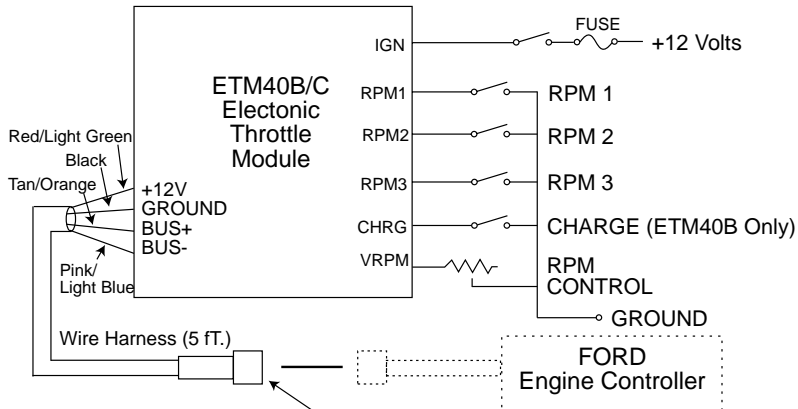


## Wiring Diagram



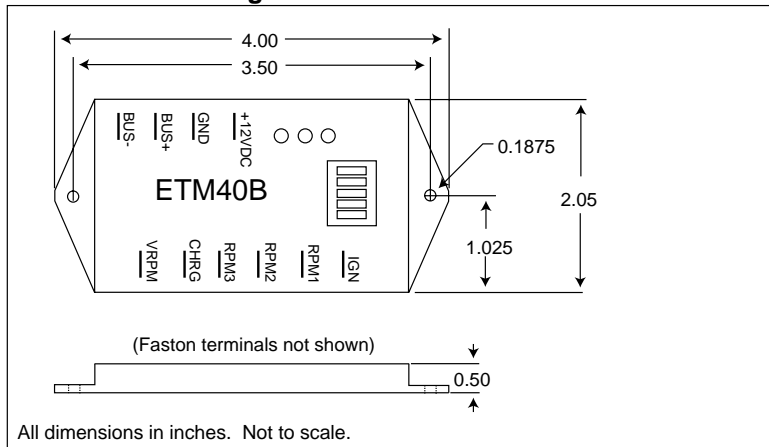
View looking into connector

BUS+ (Tan/Orange)      BUS- (Pink/Light Blue)

Ground (Black)      +12V Power (Red/Light Green)

Note - On Excursion chassis with the diesel engine a special cable must be used as Ford does not provide the above connector. The other cable connects to the OBD-II diagnostic connector.

## Mechanical Drawing



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## OWNERS MANUAL

## Model ETM40B/C

## Electronic Throttle Module

for

## Ford 6.0 &amp; 7.3 Liter Diesel Truck Engines

**PRODUCT  
DISCONTINUED**



## Introduction

Model ETM40B and ETM40C Electronic Throttles are designed to support trucks that use Ford 6.0 & 7.3 liter turbo diesel engines. Mode selection is via five inputs, and mode priority interlocking is provided.

The model ETM40B contains the Charge Protect mode and supports both automatic and manual transmissions on the 7.3L engine applications. It supports only manual transmissions on the 6.0L engine applications.

The model ETM40C does *not* contain the Charge Protect mode and supports both automatic and manual transmissions on 6.0L engine applications. It supports only automatic transmissions on 7.3L engine applications.

## Standard Features

- Supports Ford 6.0 & 7.3L Power Stroke diesel engines
- Multiple modes of operation
- Direct interface to engine controller
- Licensed Ford patented technology assures compatibility and reliability
- Encapsulated electronics for maximum environmental protection
- LED status indicators

## Operation

When the vehicle is parked and Chassis Ready Conditions are satisfied, the engine idle speed may be controlled by selection of one of the five available modes: three presets, charge protect or variable RPM. The preset RPM modes may be adjusted via three calibration potentiometers on the top of the ETM40 unit.

### Chassis Ready Conditions

1. Parking brake is set
2. *For automatic transmission:* gear shift lever is in PARK
3. *For manual transmission:* foot is off the clutch pedal
4. Foot is off the service brake
5. Foot is off accelerator pedal
6. Vehicle is stationary
7. Engine is started and idling

### Modes of Operation

#### A. Three Preset RPM High Idle Modes:

Function: Increase Idle to a preset RPM value  
 Terminals: RPM1, RPM2, RPM3  
 Activation: Apply ground to terminal  
 Range of Calibration: 1200 to 2600 RPM  
 Type of Adjustment: Internal potentiometers  
 RPM1 Adjustment: Potentiometer 1  
 RPM2 Adjustment: Potentiometer 2  
 RPM3 Adjustment: Potentiometer 3

#### B. Charge Protect Mode:

Function: Varies RPM to maintain 14 volts at battery  
 Terminal: CHRГ  
 Activation: Apply ground to terminal  
 RPM Range: 1200 to 2600 RPM

#### C. Variable RPM Mode:

Function: Varies RPM as a function of voltage on VRPM  
 Terminal: VRPM  
 Adjustment: 10k Ohm Potentiometer between terminal and ground  
 Enable: Turn potentiometer down to zero resistance, then slowly increase until reaching desired RPM  
 Disengage: Turn Potentiometer down to zero and RPM will drop to standard idle  
 RPM Range: 1200 to 2600 RPM

#### D. Mode Priorities:

RPM1 Highest - will override all other modes  
 RPM2 Second - will override lower modes  
 RPM3 Third - will override lower modes  
 Variable RPM Lowest - will only activate when all other modes are off

## Status Indicators

A five segment LED provides status and problem detection information. Refer to the following table for coding of these functions.

LED	Status	Indication
ON/OFF	On Solid	Module ON & Functioning
	Flashing	Module ON, problem detected
GEAR	On Solid	Gear = Park, Park Brk set, Services Brk off
	Flashing	Problem detected
RPM1	On Solid	RPM1 terminal grounded, engine at RPM1
	Flashing	RPM1 terminal grounded, engine at low idle
RPM2	On Solid	RPM2 terminal grounded, engine at RPM2
	Flashing	RPM2 terminal grounded, engine at low idle
RPM3	On Solid	RPM3 terminal grounded, engine at RPM3
	Flashing	RPM3 terminal grounded, engine at low idle
RPM2/ RPM3	On Solid	VRPM terminal grounded, engine at high idle
	Flashing	VRPM terminal grounded, engine at low idle

*NOTE: The GEAR diagnostic LED on the 6.0 L engine applications should not be used as it will contain erroneous indications.*

### Specifications

#### Electrical

Input Voltage (+12V Terminal): 8 to 16 V  
 Input Current (+12V Terminal): 37mA  
 Standby Current: 28mA  
 Input Current (on/off terminal): 1mA  
 Control Current: 1mA

#### Mechanical

Weight: 0.17lbs  
 Connections: Faston 0.25 inch terminals  
 Case Material: Cyolac thermoplastic (UL 94VO)  
 Encapsulation Material: Epoxy potting compound, resistant to most fuels, oils, acids and cleaning agents.

### Installation

The ETM40 module should be mounted inside the cab, under the dashboard. A supplied five foot cable connects to the Ford wiring harness' four pin connector. The mode activation connections must be supplied by the user to connect to the 0.25 Faston terminals. (See wiring diagram.)

Note: Excursion chassis do not have an APCM harness connector for the ETM40 data cable. A special data cable must be used that will connect to the vehicle's OBD-II Data Link Connector. Contact InPower, LLC for details.

### Setup and Calibration

The only calibration required is to select each of the three preset modes (RPM1, RPM2 and RPM3) and adjust the three respective potentiometers on the ETM40 to the desired RPM.