W12T-50 Power Relay

Features

- 50A contact switching capability
- Breakdown voltage(between coil and contacts):4KV
- UL insulation system:Class F
- Environmental friendly product(RoHS compliant)
- Outline Dimensions:(31.8×28.8×19.3)mm
- Main application:Electric vehicles and charging piles、photovoltaic new energy

■ CHARACTERISTICS

Specifications	Item		
Contact Data	Contact arrangement		1A、1C
	Contact resistance(initial)		50mΩ(6VDC 1A)
	Contact material		$AgSnO_2$
Rated value	Rated load(Resistance load)		NO: 60A 277/250VAC 50A 277/250VAC 40A 277/250VAC NC:20A 277/250VAC
	Max.switching voltage		277VAC
	Max.switching current		50A
	Max.switching capacity		13850VA
	Min.allowing load		5VDC 100mA
Electrical performance	Insulation resistance(initial)		1000MΩ(500VDC)
	Dielectric strength (initial)	Between open contacts	1500VAC,1min
		Between coil&contacts	2500VAC(Standard Type)/4000VAC,1min
	Operate time		≤20ms
	Release time		≤10ms
Mechanical performance	Shock resistance	Functional	98m/s²
		Destructive	980m/s²
	Vibration resistance		10Hz~55Hz 1.5mm DA
Endurance	Mechanical		5×10^6ops
	Electrical(Room temperature)		NO:60A 277/250VAC 1×10^4ops (ON/OFF=1s/9s) 50A 277/250VAC 2×10^4ops (ON/OFF=1s/9s) 40A 277/250VAC 3×10^4ops (ON/OFF=1s/9s) NC:20A 277/250VAC 2×10^4ops (ON/OFF=1s/9s)
Operate condition	Ambient temperature		-40℃~85℃
	Humidity		5% to 90%
Termination			PCB
Unit weight			Approx.30g
Construction			Plastic sealed,Flux proofed

■ 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	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
DC 110V	≤82.50	≥5.50	10.9mA	10083.3Ω		DC 143V

■ 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	180mA	27.8Ω	0.9W	DC 6.5V
DC 12V	≤9.00	≥0.60	75mA	160Ω		DC 15.6V
DC 24V	≤18.00	≥1.20	37.5mA	640Ω		DC 31.2V
DC 48V	≤36.00	≥2.40	18.75mA	2560Ω		DC 62.4V
DC 110V	≤82.50	≥5.50	8.19mA	13444.5Ω		DC 143V

■ ORDERING INFORMATION

W12T-50 -1A S T L F -XXX DC12V

① Type

② Contact arrangement:1A=1 open contacts、
1C=1 switched contacts

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

④ Contact material:T=$AgSnO_2$

⑤ Coil power:Nil=Standard、L=Sensitive

⑥ Insulation system:F=Class F

⑦ Customer special code:numbers or letters denote customer's requirements

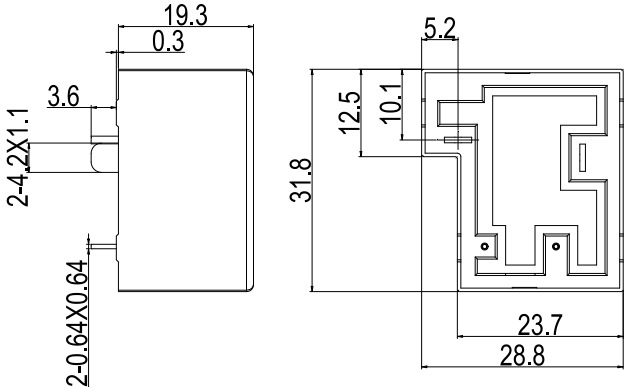
⑧ Coil specification:DC5/12/24/48/110V

(1) When used in clean environment(excluding H_2S,SO_2,NO_2,dust and other pollutants), it is recommended to choose the Flux proofed type;When used in unclean environment(contain H_2S,SO_2,NO_2,dust and other pollutants), it is recommended to choose the Plastic sealed.

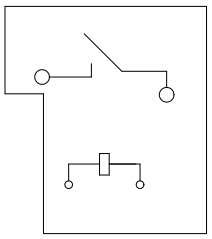
■ OUTLINE DIMENSIONS,WIRING DIAGRAM AND PC BOARD LAYOUT(Unit:mm)

1A

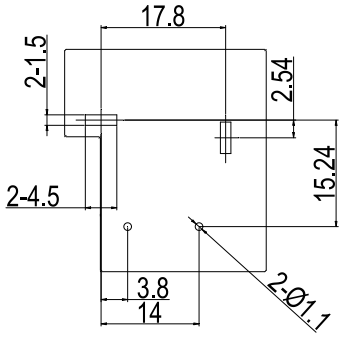
Outline Dimensions



Wiring Diagram
(Bottom view)

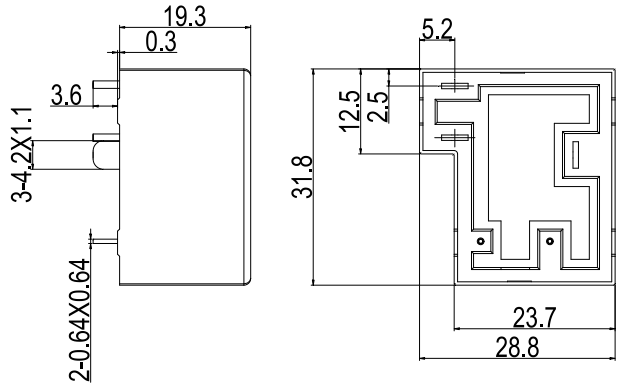


PCB Layout
(Bottom view)

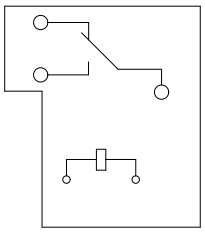


1C

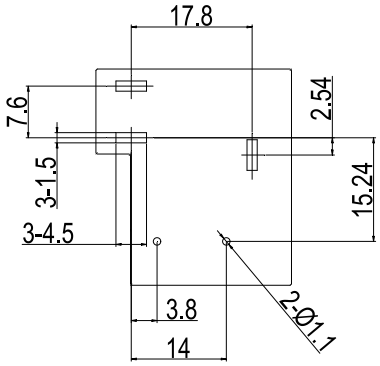
Outline Dimensions



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(NO)	$AgSnO_2$	NO: 40/30A 277/250VAC 85℃ 50A 277/250VAC 65℃ 60A 277/250VAC 45℃ NC: 20A 277/250VAC 85℃
TUV	R 50616155	1A(NO)	$AgSnO_2$	NO: 40/30A 277/250VAC 85℃ 50A 277/250VAC 65℃ 60A 277/250VAC 45℃ NC: 20A 277/250VAC 85℃
CQC	CQC16002140939	1A(NO)	$AgSnO_2$	NO: 40/30A 277/250VAC 85℃ 50A 277/250VAC 65℃ 60A 277/250VAC 45℃ NC: 20A 277/250VAC 85℃

■ 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.