# imall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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## 455 SERIES

#### 3-Phase Voltage/Phase Monitor

# ® **@** €€



#### Wiring Diagram

MODEL 455 WITH MOTOR CONTROL USING A 3-POLE CONTACTOR



MODEL 455 WITH MOTOR CONTROL USING A 2-POLE CONTACTOR



#### Description

The 455 Series are 3-phase voltage monitors that combine load and line side monitoring to offer complete protection. Monitoring the load side will alert the user of contactor failure or impending contactor failure. Line side monitoring will also protect the motor from damaging fault conditions that may be present prior to the motor starting. With other line/load side monitors, the motor must be started before a voltage fault is detected. With the 455, your motor is fully protected at all times.

The 455 Series are 3-phase, dual range voltage monitors that protect 190-480VAC, 50\*/60Hz motors, regardless of their size. It automatically selects between the 200V and 400V range when the user selects the nominal voltage setpoint. Other adjustments include a 2-30 second trip delay, a 2-300 second restart delay (and manual restart) and a voltage unbalance trip point of 2-8%. The voltage monitor's circuitry is powered through the line side connections, so there is no need for separate control power, making it easy to install.

Equipped with an infrared LED, the 455 Sereies can communicate to the optional hand-held diagnostic tool, Informer-MS to obtain valuable information such as real-time voltage, voltage unbalance on both line and load sides, motor run hours, last 20 faults, last 32 motor starts, high and low voltage trip points, voltage unbalance trip point, restart and trip delay settings, LED status and more.

#### Features & Benefits

FEATURES	BENEFITS
Load side monitoring of contactor	Protects motor from contactor failure or worn contacts.
Monitors contactor or starter	Prevents rapid cycling
Infrared LED Capable	Increases personnel safety line of sight monitoring using optional Informer-MS

#### Accessories



#### Informer-MS

A hand-held diagnostic tool designed for use with Littelfuse® 455 equipped with an infrared LED transmitter



#### Informer IR Kit-36

36" infrared adapter cable attaches to the face of the unit to provide remote diagnostics without opening the panel.

#### **Ordering Information**

MODEL	LINE VOLTAGE	DESCRIPTION
455	190-480VAC	Universal line and load side monitor
455480R	380-480VAC	Used in high voltage applications with pilot duty 470VA @ 600VAC
455575	475-600VAC	For use in Canada or NE USA where 575V utility power services are common.

### **455 SERIES**



#### **Specifications**

Frequency Low Voltage (% of setpoint) Trip Reset High Voltage (% of setpoint) Trip Reset Voltage Unbalance (NEMA) Trip Reset **Trip Delay Time** Low & High Voltage and Unbalance **Single-phasing Faults** (>25% UB) **Restart Delay Time** After a Fault

After a Complete Power Loss Manual, 2-300 seconds adj. After a Motor Shut-down **Output Characteristics Output Contact Rating (SPDT)** 

Pilot Duty **General Purpose** High Voltage Relay (-480R) **Pilot Duty** 

50\*/60Hz

90% ±1% 93% ±1% 110% ±1%

107% ±1%

2-8% adjustable Trip setting minus 1%

2-30 seconds adjustable

2 seconds fixed

Manual, 2-300 seconds adj. Manual, 2-300 seconds adj.

480VA @ 240VAC 10A

470VA @ 600VAC

#### **General Characteristics**

Ambient Temperature Range	
Operating	-40° to 70°C (-40° to 158°F)
Storage	-40° to 80°C (-40° to 176°F)
Repeat Accuracy	
Fixed Conditions	±0.1%
Maximum Input Power	6 W
Terminal	
Torque	7 inlbs.
Wire Size	12-18AWG
Transient Protection	
(Internal)	IEC 61000-4-5;1995 ±6kV
Safety Marks	
UL	UL508 (File #E68520)
CSA	C22.2 No. 14 (File #46510)
CE	IEC 60947-6-2
Dimensions	<b>H</b> 74.4 mm (2.93"); <b>W</b> 133.9 mm (5.27");
	<b>D</b> 74.9 mm (2.95")
Weight	1.1 lbs. (17.6 oz., 498.95 g)
Mounting Method	#8 screws

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