Protection Unit for 3-phase AC Motors TC70

- **Low cost**
- **Monitors LINE (phase) presence and order**
- **Monitors phase voltage magnitude**
- **Monitors NEUTRAL (zero) presence**
- **Overheating-protection input from PTC**
- **High reliability**

TC70 is a specialized device for monitoring and protection of 3-phase asynchronous motors, designed for DIN-rail mounting. It 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. A cheap, yet highly reliable device, TC70 can be used not only for motor protection, but also in all cases, in which 3-phase system power supply should be monitored.

Technical specifications

Input	
LINE control input (3-phase)	3 x 380 VAC ± 15%
NEUTRAL control input	220 VAC ± 15%
Temperature input	PTC (R_{PTC} at 25 °C = 1k, 2k, or other)
Output	
Relay electromechanical	3A/250V w/ NO/NC contact
Solid state relay	1A/250VAC
Output function	switches off in situations [1]: (a) missing line (R/S/T) or neutral (N), (b) line voltage exceeds 270 ± 10 V, (c) line voltage drops below 170 ± 10 V, (d) line order is not RST, STR, or TRS
Temperature control	switches off when PTC indicates 70 °C
Indication	LED for relay ON

Power supply	
Supply voltage	230 VAC +10/-15%
Consumption	max. 4 VA
Operating conditions	
Operating temperature	-10...65 °C
Operating humidity	0...85 %RH
Design and materials	
Case material	plastic
Mounting	on 35 mm DIN rail
Wiring	screw terminals
Dimensions	45x78x108 mm
Weight	max. 300 g
Protection, case/terminals	IP40 / IP00

[1] Other phase voltages than the described in points (b) and (c) may be monitored if requested.

Ordering code TC70 - G5.G6

Code	Feature or option	Code values
G5	Relay output	**C** - relay NO/NC, **D** - SSR
G6	Temperature control input	**BP** - PTC 1k, **BQ** - PTC 2k, **BZ** - other PTC (specify!)