ECI Temp Sensor Adapter

Installation Guide

For easier retrofits of Emerson products into stores with ECI (formerly EIL) refrigeration control products, Emerson now supplies the ECI Temp Sensor Adapter *(P/N 535-2705)*. This adapter allows Emerson 16AI and MultiFlex input boards to read the values of LM235-based high-temp and low-temp sensors. As a result, stores with ECI control products may replace them with Emerson controllers and I/O boards without the need for replacing and rewiring existing temperature sensors in the store.

The ECI Temp Sensor adapter works with all ECI temperature sensors, including plastic capsule “C” sensors, low-temp “L” sensors, and high-temp “H” sensors.

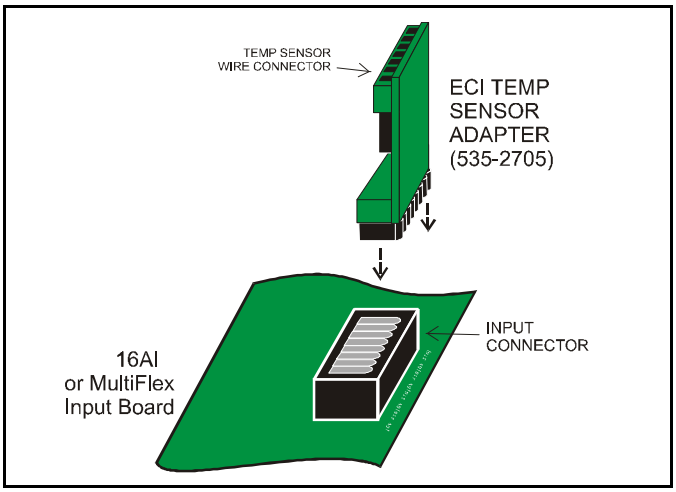

Figure 1 - ECI Temp Sensor Adapter

Wiring

1. Disconnect all temperature sensor leads from the ECI control boards.
2. Each ECI Temp Sensor Adapter has four pairs of screw terminals for connection to up to four ECI temperature sensors. Wire the leads of each sensor to the matching points on the adapter as shown in ***Figure 2***.
   - For capsule-type and low-temp sensors, the RED wire connects to the SIG terminal, and the WHITE wire connects to the 0V terminal.
   - For high-temp sensors, the BLACK wire connects to the SIG terminal and the WHITE wire connects to the 0V terminal.

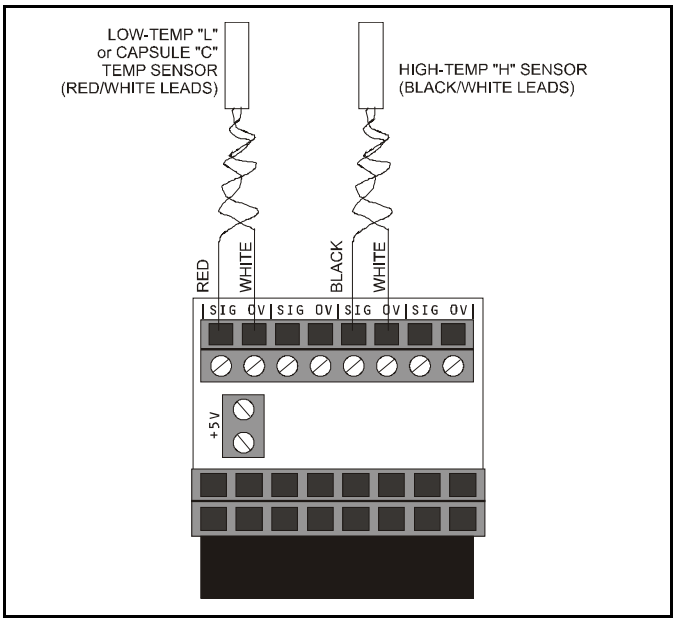

Figure 2 - Temp Sensor Wiring

3. Connect one of the two +5VDC terminals on the adapter to a +5V power output on the MultiFlex (located at the bottom of the MultiFlex board) or 16AI (located on the right-hand side of the board). The two terminals are tied together, so you will only need to connect one terminal to the +5V power source. You may use the second terminal to "daisychain" multiple adapters to the same +5V power source (see ***Figure 3***). **DO NOT GROUND EITHER OF THE +5V TERMINALS.**
4. Plug the ECI Temp Sensor Adapter into an 8-pin connector on the input board, as shown in ***Figure 1***.
5. For every input point that has an ECI temperature sensor attached to it, locate the corresponding input type dip switch. Input type dip switches are located in switch banks S1 and S2 for all Emerson input board types. S1 switches 1-8 correspond to points 1 through 8 on the board, while S2 switches 1-8 correspond to points 9 through 16 on the board.
   - For 16AI boards, each point with an ECI sensor connected to it must have its input dip switch set to the OFF (down) position.
   - For MultiFlex boards, each point with an ECI sensor connected to it must have its input dip switch set to the OFF (left) position.

Repeat steps 1 through 5 for each group of four ECI temp sensors you wish to set up.

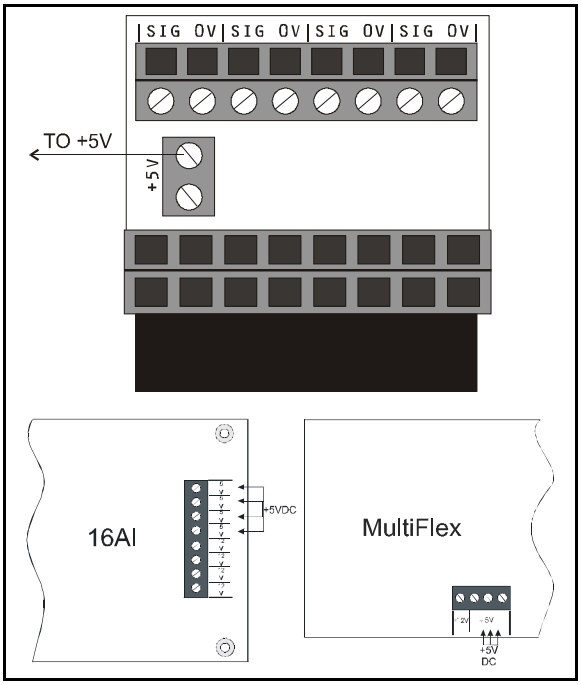

Figure 3 - Power Wiring

Software Setup

Once the ECI Temp Sensor Adapter and the ECI sensors are properly connected, you must set up each input point as a special sensor type, "LM235 TEMP," in the Einstein or E2 software.

E2 Setup

To set up an ECI temperature sensor point in the E2 software:

1. Log in using a username/password that allows configuration changes (usually level 3 or above).
2. Press **MENU**, **7 - SYSTEM CONFIGURATION**, and **1 - INPUT SETUP** to navigate to the *Input Status* screen.
3. Use the arrow keys to highlight the row that corresponds to a board and point you wish to set up as an ECI temp sensor.
4. Press **F1 - SETUP**.
5. If the board and point was undefined previously, you will be prompted to specify whether the input is analog or digital. Select **1 - ANALOG**.
6. In the *Analog Input* setup screen, highlight the **Sensor Type** field, press **F4 - LOOKUP**, and select "LM235 TEMP".

Einstein Setup

To set up an ECI temperature sensor point in the Einstein software:

1. Log in using a username/password that allows configuration changes (usually level 3 or above).
2. Press **F8**, **Y**, **6**, **1** to navigate to the *Input Summary* screen.
3. Use the arrow keys to highlight the row that corresponds to a board and point you wish to set up as an ECI temp sensor.
4. Press **F7 - SETUP IN**.
5. If the board and point was undefined previously, you will be prompted to specify whether the input is analog or digital. Select **1 - ANALOG**.
6. In the *Analog Input* setup screen, highlight the **Sensor Type** field, press **F7 - LOOKUP**, and select "LM235 TEMP."