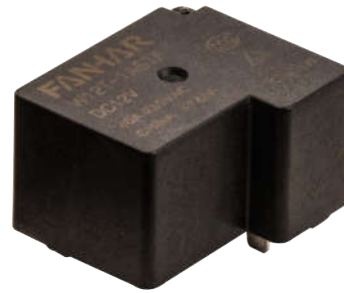


Features

- 40A con switching capability
- Dielectric strength 4KV (between coil and contacts)
- We can provide the contact gap is 2.1mm, it meets the standard of VDE0126
- UL insulation system: Class F
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (31.6×27.2×18.8) mm
- Main application: Electric vehicles and charging piles、 photovoltaic new energy



TV-10 C  US

CHARACTERISTICS

Specifications	Item	Standard	BG Type	
Contact Data	Contact arrangement	1A		
	Contact resistance(initial)	100mΩ(6VDC 1A)		
	Contact material	AgSnO ₂		
Rated value	Rated load(Resistance load)	40A 250VAC	40A 250VAC	
		20A 30VDC	20A 48VDC	
	Max.switching voltage	277VAC/30VDC	277VAC/48VDC	
	Max.switching current	50A		
	Max.switching capacity	10000VA/600W	10000VA/960W	
Electrical performance	Min.allowing load	5VDC 100mA		
	Insulation resistance(initial)	1000MΩ(500VDC)		
	Dielectric strength (initial)	Between open contacts	1500VAC,1min	2500VAC,1min
		Between coil&contacts	2500VAC(standard)/4000VAC,1min	
	Operate time	≤15ms	≤20ms	
Release time	≤10ms	≤15ms		
Mechanical performance	Shock resistance	Functional	98m/s ²	
		Destructive	980m/s ²	
	Vibration resistance	10Hz~55Hz 1.5mm DA		
Endurance	Mechanical	5×10 ⁶ ops		
	Electrical	40A 250VAC 2×10 ⁴ ops(ON/OFF=1s/9s)	40A 250VAC 2×10 ⁴ ops (ON/OFF=1s/9s)	
		20A 30VDC 1×10 ⁵ ops (ON/OFF=1s/9s)	20A 48VDC 5×10 ⁴ ops (ON/OFF=1s/9s)	
Operate condition	Ambient temperature	-40℃~85℃		
	Humidity	5% to 90%		
Termination	PCB			
Unit weight	Approx.27g			
Construction	Plastic sealed,Flux proofed			

COIL DATA(23°C)

Standard Type

Nominal Voltage	Pick-up Voltage VDC	Drop-out Voltage VDC	Rated Current (±10%)	Coil Resistance (±10%)	Nominal Power	Max Voltage
DC 5V	≤3.75	≥0.25	180mA	27.8Ω	900 mW	130%Nominal Voltage
DC 6V	≤4.50	≥0.30	150mA	40Ω		
DC 9V	≤6.75	≥0.45	100mA	90Ω		
DC 12V	≤9.00	≥0.60	75mA	160Ω		
DC 15V	≤11.25	≥0.75	60mA	250Ω		
DC 18V	≤13.50	≥0.90	50mA	360Ω		
DC 24V	≤18.00	≥1.20	37.5mA	640Ω		
DC 36V	≤27.00	≥1.80	25mA	1440Ω		
DC 48V	≤36.00	≥2.40	18.75mA	2560Ω		
DC 110V	≤82.50	≥5.50	8.19mA	13444.5Ω		

BG Type

Nominal Voltage	Pick-up Voltage VDC	Drop-out Voltage VDC	Rated Current (±10%)	Coil Resistance (±10%)	Nominal Power	Max Voltage
DC 5V	≤3.75	≥0.25	280mA	18Ω	1400 mW	130%Nominal Voltage
DC 6V	≤4.50	≥0.30	233mA	26Ω		
DC 9V	≤6.75	≥0.45	156mA	58Ω		
DC 12V	≤9.00	≥0.60	116.7mA	103Ω		
DC 15V	≤11.25	≥0.75	93.3mA	161Ω		
DC 18V	≤13.50	≥0.90	77.3mA	231Ω		
DC 24V	≤18.00	≥1.20	58.3mA	411Ω		
DC 36V	≤27.00	≥1.80	38.9mA	926Ω		
DC 48V	≤36.00	≥2.40	29.2mA	1646Ω		
DC 110V	≤82.50	≥5.50	12.7mA	8663Ω		

ORDERING INFORMATION

W12T -BG -1A S T F -XXX DC12V

- ① Type
- ② Contact gap: Nil=Standard、BG=2.1mm contact gap
- ③ Contact arrangement: 1A=1 open contacts
- ④ Construction: Nil=Flux proofed, S=Plastic sealed
- ⑤ Contact material: T=AgSnO₂
- ⑥ insulation system: F=Grade F
- ⑦ Customer special code: numbers or letters denote customer's requirements
- ⑧ Coil specification: DC5/6/9/12/15/18/24/36/48/110V

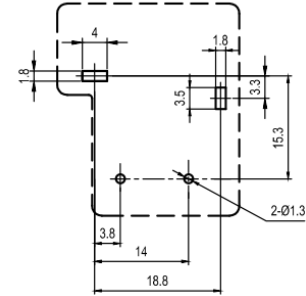
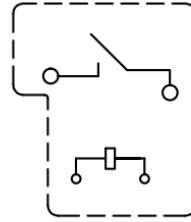
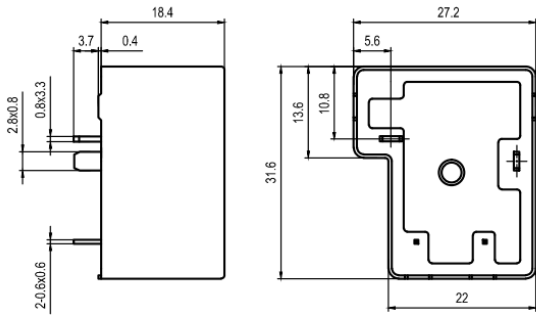
■ OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT (Unit: mm)

1A

Outline Dimensions

Wiring Diagram
(Bottom view)

PCB Layout
(Bottom view)



Remark: (1) In case of no tolerance shown in outline dimension: outline dimension $\leq 1\text{mm}$, tolerance should be $\pm 0.2\text{mm}$; outline dimension $> 1\text{mm}$ and $< 5\text{mm}$, tolerance should be $\pm 0.3\text{mm}$; outline dimension $\geq 5\text{mm}$, tolerance should be $\pm 0.5\text{mm}$.

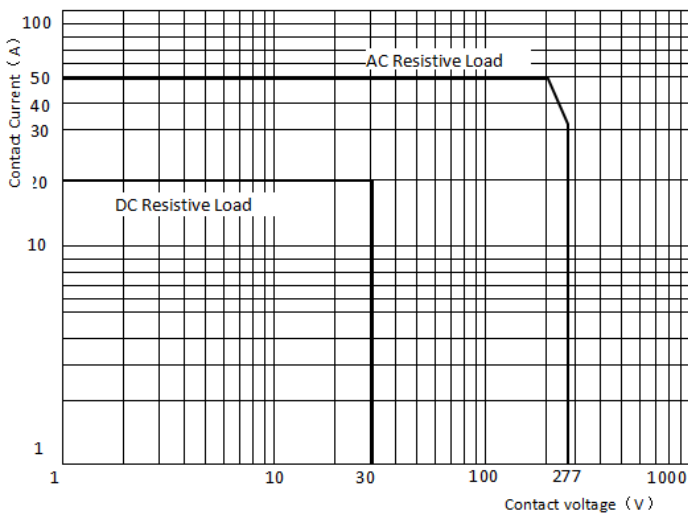
(2) The tolerance without indicating for PCB layout is always $\pm 0.1\text{mm}$.

■ SAFETY APPROVAL RATINGS

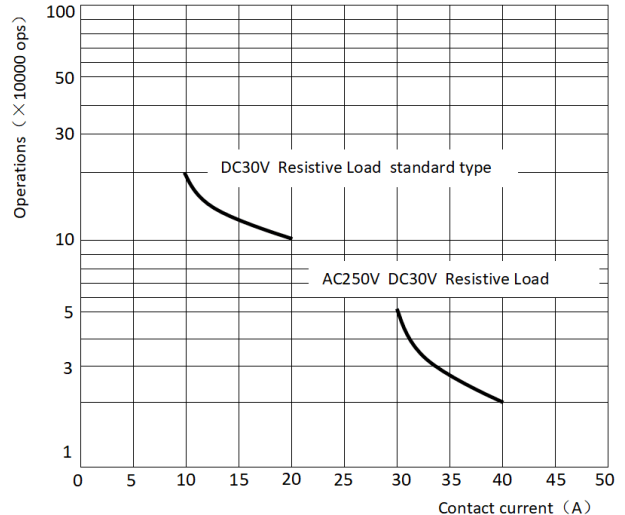
Approval	File No.	Contact arrangement	Contact material	Approved ratings		
UL/C-UL	E475405	1A(NO)	AgSnO ₂	20A	30VDC	85°C
				40A	250/125 VAC	85°C
				2HP	250VAC	85°C
				20A	250/125VAC(PF=0.6)	85°C
TUV	R 50338930	1A(NO)	AgSnO ₂	TV-10	125VAC	85°C
				20A	48VDC	85°C
CQC	CQC16002140939	1A(NO)	AgSnO ₂	40A	250VAC	85°C
				20A	30VDC	85°C

■ PERFORMANCE CURVES

MAXIMUM SWITCHING POWER



ENDURANCE CURVE



■ NOTICE

- ① If the relay needs to be cleaned or used in bad environment(e.g:dust or organic gas),we recommend plastic sealed type.
- ② The specification is for reference only,specifications subject to change without notice.