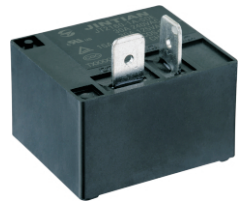
JT2160 MINIATURE HIGH POWER RELAY

c UL us
File No:E319069

File No:R 50266582

CQC
File No:CQC13002100206



Features

- 30A switching capability
- PCB & QC types available
- 1 Form A, 1 Form B and 1Form C types available
- Plastic sealed and dust protected type available
- UL insulation system:Class F available
- Environmental friendly product (RoHS compliant)
- Outline Dimensions:(32.2 x 27.5 x 19.8)mm
- Products with QC 3.2mm pin diameter are available

CONTACT DATA

Contact arrangement	1A	1B	1C(NO)	1C(NC)
Contact resistance[1]	50mΩ max.(at 1A 24VDC)			
Contact material	$AgCdO,AgSnO_2$			
Contact rating (Res.load)	30A 240VAC 20A 30VDC	15A 240VAC 10A 30VDC	20A 240VAC 20A 30VDC	10A 240VAC 10A 30VDC
Max.switching voltage	277VAC/30VDC			
Max.switching current	40A[2]	15A	20A	10A
Max.switching capacity	11080VA 1200W	4155VA 450W	5540VA 600W	2770VA 300W
Mechanical endurance	1×10^7 ops			
Electrical endurance	1A type(Dust protected):1×10^5 ops (30A 240VAC,Resistive load, AgCdO,Room temp.,1s on 9s off) 1B type(Dust protected):1×10^5 ops 15A 240VAC,Resistive load, AgCdO,Room temp.,1s on 9s off)			

Notes: 1) The data shown above are intial values.
2) Long time current-carrying under 40A condition is prohibited.

CHARACTERISTICS

Insulation resistance		1000MΩ(at 500VDC)
Dielectirc strength	Between coil&contacts	2500VAC 1min
	Between open contacts	1500VAC 1min
Operate time(at nomi.volt.)		15ms max.
Release time(at nomi.volt.)		10ms max.
Ambient tenperature		-55℃ to 85℃
Shock resistance	Functional	$98m/s^2$
	Destructive	$980m/s^2$
Vibration resistance		10Hz to 55Hz 1.5mm DA
Humidity		5% to 85% RH
Termination		PCB&QC
Unit weight		Approx. 30g
Construction		Plastic sealed Dust protected

Notes: 1) For plastic sealed type,the venting-hole should be opened in test.
2) The data shown above are intial values.
3) Please find coil temperature cerve in the characteristic curves below.
4) UL insulation system:Class F,Class B.
5) It is recommended that the terminal of the process QC cannot pass through more than 25A current for a long period of time.

COIL

Coil power	Approx. 900mW

COIL DATA

at 23℃

Nominal Voltage VDC	Pick-up Voltage VDC[1]	Drop-out Voltage VDC[1]	Max. Voltage VDC*[2]	Coil Resistance Ω
5	≤3.75	≥0.5	6.5	27 x (1±10%)
6	≤4.50	≥0.6	7.8	40 x (1±10%)
9	≤6.75	≥0.9	11.7	97 x (1±10%)
12	≤9.00	≥1.2	15.6	155 x (1±10%)
15	≤11.25	≥1.5	19.5	256 x (1±10%)
18	≤13.50	≥1.8	23.4	380 x (1±10%)
24	≤18.00	≥2.4	31.2	660 x (1±10%)
48	≤36.00	≥4.8	62.4	2560 x (1±10%)
70	≤52.50	≥7.0	91.0	5500 x (1±10%)
110	≤82.50	≥11.0	143.0	13450 x (1±10%)

Notes: 1) The data shown above are intial values.
2) *Maximum Voltage refers to the maximum voltage which relay coil could endure in a short period of time.

SAFETY APPROVAL RATINGS

UL/CUL

Contact material	Load type	Volts	1 Form A	1 Form B	1 Form C(NO)	1 Form C(NC)
AgCdO	General purpose	125/240VAC	30A	15A	30A	15A
		277VAC	30A	30A	30A	30A
	Resistive	125/240VAC	30A	15A	---	---
		30VDC	20A	10A	20A	10A
		277VAC	20A	---	---	---
		240VAC	15A	---	---	---
		250VAC	40A		40A	
	Ballast	125/240/277VAC	6A	3A	6A	3A
	Pilot duty	125VAC	800VA	290VA	800VA	290VA
		125VAC	690VA	---	690VA	---
		125VAC	800VA	---	800VA	---
		240VAC	1152VA	768VA	1152VA	768VA
		277VAC	764VA	---	764VA	---
	Motor load	125VAC	1HP	1/4HP	1HP	1/4HP
		240VAC	2HP	1HP	2HP	1HP
		125VAC	1HP	---	1HP	---
		125/277VAC	3/4HP	---	3/4HP	---
	Definite purpose (LRA-loaded rotor) (FLA-full load)	120VAC	82.8LRA,13.8FLA	---	82.8LRA,13.8FLA	---
		125VAC	96LRA,30FLA	33LRA,10FLA	60LRA,20FLA	33LRA,10FLA
		125VAC	60LRA,20FLA	30LRA,12FLA	60LRA,20FLA	30LRA,12FLA
		125VAC	82.8LRA,27FLA	---	82.8LRA,27FLA	---
		240VAC	80LRA,30FLA	33LRA,10FLA	60LRA,20FLA	33LRA,10FLA
		240VAC	41.4LRA,6.9FLA	---	41.4LRA,6.9FLA	---
		277VAC	60LRA,20FLA	---	60LRA,20FLA	---
	Tumgsten	125VAC	15A	---	15A	---
		240VAC	5A	---	5A	3A
		120VAC	---	3A	---	---
		240VAC	---	3A	---	---
$AgSnO_2$	General purpose	125/240VAC	30A	---	---	---
		240VAC	---	15A	---	---
	Resistive	250VAC	40A	---	---	---

Notes: 1) All values unspecified are at 40°C.
2) Only typical loads are listed above. Other load specifications can be available upon request.

ORDERING INFORMATION

	JT2160	-1A	-12D	E	T	F	(XXX)	
Type								
Contact arrangement	**1A**:1Form A **B**:1Form B **C**:1Form C							
Coil voltage	5, 6, 9, 12, 15, 18, 24, 48, 70, 110VDC							
Construction [1) 2)]	**E**: Plastic sealed	**Nil**: Dust protected						
Contact material [3)]	**T**: $AgSnO_2$	**Nil**: AgCdO						
Insulation standard	**F**: Class F	**Nil**: Class B						
Special code [4)]	**XXX**: Customer special requirement	**Nil**: Standrad						

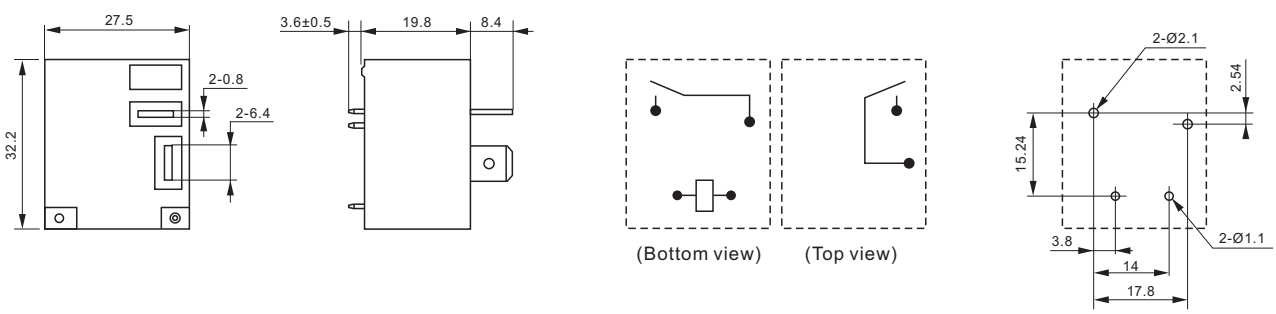
Notes: 1) We recommend dust protected types for a clean environment(free from contaminations like H_2S, SO_2 or NO_2 dust, ect.).
We suggest to choose plastic sealed types and validate it in real application for an unclean environment(with contaminations like H_2S, SO_2 or No_2, dust, ect.).
2) Contact is recommended for suitable condition and specifications if water cleaning or surface process is involved in assembling relays on PCB.
3) $AgSnO_2$ contact can be represented as "(T)" after periodic code.
4) The customer special requirement express as special code after evaluating by JINTIAN.

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

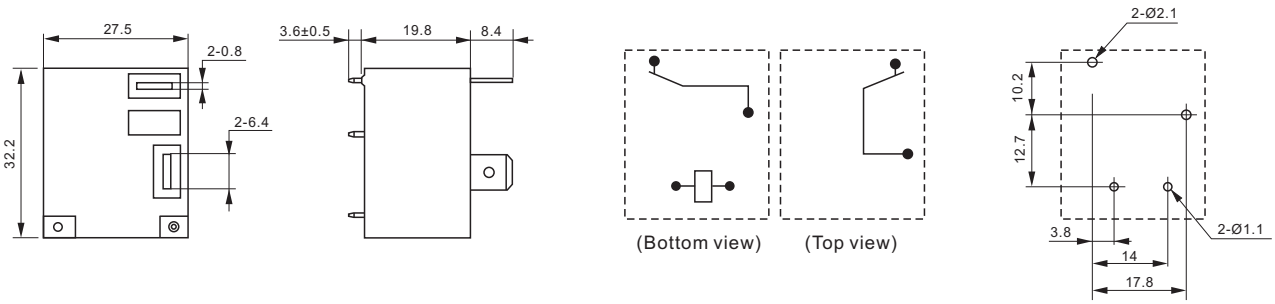
Unit: mm

Outline Dimensions | Wiring Diagram (Bottom view) | PCB Layout (Bottom view)

1 Form A



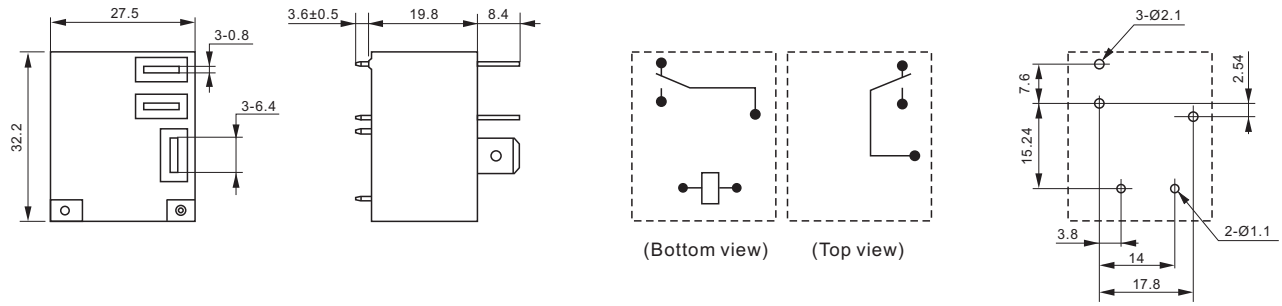
1 Form B



OUTLINE DIMENSIONS,WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

1 Form C



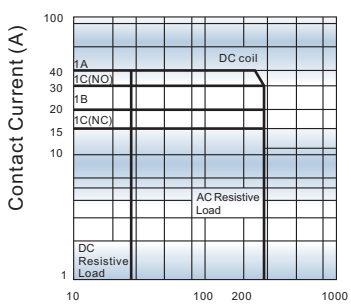
Remark:1) The pin dimension of the product outline drawing is the size before tinning (it will become larger after tinning), and the mounting hole size is the recommended design size of the PCB board hole. The specific PCB board hole design size can be mapped and adjusted according to the actual producet.

2) 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.

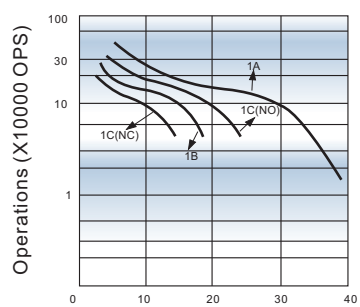
3) The tolerance without indicating for PCB layout is always±0.1mm.

CHARACTERISTIC CURVES

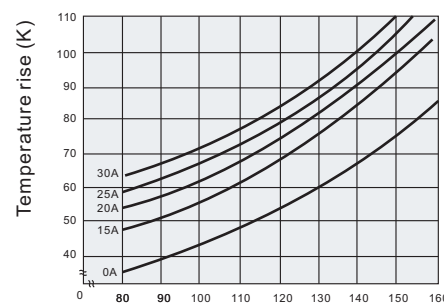
MAXIMUM SWITCHING POWER



ENDURANCE CURVE



COIL TEMPERATURE RISE



Test conditions:
Resistive load, Dust protected,
AgCdO, Room temp., 1s on 9s off

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.