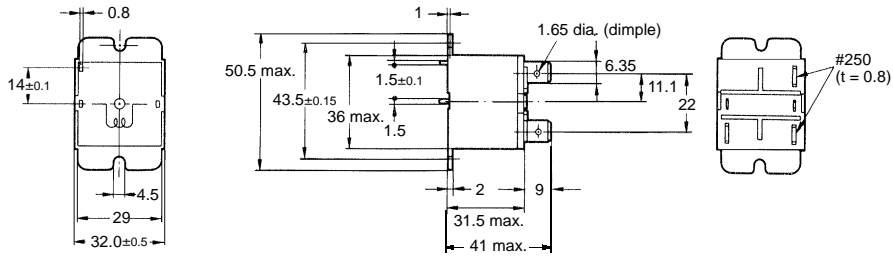
G4B-112T1-US



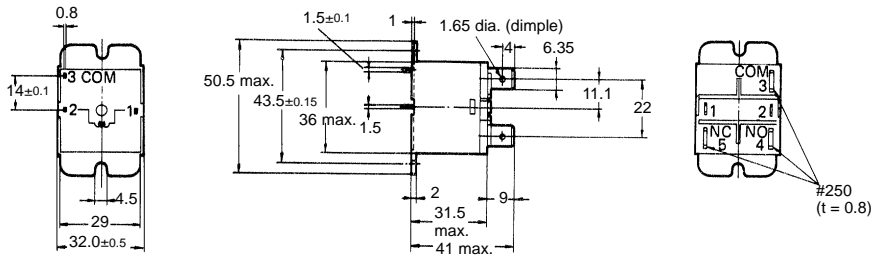
G4B-112T1-C-US



G4B-112TP-US

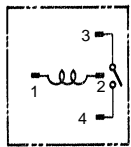


G4B-112TP-C-US



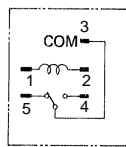
Terminal Arrangement/Internal Connections

G4B-112T-US



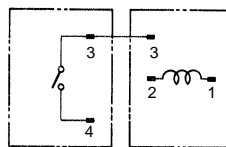
(Top View)

G4B-112T-C-US



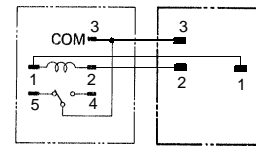
(Top View)

G4B-112TP-US



(Top View) (Bottom View)

G4B-112TP-C

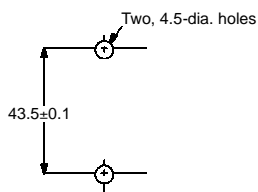


(Top View) (Bottom View)

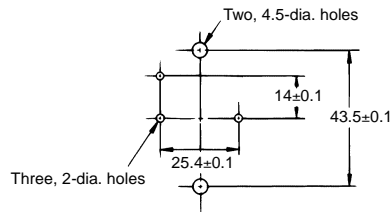
Mounting Holes (bottom view)

G4B-112T(-C)-US

G4B-112T1(-C)-US



G4B-112TP(-C)-US



ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.