

Use Case S2: Detailed Description

Use Case Name: Monitor Humidity Data

Scenario: N/A

Brief Description: With the System Running, the System monitors the Humidity Data by periodically requesting humidity information from the 1-Wire Humidity Sensor (OneWireSensor26)

Actors: System

Related Use Cases: Use Case A1, *The Administrator shall set the Measurement Rate*
Use Case S7, *The System shall save Humidity Data*
Use Case S8, *The System shall save the Humidity Extremes*
Use Case S12, *The System shall calculate the Heat Index*
Use Case S13, *The System shall calculate the Dew Point*
Use Case S9, *The System shall determine the Humidity Extremes*

Stakeholders: National and local weather bureaus, use

Preconditions: The System is running, the measurement rate is set, the network is up and running

Postconditions: The Humidity is calculated, the humidity data is compared to the extremes

Flow of Events

System	One Wire Humidity Sensor
1. Periodically request humidity data	2. Returns Humidity Data (preferably raw)
3. Converts the raw humidity data to a percentage (relative)	

Exceptions Conditions:

2. If the One Wire Humidity Sensor returns an error, then the System shall report the error and display a default humidity value (-99.9)

2. If the One Wire Humidity Sensor stops working (“drops out”), then the system shall report and display an error and display a default humidity value (-99.9)

2. If the Network stops working, then the system shall report an error and display a default humidity value (-99.9)