

Features

- 50A switching capability;
- The contact gap is 1.80mm;
- UL insulation system:Class F;
- Main application:Photovoltaic inverter
- Sustaining voltage can be applied to the whole machine to save energy consumption.;
- Environmental friendly product(RoHS compliant)
- Outline Dimensions: (31.8×26.9×18.6) mm



■ CHARACTERISTICS

Specifications		Item	
Contact Data	Contact arrangement		1A
	Contact resistance(Initial)		≤20mΩ(6VDC 20A)
	Contact material		AgSnO ₂
Rated value	Rated load(Resistance load)		NO:32A/35A/43A/50A/60A 250VAC
	Max.switching voltage		277VAC
	Max.switching current		60A
	Max.switching capacity		12500VA
	Min.allowing load		5VDC 100mA
Electrical performance	Insulation resistance(Initial)		1000MΩ(500VDC)
	Dielectric strength (Initial)	Between open contacts	2500VAC,1min (Standard Type) 1500VAC,1min (Sensitive Type)
		Between coil&contacts	2500VAC,1min
	Operate time		≤15ms
	Release time		≤10ms
Mechanical performance	Shock resistance	Functional	98m/s ² (10g)
		Destructive	980m/s ² (100g)
	Vibration resistance		10Hz~55Hz 1.5mm DA
Endurance	Mechanical		1×10 ⁶ ops
	Electrical(Room temperature)		Standard Type:
			35/32A 277/250VAC 3×10 ⁴ ops(ON/OFF=1s/9s)
			50/43A 277/250VAC 3×10 ⁴ ops(ON/OFF=1s/9s)
			Connecting 20A carrying 43A/50A/60A breaking 20A 250/277VAC 3×10 ⁴ ops(ON/OFF=1s/9s)
Endurance	Electrical(Room temperature)		60A 277/250VAC
			Sensitive Type:
			35/32A 277/250VAC 3×10 ⁴ ops(ON/OFF=1s/9s)
			50/43A 277/250VAC 1×10 ⁴ ops(ON/OFF=1s/9s)
			Connecting 20A carrying 43A/50A /60A breaking 20A 250/277VAC 1×10 ⁴ ops(ON/OFF=1s/9s)
Operate condition	Ambient temperature		-40℃~85℃
	Humidity		5% to 85%
Termination		PCB	
Unit weight		Approx.38g	

Construction	Plastic sealed,Flux proofed
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■ COIL DATA(23℃)

■ Standard Type

Nominal Voltage	Operate Voltage VDC	Release Voltage VDC	Rated Current (±10%)	Coil Resistance (±10%)	Nominal Power	Max Voltage
DC 5V	≤3.75	≥0.25	450.0mA	11.1Ω	2.25W	DC 6.5V
DC 12V	≤9.00	≥0.60	187.5mA	64Ω		DC 15.6V
DC 24V	≤18.00	≥1.20	93.8mA	256Ω		DC 31.2V
DC 48V	≤36.00	≥2.40	46.9mA	1024Ω		DC 62.4V

Note:Holding voltage :40%~110%Un(Environment temperature 23℃);50%~70%Un(Environment temperature 85℃)

■ Sensitive Type

Nominal Voltage	Operate Voltage VDC	Release Voltage VDC	Rated Current (±10%)	Coil Resistance (±10%)	Nominal Power	Max Voltage
DC 5V	≤3.75	≥0.25	240.0mA	20.8Ω	1.2W	DC 6.5V
DC 12V	≤9.00	≥0.60	100.0mA	120.0Ω		DC 15.6V
DC 24V	≤18.00	≥1.20	50.0mA	480.0Ω		DC 31.2V
DC 48V	≤36.00	≥2.40	25.0mA	1920.0Ω		DC 62.4V

■ ORDERING INFORMATION

FH12G

-1A

S

T

L

F

-XXX

DC12V

① Type

② Contact arrangement(1):1A=1 open contacts

③ Construction(1):Nil=Flux proofed,S=Plastic sealed

④ Contact material:T=AgSnO₂

⑤ Coil power:Nil=Standard, L=Sensitive

⑥ Insulation standard:F=Class F

⑦ Customer special code:Represented by numbers or letters (load: 32=load 32A, 35=load 35A, 43=load 43A, none=load 50A, 60=load 60A (standard type only)), 60X=current carrying 60A, current breaking 20A

⑧ Coil specification:DC5/12/24/48V

- (1) When used in clean environment(excluding H₂S,SO₂,NO₂,dust and other pollutants), it is recommended to choose the Flux proofed type;When used in unclean environment(contain H₂S,SO₂,NO₂,dust and other pollutants), it is recommended to choose the Plastic sealed.

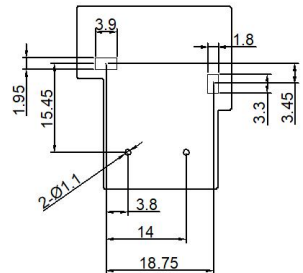
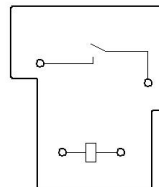
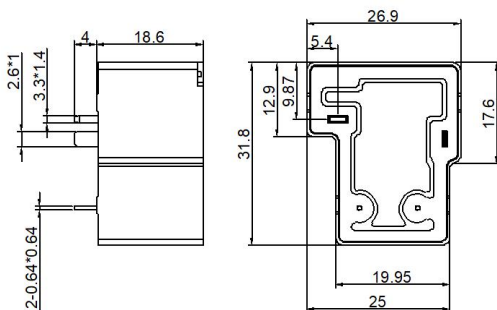
■ OUTLINE DIMENSIONS,WIRING DIAGRAM AND PC BOARD LAYOUT(Unit:mm)

1A

Outline Dimensions

Wiring Diagram
(Bottom view)

PCB Layout
(Bottom view)



Remark:(1)In case of no tolerance shown in outline dimension:outline dimension≤1mm,tolerance should be±0.2mm;outline dimension >1mm and <5mm,tolerance should be ±0.3mm;outline dimension≥5mm,tolerance should be ±0.5mm.

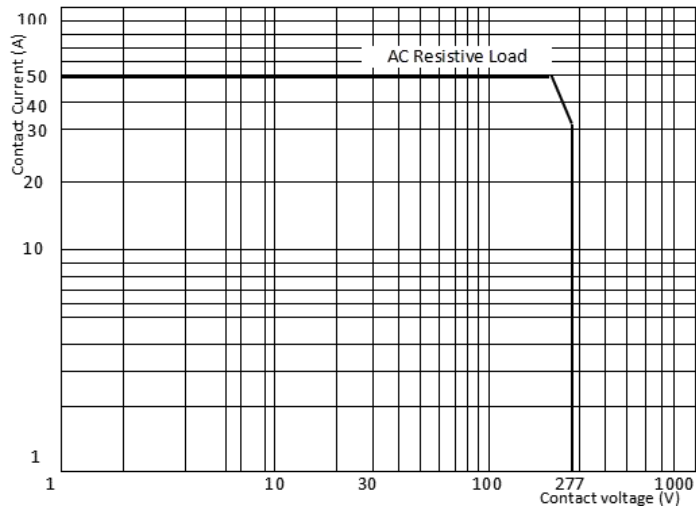
(2) The tolerance without indicating for PCB layout is always ±0.1mm.

SAFETY APPROVAL RATINGS

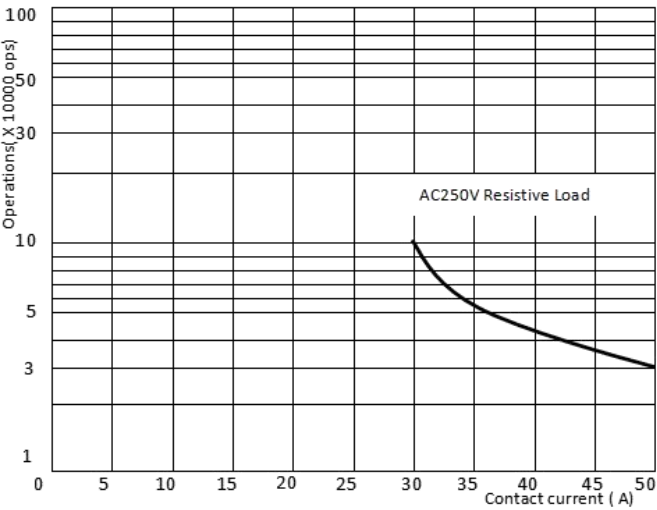
Approval	File No.	Contact arrangement	Contact material	Approved ratings
UL/C-UL	E475405	1A	AgSnO ₂	Standard Type: 35/32A 277/250VAC 3×10 ⁴ ops(ON/OFF=1s/9s) 105℃ 50/43A 277/250VAC 3×10 ⁴ ops(ON/OFF=1s/9s) 65℃ Connecting 20A carrying 43A/50A/60A breaking 20A 250/277VAC 3×10 ⁴ ops(ON/OFF=1s/9s) 65℃ Sensitive Type: 35/32A 277/250VAC 3×10 ⁴ ops(ON/OFF=1s/9s) 85℃ 50/43A 277/250VAC 1×10 ⁴ ops(ON/OFF=1s/9s) 65℃ Connecting 20A carrying 43A/50A breaking 20A 250/277VAC 1×10 ⁴ ops(ON/OFF=1s/9s) 65℃
TUV	R 50656840	1A	AgSnO ₂	Standard Type: 35/32A 277/250VAC 3×10 ⁴ ops(ON/OFF=1s/9s) 105℃ 50/43A 277/250VAC 3×10 ⁴ ops(ON/OFF=1s/9s) 65℃ Connecting 20A carrying 43A/50A/60A breaking 20A 250/277VAC 3×10 ⁴ ops(ON/OFF=1s/9s) 65℃ Sensitive Type: 35/32A 277/250VAC 3×10 ⁴ ops(ON/OFF=1s/9s) 85℃ 50/43A 277/250VAC 1×10 ⁴ ops(ON/OFF=1s/9s) 65℃ Connecting 20A carrying 43A/50A breaking 20A 250/277VAC 1×10 ⁴ ops(ON/OFF=1s/9s) 65℃
CQC	CQC24002454077	1A	AgSnO ₂	Standard Type: 35/32A 277/250VAC 3×10 ⁴ ops(ON/OFF=1s/9s) 105℃ 50/43A 277/250VAC 3×10 ⁴ ops(ON/OFF=1s/9s) 65℃ Connecting 20A carrying 43A/50A/60A breaking 20A 250/277VAC 3×10 ⁴ ops(ON/OFF=1s/9s) 65℃ Sensitive Type: 35/32A 277/250VAC 3×10 ⁴ ops(ON/OFF=1s/9s) 85℃ 50/43A 277/250VAC 1×10 ⁴ ops(ON/OFF=1s/9s) 65℃ Connecting 20A carrying 43A/50A breaking 20A 250/277VAC 1×10 ⁴ ops(ON/OFF=1s/9s) 65℃

■ PERFORMANCE CURVES

MAXIMUM SWITCHING POWER



ENDURANCE CURVE



■ NOTICE

- ① In order to maintain the initial performance parameters of the relay, please be careful not to drop the product;
- ② The specification is for reference only.Specifications subject to change without notice.