

ECU[®]

60 Series Engine Controls

Use CAUTION since you are applying 120VAC RMS to the AC Input terminals and that it is always potentially there during engine run!!!

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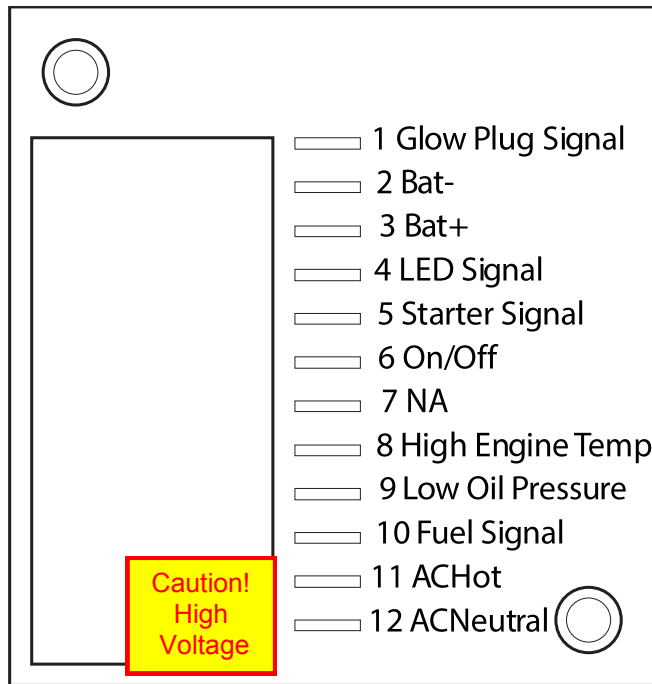
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Unit Review



60 Series Terminal Drawing

Drawing is for the 60 Series shown for basic unit understanding. Refer to specific unit you are using for wiring and operation.

Battery + is connected on its own terminal as shown.

All Current Draws must not be greater than 15 amps since this is the limit of the standard .250 Fast Connect Terminals.

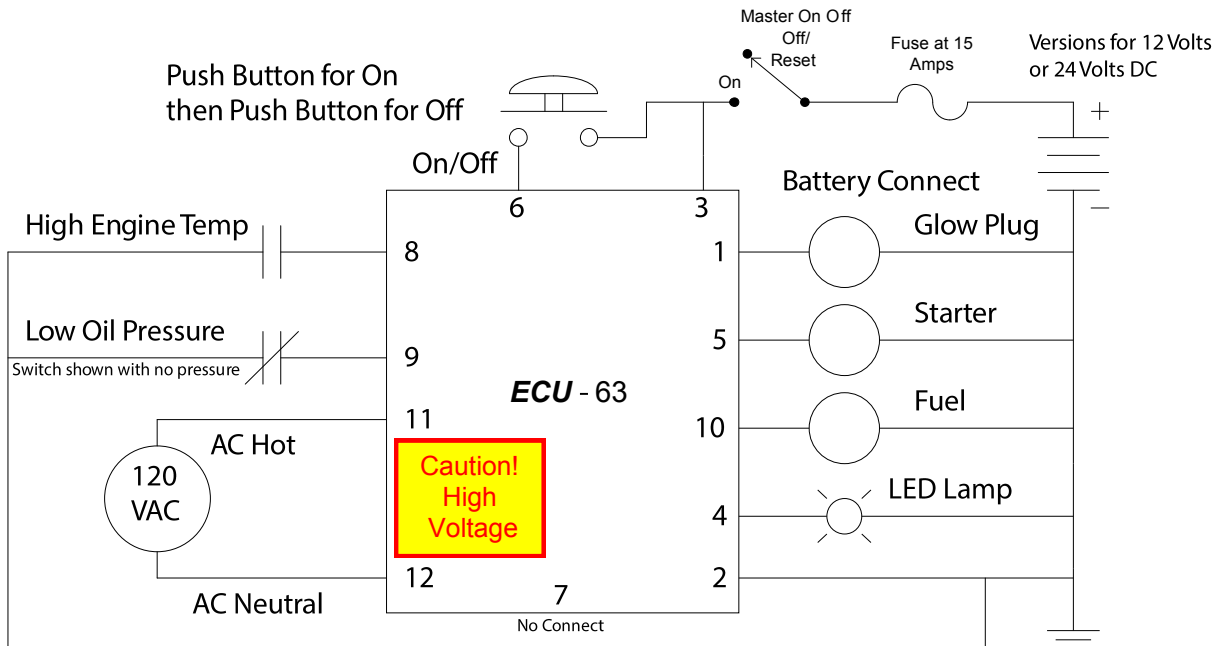
Always connect appropriate voltage to the correct terminal 12 or 24VDC.

Use CAUTION since you are applying 120VAC RMS to the AC Input terminals and that it is always potentially their during engine run!!!

If needed refer to the trouble shooting guides for more information.

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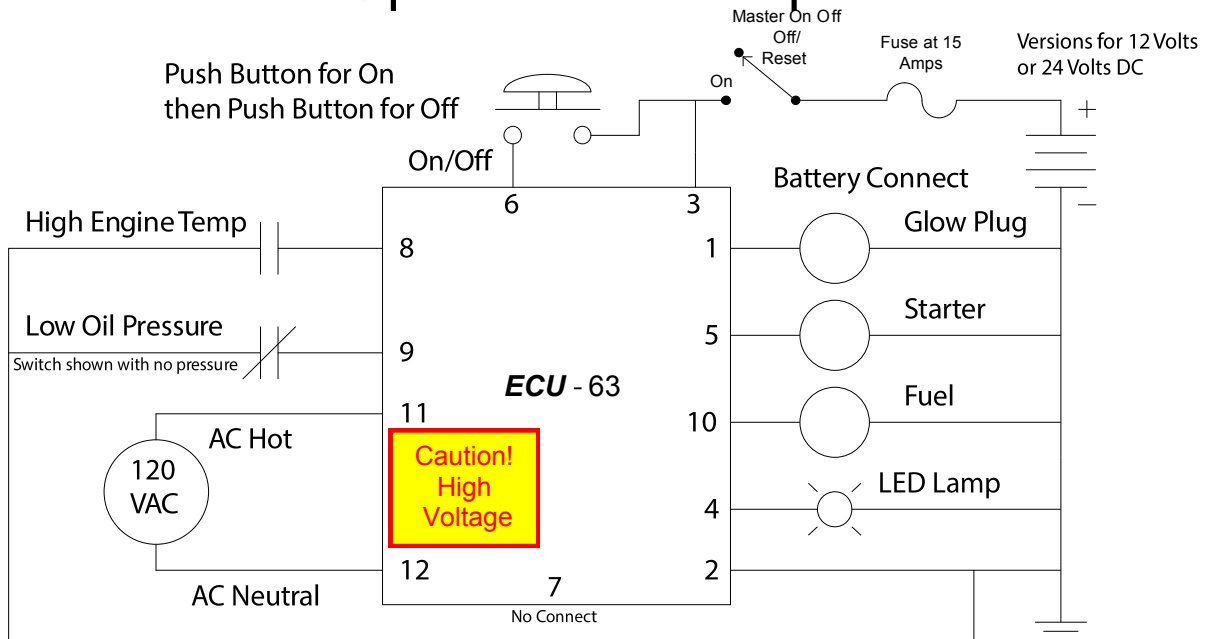
AC Input



The units will take AC voltage and process it to determine the speed of the engine via the attached generator via its windings. The max AC voltage is 120V L-N and you should connect them as shown on the terminal diagram. During Cranking the voltage is checked to see if it is sufficient for engine cranking it must be about 1 Volt RMS. If the residual voltage on the generator is not adequate the control will stop and indicate the problem. You must have a LED connected to the LED signal output with a resistor in series to get the flash and status codes. Low power lamps may be used also. We recommend doing a twisted pair with your AC wires to help against noise if the wires are long. Be careful that the wiring is done to National accepted standards for AC wiring.

Signal fail is 4 flashes on the 63,64 and on the 67 it's the OS and OC LEDs on at the same time. Refer to [Faults Page](#)

Operations example



Be sure to have read AC Input before reading this section.

The standard starting sequence is as follows.

63 press the button to start the engine, press the button to stop.

64,67 close the operations switch refer to the PDF documents for each

The Glow Hold will cause the glow hold relay to turn on, fuel may be on at this time, this is often OEM dependent. After the Hold time the Glow signal is stopped and the starter is applied. A brief delay is inserted in this operation to assure that the Glow Signal and Starter are not on at the same time to prevent overload of the 15 amp terminals. The Starter will cycle crank until either the engine starts or it overcranks. If indeed the engine has not started then a fault signal is indicated. See the [Fault Page](#) for fault codes and clearing methods.

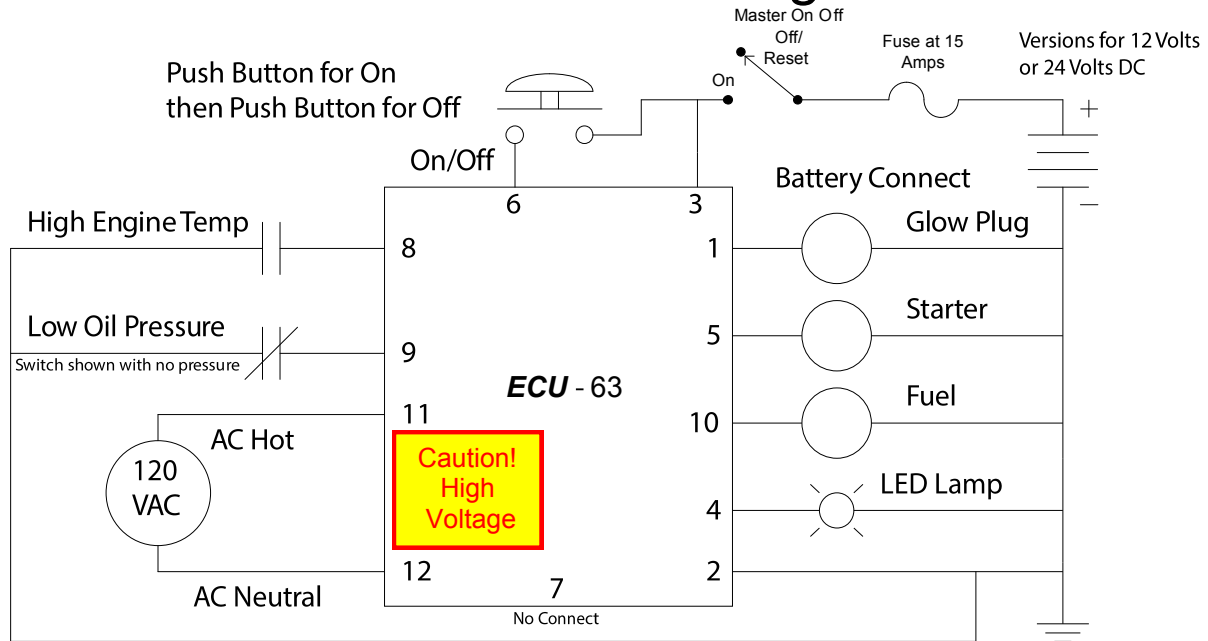
If the engine attains the factory 20 Hertz the starter will be disconnected and the engine will begin to run. The High Engine Temperature and Low Oil Pressure Switches are armed after a brief delay. If either fault occurs or Overspeed > 67HZ the control will stop the engine.

Engine will continue to run with only the Fuel signal applied until either..

63 press the start/stop button and engine will stop

64,67 Open the Control switch

Faults Status Page



Fault and Status indications

For the 63 and 64 you must connect an external lamp or LED with resistor to the LED Lamp Signal of the unit.

On 63,64 units Flash codes are as follows:

Status Flash Codes: Glow Hold = Slow Flash, Cranking = Slow Flash, Solid On = Engine Started

Error Codes Flash Counts...

Over Crank 1

High Engine Temperature 2,

Low Oil Pressure 3,

No AC signal 4,

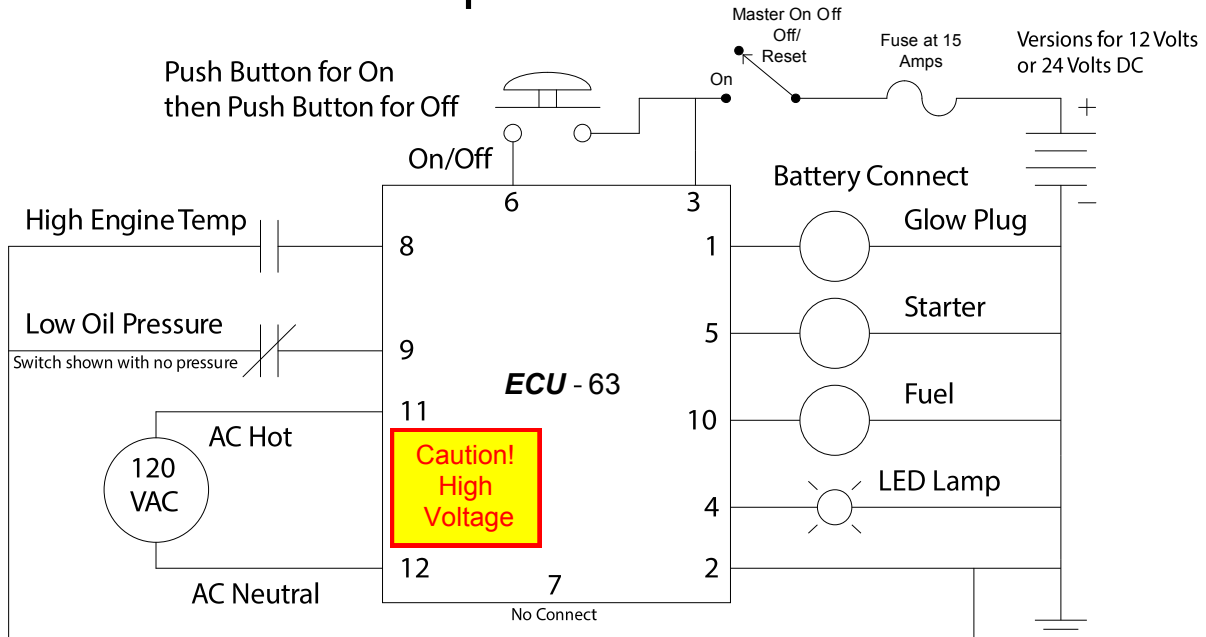
Overspeed 6

On 67 units LEDs show the faults, OC LED+OS LED is AC sensing fault.

On 67 Glow Hold is slow flash on Green LED

Faults are cleared by opening the Master Switch or Control Switch and removing power to the unit.

Specifications



Specifications: Models 63,64,67

AC Volts input 1 to 135 VRMS AC
 Sensing Volts 1 Volt Minimum from Residual on Generator

Input DC Voltage is on 12 V 9-15 VDC
 24V 19 to 30VDC

Max Current total 15Amps DC

Temperature Range
 Storage/Operating -40 +85C

Max Signal Current 100mA

Current Draw <200mA depending on which cycle

Specifications subject to change without notice

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Adjustments

**There are no adjustments on the 60 Series units.
All units specifications are predetermined and programmed into the unit at time of manufacture and can not be changed.**