


**Title:**

i-Controller Visograph Navigation for REV.200

# Flō i-Controller




## Visograph Navigation for Revision.200


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## **IMPORTANT:** Please Read before Continuing

Once a Modbus connection is established to the i-Controller from a Building Management System (BMS) and the controller is ONLINE, all set point and schedule changes need to be made at the BMS. Otherwise changes can be made directly on the i-Controller either for testing purposes or setting changes by performing the following steps:

1. Unplug the RS485 Slave Connector from the i-Controller.
2. Wait at least 90 seconds, until the BMS Status on the Network Info screen on the Visograph reads Offline.
3. Adjust the necessary settings for testing, or change the desired variable. (For instructions on how to navigate the Visograph, please refer to the instructions below).
4. When testing/changes are complete, plug the RS485 Connector back into the RS485 slave port.
5. Once the Modbus connection has been re-established and the controller shows Online on the Network Info screen, double check the changed variable to ensure that it is correct.
6. If the changed variable has been over-written, then the variable change needs to be made at the BMS.

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## Introduction Screen

Flo introductory splash screen.

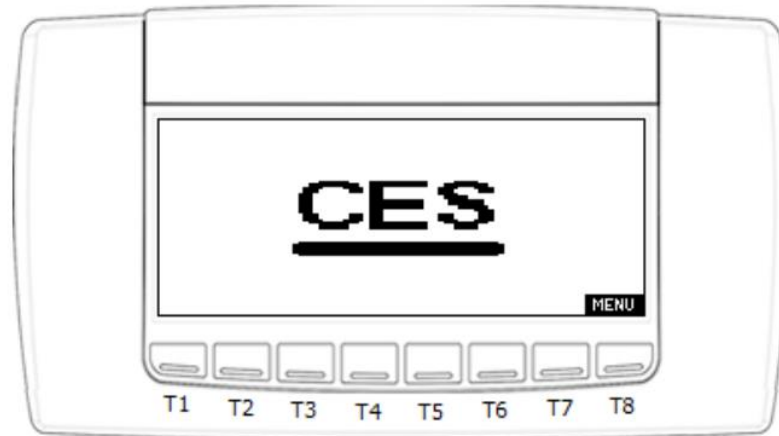


Figure 1. Introduction screen

T8: Go to Main Menu  
T2 + T3: Go to Version Info

If an out-of-date parameters file has been loaded, the Intro Screen will display an error.

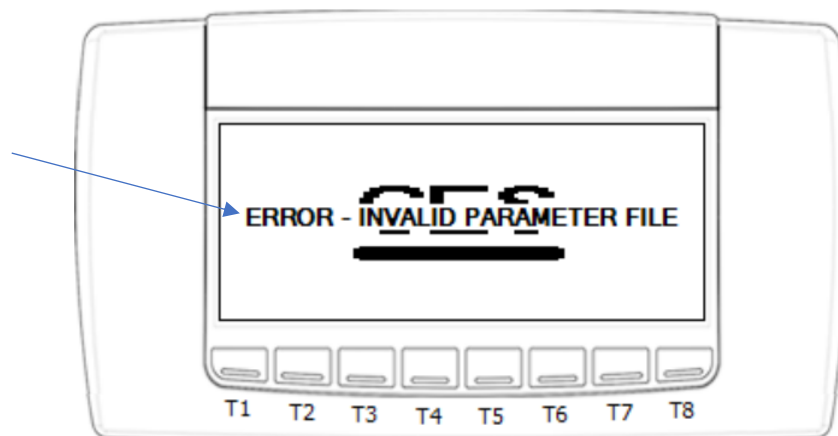


Figure 2. Invalid Parameter File Message

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## Version Information

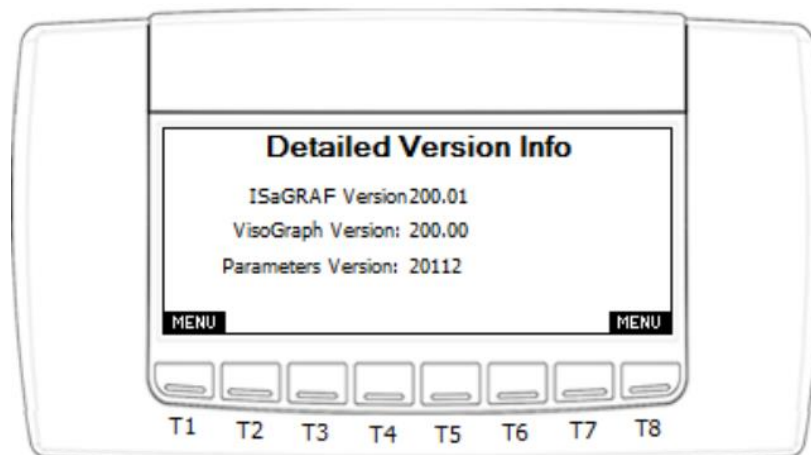


Figure 3. Version Information screen

T1: Go to Main Menu  
T8: Go to Main Menu  
T2: Go to Overrides

1. **ISaGRAF Version:** The version of the base program inside the i-Controller. This field should match the CRM field “Revision #” for a given unit.
2. **VisoGraph Version:** The version of the screens shown on the Visograph.
3. **Parameters Version:** The version of the parameters file loaded into the i-Controller.

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## Main Menu

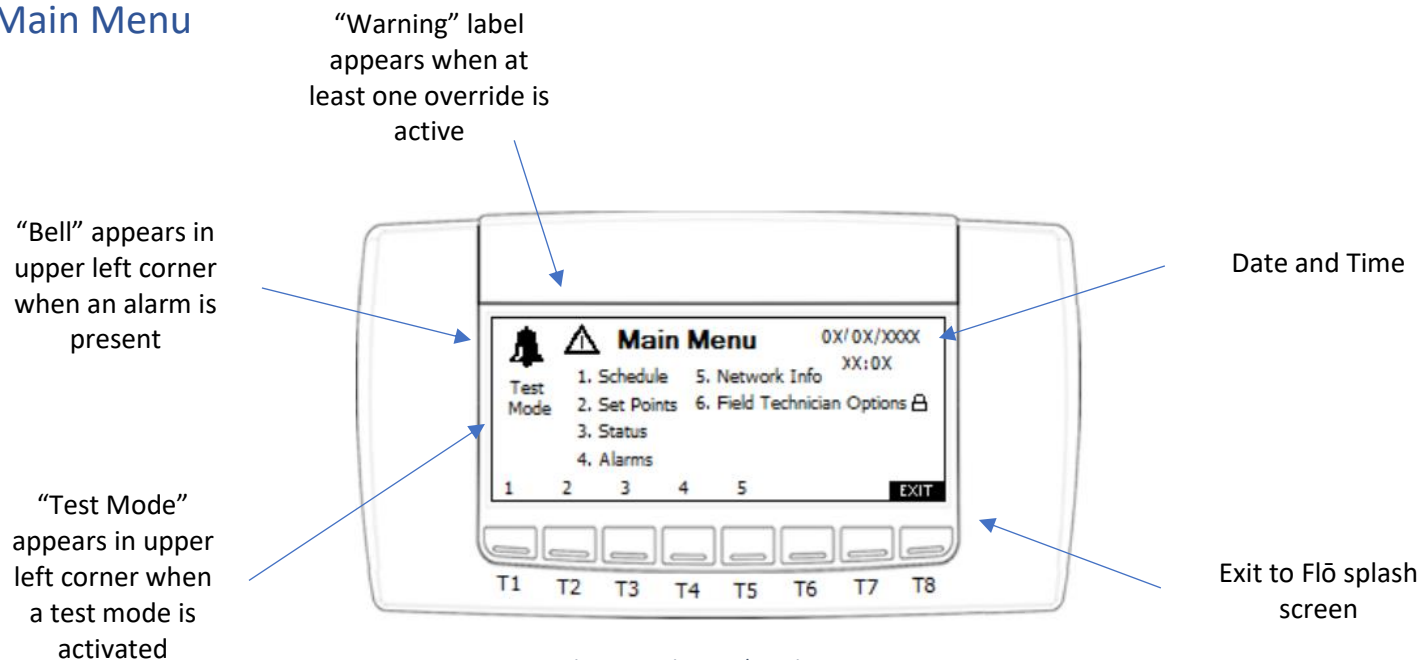


Figure 4. Visograph Main Menu

- T1: Go to Schedule
- T2: Go to Set Points
- T3: Go to Status
- T4: Go to Alarms
- T5: Go to Network Info
- T8: Go to Logo screen

## Main Menu Instructions

To navigate to the following menu options, press the corresponding key on the Visograph below the menu item number.

- Schedule** – Set weekly schedule for “Occupied” and “Unoccupied” times.
- Set Points** – Define set points for cooling, heating, and dehumidification modes during occupied and unoccupied modes of operation.
- Status** – View current temperature, compressor, and operation mode status.
- Alarms** – View current alarm status, sensor status, and alarm resets.
- Network Info** – View current controller IP settings and run time, change controller Modbus address, and change the current Flō i-Controller date and time.
- Field Technician Options** – Parameters to be set by a certified field technician only (password protected).



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### Schedule

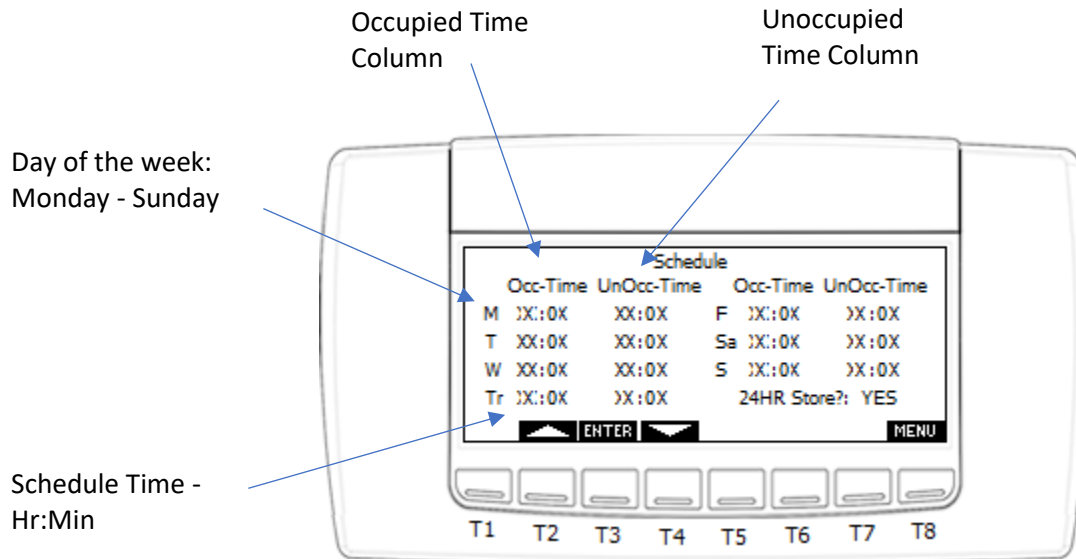









Figure 5. Visograph Schedule screen

T2: Scroll Up/Increase Value  
T3: Enter (Select and Set Value)  
T4: Scroll Down/Decrease Value  
T8: Go to Main Menu

### Schedule Instructions

**NOTE:** See *Important* notice on page 5 before modifying schedules.

Each day of the week is listed next to a corresponding occupied time “Occ-Time” and unoccupied time “UnOcc-Time”. The Flō unit will operate in “Occupied Mode” in between the “Occ-Time” and “UnOcc-Time” listed for the current day of the week. Each time on the schedule should correspond with the store hours. **All hours should be set in military time on a 24hr basis.** (For Example: on Mondays, the occupied time starts at 8:00am and the unoccupied time begins at 10:00pm. The above screen should read next to the “M” 8:00 under the “Occ-Time” and 20:00 under the “UnOcc-Time”.) To change the occupied and unoccupied times perform the following steps:

1. Using the  and  buttons (T2 and T4, respectively) navigate to the hour or minute that you wish to change.
2. Press the  (T3) button and the value should blink.
3. Using the  and  buttons increase and decrease the value as desired.
4. Once the desired value has been reached press the  button to set the value.
5. Repeat steps 1-4 until all values in the schedule have been updated.
6. Once all changes have been completed, press the  (T8) button to return to the Main Menu.

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### Set points

NOTE: The i-Controller Set point configuration consists of 4 navigation screens.

“Occupied”  
mode set points.

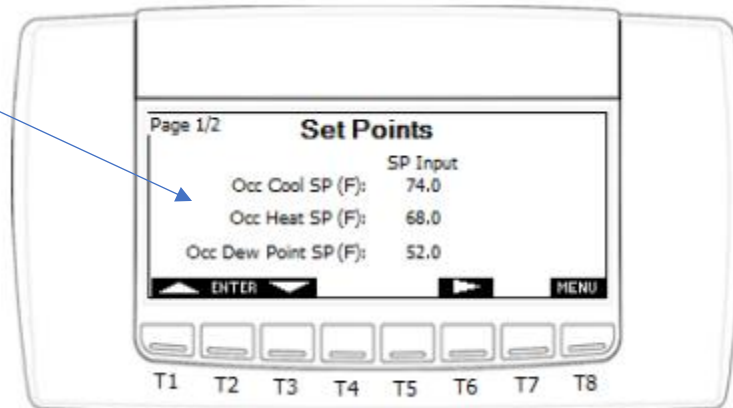


Figure 6. Visograph Set Points screen 1

- T1: Scroll Up/Increase Value
- T2: Enter (Select and Set Value)
- T3: Scroll Down/Decrease Value
- T8: Go to Main Menu
- T5: Go to Previous Page
- T6: Go to Next Page

“Unoccupied”  
mode set points.

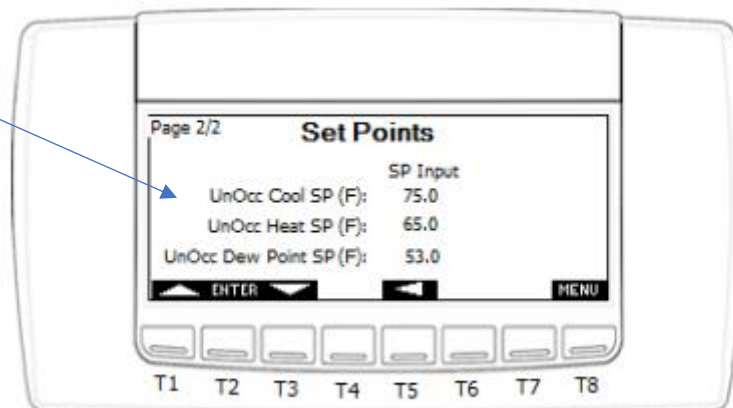


Figure 7. Visograph Set Points screen 2

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### Set points – Continued

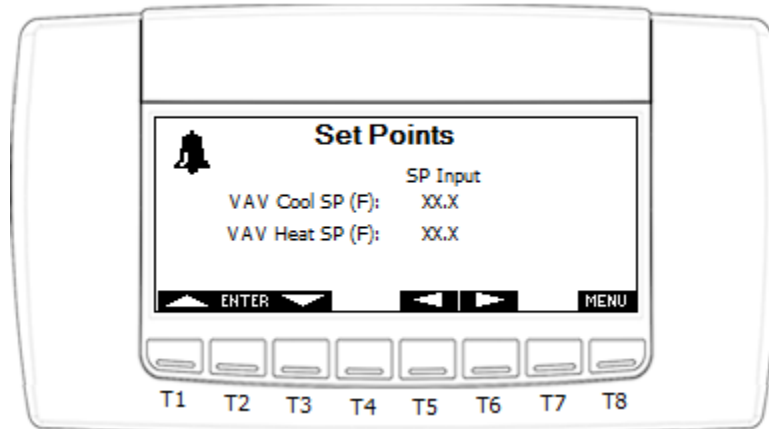


Figure 8. Visograph Set Points screen 3

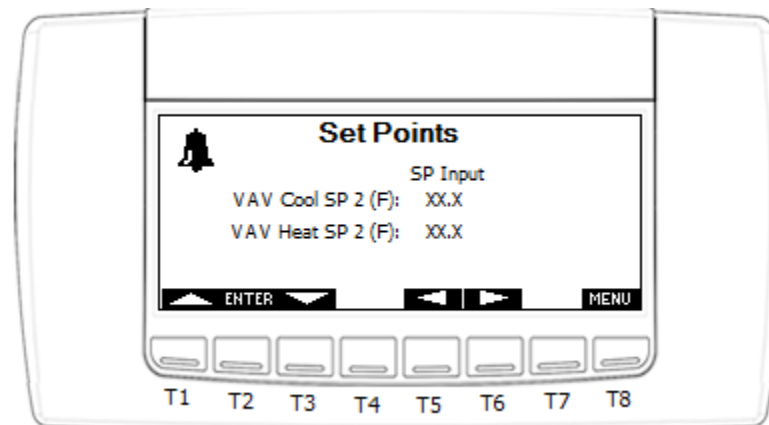


Figure 9. Visograph Set Points screen 4

### Set Point Instructions

The “Set Points” option should only be used if operation set points **are not** being communicated to the FLō i-Controller from a Building Management System (BMS). If the FLō i-Controller is connected to a BMS over Modbus, the set points shown on this screen will be automatically updated with the set points entered in the BMS. The VAV Set Points will only appear if VAV controls are connected to the FLō unit. The set points limitations are as follows:

Cool SP: 60 - 85F  
Heat SP: 50-80F  
Dew Point SP: 48-60F










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## Set Point Instructions - Continued

There must be a minimum of 4-degrees between the heating and cooling set points. If set points are inputted too close together, the program will automatically adjust the set points per the following rules:

Outdoor Air Temp > 60 °F: Heating Set Point = Cooling Set Point - 4 °F

Outdoor Air Temp < 50 °F: Cooling Set Point = Heating Set Point + 4 °F

1. If the Flō i-Controller is **not** connected to a BMS, perform the following steps to modify the set points.
2. Using the  and  buttons (T2 and T4, respectively) navigate to the “Occupied” set points that you wish to change.
3. Press the  (T3) button and the value should blink.
4. Using the  and  buttons increase and decrease the value as desired.
5. Once the desired value has been reached press the  button to set the value.
6. Repeat steps 1-4 until all “Occupied” values have been set.
7. Press the  (T6) button to view the “Unoccupied” set points.
8. Repeat steps 1-4 until all “Unoccupied” values have been set.
9. Once all changes have been completed, press the  (T5) to return to the “Occupied” set points screen or press the  (T8) button to return to the Main Menu.

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## System Status

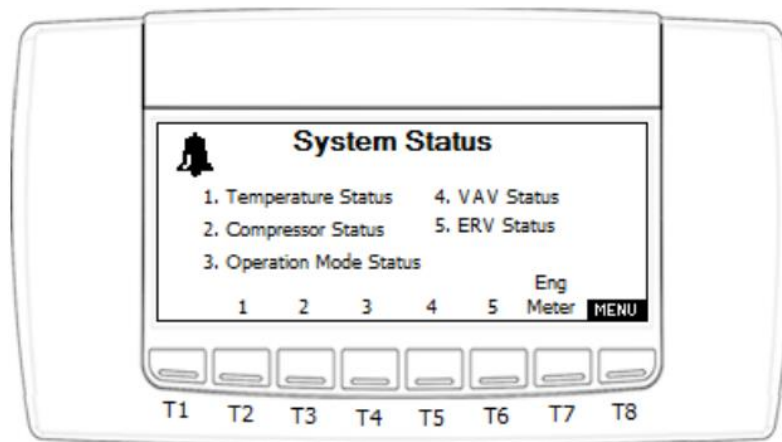


Figure 10. Visograph System Status screen

- T2: Go to Temperature Status
- T3: Go to Compressor Status
- T4: Go to Operation Mode
- T5: Go to VAV Status\*\*
- T6: Go to ERV Status
- T7: Go to Energy Meter
- T8: Go to Main Menu

## System Status Instructions

To navigate to the following menu options, press the corresponding key on the Visograph below the menu item number. Press the **MENU** (T8) button to return to the Main Menu.

- Temperature Status** – View the current temperature in the treated space, space dew point, supply duct temperature, return air temperature, or outdoor conditions.
- Compressor Status** – View the current compressor and suction pressure status.
- Operation Mode Status** – View the current operation mode (Dehumidification, cooling, or heating), reheat or reclaim status, current occupancy, and other key system parameters.
- VAV Status\*\*** – View current status of connected VAV zones. Status will only appear if a VAV Option is present on site.
- ERV Status\*\*** – View current status of ERV wheels. Status will only appear if an ERV Option is present on site.
- Energy Meter** – View current power consumption.

\*\* If Equipped

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Temperature Status

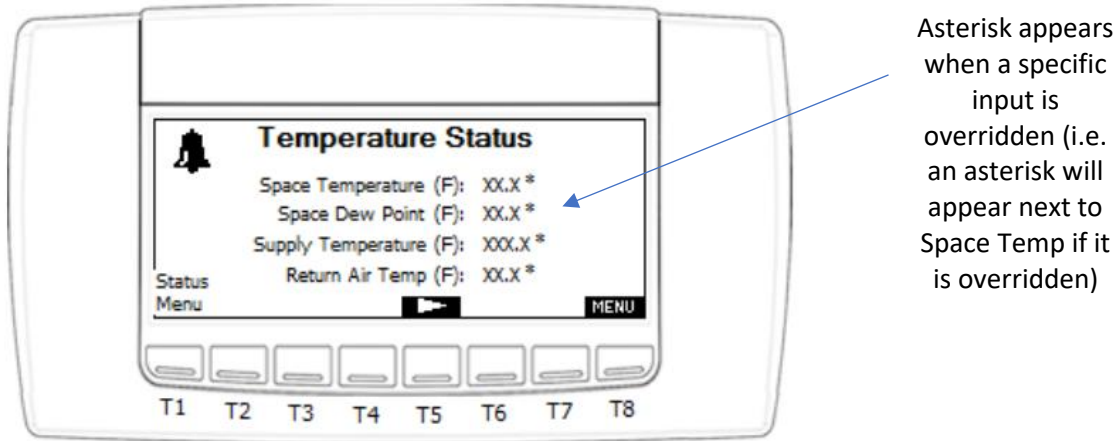


Figure 11. Visograph Temperature Status screen 1

- T1: Go to System Status Menu
- T4: Previous Page
- T5: Next Page
- T8: Go to Main Menu

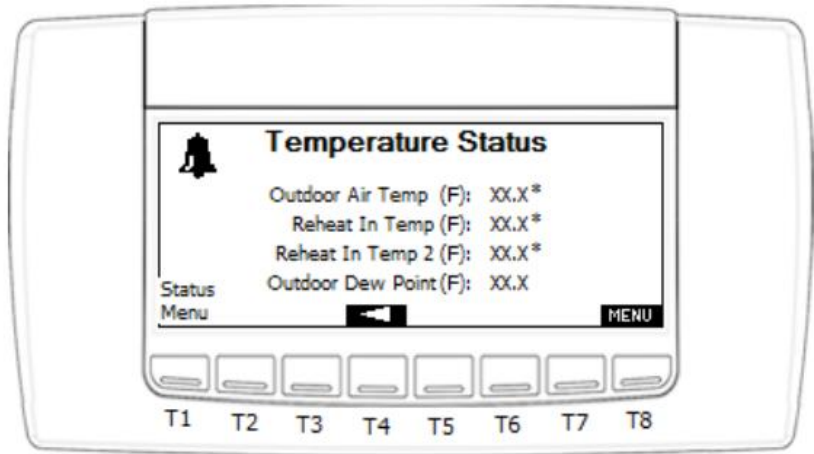






Figure 12. Visograph Temperature Status screen 2

Temperature Sensor Instructions

Use the  (T4) and  (T5) buttons to navigate between the two “Temperature Status” pages. Press T1 to return to the System Status Menu or press the  (T8) button to return to the Main Menu.

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1. **Space Temperature:** Temperature reading from temperature probe mounted in the space.
2. **Space Dew Point:** Dew point calculated from the temperature and humidity probe readings mounted in the space.
3. **Supply Temperature:** Temperature reading from temperature probe mounted in the supply air duct.
4. **Return Air Temperature:** Temperature reading from temperature probe mounted in the return air duct.
5. **Outdoor Air Temperature:** Temperature reading from temperature probe mounted in underneath the rain hood on the Flō unit.
6. **Reheat/Reclaim In Temp:** Temperature reading from temperature probe mounted in the Reheat/Reclaim Stage 1 inlet.
7. **Reheat/Reclaim In 2 Temp\*\*:** Temperature reading from temperature probe mounted in the Reheat/Reclaim Stage 2 inlet.
8. **Outdoor Dew Point\*\*:** Dew point calculated from the temperature and humidity probe readings mounted underneath the rain hood of the Flō unit.

\*\* If Equipped

## Compressor Status

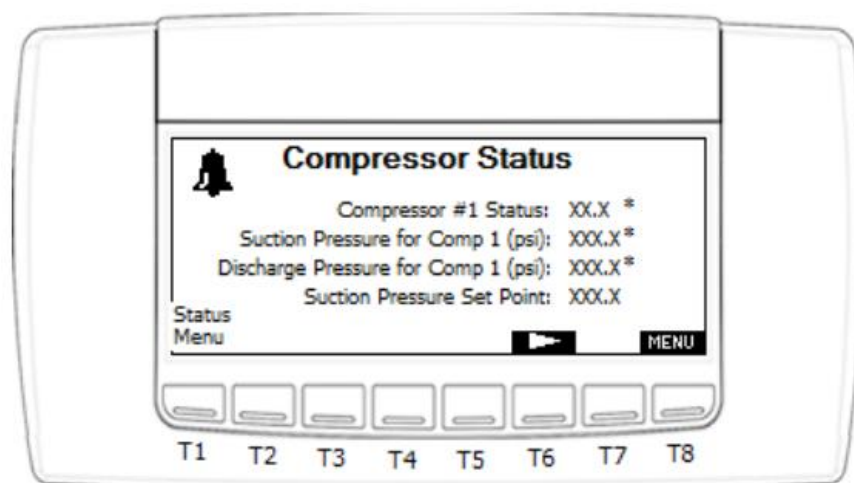

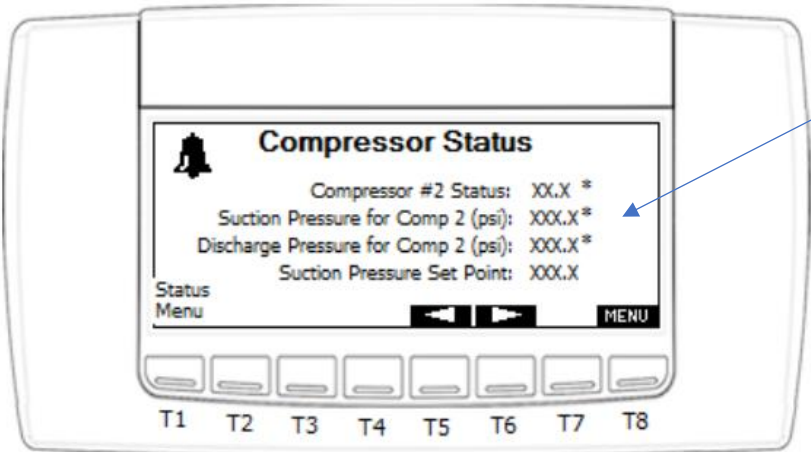


Figure 13. Visograph Compressor Status screen 1

T1: Go to System Status Menu  
T5: Previous Page  
T6: Next Page  
T8: Go to Main Menu

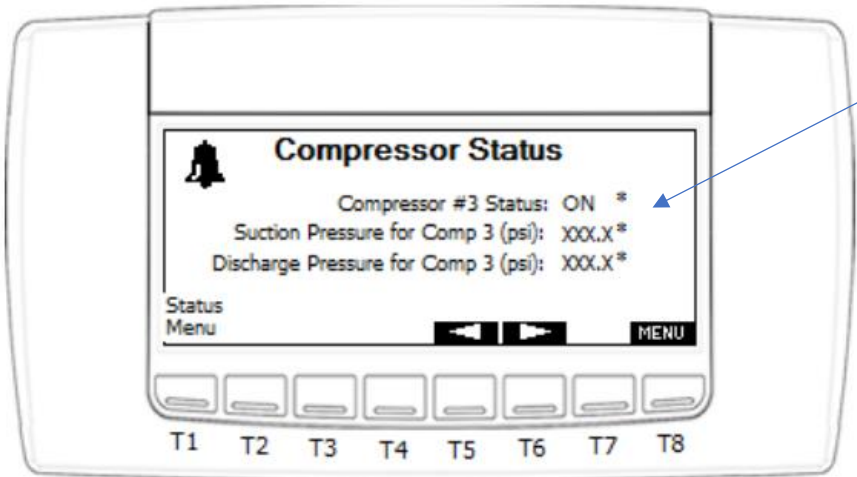
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Compressor Status – Continued



Suction Pressure Setpoint will only appear if Compressor 2 is a digital scroll compressor (when 4 compressors are present)


Figure 14. Visograph Compressor Status screen 2



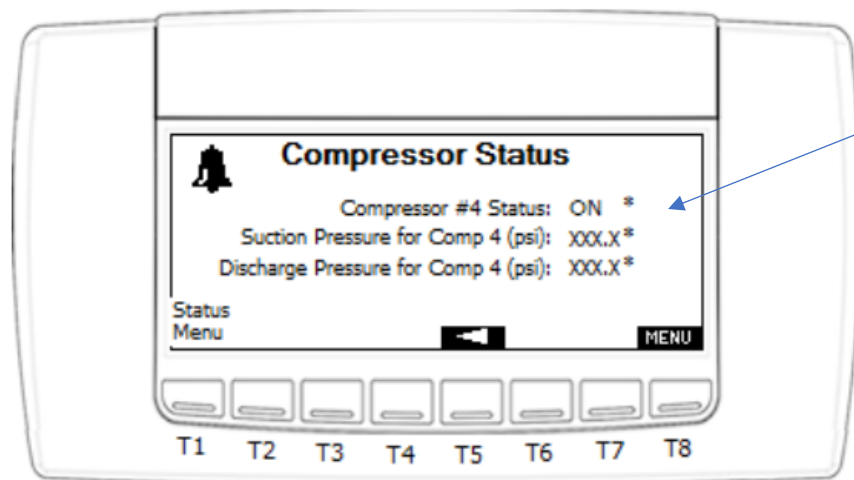
Page 3 is only shown when 4 compressors are present

Figure 15. Visograph Compressor Status screen 3



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## Compressor Status – Continued



Page 4 is only shown when 4 compressors are present

Figure 16. Visograph Compressor Status screen 4

## Compressor Status Instructions

Use the  (T5) and  (T6) buttons to navigate between the two “Compressor Status” pages. The second “Compressor Status” page is only available if the FLO unit contains more than two compressors. Press T1 to return to the System Status Menu or press the  (T8) button to return to the Main Menu.

1. **Dig Comp # Operating Capacity:** Current Digital Compressor operating percentage.
2. **Fixed Compressor # Status:** Current Fixed Compressor operating status; “ON” or “OFF”.
3. **Suction Pressure for Comp #:** Current suction pressure reading from the pressure transducer located on the denoted Digital Compressor.
4. **Suction Pressure Set Point:** Current suction pressure set point set based on the current control strategy.

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## Operation Mode Status

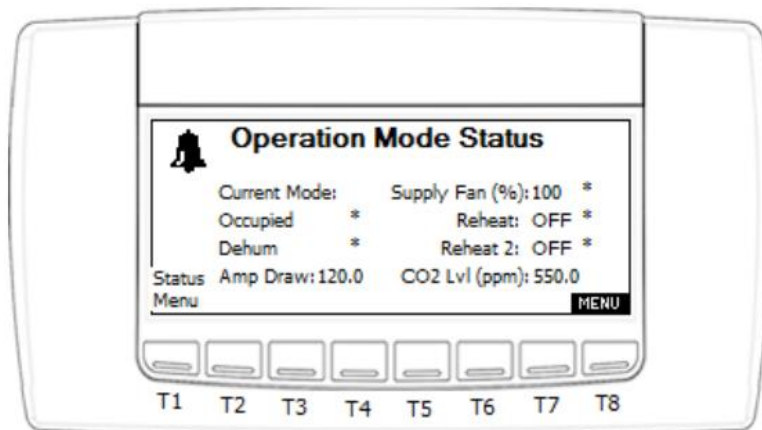


Figure 17. Visograph Operation Mode Status screen

T1: Go to System Status Menu

T8: Go to Main Menu

## Operation Mode Status Instructions

Press T1 to return to the System Status Menu or press the **MENU** (T8) button to return to the Main Menu.

1. **Occupancy Mode:** “Occupied” or “Unoccupied” Mode will display based on the current occupancy schedule.
2. **Current Mode:** The second line will display the unit’s operation mode. One of the following will appear, based on the unit’s operation.
  - Fan-Only
  - Heat
  - Cool
  - Dehum
  - Dehum + Heat
  - Dehum + Cool
  - Pre-Emptive Dehum
  - Shutdown
  - Net Disable
3. **Amp Draw:** Current reading from the 1-phase current transducer.

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4. **Supply Fan:** Status of the supply fan operation will a value from 0-100%.
5. **Reheat/Reclaim Status:** Reheat or Reclaim Stage 1 “ON” or “OFF” when the coil is activated and deactivated.
6. **Reheat/Reclaim 2 Status\*\*:** Reheat or Reclaim Stage 1 “ON” or “OFF” when the coil is activated and deactivated.
7. **Clogged Filter:** Current status of the filters. When “YES” is displayed, the clogged filter sensor has detected airflow restriction and the filters need to be changed.
8. **CO2 Level (ppm)\*\*:** If a CO2 sensor option is chosen, the current CO2 level will be displayed in parts per million (ppm). This is the CO2 control value. If more than one CO2 sensor is being used, this value represents the max CO2 value.

\*\* If Equipped

## VAV Status

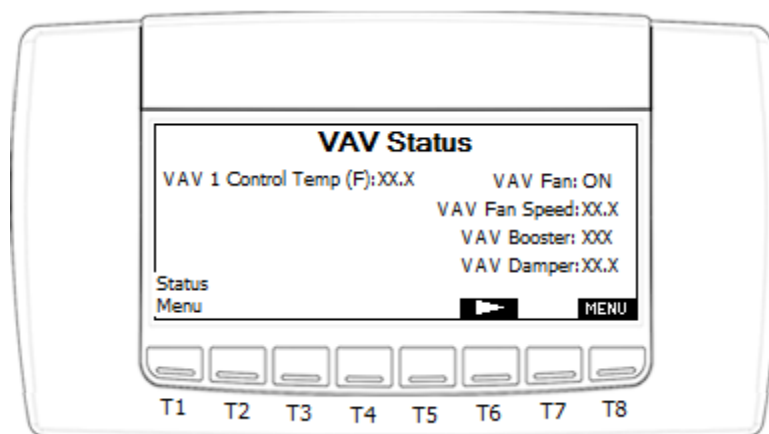


Figure 18. Visograph VAV Status screen 1

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## VAV Status – *Continued*

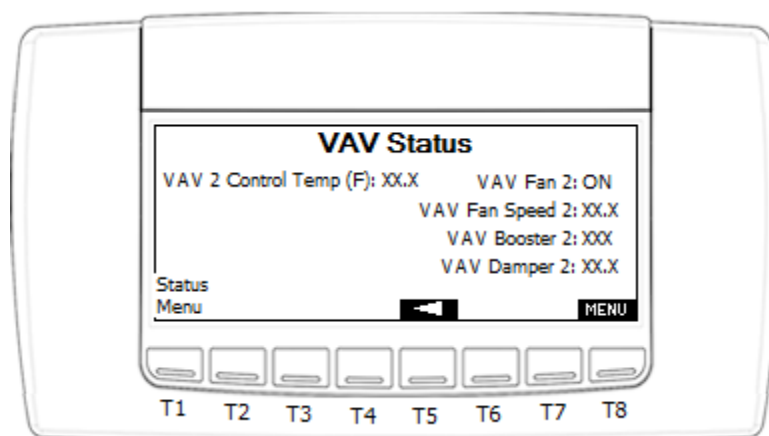



Figure 19. Visograph VAV Status screen 2

- T1: Go to Status Menu
- T8: Go to Main Menu
- T5: Previous Page
- T6: Next Page

## VAV Status Instructions

Press T1 to return to the System Status Menu or press the **MENU** (T8) button to return to the Main Menu.

1. **VAV # Control Temp:** The calculated control temperature for the associated zone. If more than one temperature sensor is being used for the associated zone, this value represents the calculated average of the temperature readings.
2. **VAV Fan #:** VAV Fan Status for associated zone. Value will be “ON” or “OFF.”
3. **VAV Fan Speed #:** VAV Fan Speed for associated zone. Value will be 0-100%.
4. **VAV Booster #:** VAV Booster Heater status for associated zone. Value will be “ON” or “OFF.” If modulate heat is being used, the value will be 0-100%.
5. **VAV Damper #:** VAV Damper position for associated zone. Value will be 0-100%.

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## ERV Status

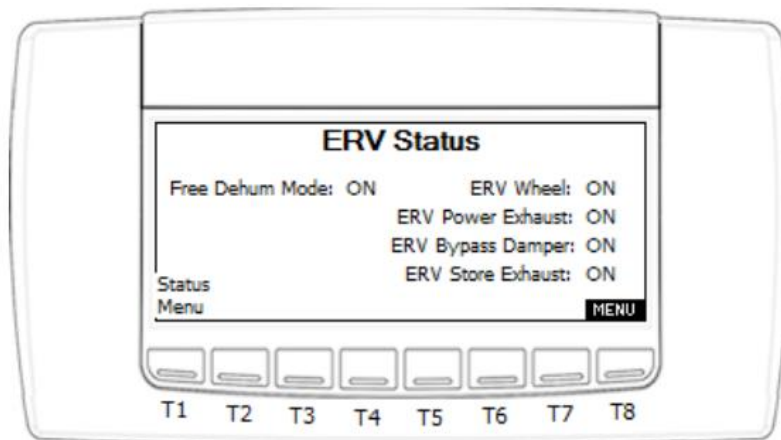


Figure 20. ERV Status screen

T1: Go to Status Menu

T8: Go to Main Menu

1. **Free Dehum Mode:** Displays whether the unit is in “Free Dehum” Mode.
2. **ERV Wheel:** ERV Wheel Status. Value will be “ON” or “OFF.”
3. **ERV Power Exhaust:** ERV Power Exhaust Status. Value will be “ON” or “OFF.”
4. **ERV Bypass Damper:** ERV Bypass Damper Position. Value will be “ON” if the damper is open, or “OFF” if the damper is closed.
5. **ERV Store Exhaust:** ERV Store Exhaust Status. Value will be “ON” or “OFF.”

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## Energy Meter

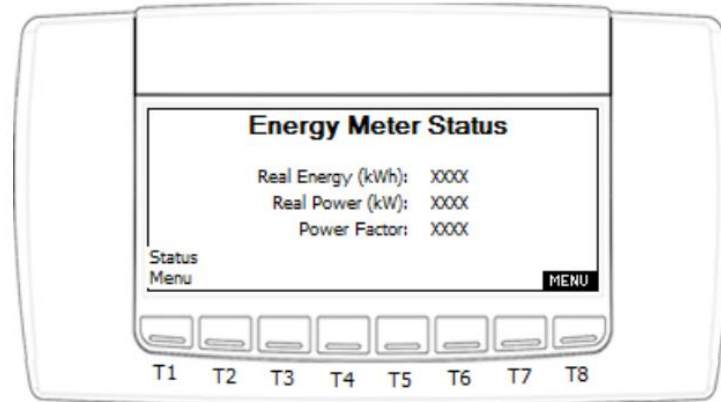


Figure 21. Energy Meter Status screen

T1: Go to Status Menu

T8: Go to Main Menu

1. **Real Energy (kWh):** Displays the current Real Energy usage, in kilowatt-hours.
2. **Real Power (kW):** Displays the current Real Power usage, in kilowatts.
3. **Power Factor:** Displays the power factor.

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## Alarms

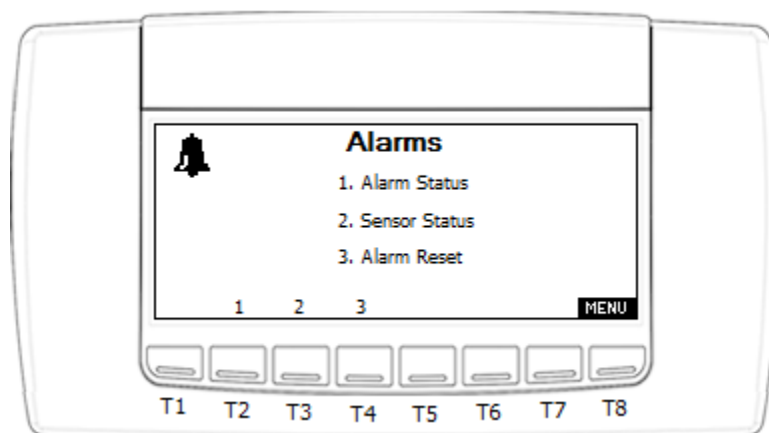


Figure 22. Visograph Alarms screen

- T2: Go to Alarm Status
- T3: Go to Sensor Status
- T4: Go to Alarm Reset
- T8: Go to Main Menu

## Alarms Instructions

To navigate to the following menu options, press the corresponding key on the Visograph below the menu item number. Press the **MENU** (T8) button to return to the Main Menu.

- Alarm Status** – View the current status of alarms. Navigate to this page when the bell in the upper left corner appears to view which alarm has been activated.
- Sensor Status** – View the current status of sensors. If a sensor failure is the cause for an alarm, this page will show which sensor has failed.
- Alarm Reset** – Contains necessary resets for certain alarms. If a fan fail occurs, once the problem has been resolved this page contains the reset necessary to continue operation.

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## Alarm Status

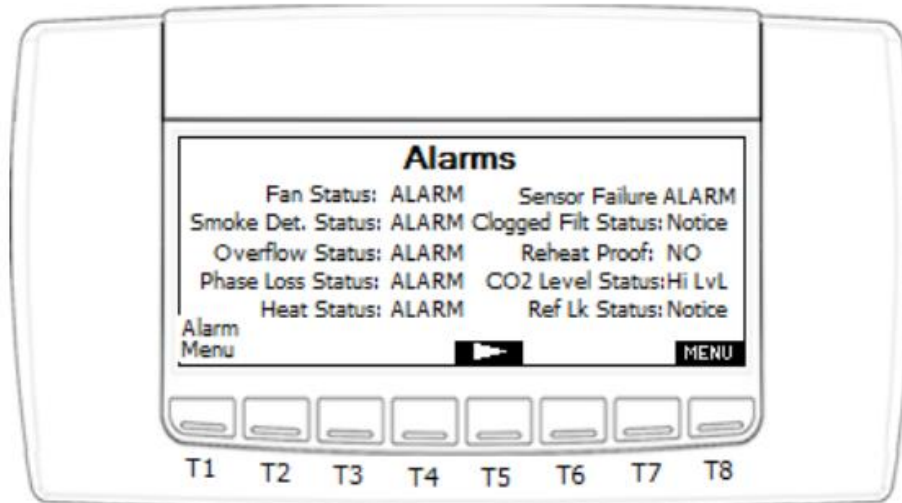


Figure 23. Visograph Alarm Status screen 1

T1: Go to Alarm Menu

T5: Go to Next Page

T8: Go to Main Menu

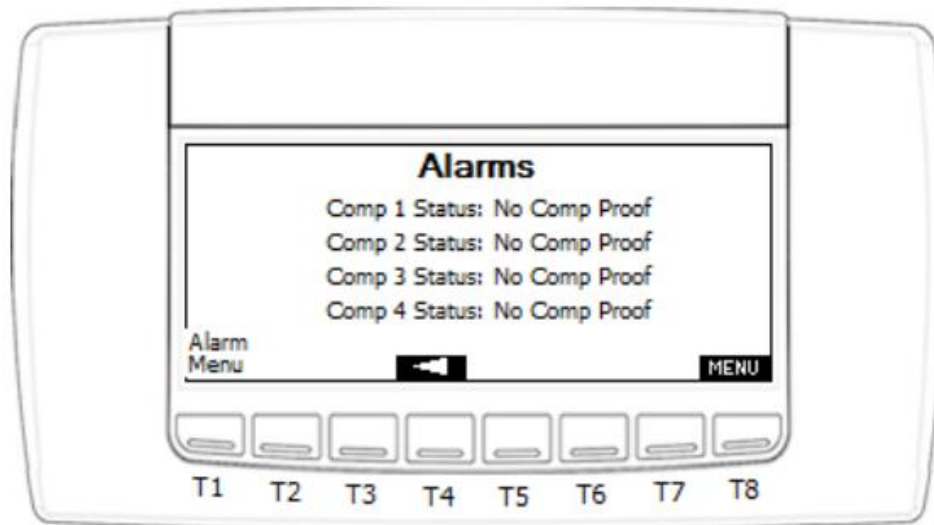



Figure 24. Visograph Alarm Status screen 2

T1: Go to Alarm Menu

T4: Go to Previous Page

T8: Go to Main Menu



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## Alarm Status Instructions

Press T1 to return to the Alarms Menu or press the **MENU** (T8) button to return to the Main Menu. Each alarm will display “ALARM” when an alarm is present and “OK” when no alarm is present.

1. **Clogged Filter Alarm:** Alarm activated when the filters in the unit need to be replaced.
2. **Fan Status:** Alarm activated when a fan fail occurs.
3. **Overflow Alarm:** Alarm activated when a smoke detection signal is sent from the space. This alarm will cause the unit to shut down.
4. **Phase Loss Alarm:** Alarm activated when improper voltage is supplied to the unit. This alarm will cause the unit to shut down.
5. **Smoke Det. Alarm:** Alarm activated when a smoke detection signal is sent from the space. This alarm will cause the unit to shut down.
6. **CO2 Level Status\*:** Alarm is activated when the CO2 level in the space increases above the specified ppm limit.
7. **Ref Lk Status\*:** Alarm is activated if there is a leak in the store’s refrigeration system. A digital signal is received from the refrigeration rack controller that signifies a leak has been detected. Once the signal is received, the OAD of the FLO unit will open to 100% to flush the store.
8. **Heat Status:** Alarm is activated if a temperature increase has not occurred after heat mode has been activated for a certain period of time.
9. **Sensor Failure:** Displays “YES” when a sensor failure is present.
10. **Reclaim Status\*:** Notice is activated if the reheat/reclaim inlet temperature has not increased at least 5 °F, after heat reclaim has been enabled for 15 minutes. Notice is automatically reset upon heat reclaim disable. This notice will not trigger an alarm in the unit.

*\*If Equipped.*

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## Alarm Status Instructions - *Continued*

11. **Comp Status:** This will display the status of each compressor. Possible status values include:

If multiple alarms are present, only the highest priority alarm will appear. Alarms are listed top-to-bottom by priority (with 'Suct Trans Fail' being the highest priority, and 'OK' being the lowest).

- **Suct Trans Fail:** Activated when the suction transducer reading is out of range.
- **Dis Trans Fail:** Activated when the discharge transducer is out of range.
- **Comp High Dis Trip:** Activated when a Comp Proof Fail and High Dis Pressure alarm activate together.
- **No Comp Proof:** Activated when the compressor signal is on, but suction pressure and discharge pressure are within 20psi of each other.
- **High Suct. Press:** Activated when the suction pressure increases above the upper pressure limit (varies per mode) during dehumidification or cooling call.
- **Low Suct Press:** Activated when the suction pressure decreases below the lower pressure limit (80psi).
- **High Dis Press Alarm:** Activated when the suction pressure increases above the upper pressure limit (500psi).
- **OK:** Compressor is running properly.

*\*If Equipped.*

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### Sensor Status

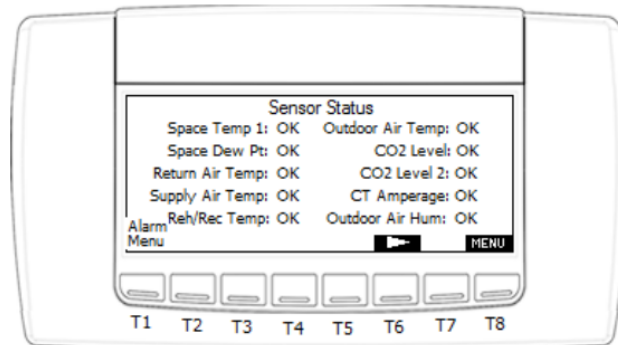


Figure 25. Visograph Sensor Status screen 1

- T1: Go to Alarms Menu
- T5: Previous Page
- T6: Next Page
- T8: Go to Main Menu

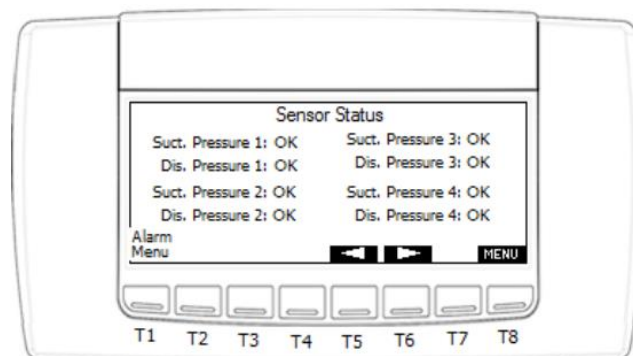


Figure 26. Visograph Sensor Status screen 2

Screen 3 is only visible if the unit contains VAV, a second space Temp, or a 2<sup>nd</sup> Dehum Probe

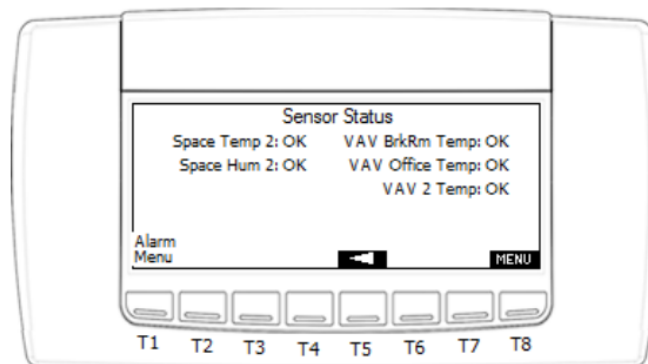


Figure 27. Visograph Sensor Status screen 3

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## Sensor Status Screen Instructions

Press T1 to return to the Alarms Menu or press the **MENU** (T8) button to return to the Main Menu. Each sensor status will display “FAIL” if the sensor has failed and “OK” when the sensor is still operational. Use the **◀** (T5) and **▶** (T6) buttons to navigate between the two “Sensor Status” pages.

The Outdoor Humidity and CO2 sensors on the first page are optional and will not appear on the screen if these options are not included on the unit.

## Alarm Resets

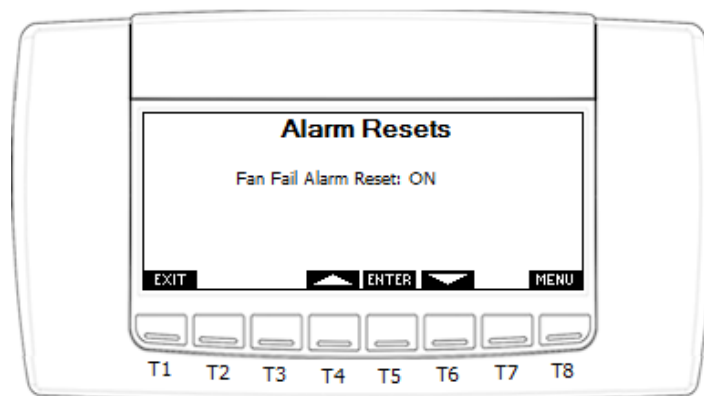


Figure 28. Visograph Alarm Resets screen


- T1: Go to Alarms Menu
- T4: Change value to ON
- T5: Enter (Select and Set Value)
- T6: Change value to OFF
- T8: Go to Main Menu

## Alarm Reset Instructions

Press T1 to return to the Alarms Menu or press the **MENU** (T8) button to return to the Main Menu. If a fan fail occurs and the problem has been resolved, the fan fail alarm needs to be reset in order to start normal operation. To reset the fan, fail alarm, perform the following steps:

1. Using the **◀** and **▶** buttons (T4 and T6, respectively) ensure that the “OFF” value is highlighted.
2. Press the **ENTER** (T5) button and the value should blink.
3. Using the **◀** and **▶** buttons increase and decrease the value until “ON” appears.
4. Once the desired value has been reached press the **ENTER** button to set the value.
5. Once the value has been set to “ON” the fan fail alarm has been reset and the fan is ready for operation.
6. The value will automatically reset to “OFF” after 5 seconds.

Values will display as “ON/OFF” for Fan Fail Reset, or “YES/NO” for Clear Alarms.

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## Network Information

### Modbus Network

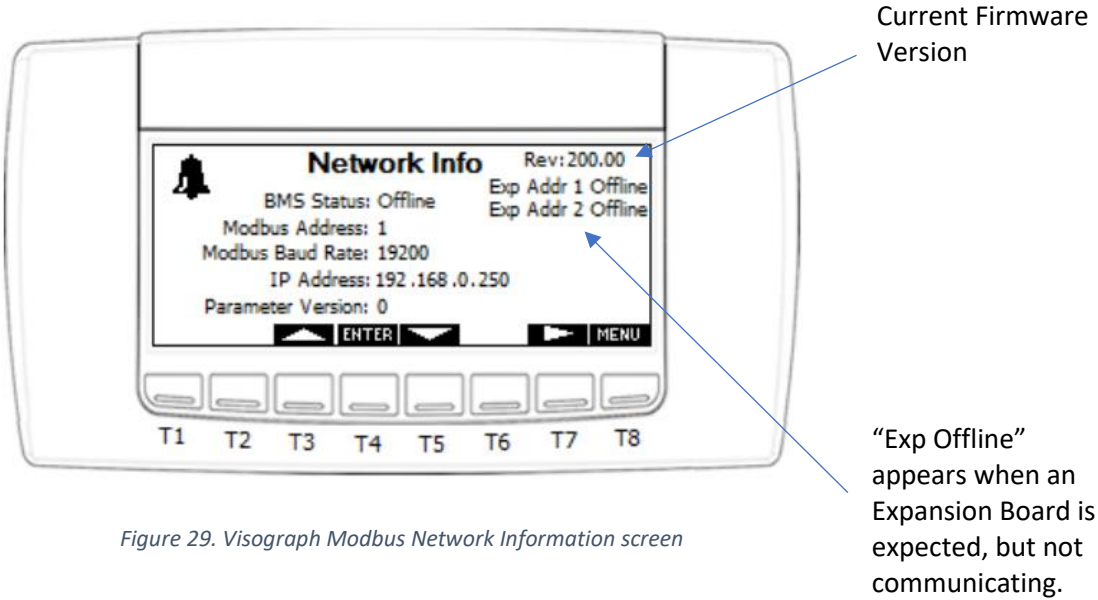


Figure 29. Visograph Modbus Network Information screen

- T8: Go to Main Menu
- T3: Scroll Up/Increase Value
- T4: Enter (Select and Set Value)
- T5: Scroll Down/Decrease Value
- T6: Previous Page
- T7: Next Page

### BACnet Network

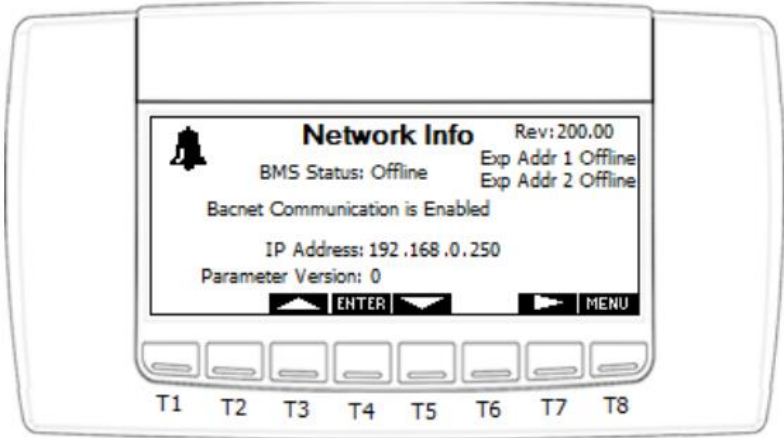


Figure 30. Visograph BACnet Network Information screen

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Page 2 will be the same, whether the unit is on a Modbus or BACnet Network

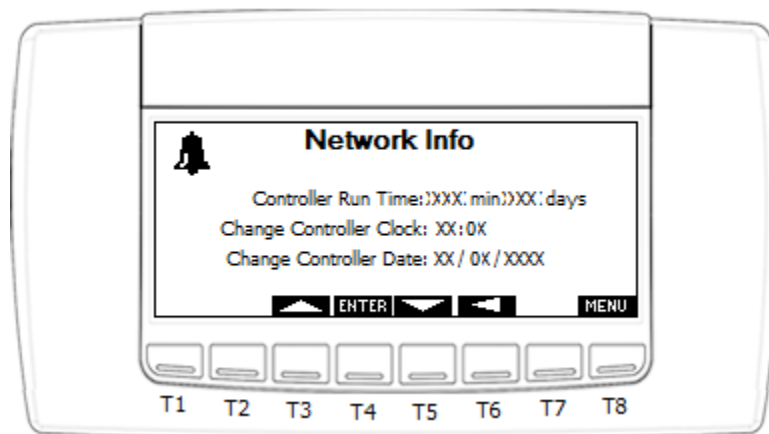








Figure 31. Visograph BACnet Network Information screen

## Network Information Instructions

The “Network Info” screen displays the FLO i-Controller IP address and run time along with the status of the connection to the Building Management System (BMS). If the FLO i-Controller is connected to the BMS the status will show “Online”, and will show “Offline” if the BMS is currently offline or the FLO i-Controller is not connected.

For units on a Modbus network, this screen also displays the current Modbus address (which is changeable), the current Modbus baud rate setting, and options to adjust the date and time. To change the Modbus address or date and time, perform the following steps:

1. Using the  and  buttons (T3 and T5, respectively) navigate to the value that you wish to change.
2. Once the value is highlighted, press the **ENTER** (T4) button and the value should blink.
3. Using the  and  buttons increase and decrease the value as desired.
4. Once the desired value has been reached press the **ENTER** button to set the value.
5. Use the  (T6) and  (T7) buttons to navigate to the date and time screen.
6. Repeat steps 1-4 until all desired values have been updated.
7. Once all changes have been completed, press the **MENU** (T8) button to return to the Main Menu.

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## Field Tech Menu

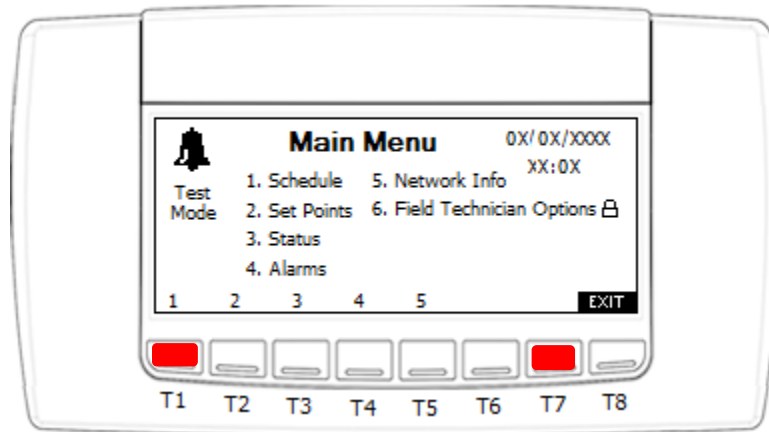


Figure 32. Visograph Main Menu

To access the Field Tech Menu, on the “Main Menu” screen press the T1 and T7 buttons simultaneously.

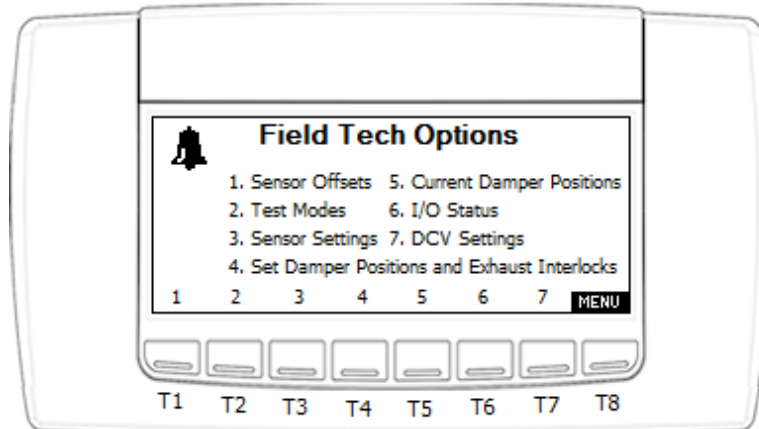


Figure 33. Visograph Field Tech Options screen

- T1: Go to Sensor Offsets
- T2: Go to Test Modes
- T3: Go to Sensor Settings
- T4: Go to Set Damper Positions
- T5: Go to Current Damper Position
- T6: Go to I/O Status
- T7: Go to DCV Settings
- T8: Go to Main Menu

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## Field Tech Option Instructions

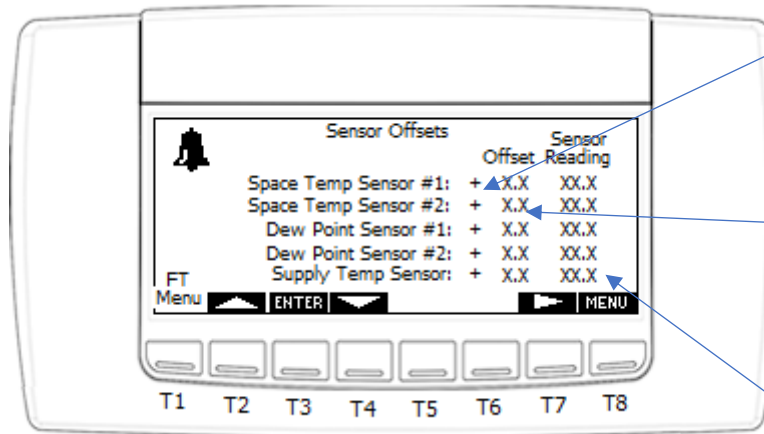
From the “Field Tech Options” menu, options to set sensor offsets, activate test modes, change sensor settings, set damper positions, and view Input/Output status can be accessed. To navigate to the following menu options, press the corresponding key on the Visograph below the menu item number. Press the **MENU** (T8) button to return to the Main Menu.

1. **Sensor Offsets** – Set sensor offsets for all available sensors.
2. **Test Modes**– Activate test modes for dehumidification, comfort cooling, heating, occupancy mode, and gas pressure check.
3. **Sensor Settings** – Set limits for dew point sensors, suction transducers, and discharge transducers.
4. **Set Damper Positions and Exhaust Interlocks** – Set the Outdoor damper operating percentage and damper percent increases for any available exhaust fan interlocks.
5. **Current Damper Positions** – View the current positions of the outdoor, return, and bypass dampers.
6. **I/O Status** – View the current readings for all the inputs and outputs.
7. **DCV Settings** – If unit contains a CO2 sensor, access this menu to adjust the ventilation settings/limits for CO2 level control.



## Title: i-Controller Visograph Navigation for REV.200

### Sensor Offsets



User inputted if the sensor offset is +/- . Default is -.

User inputted sensor offset. Default is 0.0.

Actual sensor reading, including the offset.

Figure 34. Visograph Sensor Offsets screen 1

- T1: Go to Field Tech Menu
- T2: Scroll Up/Increase Value
- T3: Enter (Select and Set Value)
- T4: Scroll Down/Decrease Value
- T6: Previous Page
- T7: Next Page
- T8: Go to Main Menu

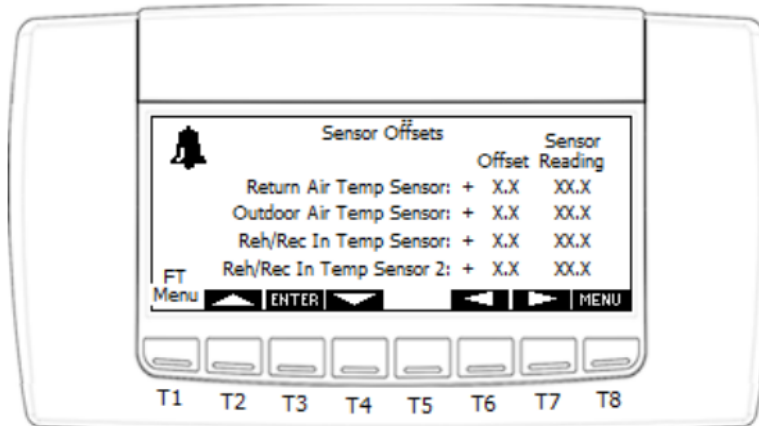


Figure 35. Visograph Sensor Offsets screen 2

## Title: i-Controller Visograph Navigation for REV.200

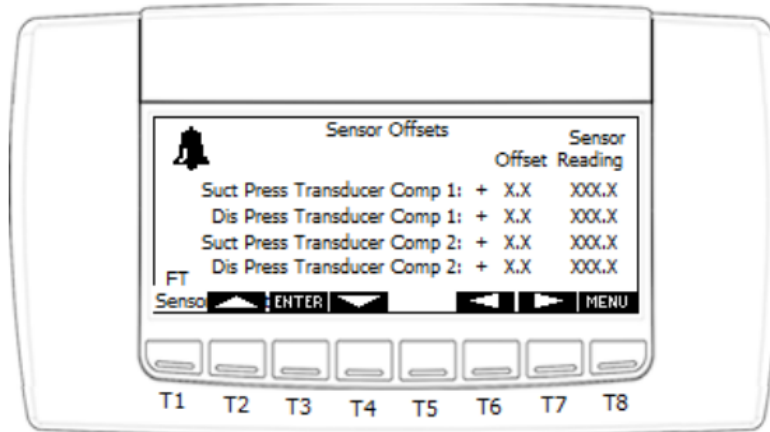


Figure 36. Visograph Sensor Offsets screen 3

Note: The order of Pages 4, 5, and 6 may vary based on which options are present

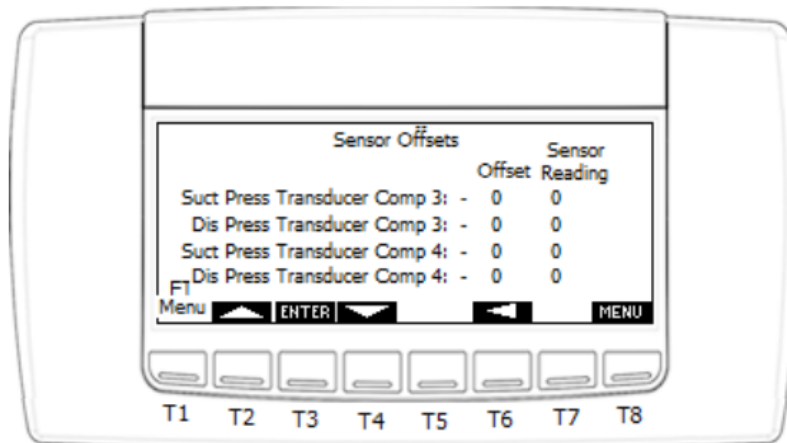


Figure 37. Visograph Sensor Offsets screen 4

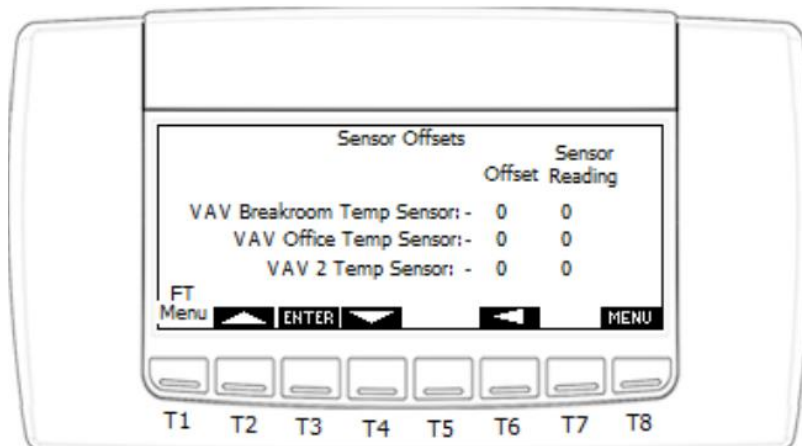



Figure 38. Visograph Sensor Offsets screen 5

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## Sensor Offsets - *Continued*

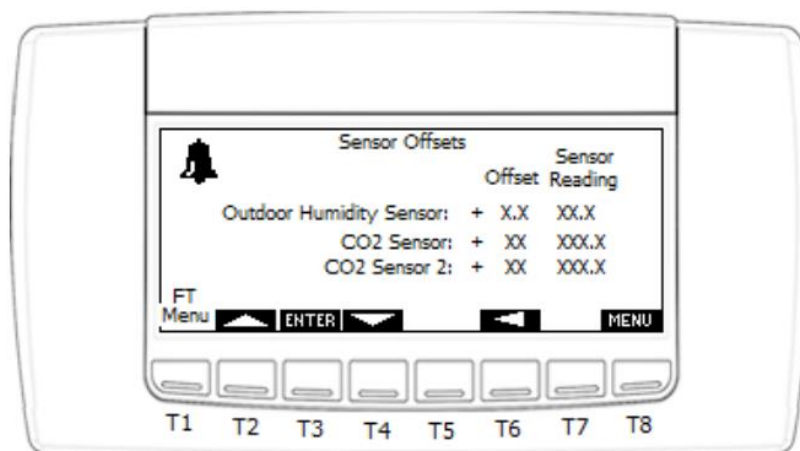











Figure 39. Visograph Sensor Offsets screen 6

## Sensor Offset Instructions

Sensor offsets are available for all sensors related to the FLō unit. Sensor offsets should be set when an installed sensor is reading differently from a calibrated device. **Maximum offset values for each sensor type are as follows:**

Temperature Sensors: +/- 3 °F  
 Pressure Transducers: +/- 5psi  
 Humidity Sensor: +/- 3%  
 Dew Point Sensor: +/- 2 °F  
 CO2 Sensor: +/- 50ppm

If the sensor requires a larger offset than what is listed above, then the sensor should be evaluated and replaced if necessary. Note: the CO2 sensor will only appear if the FLō unit contains the CO2 option, the second suction/discharge pressure transducers will only appear if the FLō unit has more than two compressors, and the VAV sensor offsets will only appear if the unit is connected to a VAV zone. Next to each offset is the actual sensor reading including the offset. To adjust the sensor offset, perform the following steps:

1. Using the  and  buttons (T2 and T4) navigate and highlight the “-” next to the sensor you wish to adjust.
2. Once the value is highlighted, press the  (T3) button and the value should blink.
3. Using the  and  buttons change the value to “+” or “-” depending on if the offset is intended to increase or decrease the sensor reading.
4. Once the desired value has been reached press the  button to set the value.
5. Repeat steps 1-4 to adjust the value of the Offset for the sensor you wish to adjust.
6. Use the  (T6) and  (T7) buttons to navigate to the next page for additional sensors that require offsets.
7. Once all changes have been completed, press the  (T8) button to return to the Main Menu or T1 to return to the Field Tech Options Menu.

## Title: i-Controller Visograph Navigation for REV.200

### Test Modes

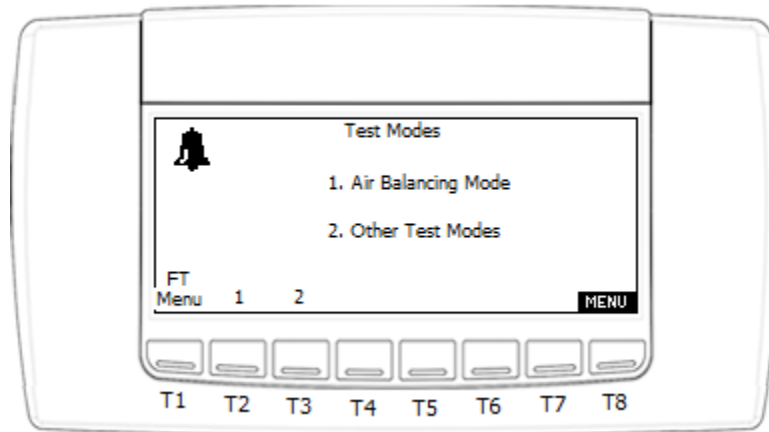


Figure 40. Visograph Test Modes screen

- T1: Go to Field Tech Menu
- T2: Go to Air Balancing Mode
- T3: Go to Other Test Modes
- T8: Go to Main Menu

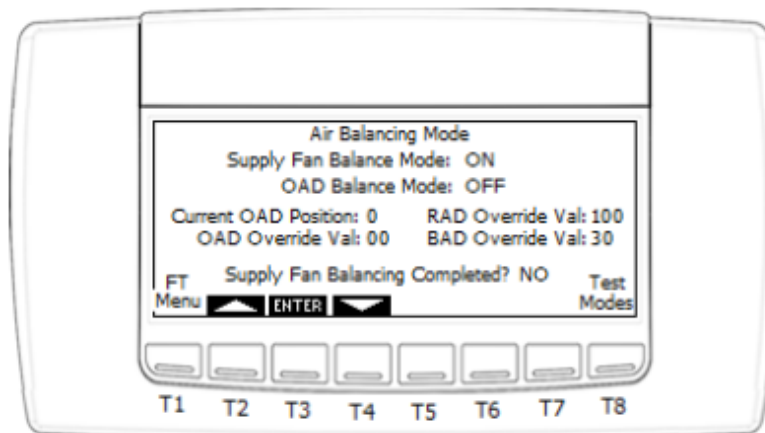



Figure 41. Visograph Test Air Balance Mode screen

- T1: Go to Field Tech Menu
- T2: Scroll Up/Increase Value
- T3: Enter (Select and Set Value)
- T4: Scroll Down/Decrease Value
- T8: Go to Test Modes Menu

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## Test Modes – *Continued*

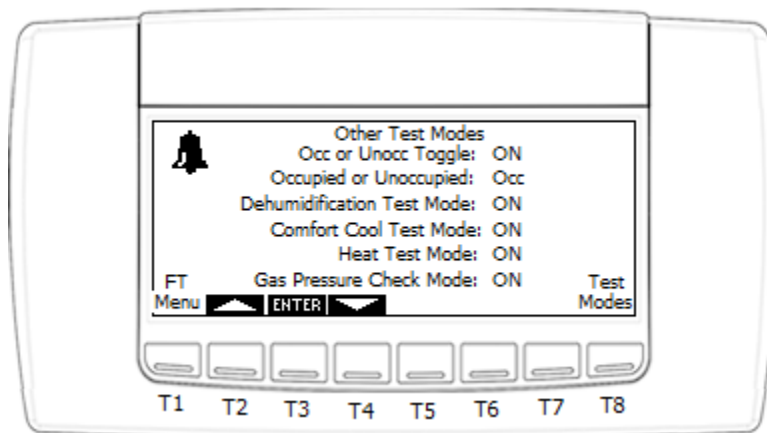


Figure 42. Visograph Other Test Modes screen

- T1: Go to Field Tech Menu
- T2: Scroll Up/Increase Value
- T3: Enter (Select and Set Value)
- T4: Scroll Down/Decrease Value
- T8: Go to Test Modes Menu

## Test Modes Instructions

Air balance mode can be used to place the dampers in the proper location for air balancing. **The Air Balance mode will time out after 2 hours.**

**Supply Fan Balance Mode:** When turned to “ON”, the Outdoor Air Damper will completely close, the Return Air Damper will be set to 100%, and the Bypass Damper will be set to 30%. This allows for the total airflow requirements to be set with the VFD. The Outdoor, Return, and Bypass are adjustable via the “Override Val” if necessary. Toggle Supply Fan Balance Completed to ‘YES’ when completed.

**OAD Balance Mode:** When turned “ON”, the Outdoor Air Damper will open to its default operating position, the Return Air Damper will be set to 65%, and the Bypass Damper will be set to 30%. This allows for the total outdoor airflow requirements to be set with the Outdoor Air Damper position. The OAD Input Val can be changed to achieve the desired outdoor air flow. Toggle Supply Fan Balance Completed to ‘YES’ when completed.

**Current OAD Position:** The current Outdoor Air Damper position in use.

**OAD Input Val:** Displays during OAD Balance Mode and is used to adjust the Outdoor Air Damper position when balancing the outdoor airflow requirement.

**Balancing Completed?:** Set to “YES,” when each balancing is complete. This will save the inputted “OAD Input Val” setting as the default outdoor air damper position, and the unit will revert to normal operation.

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## Test Modes Instructions – *Continued*

Test modes are available for testing dehumidification mode, cooling mode, heating mode, occupancy, and a gas pressure check mode for verifying gas flow. **All test modes will time out after 30 minutes.**








**Occupancy Test Mode:** This mode can be used to test unit response during Occupied and Unoccupied hours.

**Dehumidification Test Mode:** This mode can be used to test unit response to a space dehumidification call. When activated the space temperature and humidity will be overridden to 72°F and 70%, resulting in a dew point reading of 70°F. To ensure the compressors initiate, the suction pressure will be overridden to 150psi if ambient conditions are above compressor lockout conditions.

**Cooling Test Mode:** This mode can be used to test unit response to a space cooling call. When activated the space temperature and humidity will be overridden to 81.5°F and 15%. To ensure the compressors initiate, the suction pressure will be overridden to 170psi if ambient conditions are above compressor lockout conditions.

**Heating Test Mode:** This mode can be used to test unit response to a space heating call. When activated the space temperature and humidity will be overridden to 58.5°F and 15%.

**Full Burn Test Mode:** This mode can be used to aid in the gas pressure setting process during unit commissioning. When activated, all available heat stages will be overridden on.

1. To activate any of the test modes perform the following steps:
2. Using the  and  buttons (T2 and T4, respectively) navigate to the value that you wish to change.
3. Once the value is highlighted, press the  (T3) button and the value should blink.
4. Using the  and  buttons increase and decrease the value as desired.
5. Once the desired value has been reached press the  button to set the value.
6. Repeat steps 1-4 until all desired values have been updated.
7. Once all changes have been completed, press the  (T8) button to return to the Main Menu or T1 to return to the Field Tech Options Menu.

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## Sensor Settings

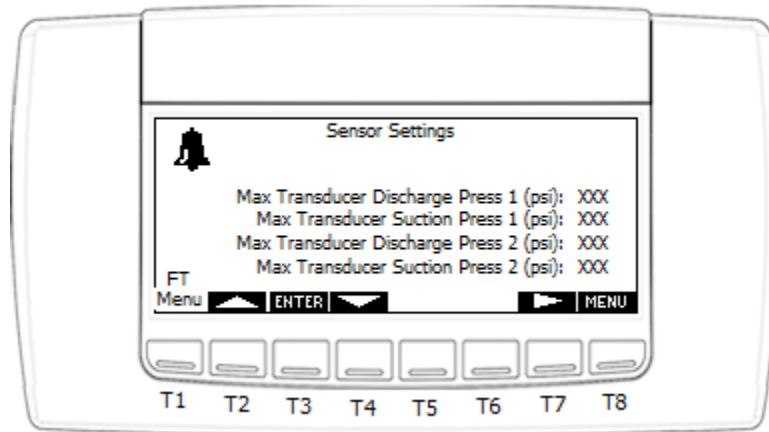


Figure 43. Visograph Sensor Settings screen 1

- T1: Go to Field Tech Menu
- T2: Scroll Up/Increase Value
- T3: Enter (Select and Set Value)
- T4: Scroll Down/Decrease Value
- T8: Go to Main Menu

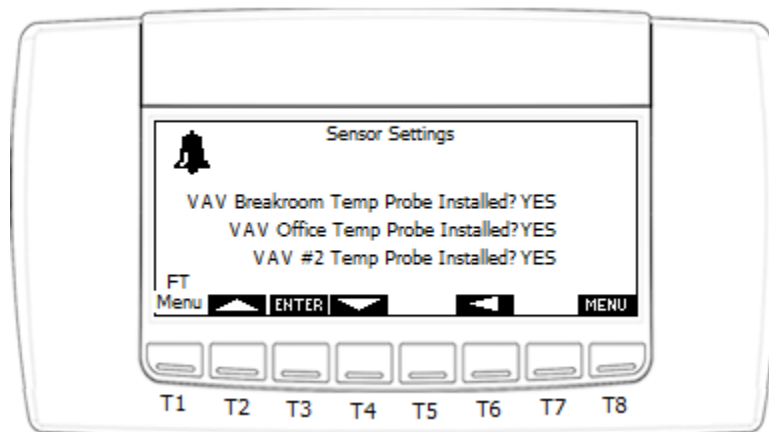



Figure 44. Visograph Sensor Settings screen 2

- T1: Go to Field Tech Menu
- T2: Scroll Up/Increase Value
- T3: Enter (Select and Set Value)
- T4: Scroll Down/Decrease Value
- T8: Go to Main Menu

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## Sensor Settings - *Continued*

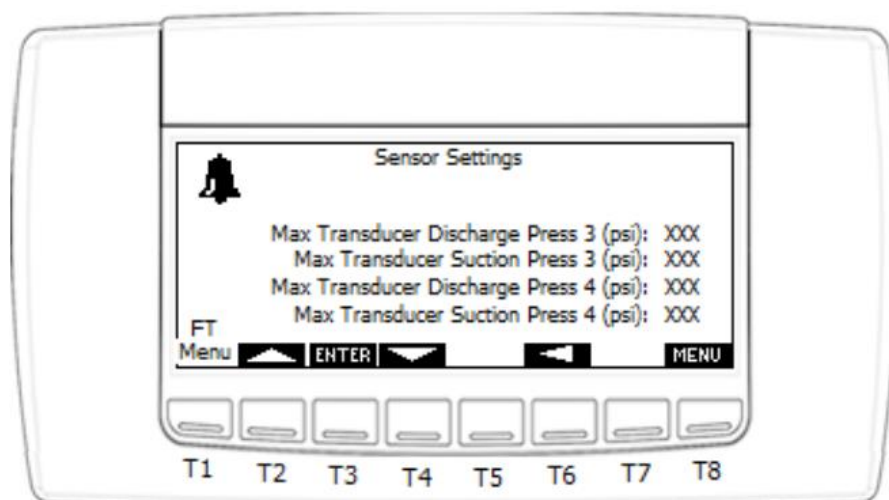










Figure 45. Visograph Sensor Settings screen 3

## Sensor Setting Instructions

The “Sensor Settings” screen is available to set the maximum pressure of the pressure transducers if it is different from the default value. The default pressure values are 500psi for the max suction pressure and 667psi for the max discharge pressure. The second discharge and suction transducers options will only be available if the Flō unit has more than two compressors. For stores equipped with a VAV controlled by the Flō i-Controller, the number and location of temperature sensors used for VAV Zone 1 can be adjusted in this screen (either 1 or 2 sensors are permitted). Mark “YES” next to the sensors that have been installed. To change the sensor settings, perform the following steps:

1. Using the  and  buttons (T2 and T4, respectively) navigate to the value that you wish to change.
2. Once the value is highlighted, press the  (T3) button and the value should blink.
3. Using the  and  buttons increase and decrease the value as desired.
4. Once the desired value has been reached press the  button to set the value.
5. Repeat steps 1-4 until all desired values have been updated.
6. Once all changes have been completed, press the  (T8) button to return to the Main Menu or T1 to return to the Field Tech Options Menu.



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## Set Damper Positions and Exhaust Fan Interlocks

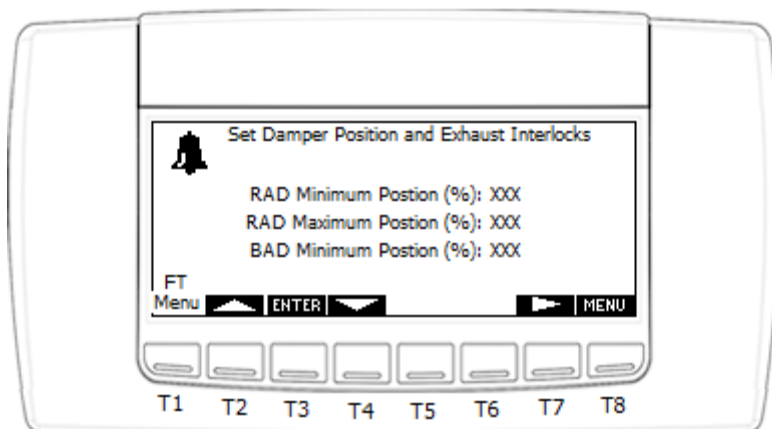


Figure 46. Visograph Set Damper Position and Exhaust Interlocks 1

- T1: Go to Field Tech Menu
- T2: Scroll Up/Increase Value
- T3: Enter (Select and Set Value)
- T4: Scroll Down/Decrease Value
- T6: Previous Page
- T7: Next Page
- T8: Go to Main Menu

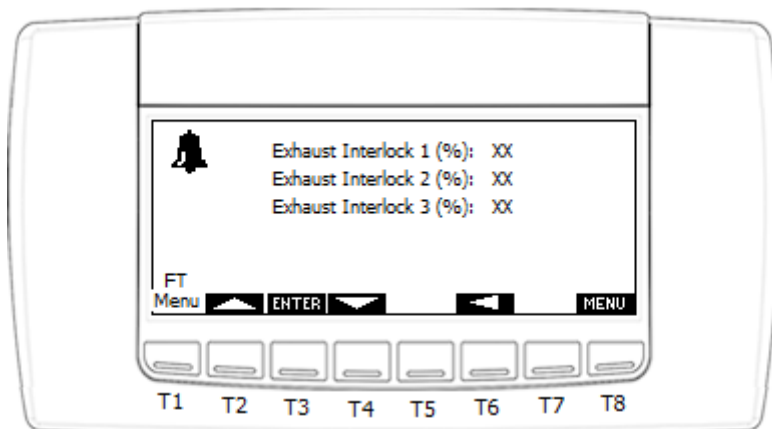









Figure 47. Visograph Exhaust Interlocks

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## Set Damper Positions and Exhaust Fan Interlocks Instructions

The “Set Damper Position and Exhaust Interlocks” screen is available to set the min/max percentage of the return air damper, the min position for the bypass damper, and additional outdoor air damper opening for exhaust fan interlocks. The Exhaust fan interlock options will not be visible if none are available. If exhaust fan interlocks exist on the Flō unit, only the number of interlocks for the unit will appear on the screen. To adjust the outdoor damper opening or exhaust interlock opening perform the following steps:

1. Using the  and  buttons (T2 and T4, respectively) navigate to the value that you wish to change.
2. Once the value is highlighted, press the **ENTER** (T3) button and the value should blink.
3. Using the  and  buttons increase and decrease the value as desired.
4. Once the desired value has been reached press the **ENTER** button to set the value.
5. Use the  (T6) and  (T7) buttons to navigate to the second page if more than 4 exhaust fan interlocks exist on the unit.
6. Repeat steps 1-4 until all desired values have been updated.
7. Once all changes have been completed, press the **MENU** (T8) button to return to the Main Menu or T1 to return to the Field Tech Options Menu.

## Current Damper Positions

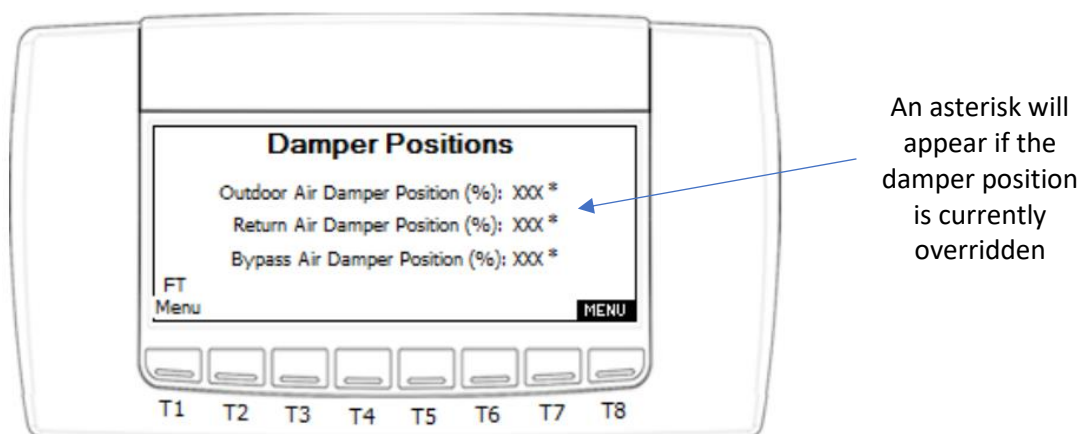


Figure 48. Damper Positions screen

T1: Go to Field Tech Menu  
T8: Go to Main Menu

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Damper Positions Instructions

The “Damper Positions” screen is available to view the current positions of each of the dampers. Press T1 to return to the Field Tech Menu, or press the **MENU** (T8) button to return to the Main Menu.

Input and Output Status

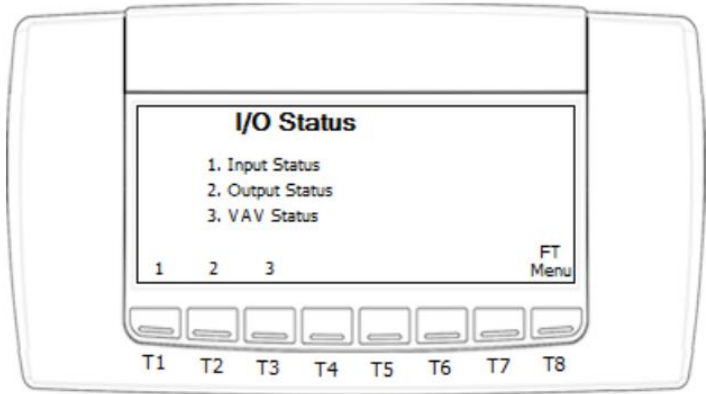


Figure 49. Visograph I/O Status screen

- T1: Go to Input Status
- T2: Go to Output Status
- T3: Go to VAV Status
- T8: Go to FT Menu

Input Status

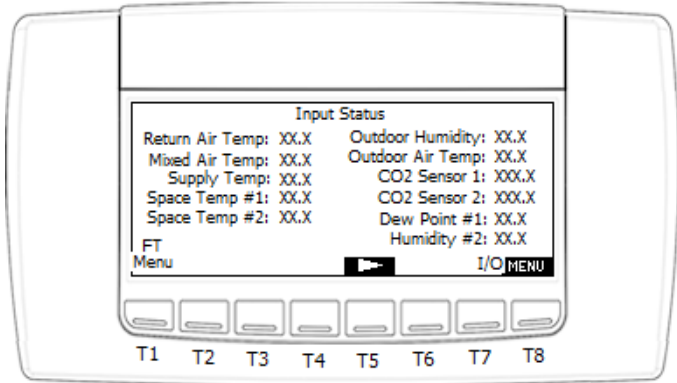


Figure 50. Visograph Input Status screen 1

- T1: Go to Field Tech Menu
- T4: Previous Page
- T5: Next Page
- T8: Go to I/O Status Menu

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### Input Status – *Continued*

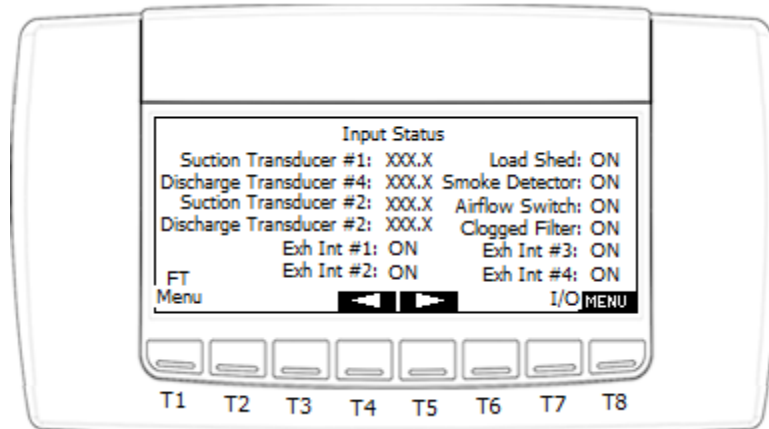


Figure 51. Visograph Input Status screen 2

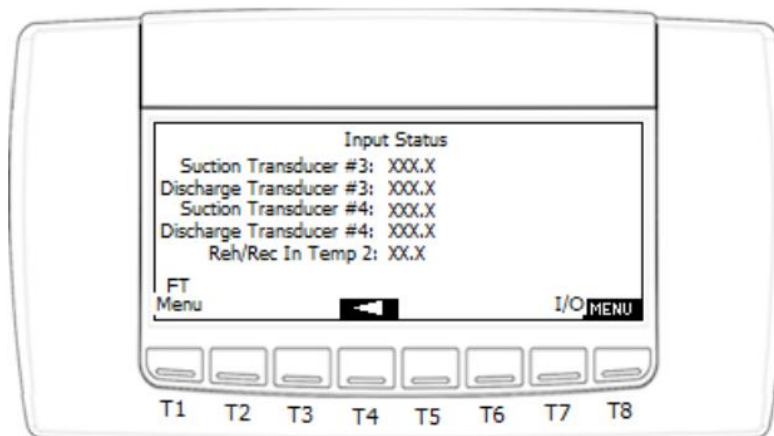


Figure 52. Visograph Input Status screen 3

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### Output Status

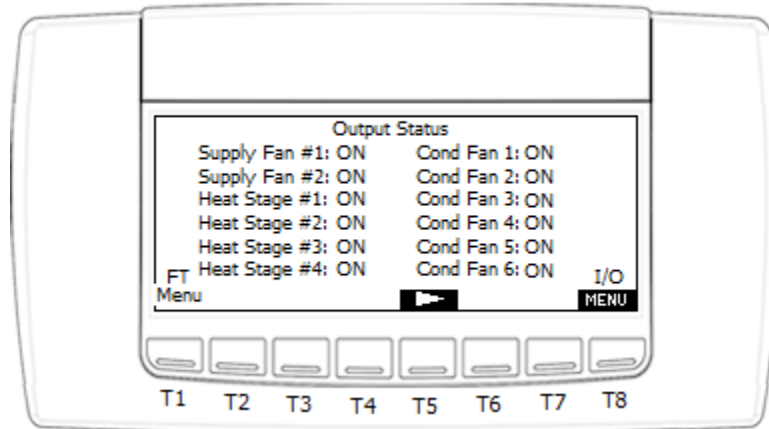


Figure 53. Visograph Output Status screen 1

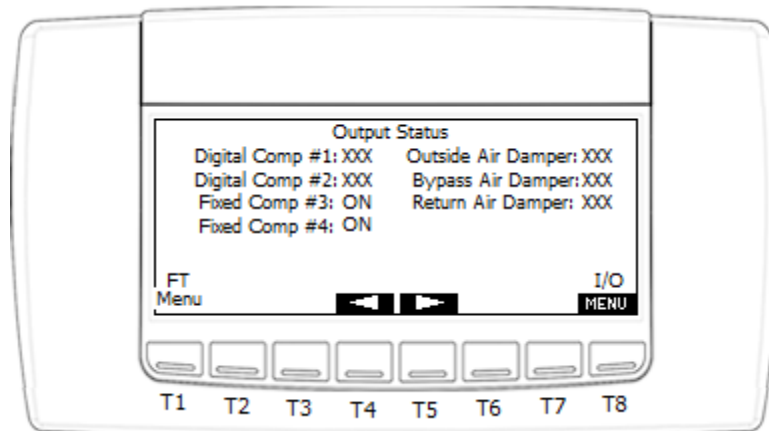


Figure 54. Visograph Output Status screen 2

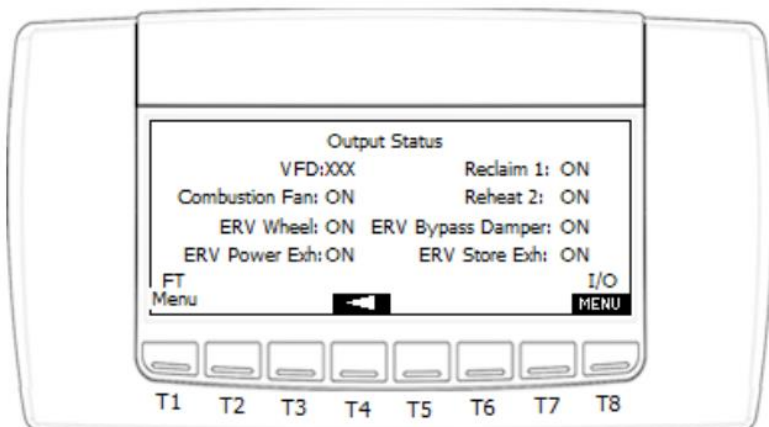


Figure 55. Visograph Output Status screen 3

## Title: i-Controller Visograph Navigation for REV.200

### VAV Status

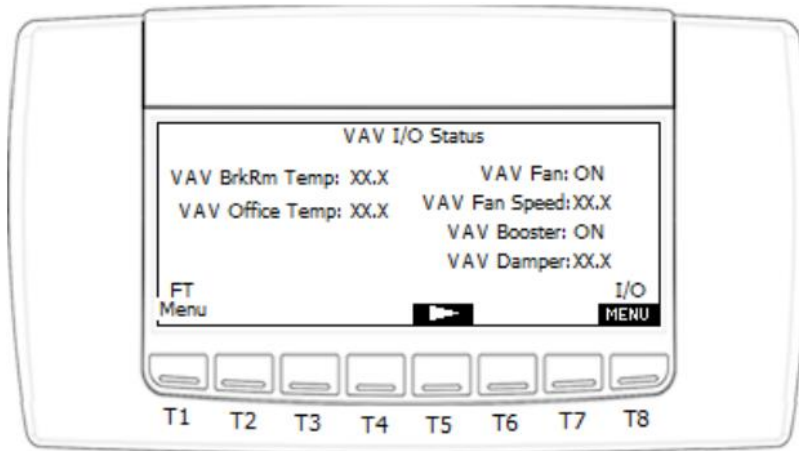


Figure 56. Visograph VAV I/O Status screen 1

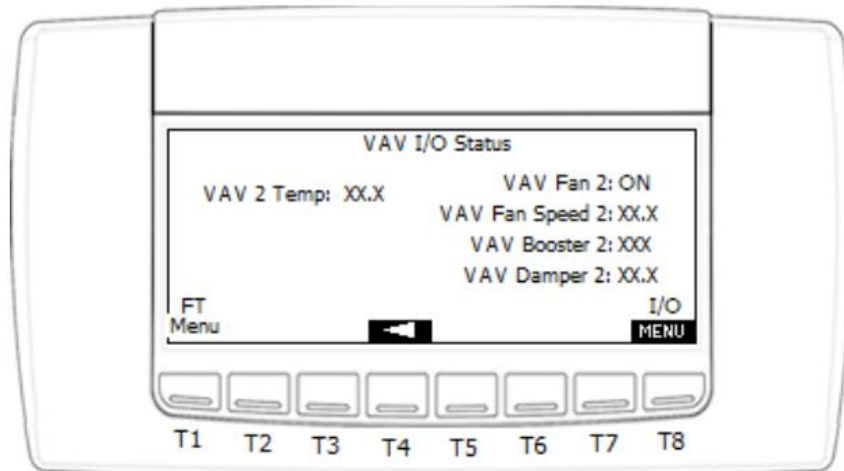






Figure 57. Visograph VAV I/O Status screen 2

### I/O Status Instructions

The “I/O Status” screens are available to view the current readings for each input and output. Only the inputs and outputs specific to the FLO unit will be visible on the screens.

1. Use the  (T4) and  (T5) buttons to navigate in between the input and output pages.
2. Press T1 to return to the Field Tech Menu, or press the  (T8) button to return to the I/O Status Menu.

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## Demand Control Ventilation (DCV)

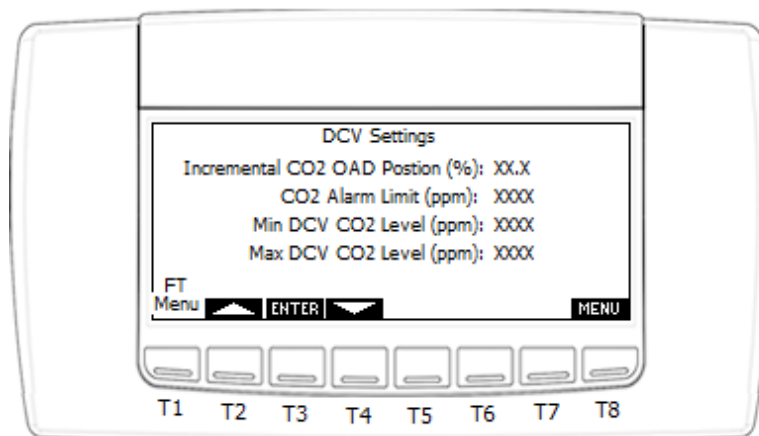






Figure 58. Visograph DCV Settings screen

T1: Go to FT Menu  
T2: Increase Value  
T3: Enter  
T4: Decrease Value  
T8: Go to Menu

## DCV Setting Instructions

The “DCV Settings” screen is available to set ventilation parameters for units equipped with a CO2 Sensor. The beginning ventilation CO2 level, the max ventilation CO2 level, and alarm parameter can be adjusted in this screen. To adjust the CO2 ventilation parameters, perform the following steps:

1. Using the  and  buttons (T2 and T4, respectively) navigate to the value that you wish to change.
2. Once the value is highlighted, press the **ENTER** (T3) button and the value should blink.
3. Using the  and  buttons increase and decrease the value as desired.
4. Once the desired value has been reached press the **ENTER** button to set the value.
5. Once all changes have been completed, press the **MENU** (T8) button to return to the Main Menu or T1 to return to the Field Tech Options Menu.

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## Overrides

Note: If the i-Controller is connected to a BMS, remove RS485 connection before proceeding with Overrides.

### Override Instructions

Note: Before proceeding to the override options, please note that the overrides are not timed and must be manually removed once your task is complete. All overrides will be reset in the event of a power cycle.

1. To access the Override menu, press T2 on the Field Tech Options Menu to access the Test Modes Menu.
2. From the Test Modes menu, press T2 to access Other Test Modes.
3. Once in the Other Test Modes screen, press T6 and T7 simultaneously to access the QA Options.
4. Then press 2 to access the Override options.

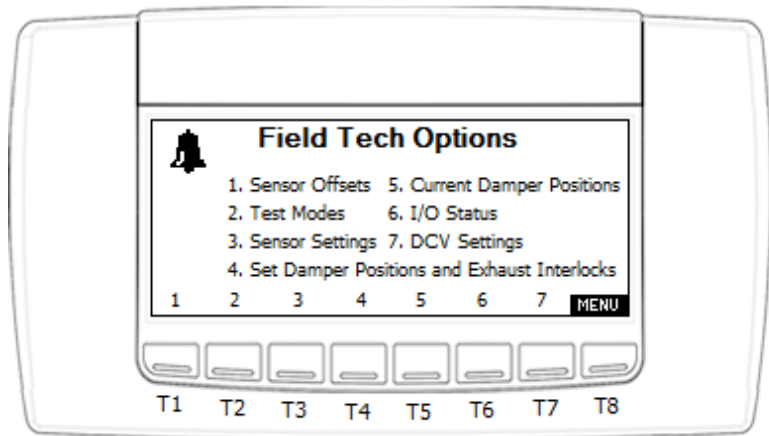


Figure 59. Visograph Field Tech Options screen

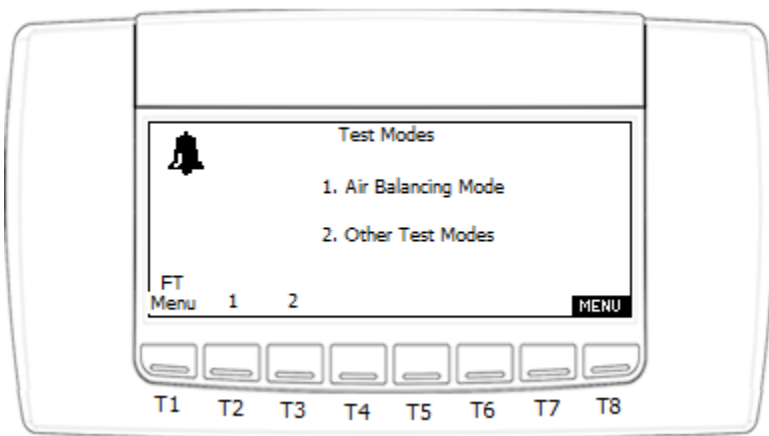


Figure 60. Visograph Test Modes screen



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Override Instructions – *Continued*

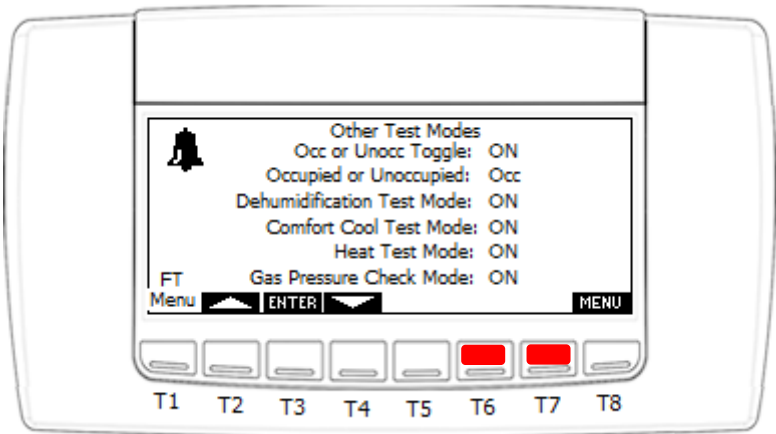


Figure 61. Visagraph Other Test Modes screen

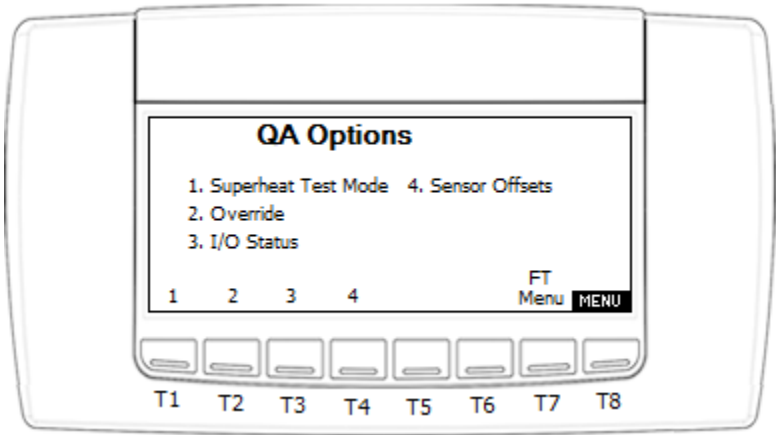


Figure 62. Visagraph QA Options screen

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## Override Instructions – Continued

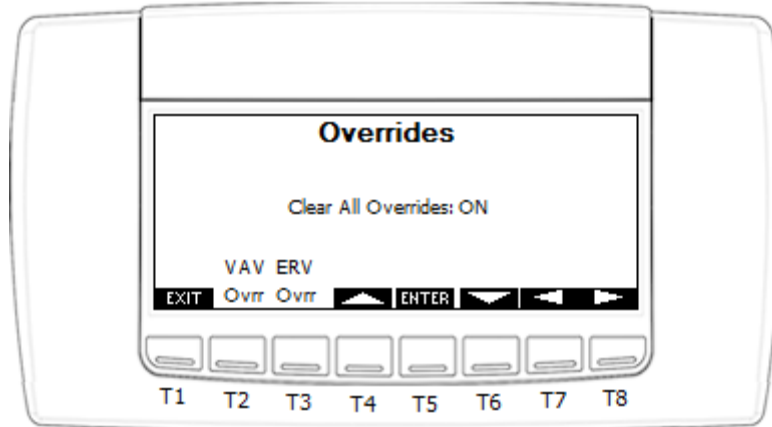


Figure 63. Visograph Overrides screen 1

- T1: Go to QA
- T4: Increase
- T5: Enter
- T6: Decrease
- T8: Next Page
- T7: Prev Page

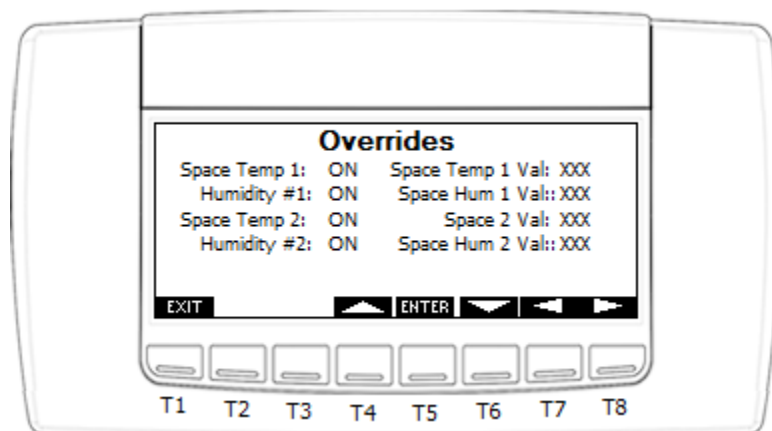


Figure 64. Visograph Overrides screen 2

## Title: i-Controller Visagraph Navigation for REV.200

### Override Instructions – Continued

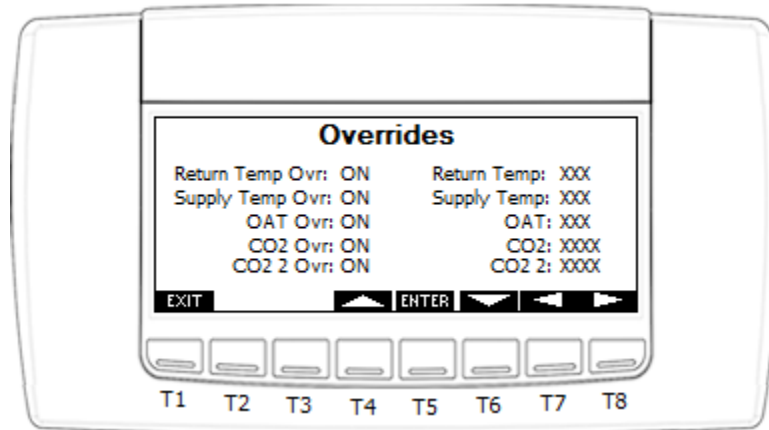


Figure 65. Visagraph Overrides screen 3

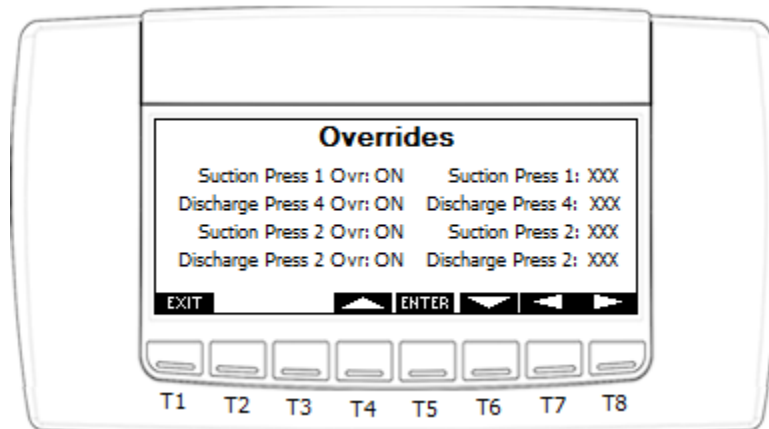


Figure 66. Visagraph Overrides screen 4

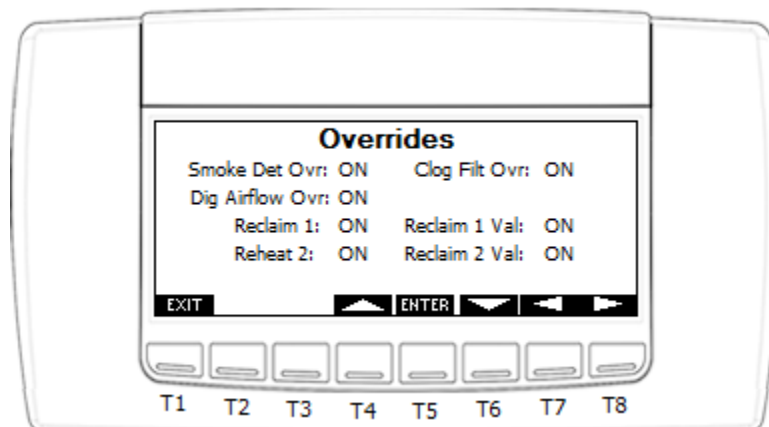


Figure 67. Visagraph Overrides screen 5

## Title: i-Controller Visograph Navigation for REV.200

### Override Instructions – Continued

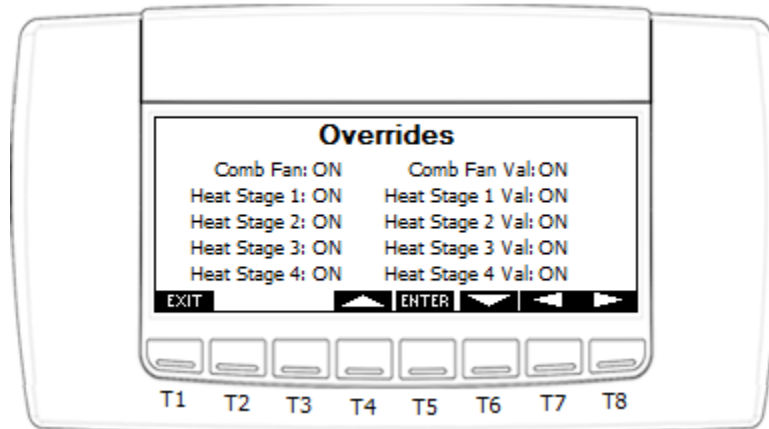


Figure 68. Visograph Overrides screen 6

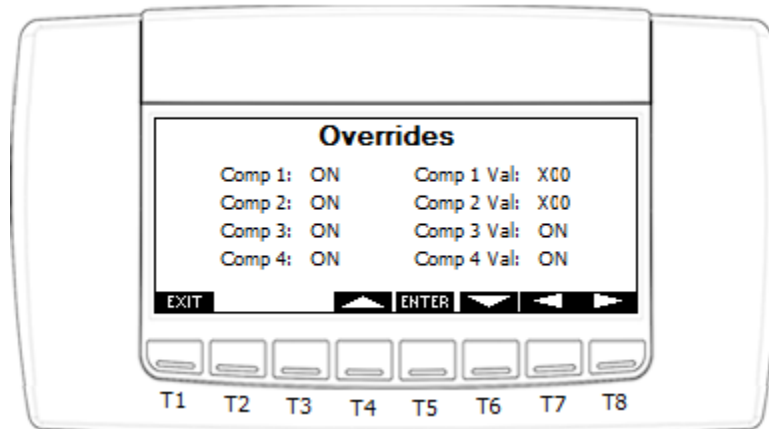


Figure 69. Visograph Overrides screen 7

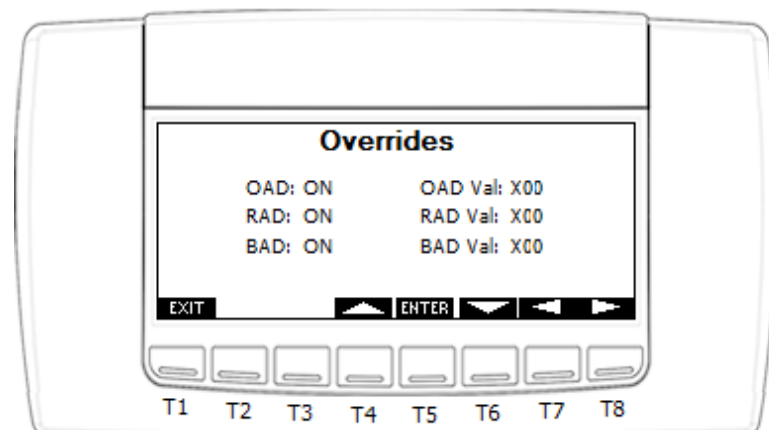


Figure 70. Visograph Overrides screen 8

**Title:** i-Controller Visograph Navigation for REV.200

## Override Instructions – Continued

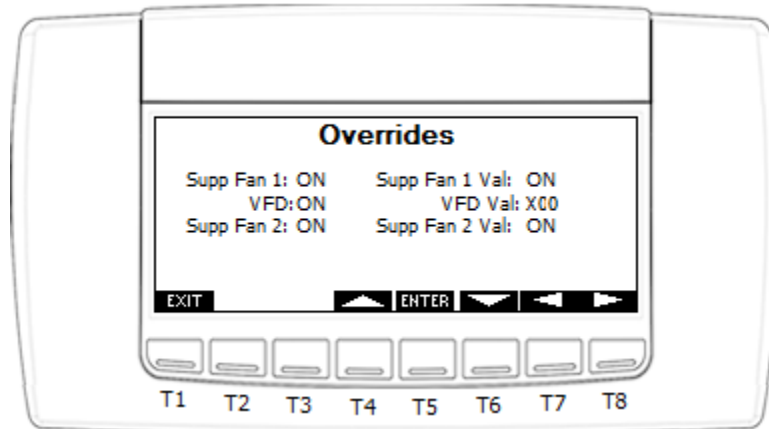


Figure 71. Visograph Overrides screen 9

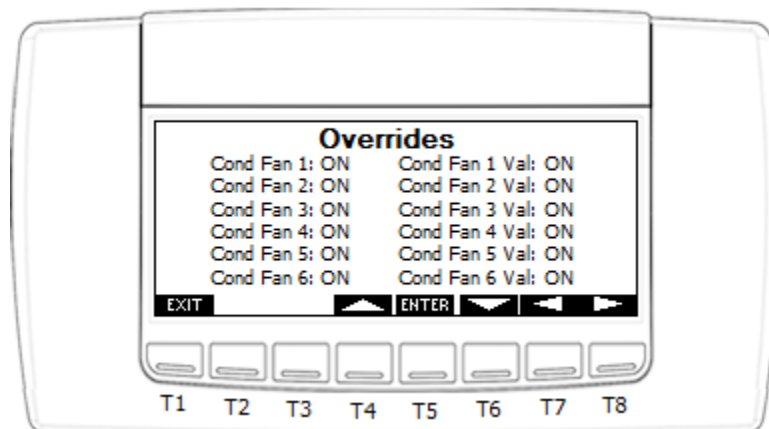


Figure 72. Visograph Overrides screen 10

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Override Instructions - *Continued*

- 1. From the Main Overrides screen, press T2 VAV Ovrr to access the VAV Overrides.

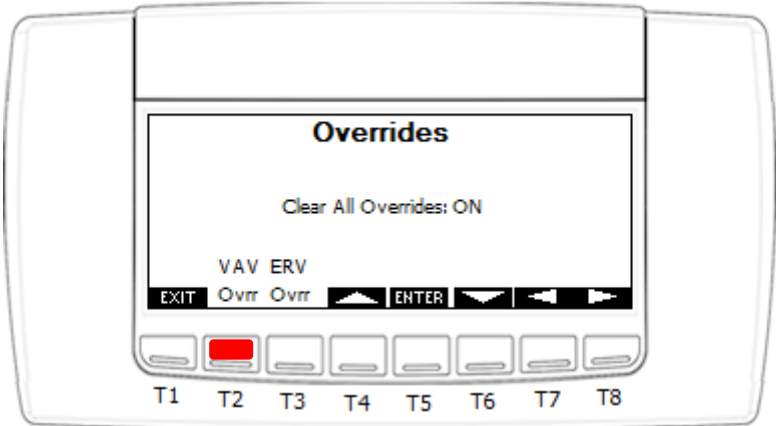


Figure 73. Visograph Overrides screen

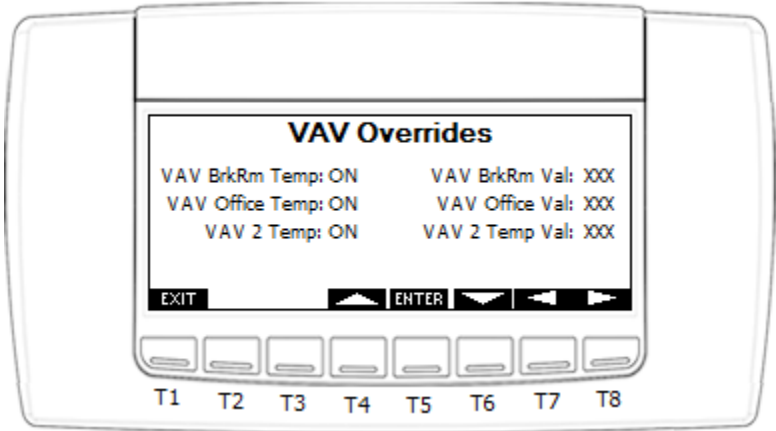


Figure 74. Visograph VAV Overrides screen 1

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## VAV Override Instructions – *Continued*

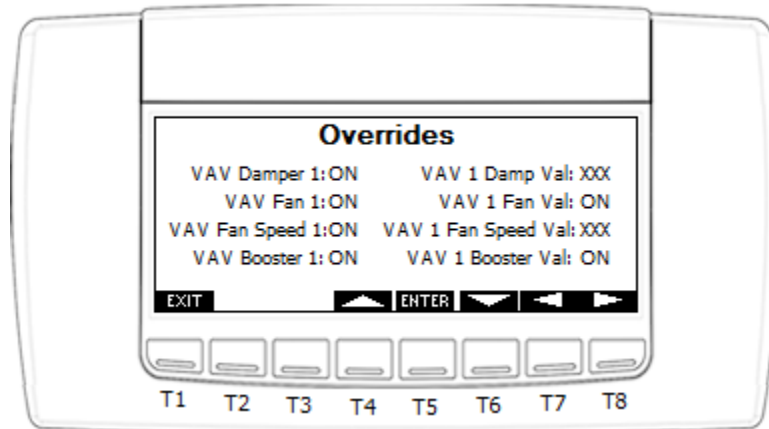


Figure 75. Visograph VAV Overrides screen 2

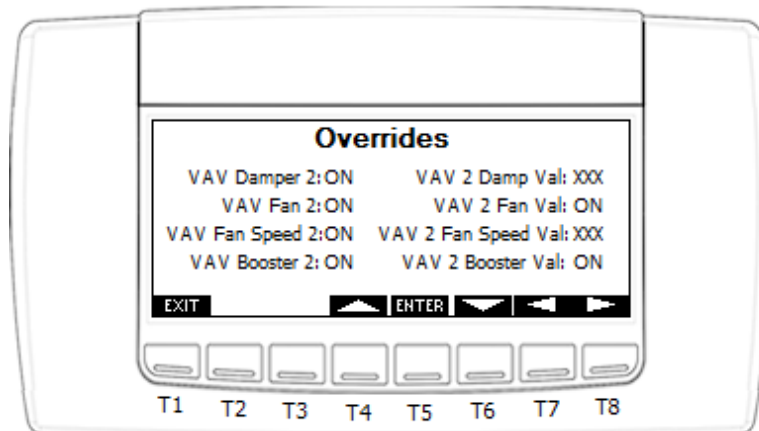



Figure 76. Visograph VAV Overrides screen 3

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Energy Recovery Wheel (ERV) Overrides

- 1. From the Main Overrides screen, press T3 ERV Ovrr to access the ERV Overrides.

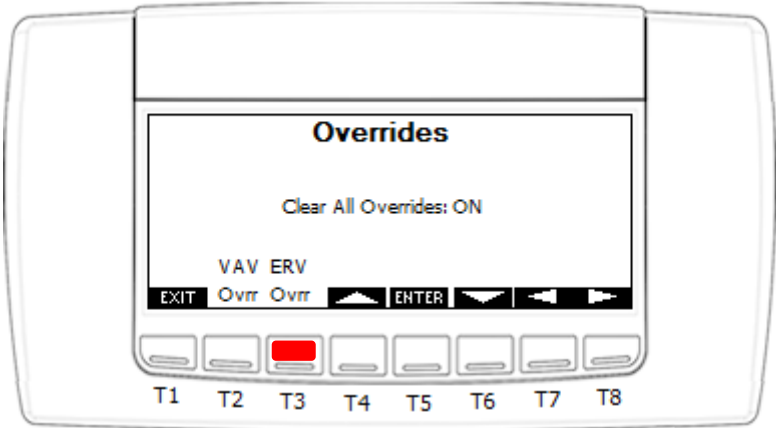


Figure 77. Visograph Overrides screen

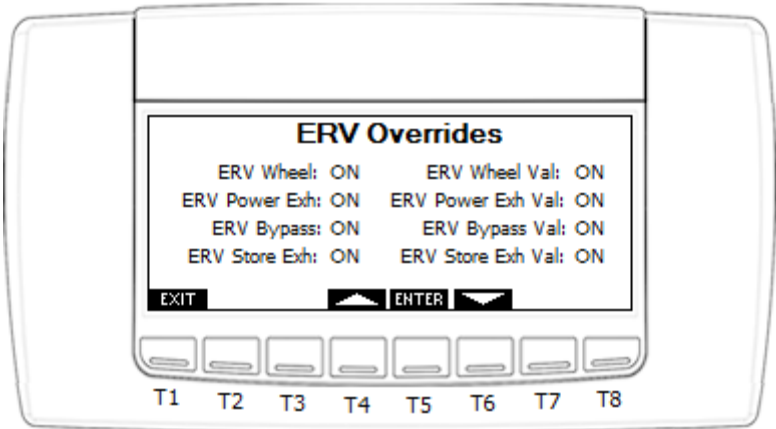



Figure 78. Visograph ERV Overrides screen 1

Override Instructions










The “Overrides” screen is available to set specific values for the inputs and outputs for diagnostic testing. Please note that these overrides are not timed, and will remain in the controller until they are manually removed. **All overrides will be reset in the event of a controller power cycle.** To place an override on a specific variable, first the override needs to be turned on and then the desired value is adjusted (i.e. Cond Fan 1: ON, Cond Fan 1 Val: ON will force Condenser Fan 1 ON).



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## Override Instructions – *Continued*

To adjust the override value for inputs and outputs perform the following steps:

1. Using the  and  buttons (T4 and T6, respectively) navigate to the value that you wish to change.
2. Once the value is highlighted, press the  (T3) button and the value should blink.
3. Using the  and  buttons increase and decrease the value as desired.
4. Once the desired value has been reached press the  button to set the value.
5. Use the  (T7) and  (T8) buttons to navigate to the second page if more than 4 exhaust fan interlocks exist on the unit.
6. Repeat steps 1-4 until all desired values have been updated.
7. Once testing is complete and you would like to clear all overrides, turn the “Clear All Overrides:” value located on page 1 ON. This value will automatically turn OFF after a specified time.
8. Once all changes have been completed, press the  (T1) button to return to the QA Menu.