

Features

- 40A contact switching capability
- Breakdown voltage(between coil and contacts):4KV
- 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:(31.6×27.2×18.4)mm
- Main applications:Electric vehicles and charging piles, photovoltaic new energy



TV-10 C  US

CHARACTERISTICS

Specifications	Item	Standard	BG Type	
Contact Data	Contact arrangement	1A, 1C	1A	
	Contact resistance(initial)	100mΩ(6VDC 1A) Special type: NO:≤1.2mΩ(32A) NC:≤1.5mΩ(32A)	100mΩ(6VDC 1A)	
	Contact material	AgSnO ₂		
Rated value	Rated load(Resistance load)	40A 250VAC 20A 30VDC	40A 250VAC 20A 48VDC	
	Max.switching voltage	277VAC/30VDC	277VAC/48VDC	
	Max.switching current	40A		
	Max.switching capacity	10000VA/600W	10000VA/960W	
	Min.allowing load	5VDC 100mA		
Electrical performance	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(Room temperature)	40A 250VAC 2×10 ⁴ ops(ON/OFF=1s/9s) 20A 30VDC 1×10 ⁵ ops(ON/OFF=1s/9s)	40A 250VAC 2×10 ⁴ 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	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	900 mW	DC 6.5V
DC 6V	≤4.50	≥0.30	150mA	40Ω		DC 7.8V
DC 9V	≤6.75	≥0.45	100mA	90Ω		DC 11.7V
DC 12V	≤9.00	≥0.60	75mA	160Ω		DC 15.6V
DC 15V	≤11.25	≥0.75	60mA	250Ω		DC 19.5V
DC 18V	≤13.50	≥0.90	50mA	360Ω		DC 23.4V
DC 24V	≤18.00	≥1.20	37.5mA	640Ω		DC 31.2V
DC 36V	≤27.00	≥1.80	25mA	1440Ω		DC 46.8V
DC 48V	≤36.00	≥2.40	18.75mA	2560Ω		DC 62.4V
DC 110V	≤82.50	≥5.50	8.19mA	13444.5Ω		DC 143V

BG 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	280mA	18Ω	1400 mW	DC 6.5V
DC 6V	≤4.50	≥0.30	233mA	26Ω		DC 7.8V
DC 9V	≤6.75	≥0.45	156mA	58Ω		DC 11.7V
DC 12V	≤9.00	≥0.60	116.7mA	103Ω		DC 15.6V
DC 15V	≤11.25	≥0.75	93.3mA	161Ω		DC 19.5V
DC 18V	≤13.50	≥0.90	77.3mA	231Ω		DC 23.4V
DC 24V	≤18.00	≥1.20	58.3mA	411Ω		DC 31.2V
DC 36V	≤27.00	≥1.80	38.9mA	926Ω		DC 46.8V
DC 48V	≤36.00	≥2.40	29.2mA	1646Ω		DC 62.4V
DC 110V	≤82.50	≥5.50	12.7mA	8663Ω		DC 143V

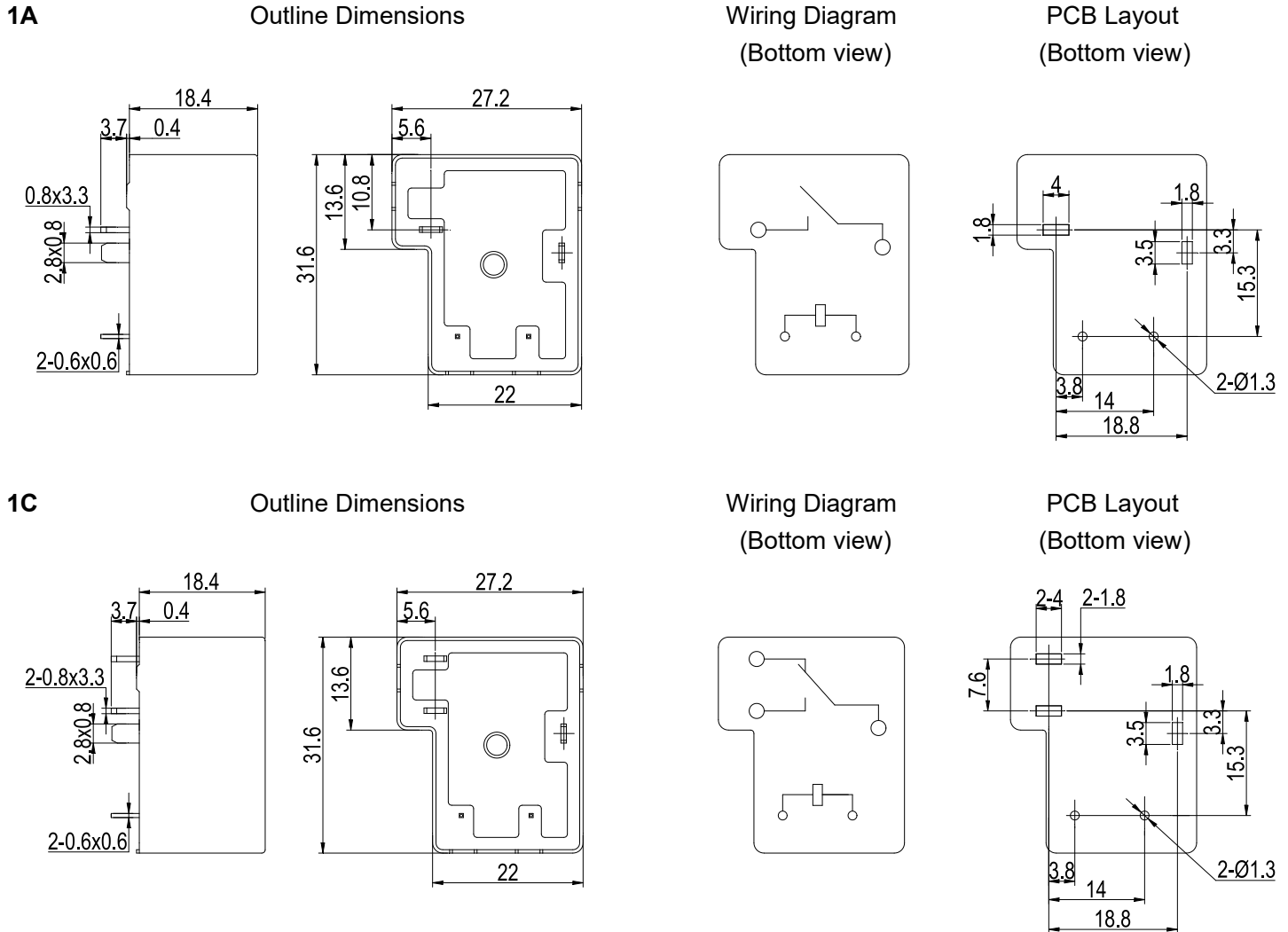
ORDERING INFORMATION

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
1C=1 switched contacts(BG type is not available)
- ④ Construction(1): Nil=Flux proofed, S=Plastic sealed
- ⑤ Contact material: T=AgSnO₂
- ⑥ Insulation system: F=Class 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

- (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)



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

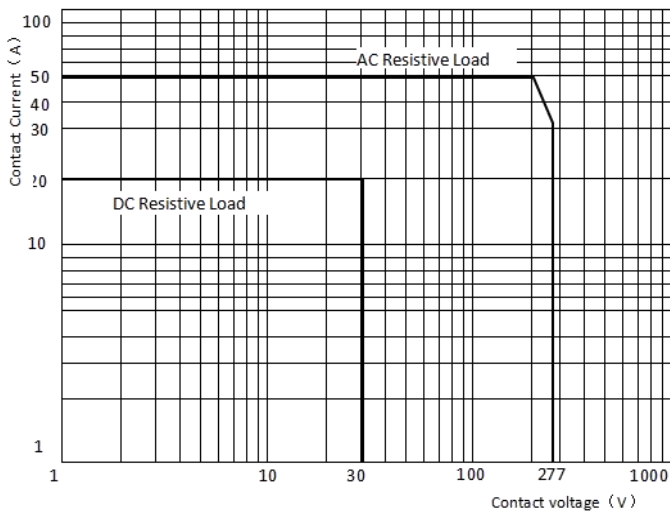
(2) The tolerance without indicating for PCB layout is always \pm 0.1mm.

SAFETY APPROVAL RATINGS

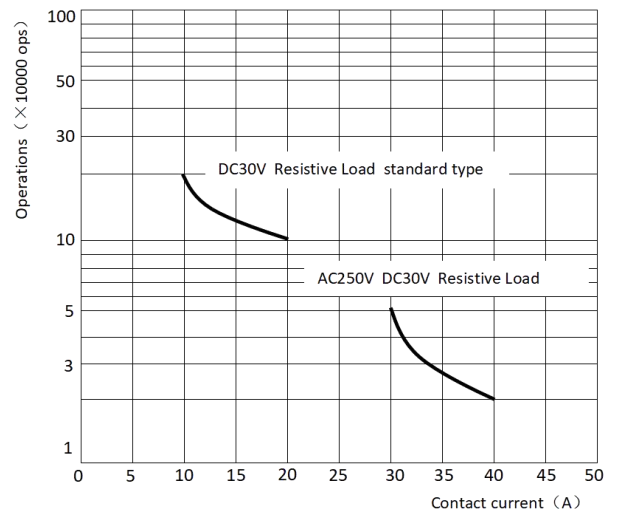
Approval	File No.	Contact arrangement	Contact material	Approved ratings		
UL/C-UL	E475405	1A(NO)	AgSnO ₂	20A	30VDC	85°C
				40A	250/125 VAC	85°C
			AgSnO ₂	2HP	250VAC	85°C
				20A	250/125VAC(PF=0.6)	85°C
TUV	R 50338930	1A(NO)	AgSnO ₂	40A	250VAC	85°C
				20A	30VDC	85°C
CQC	CQC16002140939	1A(NO)	AgSnO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

PERFORMANCE CURVES

MAXIMUM SWITCHING POWER



ENDURANCE CURVE



NOTICE

- ① 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.