

## Ford Electronic Throttle Module



**Fast Idle Speed Control for Ford Trucks, Vans and Cut -Away Chassis**

### Vehicle Compatibility

This electronic throttle is compatible with only certain *Ford* vehicle configurations. Refer to *InPower Ford Electronic Throttle Application Guide AB-17* to determine the electronic throttle model that matches your vehicle model year, chassis, engine and transmission.

### Applications

- Emergency Vehicles
- Work Trucks
- Transit & Shuttle Buses
- Pumper Trucks
- Service and Rescue Vehicles
- Hydraulic Systems
- Air Compressors
- Power Inverter Systems
- Warning Light Systems

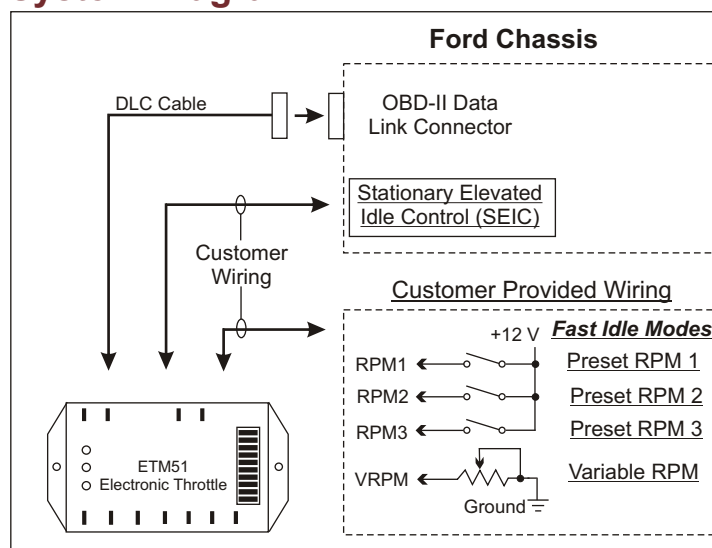
### Key Features

- Three user-adjustable speed presets with priority control
- Variable speed input for remote control of fast idle speed.
- Works in conjunction with Ford's built-in *Stationary Elevated Idle Control (SEIC)*.
- Engine Control Module programming for speed presets not required
- LED status and troubleshooting indicators
- Consistent speed ramp rate control between speed presets.

Four selectable modes of fast engine idle operation include three adjustable preset fixed speeds, and a variable speed control via a external potentiometer. The modes are selected by applying +12 volts to the RPM1, RPM2 or RPM3 terminals. The three fast idle presets can be individually adjusted by calibration potentiometers accessible on the top of the module. Ten LED indicators are provided to display the selected operating mode, system status, and error conditions. The ETM51 controller module is compact, measuring only 2 x 4 inches. Wiring terminations utilize 0.25 inch Faston (blade) terminals. Its circuitry is encapsulated for maximum environmental protection.

Installation is simplified with a wiring harness that plugs into the vehicle's engine data bus, eliminating the need to wire into chassis sensors or the accelerator pedal module. The ETM51 module mounts under the dash and is supplied with a three foot cable that plugs into the vehicle's OBDII Data Link Connector. Customer provided wiring is required to select the fast idle mode and to connect to the Ford SEIC harness (three blunt-cut wires).

### System Diagram



# ETM51 Electronic Throttle Modules

## Specifications

### Modes of Operation

#### A. Preset RPM Modes

Function: Increases idle to a preset rpm  
 Number of presets: Three  
 Input identification: RPM1, RPM2 & RPM3 (RPM1 has highest priority, then RPM2, and RPM3 the lowest priority.)  
 Activation: Apply +12 V to input to select mode  
 Range of calibration:  
 Diesel Engine: 1200 to 2400 RPM  
 Gas Engines: 900 to 2340 RPM  
 Calibration method: Internal potentiometers (3)

#### B. Variable RPM Mode

Function: Varies rpm as a function of external resistance Change  
 Input identification: VRPM  
 Adjustment: 10k Ohm potentiometer between input terminal and ground  
 RPM range:  
 Diesel Engines: 1200 to 2400 rpm  
 Gas Engines: 900 to 2340 rpm

### Power Requirements

Input Voltage: 8 to 16 volts dc (from Ignition Switch)  
 Input Current: 30 milliamps

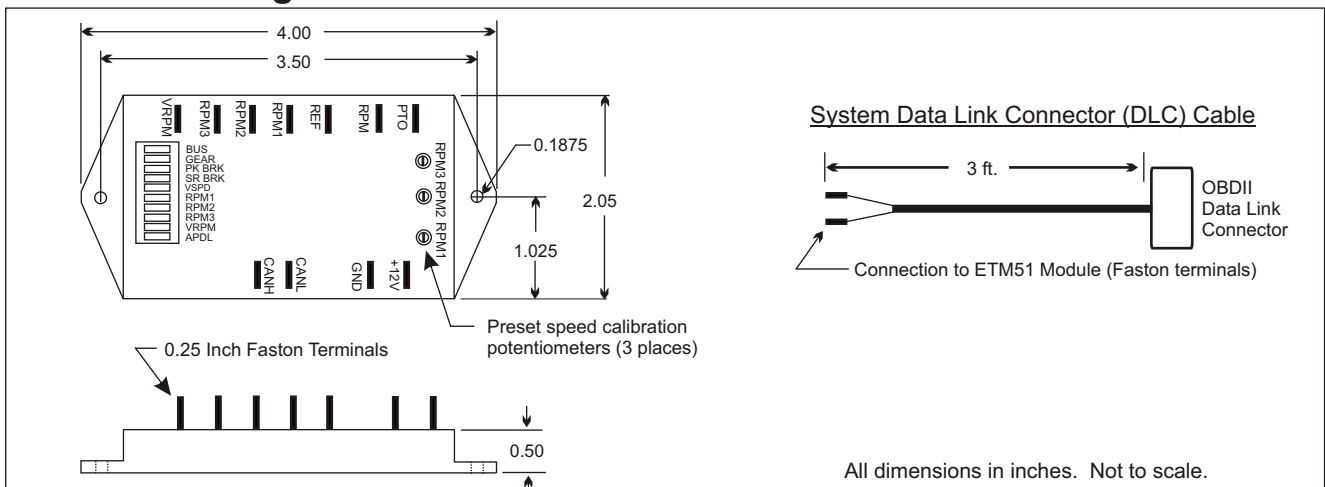
### NOTES

1. Refer to Ford Body Builders Manual for application restrictions that may apply.
2. Certain chassis are not supported as they do not have the Ford SEIC feature.
3. For Charge Protect function refer to the SEIC documentation.
4. Refer to InPower Owners Manual OM-54 for installation and operating instructions.

## DIAGNOSTIC LED

LED	FUNCTION
1. BUS	<u>Solid</u> - Module ON and functioning. <u>Flashing</u> - Module ON, but an OBDII problem was detected.
2. GEAR	<u>Solid</u> - Transmission in PARK Position or clutch pedal released. <u>Flashing</u> - Trans. not in PARK Position or clutch pedal activated.
3. PK BRK	<u>Solid</u> - Parking Brake set. <u>Flashing</u> - Parking Brake not set.
4. SR BRK	<u>Solid</u> - Service Brake set <u>Flashing</u> - Service Brake not Set.
5. VSPD	<u>Solid</u> - No vehicle speed. <u>Flashing</u> - Vehicle speed sensor shows movement.
6. RPM1	<u>Solid</u> - At fast idle speed 1. <u>Flashing</u> - Can't go to fast idle 1 due to interlock.
7. RPM2	<u>Solid</u> - At fast idle speed 2. <u>Flashing</u> - Can't go to fast idle 2 due to interlock.
8. RPM3	<u>Solid</u> - At fast idle speed 3. <u>Flashing</u> - Can't go to fast idle 3 due to interlock.
9. VRPM	<u>Solid</u> - In Variable Speed control mode (> 0 Ohms). <u>Flashing</u> - Can't go to fast idle speed due to interlock.
10. APDL	<u>Solid</u> - Accelerator Pedal at rest. <u>Flashing</u> - Accelerator Pedal actuated.

## Mechanical Drawing



## InPOWER LLC

3555 Africa Road  
 Galena, Ohio 43021  
 Tel 740-548-0965  
 Fax 740-548-2302

www.InPowerDirect.com

## Offered by:

PDS67B - 012509

© Copyright 20097 InPOWER LLC

Specifications subject to change without notice.