

ECU® Design Guide for LTO4

Refer to LTO4 application drawing when using this guide.

Topics

[What does an ***ECU***® LTO4 do for me?](#)

[What does it sense and control?](#)

[What kind of sensors are used with it?](#)

[What are pilot or slave relays?](#)

[Are there any application drawings available?](#)

What does an **ECU**® LTO4 do for me?

The LTO4 depending on the systems design can...

- Yields a bigger lamp count than the LTO2
- Build larger lamp and control systems
- Make lamp test requirements simple
- Prevent backfeed on inputs during lamptest
- Group faults and status conditions together
- Used to create circuit logic

What does it sense and control?

The LTO4 depending on systems design can...

Sense ...

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

Control...

- Pilot relays
- Lamps
- LEDs

What kind of sensors are used with the LTO4?

The LTO4 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 LTO4.

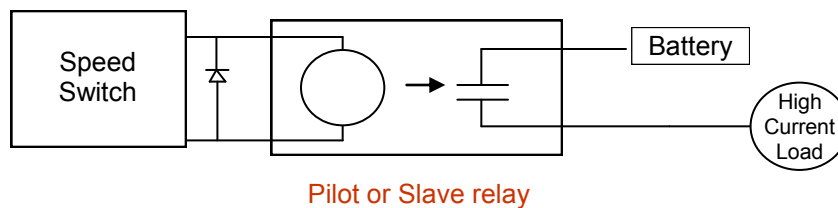
Systems that produced a positive battery signal

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 LTO4 application example located on the flyer shows an example. Look at the various drawings on other products for ideas. The LTO4 is used for many various applications from lamp test systems to circuit logic.

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.