

ASYMMETRY ADJUSTABLE PHASE FAILURE RELAY

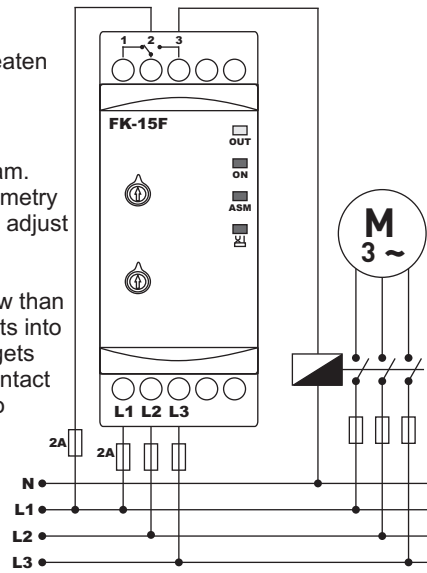
FK-05/05F/15/15F **ENG**

General

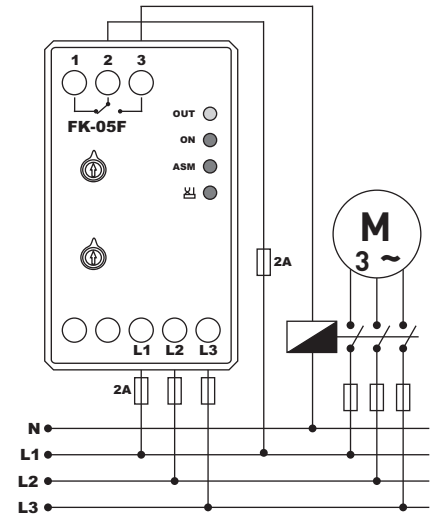
Asymmetry adjustable phase protection relays are designed to protect the threephased motors that is threaten by failures that is originated from network voltages.

Usage of Device and Working Principle

Please make the connections according to the diagram. For adjusting the asymmetry set value adjust the asymmetry button to requested rate. For adjusting the waiting time adjust the (t) button to the requested rate. After the device is energized, when the voltage values between phases 150V - 460V, the difference between voltages are below than adjusted relay(Out) led turns on and contact output gets into (NO)3. If any of the phases value gets below 150V or gets higher than 460V, 2 sec. later relay led turns off and contact output gets into (NC)1. When the Voltages gets back to normal values it starts timing until the adjusted(t) time, relay led gets turned on and contact output gets into (NO)3. If the difference between voltages are higher than adjusted asymmetry set value, asymmetry failure led turns on (Asym) it starts to count until adjusted time, relay led gets turned off and contact output gets into (NC)1. When the difference of the voltages decrease under the adjusted value asymmetry failure led turns off. It waits until the instructed time after the time is up relay led turns on and contact output gets into (NO)3.



Connection diagram for FK-15/15F



Connection diagram for FK-05/05F

FK-05F/15F it has a phase sequence property, when the phases are reversed (Phs. Seq. or Δ) led turns on. Relay led turns off and contact output gets into (NC)1.

Asymmetry Calculation : Asymmetry set value adjusts between max Phase-Phase (MaxFF) and minimum Phase-Phase (MinFF) {Asymmetry set value = ((MaxFF - MinFF) x 100) / 380 }

For example : If asymmetry set value is adjusted %15 so it equals to $15 = (MaxFF - MinFF) \times 100 / 380$ formula (MaxFF - MinFF) = 57V

Maintenance

Switch off the device and release from connections. Clean the trunk of device with a swab. Don't use any conductor or chemical might damage the device. Make sure device works after cleaning.

Warnings

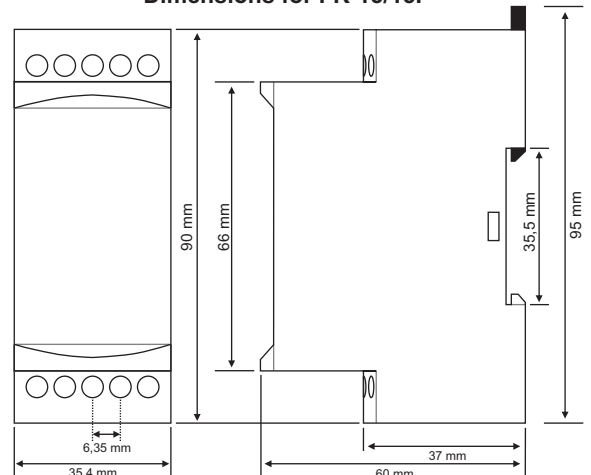
Please use the device according to the manual. Don't use the device in wet. Include a switch and circuit breaker in the assembly. Put the switch and circuit breaker nearby the device, operator can reach easily. Mark the switch and circuit breaker as releasing connection for device.

Technical Specifications:

- Operating Voltage(Un).....: 3 x 380V AC
- Operating Frequency.....: 50/60 Hz.
- Operating Power.....: <6VA
- Operating Temperature....: -20°C.....+55°C
- Voltage Range.....: 150V - 460V AC
- Assymetry Set(Asm%)..: %5 - %25
- Waiting (t).....: 0,1sec. - 10sec.
- Measurement Precision.: %±2
- Connection Type.....: Terminal connection
- Contact.....: 5A/250V AC (Resistive Load)
- Cable Diameter.....: 2,5mm²
- Weight.....: Max. 210gr.
- Mounting.....: Vertical assembled in the panel or assembled on the din rail
- Operating Altitude.....: <2000meter

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Dimensions for FK-15/15F



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