

AN500– Application Note PE3 High Current External Driver Release Date 8/19/12

PE3 High Current External Driver

Description:

The EX-PE3-HCD is a high current external driver for use with the PE3 series ECU. Digital outputs from the PE3 are capable of driving up to 3 amps of current. If more current is required for a particular device, either a relay or external driver must be used.

The external driver is low side switch controlled by a digital output from the ECU. It can be used as an on/off switch or pulse width modulated to drive motors, solenoids and other actuators.

The max allowable current of the external driver is 40 amps. It retains the over-current protection that is present in the PE3 engine control system. If the external driver flows over 40 amps, it relays this information to the PE3. The PE3 will then shut the driver down and log an over-current error in the ECU.

Uses:

The external driver can be used to control any on/off or pulse width modulated device that requires up to 40 amps. Typical uses include the following:

- · Nitrous control solenoids
- · Variable speed cooling fans
- · Variable speed fuel pumps
- · Boost control solenoids
- · Other DC motors



Connection Details	
Red Wire	Switched +12v
Black Wire	Battery ground. Warning: All of the current controlled by the external driver will be flowing through this black wire back to the battery. Make sure to connect to an appropriate ground using a suitable wire size.
Yellow Wire	PE3 Digital Output (see PE3 Wire Diagram)
Purple Wire	Ground side of the device being controlled