EXCEL AIR SYSTEMS

EXFLOW data analytics

CONTROLLER MANUAL OPERATION GUIDE

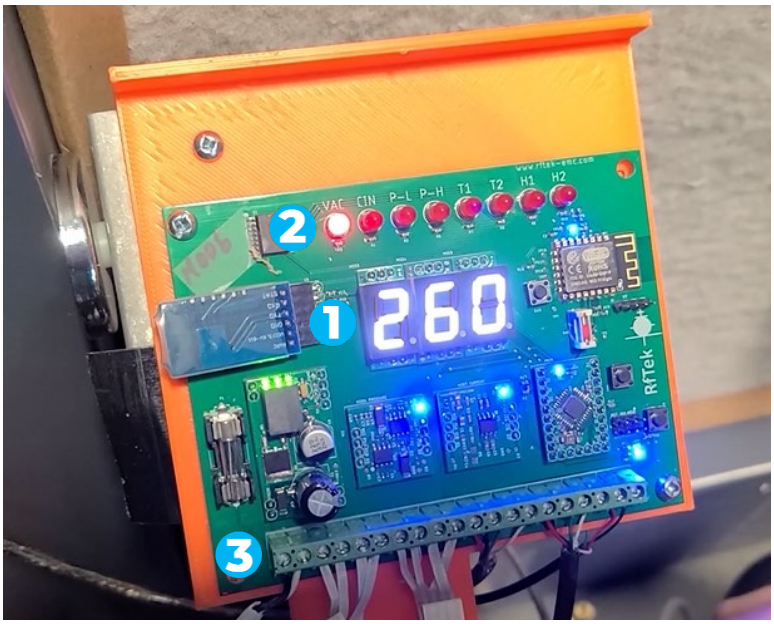
Understanding the Metrics

Once the Controller device has been properly connected to the **Evolution Series** Indoor Air Handler and started up with 24 volts, the board will light up, illuminating the **Display** 1, which shows different metrics.

The LED **Sensor Lights** 2 in the upper row indicate which Mode is currently being displayed, each corresponding to a Sensor via connectors on the lower **Input Strip** 3. (If integrated within an **Evolution Series** unit, devices are pre-connected.)

Sensor Modes are:

- **VAC** – *Voltage Input*
- **CIN** – *Amperage*
- **P-L** – *Low Pressure*
- **P-H** – *High Pressure*
- **T1** – *Temperature 1*
- **T2** – *Temperature 2*
- **H1** – *Humidity 1*
- **H2** – *Humidity 2*



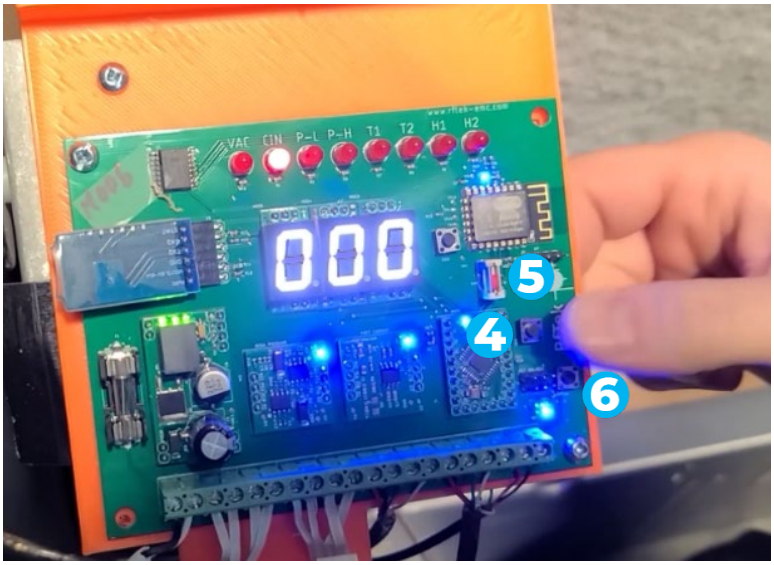
Controller is shown in **VAC** Sensor Mode, indicating *Voltage Input*, displaying full voltage with **260 volts**. (This may sometimes require slight calibration.)

Toggling Sensor Modes

For basic operation, Sensor Modes can manually be cycled through by pressing the **Middle Push Button** 4, located to the bottom right of the red **Jumper Pin** 5 and the upper left of the **Lower Push Button** 6.

Holding the **Middle Push Button** down for several seconds causes the Controller to jump to the next Sensor Mode.

CIN indicates *Amperage*, but here, the Controller is shown with the system powered on only, with low voltage, displaying **0 amps**. While the Blower is operating, **2-4 amps** will be displayed.

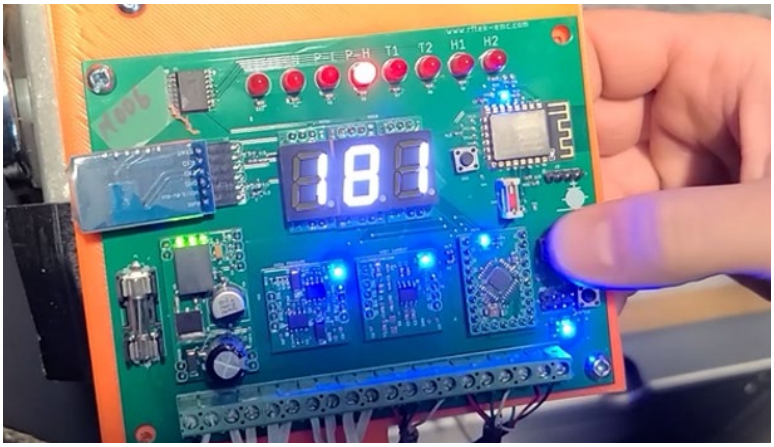


Checking the Pressure

Continuing to press the **Middle Push Button** takes the Controller through the Pressure Sensor Modes.

First, to **P-L**, indicating *Low Pressure*, and then, to **P-H**, indicating *High Pressure*.

As shown on the Controller, the system, for the most part, has equalized pressure, reading **181 PSI** for *High Pressure*, following a reading of **174 PSI** for *Low Pressure*.

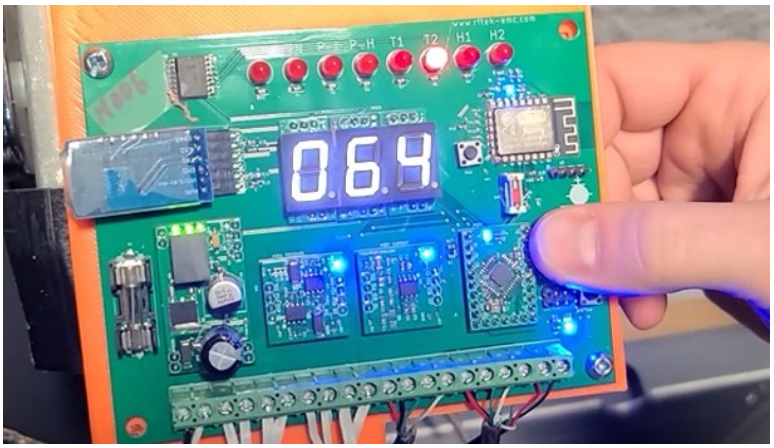


Reading Temperature

The next two Sensor Modes pertain to temperature levels.

First, **T1,** indicating *Temperature 1*, which is set up for the Return Air, and then, **T2**, indicating *Temperature 2*, which is set up for the Supply Air.

As shown, the Supply Air is reading **64 °F**, as was the Return Air, which makes sense.

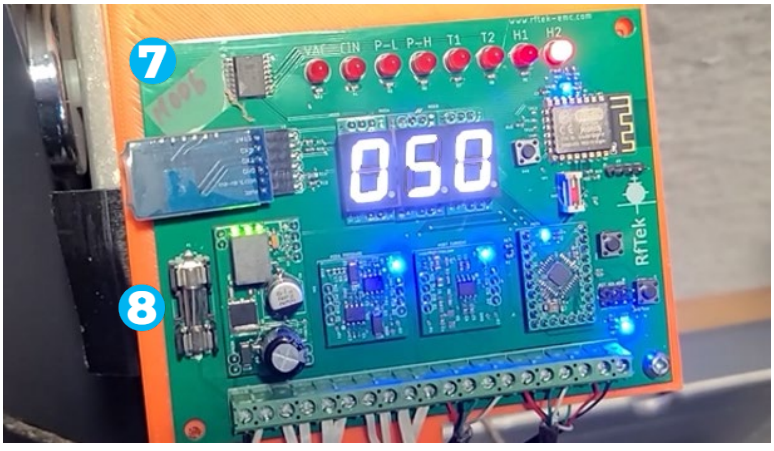


Measuring Humidity

Toggling through to the final two Sensor Modes allows for humidity levels to be measured.

First, **H1**, indicating *Humidity 1*, which is set up for the Return Air, and then, **H2**, indicating *Humidity 2*, which is set up for the Supply Air.

As shown, the Supply Air is reading **50%**, while the Return Air was reading **48%**, which is close.



In the upper left corner of each board, there is a unique **Identification Number** 7 (shown in written form), which is used when the Controller is added to the Data Cloud when performing updates.

Consistent Convenience and Reliability

Altogether, this repeated cycle ensures effortless manual navigation through the Sensor Modes.

The **ExFlow Data Analytics Controller**'s extreme reliability has been proven through rigorous testing. While repeatedly being turned off and on has no discernible negative affect, there is a **Fuse** 8 conveniently located on the left for any electrical issues that may arise with a low-voltage board.