

CAUTIONS FOR USING LATCHING RELAY

To better use the latching relay, besides knowing its features, there are some cautions for you to know to make sure the latching relay can work reliably.

1. The cautions when using the latching relays

1.1 Input

1.1.1 Please use the coil polarity speculated in the datasheet to energize the relay, otherwise the relay's set voltage will be enlarged and even failed to operate; If need to change the driving polarity, please choose our "-R" version for the reverse polarity; If there are special polarity requirement (different from our datasheet), please check with our technicals firstly.

1.1.2 Only energizing the relays with our recommended pulse width can we guarantee the relay's reliable performance.

1.1.3 Only energizing the relays with the rated voltage can we guarantee the relay's reliable performance.

1.1.4 When energize the coil with 1.5 times of rated voltage and recommended pulse width, the relay's reliable performance will not be affected much.

1.1.5 When use the capacitor to drive the coil, the recommended peak voltage is 1.5~2 times of the rated voltage, and the recommended pulse width shall not less than the relay's set time when the peak. Seen in Figure 1.

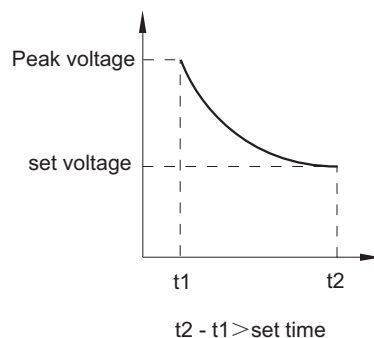


Figure 1

1.1.6 The continuous switch-on is forbidden for latching relay, please drive the relay by impulse width voltage.

1.1.7 Relay's contact status will be changed under the impact of external stress force during the transportation installation, therefore, please make a "reset" pulse before power on in your driving circuit to make sure the relay's contact status (set or reset) can resume to what you required, and avoid any disaster consequences voltage decreased to rate voltage.

1.2 Output

1.2.1 When choose the relay with QC termination, please do not use the tin-welding connecting method on the relay's load terminals, and please make sure the relay won't be affected by the heat created by your welding; We can also make the welding at customer's request.



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1.2.2 When choose the relay with PCB termination, the recommended welding temperature range and duration is 240°C to 260°C, 2s to 5s; Please do not use the reflow welding method, if the reflow is really required, please contact our technicals; the normal recommended wave soldering temperature is 250°C within 2s; the below chart is the wave soldering temperature distribution chart we recommended for your reference. Seen in Figure 2.

Wave soldering temperature distribution chart

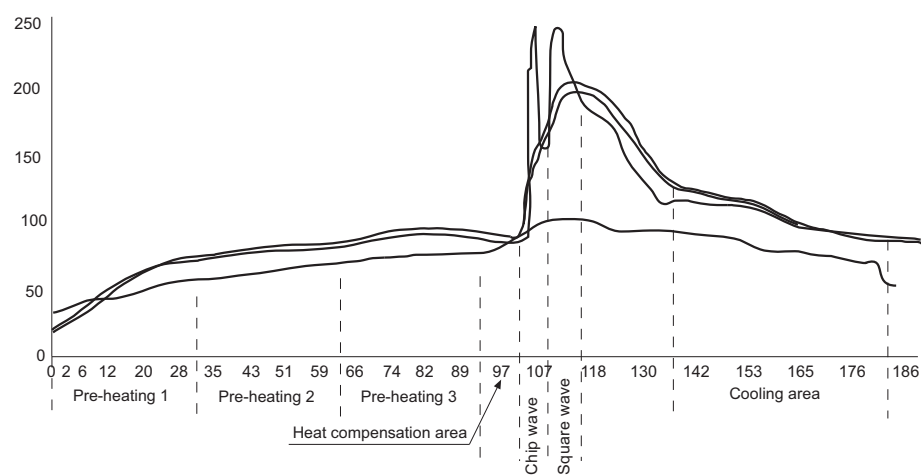


Figure 2

1.2.3 When choose the relay with hard connections, please avoid the external stress force on the load terminals during or after the installation.

1.2.4 When the relay will be connected with screw or bolts to the relay's load terminals, please make sure you the connection is fastened and prevent the relay from damages or other safety problems due the over big temperature rise.

1.2.5 The strength of sampling signal wires (from the coil, shunt or others) is limited, please do not pull or torque the wires during the installation.

2. Cautions for latching relays to be used in metering

2.1 Different Electric company or meter manufacturer's requirements to relays different a lot, to make sure the relay can work reliably at the real field environment, please provide us with the following necessary technical inputs which are must to be sure before defining the relays suitable for you. Seen in table 1.

Table 1

Item	Parameters	Must to be sure	Influence factors
Contact	Contact load		Rated current and voltage? DC or AC?Type (resistive or inductive)?
	Contact form		Normally open? Normally close? change over?
	Electrical endurance		Frequency? duty cycle? expected life cycles?
	Contact resistance		Value? test condition?
Coil	Rated voltage		Value? polarity? DC or AC?
	Coil resistance		Value? input coil power?
	Set/reset voltage		

Item	Parameters	Must to be sure	Influence factors
Performance	Dielectric strength		Value? position?
	Anti-vibration performance		Value? stability or strength?
	Anti-shock performance		Value? stability or strength?
Using enviroment	Ambient temperature		
	Humidity		
Outline and installation	Outline		Size? height?
	Installing method		Installing drawings? pins position Requirements?
	Shunt resistance		If shunts are needed, please let us konw.
Others	Short circutor or fault current		Current requirement? duration?
	Terminal temperature rise		Test position? requirements?

2.2 Relays used for metering measuring applications are usually made with dust proof structure, while most relays could be made specially per customer's specific requirements. No longer than 6 months' storage time is recommended for this kind of relay, and please pay attention to the storage environment. To ensure contact reliability, we will keep contact status be closed when delivery if no special required by customer.

3. Explanation to terminology

3.1 load terminal: The two ends of the relay carrying the loads, that is contacts' two terminals.

3.2 Hard connection: The mechanical connection of two rigid parts by welding or riveting.

3.3 Sampling signal wire: The wires used to transmit the inductive and controlling signals in the electric controlling circuit, usually they are 24AWG copper wire.

3.4 Others: The following picture shows our typical external connecting solutions. Seen in figure 3.

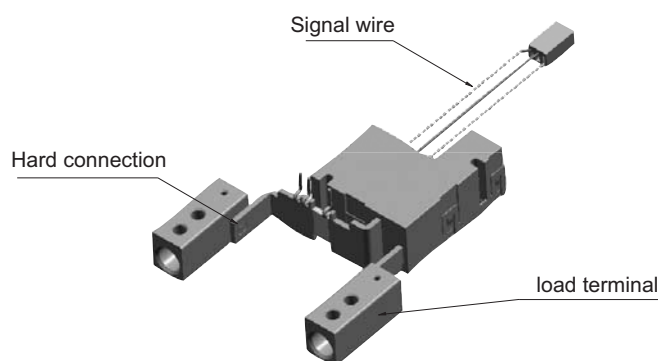


Figure 3



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