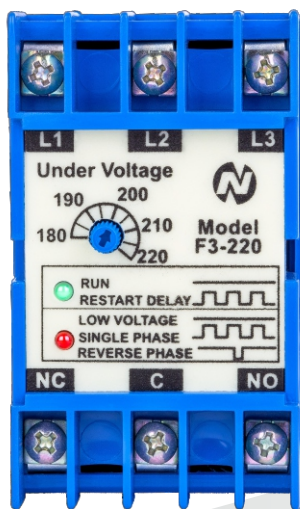


User Manual

THREE PHASE VOLTAGE
MONITOR RELAY
FASEALERT-3®
MODEL F3



The best solutions for
automation and protection

Description

The F3 series is a family of 3-phase voltage monitors. It continuously measures the voltage of each of the three phases with microcontroller accuracy and compares the value with preset trip points. It separately senses phase reversal and loss, as well as under and unbalanced voltages.

Protection is assured during periods of large voltage fluctuations or when regenerated voltages are present.

Trip and restart delays are included to prevent nuisance tripping and short cycling of sensitive equipment. The isolated 10A SPDT output relay contact trips when a phase voltage exceeds the trip limit after the time established by the trip delay.

The under voltage limit is adjustable.

Both delta and wye systems can be monitored; no connection to neutral is needed.

Features

- **Protects against phase reversal, phase loss, under and unbalanced voltages.**
- **Surface mounting or 35mm DIN rail.**
- **Isolated, 10A, relay contacts.**
- **LEDs indicate each fault, status, and time delays.**
- **3-wire connection for delta or wye systems.**

Operation

The FASEALERT-3 protects motors against:

Under voltage, phase loss, voltage unbalance and reverse phase sequence. To adjust the Under Voltage limit set the knob at the desired level.

Note: If the "Reverse Phase" LED turns ON when you are connecting the F3 for the first time, swap the cables connected to the L1 and L2 terminals and the fault LED should turn OFF.

UPON APPLICATION OF LINE VOLTAGES

- The output relay is de-energized
- The failure red LED is OFF
- The "RUN" green LED flashes during the restart delay (Depending on the model), and when it ends the green LED stays ON and the output relay is energized.

IN NORMAL VOLTAGES

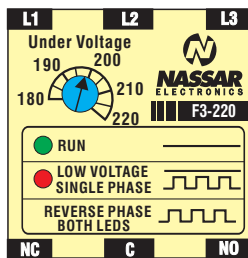
- The output relay is energized.
- The "RUN" green LED is ON.
- The red failure LED is OFF.

UPON A VOLTAGE FAILURE

- The red LED indicates the corresponding failure and the "RUN" green LED goes OFF.
- Once the adjusted period in the trip delay has passed, the output relay is de-energized to disconnect the motor.

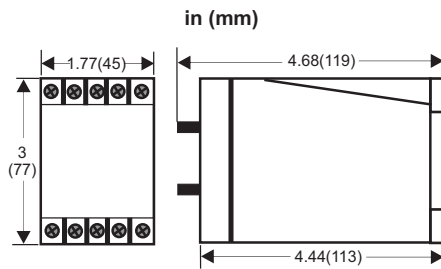
WHEN VOLTAGES GO BACK TO NORMAL

- The red failure LED is OFF.
- The output relay stays de-energized.
- The "RUN" green LED flashes during the restart delay (optional), and once it's finished, the green LED stays ON, then the output relay is energized to reconnect the motors.



GREEN LED		STATUS	
			RUN
RED LED		STATUS	
			LOW VOLTAGE
			SINGLE PHASE
			REVERSE PHASE
REVERSE PHASE BOTH LEDS			

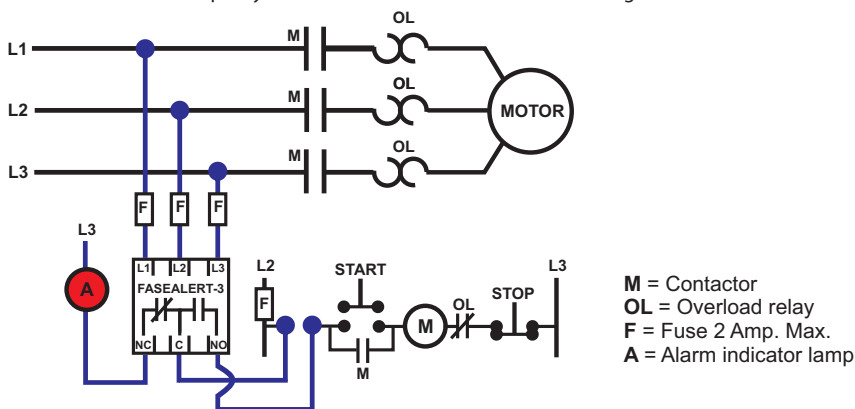
Dimensions



Typical example of connection

Connect the terminals L1, L2 and L3, through the fuses, to the motor contactor and the terminals C and NO with #14 gauge, 600 V wire. The FASEALERT-3 may be installed in THREE PHASE MOTORS OF ANY CAPACITY AND IN ALL TYPES OF STARTERS. The diagram shown below is a common example of installation.

When the NO and C contact closes, it allows the motor to start running. When it opens, it disconnects the coil and stops the motor. An indicator lamp may be used as an alarm as indicated in the diagram below.





DANGER!



Potentially hazardous voltages are present. Electrical shock can cause death or serious injury. Installation should be done by qualified personnel following all National, State & Local Codes.

BE SURE TO REMOVE ALL POWER SUPPLYING THIS EQUIPMENT BEFORE CONNECTING OR DISCONNECTING THE WIRING.

READ THE INSTRUCTIONS BEFORE INSTALLING OR OPERATING THIS DEVICE.

KEEP THIS MANUAL FOR FUTURE REFERENCE.

Specifications	F3-220	F3-380	F3-440
NOMINAL / MAXIMUM VOLTAGE	220/270 V	380/470 V	440/540 V
UNDER VOLTAGE ADJUSTMENT	180-220 V	300-380 V	360/440 V
VOLTAGE UNBALANCE	5 % Fix NEMA. (Phase failure)		
HYSTERESIS	2 %		
OUTPUT CONTACT RATING	1PDT 10 Amp. @ 220 VCA resistive.		
CONTACT LIFE	100,000 Operations at nominal capacity.		
FREQUENCY	50 / 60 Hz.		
PHASE SEQUENCE	ABC		
TRIP DELAY	5 s (Phase failure 3 s)		
RESTART DELAY	180s (optional)		
TRANSIENT PROTECTION	3 K V for 10 ms.		
STORAGE TEMPERATURE	-4 to + 158 °F (-20 to + 70 °C).		
OPERATION TEMPERATURE	14 to + 122 °F (-10 to + 50 °C).		
POWER CONSUMPTION	3 Watts approximately.		
WEIGHT	11 oz (390 g.) approximately.		

*Specifications subject to change without notice.

WARRANTY

These products are warranted to be free from defects in workmanship or material under normal service and use for a period off three (3) years from date of manufacture. Nassar Electronics shall, at its option, repair or replace F.O.B. point of manufacture the portion of the product found by Nassar Electronics to be defective. All replacements or repairs necessitated by inadequate maintenance, normal wear and usage, unsuitable power sources or environmental conditions, accident, misuse, improper installation, modification, repair, use of unauthorized replacement parts, storage or handling, or any other cause not the fault of Nassar Electronics are not covered by this limited warranty, and shall be at the buyer's expense. All costs of dismantling, reinstallation and freight, and the time and expenses shall be borne by the buyer.

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