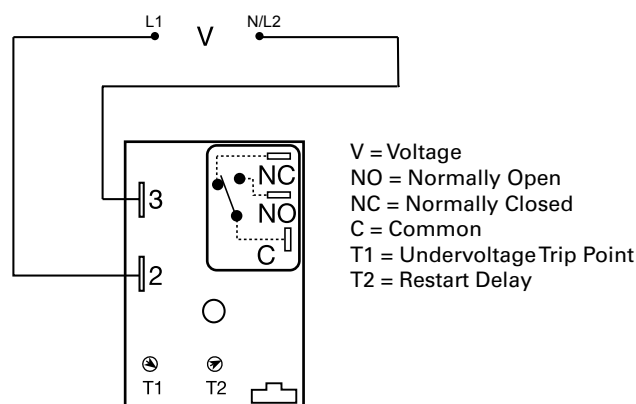


HLVA6I23

Single-Phase Monitor



Wiring Diagram



Description

The HLVA6I23 is a single-phase undervoltage monitor designed to protect sensitive equipment from brownout or undervoltage conditions. Time delays are included to prevent nuisance tripping and short cycling. The 30A, 1hp rated, SPDT relay contacts allow direct control of motors, solenoids and valves. The output relay can be ordered with isolated SPDT contact to allow monitoring of one voltage and switching a separate voltage. Two undervoltage trip point ranges allow monitoring of 110 to 120VAC or 208 to 240VAC systems.

Operation

Upon application of input voltage the output relay remains de-energized. When the input voltage value is above the pull-in voltage, the restart delay begins. At the end of the restart delay, the output relay energizes. When the input voltage falls below the trip point, the trip delay begins. If the input voltage remains below the pull-in voltage for the entire trip delay the relay de-energizes. If the input voltage returns to a value above the pull-in voltage, during the trip delay, the trip delay is reset and the relay remains energized. If the input voltage falls below the trip point voltage during the restart delay, the delay is reset and the relay remains de-energized. Reset is automatic upon correction of an undervoltage fault.

Reset: Removing input voltage resets the output relay and the time delays.

Features

- 30A, SPDT, NO output contacts
- 100 to 240VAC input voltage
- 70 to 220VAC adjustable undervoltage trip point in 2 ranges
- Restart delays from 3 - 300s
- Trip delay 1 - 20s fixed
- Isolated or non-isolated relay contacts

Accessories



P1015-13 (AWG 10/12), P1015-64 (AWG 14/16) Female Quick Connect

These 0.25 in. (6.35 mm) female terminals are constructed with an insulator barrel to provide strain relief.



P1023-6 Mounting bracket

The 90° orientation of mounting slots makes installation/removal of modules quick and easy.



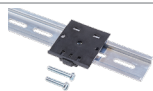
P1015-18 Quick Connect to Screw Adapter

Screw adapter terminal designed for use with all modules with 0.25 in. (6.35 mm) male quick connect terminals.



C103PM (AL) DIN Rail

35 mm aluminum DIN rail available in a 36 in. (91.4 cm) length.



P1023-20 DIN Rail Adapter

Allows module to be mounted on a 35 mm DIN type rail with two #10 screws.

HLVA6I23

Specifications

Input

Min & Max RMS Voltage

70 to 264VAC

AC Line Frequency

50/60 Hz

Power Consumption

AC ≤ 4VA

Undervoltage Sensing

Type

Peak voltage sensing

Ranges

(4)

70 to 120VAC

(6)

170 to 220VAC

Pull-In Voltage

105% or trip point voltage

Trip Point Accuracy

± 3% of trip point

Time Delay

Restart Delays

3 - 300s adjustable

Trip Delay

1 - 20s fixed in 1s increments

Repeat Accuracy

±0.5% or 20ms, whichever is greater

Tolerance

(Factory Calibration)

±5%

Reset Time

≤ 150ms

**Time Delay vs. Temp.
& Voltage**

≤ ±10%

Output

Type

Electromechanical relay

Form

SPDT

Ratings

SPDT-NO

SPDT-NC

General Purpose

125/240VAC

30A

15A

Resistive

125/240VAC

30A

15A

28VDC

20A

10A

Motor Load

125VAC

1 hp*

1/4 hp**

240VAC

2 hp**

1 hp**

Life

Mechanical - 1 x 10⁶

Electrical - 1 x 10⁵, *3 x 10⁴, **6,000

Protection

Surge

IEEE C62.41-1991 Level A

Circuitry

Encapsulated

Isolation Voltage

≥ 1500V RMS input to output; isolated units

Insulation Resistance

≥ 100 MΩ

Mechanical

Mounting

Surface mount with one #10 (M5 x 0.8) screw

Dimensions

H 76.7 mm (3"); **W** 51.3 mm (2");

D 38.1 mm (1.5")

Termination

0.25 in. (6.35 mm) male quick connects

Environmental

Operating/Storage

Temperature

-40° to 60°C / -40° to 85°C

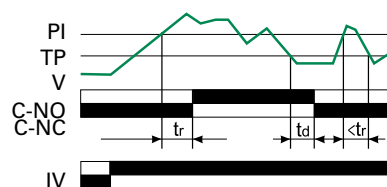
Humidity

95% relative, non-condensing

Weight

≈ 3.9 oz (111 g)

Function Diagram



tr = Restart Delay

td = Trip Delay

PI = Pull-in 105% or trip point

TP = Trip Point

V = Monitored Voltage

IV = Input voltage

C-NO = Normally Open Contacts

C-NC = Normally Closed Contacts