

<h1>Latching Relay</h1>	<h2>TRL4-90</h2>
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- 90A switching capacity
- According to IEC62055-31: UC2
- Dielectric strength 4kv (coil to contacts)
- High vibration resistance
- Environmentally friendly products (RoHS Compliant)
- Dimension: 38mm × 30mm × 16.5mm



### ■ Ordering information

<u>TRL4</u> — <u>90</u> <u>L1</u> <u>H</u> <u>R/</u> <u>12VDC</u> <u>(A)</u> <u>(XXX)</u> 1            2    3    4    5            6            7            8	
1. Relay Model 2. Contact Load: 90A 3. Coil Power: L1: Single coil, 1.5W L2: 2-Dual coil, 3.0W 4. Contact Form: H: 1A D: 1B	5. Nil: Positive polarity R: Negative polarity 6. Coil Nominal Voltage: 5, 6, 9, 12, 24, 48VDC 7. Customized requirements A: Coil: Type A B: Coil: Type B 8. Nil:None: Standard type XXX customer special requirements

### ■ Coil data (at 20°C)

Nominal Voltage (VDC)	5	8	9	12	24	48	Single coil 1.5W
Coil Resistance ( $\Omega \pm 10\%$ )	16	24	54	96	384	1536	
Nominal Voltage (VDC)	5	8	9	12	24	48	Dual coil 3W
Coil Resistance ( $\Omega \pm 10\%$ )	8+8	12+12	27+27	48+48	192+192	768+768	
Release Voltage (VDC)	70% (max)						
Operate Voltage (VDC)	70% (max)						
Rectangular Pulse Width (ms)	100ms						

### ■ Contact data

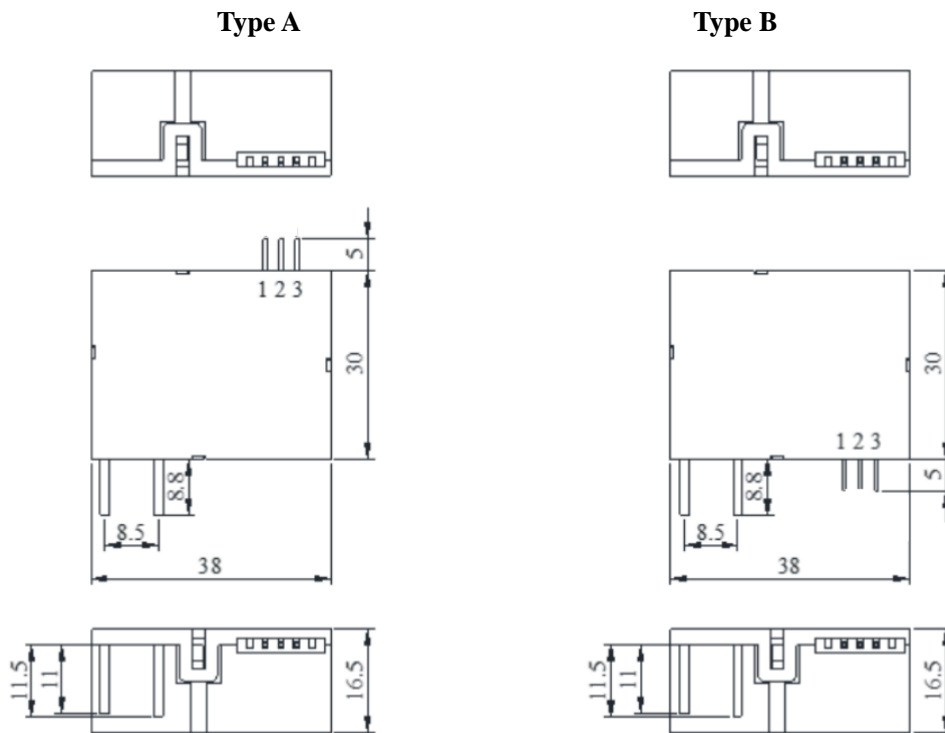
Contact Form	1H/1D
Contact Material	Silver alloy
Load	90A 250VAC
Max Switching Voltage	250VAC
Max Switching Current	90A
Max Switching Power	22500 VA

Contact Resistance	1m $\Omega$ Max	
Electrical Durability	On/off time (S): 10:20	10,000 times
Mechanical endurance	100,000 ops (30 cycles/ min)	

### ■ Characteristics data

Insulation Resistance	1000M $\Omega$ Min at 500VDC	
Dielectric Strength Between Open Contacts	2000VAC (1min)	
Dielectric Strength Between Contacts and coil	4000VAC (1min)	
Operate Time	$\leq$ 20ms	
Release Time	$\leq$ 20ms	
Temperature Range	-40 $^{\circ}$ C to +85 $^{\circ}$ C	
Shock Resistance	Functional: 10G	
	Destructive: 100G	
Vibration Resistance	10-55Hz, 1.5mm	
Humidity	98%RH, 40 $^{\circ}$ C	
Weight	Approx. 50g	

### ■ Outline dimensions (Unit: mm)



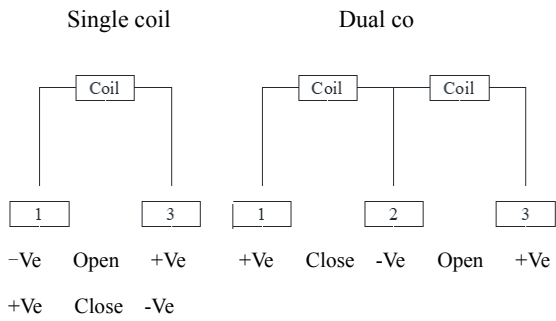
For single coil product ,the pin“2” is removed, the distance between pin “1” and pin “3” is 5mm

For double coil product, pin “1” and pin “2”, pin “2” and pin “3” is 5mm

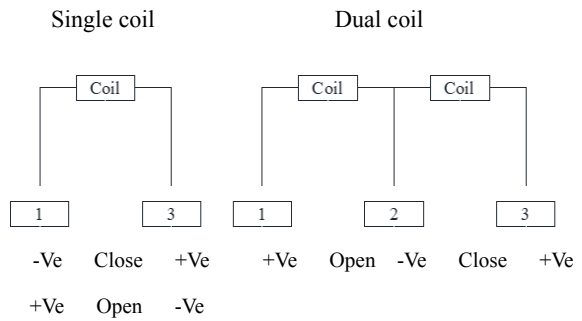
- Remark:** 1) In case the tolerance is not shown in outline dimension, the tolerance should be  $\pm 0.2$ mm for outline dimension  $\leq 1$ mm;  
 $\pm 0.3$ mm for outline dimension: 1~5mm and  $\pm 0.4$ mm for outline dimension  $> 5$ mm;  
2)The tolerance without indication is always  $\pm 0.1$ mm for the dimension of PCB layout.

### ■ Wiring diagram

### Positive polarity



### Negative polarity



#### Notice:

1. Relay is on the “reset” or “set” status when being released from stock, with the consideration of shock risen from transit and relay mounting, relay would be changed to “set” or “reset” status, therefore, when application (connecting the power supply), please reset the relay to “set” or “reset” status on request.
2. Do not energize voltage to “set” coil and “reset” coil simultaneously. And also long energize time (more than 1 min) should be avoided.
3. Normally the load terminals are not suitable for reflow solder, wave solder or tin solder, we suggest use spot welding. Load terminals shall be prevented from assembly stress, or freely move.
4. Keep away from corrosive gas and other condition which may damage the relay.

#### Disclaimer:

The specification is just for reference and 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 Tianbo for the technical service. However, it is the user’s responsibility which product should be used only.

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