

# ***ECU***® Design Guide for PMTN

Refer to PMTN application drawing when using this guide.

Topics

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## What does an **ECU**<sup>®</sup> PMTN do for me?

The PMTN depending on the systems design can...

- Be programmed for Delay on Make
- Be programmed for Delay on Release
- Be programmed for Cyclic duty
- Be programmed for Interval duty

As a result it can be set to be a

- Delay on start
- Delay on make
- Warmup timer
- Cool down timer
- Rack timer (use diagram in manual for zero power option)
- Flasher
- Pre-lube timer
- Glow plug timer
- Not in auto detector

### How the PMTN works for you

The unit has a highly flexible circuit that allows for many modes. Changing the DIP switch allows for these modes and 4 time ranges. A 30 turn pot allows for fine adjust.

If the load on the Alarm Output is larger than published specification be sure to use a pilot relay

## What does it sense and control?

The PMTN depending on systems design can...

### Sense ...

- Contact closures to battery positive
- Battery high signals from other units

### Control...

- Pilot relays
- Lamps
- Isolated loads

## What kind of sensors are used with the PMTN?

The PMTN uses

### Dry Contact Closures

These are switches that close allowing battery voltage connected to one side of a dry contact to transfer to the the other side thus sending signal to the PMTN.

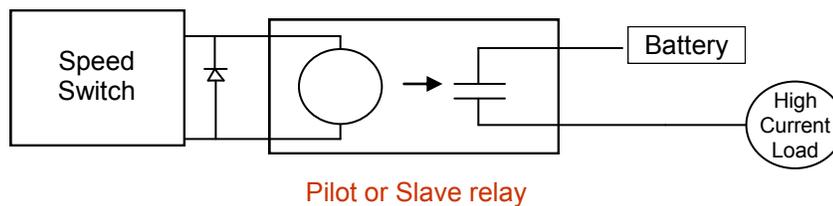
### Systems that produced a positive battery signal

These are systems that produce a battery positive signal via various means such as transistor, semiconductor, thermostat or internal relays.

## What are pilot or slave relays?

### Pilot or Slave relays

Many of the valves and solenoids the speed switch operates have high currents and it may become necessary to “buffer” the control against harmful currents.



The Pilot or Slave relay simply “relays” the signal to the high current load. The input to the Slave relay can be small but it can control currents up to 100’s of amps. A diode is shown in the above illustration. This is a low cost preventative that adds years of useful life. The diode channels the surges of the slave relay into a harmless dissipation as opposed to causing arcing in the control contacts of the engine control.

By placing the pilot relays close to the loads other electrical benefits occur when the system is in an environment where electrical interference should be minimized.

## Are there any application drawings available?

The PMTN application example located on the flyer shows an example. Look at the various drawings on other products for ideas.

**ECU®** can be reached for special applications that we may already have drawings for.

We will endeavor to assemble all the drawings into a fixed gallery that can be emailed to our customers on a project by project basis.