

INSTRUCTION MANUAL

Over Voltage Relay

A BATTERY VOLTAGE MONITOR THAT DETECTS
AN OVER VOLTAGE CONDITION



MODEL #O91-108

3 YEAR WARRANTY



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INTRODUCTION

The 091-108-012 OVER VOLTAGE RELAY is a device that continuously monitors the voltage of the battery. The unit is factory set to actuate at 17 volts, and reset at 14 volts but may be adjusted to other voltages. The output relay is capable of switching 30 amperes, and both a “normally open” and normally closed” contacts are provided.

INSTALLATION

Connect the OVER VOLTAGE RELAY to the battery, the load and the fuse as illustrated in figure 1. This is a typical circuit. Other circuit configurations are possible. It is always necessary to connect the Bat+ and Bat- terminals to that point at which the voltage is to be sensed.

ADJUSTMENT

The factory setting for the OVER VOLTAGE RELAY is 17.0 volts. Field adjustment of the set point is possible. To do this, remove two screws holding down the cover. Note the position of the voltage adjustment trimmer R5. This is the 17-volt setting. To decrease the voltage turn counter clockwise. To increase the voltage turn clockwise. Two indicator LED's are provided adjacent to the terminal strip. When the green LED is lit, the voltage sensed is normal. When the red LED is lit, the voltage is above the set point. The voltage detector can be tested by gradually raising the system voltage while simultaneously measuring the voltage applied to the input terminals with a precise voltmeter and noting the voltage at which the red LED turns “ON”.

The 091-108-012 OVER VOLTAGE RELAY contains an adjustable high hysteresis feature. With the normal trip point set to 17.0 volts, the hysteresis circuit maintains the relay energized until the voltage decreases below 14.0 volts. This assures that the loads being controlled are not energized until the sensed voltage reaches 14.0 volts. This limits the ON/OFF cycling of the load. The hysteresis may be adjusted using trimmer R15. Turning R15 CCW will decrease the hysteresis while turning CW will increase. Unless absolutely necessary it is recommended that the hysteresis remain at the factory setting.

SPECIFICATIONS

Input voltage: 10 to 18 volts D.C.

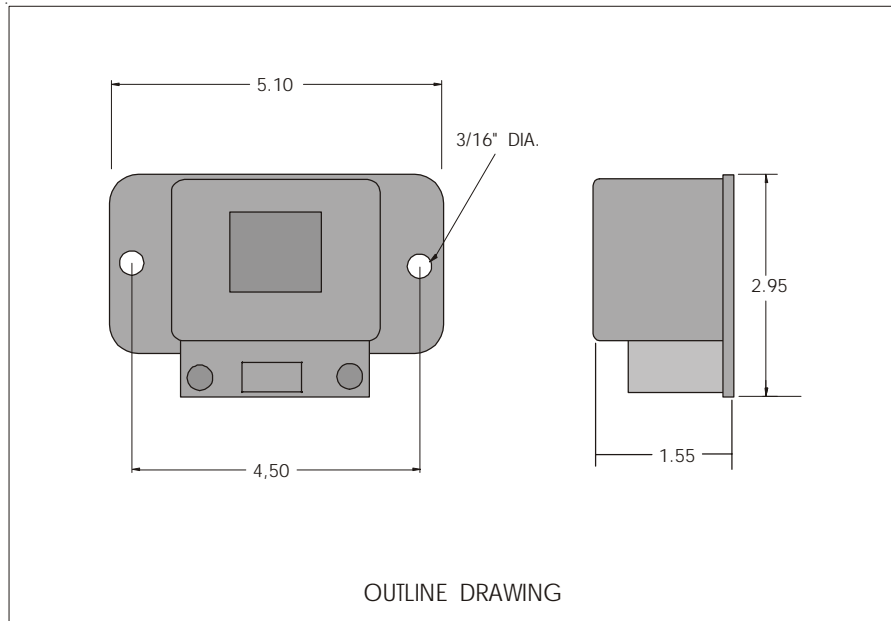
Input amps, relay off: .015

Input amps, relay on: .08

Relay contacts, amps: 30 amperes

Case: non-weatherproof, polypropylene

Weight: 4 ounces



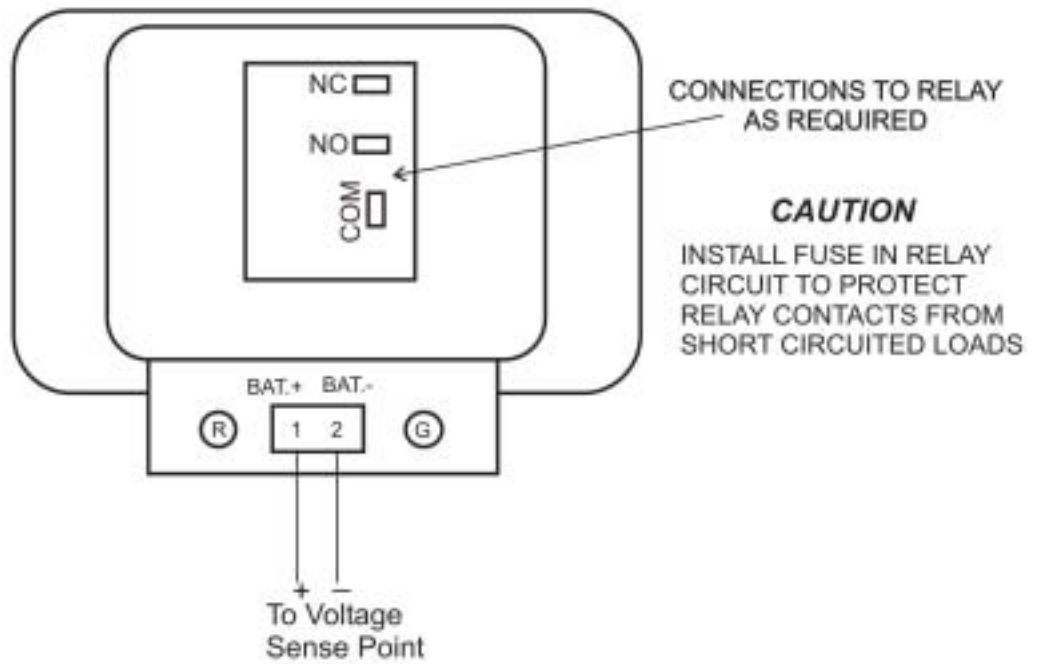


Figure 1, Under Voltage Relay Installation

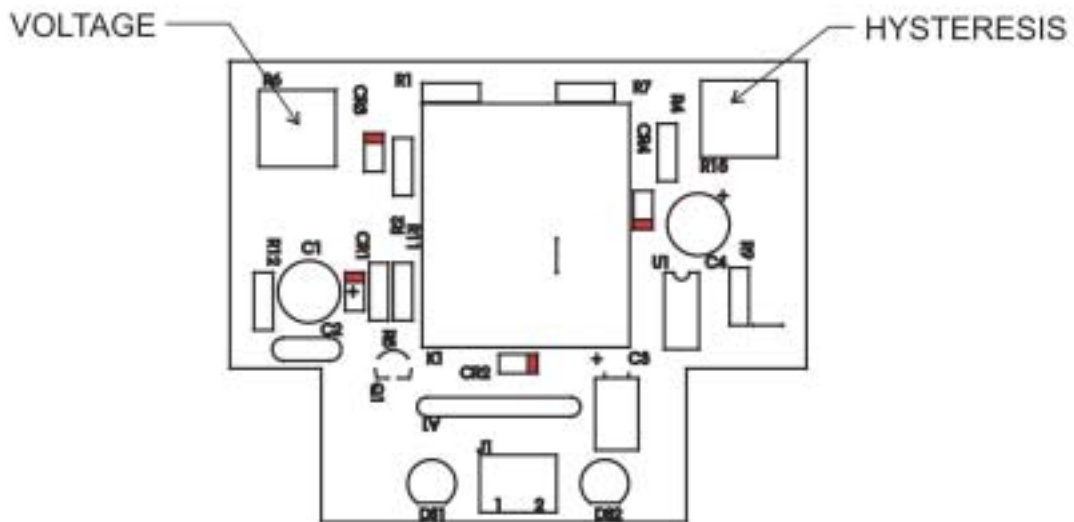


Figure 2, Voltage & Hysteresis Adjustment

INSTALLATION RECORD & WARRANTY

Date Installed _____

Installed By _____

Vehicle Identification _____

Vehicle Owner _____

WARRANTY

All products of Kussmal Electronics Company Inc. are warranted to be free of defects of material or workmanship. Liability is limited to repairing or replacing at our factory, without charge, any material or defects which become apparent in normal use within 3 years from the date the equipment was shipped. Equipment is to be returned, shipping charges prepaid and will be returned, after repair, shipping charges paid.

Kussmal Electronics Company, Inc. shall have no liability for damages of any kind to associated equipment arising from the installation and /or use of the Kussmal Electronics Company, Inc. products. The purchaser, by the acceptance of the equipment, assumes all liability for any damages which may result from its installation, use or misuse, by the purchaser, his or its employees or others.