JE7 SUBMINIATURE INTERMEDIATE POWER RELAY

c UL us
File No.:E134517

Features

- High switching capacity
  1A: 10A 250VAC/8A 30VDC;
  2A, 1A + 1B: 8A 250VAC/30VDC
- High sensitivity: 200mW
- 4kV dielectric strength (between coil & contacts)
- Single side stable and latching types available
- 1 Form A, 2 Form A and 1A + 1B contact arrangement
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (20.0 x 15.0 x 10.2) mm

CONTACT DATA

Contact arrangement	1A	2A, 1A + 1B
Contact resistance	No gold plated: 50mΩ (at 1A 6VDC) Gold plated: 30mΩ (at 1A 6VDC)	
Contact material	AgNi, AgNi+Au	
Contact rating (Res. load)	10A 250VAC/ 8A 30VDC	8A 250VAC/ 30VDC
Max. switching Voltage	277VAC	277VAC
Max. switching current	10A	8A
Max. continuous current	10A	8A
Max. switching power	2500VA / 240W	2000VA/ 240W
Mechanical endurance	5×10^7 OPS	
Electrical endurance	1×10^5 OPS (2 Form A: 3×10^4 ops)	

CHARACTERISTICS

Insulation resistance		1000MΩ (at 500VDC)
Dielectric Strength	Between coil & contacts	1A, 1A+1B: 4000VAC 1min 2A: 2000VAC 1min
	Between open contacts	1000VAC 1min
Pulse width of coil		20ms min. (Recommend: 100ms to 200ms)
Operate time (at nomi. volt.)		10ms max.
Release (Reset) time (at nomi. volt.)		10ms max.
Max. operate frequency (under rated load)		20 cycles /min
Temperature rise (at nomi. volt.)		50 K max.
Vibration resistance		10Hz to 55Hz 1.5mm DA
Shock resistance		100m/s² (10g)
Humidity		5% to 85% RH
Ambient temperature		-40 °C to 70 °C
Termination		PCB
Unit weight		Approx. 6g
Construction		Wash tight, Flux proofed

Notes: The data shown above are initial values.

COIL

Coil power	1 From A, 1A+1B single side stable	200mW
	1 coil latching	200mW
	2 Form A single side stable	280mW
	2 coils latching	280mW

COIL DATA at 23°C

Nominal Voltage VDC		Coil Resistance x (1±10%) Ω	Pick-up (Set/Reset) Voltage 1) VDC	Drop-out Voltage VDC
1A, 1A+1B single side stable 1 coil latching	3	45	2.1	0.3
	5	125	3.5	0.5
	6	180	4.2	0.6
	9	405	6.3	0.9
	12	720	8.4	1.2
	24	2880	16.8	2.4
2 Form A single side stable	3	32.1	2.1	0.3
	5	89.3	3.5	0.5
	6	129	4.2	0.6
	9	289	6.3	0.9
	12	514	8.4	1.2
	24	2056	16.8	2.4
2 coils latching	3	32.1+32.1	2.1	---
	5	89.3+89.3	3.5	---
	6	129+129	4.2	---
	9	289+289	6.3	---
	12	514+514	8.4	---
	24	2056+2056	16.8	---

Notes: 1) set/reset voltage is applied to latching relay.

SAFETY APPROVAL RATINGS

UL&CUR	1 Form A	10A 250VAC 8A 30VDC 1/4HP 125VAC 1/3HP 250VAC
	2 Form A	8A 250VAC/30VDC 1/4HP 125VAC 1/3HP 250VAC
	1 A +1 B	8A 250VAC/30VDC 1/4HP 125VAC 1/3HP 250VAC

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

ORDERING INFORMATION

	JE7 /	12	-1H	S	G	-L2	-R	(XXX)
Type								
Coil voltage	3, 5, 6, 9, 12, 24VDC							
Contact form	**1H:** 1 Form A **2H:** 2 Form A **1HD:** 1A + 1B							
Construction [1]	**S:** Wash tight **Nil**: Flux proofed							
Contact plating	**G:** Gold plated **Nil**: No gold plated							
Sort	**L1:** 1 coil latching **L2:** 2 coils latching **Nil:** Single side stable							
Polarity	**R:** Reverse polarity **Nil:** Standard polarity							
Customer special code [2]	Only for special requirements, e.g. (555) stands for RoHS compliant							

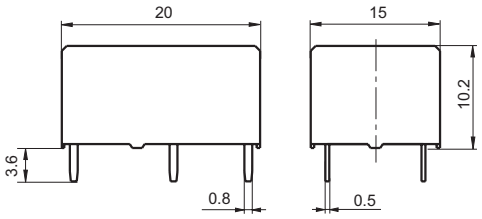
Notes: 1) Under the ambience with dangerous gas like H_2S, SO_2 or NO_2, wash tight type is recommended; please test the relay in real applications. If the ambience allows, flux proofed is preferentially recommended.
2) JE7 is an environmental friendly product. Please mark a special code (555) when ordering.

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

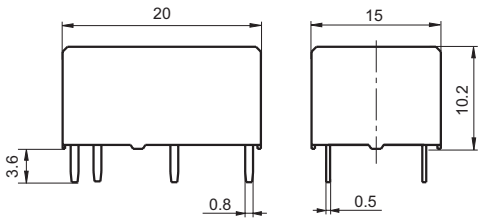
Unit: mm

Outline Dimensions

Single side stable & 1 coil latching



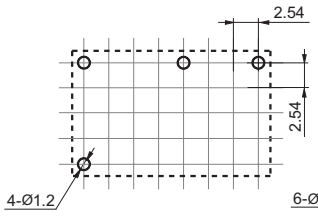
2 coils latching



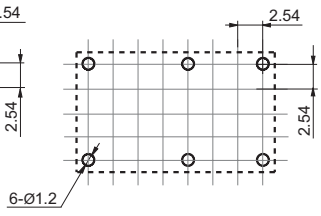
PCB Layout (Bottom view)

Single side stable & 1 coil latching

1 Form A

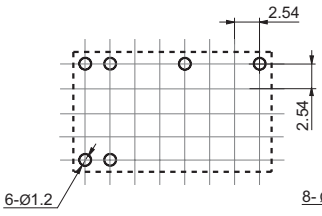


2 Form A, 1A + 1B

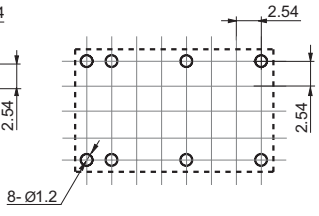


2 coils latching

1 Form A



2 Form A, 1A + 1B



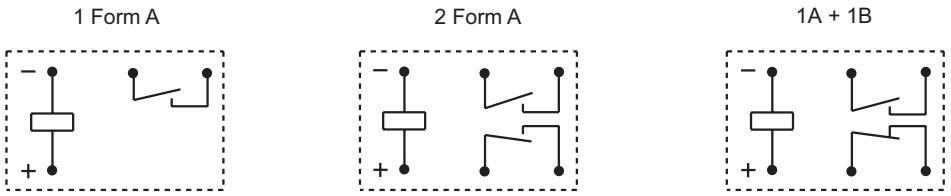
Remark: 1) In case of no tolerance shown in outline dimension: outline dimension ≤1mm, tolerance should be ±0.2mm; outline dimension >1mm and ≤5mm, tolerance should be ±0.3mm; outline dimension >5mm, tolerance should be ±0.4mm.
2) The tolerance without indicating for PCB layout is always ±0.1mm.
3) The width of the gridding is 2.54mm.

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

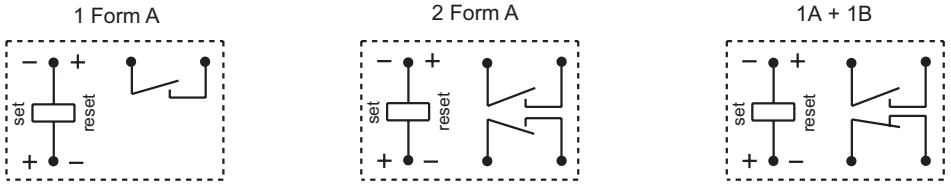
Unit: mm

Wiring Diagram (Bottom view)

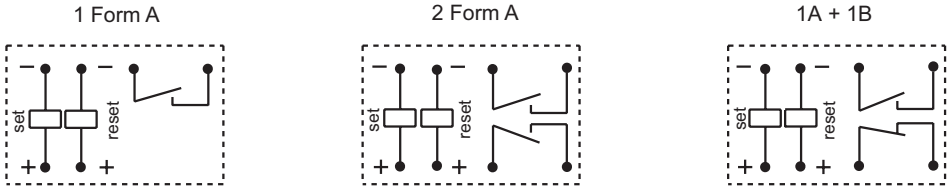
Single side stable (Deenergized condition)



1 coil latching (Reset condition)



2 coils latching (Reset condition)



Remark: The coil polarity of Reverse polarity and Standard polarity is opposite.

Notice

1. Relay is on the “reset” status when being released from stock, with the consideration of shock risen from transit and relay mounting, relay would be changed to “set” 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.