

Features

The 455's universal range from 190-480VAC 50/60 Hz provides the versatility needed to handle global applications.

Four adjustment pots provide versatility for a variety of applications.

Both load and line-side monitoring provides contactor protection.

Diagnostic LEDs indicate trip status and provide simple troubleshooting.

Microcontroller-based circuitry provides better accuracy and higher reliability than analog designs.

Single-phase conditions are detected regardless of regenerated voltages.

Transient protection meets IEEE and IEC standards and permits operation under tough conditions.



The New Model 455s are now equipped* with an infrared LED to communicate with the handheld diagnostic tool, the Informer-MS, to display MotorSaver® data to assist in monitoring and troubleshooting the system. (For more information on the Informer-MS, visit our website, www.symcom.com.)

The Model 455 three-phase voltage monitor combines load and line-side monitoring to alert the user of contact failure or impending contact failure.

The line-side monitoring will protect the motor from damaging line-side conditions prior to the motor starting. With other line-load side voltage monitors, the motor must be started before a voltage problem is detected. With the Model 455, your motor is fully protected at all times. The motor will not start if a power problem is present.

The Model 455 (190-480VAC) and the 455-575 (475-600VAC) are equipped with one SPDT 480VA @ 240VAC output relay.

The Model 455-480R (390-480VAC) and 455-575R (475-600VAC) are equipped with one SPDT 470VA @ 600VAC output relay.

All Model 455s feature an adjustable trip delay (2-30 seconds), restart delay (2-300 seconds), and voltage unbalance trip point (2-8%).

The status of the Model 455 can be easily identified by the four LEDs on the front of the device: Run, Undervoltage, Overvoltage, and Phasing Fault or by using the Informer-MS, which, in addition to present status, will give live voltages, last 20 faults and the last 32 motor starts.

*Effective March 2006

MotorSaver
THREE-PHASE ELECTRIC MOTOR PROTECTOR

455
455-575
455-480R
455-575R

Three-Phase
Voltage Monitors

•
Engineered
Protection

•
Microcontroller Based

Protects 3-Phase

Motors from:

- Contact failure
- Loss of any phase (single-phasing) on the load or line side
- Low voltage
- High voltage
- Voltage unbalance
- Phase reversal
- Rapid cycling

Additional Features:

- UL and cUL listed
- 5-year warranty
- Made in USA
- Standard surface mount
- Optional DIN rail mount
- Standard manual reset- 2-300 sec. variable restart delay
- Standard 2-8% variable voltage unbalance
- Standard 2-30 sec. variable trip delay
- Finger-safe terminals



MotorSaver®

THREE-PHASE ELECTRIC MOTOR PROTECTOR

Specifications

Operating Points

Special Options

455, 455-575, 455-480R, 455-575R Three-Phase Voltage Monitors

Specifications

3-Phase Line Voltage

455	190-480VAC
455-575	475-600VAC
455-480R	390-480VAC
455-575R	475-600VAC

Frequency 50*/60 Hz

Low Voltage (% of setpoint)

• Trip	90% ±1%
• Reset	93% ±1%

High Voltage (% of setpoint)

• Trip	110% ±1
• Reset	107% ±1%

Voltage Unbalance (NEMA)

• Trip	2-8% adjustable
• Reset	trip setting minus 1%

Trip Delay Time

• Low & High Voltage and Unbalance	2-30 seconds adjustable
• Single-phasing Faults (>25% UB)	2 seconds fixed

Restart Delay Time

• After a Fault	manual, 2-300 seconds adjustable
• After a Complete Power Loss	manual, 2-300 seconds adjustable
• After a Control Power Loss	manual, 2-300 seconds adjustable

Output Contact Rating (SPDT)

455, 455-575	480VA @ 240VAC Pilot Duty	10A @ 240VAC General Purpose
455-480R, 455-575R	470VA @ 600VAC Pilot Duty	

Standards Passed

- Electrostatic Discharge (ESD) IEC 1000-4-2, Level 3, 6kV contact, 8kV air
- Radio Frequency Immunity, Radiated ..150 MHz, 10V/m
- Fast Transient Burst IEC 1000-4-4, Level 3, 3.5kV input power & controls

Surge

- IEC IEC 1000-4-5, Level 3, 4kV line-to-line; Level 4, 4kV line-to-ground
- ANSI/IEEE C62.41 Surge and Ring Wave Compliance to a level of 6kV line-to-line
- Hi-potential Test Meets UL508 (2 x rated V +1000V for 1 minute)

Repeat Accuracy

• Fixed Conditions ± 0.1%

Power Consumption 6 Watts (max.)

Weight 14 oz.

*Note: 50 Hz units will increase all delay times by 20%.

SymCom warrants its microcontroller based products against defects in material or workmanship for a period of five (5) years from the date of manufacture. All other products manufactured by SymCom shall be warranted against defects in material and workmanship for a period of two (2) years from the date of manufacture. For complete information on warranty, liability, terms, returns, and cancellations, please refer to the SymCom Terms and Conditions of Sale document.

