

Features

Four adjustment pots provide versatility for all kinds of applications.

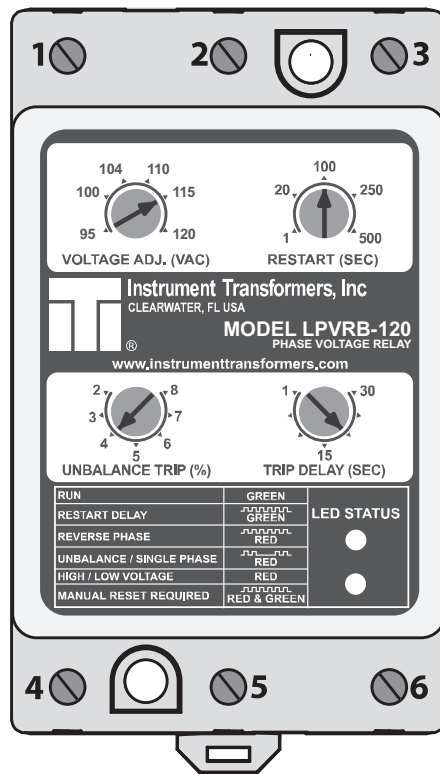
Range from 95-120 VAC 50/60 Hz provides the versatility needed to handle global applications.

Diagnostic LEDs indicate trip status and provide simple trouble shooting.

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

Transient protected to meet IEEE and IEC standards and operate under tough conditions.

Will detect single phase condition regardless of regenerated voltages.



PHASE VOLTAGE RELAY

Model LPVRB-120

Three Phase Voltage Monitor

Engineered Protection

Microcontroller Based

Protects 3-Phase motors from:

- Loss of any Phase
- Low Voltage
- High Voltage
- Voltage Unbalance
- Phase Reversal
- Rapid Cycling

Additional Features:

- Compact Design
- UL and cUL listed
- CE Compliant
- Finger Safe Terminals
- 5 year Warranty
- Made in USA
- Standard Surface or DIN Rail Mount
- Standard 1-500 sec. Variable Restart Delay
- Standard 2-8% Variable Voltage Unbalance
- Standard 1-30 sec. Variable Trip Delay
- One 10 Amp General Purpose Form C Relay
- Optional Manual Reset

The **Model LPVRB-120** is designed to protect 3-phase loads from damaging power conditions. Its wide operating range combined with UL and CE compliance enables quick access to domestic and global markets.

A unique microcontroller-based voltage and phase sensing circuit constantly monitors the three phase voltages to detect harmful power line conditions. When a harmful condition is detected, the LPVRB-120's output relay is deactivated after a specified trip delay. The output relay reactivates after power line conditions return to an acceptable level for a specified amount of time (Restart Delay) or after a manual reset. The trip and restart delays prevent nuisance tripping due to rapidly fluctuating power line conditions.

An adjustment is provided to set the nominal line voltage from 95-120 VAC. Other adjustments include a 1-30 second trip delay, a 1-500 second restart delay, and a 2-8% voltage unbalance trip point adjustment.

Two LEDs indicate the status of the Model LPVRB-120; Run Light, Under Voltage, Over Voltage, Phasing Fault/ Reverse Phase, and Manual Reset.

The LPVRB-120 ships with a jumper installed for automatic restart. A connector with two 12" wires is included for manual reset switch.

PHASE VOLTAGE RELAY

Specifications
Operating Points
Special Options

Model LPVRB-120 Three Phase Voltage Monitor

Specifications

3-Phase Line Voltage95 - 120 VAC
Frequency50* or 60 Hz

Low Voltage (% of set point)

•Trip90% ±1%
•Reset93% ±1%

High Voltage (% of set point)

•Trip110% ±1%
•Reset107% ±1%

Voltage Unbalance (NEMA)

•Trip2 - 8% adjustable
•ResetTrip setting minus 1% (5 - 8%)
.....Trip setting minus .5% (2 - 4%)

Trip Delay Time

•Low, High and Unbalanced Voltage1 - 30 seconds adjustable
•Single Phasing Faults1 second fixed

Restart Delay Time (When manual reset pins are shorted.)

•After a Fault1 - 500 seconds adjustable
•After a Complete Power Loss1 - 500 seconds adjustable

Output Contact Rating

•1-Form C10 A General Purpose @ 240 VAC
.....Pilot Duty 480VA @ 240 VAC, B300

Power Consumption

.....6 Watts (max)

Weight14 oz.

EnclosurePolycarbonate

Terminal Torque6 in.-lbs.

Wire TypeStranded or solid 12-20 AWG, one per terminal

Safety Marks

•ULUL508
•CEIEC 60947-6-2

Standards Passed

•Electrostatic Discharge (ESD)IEC 1000-4-2, Level 3, 6kV contact, 8kV air
•Radio Frequency Immunity, Radiated150 MHz, 10V/m
•Fast Transient BurstIEC 1000-4-4, Level 3, 3.5 kV input power & controls

Surge

•IECIEC 1000-4-5, Level 3, 4kV line-to-line;
.....Level 4, 4kV line-to-ground
•ANSI/IEEEC62.41 Surge and Ring Wave Compliance
.....to a level of 6kV line-to-line
•Hi-potential TestMeets UL508 (2 x rated V +1000V for 1 minute)

Environmental

Temperature RangeAmbient Operating: -20° - 70° C (-4° - 158°F)
.....Ambient Storage: -40° - 80° C (-40° - 176°F)

Class of ProtectionIP20, NEMA 1 (FINGER SAFE)

Relative Humidity10-95%, non-condensing per IEC 68-2-3

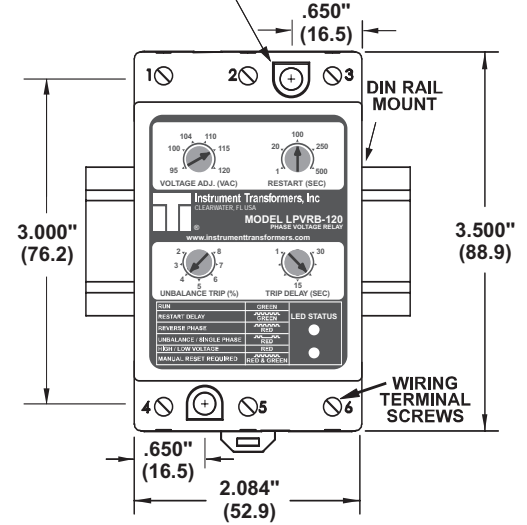
Special Options

Manual ResetExternal momentary push button required.

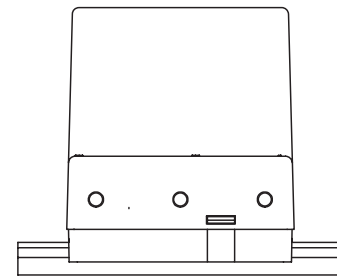
*Note: 50 Hz will increase all delay timers by 20%

For complete information on warranty, liability, terms, returns, and cancellations, please refer to the Instrument Transformers, Inc. Standard Conditions of Sale.

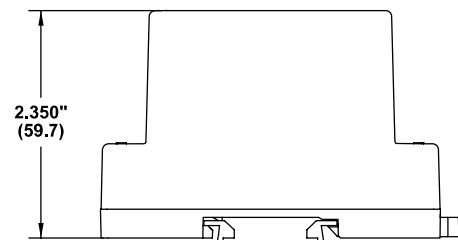
Surface Mount
2- #6 or #8 x 5/8 Screws



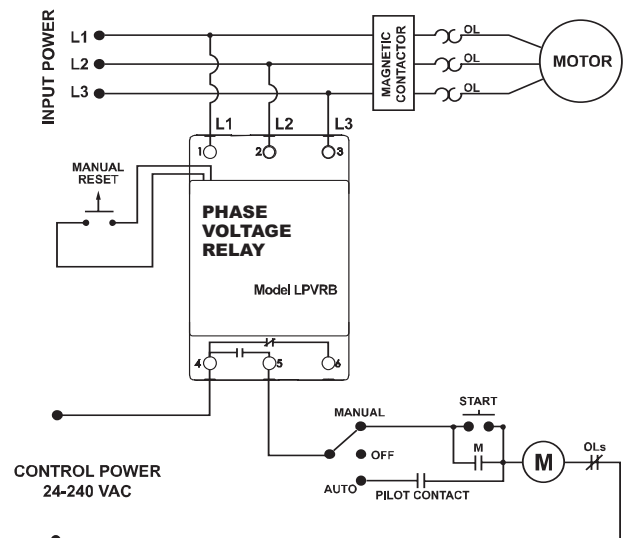
FRONT VIEW



BOTTOM VIEW



SIDE VIEW



TYPICAL WIRING DIAGRAM



Instrument Transformers, Inc

1907 Calumet Street • Clearwater, FL 33765
(727) 298-2000 • FAX (727) 298-2086
www.instrumenttransformers.com