

JE9 (HF8509)

HIGH POWER LATCHING RELAY



File No.:E133481



File No.:CQC02001001950



Features

- 60A switching capability
- 4KV dielectric strength (between coil and contacts)
- Heavy load up to 15000VA
- Environmental friendly product available (RoHS compliant)
- Outline Dimensions: 38.0 x 30.0 x 16.0 mm

CONTACT DATA

Contact arrangement	1A		
Voltage drop (initial) ¹⁾	Typ.: 100mV (at 10A) Max.: 250mV (at 10A)		
Contact material	AgSnO ₂ , AgCdO		
Contact rating (Res. load)	60A 250VAC 5000 OPS	50A 250VAC 10000 OPS	40A 250VAC 100000 OPS
Max. switching voltage	250VAC		
Max. switching current	60A		
Max. switching power	15000VA		
Mechanical life	1 x 10 ⁶ OPS		
Electrical life	1 x 10 ⁶ OPS (at 40A 250VAC)		

CHARACTERISTICS

Initial insulation resistance	1000MΩ (at 500VDC)	
Dielectric strength	Between coil & contacts	4000VAC 1min.
	Between open contacts	1500VAC 1min.
Creepage distance	8mm	
Operate time (at nomi. volt.)	Max. 20ms	
Release time (at nomi. volt.)	Max. 20ms	
Shock resistance	Functional	98m/s ²
	Destructive	980m/s ²
Vibration resistance	10 to 55Hz 1.5mm DA	
Humidity	98% RH, +40°C	
Ambient temperature	-40°C to +70°C	
Termination	PCB & QC	
Unit weight	Approx. 33g	
Construction	Sealed IP67, Dust cover	

COIL

Coil power Single Coil: 1.0W; Double Coil: 2.0W

COIL DATA²⁾

Nominal Voltage (VDC)	Pick-up Voltage (VDC)	Pulse Duration (ms)	Coil Resistance (Ω)	
5	3.5	50		Single Coil
6	4.2	50	24 ± 10%	
9	6.3	50	35 ± 10%	
12	8.4	50	80 ± 10%	
24	16.8	50	145 ± 10%	
48	33.6	50	575 ± 10%	
5	3.5	50	Double Coils	
6	4.2	50		2270 ± 10%
9	6.3	50		2 x 12 ± 10%
12	8.4	50		2 x 17.5 ± 10%
24	16.8	50		2 x 40 ± 10%
48	33.6	50		2 x 72 ± 10%
			2 x 285 ± 10%	
			2 x 1135 ± 10%	

Notes: 1) Equivalent to the max. initial contact resistance is 50mΩ (at 1A 24VDC), and measured when coil is energized with 100% nominal voltage at 25°C.

2) When requiring other nominal voltage, special order allowed.

SAFETY APPROVAL RATINGS

UL&CUR	AgCdO	40A 250VAC at 70°C
		50A 250VAC at 70°C
	AgSnO ₂	60A 250VAC at 70°C
		40A 250VAC at 70°C
		50A 250VAC at 70°C
		60A 250VAC at 70°C



HONGFA RELAY

ISO9001、ISO/TS16949、ISO14001、OHSAS18001 CERTIFIED

2006 Rev. 1.10

ORDERING INFORMATION

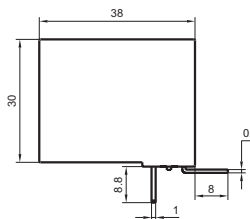
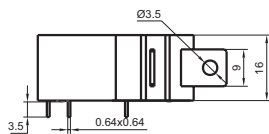
Type	JE9 -3 I / 12 -H S T -R X X-X XXX										
Version	1: 1 type, PCB terminals 2: 2 type, PCB terminals 3: Double Coil										
Load type	I: Inrush Nil: Standard										
Coil voltage	5, 6, 9, 12, 24, 48VDC										
Contact form	H: 1 Form A										
Construction	S: Sealed IP67 Nil: Dust cover										
Contact material	T: AgSnO ₂ Nil: AgCdO										
Polarity	R: Negative polarity Nil: Positive polarity										
Solder direction of twisted wire	A to I: See below direction of solder wire Nil: Without solder wire										
Twisted copper wire length	First X: length of left side Second X: length of right side										
Customer special code (Only for special requirements)	e.g. 551 stands for RoHS compliant (Cadmium containing contacts) 555 stands for RoHS compliant (Cadmium-free contacts)										

Notes: For high inrush load with the steady-state current of less than 40A, please choose type I.

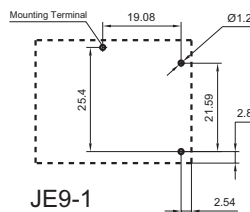
OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

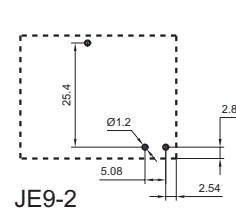
Outline Dimensions



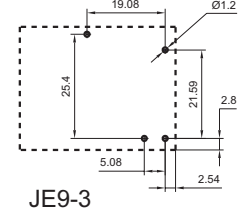
PCB Layout



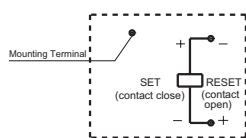
JE9-1



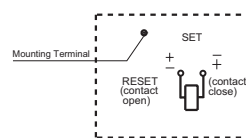
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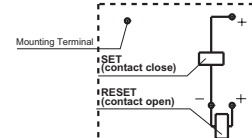
JE9-3



JE9-1

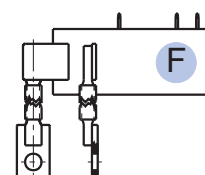
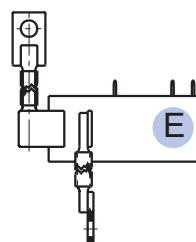
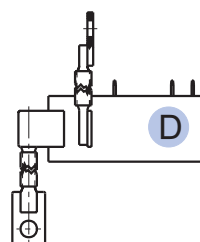
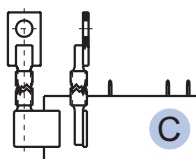
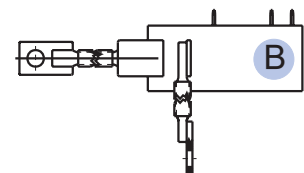
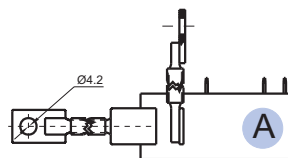


JE9-2



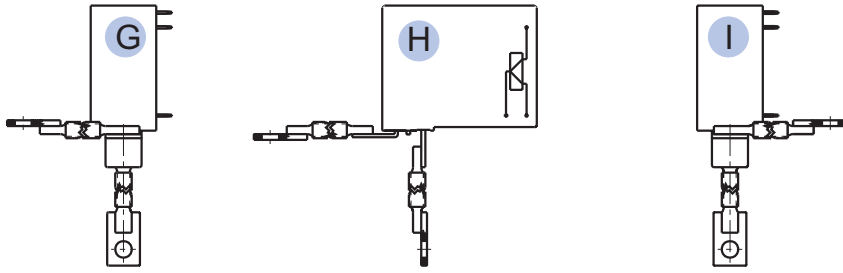
JE9-3

The solder direction of twisted copper wire (A to I)



OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

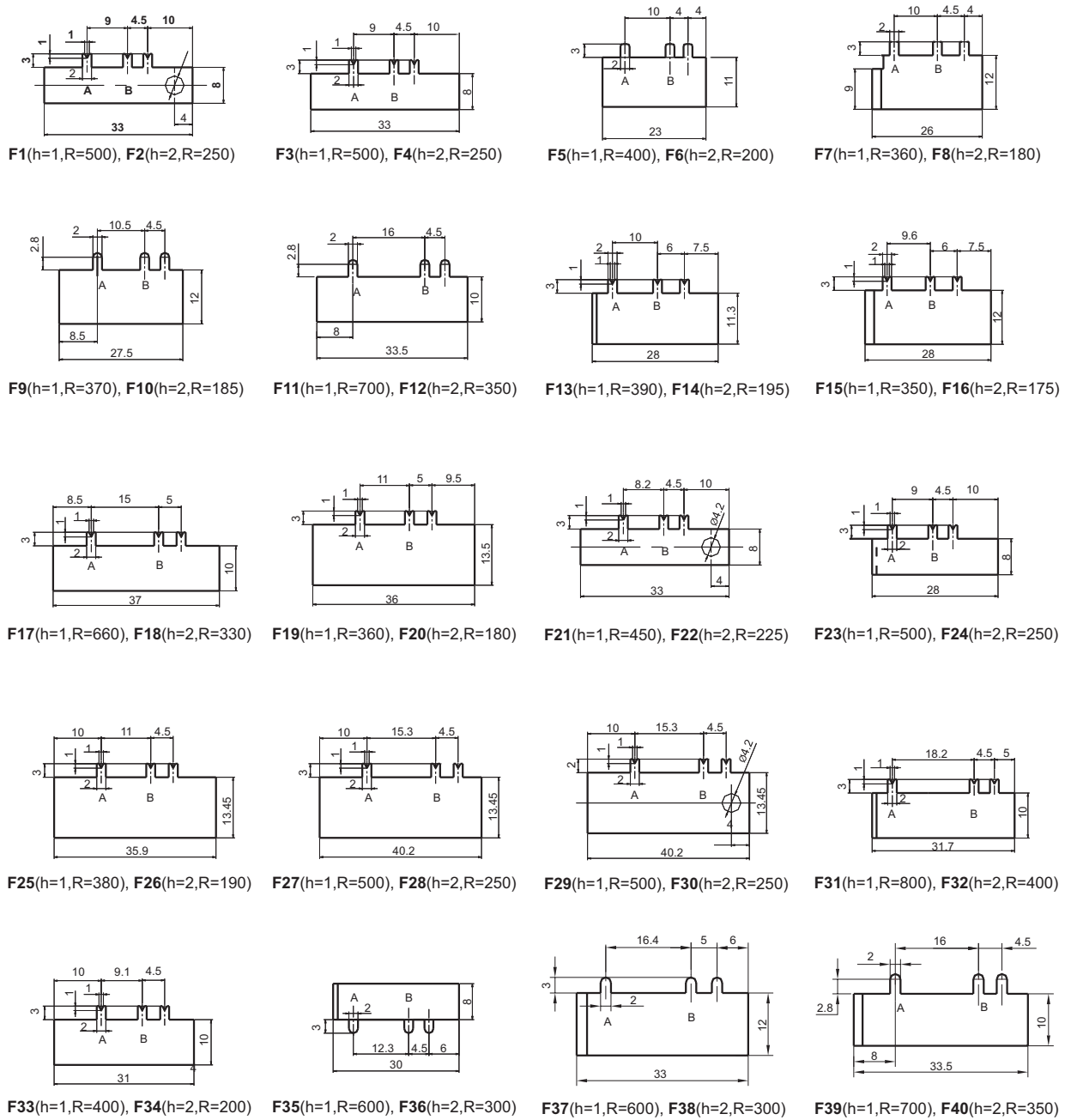
Unit: mm



Notes:
Welding pictures for JE9 with twisting copper wire. Please show welding style (A to I) and the length of wires when ordering. Please mark the length of each wire from left to right if the length is different.

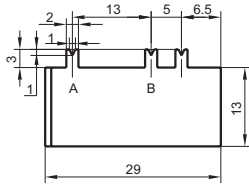
Style of manganin shunt

Notes: Style F1 to F44, the thickness of shunt: h=1 or h=2, R: resistance of shunt between A-B ($\mu\Omega, \pm 10\%$)

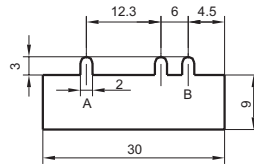


Style of manganin shunt

Notes: Style F1 to F44, the thickness of shunt: $h=1$ or $h=2$, R: resistance of shunt between A-B ($\mu\Omega, \pm 10\%$)



F41($h=1, R=440$), F42($h=2, R=220$)

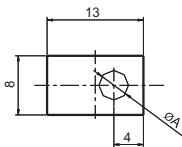


F43($h=1, R=600$), F44($h=2, R=300$)

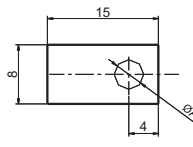
OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

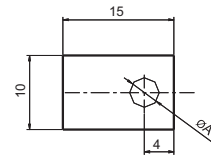
Connector style



Style 056: $A=\varnothing 4.2$
Style 056-1: $A=\varnothing 5.2$

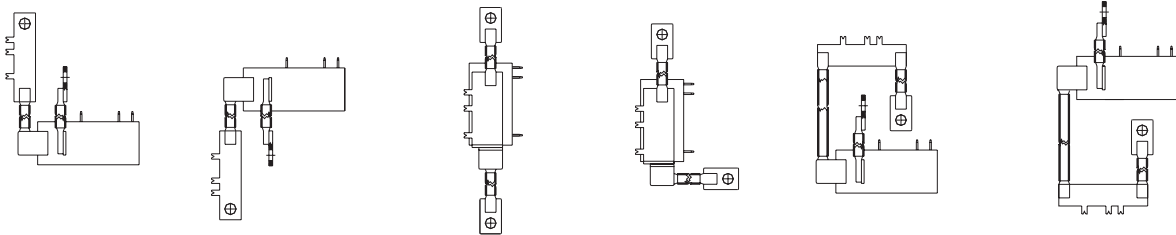


Style 076: $A=\varnothing 4.2$
Style 076-1: $A=\varnothing 5.2$



Style 077: $A=\varnothing 4.2$
Style 077-1: $A=\varnothing 5.2$
Style 077-2: $A=\varnothing 6.2$

Typical shunt connection ways



Notes: We can make special connection according to customer's requirement.

Please provide us with the drawing, and shunt specification and connector's specification.

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. The terminals of relay without twisted copper wire can not be tin-soldered, can not be moved willfully, more over two terminals can not be fixed at the same time.

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.

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