JTKW SUBMINIATURE AUTOMOTIVE RELAY

Features

- Tight structure and light weight
- High current contact capacity
- (Carrying current:35A/10min 25A/1h)
- Improved heat resistance
- Reflow soldering version available
- ROHS&ELV compliant

Typical Applications

Central door lock,power doors&windows,Turing lamp control, Mirror adjustment,Seat adjustment,Speed-limit indicator control, Warm-up control,Wiper control

CHARACTERISTICS

Contact arrangement	1A,1C
Voltage drop(initial)[1]	Typ.:50mV(at 10A) Max.:250mV(at 10A)
Max.continuous current[2]	35A(at 23℃,10min) 25A(at 23℃,1h)
Max.switching current[3]	NO:35A NC:20A
Max.switching voltage	16VDC
Min.contact load	1A 6VDC
Electrical endurance	See"CONTACT DATA"
Mechanical endurance	1 x10^{7}ops(300ops/min)
Initial insulation resistance	100MΩ(at 500VDC)
Dielectric strength[4]	500VAC

Operate time	Max.:10ms (at nomi.vol.)
Release time[5]	Max.:5ms
Shock resistance[6]	98m/s²
Vibration resistance[6]	10Hz to 55Hz 1.5mm DA
Ambient temperature	-40℃ to 85℃
Termination	PCB[7]
Unit weight	Approx.6g
Construction	Plastic sealed Flux proofed

Notes: 1) Equivalent to the max.initial contact resistance is 100mΩ (at 1A 6VDC).
2) For NO contacts,measured when applying 100% rated votage on coil.
3) At 23℃,13.5VDC(100 cycles,resistive load).
4)1min,leakage current less than 1 mA.
5) The value is measured when voltage drops suddenly from nominal voltage to 0VDC and coil is not paralleled with suppression circuit.
6) When energized,opening time of NO contacts shall not exceed 100μs,when non-energized,opening time of NC contacts shall not exceed 100μs,meantime, NO contacts shall not be closed.
7) Since it is an environmental friendly product,please select lead-free solder when welding.The recommended soldering temperature and time is (250±3)℃,(5±0.3)s.

COIL

at 23℃

Nominal Voltage[1] VDC	Pick-up Voltage VDC max.		Dorp-out Voltage VDC min.	Coil Resistance x(1±10%)Ω	Power consumption W	Max.allowable overdrive Voltage[2] VDC	
	at 23℃	at 85℃				at 23℃	at 85℃
6	3.6	4.5	0.5	60	0.6	9	8
9	5.4	6.8	0.7	135	0.6	13.5	12
10	6.3	7.9	0.8	180	0.6	15	13.3
12	7.3	9.0	1.0	240	0.6	18	16

CONTACT DATA

Load voltage	Load type		Load current A			On/Off ratio		Electrical endurance OPS	Contact meterial	Load wiring diagram[4)]
			1C		1A	On s	Off s			
			NO	NC	NO					
13.5VDC	Resistive	Make	20	10	20	2	2	2×10^5	$AgSnO_2$	see diagram 1
		Break	20	10	20	2	2			
	Resistive	Make	30	---	30	2	2	1×10^5	$AgSnO_2$	see diagram 2
		Break	30	---	30					
	Motor Locked	Make	25[3)]	---	25[3)]	2	2	1×10^5	$AgSnO_2$	see diagram 3
		Break	25[3)]	---	25[3)]					
	Lamp[1)]	Make	90[2)]	---	90[2)]	1	9	1×10^5 (at 23℃)	$AgSnO_2$	see diagram 4
		Break	8.8	---	8.8					
	Lamp[1)]	Make	6 x21W	---	6 x21W	1	9	1×10^5	$AgSnO_2$	see diagram 4
		Break		---						

1) Corresponds to the peak inrush current on intial actuation (cold filament).
2) Corresponds to the peak inrush current on intial actuation (motor).
3) The load wiring diagrams are listed below (Ratings of NO,NC are tested based on different samples seperately):

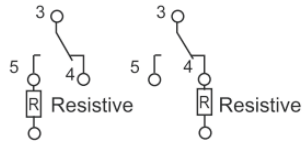


diagram 1

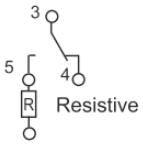


diagram 2

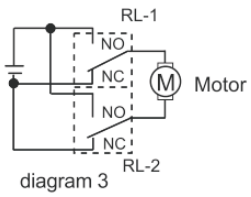


diagram 3

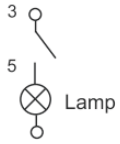


diagram 4

4) When the load voltage is at 24VDC or higher,or the applications are different from the table above,please submit the detailed application conditions to JINTIAN to get more support.

ORDERING INFORMATION

JTKW / 012 -1Z W -S (XXX)

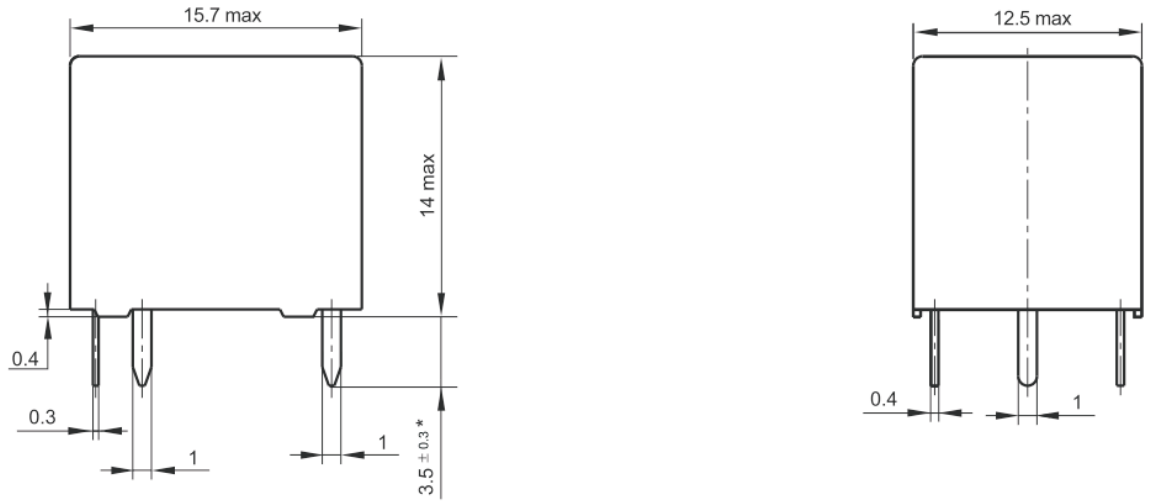
Type	
Coil voltage	006:6VDC 009:9VDC 010:10VDC 012:12VDC
Contact arrangement	**1H**:1Form A **1Z**:1Form C
Contact material	**W**:$AgSnO_2$
Construction[1)2)]	**S**:Plastic sealed **Nil**:Flux proofed
Special code[3)]	**XXX**:Customer special requirement **Nil:**Standrad

Notes: 1) The structure of JTKW/XXX-1ZWSX is only flux proof,the open vent holes is at the bottom of the base.
2) Contact is recommended for suitable condition and specifications if water cleaning or surface process is involved in assembling relays on PCB.
3) The customer special requirement express as special code after evaluating by Jintian.e.g.(335)stand for product in accordance to IEC 60335-1(GWT).

OUTLINE DIMENSIONS,WIRING DIAGRAM AND PC BOARD LAYOUT

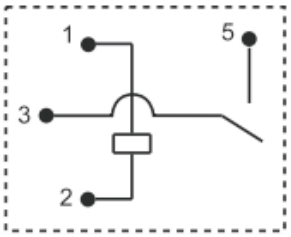
Unit: mm

Outline Dimensions(1 Form A / 1 Form C)

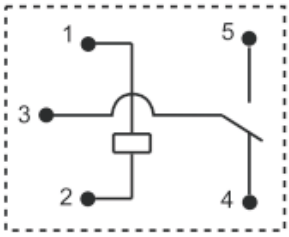


PCB Layout (Bottom view)

1 Form A

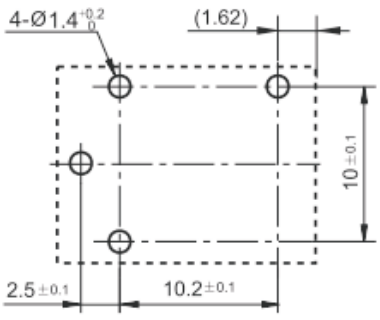


1 Form C

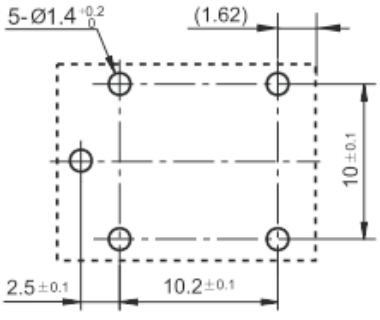


Wiring Diagram (Bottom view)

1 Form A



1 Form C

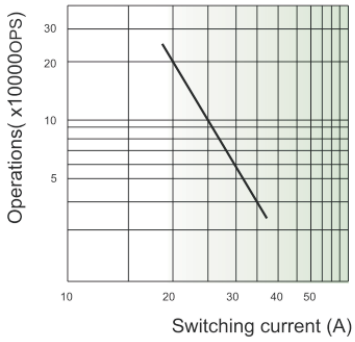


Remark:1) In case of no tolerance shown in outline dimension:outline dimension ≤1mm,tolerance should be ±0.2mm;outline dimension>1mm and≤5mm,tolerance should be±0.3mm;outline dimension>5mm,tolerance should be±0.4mm.
2) The tolerance without indicating for PCB layout is always±0.1mm.

CHARACTERISTIC CURVES

Load curve (NO contacts, at 23°C)

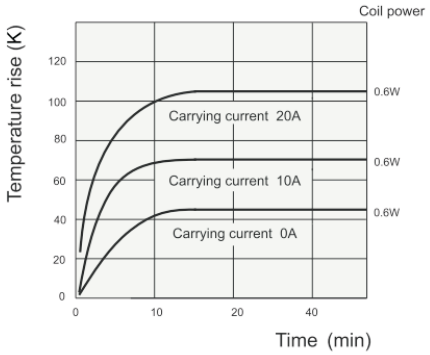
Electrical endurancecurve (Motor locked)



JTKW/012-1ZW(XXX)

Test conditions: 0.2s ON, 2s OFF

Coil temperature rise



JTKW/012-1ZW(XXX)

Disclaimer

The specification is for reference only.See to “Terminology and Guidelines”for more information.Specifications subject to change without notice.We could not evaluate all the performance and all the parameters for every possible application.Thus the user should be in a right position to choose the suitable product for their own application.If there is any query,please contact JINTIAN for the technical service.However,it is the user’s responsibility to determine which product should be used only.