



OmniSense FMS Remote Monitoring Service Web Site Product Brief

Overview

The OmniSense Facility Monitoring System (FMS) Customer Web Site provides a user friendly interface to the OmniSense Database Server (ODS). A typical 100 room hotel installation will generate about 57000 sensor data points per day. The ODS checks each data point against user settable alarm thresholds, triggers an alarm event if necessary, and permanently stores the data point and its context including the sensor ID, Network ID, and when it occurred. The web site provides powerful interactive analysis tools which can distill thousands of sensor data points into easy to read tables and graphs.

The screenshot shows a web browser window titled "Sensors at Hoogenboom, Hudson - Microsoft Internet Explorer". The address bar shows "http://www.omnisense.com/sensor_select.asp?siteNbr=8". The page header includes the OmniSense logo and navigation links: "Log-out | My Account | Companies | Sites |".

The main content area is titled "Sensors at Hoogenboom, Hudson" and contains instructions:

- 1) To View All Sensor Detail and/or Activity click on a Sensor Id below.
- 3) To Sort By A Specific Data Type click on a Column Header.
- 2) To View Activity for a Specific Data Type click on a Data Value.

Below the instructions is a breadcrumb trail: "My Account > Companies > Sites > Sensors". There is a filter option: "Only Show Sensors With Active Alarms" with radio buttons for "Yes" and "No" (selected).

Sensor Id	Type	Last Activity	Sts	Temp	RH%	WME	VBatt	VAux
09600002	1	05/03 19:21:53	A	54.36	44.73	10.92	3.38	0.00
09600003	1	05/03 19:22:19	A	53.46	47.32	11.56	3.36	0.00
09600004	1	05/03 19:23:50	A	52.11	51.24	13.27	3.33	0.00
09600005	1	05/03 19:18:56	A	52.81	46.93	12.95	3.37	0.00
09600006	1	05/03 19:07:42	A	48.16	63.10	17.08	3.38	0.00
09600007	1	05/03 19:25:04	A	47.68	65.94	16.93	3.33	0.00
09600008	1	05/03 19:23:43	A	45.14	69.30	16.39	3.29	0.00
09600009	1	05/03 19:27:24	A	47.16	60.16	15.89	3.27	0.00
0960000A	1	05/03 19:31:33	A	46.29	58.21	15.77	3.40	0.00

Figure 1 - Typical Sensor Summary Page

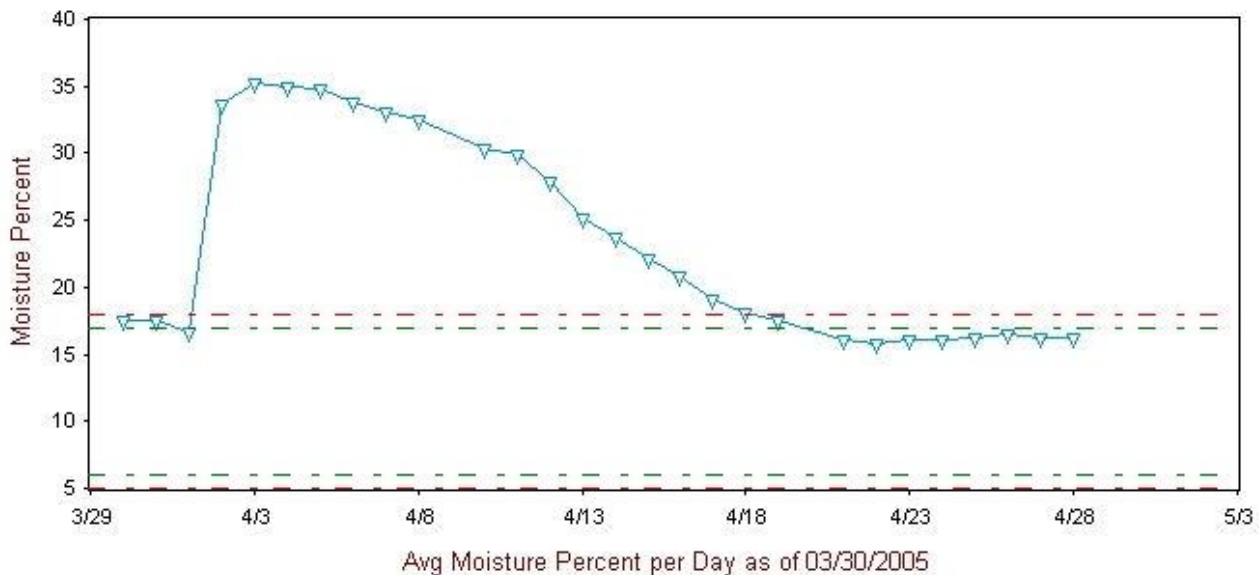
For more information contact OmniSense Sales
OmniSense LLC • 2230 Peninsula Road • Oxnard, CA 93035
Phone (805)-340-9625

www.omnisense.com • E-mail: info@omnisense.com

Alarms

From the web site users with administrative privileges can configure thresholds for when alarms will go on and off, who should be notified and how they should be notified. Once an alarm has been reported users can quickly analyze that sensor's (and possibly neighboring sensors') data on the web site to help understand the scope of the problem. Figure 1 is an example of a summary web page of sensor data for a typical sensor network. From this web page users can quickly view and sort all the sensors in their network and identify sensors whose readings have triggered an alarm event and what their current readings are.

Sensor: 0960002A - 2nd story guest bedroom, corner window facing pond, lower left corner as view from exterior
Type: 1 - Moisture Meter **Company:** OmniSense
Status: Active **Site:** Hoogenboom, Hudson



| Last Hour | Last Day | Last Week | Last Month | Last 3 Months | Last 6 Months | Last Year | All Readings |

Figure 2 - Typical Sensor Data Graph Web Page

If a sensor has triggered an alarm a history of that sensor's data can be viewed in a graph such as shown in Figure 2. The graph shows that a significant spike in the %WME for sensor ID 0960002A occurred on April 1st which, not surprisingly, coincided with a rainstorm on that day. The sensor's humidity data can be analyzed to determine if the leak is confined to the exterior surface of the structure or has penetrated to the interior wall cavity. The sensor detail page shown in Figure 3 provides the GPS position of a sensor and/or a text description of the sensor's



location; for example "room 201 window lower left as viewed from exterior". Within minutes of the alarm maintenance personnel can be dispatched to the site of the alarm to determine the cause of the problem and the scope of the necessary repairs. When compared to the months or years of undetected damage that can occur in an unmonitored structure the benefits of the OmniSense FMS are speak for themselves.

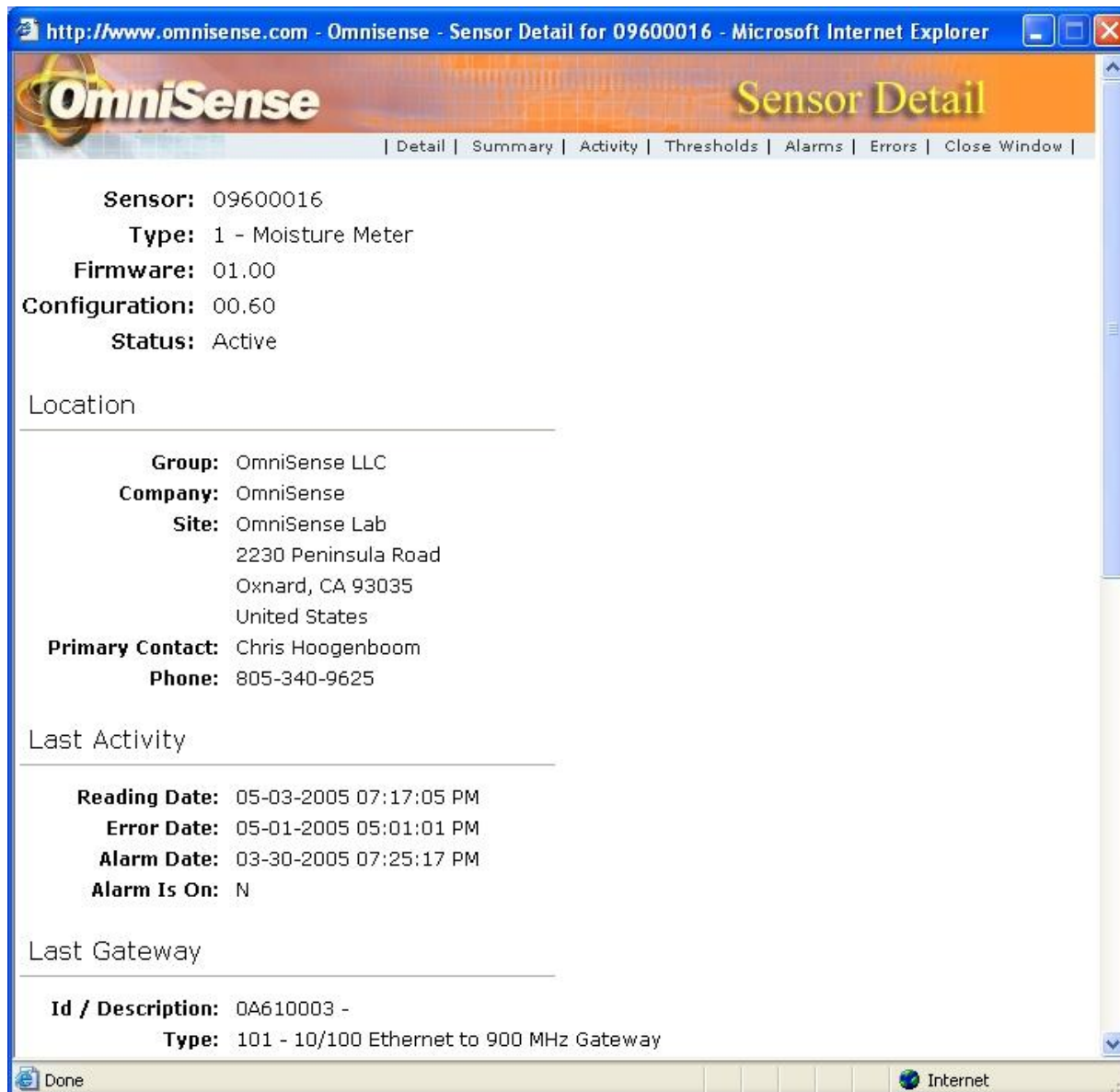


Figure 3 – Sensor Detail Web Page

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Trend Analysis

The FMS web site provides useful tools for extracting valuable information about the overall performance your structure. The graph in Figure 4 is a plot of the temperature for all the sensors in a network. The graph shows a significant variation in temperature during colder periods indicating a possible issue with the quality of the structure's insulation.

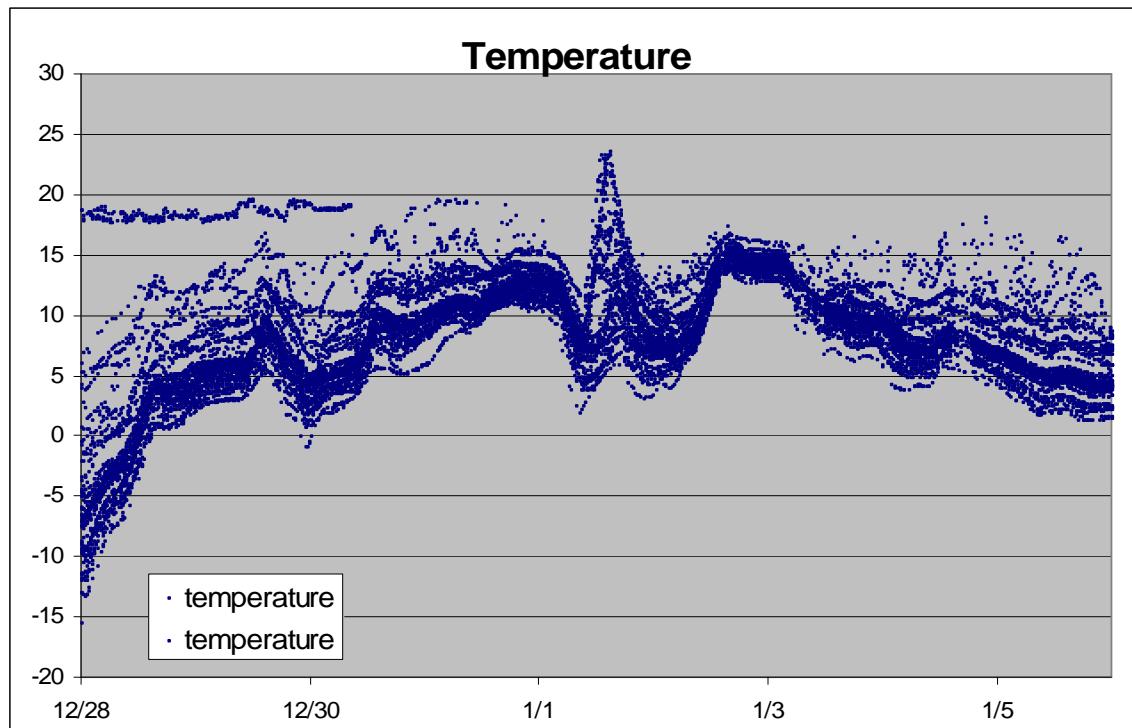


Figure 4 - Graph of Temperature for all Sensors in Network

Data Storage

The ODS application runs on a high reliability server farm in a secure data center. Subscriber's data is permanently archived the benefits of which are:

- If you ever sell your property you have the data to show that it was well maintained
- If you are ever sued for toxic mold exposure you have the data to show your property was well maintained
- If your contractor denies liability in a moisture related construction defect you have the data to prove when and where the problem occurred