3 Phase Voltage Monitor PLMU Series Universal Plug-in Monitor



Description

The PLMU Series continuously measures the voltage of each of the three phases to provide protection for three phase motors and sensitive loads. Its microcontroller senses under and over voltage, voltage unbalance, phase loss, and phase reversal. Protection is provided even when regenerated voltages are present. Universal voltage operation and standard base connection allows the PLMU to replace hundreds of competitive part

Connection

L1

ØΑ

F = Fuses

internal connections.

ØA = Phase A = L1

 $\emptyset B = Phase B = L2$ $\emptyset C = Phase C = L3$

NO = Normally Open

NC = Normally Closed

Relay contacts are isolated. Dashed lines are

L2 L3

ØB ØC

3F

8

2

NO

NC

C

2 Amp

Fast Acting

Fuses

Recommended

For Safety

(Not Required)

Operation

Upon application of power, a 0.6 s random start delay begins and the PLMU measures the voltage levels and line frequency and selects the voltage range. The output relay is energized and the LED glows green when all voltages are acceptable and the phase sequence is correct. LED flashes green during trip delay, glows red when output de-energizes. Undervoltage, overvoltage, and voltage unbalance must be sensed for continuous trip delay before the relay de-energizes. Re-energization is automatic upon fault correction. The output relay will not energize if a fault condition is sensed as three phase input voltage is applied. Line voltage is selected with the knob, setting the over and under voltage trip points. Voltage range is automatically selected by the microcontroller.



Faceplate View

Ordering Table

Voltage Unbalance Adjustable 2 ... 10%

Trip Delay Adjustable 0.25 ... 30 s Part Number PLMU11

PLMU2B01 06.08.04

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Technical Data

Line Voltage Type Line Voltage Adjustable Voltage Ranges (Automatic Range Selection) Maximum Voltage Phase Sequence	Three phase Delta or Wye with no connection to no 200 480 V AC +/-15%; 50 60 Hz +/-2 Hz 200 240 V AC, 50 60 Hz 340 420 V AC, 50 Hz 400 480 V AC, 60 Hz 552 V AC ABC	eutral
Overvoltage, Undervoltage, & Voltage Unbalance Type Overvoltage & Undervoltage Undervoltage Trip Point Reset Voltage Overvoltage Trip Point Reset Voltage Voltage Unbalance Trip Point Reset on Balance (%): Selected Unbalance Reset	Voltage detection with delayed trip & automatic res 88 92% of adjusted line voltage +2% of trip voltage 109 113% of adjusted line voltage -2% of trip voltage Adjustable from 2 10% or fixed 4 10% 2 3 4 5 6 7 8 9 1.5 2.5 3.5 4.5 5.4 6.3 7.2 8.1	set 10 9
Trip Delay Range Severe Unbalance - 2X Selected Unbalance Random Start Delay	Adj. from 0.25 30 s or fixed 2 30 s +/-15% 0.25 2 s; disabled when the trip delay is less that \cong 0.6 s	an 2 s
Phase Reversal & Phase Loss Trip Time Phase Loss Set Point Reset Type	≤ 150 ms ≥ 15% unbalance Automatic	
Output Type Rating Life	Energized when voltages are acceptable 10 A resistive @ 240 V AC; 1/4 hp @ 125 V AC; 1/3 hp @ 250 V AC; max. voltage 277 V AC Mechanical 1 x 10 ⁶ ; Electrical 1 x 10 ⁵	
Protection Surge Isolation Voltage	IEEE C62.41-1991 Level B ≥ 2500 V RMS input to output	
Mechanical Mounting* Termination Package	Plug-in socket rated 600 V AC 8 Pin octal plug 3.03 x 2.39 x 1.78 in. (77.0 x 60.7 x 45.2 mm)	*CAUTION: Select an octal socket rated for 600 V AC operation.
Environmental Operating Temperature Storage Temperature Weight	-40°C +60°C -40°C +85°C ≅ 8.6 oz (244 g)	

Mechanical View



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