

INSTRUCTION MANUAL

AUTO THROTTLE 1



MODEL # 091-84

AN AUTOMATIC HIGH IDLE CONTROLLER

3 YEAR WARRANTY



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INTRODUCTION

The 091-84 Auto Throttle 1 is a voltage sensor designed to detect when insufficient alternator output causes the battery voltage to drop. Whenever the Auto Throttle 1 is selected the battery voltage is monitored. When this voltage drops below 12.5 volts for a period of 15 seconds, the Auto Throttle 1 relay will close.

Once the Auto Throttle 1 relay is operated it will always remain closed for a period of 5 minutes or until the sensed voltage rises above 13.4 volts, whichever occurs later. If the sensed voltage rises above 13.4 volts before the end of the 5 minute interval, then the relay will drop out at the completion of the 5 minutes. However, if the voltage has not attained 13.4 volts when the timer times out, the relay will remain energized as long as required for the battery to reach 13.4 volts. Red and Green indicator lights are provided to indicate the status and assist at installation. The Green LED is lit whenever the Auto Throttle 1 is enabled. When low voltage is detected for more than 15 seconds, the relay is energized, the Red LED lights and the Green LED is extinguished.

The Installer is cautioned that this device contains no interlocks. Safety Interlocks must be provided to assure that the Auto Throttle 1 does not inadvertently advance the throttle. It is suggested that the interlock interrupt the 12 volt DC. This will insure that all timing circuits in the Auto Throttle 1 are reset when it is enabled.

Typical installations appear in Figures 1, 2, and 3.

Auto Throttle 1 Output Relay - N.O. Contact - 30 Amps Max.
 N. C. Contact - 20 Amps Max.

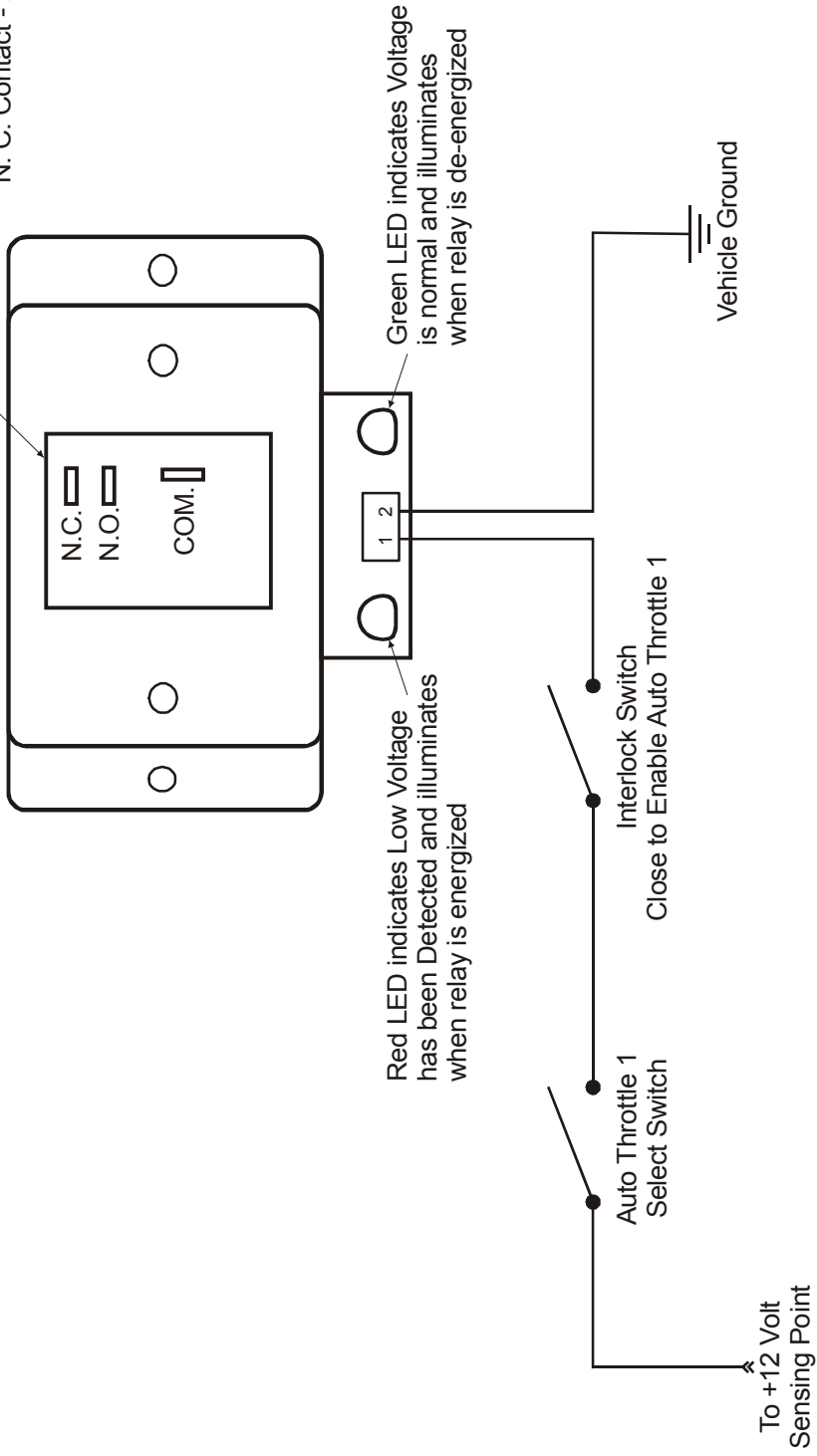


Figure 1 - Auto Throttle 1
 Typical Installation

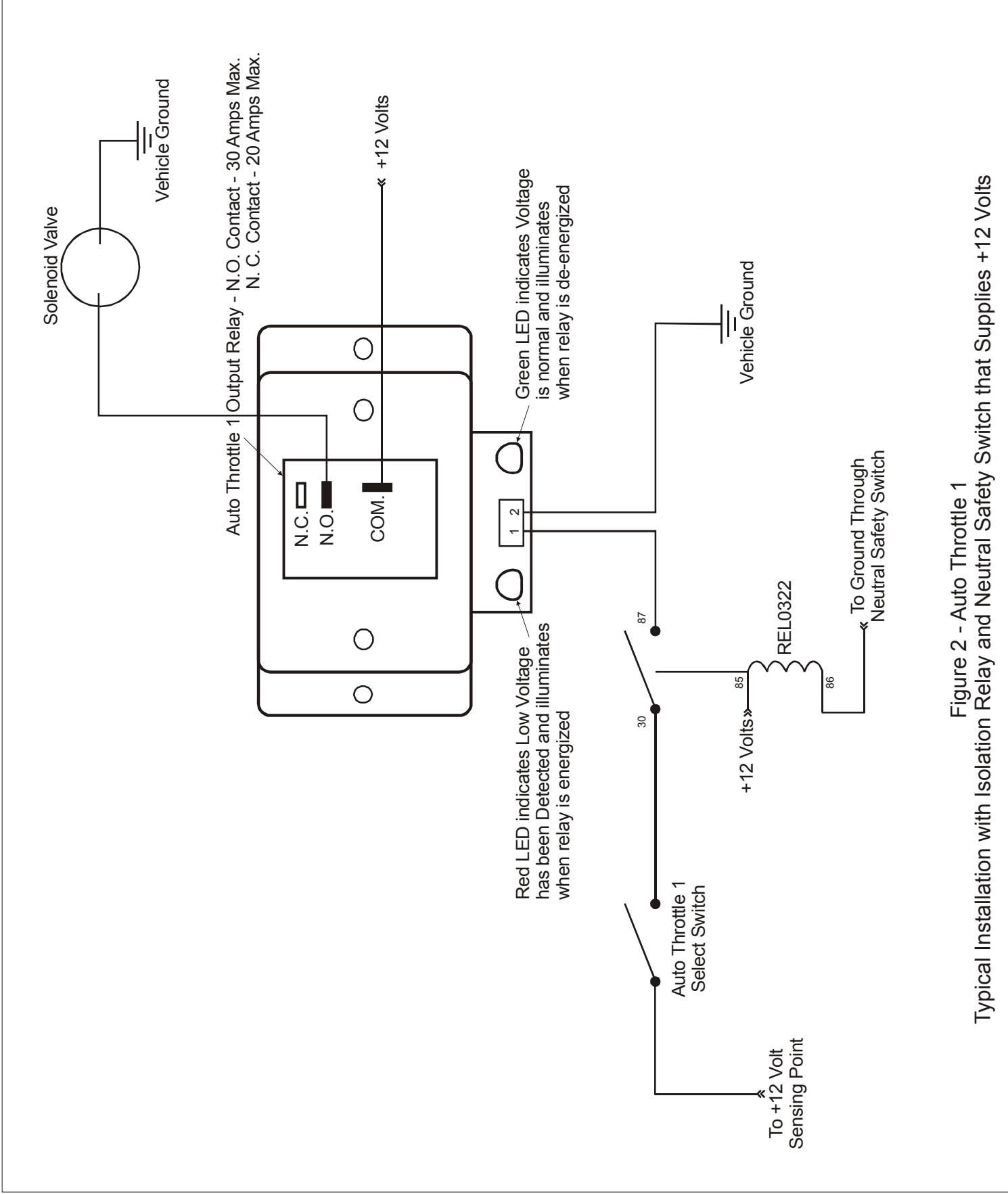


Figure 2 - Auto Throttle 1
 Typical Installation with Isolation Relay and Neutral Safety Switch that Supplies +12 Volts

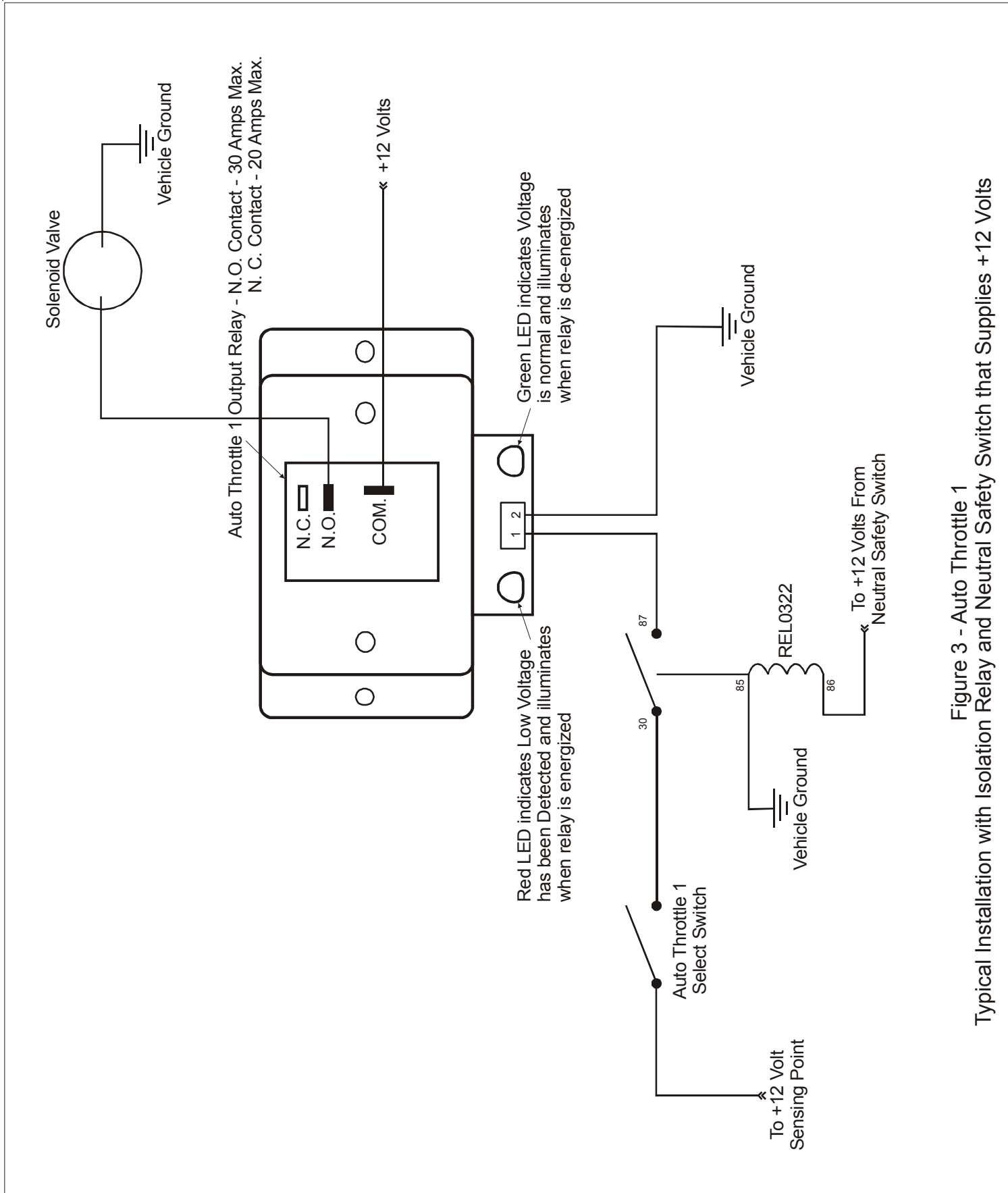


Figure 3 - Auto Throttle 1
 Typical Installation with Isolation Relay and Neutral Safety Switch that Supplies +12 Volts

INSTALLATION RECORD & WARRANTY

Date Installed _____

Installed By _____

Vehicle Identification _____

Vehicle Owner _____

WARRANTY

All products of Kusmaul 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.

Kusmaul Electronics Company, Inc. shall have no liability for damages of any kind to associated equipment arising from the installation and /or use of the Kusmaul 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.