MODELS:
IWS01 – innSIGHT Supervisor Web Server

innSIGHT Supervisor Web Server

Overview

The Innotech® innSIGHT Supervisor Web Server allows easy access to user selected information from controllers connected to the Innotech Net Comms network through the embedded web server. The user selected information can be accessed with a web browser (Internet Explorer® version 8 or above), and is as simple as browsing a typical web site. It allows you to view, trend and modify accessible point values without being immersed in the technical details of the configuration. The built in alarm monitoring functionality with notifications sent via email, together with an advanced log extraction and graphing tool, makes innSIGHT a complete Web-Based BMS solution.

Features

- 2 x Isolated RS485 Net Comms Network ports (PC and NET)
- 1 x Isolated Ethernet (10baseT) port
- User selectable Baud rate on RS485 Net Comms Network ports
- All wires connected by pluggable screw terminals
- Program resides in non-volatile flash RAM
- Real-Time Clock (battery backed)
- Visual indication of power, system, and communication activity
- Support of up to 128 network devices
- Monitor up to 1500 alarms
- Email notification on alarm activation and reset
- Real-time device trending
- Built in log extraction and graphing tool
- View and modify schedules
- Embedded web server
- Export logs to CSV files

Applications

- Monitor values and equipment status on either Genesis or MAXIM controllers
- Modify the following settings or parameters:
  - a. Date and Time
  - b. Daylight Savings
  - c. Daily, weekly, or yearly schedules
  - d. Values such as set points and timers
- Extract, view and print historical logs from monitored devices
- Monitor alarm status on devices

Installation

The IWS01 should be installed in an environment which adheres to the specifications outlined in this document. It should be mounted in a dry, clean, and vibration free environment.

Approvals

The Innotech IWS01 conforms to:
- EN 61326:2013 for CE Marking and RCM Labelling
- Title 47 CFR, Part 15 Class A for FCC Marking
- UL & C-UL listed to UL916, File Number E242628

Specifications

Power Supply Requirements

- 24VAC ±10% @ 50/60Hz
- Power consumption: 4VA
- 24VDC ±10%
- Power consumption: 2.3W
- Recommended transformer rating of 8VA or greater

The operating voltage must meet the requirements of Safety Extra Low Voltage (SELV) to EN60730. The transformer used must be a Class 2 safety transformer in compliance with EN60742 and be designed for 100% duty. It must also be sized and fused in compliance with local safety regulations.

Minimum Software & Firmware Requirements

Software
- Microsoft Internet Explorer (version 8 or later) with Microsoft Silverlight plugin (version 4 or later).

Firmware
When using:

• Maxim	Version 4.20 or later
• Genesis	Version 4.20 or later
• IG01 Sub-System Gateway	Version 6.20 or later

Battery

Contains a lithium type battery, dispose of properly.
(In accordance with local regulations)

• Type	CR-2032 Lithium Battery
• Nominal voltage	3 Volts
• Shelf life	5 years, dependent on ambient temperature

⚠ Caution: Risk of Explosion if battery is replaced by an incorrect type.

Enclosure

The IWS01 is housed in a DIN case suitable for DIN Rail mounting. The housing is moulded from flame retardant plastics recognised by UL as UL 94-V0.

Colour: Grey

Dimensions (max):   71mm x 115mm x 67mm

Temperature Ratings

- Storage: -5 to 50°C non-condensing
- Operating: 0 to 50°C non-condensing

Communications

The IWS01 acts as the network master and manages the communications on the Innotech Net Comms network. All Innotech Net Comms traffic must pass through the IWS01.

When using Innotech software, a TCP/IP connection must be configured in the Innotech iComm software to communicate with the IWS01 using the Ethernet port. The device network must be connected to the NET RS485 port.

If an IG03 BACnet Gateway is installed on the network, the IWS01 should be connected to the PC port of the IG03.

PC

The PC port is an RS485 Serial communications channel for interfacing with Innotech software. Connectivity is provided through a 5-way pluggable screw terminal connector located on the front of the IWS01. This port is generally used as a service port.

NET

The NET port is an RS485 serial communications channel for interfacing with devices on the Innotech network. Connectivity is provided through a 5-way pluggable screw terminal connector located on the front of the IWS01.

Please note that the IWS01 does NOT have a physical Innotech network device address.

Ethernet

When the IWS01 Ethernet settings are correctly configured you are able to access the embedded web server to view information from any device(s) monitored by the IWS01. The Ethernet port can also be used for communicating with the Innotech iComm software through a TCP/IP connection.

Connectivity is provided through an RJ45 socket on the top right corner of the IWS01.

The IWS01 is configured with the following default static Ethernet setting:

Ethernet Settings

IP Address	Gateway	Subnet Mask
192.168.2.100	0.0.0.0	255.255.255.0

The default settings can be changed if required.

Embedded web server

The IWS01 is configured using the embedded web server which is accessible with a web browser (Internet Explorer® version 8 or above). To access the embedded web server for initial setup and configuration, configure the TCP/IP address of your computer to be on the same subnet as the default IP address of the IWS01. Launch Internet Explorer and enter the default IP address of the IWS01 in the address bar.

Wiring

- Note the polarity of the RS485 signal lines
- The tails of the cable screens should be as short as possible (max 30mm) to maintain signal integrity and effective protection against electrical interference
- 0 V AC / DC supply terminal must be earthed

Innotech Comms Cabling

The comms cabling must be organised in a bus topology where a single cable runs from device to device. A cut is made in the cable at the point where the device is to be installed. The two ends of the cable are wired to the device. The shields from the two new ends are then terminated to the terminals marked SHLD. There should be NO stubs in the cable.

A minimum of 3 wires are required for reliable comms operation:

- + RS485
- – RS485
- SHIELD

For further information, refer to the DS99.04 - Installation Manual for Innotech Device Network Cabling.

Status LEDs

LED Indicator	LED Colour	Description
Power	Red	Power is ON
Heartbeat	Flashing Green	Device Status OK
Net Comms (RJ45)	Orange	Network Connection
	Green	Network Activity

User Interface

The user interface for the IWS01 is through an embedded web server, accessible with a web browser (Internet Explorer® version 8 or above). It provides an easy and intuitive way to monitor and modify pre-configured controller information.

The IWS01 is built using Microsoft Silverlight® technology and requires the latest Silverlight plug-in to be installed. When the embedded web server is loaded, the user will be prompted to install the Silverlight plug-in if it is not already installed.

Alarms

Alarms can be viewed for each device available in innSIGHT. The alarm status, last alarm reset and last alarm activation time & date can be viewed.

Log Extraction and Real-Time Trending

Users will be able to view a graphical trend of real-time values of the watches on the page being viewed.
Trending is updated every 3 seconds. Trending is shown for the last 10 minutes (maximum).

Users are able to view historical information from the connected devices. After extraction, graphs can be viewed, printed and exported as .csv files.

User Access Levels

View Only
The View Only level allows you to view information and does not allow you to configure or modify any settings on the IWS01. User adjustable values and schedules cannot be modified. There is no default password for the View Only level.

General Admin
The General Admin level allows you to view information, and modify the following settings:
- Client Name and Location
- Date and Time
- Enable / Disable Daylight Savings Time
- Date and Time
- Schedules and Watches

The default password for the General Admin level is **admin**.

Engineering Level
The Engineering Level provides you full access and the ability to modify all settings on the IWS01. The default password for the Engineering level is **1111**.

Configuring innSIGHT
Once you have accessed the embedded web server, select the *Engineering* access level from the drop down menu. Enter the default password of **1111** and click on **Log In**.

From the Home screen click on **Setup**. There are four tabs you can select to modify the settings, and each one is described in detail below.

General tab
Under the General tab you can modify the following settings:
- Client Details
- Date & Time
- Enable / Disable Daylight Savings Time
- Service Provider Information

If any settings have been modified, click on **Apply Changes** to save your settings.

User Access tab
Under the User Access tab you can configure or modify the password for each access level. If any settings have been modified, click on **Apply Changes** to save your settings.

Communications tab
Under the Communication tab you are able to configure or modify all communication settings for the IWS01. If any settings have been modified, click on **Apply Changes** to save your settings.

Notifications tab
Under the Notifications tab you can modify the following settings:
- General
- Sender Details
- Notification Email Groups
- Outgoing Mail Server (SMTP)

If any settings have been modified, click on **Apply Changes** to save your settings.

ℹ️ Does not support SMTP Mail Servers which require data encryption.

Commissioning tab
Under the Commissioning tab you are able to view the resource usage (memory usage), rebuild the device data and clear all pending emails. The Commissioning tab shows usage for Devices, Alarms, Watches, Blocks and statistics for each communication channel.

Communication Settings
The communication settings of the IWS01 can be modified from the Setup menu located under the Communication tab of the embedded web server. By hovering over the ℹ️ icon next to the parameter you wish to modify, a tooltip provides a brief explanation of the parameter.

The following Ethernet settings on the innSIGHT Supervisor Web Server need to be modified as per the site LAN requirements:

- IP address
- Network Mask
- Default Gateway

Once you have configured the Ethernet settings, click on **Apply Changes** to save your settings.

ℹ️ Please note that if you modify the Ethernet settings of the IWS01, you may have to update the network settings of your computer accordingly.

Default Comms Settings

Parameter	Default Setting
Address Range	Auto
Baud Rate	57,600
Net Comms Port	20,000
HTTP Port	80

The IWS01 is easy to configure and is basically Plug and Play. This means that with the factory default settings of the IWS01, all devices on the network will auto populate without any user intervention.
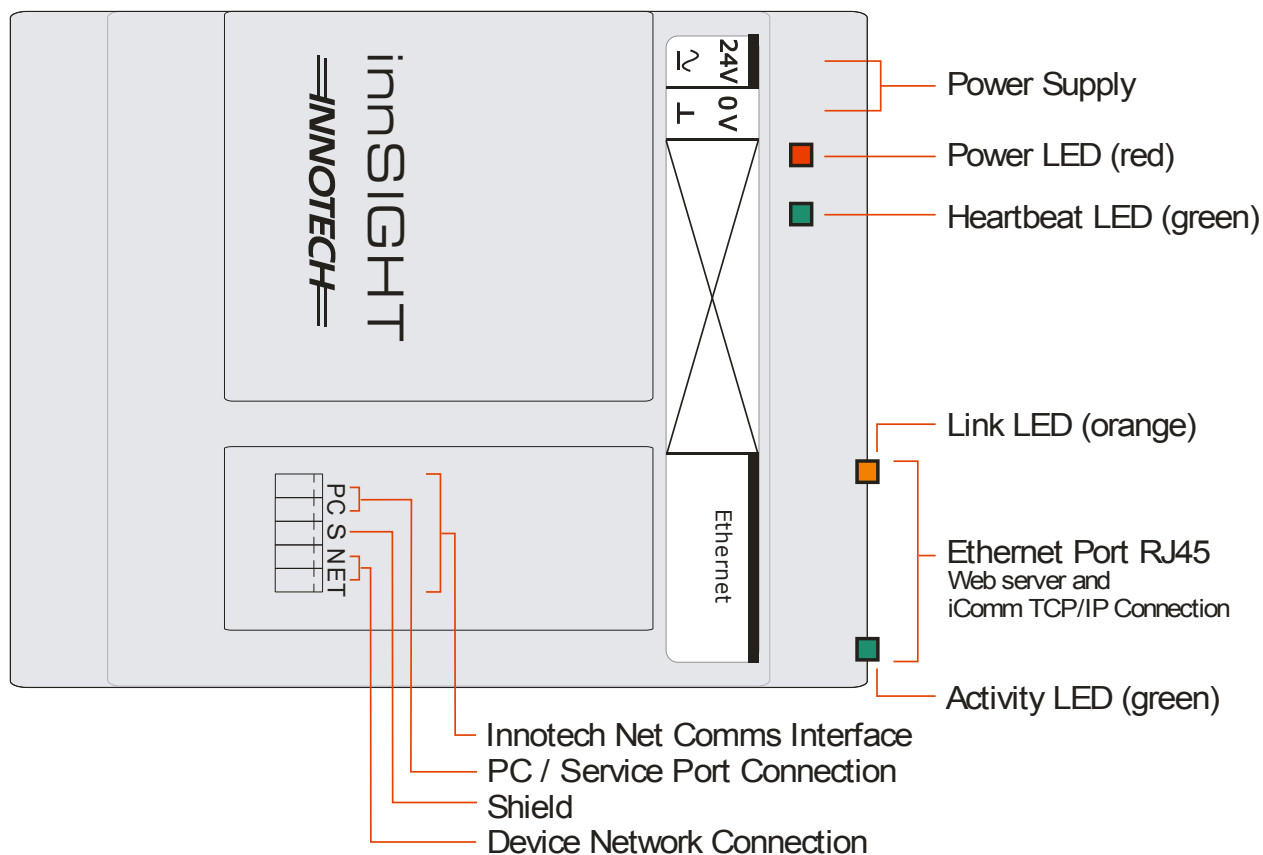
Device Colour Reference
Each device monitored by the IWS01 is represented with a colour code on the Home screen of the embedded web server. The table below lists each device and the corresponding colour code.

Device Colours

Device	Colour Reference
Genesis II Controller	Blue
MAXIM Controller (Primary)	Dark Green
MAXIM Controller (Sub System)	Light Green
Device halted or no config loaded	Orange
Unsupported Device	Orange
Error Reading Blocks	Orange
Out of Memory	Orange
Dead Device	Red

ℹ️ When you hover over a device that is an Orange colour, an information popup window provides you with the exact status (i.e Halted or No Config). The Orange colour indicates that the device has a problem.

innSIGHT Connection Diagram

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