



SmartStat™

Overview

The EnergyLogic SmartStat™ provides set-back temperature programmability and added monitoring and feedback on EnergyLogic waste oil furnaces.

What it Does

- Allows you to lower the set point automatically when less heat is needed, such as nights and weekends.
- Monitors low fuel sensor and alerts you when you are out of fuel. It will then automatically shut the furnace off to prevent air from entering the pump and fuel lines.
- Records total furnace run time.
- Allows you to track run time since the last service was performed.
- Monitors burner lock out to let you know if the primary control needs to be reset.
- High vacuum switch indicates a clogged fuel filter or pickup.



Product Features

- Designed for use with all EnergyLogic furnaces equipped with a Carlin Primary Control.
- Simple Installation.
- Programmable for improved comfort and energy savings.
- Single point monitor for fuel filter and low fuel cutoff.



Wiring the SmartStat™



There are potential hazards associated with the installation of this product. Codes, regulations, and general safety rules should be followed at all times to prevent accidents leading to injury, death, and property damage.

WARNING

Do not allow unqualified personnel to install and operate this product. Failure to install and maintain your system properly will void your warranty. Contact EnergyLogic for assistance.

DANGER

The SmartStat™ operates on 115V/60 Hz electrical power. Turn power off at the circuit breaker and lock it out prior to performing any work on the system. Make sure the thermostat is mounted to the junction box during normal use.

INCLUDED ITEMS



Installation Instructions:

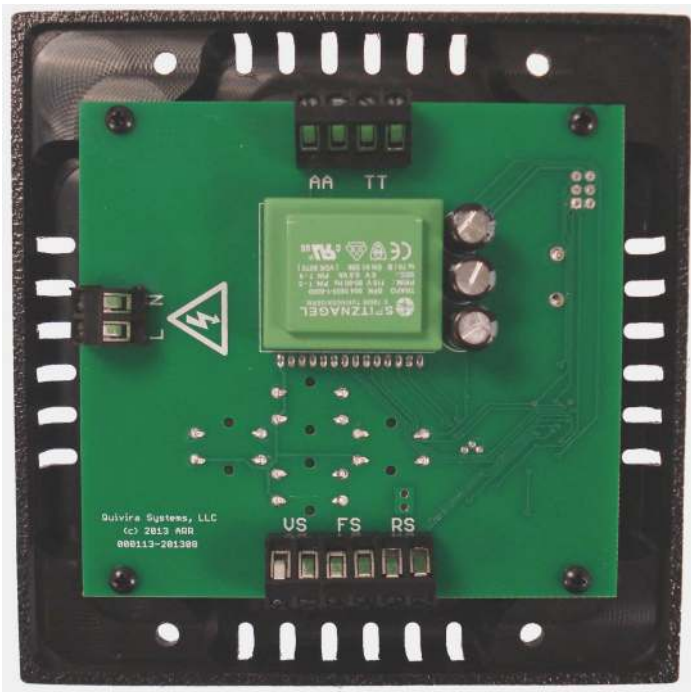
- Designate a location for the SmartStat™ display with junction box ②. It is recommended to be within 6' of storage tank's low fuel cut-off switch and pump. If it needs to be further away, splices to the low voltage wires may be required. **NOTE: An un-switched 115V/60Hz connection will be required at the Display Junction Box.** ②
- Once the location has been decided, install the Compression Fitting ⑤ on the Display Junction Box ② and mount to wall. All the low volt cables will enter through the Compression Fitting ⑤.
- Connect the Thermostat Wire Assy plug ④ to the receptacle on the side of the burner box (See picture 2) and connect the other end to the Display ② using connections "TT" (See Picture 1).

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Installation Instructions (cont):

- Connect the Primary Control Wire Assy ① to the Primary Control Alarm Output using the spade terminals (See Picture 2). Connect the other end to the Display ② using connections “AA” (See Picture 1).
- Install the Brass Tee ⑦ on the metering pump inlet assembly. Mount the Vacuum Switch and the vacuum gauge on the Brass Tee ⑦. (For add – on, the vacuum gauge must be removed from the pump inlet assembly before installing the Brass Tee ⑦ and then re-installed) (See Picture 5) Use the appropriate thread sealer. Do not use Teflon tape!
- Connect leads from vacuum switch on pump assembly (See Picture 3) to Display using connections “VS” (See Picture 1).
- Connect Low Fuel Cut-Off wires (See Picture 4) to Display ② using connections “FS” (See Picture 1).
- Run 120V/60Hz to the Display Box from an un-switched circuit. Do not use the compression fitting, low volt entrance to the box. Install per local Electric Code. Connect ground to the box using the ground screw ⑥
- Connect line to “L” on the circuit board and neutral to “N” on the circuit board. (See Picture 1).
- Mount the display to the junction box with the two screws provided with the junction box. NOTE: HAND TIGHT ONLY! DRIVING THE SCREWS WITH A POWER TOOL WILL BREAK THE PLASTIC.

Wiring the SmartStat™



Picture 1 — Reverse Side of Display ②

*NOTE: No connection to “RS”

Connect spade end of Primary Control Wire Assy ①. Connect opposite end to “AA” of Display ②

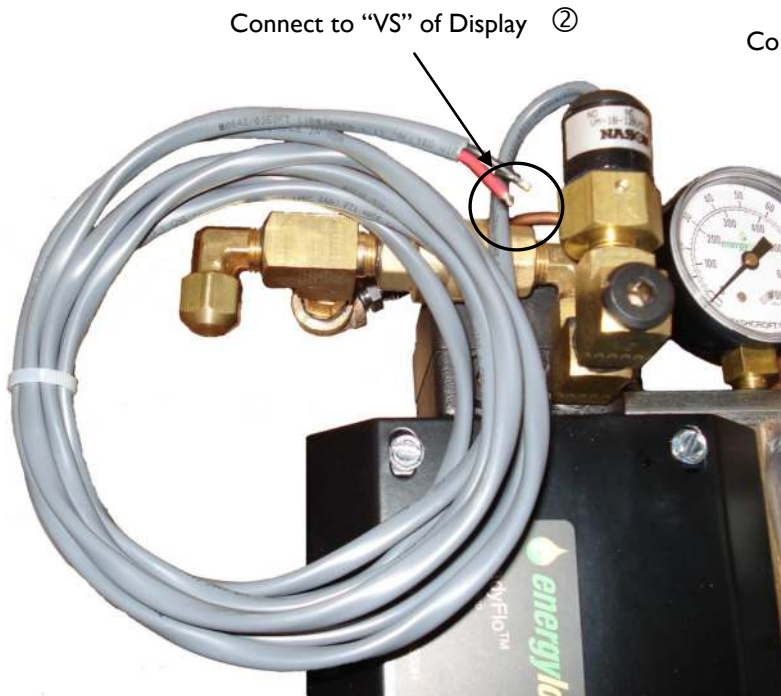
Plug in connector of Thermostat Wire Assy ④. Connect opposite end to “TT” of Display ②



Picture 2 — Burner Assembly

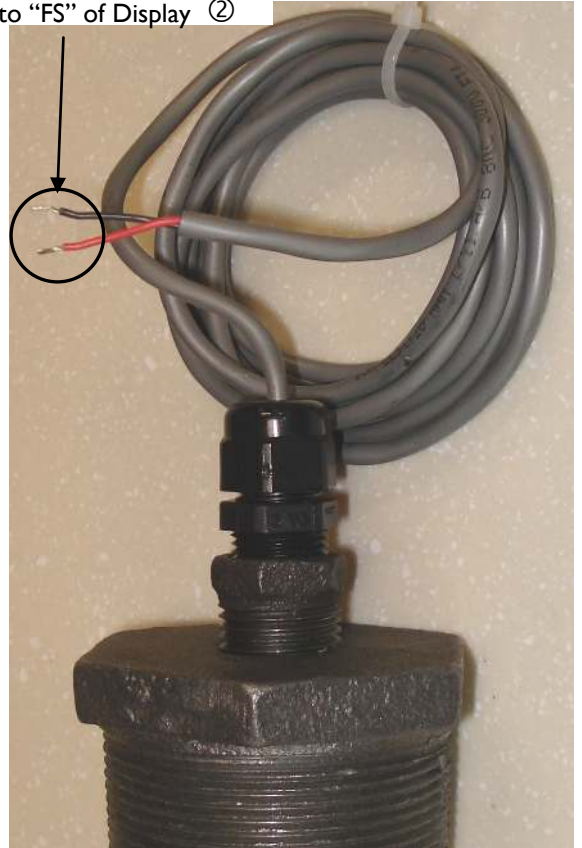


Wiring the SmartStat™ (cont)

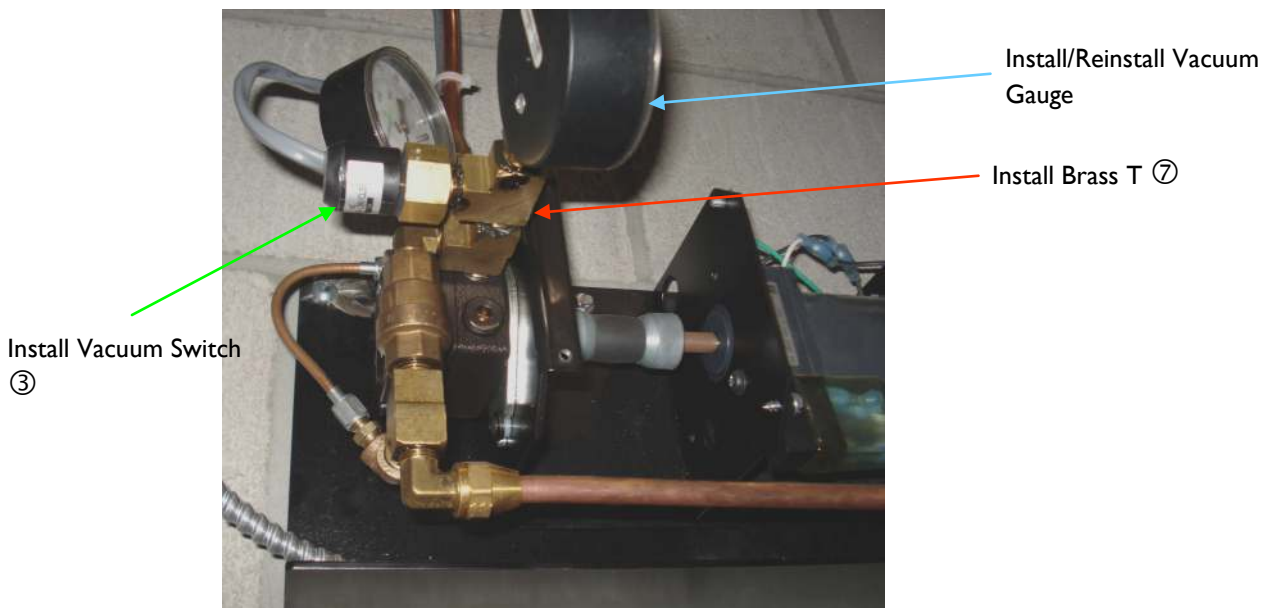


Picture 3 — Metering Pump Vacuum Switch

Connect to "FS" of Display ②

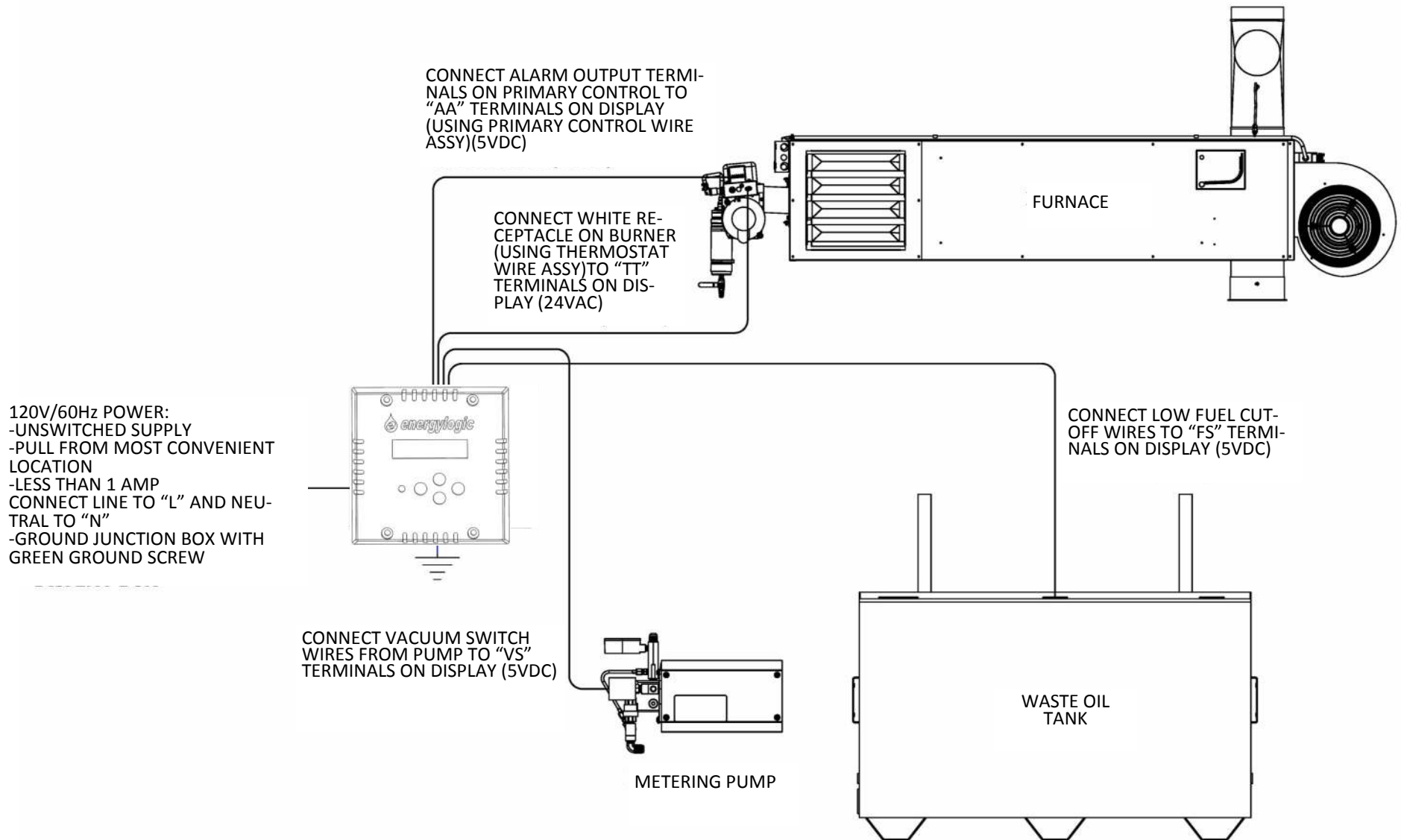


Picture 4 — Low Fuel Cutoff,
float switch in tank.



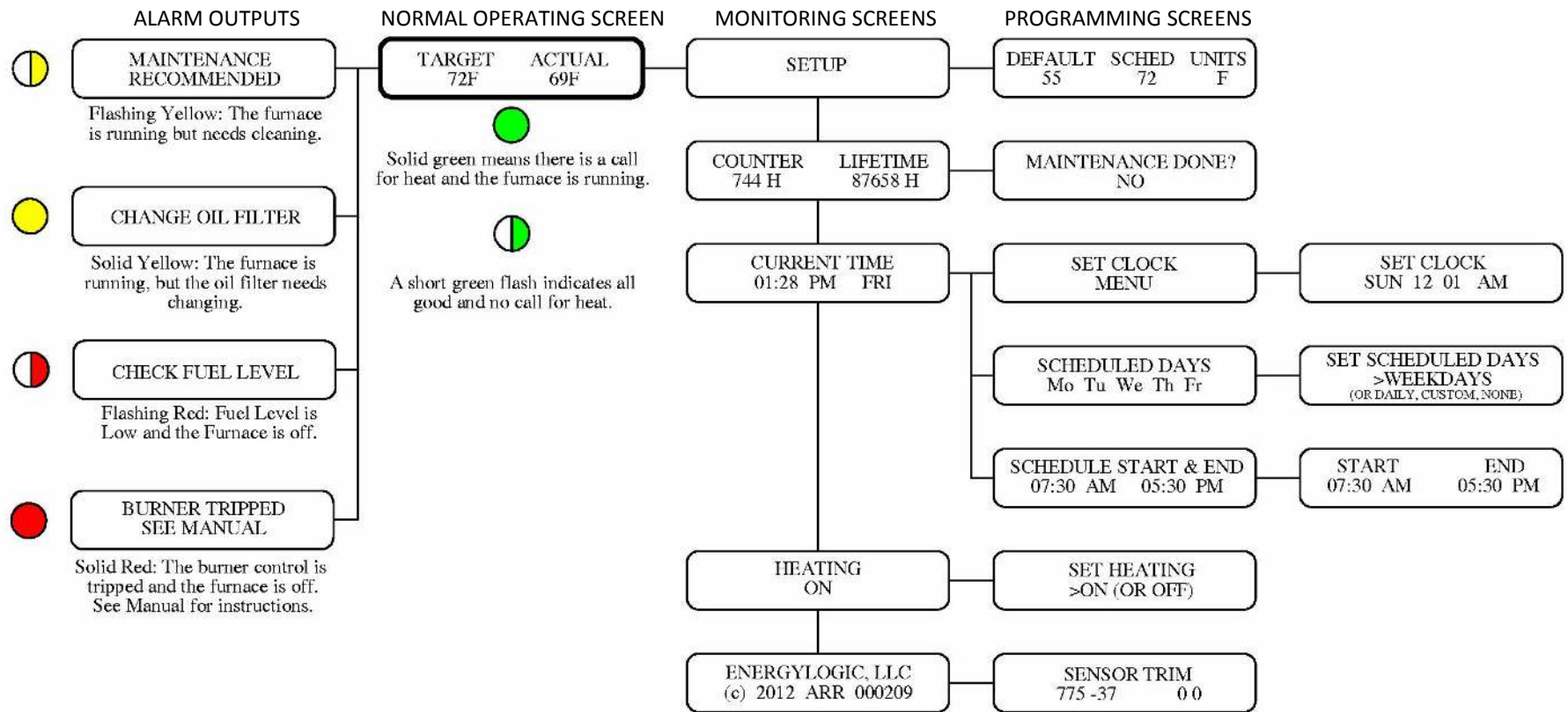
Picture 5 — Metering Pump Vacuum Switch

SmartStat™ Connection Diagram



NOTE: LOW VOLTAGE WIRE PAIRS ARE REVERSIBLE (CAN CONNECT TO EITHER TERMINAL ON DISPLAY).

SmartStat™ — Interface Diagram



- The “Normal Operating Screen” displays the target and actual temperatures. When the actual is below the target, the furnace will come on.
- Use the right button to move to the right through the menus and to enter a change.
- Use the left button to go back and not accept a change.
- Use the down and up buttons to change values and move through the menus.
- When a schedule is set, the “SCHEM” temperature will be used as the target during the ON times. The “DEFAULT” temperature will be used during the OFF times.
- When maintenance is completed, change the “Maintenance Done” to YES to reset the counter.
- If power is ever lost to the SmartStat™, time and day settings will need to be re-entered, but the hour meter and settings will be saved.
- When there is a system alert (Check Fuel Level, Change Oil Filter, etc), the type of the alert will flash on the screen and the LED light will show as listed above.
- Do not adjust the “Sensor Trim” unless instructed to do so by EnergyLogic.