

ECU® Design Guide for DAO1

Refer to DAO1 application drawing when using this guide.

Topics

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What does an **ECU**[®] DAO1 do for me?

The DAO1 depending on the systems design can...

Be used to suppress relay coils

Prevent backfeed

Group faults and status conditions together

Used to create circuit logic

What does it sense and control?

The DAO1 depending on systems design can...

Sense ...

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

Control...

- Starting pilot relay (energizes starting solenoid)
- Fuel pilot relay solenoid valve
- Lamps
- LEDs

What kind of sensors are used with the DAO1?

The DAO1 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 DAO1

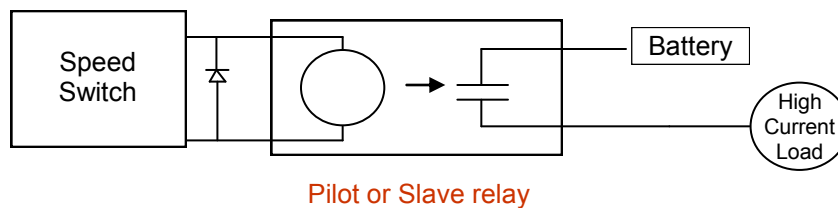
Systems that produced a positive battery signal

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 DAO1 application example located on the flyer shows an example. Look at the various drawings on other products for ideas. Wherever you see a diode used in a circuit by itself a DAO1 can be used.

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.