

OJ Electronics

ET02 Controller

Pictorial *Installation and Programming* *Guide*

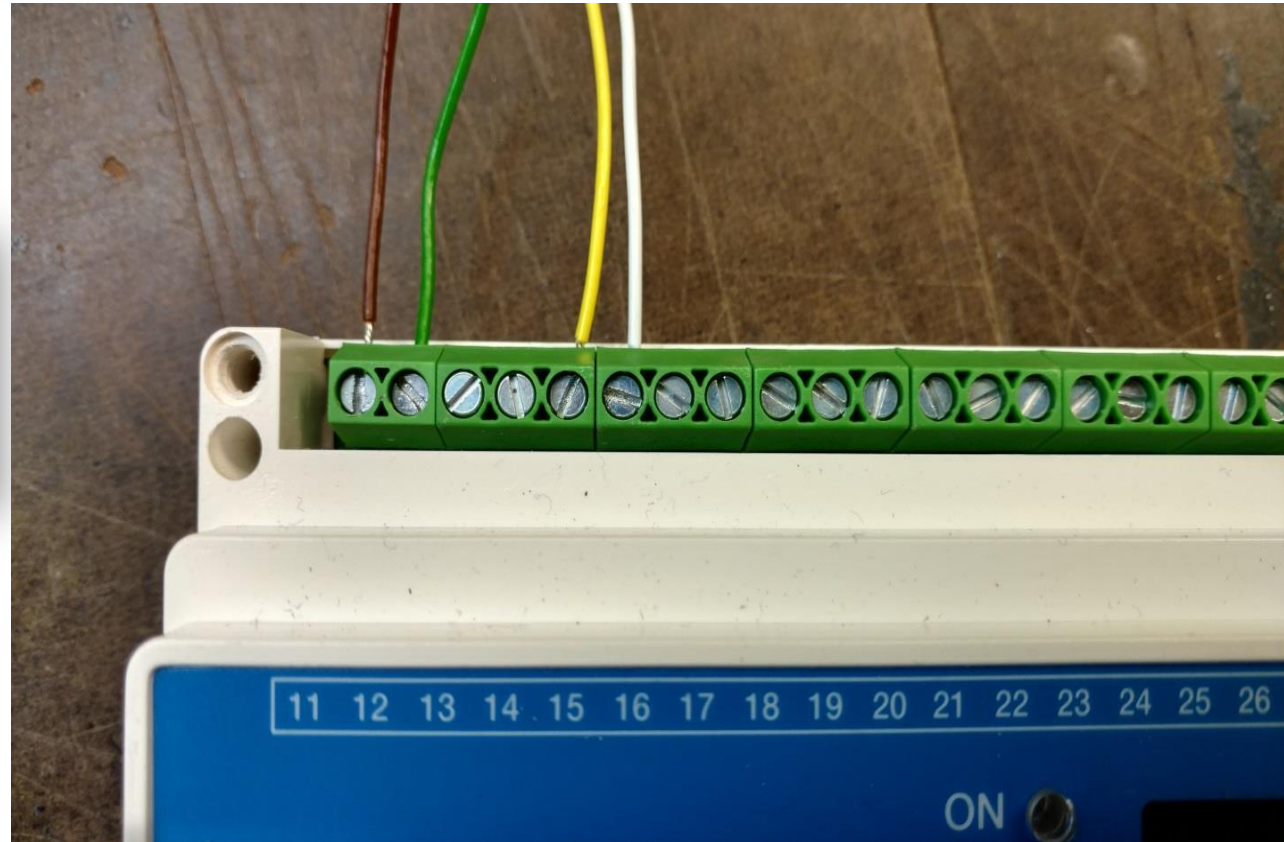
Provide Power to the ET02 Controller



1) Connect Neutral from the power supply to the N Terminal on controller

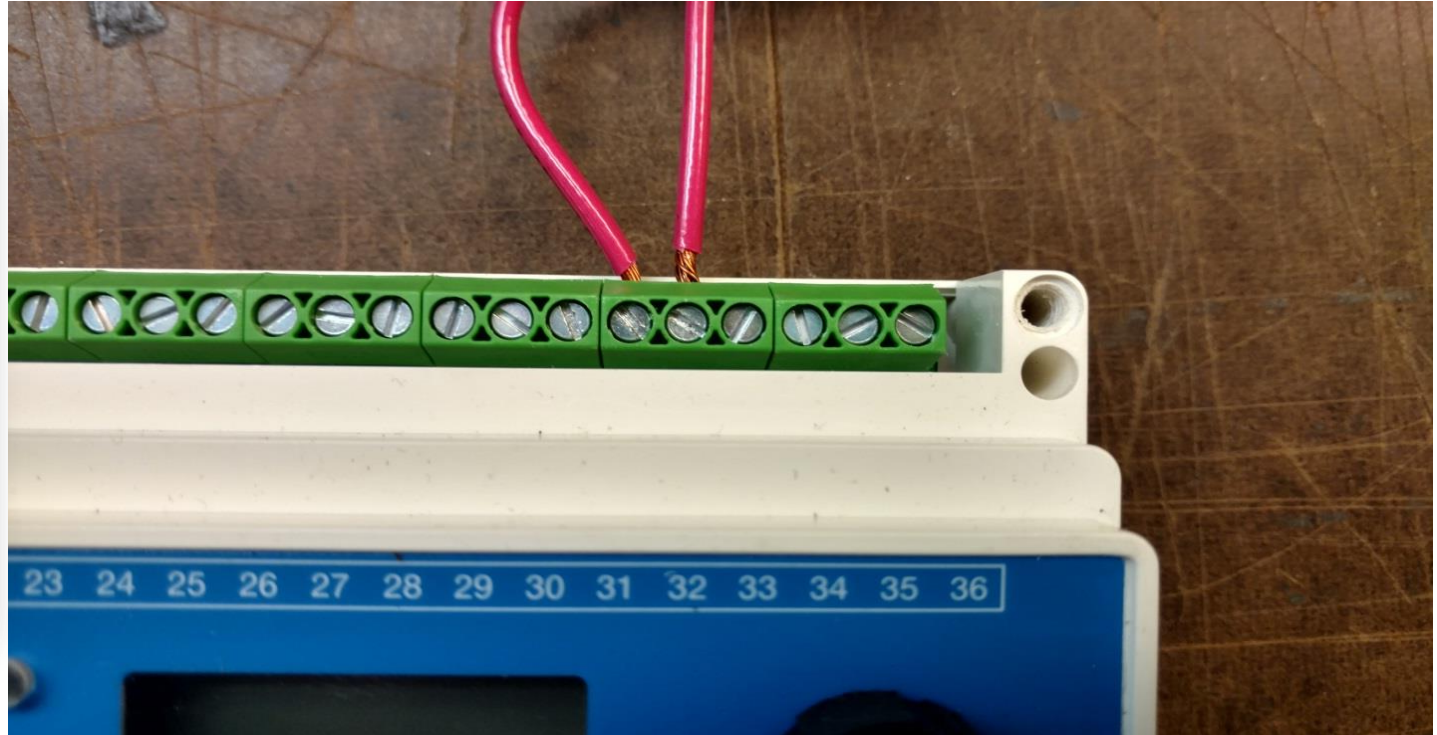
2) Connect Live from the power supply to the L Terminal on the controller

Connecting the ETOR- 55 Moisture Sensor



- 1) Connect brown wire from the sensor lead to terminal 11**
- 2) Connect green wire from the sensor to terminal 12**
- 3) Connect yellow wire from the sensor to terminal 15**
- 4) Connect white wire from sensor to terminal 16**

Connecting the ETF -744/99 Outdoor Temperature Sensor



- 1) Use minimum 16AWG (2 leads) wire to connect to the controller
- 2) Connect 1 lead wire from the ETF to terminal 31
- 3) Connect 1 lead wire from the ETF to Terminal 32

Club the Cold Lead wires for exterior Junction Box

**Club the Ground, Live, neutral terminals from
all installed de-icing systems in an NEC
APPROVED EXTERIOR JUNCTION BOX under
overhang**

Connecting Perfectly Clear De-icing Systems to Controller ...

Three Lead wires from the installed systems, Ground, Live, and Neutral

Connect Ground to the Common Ground (shown in green)

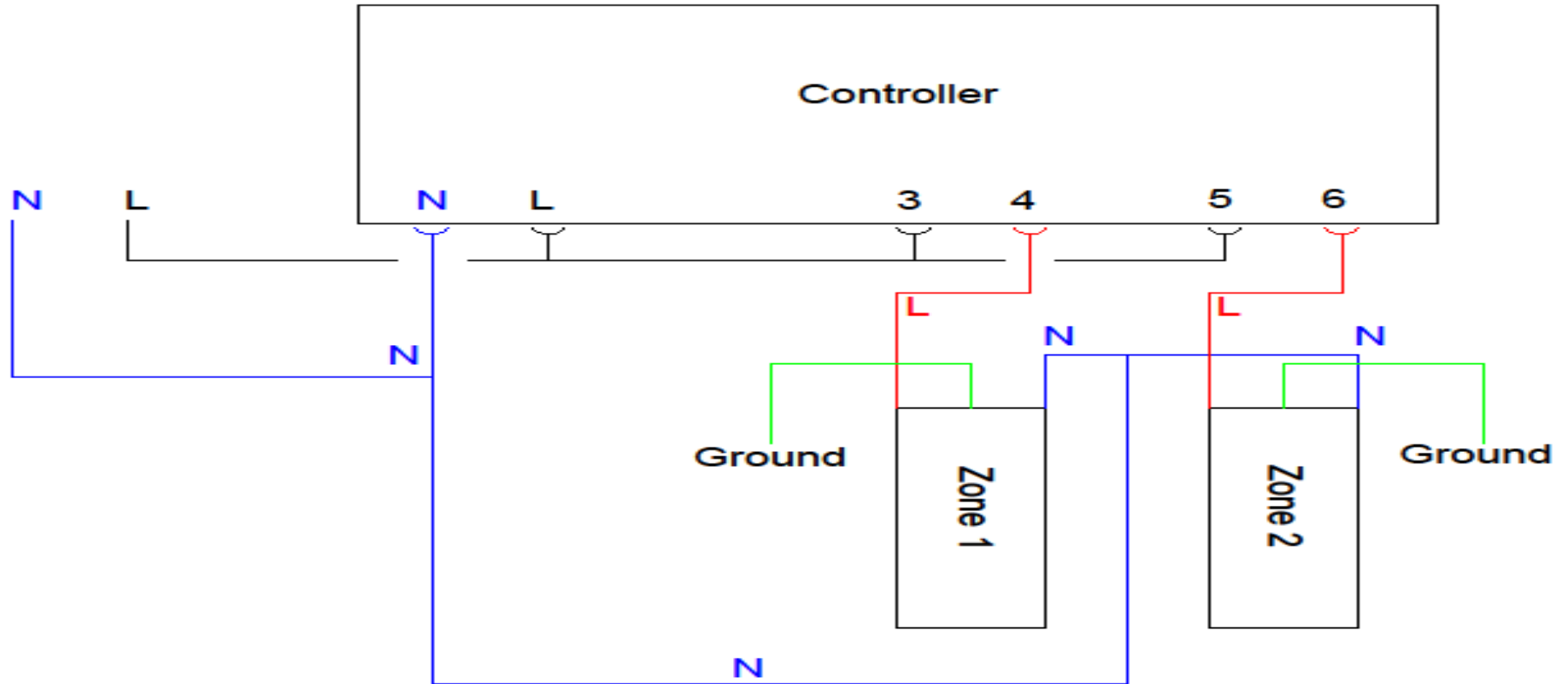
Connect your roof de-icing system between terminals 3 and 4 as follows:

- a) Connect the Live terminal from the breaker to the number 3 terminal on controller
- b) Connect the Live terminal from de-icing system to terminal number 4 on controller
- c) Connect Neutral Terminal from de-icing system to the Neutral Terminal from breaker
- d) Connect Ground Terminal from the de-icing system to the Common Ground Terminal from the breaker

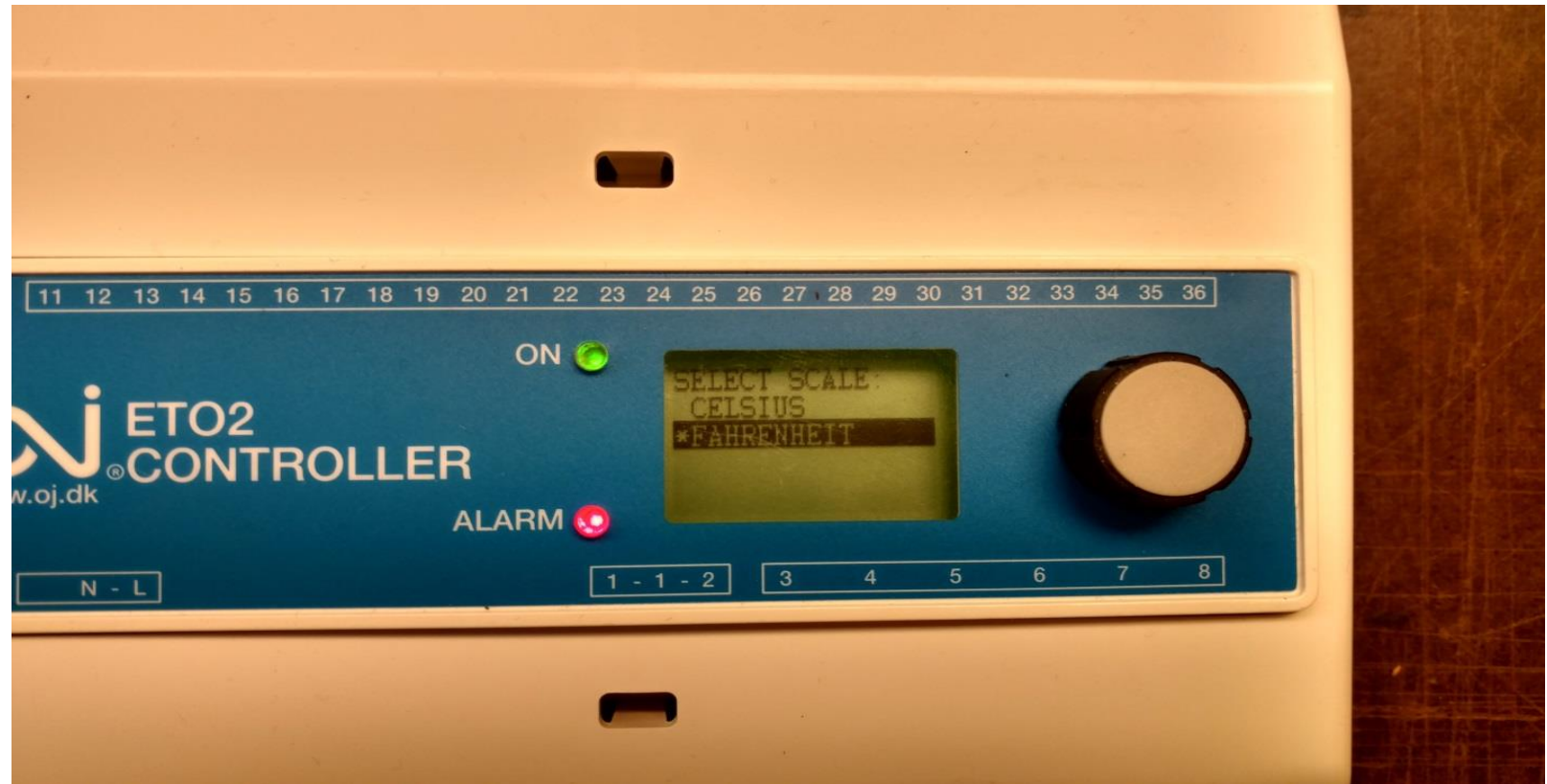
See Diagram on next slide

- Each connection cannot exceed more than 16 amps draw
- Connect terminal 3 and live using at least 14 AWG wire.
- Follow same method for connecting loads between 5 and 6 terminal, 7 and 8 terminal

Diagram for Connecting Perfectly Clear De-icing Systems to Controller

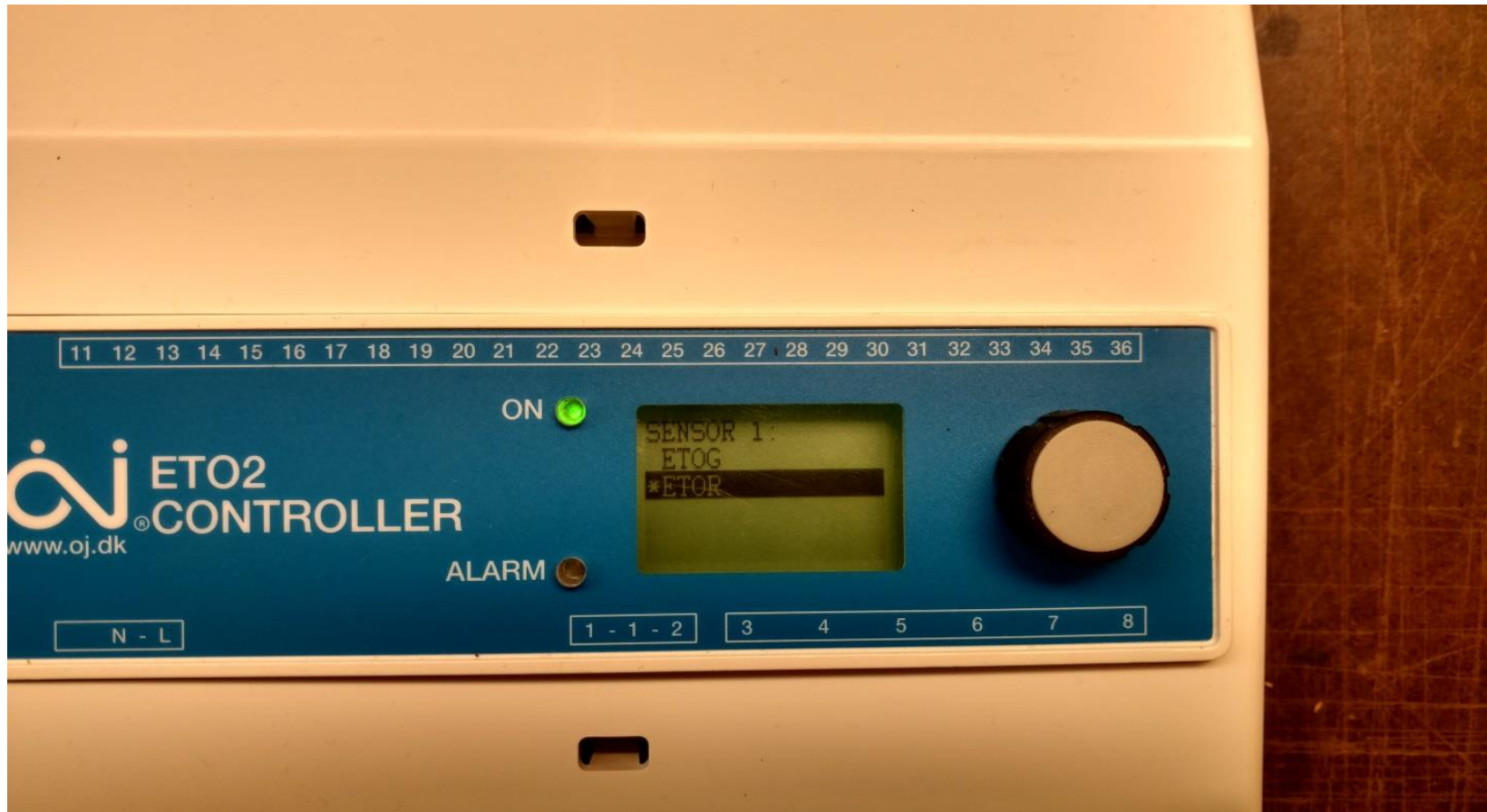


Display after Powering the controller :



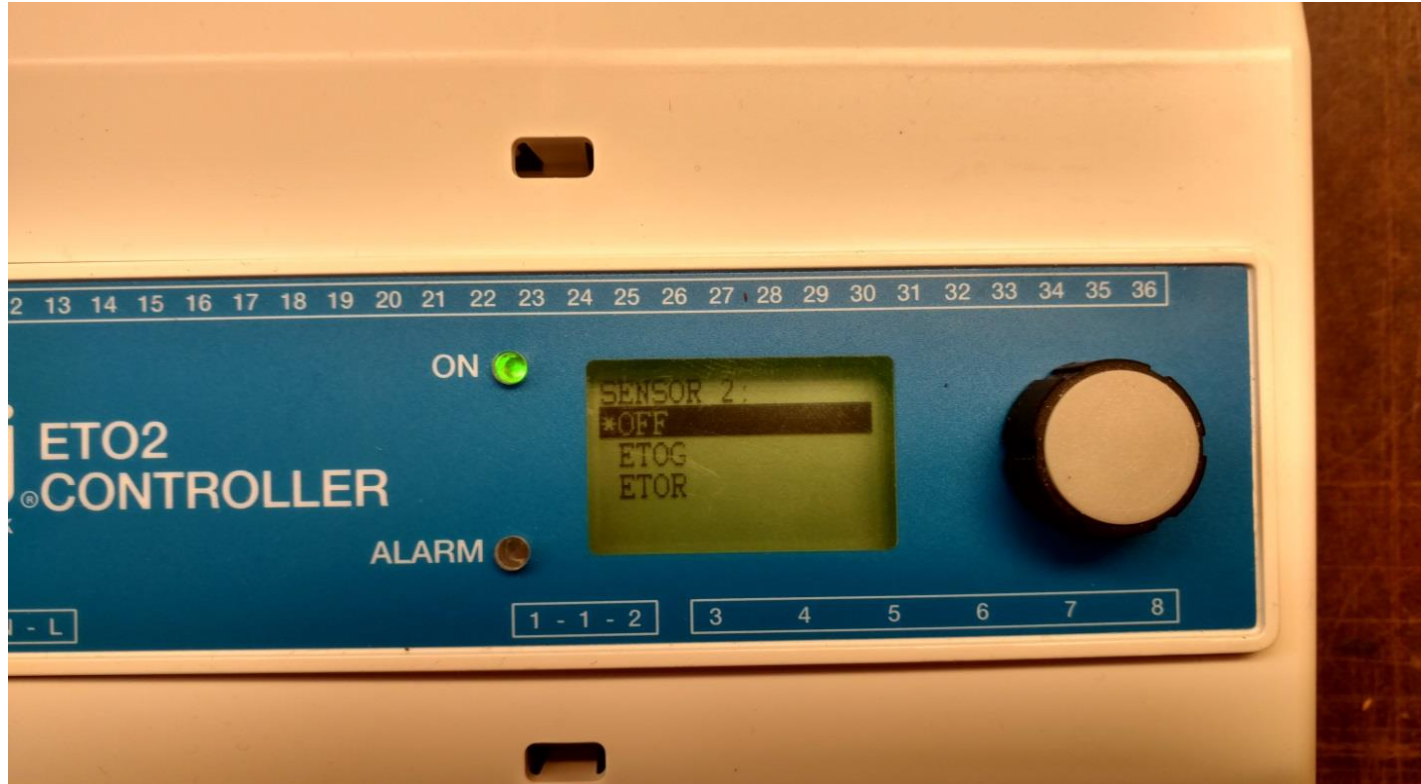
- 1) Select Temperature Scale by turning the knob until either Fahrenheit or Celsius is highlighted
- 2) Once selected – push the knob

Selecting Sensor 1 (ETOR-55 moisture)



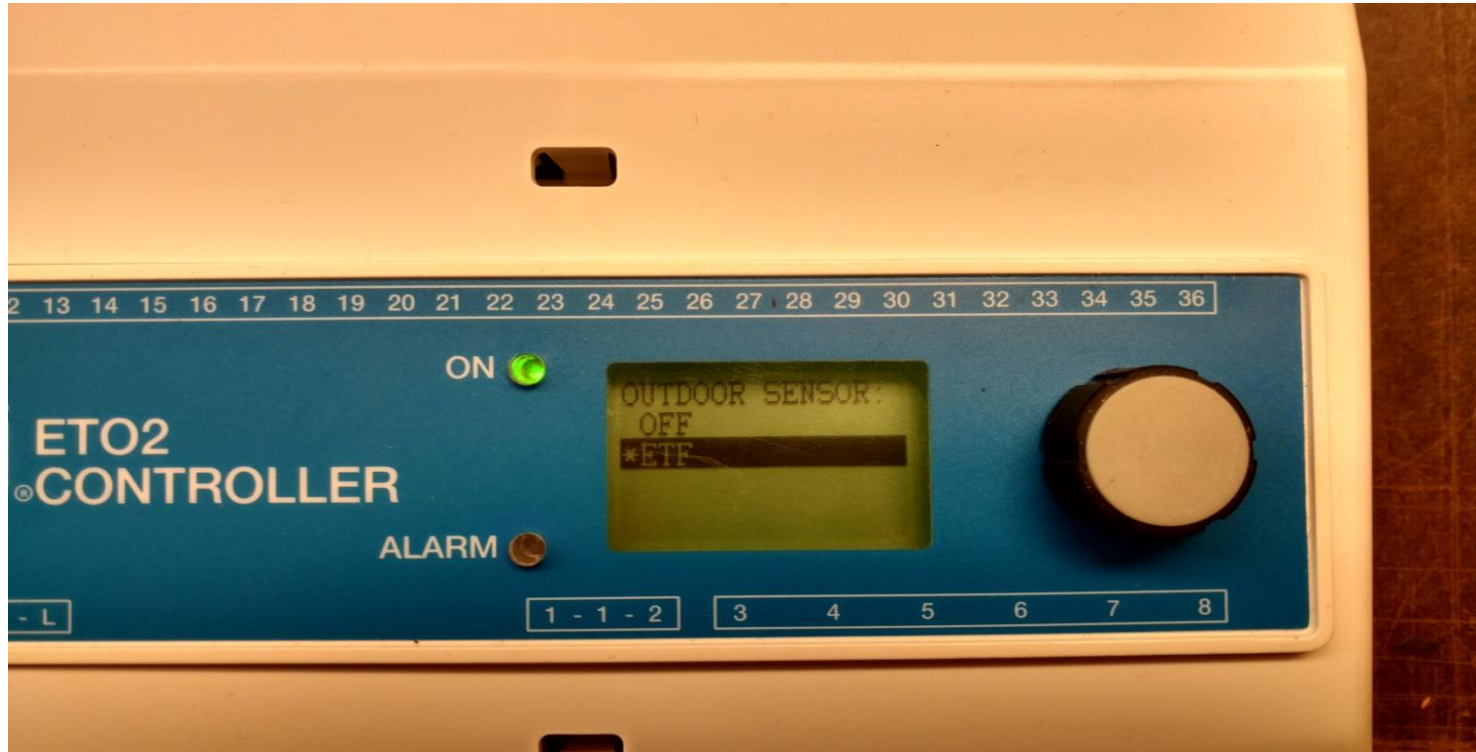
- 1) Turn Knob and select ETOR
- 2) Press Knob when ETOR is highlighted

When installing 2 moisture sensors to operate 2 Zones independently :



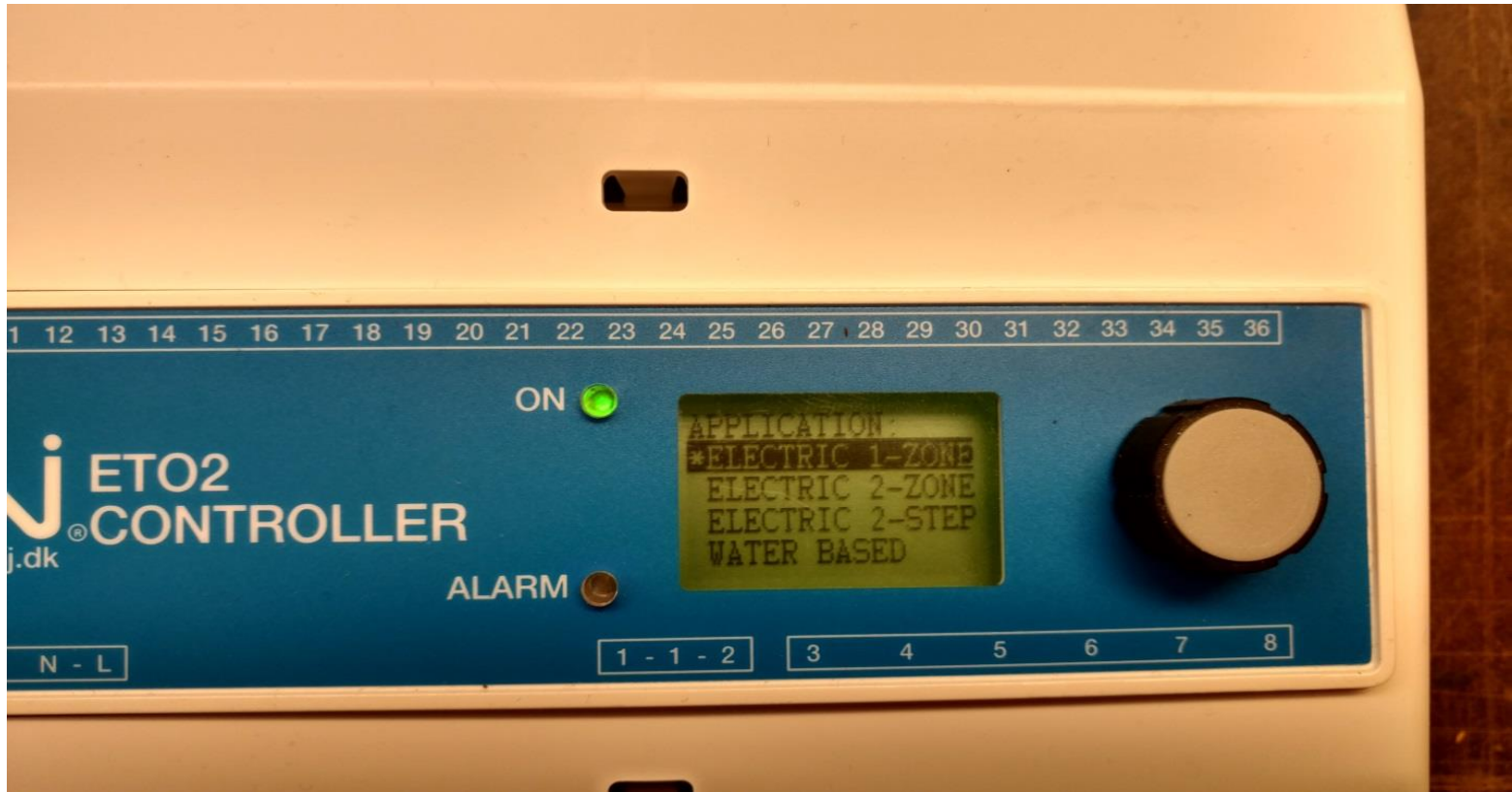
- 1) Highlight and select ETOR using selector knob
- 2) Push selector knob

Selecting Outdoor Sensor (ETF)



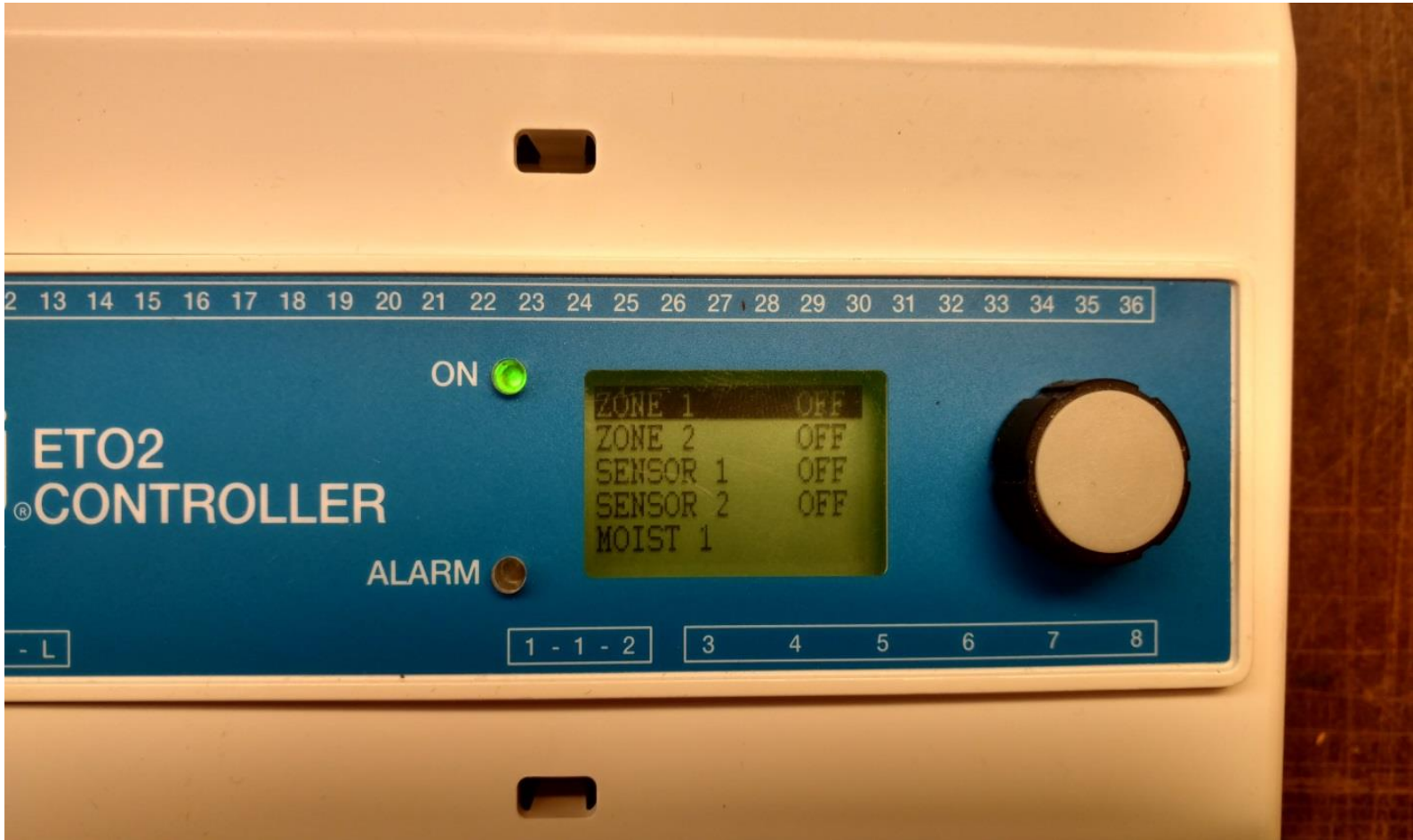
- 1) Highlight and select ETF as an outdoor sensor using selector knob
- 2) Once ETF is selected and highlighted, push the selector knob

Selecting the Application:

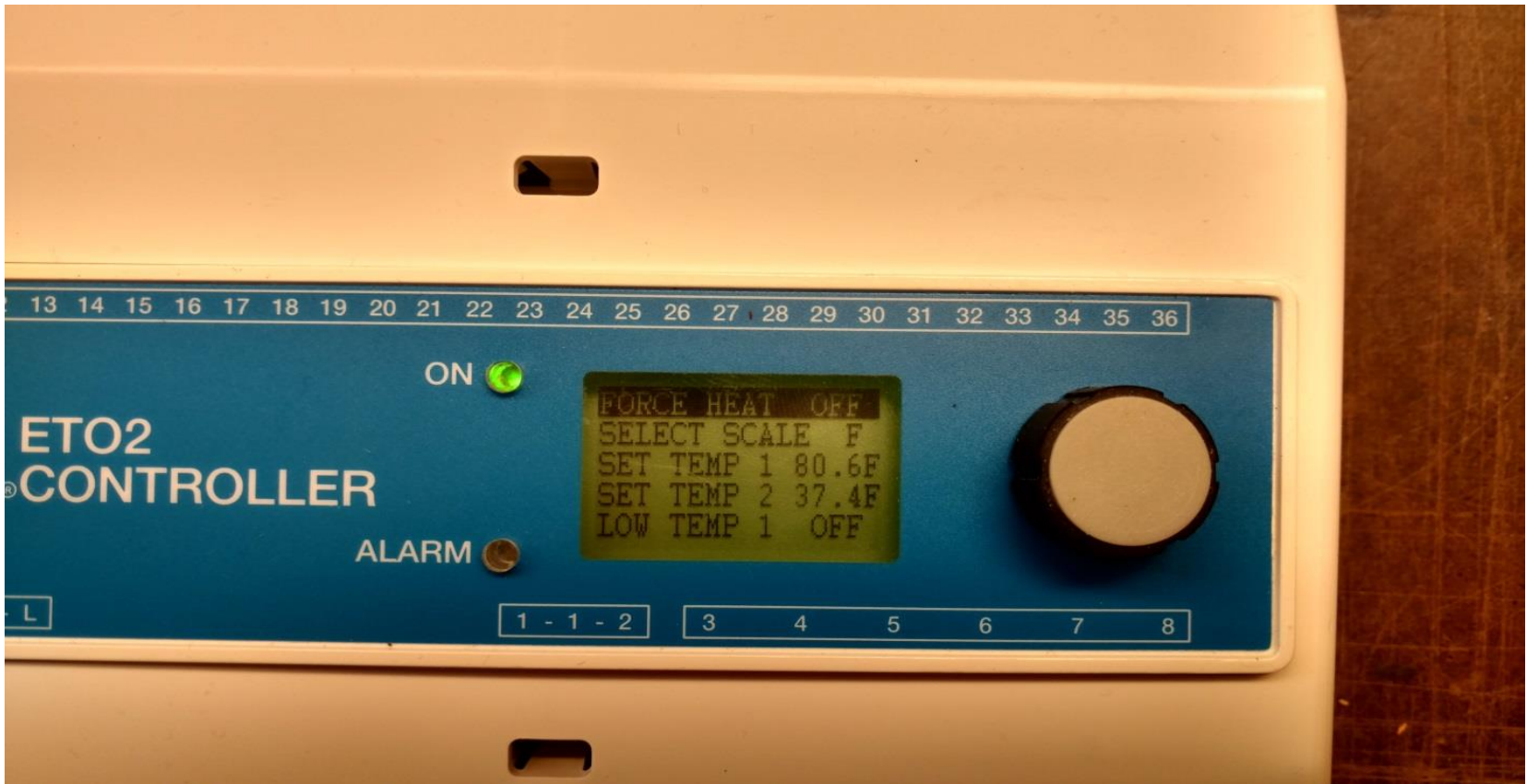


- 1) Highlight and Select Electric Zone 1 (if only one zone installed)
- 2) Highlight and Select Electric Zone 2 (if system installed in 2 zones using 2 moisture sensors)
- 3) Press knob for selected highlighted selection

Exit the set-up, and the display will look as shown below:

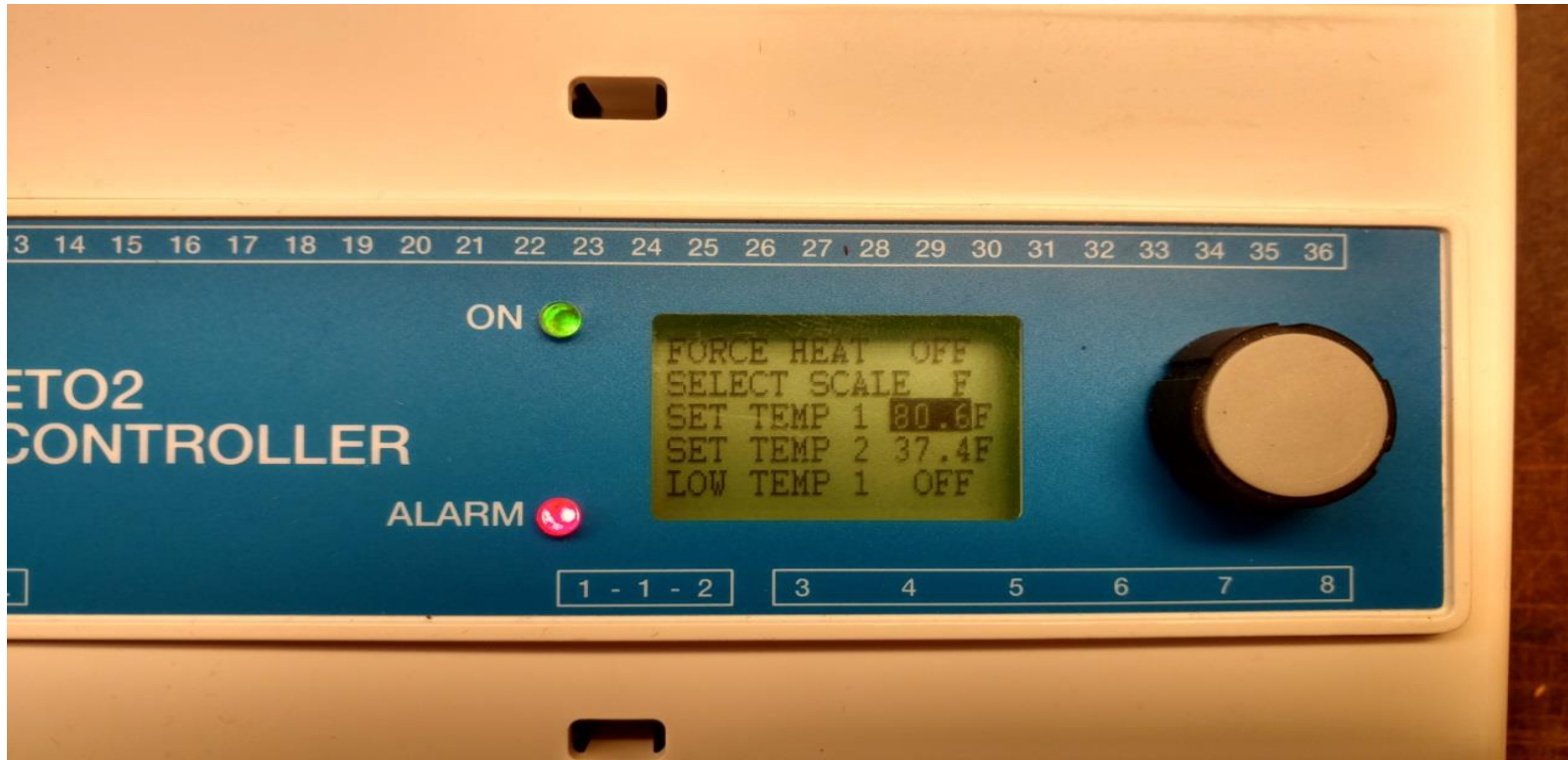


Application Programming



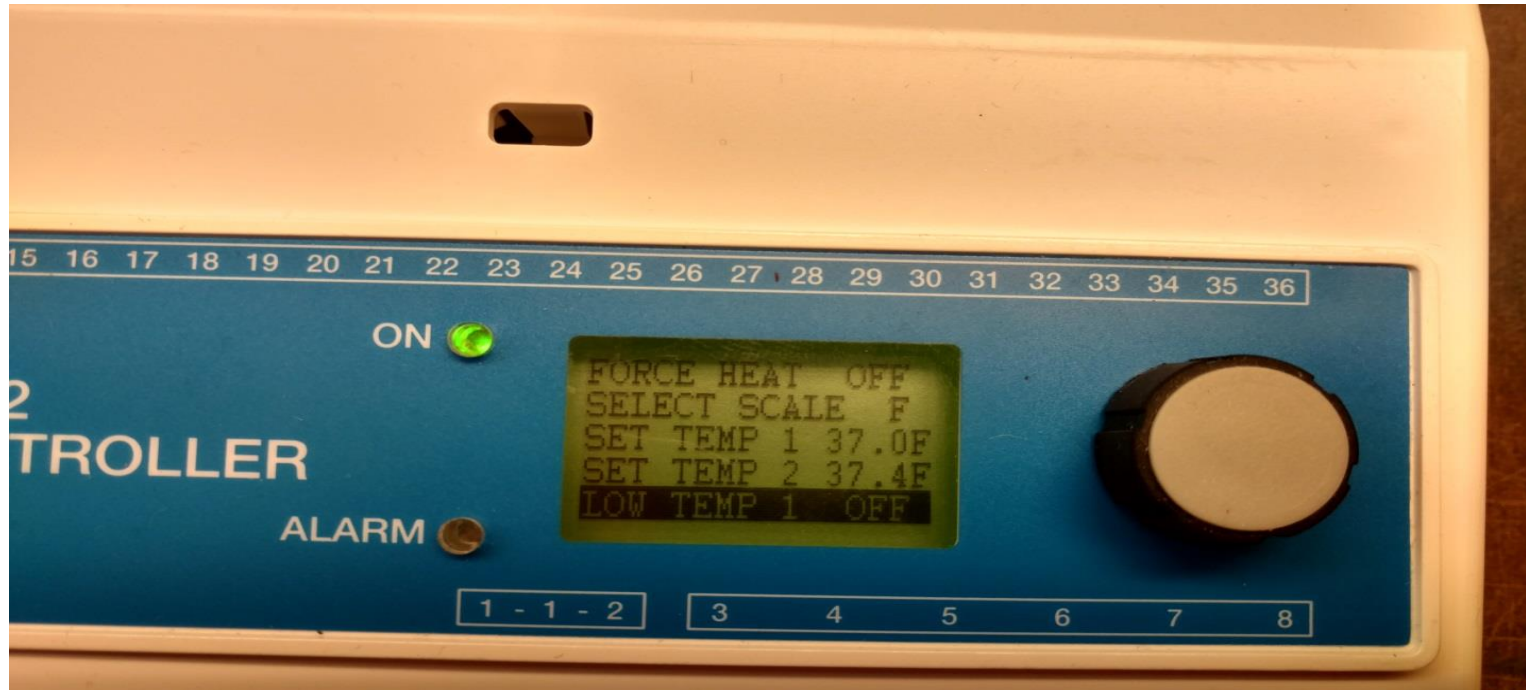
- 1) Using selector knob, scroll down, highlight and select “Set Up” to get into programming.
- 2) Press Knob

Set Temperature for the System



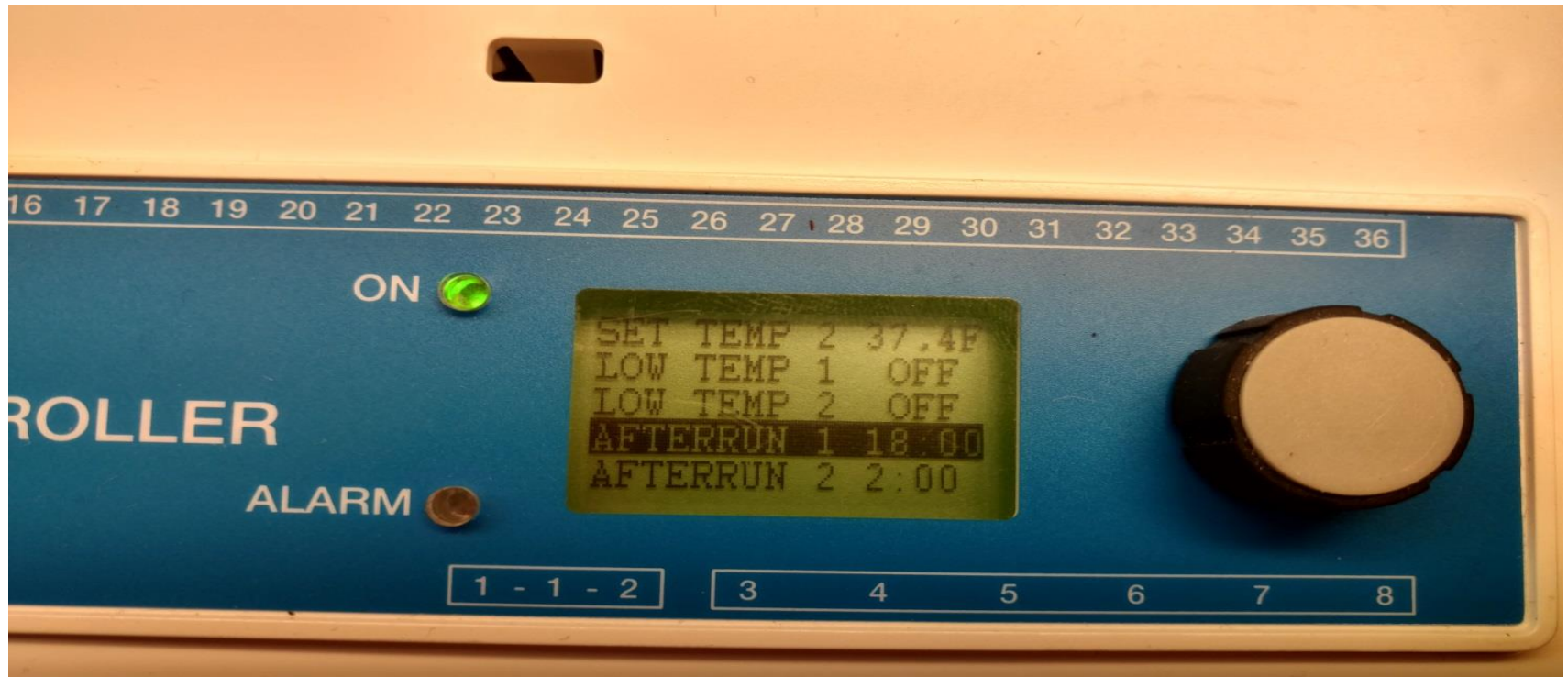
- 1) Temperature set point at which controller will signal to start looking for moisture can be set by highlighting and selecting SET TEMP 1 (For Zone 1)
- 2) This can be achieved by turning selector knob clockwise (to increase the temperature)

Setting Low Temperature for each zone



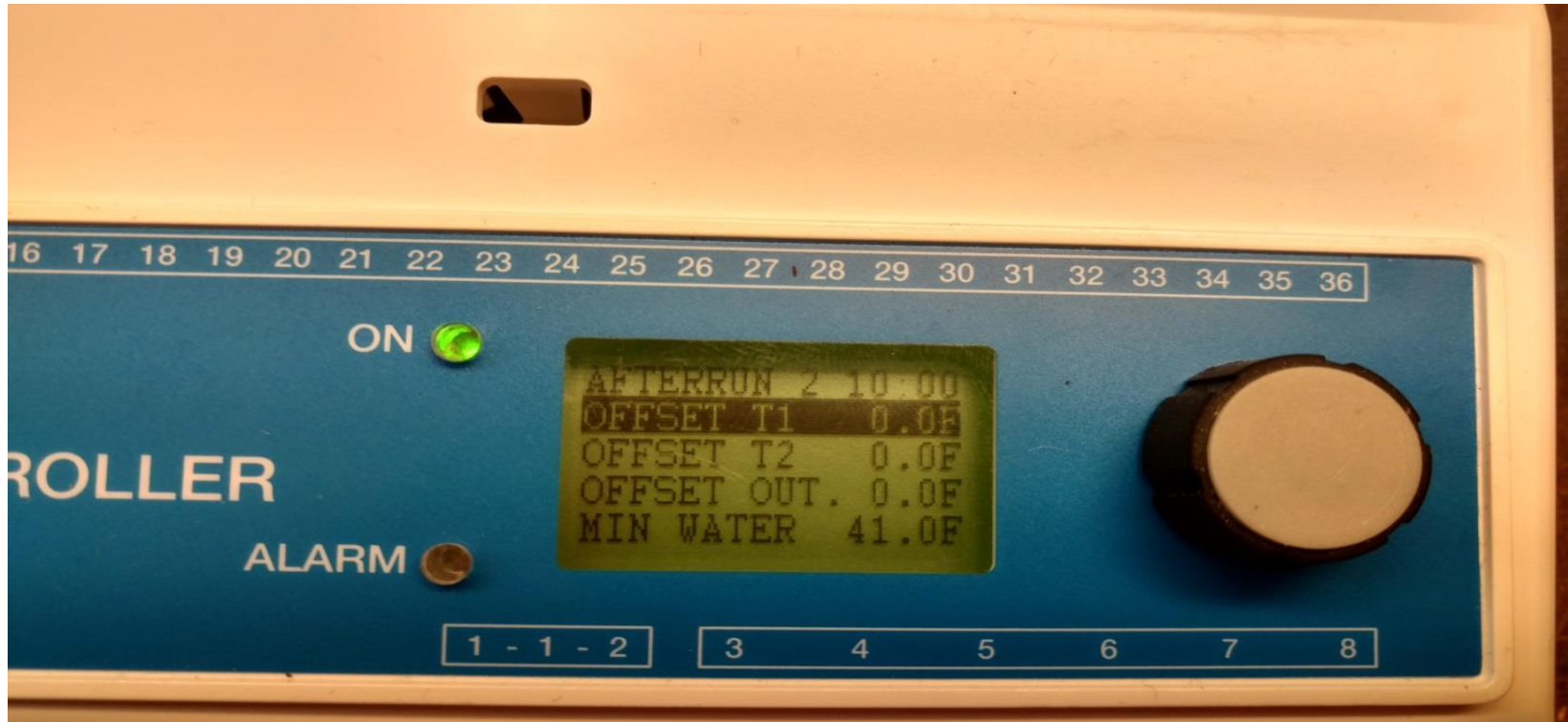
- 1) Set temperature at or below what the controller will not switch the system on.
- 2) Suggest to keep it on OFF as the system is designed to work at:
-14 Fahrenheit

Setting the After Run Time



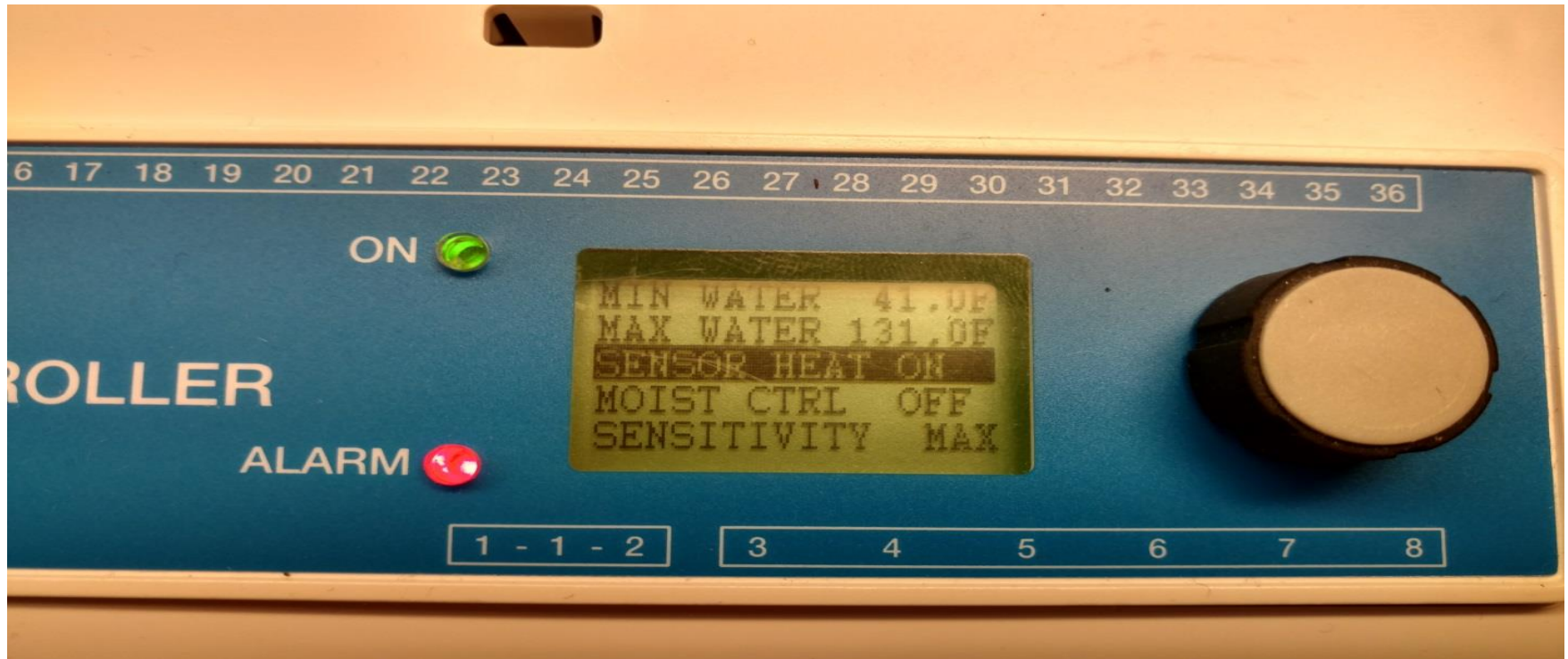
- 1) Set AFTER RUN time from 2 to 18 hours.
- 2) After SET TEMP is lower than ambient and/or there is no moisture on the sensor, the controller will put the system in AFTER RUN mode (system stays on for predetermined time)
- 3) Highlight and select the time next to after Run 1 (for Zone 1) and increase the by rotating selector knob clockwise. (to decrease turn it counter clockwise)
- 4) Use the same method for changing and setting time for AFTER RUN 2 (Zone 2)

Offset T1, Offset T2, Offset Out, Minimum Water, Maximum Water



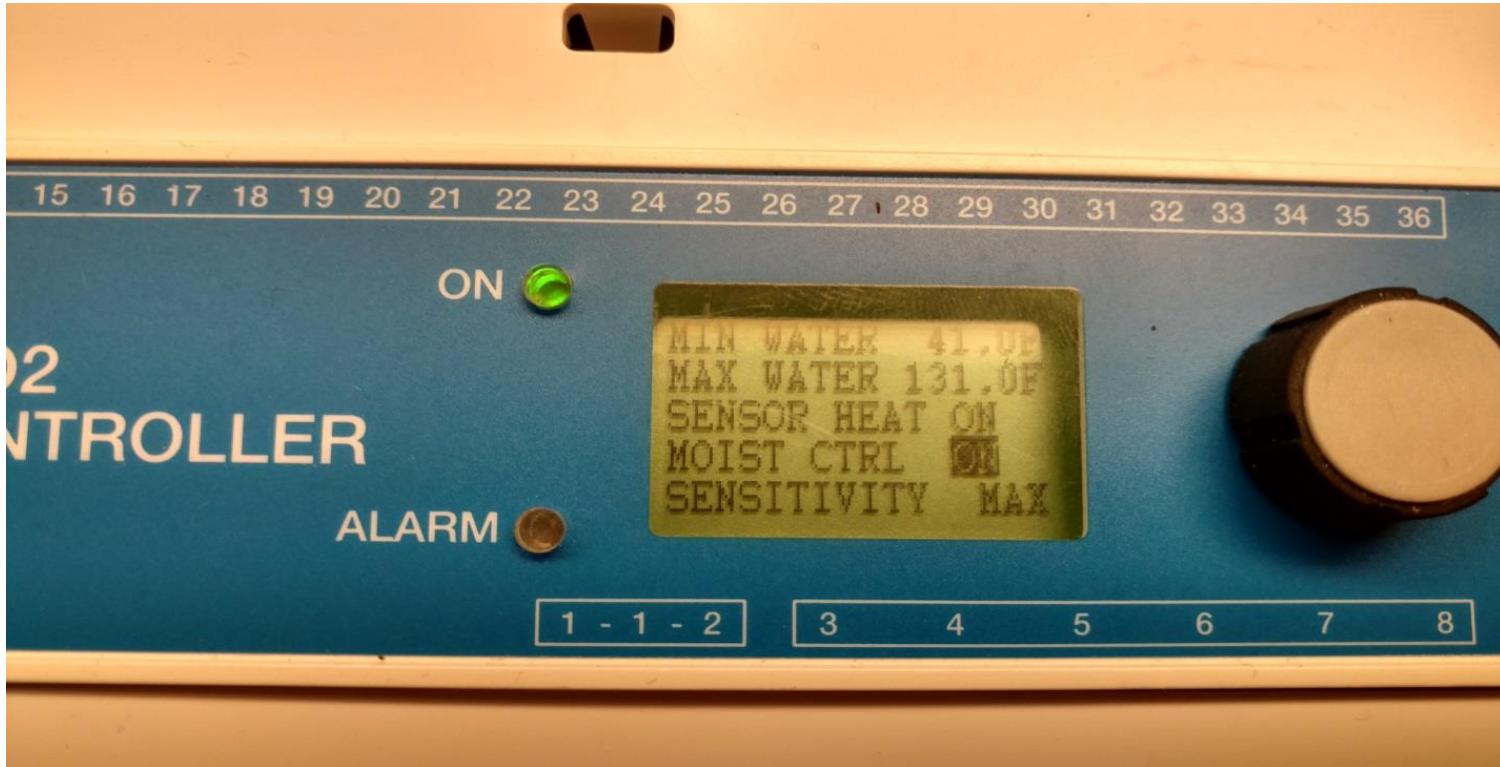
SPECIAL NOTE: These inputs are used for calibration of sensors, and/or for hydronic heater applications. Please do not change any values on them.

Sensor Heat



- 1) Turn the knob to highlight and select SENSOR HEAT
- 2) Turn the knob to select either AUTO or ON. For Northeast areas select AUTO. For North West (such as Michigan Wisconsin) please select ON.
- 3) This Sensor heater comes on in Auto mode when the set temperature is higher than ambient temperature. The sensor heat stays on in (ON mode) all the time.

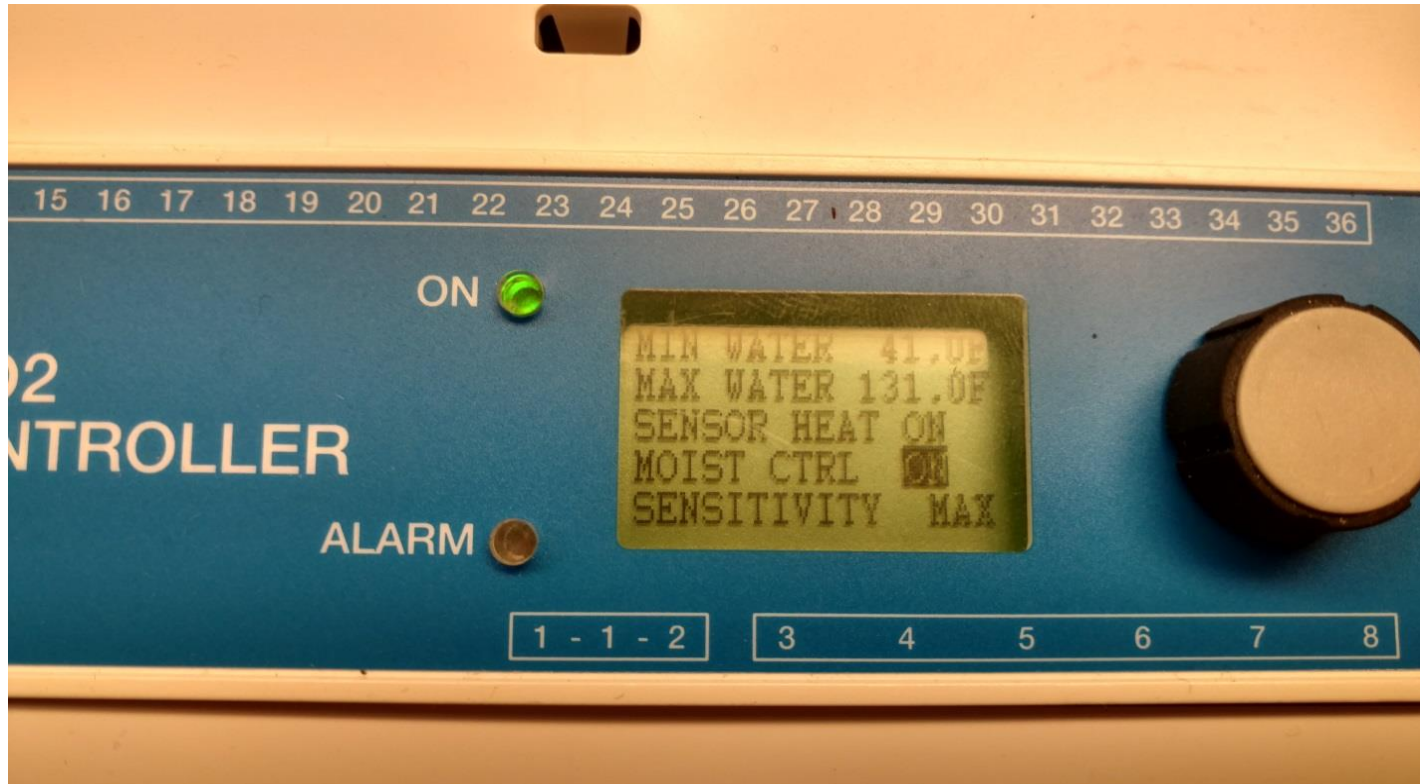
Moisture Control



1) Highlight and select MOIST CTRL, and select either ON or OFF. If you elect ON, controller will look for moisture input to switch the system on.

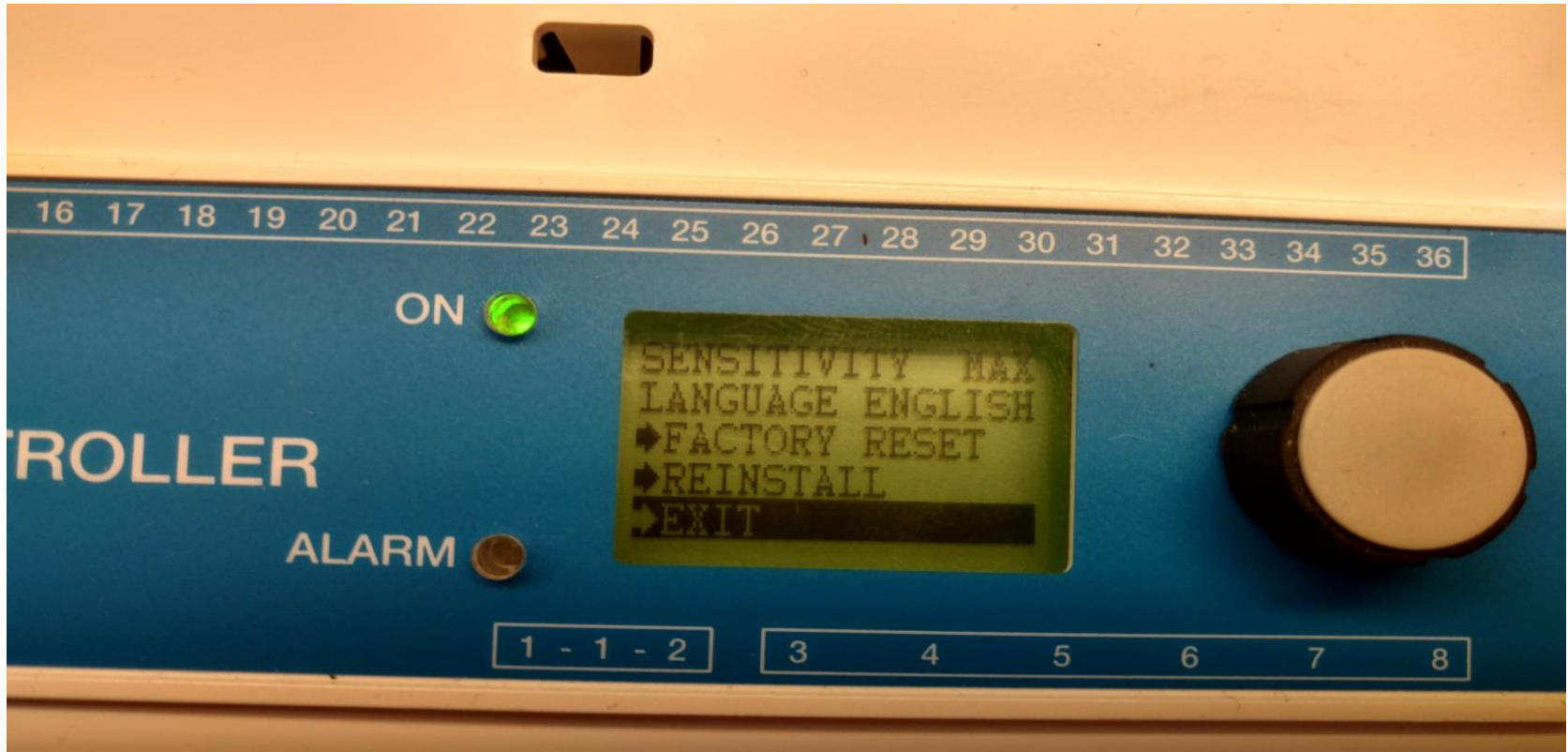
NOTE: By selecting off, in this mode, you are bypassing the moisture sensor and the controller is turning the system on whenever the set temp is higher than ambient.

Sensitivity



- 1) Highlight and select sensitivity.
- 2) You may toggle between Low, Norm, High and Max using selector knob and turning clockwise.
- 3) In the North East Region keep it on NORM
- 4) If in North Midwest and Western Regions such as Michigan or Wisconsin please set and keep on MAX

EXITING



Highlight and select EXIT to get out of the set up and return to main menu

Special Notes:

- **Controllers must be installed inside of the building where temperatures do not drop below 32 Degrees Fahrenheit.**
- **Moisture Sensor lead wires may be extended – not to exceed:
656 feet**

**For more detailed product
information**

**Visit : OJ Electronics.com
click on technical support
or**

**email questions to:
oj@ojelectronics.com**