

### High-power Relay that Breaks 20 A, Carries 20 A, and Withstands 60-A Inrush

- Miniature, high-capacity power relay ideal for incorporation in non-industrial equipment to switch such loads as motor, transformer, lamp, heater, etc.
- Creepage distance of more than 4 mm.
- Nonflammable insulating materials employed meet UL94V-0



RCE

### Ordering Information

Classification	Contact form	Coil terminal	Load contact terminal	Model
Standard model	SPST-NO	PCB terminal	Quick connect #250	G4F-11123T
	SPDT			G4F-1123T
UL/CSA approved model	SPST-NO			G4F-11123T-US
	SPDT			G4F-1123T-US
VDE/TÜV approved model	SPST-NO	G4F-11123T-TU		
	SPDT	G4F-1123T-TU		

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

Example: G4F-1123T, 12 VDC

Rated coil voltage

### Specifications

#### ■ Coil Ratings

Voltage	Current	Resistance	Coil inductance (H) (ref. value)		Must operate voltage	Must release voltage	Max. voltage	Power consumption (approx.)
			Armature OFF	Armature ON				
12 VDC	75 mA	160 Ω	1.3	1.9	70% max.	10% min.	110%	0.9 W
24 VDC	37.5 mA	640 Ω	5.8	9.5				

**Note:** 1. The rated current is measured at a coil temperature of 23°C with tolerances of ±10%.

2. Performance characteristic data are measured at 23°C coil temperature.

## ■ Contact Ratings

Model	G4F-1123T(-US) (-TU)		G4F-11123T(-US) (-TU)	
	Resistive load ( $\cos\phi = 1$ )	Inductive load ( $\cos\phi = 0.4$ )	Resistive load ( $\cos\phi = 1$ )	Inductive load ( $\cos\phi = 1$ )
Rated load	15 A at 220 VAC	10 A at 220 VAC	20 A at 220 VAC	15 A at 220 VAC
Max. inrush current	55 A		60 A	
Rated carry current	20 A			
Max. switching voltage	250 VAC			
Max. switching current	15 A		20 A	
Max. switching power	3300 VA	2,200 VA	4400 VA	3300 VA
Min. permissible load (ref. value)	100 mA at 5 VDC			

## ■ Characteristics

Contact resistance	30 mΩ max.
Operate time	20 ms max.
Release time	10 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 contacts of same polarity)
Vibration resistance	Destruction: 10 to 55 Hz, 1.5-mm double amplitude Malfunction: 10 to 55 Hz, 1.5-mm double amplitude
Shock resistance	Destruction: 1,000 m/s <sup>2</sup> Malfunction: 200 m/s <sup>2</sup>
Ambient temperature	Operating: -25°C to 55°C (with no icing)
Ambient humidity	35% to 85%
Life expectancy	Mechanical: 5,000,000 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. 40 g

Note: The data shown above are initial values.

## ■ Motor Load Ratings (Reference Only)

Model	Load conditions	Operating frequency	Electrical life expectancy
G4F-1123T	110 VAC ( $\cos\phi = 0.7$ ) Inrush: 55 A (0.2 sec.) Break: 15 A	ON: 1 sec. OFF: 10 sec.	200 (X 10 <sup>3</sup> operations min.)
G4F-11123T	110 VAC ( $\cos\phi = 0.7$ ) Inrush: 60 A (0.2 sec.) Break: 20 A		

## ■ Approved Standard

### UL508 484 Recognitions (File No. E41643)

Model	Coil ratings	Contact ratings	Operations
G4F(-)-US	5 to 100 VDC	15 A, 250 VAC (Resistive)	6 x 10 <sup>3</sup>
		15 A, 30 VDC (Resistive) 10 A, 250 VAC (General use) 12 FLA 150 VAC, 72 LRA 150 VAC 10 FLA 240 VAC, 60 LRA 240 VAC 15 FLA 120 VAC, 90 LRA 120 VAC	30 x 10 <sup>3</sup>

### CSA C22.2 No. 14 (File No. LR 35535)

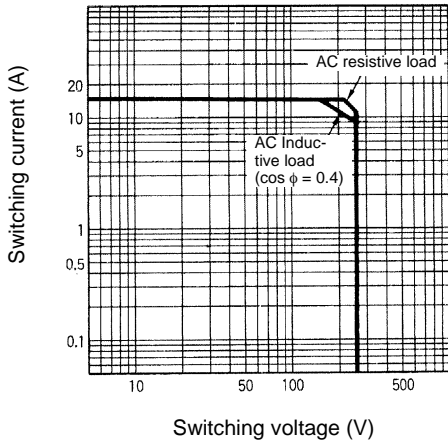
Model	Coil ratings	Contact ratings	Operations
G4F(-)-US	5 to 100 VDC	15 A, 250 VAC (Resistive)	6 x 10 <sup>3</sup>
		15 A, 30 VDC (Resistive) 1 HP 125/250 VAC (Motor load) TV-3 AC	25 x 10 <sup>3</sup>

TÜV File No. R9151218 (IEC 255, EN 60335-1, VDE 0435)

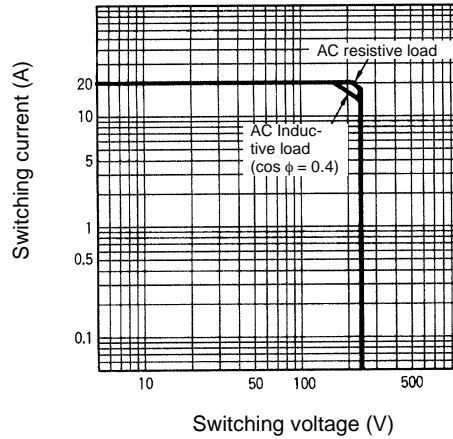
Model	Coil ratings	Contact ratings	Operations
G4F(-)-TU	5 to 100 VDC	15 A, 250 VAC (cosφ=1) 10 A, 250 VAC (cosφ=0.4) 20 A, 250 VAC (cosφ=1) 15 A, 250 VAC (cosφ=0.4)	100 x 10 <sup>3</sup>

## Engineering Data

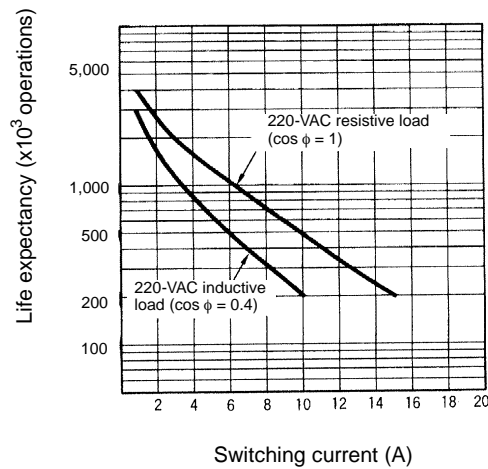
### Maximum Switching Power G4F-1123T(-US) (-TU)



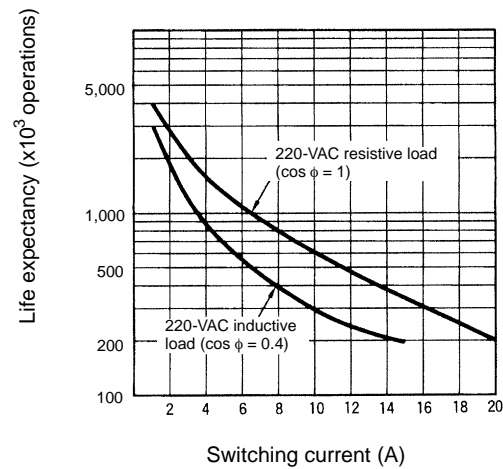
### G4F-11123T(-US) (-TU)



### Electrical Life Expectancy G4F-1123T(-US) (-TU)



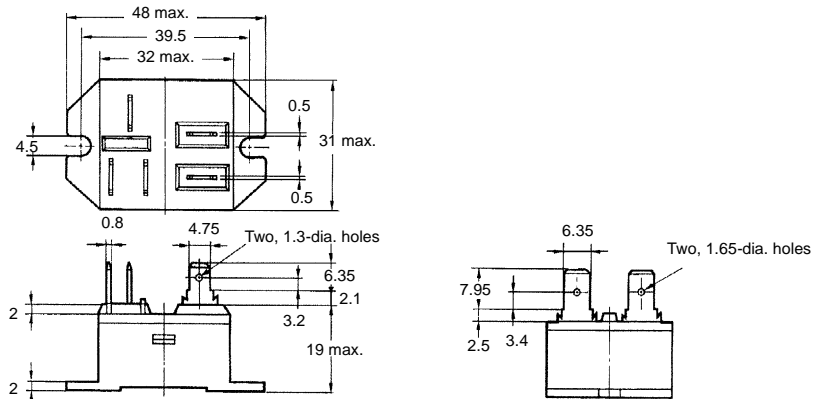
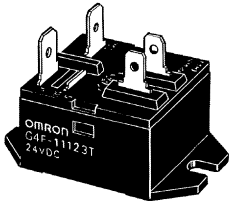
### G4F-1112TP(-US) (-TU)



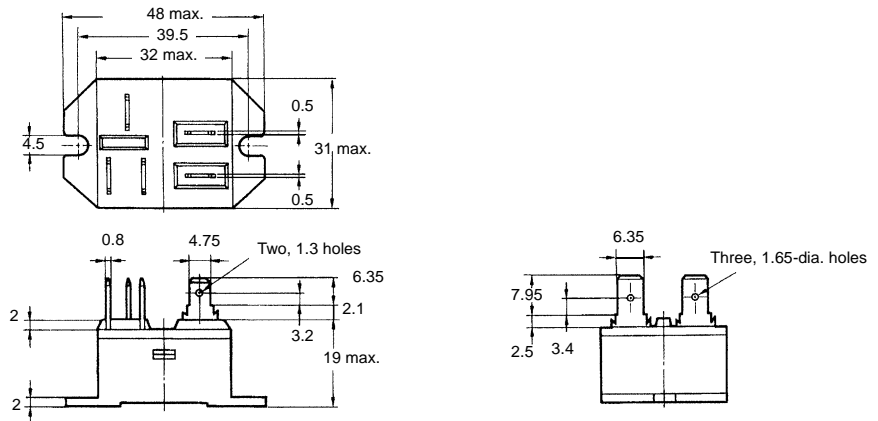
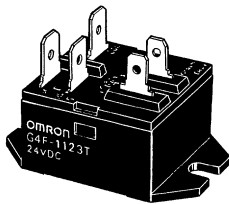
# Dimensions

**Note:** All units are in millimeters unless otherwise indicated.

## G4F-11123T(-US) (-TU)

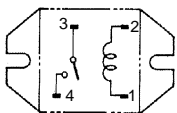


## G4F-1123T(-US) (-TU)

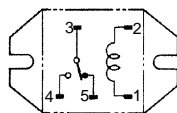


### Terminal Arrangement/Internal Connections (Top View)

#### G4F-11123T(-US) (-TU)



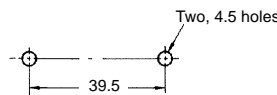
#### G4F-1123T(-US) (-TU)



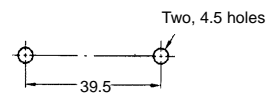
**Note:** This type has no polarity.

### Mounting Holes

#### G4F-11123T(-US) (-TU)



#### G4F-1123T(-US) (-TU)



**ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.**

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