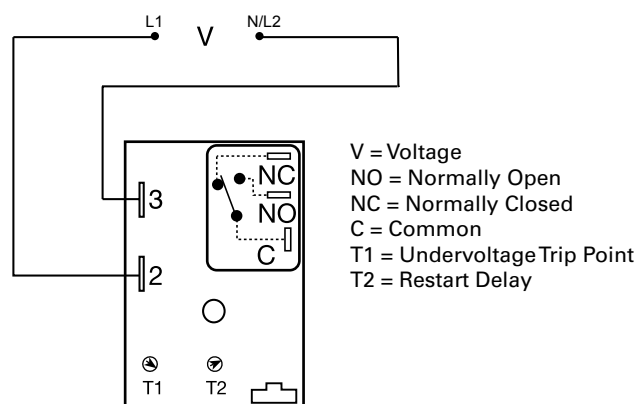


# HLVA6I23

## 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.



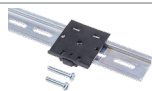
### P1015-18 Quick Connect to Screw Adapter

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**

±5%

**(Factory Calibration)**

**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 10<sup>6</sup>

Electrical - 1 x 10<sup>5</sup>, \*3 x 10<sup>4</sup>, \*\*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

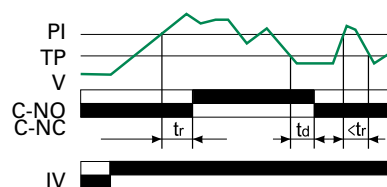
**Humidity**

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