

## JE10

## MINIATURE HIGH POWER LATCHING RELAY



File No.: E134517



File No.: CQC06017016719

## Features

- Maximum switching capability up to 50A
- Lamp load up to 5000W
- Capacitor load up to 200uF (Min. inrush current at 500A/10s)
- Creepage distance: 8mm
- Dielectric strength: more than 4000VAC (between coil and contacts)
- Wash tight and flux proofed types available
- Manual switch function available
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (39.0 x 15.0 x 30.2)mm

## CONTACT DATA

Contact arrangement	1A, 1C
Contact resistance	50mΩ (at 1A 24VDC)
Contact material	AgSnO <sub>2</sub> , AgCdO
Contact rating	1A: 50A 250VAC, 1 x 10 <sup>5</sup> OPS(Resistive) 5000W 220VAC, 3 x 10 <sup>4</sup> OPS (Incandescent & fluorescent lamp) 1C: 40A 250VAC, 3 x 10 <sup>4</sup> OPS(Resistive)
Max. switching voltage	440VAC
Max. switching current	50A
Max. switching power	1A: 12500VA / 1C: 10000VA
Max. continuous current	50A
Mechanical endurance	1 x 10 <sup>6</sup> OPS
Electrical endurance	See rated load

## COIL DATA

at 23°C

Nominal Voltage VDC	Set/Reset Voltage VDC	Max. Allowable Voltage VDC	Coil Resistance x (1±10%) Ω	
6	4.8	7.8	Single Coil	24
12	9.6	15.6		96
24	19.2	31.2		384
48	38.4	62.4		1536
6	4.8	7.8	Double Coil	2 x 12
12	9.6	15.6		2 x 48
24	19.2	31.2		2 x 192
48	38.4	62.4		2 x 768

## CHARACTERISTICS

Insulation resistance	1000MΩ (at 500VDC)
Dielectric strength	Between coil & contacts 4000VAC 1min
	Between open contacts 1500VAC 1min
Creepage distance (input to output)	1A: 8mm 1C: 6mm
Pulse width of coil	50ms min. (Recommend: 100 to 200ms)
Operate time (at nomi. volt.)	15ms max.
Release time (at nomi. volt.)	15ms max.
Max. operate frequency	1A: 20 cycles/min 1C: 10 cycles/min
Shock resistance	Functional 100m/s <sup>2</sup> (10g)
	Destructive 1000m/s <sup>2</sup> (100g)
Vibration resistance	10Hz to 55Hz 1.5mm DA
Humidity	98% RH, 40°C
Ambient temperature	-40°C to 70°C
Storage temperature	-40°C to 100°C
Termination	PCB
Unit weight	Approx. 32g
Construction	Wash tight, Flux proofed

Notes: The data shown above are initial values.

## SAFETY APPROVAL RATINGS

UL&CUR (AgSnO <sub>2</sub> )	1 Form A	Resistive: 50A 277VAC Tungsten: 5000W 240VAC
	1 Form C	40A 277VAC

Notes: Only some typical ratings are listed above. If more details are required, please contact us.

## COIL

Coil power	Single Coil: 1.5W; Double Coil: 3.0W
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## ORDERING INFORMATION

Type	JE10	-1/	12	-H	S	T	-L2	-R	(XXX)
Version	1: No auxiliary convexity, no manual switch 2: No auxiliary convexity, with manual switch 3: With auxiliary convexity, no manual switch 4: With auxiliary convexity, with manual switch								
Coil voltage	6, 12, 24, 48VDC								
Contact form	H: 1 Form A Z: 1 Form C								
Construction <sup>1)</sup>	S: Wash tight (only for JE10-1 & JE10-3) Nil: Flux proofed								
Contact material	T: AgSnO <sub>2</sub> Nil: AgCdO (No UL approval)								
Sort	L1: Single coil latching L2: Double coil latching								
Polarity	R: Reverse polarity (See Wiring diagram) Nil: Standard polarity (See Wiring diagram)								
Customer special code <sup>2)</sup> (Only for special requirements)	e.g. (551) stands for RoHS compliant (Cadmium containing contacts) (555) stands for RoHS compliant (Cadmium-free contacts)								

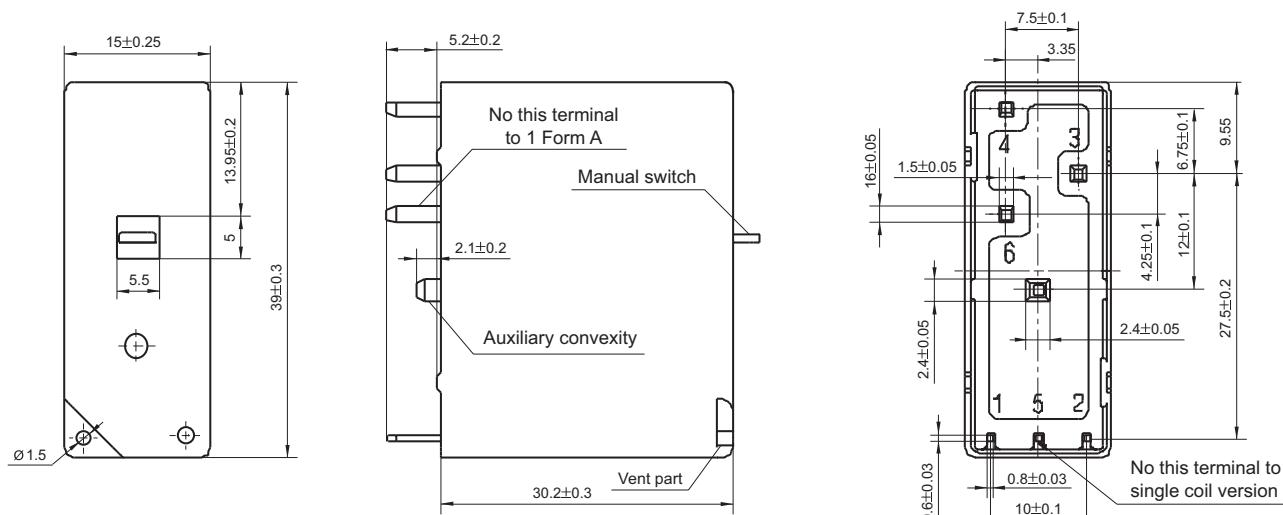
**Notes:**

- 1) Under the ambience with dangerous gas like H<sub>2</sub>S, SO<sub>2</sub> or NO<sub>2</sub>, wash tight type is recommended; please test the relay in real applications. If the ambience allows, flux proofed is preferentially recommended.
- 2) JE10 is an environmental friendly product. Please mark a special code (555) or (551) when ordering. (551) stands RoHS compliant with Cadmium contact; (555) stands for RoHS compliant with Cadmium-free contact.
- 3) As to wash tight type, before using relay, please remove the vent part on the top of the cover.
- 4) Considering the initial state might be changed in transit (terminal 3# and 4# is opening by default), upon required, position should be set or reset.
- 5) As to lamp load, capacitive load, motor load or some occasion asking for according with RoHS, please choose AgSnO<sub>2</sub> contact material.

## OUTLINE DIMENSIONS AND WIRING DIAGRAM

Unit: mm

### Outline Dimensions



(Bottom view)

Remark: In case of no tolerance shown in outline dimension: outline dimension  $\leq 1$ mm, tolerance should be  $\pm 0.2$ mm; outline dimension  $> 1$ mm and  $\leq 5$ mm, tolerance should be  $\pm 0.3$ mm; outline dimension  $> 5$ mm, tolerance should be  $\pm 0.4$ mm.

## OUTLINE DIMENSIONS AND WIRING DIAGRAM

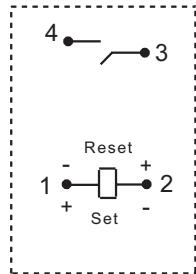
Unit: mm

### Wiring Diagram

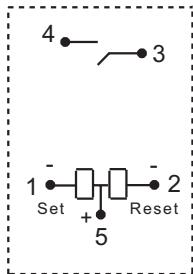
(Bottom view)

Standard polarity (Reset condition)

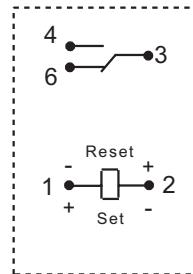
Single coil, 1 Form A



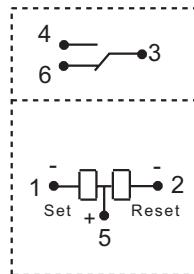
Double coil, 1 Form A



Single coil, 1 Form C

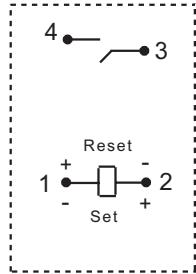


Double coil, 1 Form C

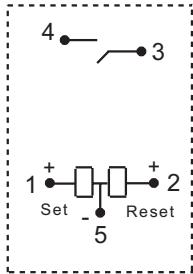


Reverse polarity (Reset condition)

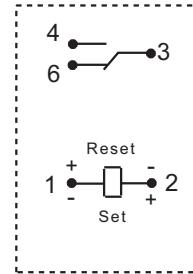
Single coil, 1 Form A



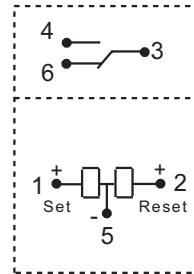
Double coil, 1 Form A



Single coil, 1 Form C



Double coil, 1 Form C



#### Notice

1. Relay is on the "set" status when being released from stock, with the consideration of shock risen from transit and relay mounting, relay would be changed to "reset" status, therefore, when application (connecting the power supply), please reset the relay to "set" or "reset" status on request.
2. In order to maintain "set" or "reset" status, energized voltage to coil should reach the rated voltage, impulse width should be 5 times more than "set" or "reset" time. Do not energize voltage to "set" coil and "reset" coil simultaneously. And also long energized time (more than 1 min) should be avoided.
3. In order to avoid changing operate voltage, products should not be kept in strong magnetic field during transportation, storage and application.

#### Disclaimer

This datasheet is for the customers' reference. All the specifications are 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 Hongfa for the technical service. However, it is the user's responsibility to determine which product should be used only.