

## Specifications

### Inputs:

- LINE Control (3-phase)
- NEUTRAL Control

- Temperature

Output

Power Supply

Consumption

Operating Temperature / Humidity

Storage Temperature / Humidity

Protection Class: front / terminals

3 x 380 VAC  $\pm$  15%

220/230 VAC  $\pm$  15%

☐ PTC 1k, ☐ PTC 2k, ☐ .....

☐ relay NO/NC 3A/250V, ☐ SSR 1A/250V

230 VAC +10/-15%

max. 4 VA

-10...65 °C / 0...85% RH

-20...65 °C / 0...95% RH

IP40 / IP00

## Warranty and Support

.....  
serial number

.....  
manufacturing date

QC check mark .....(passed)  
(stamp)

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### Warranty

COMECO warrants this product to be free from defects in materials and workmanship for 2 years. If your unit is found to be defective within that time, we will promptly repair or replace it. This warranty does not cover accidental damage, wear or tear, or consequential or incidental loss. This warranty does not cover any defects caused by wrong transportation, storage, installation, or operating (see 'Specifications').

### Technical support

In the unlikely event that you encounter a problem with your COMECO device, please call your local dealer or contact directly our support team.

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v2-02.10



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## PHASE FAILURE CONTROLLER FOR ASYNCHRONOUS MOTOR PROTECTION

# TC70

## OPERATION MANUAL



Please read this Operation Manual before mounting and operating!  
Save the Manual for future references!

## Overview

TC70 is a cheap and reliable phase failure controller for monitoring and protecting 3-phase asynchronous motors. The unit monitors phase presence and order, phase line voltage, and zero presence, and switches off its relay output in the cases of failure. An additional input for connecting a thermistor with positive temperature coefficient (posistor) is used for monitoring motor temperature. TC70 can also be used in all cases, in which 3-phase system power supply should be monitored.

## Mounting and Wiring

### Mounting

TC70 can be easily mounted on every 35 mm rail conforming to EN50022.

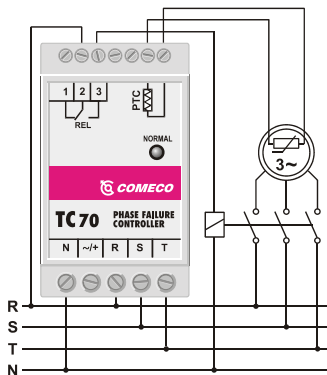
- ◆ Place the rail lower edge into the lower slot on the device back.
- ◆ Press the controller against the upper rail edge until it fits in.

### Dismounting

- ◆ Using a screwdriver's tip, pull up the black plate on the device back.
- ◆ Tilt the controller downwards and take it off the rail.

### Wiring

To wire the controller, follow the wiring diagram on the left.



## Operating

- ◆ The device starts operating right after it has been supplied with the power supply voltage, mentioned in '**Specifications**' and printed on the device label.
- ◆ The output relay turns on and 'NORMAL' LED lights up.
- ◆ TC70 switches off its relay output in the following cases:
  - any of the phase lines (R/S/T) or the neutral (N) is absent (interrupted);
  - the voltage of any phase exceeds  $270 \pm 10$  V;
  - the voltage of any phase drops below  $170 \pm 10$  V;
  - two of the phase lines are interchanged and the phase line sequence is not one of the following: RST, STR, or TRS;
  - PTC indicates  $70^\circ\text{C}$ .
- ◆ When the voltages (temperature) return within their normal limits, the relay activates.



### Important note:

*If no posistor (for monitoring motor temperature) is used, the respective terminals should be short-circuited.*