



## **E3 Lean Burn Trim Revised Wiring Guidelines**

**Part Numbers 8237-1266 & 8237-1272**

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# E3 Lean Burn Trim Revised Wiring Guidelines

## Introduction

An improvement to the wiring specified in the application manual and wiring diagram for this product has been identified. The application manual number is 26464 (Revision "NEW"), and the wiring diagram drawing number is 9971-1266 (Revision "NEW"). Since publication of these documents, an improved wiring configuration for the E3 Controller has been identified. Revision A of these respective documents will incorporate the updated wiring configuration that is described below.

## Background

The E3 Controller has on-board low-side-output (LSO) drivers used to switch or modulate external devices such as relays and lamps. When the external device constitutes an inductive load (such as a relay), switching off the LSO used to control the device can cause an inductive kickback voltage to be generated by the external device. If excessive, this voltage could damage the LSO driver. Testing by Woodward using typical relays and other inductive loads has shown that there is no appreciable risk of damage from typical external devices. However, additional protection is available by including wiring from a source of supply voltage to the two DRVP (driver power) inputs of the controller. These inputs are identified as DRVP1 (Pin J2-18) and DRVP2 (Pin J2-19).

## Revised E3 Lean Burn Trim Controller Power and Ground Wiring Recommendations

Connect the power leads directly from the power source to the control. DO NOT POWER OTHER DEVICES WITH LEADS COMMON TO THE CONTROL. Avoid long wire lengths. Connect the battery positive (power source positive) to the J1-B2, J1-B8, J2-A18, and J2-A19 inputs and battery negative (power source common) to J2-A15, J2-A16, J2-A24, and J2-B9. If the power source is a battery, be sure the system includes an alternator or other battery-charging device. Power supply wiring is shown schematically in Figure 1.

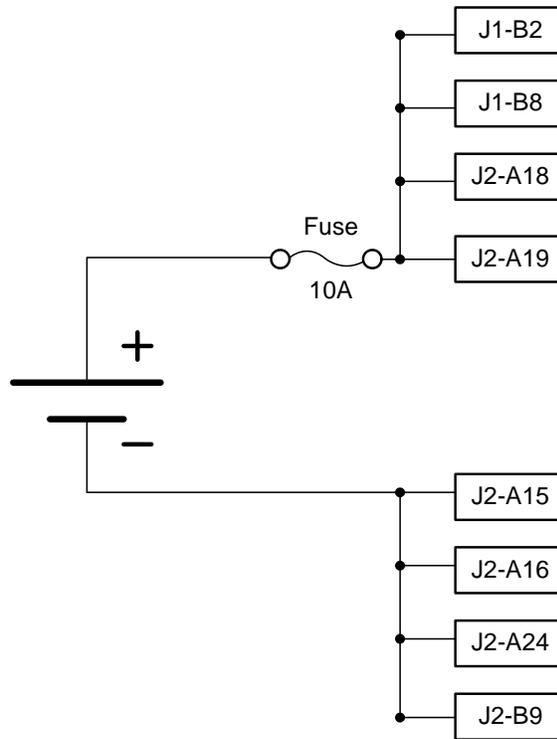


Figure 1. Power Supply Wiring

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