

Series Phase Failure Relays

1. Characteristics of Function

- ① Phase reverse protection: It is a safeguard acting immediately, which protects L1, L2, and L3 three phase against wrong connection sequence. In this case, the Yellow indicator light will be lighted.
- ② Phase loss protection: It means that any phase occurs phase loss when the protected circuit is in running or stopping status. In this case, the red indicator light will be lighted and be priority.
- ③ Voltage imbalance protection: While a protection of voltage imbalance rate >50%, the imbalance of three phase voltage will affect the safe running of the equipment. In this case that there is a phase losing, the red indicator light will be lighted and be priority.
- ④ Anti-lightning, anti-surge function: built-in lightning protection, anti-surge protection circuit to maximize the protection of your electrical equipment.

2. Characteristics of performance

- ① There is no requirement for connecting method when it is used in protection of motor.
- ② The protection functions of relay don't be affected by current intensity of circuit or load, impulse current, imbalance current and load characteristic.
- ③ The relay could long term work under full capability and full climate. Power consumption is lower than 2W.
- ④ This product measures up GB/T 14048.1-2000, GB14048.5-2001
- ⑤ The EMC of the product measures up the limits and methods of measurement of radio disturbance characteristics of GB4343-1995.

3. Working Principle

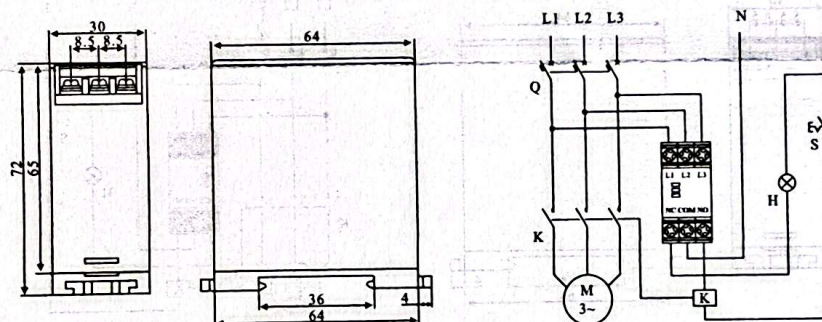
- ① If the connection of L1, L2 and L3 phases are right, the green light of the relay illuminates and the relay closes, If they are wrong, the Yellow light of the relay illuminates, Exchanging any two of them, the relay will accept the phase sequence and begin to work normally. In this case that there occurs Yellow light illuminated and relay unclosed after the protected equipment works normally, it should be a wrong connection of external circuit. The relay has a function of protection against wrong connection
- ② L1, L2, L3 three-phase voltage is not measured > 50%, the red light, the relay release; voltage rose to <20% recovery, the green light, and closed relay.
- ③ L1, L2, L3 any phase occurs phase loss, the red light, the relay release; The restoration of normal voltage, the green light, and closed relay.

4. Selection of Specifications

Model	Voltage(V)	Phase failure	Reverse	Over/under voltage	Delay action	Connection mode
TG30	220-440	✓	✓	×	<3S	screws
TG30s	220-440	✓	✓	×	<3S	screws
TL-2238	220-440	✓	✓	×	<3S	screws
TG30A	220-660	✓	✓	1-20%	1-20S	screws

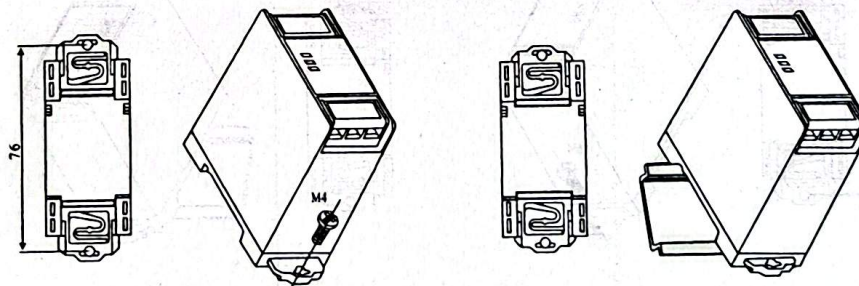
** Special specifications can be customized **

5. Dimensions and electrical schematic



6. Installation Method

- ① Protection can be directly inserted into the standard installation 35mm TH Road rail; On other occasions when the installation can be used M2-M4 screw fixation.
- ② L1, L2, L3 then three-phase AC voltage, built-relay output, NO, COM-opens for regular contact; NC, COM for the normally closed contact. Direct use of single strand wire or hardware to wear ear line, insert the connection (screw-free)



7. Technical parameters

Rated voltage: 220-440(220-660)VAC
 Unbalanced voltage: +10-20%
 Other parameters refer to the nameplate

Rated Frequency: 50/60 Hz
 Ambient temperature: -25--+65°C

Output current: 5A
 Relative humidity: <90%