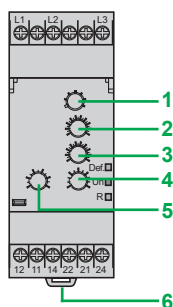




RM35TF30



RM35TF30

Def. Yellow LED: indicates fault present status (on for asymmetry, flashing for overvoltage, and undervoltage)
Un Green LED: indicates that supply to the product is on
R Yellow LED: indicates relay output status

Presentation

The RM35TF30 control relay monitors the following on 3-phase supplies:

Functions	RM35TF30	RM35TF36
Sequence of phases L1, L2, and L3		
Phase loss		
Overvoltage and undervoltage in window mode		
Asymmetry		
Ranges controlled	220..480 V ~	480..690 V ~

Function performed

These control relays:

- Accept different nominal 3-phase voltages from 220V ~... 690 V ~
- Monitor their own power supply measured as a true rms value
- Are designed for clip-on mounting on a 35 mm rail

They feature:

- A sealable cover to help protect the settings
- A control status indicator LED

Applications

- Control for connection of moving equipment (site equipment, agricultural equipment, refrigerated trucks)
- Control against reverse motor operation (lifting, handling, elevators, escalators, etc.)
- Control of sensitive 3-phase supplies
- Emergency power supply switching in abnormal conditions

Description

RM35TF30

- 1 Voltage range selector switch (220, 380, 400, 415, 440, and 480 V ~)
- 2 Overvoltage setting potentiometer **>U**
- 3 Undervoltage setting potentiometer **<U**
- 4 Asymmetry threshold setting potentiometer **Asy**
- 5 Time delay adjustment potentiometer **Tt**
- 6 Spring for clip-on mounting on 35 mm/1.38 in. rail

RM35TF36

- 1 Voltage range selector (480, 600 & 690 V ~)
- 2 Overvoltage setting potentiometer **>U**
- 3 Undervoltage setting potentiometer **<U**
- 4 Asymmetry threshold setting potentiometer **Asy**
- 5 Time delay adjustment potentiometer **Tt**
- 6 Spring for clip-on mounting on 35 mm/1.38 in. rail

Operating principle

3 phase supply control relay RM35TF30 & RM35TF36 monitors:

- ☐ Correct sequence of phases L1, L2, and L3
- ☐ Phase loss
- ☐ Undervoltage and overvoltage in window mode

Function Diagram

- ☐ Output 11-14, 21-24 open
- ☐ Output 11-14, 21-24 closed

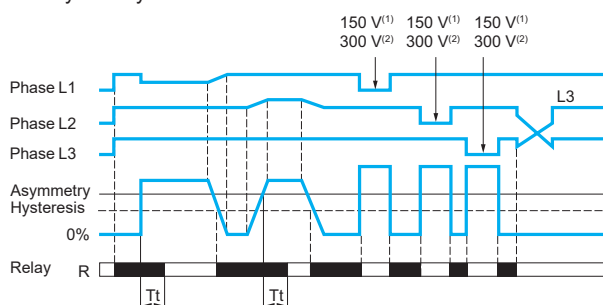
		RM35TF30			RM35TF36
Un		220V	380V, 400V, 415V, 440V	480V	480V, 600V, 690V
Voltage threshold (%)	<	- 12...- 2	- 20...- 2	- 20...- 2	- 20...- 2
	>	+ 2...+ 20	+ 2...+ 20	+ 2...+ 10	+ 2...+ 20

- ☐ Asymmetry from 5...15% of the supply voltage Un
- ☐ LED indication for relay output status and fault detection (except phase disconnection)
- Voltage switch operation:
 - ☐ Set the switch to the 3-phase supply voltage Un.
 - ☐ The position of this switch is only taken into account on energization of the device.
 - ☐ If the switch position is changed while the device is operating, all the LEDs flash, but the product continues to operate normally with the voltage selected at the time of energization preceding the change of position.
 - ☐ If the switch is returned to the original position selected prior to the last energization, the LEDs return to their normal state.

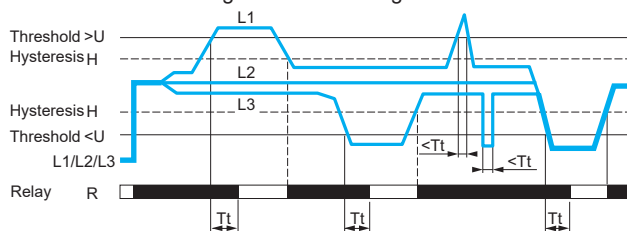
RM35TF30⁽¹⁾ and RM35TF36⁽²⁾

Phase + Overvoltage + Undervoltage in window mode

- ☐ Sequence of phases L1, L2, and L3
- ☐ Phase loss
- ☐ Asymmetry



- ☐ Control of overvoltage and undervoltage in window mode



The relay monitors:

- ☐ Correct sequence of the three phases.
- ☐ Phase loss of at least one of the three phases (U measured < 150V)⁽¹⁾
- ☐ Phase loss of at least one of the three phases (U measured < 300V)⁽²⁾
- ☐ Asymmetry, adjustable from 5 to 15% of Un.
- ☐ Under voltage and Over voltage threshold (%) is adjustable depending on input Un as shown in the above table.
- ☐ If a sequencing or phase loss fault is detected, the relay opens instantly.
- ☐ If an asymmetry or voltage fault is detected, the relay opens at the end of the time delay set by the user.
- ☐ On energization of the device with a detected measured fault, the relay stays open.

Note: Tt: time delay after crossing of the threshold (adjustable on front panel).

Reference



RM35TF30

RM35TF36

Function	Rated 3-phase supply voltage	Output	Reference	Weight
	V			kg/lb
■ Phase sequence ■ Phase loss ■ Asymmetry	220...480 ~	2 CO 5 A	RM35TF30	0.130/ 0.287
■ Undervoltage and overvoltage in window mode	480...690 ~	2 CO 5 A	RM35TF36	0.12/ 0.265