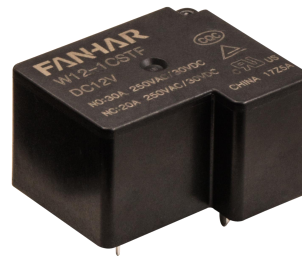


Features

- 40A switching capability
- Breakdown voltage (between contact and coil) : 4KV
- Provide the product meet the standards of IEC60335-1
- UL insulation system: Class F
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (31.6×27.2×18.8) mm
- Main application: Industrial Control、New energy and PV industry


TV-10 cUL[®] US

CHARACTERISTICS

Specifications	Item		
Contact Data	Contact arrangement		1A、1B、1C
	Contact resistance(initial)		≤100mΩ(6VDC 1A)
	Contact material		AgNi、AgSnO ₂
Rated value	Rated load(Resistance load)		30A (Standard) / 40A 250VAC 20A 30VDC
	Max.switching voltage		277VAC/30VDC
	Max.switching current		40A
	Max.switching capacity		10000VA/600W
	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)/4000VAC, 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		5×10 ⁶ ops
	Electrical	40A 250VAC	2×10 ⁴ ops ON/OFF=1s/9s)
		30A 250VAC 20A 30VDC	5×10 ⁴ ops (ON/OFF=1s/9s) 1×10 ⁵ 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)

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	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

ORDERING INFORMATION

W12 -1A S T F -XXX DC12V

① Type

② Contact arrangement(1): 1A=1open contacts、
1B=1close contacts、1C=1 switched contacts

③ Construction(2): Nil=Flux proofed, S=Plastic sealed

④ Contact material(3): Nil=AgNi、T=AgSnO₂

⑤ insulation system: F=Class F

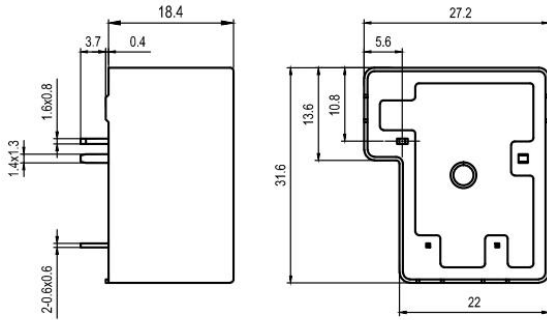
⑥ Customer special code: numbers or letters denote customer's requirements

⑦ Coil specification: DC5/6/9/12/15/18/24/36/48/110V

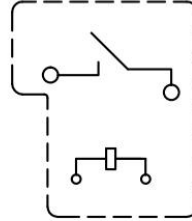
- (1) If need the contact arrangement is 1B, please contact with the salesman to ask for the outline dimensions, wiring diagram and PC board layout.
- (2) When used in clean environment(excluding H₂S、SO₂、NO₂、dust and other pollutants), it is recommended to choose the Flux proofed type; When used in unclean environment(contain H₂S、SO₂、NO₂、dust and other pollutants), it is recommended to choose the Plastic sealed.
- (3) Due to the high surge current of relay connection, we propose to use AgSnO₂ contacts.

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

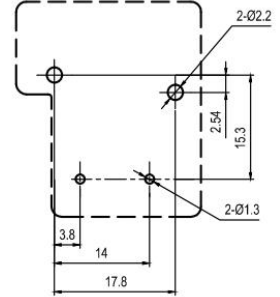
1A Outline Dimensions



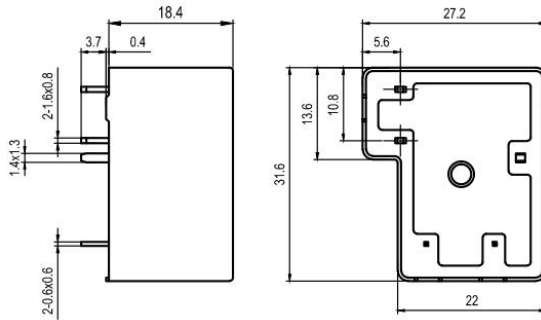
Wiring Diagram
(Bottom view)



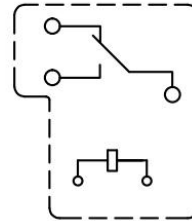
PCB Layout
(Bottom view)



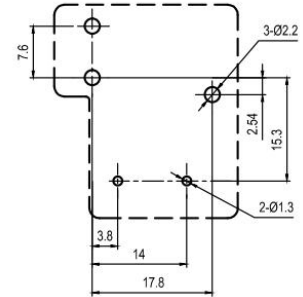
1C Outline Dimensions



Wiring Diagram
(Bottom view)



PCB Layout
(Bottom view)



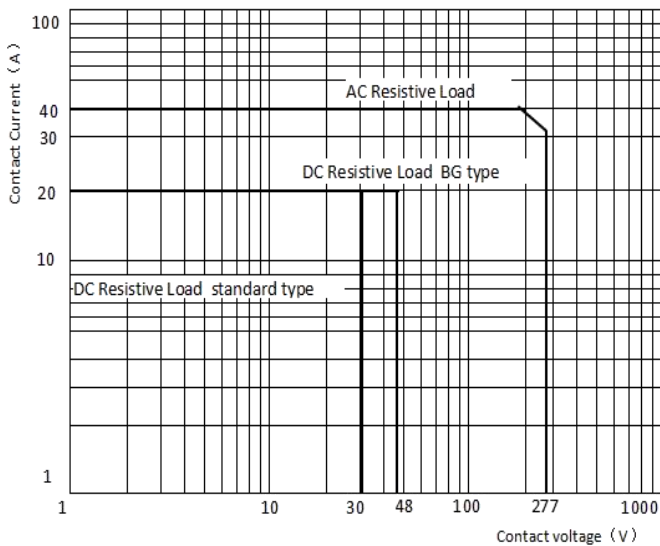
Remark: (1) In case of no tolerance shown in outline dimension: outline dimension ≤ 1 mm, tolerance should be ± 0.2 mm; outline dimension > 1 mm and < 5 mm, tolerance should be ± 0.3 mm; outline dimension ≥ 5 mm, tolerance should be ± 0.5 mm.
(2) The tolerance without indicating for PCB layout is always ± 0.1 mm.

SAFETY APPROVAL RATINGS

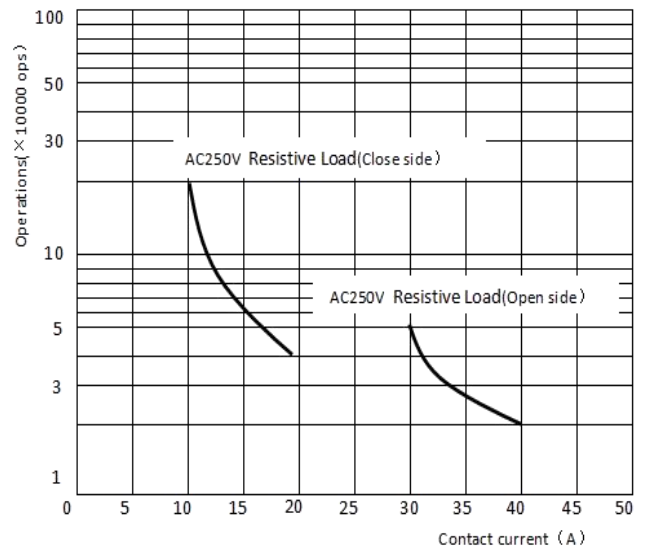
Approval	File No.	Contact arrangement	Contact material	Approved ratings			
UL/C-UL	E475405	1A、1C(NO)	AgNi、AgSnO ₂	20A	30VDC	85°C	
				40A/30A	250VAC	85°C	
				2HP	250VAC	85°C	
		1B、1C(NC)	AgNi、AgSnO ₂	20A	250VAC(PF=0.6)	85°C	
				AgSnO ₂	TV-10	125VAC	85°C
					20A	48VDC	85°C
TUV	R 50338930	1A(NO)	AgNi、AgSnO ₂	40A	250VAC	85°C	
				20A	30VDC	85°C	
		1B(NC)		20A	250VAC	85°C	
				15A	30VDC	85°C	
		1C(NO/NC)		20A/10A	250VAC	85°C	
				10A/10A	30VDC	85°C	
CQC	CQC16002140939	1A、1C(NO)	AgNi、AgSnO ₂	40A	250VAC	85°C	
				20A	30VDC	85°C	
		1B、1C(NC)		20A	250VAC	85°C	
				15A	30VDC	85°C	
		1C(NO/NC)		20A/10A	250VAC	85°C	
				10A/10A	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.