



**User's Manual  
Installation and Operation Guidelines**

**SiteBoss™ 420 Remote Site Manager**

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Version 1.00.101

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# SiteBoss™ 420 Remote Site Manager Installation and Operation Guidelines

Manual Rev. A  
for Firmware Version 1.00.101 \_STD  
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## Changes In This Version of the User Manual

- Internal temp sensor now comes with an external temp sensor cable to provide accurate temperature readings from just outside the unit.
- Added a [login credentials](#) requirement, with default Username and Password
- Changed all references from “Unit ID” to “Site Name”.
- Changed all references from “Gateway” to “Router Address”.
- Added a section to explain how to reset [default settings](#) for all settings, and also for just User Name and Password only.
- Increased the number of external [Type2 EventSensors](#) that can be supported from two to three.

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# Table of Contents

<b>Quick Start</b> .....	<b>1</b>
<b>What's Included</b> .....	<b>1</b>
Hardware Needed .....	1
Information Needed .....	1
<b>Connecting</b> .....	<b>1</b>
Cables and Power.....	1
Power Requirements .....	1
Accessing the unit via the Web Interface.....	1
<b>What is a SiteBoss 420</b> .....	<b>3</b>
<b>The Basics</b> .....	<b>3</b>
Communication Methods .....	3
Event Notification .....	3
<b>Parts Identification</b> .....	<b>3</b>
Features and Accessories .....	3
LEDs, Ports, DIP Switches and Buttons .....	4
<b>Getting Connected</b> .....	<b>7</b>
<b>Power Up Sequence</b> .....	<b>7</b>
<b>Default Passwords</b> .....	<b>7</b>
<b>Device Status Screen</b> .....	<b>7</b>
<b>Settings Tabs</b> .....	<b>8</b>
<b>Status</b> .....	<b>9</b>
<b>General</b> .....	<b>11</b>
<b>Networking</b> .....	<b>12</b>
<b>Events</b> .....	<b>13</b>
On-Board Sensors .....	13
SensorJack <i>n</i> Sensors .....	16
<b>Alerts</b> .....	<b>19</b>
General Settings Tab .....	19
Email Alerts Tab.....	20
SNMP Alerts Tab .....	21
<b>Administration</b> .....	<b>22</b>
Firmware Update .....	22
Reset Unit .....	22
Reset Parameters .....	23
Reset ALL Parameters.....	23
Upload Settings to Unit .....	23
Download Settings from Unit .....	23
<b>Resetting Defaults</b> .....	<b>24</b>
<b>Setting Keys</b> .....	<b>25</b>
<b>Type2 EventSensor™ Setup</b> .....	<b>28</b>
<b>Connections</b> .....	<b>28</b>
<b>DIP Switch Settings</b> .....	<b>28</b>
<b>Configuration</b> .....	<b>28</b>
<b>Appendices</b> .....	<b>29</b>
<b>Canadian Department of Communications</b> .....	<b>29</b>
<b>Warranty Information</b> .....	<b>31</b>



# Quick Start

## What's Included

This chapter is a brief guide to help get your SiteBoss 420 (S420) up and running quickly.

## Hardware Needed

- Asentria SiteBoss 420
- 15VDC power adaptor
- Ethernet cable
- A PC running Asentria OmniDiscover software, for purposes of assigning an IP address to the S420.
- A PC running any type of SNMP trap management software, if S420 will be sending SNMP traps as event actions.

## Information Needed

- IP address to assign to the S420
- Subnet mask
- Default router IP or gateway router IP address if on a WAN (Optional)
- IP address of a PC running any type of SNMP trap management software, if S420 will be sending SNMP traps as event actions.

## Connecting

### Cables and Power

1. Connect the attached ground wire securely to an appropriate earth ground (this is essential).
2. Connect an Ethernet cable into the RJ-45 jack labeled Ethernet.
3. Connect the power supply to the unit.

### Power Requirements

The S420 is configured with a power jack for connecting the 15VDC power adapter shipped with the unit. If the optional DC power option is being used, a –48VDC to AC power adapter is provided.

### Accessing the unit via the Web Interface

1. Connect a network cable to the Ethernet port on the back panel of the S420.
2. Assign an IP address to the S420 using one of the following two methods:
  - 1) **Asentria OmniDiscover application** – available from the Documentation and Utilities CD or the Asentria web site: <http://www.asentria.com/docsandsoftware/productManuals.aspx>
    - a. Open the Asentria OmniDiscover application, and select Search on the top menu bar. The S420 will be displayed in the main window including the MAC address, default Site ID, and default Subnet Mask (255.255.255.0)
    - b. Right click the S420 line, and select “Setup” from the menu that appears.
    - c. Enter the IP Address, Subnet mask (if not default) and Gateway router address you want to assign to the S420.
    - d. Press the “OK” button and you’ll be returned to the main OmniDiscover window where you should see displayed the network address configurations you just entered.
    - e. Right click the S420 line again, and select “Web”. The web interface of the S420 will be displayed, showing you the Device Status screen (as shown below). You are now connected and ready to configure remaining settings.

#### 2) ARP/Ping

- a. From a command prompt on your PC, issue the following two commands (the S420 must have no IP address configured for this to work):

```
ARP –s nnn.nnn.nnn.nnn xx-xx-xx-xx-xx-xx  
Ping nnn.nnn.nnn.nnn
```

(where *nnn.nnn.nnn.nnn* is the desired IP address, and *xx-xx-xx-xx-xx-xx* is the MAC address)

- b. Open your Internet browser and enter this URL: **http:// < IP address of the S420>**. The web interface of the S420 will be displayed, showing you the Device Status screen (as shown below).

## SiteBoss S420-0 - Enclosure Monitoring Unit

Serial #: S42001000165 -- Version: 1.00.101 STD -- Site Name: S42001000165

Status	General	Networking	Events	Alerts	Administration
--------	---------	------------	--------	--------	----------------

### Device Status

**General Information**

Site Name :	S42001000165	IP Address :	192.168.100.42
Firmware :	1.00.101 STD	MAC Address :	00:10:A3:50:05:91
Unit Serial # :	S42001000165	Subnet Mask :	255.255.255.0
Date :	08/25/09	Router Address:	192.168.100.2
Time :	15:47:19		

**On-Board**

OB-Temperature :	82 deg. F (Normal)		
CC Input 1 :	Open (Inactive)	CC Input 5 :	Open (Inactive)
CC Input 2 :	Open (Inactive)	CC Input 6 :	Open (Inactive)
CC Input 3 :	Open (Inactive)	CC Input 7 :	Open (Inactive)
CC Input 4 :	Open (Inactive)	CC Input 8 :	Open (Inactive)

**SensorJack 1**

Temperature :	80 deg. F (Normal)		
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**SensorJack 2**

Temperature :	80 deg. F (Normal)	Humidity :	32% (Normal)
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When the Device Status screen appears, the unit is successfully connected and ready for use.

**Note:** The SensorJack *n* section of the Device Status screen only appears if from one to three (max) Type2 EventSensors are connected to the S420. In the example shown above, two Type2 EventSensors are connected to the S420 and displayed. Refer to the [Events/SensorJack \*n\* Sensors](#) and [Type2 EventSensor Setup](#) sections for more information.

# What is a SiteBoss 420

## The Basics



Fig 1: S420-0 (stacked on S420-2 for comparison)

The SiteBoss 420 (S420) series is a cost-effective system used for monitoring and control of remote equipment sites. The S420 provides for remote monitoring of smaller numbers of contact closures, analog measurements, temperature and humidity, and provides notification when conditions fall outside defined limits. The S420-0 (smaller unit shown above) supports 8 on-board I/O points that can be ordered in various configurations, and a SensorJack port, but does not support Expansion Cards. The S420-2 (larger unit shown above) does not have on-board I/O (other than the on-board SensorJack) but it does provide two slots for insertion of Expansion Cards.

### Communication Methods

Communication with the S420 is done solely via the web interface. The S420 has a built-in HTTP web server that is used to configure the unit from anywhere the unit can be accessed on the network or Internet. Once you have assigned an IP address to the unit, simply connect to <http://<IP address of S420>>. Secure Sockets Layer (SSL) <https://<IP address of S420>> is not supported.

### Event Notification

Notifications for events generated or detected within the S420 can be delivered through any of the following means:

- Email
- SNMP trap
- Relays (if S420-2 is configured with optional relay Expansion Card)

## Parts Identification

### Features and Accessories

#### Standard Equipment

The base S420 comes with the following standard on-board equipment:

- Wall mount AC power supply
- 8 Contact I/O inputs (S420-0) (see chart below for options)
- 2 – Expansion Port Slots (S420-2)
- 10/100Mb Ethernet interface
- On-board Temperature sensor (modified with external Temp Sensor cable)
- SensorJack Port
- Wall mount brackets

In addition to the above components, the standard unit is shipped with the following accessories:

- This product manual on the Documentation and Utilities CD
- RJ45 Ethernet cable
- 15VDC power supply adapter

### Optional Equipment

The S420 can be ordered with the following optional equipment:

- Humidity sensor

### On-board Options (S420-0 only)

All I/O is non-isolated unless otherwise indicated.

- 8 Contact Closure Inputs
- 8 CC Isolated
- 8 Low-Current Relay
- 8 Voltage Sensor
- 8 4-20mA Sensor
- 4 CC / 4 Voltage
- 4 CC / 4 4-20mA
- 4 CC / 4 Low-Current Relay
- 4 Isolated Voltage / 4 CC
- 4 Isolated 4-20mA / 4 CC

### LEDs, Ports, DIP Switches and Buttons

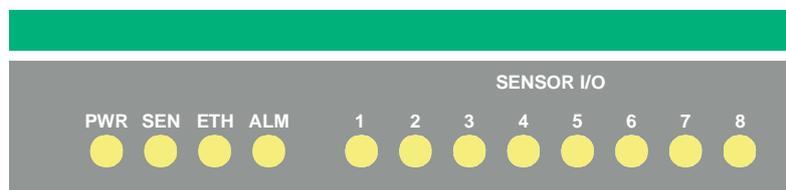


Fig 2: Front panel (S420-0)



Fig 3: Front panel (S420-2)

### LEDs – Front Panel

#### Power

The Power LED lights green when connected to an AC power supply. During normal operation, it is steady on with a blink every 5 seconds.

#### SEN (Sensor)

The SEN LED lights solid green when a Type2 EventSensor is connected to the SensorJack port on the back panel.

#### ETH (Ethernet)

The ETH LED lights solid green whenever an active Ethernet connection is made to the unit and flickers when TCP packets are transmitted or received.

#### ALM (Alarm)

The ALM LED lights solid green to indicate that there is a sensor outside the configured alarm range. The LED will be lit any time any of the eight Sensor I/O LEDs are lit.

#### Sensor I/O LEDs (S420-0 only)

The S420-0 has eight numbered Sensor I/O LEDs that indicate which of the eight contact I/O points on the back panel is outside the configured alarm range.

Expansion Card *n* LEDs (S420-2 only)

The S420-2 has two expansion bays with eight numbered LEDs for each Expansion Card that indicate which of the eight contact I/O points on each card is outside the configured alarm range.

LEDs – Back Panel

The RJ45 Ethernet port on the back panel has two LEDs associated with it – one on the Right of the port, one on the Left.

- Right – Flashes yellow/green when network data (tcp packets) is being transmitted or received across the port. When no data is actually being transmitted/received, this LED is off.
- Left – Lights solid green when an Ethernet cable is connected to the port and an active Ethernet network. The LED is off when the cable is disconnected from the network, or the Ethernet Port

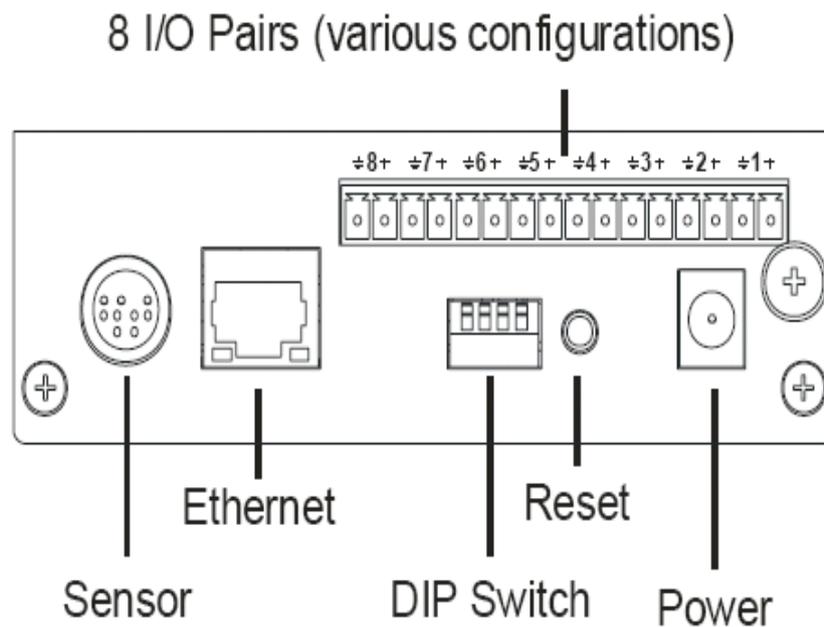


Fig 4: Back panel (S420-0)

The above drawing shows the S420-0 configured (from right to left) with AC power jack, Reset button, bank of 4 DIP switches, one RJ45 10/100 Ethernet port, one SensorJack port, and 8 pairs of contact I/O inputs which can be ordered in various configurations. The S420-2 (available later in 2009) will include two expansion card slots for use with optional Expansion Cards\*.

**» Note:** The on-board temperature sensor is located inside the S420 case but it tends to read higher than normal due to internal heat. An external temperature cable is provided for reading a temperature in very close proximity to the S420 that is more accurate.

PortsEthernet

The Ethernet 10/100Mb interface is standard RJ45 that allows connection to an Ethernet hub or switch. LEDs by the Ethernet port on the back panel flicker when packets are being transmitted/received on that port.

Sensor Jack

The Sensor Jack port is a 9-pin Mini DIN connector for connecting up to three optional Type2 EventSensor devices.

Contact I/O Inputs

These eight pairs of contacts are standard contact inputs by default, but internally can be enhanced, when ordered, to be voltage, relays, current (4-20mA), isolated voltage, isolated current, or isolated contacts.

### **DIP Switches**

The four DIP switches on the back panel of the S420 are not currently used during normal operation. All four DIP switches are shipped from the factory in the UP position, and should remain that way. If all four are set to the DOWN position and the Reset button is briefly pressed, all the internal settings will be returned to default.

### **Buttons**

The only button on the S420 is the Reset button located on the back panel to the right of the DIP switches. When pressed it will cause an immediate reset of the S420. All configurations are preserved when the unit is reset.

### **\* Expansion Cards**

The S420-2 will feature two Expansion Card slots in which optional Expansion Cards can be installed to expand the capabilities of the S420. Contact Asentria Sales ([sales@asentria.com](mailto:sales@asentria.com)) for more information on the S420-2 and Expansion Cards.

## Getting Connected

### Power Up Sequence

When power is applied, the S420 boots up immediately. The PWR LED lights and begins to blink once every 5 seconds, and will do this continuously as a “heartbeat” while the S420 is powered on.

### Default Passwords

S420 firmware version 1.00.000 did not utilize any form of password security. With version 1.00.101 a Username and Password (basic authentication without a secure connection) are required. Default login credentials are admin/password but these can be changed on the [Networking Settings](#) screen.

Three attempts are allowed to enter the correct login credentials. After the third incorrect entry, the login window is no longer displayed, leaving the user with a blank browser screen. Refresh the browser to make the login window reappear, then try again. If needed, the default Username and Password can be set using the DIP switches as described in the [Resetting Defaults](#) section.

### Device Status Screen

The Status tab displays the Device Status screen, which is this unit's one-stop informational source. Much of the information that a user would need to know about the unit is available through this display. Refer to the [Status](#) tab section for a detailed description of all the information available on this screen.

## Settings Tabs

The S420 web interface provides 6 tabs across the top of the main screen that allows access to different settings that can be configured by the user. This section describes each of these tabs and the settings they contain.

**Status** – displays the [Device Status](#) screen where current data about the S420 is displayed. This screen is informational only, with no user configurable settings.

**General** – displays the [General Settings](#) screen where Site Name, Current Date & Time, and Daylight Savings Time adjustment can be configured.

**Networking** – displays the [Networking Settings](#) screen where IP Address, Subnet Mask, Router Address, SNMP Community names, and login credentials can be configured.

**Events** – displays [Events Settings](#) sub-tabs for configuring the On-Board Sensors (internal Temp Sensor and internal contacts (S420-0 only), connected Type2 EventSensors, as well as Expansion Cards (S420-2 only).

**Alerts** – displays the [Alert Settings](#) screen where general alert settings, as well as specific Email and SNMP alert settings can be configured.

**Administration** – displays the [Administration Settings](#) screen where general administrative functions for the unit can be conducted. These include uploading a new firmware file, resetting the unit, resetting all parameters to their default settings, and uploading/download the Setting Keys file.

At the bottom of each screen where settings can be configured are a **Submit** button and a **Cancel Changes** button. If you make changes and are satisfied with them, press the Submit button. New configurations will be applied immediately. Press the Cancel Changes button before pressing the Submit button to reset any configuration changes to what they were previously.

**>> Note:** Take care when making changes to Network Settings. Because these take effect immediately, you will lose your network connection to the S420 and have to reconnect using the new configurations.

## Status

SiteBoss S420-0 - Enclosure Monitoring Unit					
Serial #: S42001000165 -- Version: 1.00.101 STD -- Site Name: S42001000165					
Status	General	Networking	Events	Alerts	Administration
<b>Device Status</b>					
<b>General Information</b>					
Site Name :	S42001000165	IP Address :	192.168.100.42		
Firmware :	1.00.101 STD	MAC Address :	00:10:A3:50:05:91		
Unit Serial # :	S42001000165	Subnet Mask :	255.255.255.0		
Date :	08/25/09	Router Address:	192.168.100.2		
Time :	15:47:19				
<b>On-Board</b>					
OB-Temperature :	82 deg. F (Normal)				
CC Input 1 :	Open (Inactive)	CC Input 5 :	Open (Inactive)		
CC Input 2 :	Open (Inactive)	CC Input 6 :	Open (Inactive)		
CC Input 3 :	Open (Inactive)	CC Input 7 :	Open (Inactive)		
CC Input 4 :	Open (Inactive)	CC Input 8 :	Open (Inactive)		
<b>SensorJack 1</b>					
Temperature :	80 deg. F (Normal)				
<b>SensorJack 2</b>					
Temperature :	80 deg. F (Normal)	Humidity :	32% (Normal)		

### General Information

**Site Name** – is the identifier assigned to each S420, and is configured in the Site Name field on the [General](#) tab. Default setting is: S420-0 <serial number>.

**Firmware** – indicates the currently loaded firmware version.

**Unit Serial #** - is the factory-assigned, unique serial number for this S420.

**Date** and **Time** – display the current date and time. Date and Time can be set on the [General](#) tab.

**IP Address** – is the network IP address assigned to this S420.

**MAC Address** – is the hard-coded MAC Address of the Ethernet interface in this S420. The MAC address can also be found on the unit's serial number label. The MAC address cannot be changed and is displayed for informational purposes.

**Subnet Mask** – is the subnet mask, which should be provided by your network administrator.

**Router Address** – is the IP address of the network gateway or router to which this S420 is connected. Your network administrator should provide the gateway or router address to you.

 **Note:** IP Address, Subnet Mask, and Router Address are all user-configurable on the [Networking](#) tab.

### **On-Board**

**OB-Temperature** displays the current reading of the on-board temperature sensor. This can be set to read in Fahrenheit or Celsius on the [Events/On-Board Sensors](#) tab.

**CC Input *n*** displays the current Open/Closed and Active/Inactive status of each of the 8 on-board contact closures.

### **SensorJack *n***

The S420-0 currently supports three Type2 EventSensors that monitor either Temperature (ES-T) or Temperature and Humidity (ES-TH). If one or more of these types of Sensor's is connected, this section will be displayed with the current reading(s). If no Sensors are connected, this section will not be displayed. Refer to the [Type2 EventSensor](#) section for more information.

## General

## SiteBoss S420-0 - Enclosure Monitoring Unit

Serial #: S42001000165 -- Version: 1.00.101 STD -- Site Name: S42001000165

Status	General	Networking	Events	Alerts	Administration
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### General Settings

Site Name

Current Date 08/25/09 **Set Date/Time**

Current Time 15:32:25

Adjust for DST  ▼

**Submit** **Cancel Changes**

**Site Name** – sets the identifier assigned to each S420, and is displayed on the Device Status screen. Default setting is: S420-0 <serial number>. (Max length 40 chars)

**Current Date / Time** – displays the current Date and Time. The **Set Date/Time** button provides a pop-up window where the date and the time can be reset.

**Adjust for DST** – provides a drop down menu where the Daylight Savings Time function can be turned On or Off. Default setting is On.

- A brief explanation of daylight savings time (effective 2007): On the second Sunday in March, clocks are set ahead one hour at 2:00 a.m. local standard time, which becomes 3:00 a.m. local daylight time. On the first Sunday in November, clocks are set back one hour at 2:00 a.m. local daylight time, which becomes 1:00 a.m. local standard time.

» **Note:** The date and time settings are maintained by means of an internal battery backup when power is removed from the S420.

## Networking

## SiteBoss S420-0 - Enclosure Monitoring Unit

Serial #: S42001000165 -- Version: 1.00.101 STD -- Site Name: S42001000165

Status	General	<b>Networking</b>	Events	Alerts	Administration
--------	---------	-------------------	--------	--------	----------------

### Networking Settings

IP Address	<input type="text" value="192.168.100.42"/>
MAC Address	<input type="text" value="00:10:A3:50:05:91"/>
Subnet Mask	<input type="text" value="255.255.255.0"/>
Router Address	<input type="text" value="192.168.100.2"/>
SNMP Trap Community	<input type="text" value="public"/>
SNMP Read Community	<input type="text" value="public"/>
SNMP Write Community	<input type="text" value="public"/>
Web Login Username	<input type="text" value="admin"/>
Web Login Password	<input type="password" value="••••••••"/>

**IP Address** – sets the network IP address assigned to this S420. Default setting is 0.0.0.0

**MAC Address** – is the hard-coded MAC Address of the Ethernet interface in this S420. The MAC address can also be found on the unit's serial number label. The MAC address cannot be changed and is displayed for informational purposes.

**Subnet Mask** – sets the network subnet mask provided by the network administrator. Default setting is 255.255.255.0

**Router Address** – sets the router address provided by the network administrator. Default setting is 0.0.0.0

**SNMP Trap / Read / Write Community** – sets the SNMP trap community name to use for each. Default setting for each is "public". (Currently the S420 does not support SNMP "gets" and "sets", so the Read and Write Community names are not used.)

**Web Login Username / Password** – sets the login credentials required by the web interface. Default setting is Username: **admin** and Password: **password**. The password is always masked. For security reasons it is highly recommended that you change this password, and record all configured passwords in a secure location. If locked out of the S420-0 because the password has been forgotten, it is possible to reset the unit to its default login credentials. Refer to the [Resetting Defaults](#) section in this manual.

➤ **Note:** Take care when making changes to Networking Settings. Because these are made immediately you will lose your network connection to the S420 and have to reconnect using the new configurations.

## Events

Rolling over the Events tab will display a drop down menu for [On-Board Sensors](#) and [SensorJack \*n\* Sensors](#) (if optional Type2 EventSensors are connected). Select either of these menu options to display those configuration screens as shown and described below.

**Note:** Because the initial release of the S420-0 has 8 internal dry contact closure points, those are displayed and described below. Other options for different I/O through these contact points (voltage, current, relay output) will be available at a later date in a future version. The S420-2, which features two Expansion bays for a variety of Expansion Card options, will be displayed and described in a future version of the S420 User Manual.

## On-Board Sensors

### Temp Sensor Tab

### SiteBoss S420-0 - Enclosure Monitoring Unit

Serial #: S42001000165 -- Version: 1.00.101 STD -- Site Name: S42001000165

Status	General	Networking	Events	Alerts	Administration
--------	---------	------------	--------	--------	----------------

#### On-Board Sensors

<b>Temp Sensor</b>	Contacts 1-4	Contacts 5-8	
Alarm Name	<input type="text" value="OB-Temperature"/>	Very High Temp	<input type="text" value="120"/>
Currently	82 deg. F	Very High Severity	<input type="text" value="Info"/>
Units	<input type="text" value="Fahrenheit"/>	High Temp	<input type="text" value="100"/>
Alarm State	<input type="text" value="Off"/>	High Severity	<input type="text" value="Info"/>
Alarm Actions	<input type="text"/>	Low Temp	<input type="text" value="40"/>
Deadband	<input type="text" value="3"/>	Low Severity	<input type="text" value="Info"/>
		Very Low Temp	<input type="text" value="32"/>
		Very Low Severity	<input type="text" value="Info"/>

**Alarm Name** – sets the name of the alarm that is generated when the temperature rises above or drops below the set thresholds. This name is included in the Email and/or the SNMP Trap generated. Default setting is OB-Temperature. (Max length 32 chars)

**Currently** – displays the current temperature.

**Units** – sets the unit to report temperature in either Fahrenheit or Celsius.

**Alarm State** – is an On/Off toggle to set whether the S420 should take an alarm action if the current temperature exceeds any of the Very High / High / Low / Very Low thresholds shown to the right. Default setting is Off.

**Alarm Actions** – sets the action(s) to be taken if Alarm State is set to ON, and the temperature exceeds any of the Very High / High / Low / Very Low thresholds shown to the right. Alarm Actions are configured as **En** where *n* corresponds to the Email Address index number on the Email Alerts tab, and **Tn** where *n* corresponds to the SNMP Manager index number on the SNMP Alerts tab. Multiple actions are listed with no delimiters, so for example: **T1T2E2E3** would send a trap to SNMP Managers 1 and 2, and an Email message to Email Addresses 2 and 3.

**Deadband** – sets the range, in degrees, on either side of a temperature setting that prevents the event from repeatedly going in and out of the "event state" as the actual temperature fluctuates above and below the temperature setting. Default setting is 3 degrees.

**Very High / High / Low / Very Low Temp** – are the settings for each of four temperature thresholds that the S420 can alarm on. If Alarm State is set to ON, and the temperature rises above the High and Very High settings, the Alarm Actions will take effect. Same process if the temperature drops below either the Low or Very Low settings. Default settings are: Very High (120), High (100), Low (40), Very Low (32).

**Very High / High / Low / Very Low Severity** – displays a drop down menu of four descriptive words – Info, Minor, Major, Critical – that allow you to assign a severity rating to this alarm. This word will appear in an SNMP Trap alert, but does not appear in an Email alert. Default setting for all is "Info".

**Contacts Tabs (S420-0 only)**

Displays contacts 1 thru 4 or 5 thru 8 depending on which tab is selected.

## SiteBoss S420-0 - Enclosure Monitoring Unit

Serial #: S42001000165 -- Version: 1.00.101 STD -- Site Name: S42001000165

Status	General	Networking	Events	Alerts	Administration
--------	---------	------------	--------	--------	----------------

### On-Board Sensors

Temp Sensor	<b>Contacts 1-4</b>	Contacts 5-8		
	<b>Contact 1</b>	<b>Contact 2</b>	<b>Contact 3</b>	<b>Contact 4</b>
<b>Contact Name</b>	<input type="text" value="CC Input 1"/>	<input type="text" value="CC Input 2"/>	<input type="text" value="CC Input 3"/>	<input type="text" value="CC Input 4"/>
<b>Currently</b>	Open	Open	Open	Open
<b>Alarm State</b>	<input type="text" value="Off"/>	<input type="text" value="Off"/>	<input type="text" value="Off"/>	<input type="text" value="Off"/>
<b>Alarm Actions</b>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<b>Active State</b>	<input type="text" value="Closed"/>	<input type="text" value="Closed"/>	<input type="text" value="Closed"/>	<input type="text" value="Closed"/>
<b>Severity</b>	<input type="text" value="Info"/>	<input type="text" value="Info"/>	<input type="text" value="Info"/>	<input type="text" value="Info"/>
<b>Threshold</b>	<input type="text" value="2"/>	<input type="text" value="2"/>	<input type="text" value="2"/>	<input type="text" value="2"/>
<b>Active Alias</b>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<b>Inactive Alias</b>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="button" value="Submit"/>		<input type="button" value="Cancel Changes"/>		

**Contact Name** – is an alphanumeric field that allows you to name this contact closure. (Max length 32 chars)

**Currently** – displays the current state of the contact – Open or Closed.

**Alarm State** – is an On/Off toggle to enable or disable the alarm for this contact. Default is Off.

**Alarm Actions** – sets the action(s) to be taken if Alarm State is set to ON, and the contact goes into the active state. Alarm Actions are configured as **En** where *n* corresponds to the Email Address index number on the Email Alerts tab, and **Tn** where *n* corresponds to the SNMP Manager index number on the SNMP Alerts tab. Multiple actions are listed with no delimiters, so for example: **T1T2E2E3** would send a trap to SNMP Managers 1 and 2, and an Email message to Email Addresses 2 and 3.

**Active State** – is an Open/Closed toggle that sets whether an alert will be triggered when the contact closure circuit is opened or closed. The default state is Closed.

**Severity** – displays a drop down menu of four descriptive words – Info, Minor, Major, Critical – that allow you to assign a severity rating to this alarm. This word will appear in an SNMP Trap alert, but does not appear in an Email alert. Default setting for all is “Info”.

**Threshold** – sets the number of seconds (0-255) the contact must remain in the Active State before the Alarm Action is triggered. Default setting is 2 seconds.

**Active Alias** – sets a special name used when the contact goes into its Active State and an alert is sent. (Max length 16 chars)

**Inactive Alias** – sets a special name used when the contact returns to its Inactive State, and a Return to Normal alerts is sent (if Send Return to Normal Alerts is enabled on the [Alerts](#) tab.) (Max length 16 chars)

## SensorJack *n* Sensors

Each SensorJack *n* Sensors screen will have tabs for the various types of sensors that each Type2 EventSensor supports. Currently, only the Temperature (ES-T) and Temperature and Humidity (ES-TH) Type 2 EventSensors are supported by the S420. The configuration screen for the ES-TH is shown below. For more information about [Type2 EventSensors](#), please refer to that section in this manual.

### Temp Sensor

## SiteBoss S420-0 - Enclosure Monitoring Unit

Serial #: S42001000165 -- Version: 1.00.101 STD -- Site Name: S42001000165

Status	General	Networking	Events	Alerts	Administration
--------	---------	------------	--------	--------	----------------

### SensorJack 1 Sensors

**Temp Sensor**

Alarm Name	<input type="text" value="Temperature"/>	Very High Temp	<input type="text" value="120"/>
Currently	80 deg. F	Very High Severity	<input type="text" value="Info"/>
Units	<input type="text" value="Fahrenheit"/>	High Temp	<input type="text" value="100"/>
Alarm State	<input type="text" value="Off"/>	High Severity	<input type="text" value="Info"/>
Alarm Actions	<input type="text"/>	Low Temp	<input type="text" value="40"/>
Deadband	<input type="text" value="3"/>	Low Severity	<input type="text" value="Info"/>
		Very Low Temp	<input type="text" value="32"/>
		Very Low Severity	<input type="text" value="Info"/>

**Alarm Name** – sets the name of the alarm that is generated when the temperature rises above or drops below the set thresholds. This name is included in the Email and/or the SNMP Trap generated. (Max length 32 chars)

**Currently** – displays the current temperature.

**Units** – sets the unit to report temperature in either Fahrenheit or Celsius.

**Alarm State** – is an On/Off toggle to set whether the S420 should take an alarm action if the current temperature exceeds any of the Very High / High / Low / Very Low thresholds shown to the right. Default setting is Off.

**Alarm Actions** – sets the action(s) to be taken if Alarm State is set to ON, and the temperature exceeds any of the Very High / High / Low / Very Low thresholds shown to the right. Alarm Actions are configured as **En** where *n* corresponds to the Email Address index number on the Email Alerts tab, and **Tn** where *n* corresponds to the SNMP Manager index number on the SNMP Alerts tab. Multiple actions are listed with no delimiters, so for example: **T1T2E2E3** would send a trap to SNMP Managers 1 and 2, and an Email message to Email Addresses 2 and 3.

**Deadband** – sets the range, in degrees, on either side of a temperature setting that prevents the event from repeatedly going in and out of the "event state" as the actual temperature fluctuates above and below the temperature setting. Default setting is 3 degrees.

**Very High / High / Low / Very Low Temp** – are the settings for each of four temperature thresholds that the S420 can alarm on. If Alarm State is set to ON, and the temperature rises above the High and Very High settings, the Alarm Actions will take effect. Same process if the temperature drops below either the Low or Very Low settings. Default settings are: Very High (120), High (100), Low (40), Very Low (32).

**Very High / High / Low / Very Low Severity** – displays a drop down menu of four descriptive words – Info, Minor, Major, Critical – that allow you to assign a severity rating to this alarm. This word will appear in an SNMP Trap alert, but does not appear in an Email alert. Default setting for all is "Info".

**Humidity Sensor**

## SiteBoss S420-0 - Enclosure Monitoring Unit

Serial #: S42001000165 -- Version: 1.00.101 STD -- Site Name: S42001000165

Status	General	Networking	Events	Alerts	Administration
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### SensorJack 2 Sensors

Temp Sensor

**Humidity Sensor**

Alarm Name	<input type="text" value="Humidity"/>	Very High Humidity	<input type="text" value="90"/>
Currently	30%	Very High Severity	<input type="text" value="Info"/>
Alarm State	<input type="text" value="Off"/>	High Humidity	<input type="text" value="70"/>
Alarm Actions	<input type="text"/>	High Severity	<input type="text" value="Info"/>
Deadband	<input type="text" value="3"/>	Low Humidity	<input type="text" value="30"/>
		Low Severity	<input type="text" value="Info"/>
		Very Low Humidity	<input type="text" value="15"/>
		Very Low Severity	<input type="text" value="Info"/>

Submit

Cancel Changes

**Alarm Name** – sets the name of the alarm that is generated when the humidity rises above or drops below the set thresholds. This name is included in the Email and/or the SNMP Trap generated. (Max length 32 chars)

**Currently** – displays the current humidity.

**Alarm State** – is an On/Off toggle to set whether the S420 should take an alarm action if the current humidity exceeds any of the Very High / High / Low / Very Low thresholds shown to the right. Default setting is Off.

**Alarm Actions** – sets the action(s) to be taken if Alarm State is set to ON, and the humidity exceeds any of the Very High / High / Low / Very Low thresholds shown to the right. Alarm Actions are configured as **En** where *n* corresponds to the Email Address index number on the Email Alerts tab, and **Tn** where *n* corresponds to the SNMP Manager index number on the SNMP Alerts tab. Multiple actions are listed with no delimiters, so for example: **T1T2E2E3** would send a trap to SNMP Managers 1 and 2, and an Email message to Email Addresses 2 and 3.

**Deadband** – sets the range, in percentage, on either side of a humidity setting that prevents the event from repeatedly going in and out of the "event state" as the actual humidity fluctuates above and below the humidity setting. Default setting is 3%.

**Very High / High / Low / Very Low Temp** – are the settings for each of four humidity thresholds that the S420 can alarm on. If Alarm State is set to ON, and the humidity rises above the High and Very High settings, the Alarm Actions will take effect. Same process if the humidity drops below either the Low or Very Low settings. Default settings are: Very High (90), High (70), Low (30), Very Low (15).

**Very High / High / Low / Very Low Severity** – displays a drop down menu of four descriptive words – Info, Minor, Major, Critical – that allow you to assign a severity rating to this alarm. This word will appear in an SNMP Trap alert, but does not appear in an Email alert. Default setting for all is "Info".

## Alerts

### General Settings Tab

## SiteBoss S420-0 - Enclosure Monitoring Unit

Serial #: S42001000165 -- Version: 1.00.101 STD -- Site Name: S42001000165

Status	General	Networking	Events	Alerts	Administration
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### Alert Settings

<b>General Settings</b>	Email Alerts	SNMP Alerts
-------------------------	--------------	-------------

System Alert Actions

Power-Up Alert

Individual Alert Repeat Frequency  (Minutes)

Send Return to Normal Alerts

**System Alert Actions** – sets the action(s) to be taken when the Power-Up Alert is triggered, if enabled. Eventually there may be other types of “system alerts” for which these actions would also apply. System Alert Actions are configured as **En** where *n* corresponds to the Email Address index number on the Email Alerts tab, and **Tn** where *n* corresponds to the SNMP Manager index number on the SNMP Alerts tab. Multiple actions are listed with no delimiters, so for example: **T1T2E2E3** would send a trap to SNMP Managers 1 and 2, and an Email message to Email Addresses 2 and 3.

**Power-Up Alert** – is an On/Off toggle to enable an alert to be sent whenever the S420 goes from a powered-down to a powered-up state. Default setting is Off.

**Individual Alert Repeat Frequency** – sets the number of minutes (0 –65535) between repeat alert notifications. This applies to ALL alerts for ALL enabled events. 0 means no repeat alert notifications are sent. Default setting is 0.

**Send Return to Normal Alerts** – is an On/Off toggle to send an alert if an event returns to its “normal” or “inactive” state. The alert is sent via the same alert or alarm actions that are configured for the event itself. Default setting is On.

## Email Alerts Tab

### SiteBoss S420-0 - Enclosure Monitoring Unit

Serial #: S42001000165 -- Version: 1.00.101 STD -- Site Name: S42001000165

Status	General	Networking	Events	Alerts	Administration
--------	---------	------------	--------	--------	----------------

#### Alert Settings

General Settings	<b>Email Alerts</b>	SNMP Alerts
------------------	---------------------	-------------

SMTP Server IP Address	<input style="width: 90%;" type="text" value="0.0.0.0"/>
Email Domain Name	<input style="width: 90%;" type="text" value="S42001000165.com"/>
SMTP Authentication	<input type="button" value="Off"/> ▾
Username	<input style="width: 90%;" type="text"/>
Password	<input style="width: 90%;" type="text"/>
Email Add #1	<input style="width: 90%;" type="text"/>
Email Add #2	<input style="width: 90%;" type="text"/>
Email Add #3	<input style="width: 90%;" type="text"/>
Email Add #4	<input style="width: 90%;" type="text"/>
Send Test Email	<input type="button" value="Test"/>

**SMTP Server IP Address** – sets the IP address of the outbound mail server.

**Email Domain Name** – sets the *@domain\_name.com* to use when the S420 sends an Email alert. Default setting is “<Site Name>.com”. (Max length 48 chars)

**SMTP Authentication** – is an On/Off toggle to allow Emails to be sent to SMTP servers that require authentication. The Username and Password fields below set the credentials for successfully logging in to the SMTP server. Default setting is Off.

**Username / Password** – set the login credentials for SMTP Authentication. (Max length for each is 32 chars)

**Email Add *n*** – sets the Email address of the person(s) receiving Email alerts. The number (1,2,3,4) corresponds to the “index” number for Email alerts used when configuring alarm actions.

**Send Test Email** – pressing the Test button sends a test Email to each configured Email address.

## SNMP Alerts Tab

### SiteBoss S420-0 - Enclosure Monitoring Unit

Serial #: S42001000165 -- Version: 1.00.101 STD -- Site Name: S42001000165

Status	General	Networking	Events	Alerts	Administration
--------	---------	------------	--------	--------	----------------

#### Alert Settings

General Settings	Email Alerts	<b>SNMP Alerts</b>
------------------	--------------	--------------------

SNMP Manager #1	<input type="text" value="0.0.0.0"/>
SNMP Manager #2	<input type="text" value="0.0.0.0"/>
SNMP Manager #3	<input type="text" value="0.0.0.0"/>
SNMP Manager #4	<input type="text" value="0.0.0.0"/>
Send Test Trap	<input type="button" value="Test"/>
<input type="button" value="Submit"/>	<input type="button" value="Cancel Changes"/>

**SNMP Manager *n*** – sets the IP address of the device(s) receiving SNMP traps when the S420 sends a trap as an alarm action.

**Send Test Trap** – pressing the Test button sends a test SNMP trap to each configured SNMP Manager.

## Administration

SiteBoss S420-0 - Enclosure Monitoring Unit						
Serial #: S42001000165 -- Version: 1.00.101 STD -- Site Name: S42001000165						
Status	General	Networking	Events	Alerts	Administration	
<b>Administration</b>						
<b>Firmware Update</b>						
Firmware File: <input type="text"/> <input type="button" value="Browse..."/> <input type="button" value="Upload"/>						
<b>Reset Unit</b>						
<input type="button" value="Reset"/> Reset the unit immediately.						
<b>Reset Parameters</b>						
<input type="button" value="Reset Parameters"/> Reset non-networking parameters.						
<b>Reset ALL Parameters</b>						
<input type="button" value="Reset ALL Parameters"/> Reset all parameters, including networking parameters. <b>This web session will be disconnected; the IP address must be reset using OmniDiscover or ARP/Ping.</b>						
<b>Upload Settings to Unit</b>						
Settings File: <input type="text"/> <input type="button" value="Browse..."/> <input type="button" value="Upload"/>						
<b>Download Settings From Unit</b>						
<a href="#">Get Settings Now</a> Right-click this link, then choose Save Target As... or equivalent.						

**Firmware Update**

Allows the user to set, via direct entry or the Browse button, the path to the firmware update file. (i.e. S420-0\_1.00.101.udf). Once the path has been set, press the Upload button to begin the immediate upload and processing of the update file.

**Reset Unit**

Pressing the Reset button immediately resets the S420. All configurations are preserved.

**Reset Parameters**

Pressing the Reset Parameters button immediately resets all configurations to their default settings, except Networking Settings.

**Reset ALL Parameters**

Pressing the Reset ALL Parameters button immediately resets all configurations, including Networking Settings, to their default settings. Since the web session will be disconnected, the IP address must be reset using OmniDiscover or the ARP/Ping method, as described in the [Accessing the unit via the Web Interface](#) section above. See [Resetting Defaults](#) section for more information on resetting all parameters using DIP switches and the Reset button.

**Upload Settings to Unit**

Allows the user to set, via direct entry or the Browse button, the path to the Setting Keys file for this S420. (i.e. Setting Keys.htm). Once the path has been set, press the Upload button to begin the immediate upload of the Setting Keys file.

**Download Settings from Unit**

Allows the user to get a Setting Keys file from the S420. Right-click the "Get Settings Now" link and choose "Save Target As" from the menu to select the location where the Setting Keys file should be saved. See the section on [Setting Keys](#) for more information.

## Resetting Defaults

All settings, including network settings, can be set to their default values using this procedure:

- Set all DIP switches to the OFF (down) position
- Briefly press the Reset button until the front-panel LEDs start flashing. Let go of the button as soon as the LEDs start flashing; if the button is pressed in too long, the unit will reset and the default settings operation may not complete.

The web login username and password settings can be reset to their defaults (admin/password), without affecting any other settings, by using a similar procedure:

- Counting from left to right, set the first three DIP switches to the OFF (down) position, and set the fourth DIP switch to the ON (up) position.
- Briefly press the Reset button until the front-panel LEDs start flashing. Let go of the button as soon as the LEDs start flashing; if the button is pressed in too long, the unit will reset and the operation may not complete.

## Setting Keys

Setting Keys (SK) provide a flat file, human readable, means of setting and retrieving settings within the unit. Setting Keys are commonly used to clone settings across multiple units or in automated processes. The SK file can be downloaded from an S420, settings changed and saved, then the file can be uploaded to the same or other S420's. Settings that are changed to invalid values will not be applied when uploaded to the S420.

Following is a sample SK file from an S420:

```
// SiteBoss S420-0 Setting Key File created 08/25/09 14:43:25
// Product Version 1.00.101 STD
sys.serial=S42001000165
sys.version=1.00.101
sys.build=STD
sys.product="SiteBoss S420-0"
sys.sitename=S42001000165
sys.clock.autodst=On
net.eth.ip=192.168.100.42
net.eth.mac=00:10:A3:50:05:91
net.eth.mask=255.255.255.0
net.eth.router=192.168.100.2
net.email.server=0.0.0.0
net.email.domain=S42001000165.com
net.email.address[1]=
net.email.address[2]=
net.email.address[3]=
net.email.address[4]=
net.email.auth.enable=Off
net.email.auth.username=
net.email.auth.password=
net.snmp.server[1]=0.0.0.0
net.snmp.server[2]=0.0.0.0
net.snmp.server[3]=0.0.0.0
net.snmp.server[4]=0.0.0.0
net.snmp.readcom=public
net.snmp.writecom=public
net.snmp.trapcom=public
net.snmp.contact=
net.snmp.name=
net.snmp.location=
sec.username=admin
sec.password=password
action.systemalert.actions=
action.powerupalert.enable=Off
action.rtnalerts.enable=On
action.alarmrepeat.freq=0
event.sensor[200].type=On-Board
event.sensor[1].type="SensorJack 1"
event.sensor[2].type="SensorJack 2"
event.sensor[3].type="SensorJack 3"
event.sensor[200].temp[1].name=OB-Temperature
event.sensor[1].temp[1].name=Temperature
event.sensor[2].temp[1].name=Temperature
event.sensor[3].temp[1].name=Temperature
event.sensor[200].temp[1].scale=Fahrenheit
event.sensor[1].temp[1].scale=Fahrenheit
event.sensor[2].temp[1].scale=Fahrenheit
event.sensor[3].temp[1].scale=Fahrenheit
event.sensor[200].temp[1].enable=Off
event.sensor[1].temp[1].enable=Off
event.sensor[2].temp[1].enable=Off
```

```
event.sensor[3].temp[1].enable=Off
event.sensor[200].temp[1].actions=
event.sensor[1].temp[1].actions=
event.sensor[2].temp[1].actions=
event.sensor[3].temp[1].actions=
event.sensor[200].temp[1].deadband=3
event.sensor[1].temp[1].deadband=3
event.sensor[2].temp[1].deadband=3
event.sensor[3].temp[1].deadband=3
event.sensor[200].temp[1].vhigh=120
event.sensor[1].temp[1].vhigh=120
event.sensor[2].temp[1].vhigh=120
event.sensor[3].temp[1].vhigh=120
event.sensor[200].temp[1].vhighclass=Info
event.sensor[1].temp[1].vhighclass=Info
event.sensor[2].temp[1].vhighclass=Info
event.sensor[3].temp[1].vhighclass=Info
event.sensor[200].temp[1].high=100
event.sensor[1].temp[1].high=100
event.sensor[2].temp[1].high=100
event.sensor[3].temp[1].high=100
event.sensor[200].temp[1].highclass=Info
event.sensor[1].temp[1].highclass=Info
event.sensor[2].temp[1].highclass=Info
event.sensor[3].temp[1].highclass=Info
event.sensor[200].temp[1].low=40
event.sensor[1].temp[1].low=40
event.sensor[2].temp[1].low=40
event.sensor[3].temp[1].low=40
event.sensor[200].temp[1].lowclass=Info
event.sensor[1].temp[1].lowclass=Info
event.sensor[2].temp[1].lowclass=Info
event.sensor[3].temp[1].lowclass=Info
event.sensor[200].temp[1].vlow=32
event.sensor[1].temp[1].vlow=32
event.sensor[2].temp[1].vlow=32
event.sensor[3].temp[1].vlow=32
event.sensor[200].temp[1].vlowclass=Info
event.sensor[1].temp[1].vlowclass=Info
event.sensor[2].temp[1].vlowclass=Info
event.sensor[3].temp[1].vlowclass=Info
event.sensor[2].humid[1].name=Humidity
event.sensor[2].humid[1].enable=Off
event.sensor[2].humid[1].actions=
event.sensor[2].humid[1].deadband=3
event.sensor[2].humid[1].vhigh=90
event.sensor[2].humid[1].vhighclass=Info
event.sensor[2].humid[1].high=70
event.sensor[2].humid[1].highclass=Info
event.sensor[2].humid[1].low=30
event.sensor[2].humid[1].lowclass=Info
event.sensor[2].humid[1].vlow=15
event.sensor[2].humid[1].vlowclass=Info
event.sensor[200].cc[1].name="CC Input 1"
event.sensor[200].cc[2].name="CC Input 2"
event.sensor[200].cc[3].name="CC Input 3"
event.sensor[200].cc[4].name="CC Input 4"
event.sensor[200].cc[5].name="CC Input 5"
event.sensor[200].cc[6].name="CC Input 6"
event.sensor[200].cc[7].name="CC Input 7"
event.sensor[200].cc[8].name="CC Input 8"
event.sensor[200].cc[1].enable=Off
event.sensor[200].cc[2].enable=Off
```

---

```
event.sensor[200].cc[3].enable=Off
event.sensor[200].cc[4].enable=Off
event.sensor[200].cc[5].enable=Off
event.sensor[200].cc[6].enable=Off
event.sensor[200].cc[7].enable=Off
event.sensor[200].cc[8].enable=Off
event.sensor[200].cc[1].actions=
event.sensor[200].cc[2].actions=
event.sensor[200].cc[3].actions=
event.sensor[200].cc[4].actions=
event.sensor[200].cc[5].actions=
event.sensor[200].cc[6].actions=
event.sensor[200].cc[7].actions=
event.sensor[200].cc[8].actions=
event.sensor[200].cc[1].eventstate=Closed
event.sensor[200].cc[2].eventstate=Closed
event.sensor[200].cc[3].eventstate=Closed
event.sensor[200].cc[4].eventstate=Closed
event.sensor[200].cc[5].eventstate=Closed
event.sensor[200].cc[6].eventstate=Closed
event.sensor[200].cc[7].eventstate=Closed
event.sensor[200].cc[8].eventstate=Closed
event.sensor[200].cc[1].eventclass=Info
event.sensor[200].cc[2].eventclass=Info
event.sensor[200].cc[3].eventclass=Info
event.sensor[200].cc[4].eventclass=Info
event.sensor[200].cc[5].eventclass=Info
event.sensor[200].cc[6].eventclass=Info
event.sensor[200].cc[7].eventclass=Info
event.sensor[200].cc[8].eventclass=Info
event.sensor[200].cc[1].normalclass=Info
event.sensor[200].cc[2].normalclass=Info
event.sensor[200].cc[3].normalclass=Info
event.sensor[200].cc[4].normalclass=Info
event.sensor[200].cc[5].normalclass=Info
event.sensor[200].cc[6].normalclass=Info
event.sensor[200].cc[7].normalclass=Info
event.sensor[200].cc[8].normalclass=Info
event.sensor[200].cc[1].threshold=2
event.sensor[200].cc[2].threshold=2
event.sensor[200].cc[3].threshold=2
event.sensor[200].cc[4].threshold=2
event.sensor[200].cc[5].threshold=2
event.sensor[200].cc[6].threshold=2
event.sensor[200].cc[7].threshold=2
event.sensor[200].cc[8].threshold=2
event.sensor[200].cc[1].activealias=
event.sensor[200].cc[2].activealias=
event.sensor[200].cc[3].activealias=
event.sensor[200].cc[4].activealias=
event.sensor[200].cc[5].activealias=
event.sensor[200].cc[6].activealias=
event.sensor[200].cc[7].activealias=
event.sensor[200].cc[8].activealias=
event.sensor[200].cc[1].inactivealias=
event.sensor[200].cc[2].inactivealias=
event.sensor[200].cc[3].inactivealias=
event.sensor[200].cc[4].inactivealias=
event.sensor[200].cc[5].inactivealias=
event.sensor[200].cc[6].inactivealias=
event.sensor[200].cc[7].inactivealias=
event.sensor[200].cc[8].inactivealias=
```

## Type2 EventSensor™ Setup

As of the publishing date for this User Manual:

- a. only Temperature (ES-T) and Temperature/Humidity (ES-TH) Type2 EventSensors are available.
- b. only three Type2 EventSensor's are supported.

### Connections

The 9-pin mini DIN cable end of the EventSensor cable plugs in to the SensorJack port on the back panel of the S420. The RJ45 end of that cable plugs in to the Type2 EventSensor RJ45 port labeled Control. Additional Type2 EventSensors are chained together using Cat-5 straight-thru cable from the Sensor port on the first EventSensor, to the Control port on the next EventSensor. Be sure to set the DIP switches for each additional EventSensor so that each occupies it's own slot as per the chart below.

### DIP Switch Settings

Defines up to 16 address locations (however only Slots 1 thru 8 are currently available). The S420 currently supports only three Type2 EventSensors, so set them for Slot 1, Slot 2 and Slot 3. Note that the DIP switch is numbered from left to right, 1 through 4. The Most Significant Bit (MSB) is switch location 1.

1 = DIP Switch up            0 = DIP Switch down

DIP SW	Slot						
0000	= 1	0100	= 5	1000	= 9	1100	= 13
0001	= 2	0101	= 6	1001	= 10	1101	= 14
0010	= 3	0110	= 7	1010	= 11	1110	= 15
0011	= 4	0111	= 8	1011	= 12	1111	= 16

### Configuration

Refer to the [Events/SensorJack n Sensors](#) section for configuration instructions.

## Appendices

### Canadian Department of Communications

NOTICE: The Canadian Department of Communications Label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational and safety requirements. The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. In some cases, the company's inside wiring associated with a single line individual service may be extended by means of a certified connector assembly (telephone extension cord). The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protections that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

Caution: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

The Load Number (LN) assigned to each terminal device denotes the percentage of total load to be connected to a telephone loop, which is used by the device, to prevent overloading.

The termination of a loop may consist of any combination of devices subject only to the requirement that the total of the Load Numbers of all the devices does not exceed 100. The load number of this unit is five.

This digital apparatus does not exceed the Class A limits for Radio noise emissions from digital apparatus set out in the interference-causing equipment standard entitled "Digital Apparatus", ICES-003 of the Department of Communications.

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AVIS: - L'étiquette du ministère des Communications du Canada identifie le matériel homologué. Cette étiquette certifie que le matériel est conforme à certaines normes de protection, d'exploitation et de sécurité des réseaux de télécommunications. Le Ministère n'assure toutefois pas que le matériel fonctionnera à la satisfaction de l'utilisateur.

Avant d'installer ce matériel, l'utilisateur doit s'assurer qu'il est permis de le raccorder aux installations de l'entreprise locale de télécommunication. Le matériel doit également être installé en suivant une méthode acceptée de raccordement. Dans certains cas, les fils intérieurs de l'entreprise utilisés pour un service individuel à ligne unique peuvent être prolongés au moyen d'un dispositif homologué de raccordement (cordon prolongateur téléphonique interne). L'abonné ne doit pas oublier qu'il est possible que la conformité aux conditions énoncées ci-dessus n'empêche pas la dégradation du service dans certaines situations. Actuellement, les entreprises de télécommunication ne permettent pas que l'on raccorde leur matériel à des jacks d'abonné, sauf dans les cas précis prévus par les tarifs particuliers de ces entreprises.

Les réparations de matériel homologué doivent être effectuées par un centre d'entretien Canadien autorisé désigné par le fournisseur. La compagnie de télécommunications peut demander à l'utilisateur de débrancher un appareil à la suite de réparations ou de modifications effectuées par l'utilisateur ou à cause de mauvais fonctionnement.

Pour sa propre protection, l'utilisateur doit s'assurer que tous les fils de mise à la terre de la source d'énergie électrique, des lignes téléphoniques et des canalisations d'eau métalliques, s'il y en a, sont raccordés ensemble. Cette précaution est particulièrement importante dans les régions rurales.

Avertissement. - L'utilisateur ne doit pas tenter de faire ces raccordements lui-même; il doit avoir recours à un service d'inspection des installations électriques, ou à un électricien, selon le cas.

L'indice de charge (IC) assigné a chaque dispositif terminal indique, pour éviter toute surcharge, le pourcentage de la charge totale qui peut être raccordée a un circuit téléphonique bouclé utilisé par ce dispositif. La terminaison du circuit

bouclé peut être constituée de n'importe quelle combinaison de dispositif, pourvu que la somme des indices de charge de l'ensemble des dispositifs ne dépasse pas 100. L'indice de charge de cet produit est 5.

Cet appareil numérique respecte les limites de bruits radioélectriques applicables aux appareils numériques de Classe A prescrites dans la norme sur le matériel brouilleur : "Appareils Numériques", NMB-003 édictée par le ministre des Communications.

## Warranty Information

Asentria Corporation hereby warrants that it will, as the buyers sole remedy, repair or replace, at its option, any part of the S420 which proves to be defective by reason of improper materials or workmanship, without charge for parts or labor, for a period of 12 (twelve) months. This warranty period commences on the date of first retail purchase, and applies only to the original retail purchaser.

To obtain service under this warranty, you must obtain, by telephone, postal letter, or email, a return authorization number from Asentria Technical Support. This authorization number may be obtained by contacting Asentria Technical Support at the address and/or phone number below. The defective unit is to be returned to Asentria with shipping prepaid, and the return authorization number must be clearly marked on the outside of the package containing the defective unit.

The dealer's bill of sale or other satisfactory proof of the date of purchase may be required to be presented in order to obtain service under this warranty.

This warranty applies if your S420 fails to function properly under normal use and within the manufacturer's specifications. This warranty does not apply if, in the opinion of Asentria Corporation, the unit has been damaged by misuse; neglect; or improper packing, shipping, modification, or servicing by other than Asentria or an authorized Asentria Service Center.

In no event shall Asentria Corporation be liable for any loss, inconvenience or damage, whether direct, incidental, consequential or otherwise, with respect to the S420. Asentria Corporation's liability shall be limited to the purchase price of the S420. No warranty of fitness for purpose, or of fitness of the S420 for any particular application is provided. It is the responsibility of the user to determine fitness of the S420 for any particular application or purpose.

This warranty gives you specific legal rights. These rights may vary from state to state, as some states do not allow limitations on liability.

You may request information on how to obtain service under this warranty by contacting Asentria Technical Support at the address and phone number below:

### **Asentria Technical Support**

1200 North 96th St.

Seattle, WA 98103

206.344.8800

[support@asentria.com](mailto:support@asentria.com)

[www.asentria.com](http://www.asentria.com)