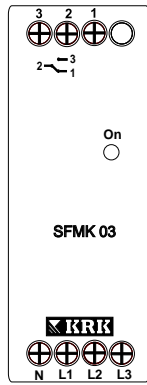
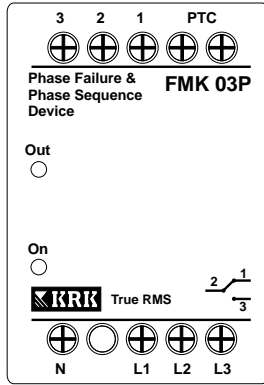


True RMS

# PHASE FAILURE & PHASE SEQUENCE DEVICE

- |         |          |
|---------|----------|
| FMK 01  | SFMK 01  |
| FMK 01P | SFMK 01P |
| FMK 03  | SFMK 03  |
| FMK 03P | SFMK 03P |
| FMK A   | SFMK A   |
| FMK AP  | SFMKAP   |
| FSR     | SFSR     |



## User Guide

UG-22/REV 01

### General Specifications

**SFMK - FMK SERIES:** Motor (Phase) Protection Relay with Phase Sequence. It protects motor when one of the phases is cut or its value fluctuates more than asymmetry value, or Phase sequence is wrong and motor overheats.  
**FSR:** It protects motor against wrong phase sequence.

### Protection Functions

- I- Phase Loss :** If the system has lost one of the phases, the output is closed without delay.
- II-Phase Sequence Failure :** If the sequence of the phases are wrong the output is closed without delay.
- III- Voltage Asymmetry:** If system's phase-neutral voltage values are between the adjusted asymmetry value, "out" led is on (2-3 contacts are closed). Otherwise the output is closed (1-2 contacts are closed).

$$\text{Asymmetry (\%)} = \frac{\text{The max. deviation between Ph-N values}}{\text{Nominal value of Ph-N}} \times 100$$

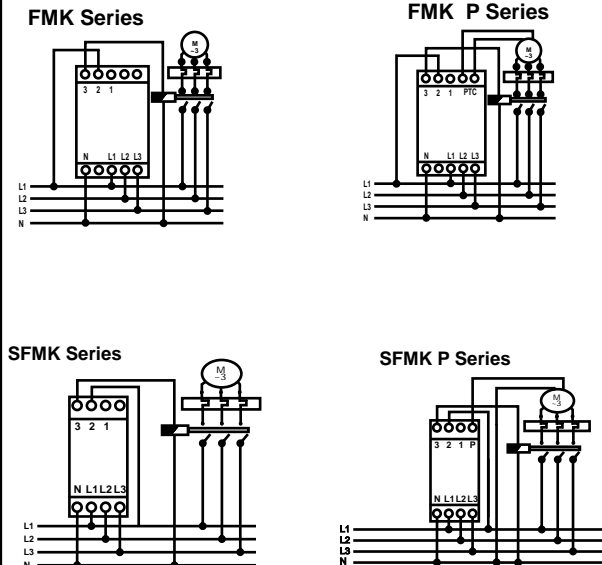
**IV- PTC Protection :** If "PTC" protection is not desired, "PTC" inputs must be short-cut. Otherwise must be connected to the motor. It will protect motor from overheating.

### Technical Specifications

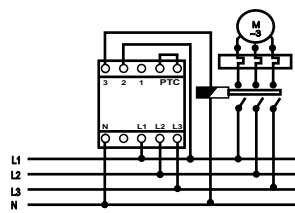
Type	Asymmetry	Temperature Protection	Electrical Connection	Weight (kg)
SFMK 01	%20		PCB Clamp	0,09
SFMK 01P	%20	PTC	PCB Clamp	0,09
SFMK 03	%40		PCB Clamp	0,09
SFMK 03P	%40	PTC	PCB Clamp	0,09
SFSR			PCB Clamp	0,09
SFMK A	%5...%30		PCB Clamp	0,09
SFMK AP	%5...%30	PTC	PCB Clamp	0,09
FMK 01	%20		PCB Clamp	0,13
FMK 01P	%20	PTC	PCB Clamp	0,13
FMK 03	%40		PCB Clamp	0,13
FMK 03P	%40	PTC	PCB Clamp	0,13
FMK A	%5...%30		PCB Clamp	0,13
FMK AP	%5...%30	PTC	PCB Clamp	0,13
FSR			PCB Clamp	0,13

- Supply voltage : 220 Vac, 3 Phases + N, 50/60 Hz.
- Hysteresis : % 20 (Asymmetry Value)
- Power Consumption : < 7 VA
- Ambient Temperature : -5°C...+55°C
- Contact Type : 1 Inversor, 10A/ 250 Vac(Omron)
- Electrical Connector : PCB Clamp
- Connection Type : DIN 35 rail or Vertical Installation(Installation springs behind the box should be pushed outward to enable screwing).

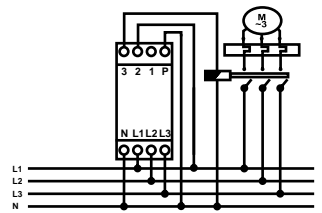
### Connection Scheme



### Without PTC protection FMK P Series

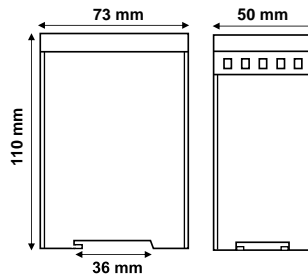


### SFMK P Series



### Dimension

#### FMK series



#### SFMK series

