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Configuration Tool Quick Start Guide

Overview

This manual is for the use and operation of the AGM Configuration Tool in conjunction with a computer and an accompanying 357200, 357205, or 357220 AGM Humidity Sensor unit.

Important Note

The sensor consumes a relatively large amount of power when connected to the Config Tool. Every minute that the sensor is connected to the Config Tool consumes hours of normal operating life. Therefore, minimizing the amount of time that a sensor is connected to the Config Tool is recommended.
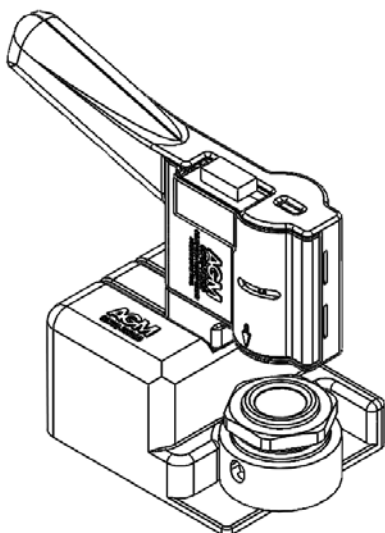
Config Tool with desktop cradle and 357200 (Gen1.1) AGM Humidity Sensor
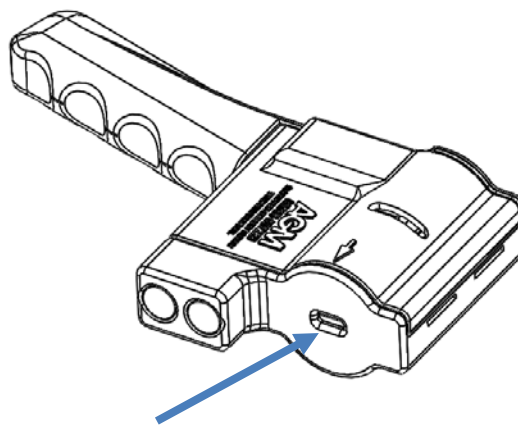
Config Tool transceiver

Configuration Tool Graphical User Interface (GUI)

Connecting to a Sensor

1. Connect the Config Tool to a PC
   a. USB: Connect directly to a USB port with a micro-USB cable for power and communication.
   b. Serial: For power, connect USB to an adapter or disabled USB port. For communication, connect the Config Tool to a serial port with a DB-9 null-modem serial cable. (Both power and communication are required.)
2. Open the Humidity Sensor Configuration Utility.
3. Under the serial port pulldown, select the available COM port.

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4. If you are using the Config Tool with its desktop cradle, place the sensor in the cradle. Otherwise, position in front of sensor window. For best results the Config Tool should be placed as close to the sensor window as possible, but it typically can connect across a maximum distance of approximately 4". It is important for the Config Tool to be mostly stationary while it is connected to a sensor, and the handle of the Config Tool contains magnets to make this easier.
5. Click the 'Connect' button. The GUI will automatically read the sensor serial number, firmware version, sensor type, and firmware commit hash when the connection is successful.
6. Maintain an optical path between the sensor and the tool while configuring the sensor. If the config tool loses connection with the sensor for too long, the tool will terminate communications. The sensor will automatically exit configuration mode after 10 seconds if it loses its connection to the sensor.
7. Click the 'Disconnect' button when configuration of the sensor is complete.

Configuring a Sensor through the GUI

1. Choose 'Update Serial' in the 'Options' pulldown to set the sensor serial number if desired.
2. Use the 'Settings' tab to set the operational parameters for the sensor:
   a. Set Trigger Level: The humidity limit for a humidity trigger. If RH is 0, then the trigger level is 5000 PPMv (16% RH at 25°C). Otherwise, the selected relative humidity is the trigger level and the equivalent PPMv at standard pressure and temperature (25°C and 1 atm) is displayed.
   b. Set Trigger Readings: The number of consecutive humidity readings in excess of the trigger level required to cause the sensor to display a 'Bad' humidity status.
   c. Set Sensor Date/Time: Set the time and date of the sensor. See the following item for instructions on retrieving the current UTC time.
   d. Update Time (UTC): Retrieve the current UTC time from the connected PC in preparation for writing it to the sensor.
   e. Click the 'Read Sensor Settings' button retrieve and display the existing parameters on the sensor.

Downloading Sensor Data through the GUI

1. Click the 'Download Logged Data' button on the 'Commands' tab to download the sensor data. The sensor will transmit its data to the attached PC via the config tool and allow the user to save it as a .csv file. Note that downloading 20 years of data may take several minutes.

Resetting a Sensor through the GUI

1. Reset the sensor through the 'Commands' tab:
   a. Click the 'Soft Reset' button to reset the sensor humidity trigger status to 'Good'. The sensor will continue to log data and the current data log on the sensor will remain intact.
   b. Click the 'Hard Reset' button to return the sensor to its factory reset mode. This will erase all logged data and make the sensor go dormant. To make the sensor start data logging again, activate it with an IR Flashlight as described in the Sensor Operation Manual.

Sensor Diagnostic Testing through the GUI
The GUI includes features which allow the user to diagnose sensor issues.

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1. Under the 'Commands' tab in the GUI, the user can test the sensor LEDs:
    a. Click the 'Blink Red LED' button to turn on the Red LED momentarily.
    b. Click the 'Blink Green LED' button to turn on the Green LED momentarily.
2. Under the 'Diagnostics' tab in the GUI, the user can test the sensing functions on the sensor.
    a. Click the 'Read Temperature' button to display the current temperature.
    b. Click the 'Read Humidity' button to display the current humidity.
    c. Click the 'Read Battery' button to display the current battery voltage.
    d. Click the 'Read Start Date/Time' button to display the recorded timestamp which was written when the sensor was first activated.
    e. Click the 'Read Reading Count' button to display the number of humidity readings the sensor has taken.
    f. Click the 'Read Touch Status' button to display the current state of the touch window.
    g. Click the 'Read Active Status' button to display whether the sensor is actively taking measurements.
    h. Click the 'Read Debug Data' button to populate the list of debugging info.

Config Tool LED Reference

LED	Status
D2 USB Rx	Config Tool is receiving data from its host PC
D1 USB Tx	Config Tool is transmitting data to its host PC
D4 High Speed	Config Tool is communicating to the Humidity Sensor in High-Speed mode
D3 Serial	Config Tool is communicating to the Humidity Sensor over RS-232 serial
D6 IrDA Rx	Config Tool is receiving data from the sensor
D7 IrDA Tx	Config Tool is transmitting data to the sensor
D5 Power	Config Tool is powered