Setup Guide
GPX-32 Pro

Package Contents:

- **GPX-32 Pro**
- Power Cable
- Setup Guide (this manual)

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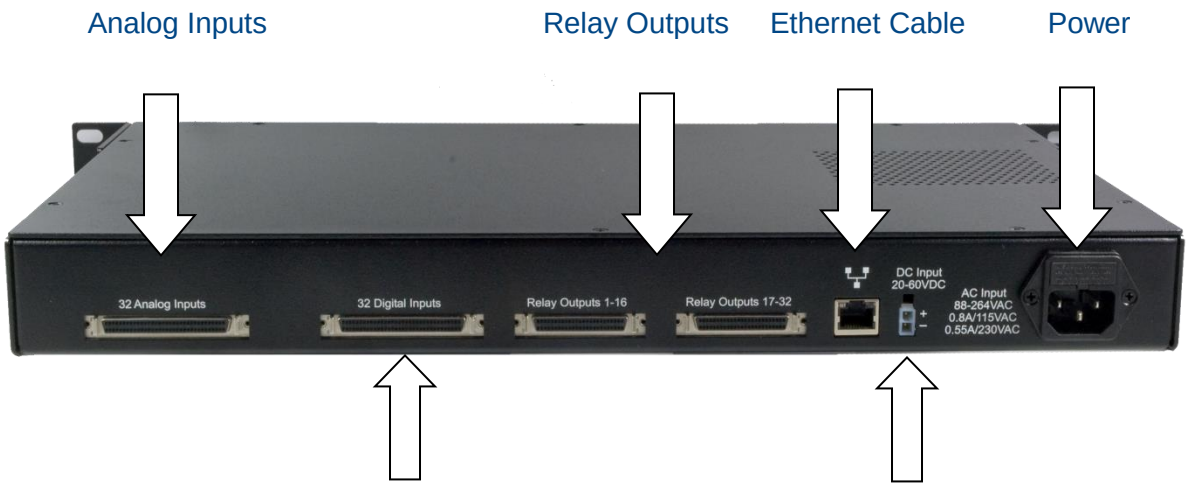
Back Panel Layout



Installing Your GPX Pro

Mount the **GPX Pro** into the desired location and connect the Ethernet and Power cables to the unit. The **GPX Pro** does not have a power switch and as such is always on once power is connected.

If you are using a DC power source in place of mains power, take special care to correctly orientate the positive and negative inputs.

➲ **Note:** Incorrectly connecting the DC power source will void the GPX Pro warranty. The DC power source must be certified with an available power output of less than 24 V.

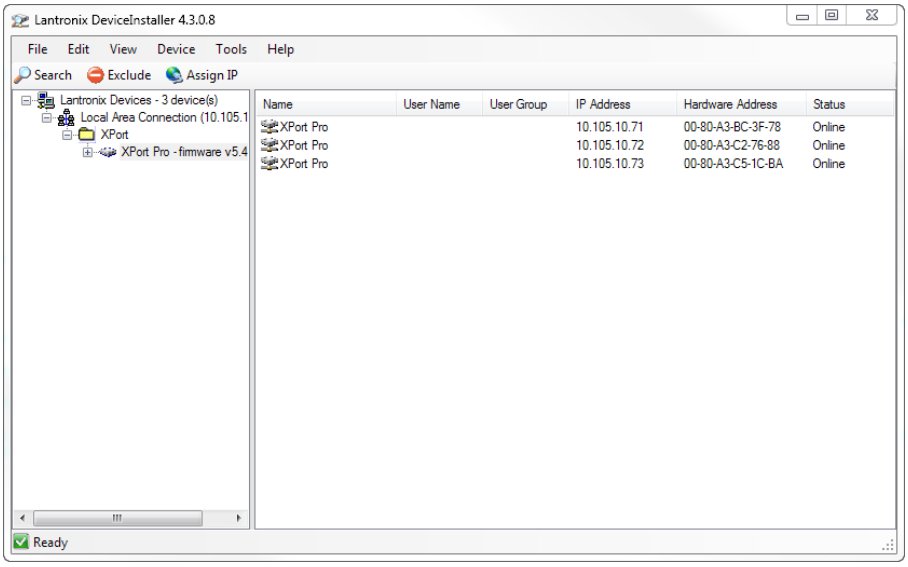
Check that both the Power LED and the Ethernet link LED are illuminated before proceeding. If either LED's are not lit please re-check all connections.

Assigning an IP address

The **GPX Pro** comes preconfigured for DHCP assignment of its IP address, if you are not using a DHCP server or want to assign a static address you can do so using the SLSWebControls web interface or download and Install the Lantronix DeviceInstaller from **https://www.lantronix.com/products/deviceinstaller/**

➲ **Note:** The **GPX Pro** must be on the same LAN segment and IP subnet as the PC you are using to run the DeviceInstaller software from.

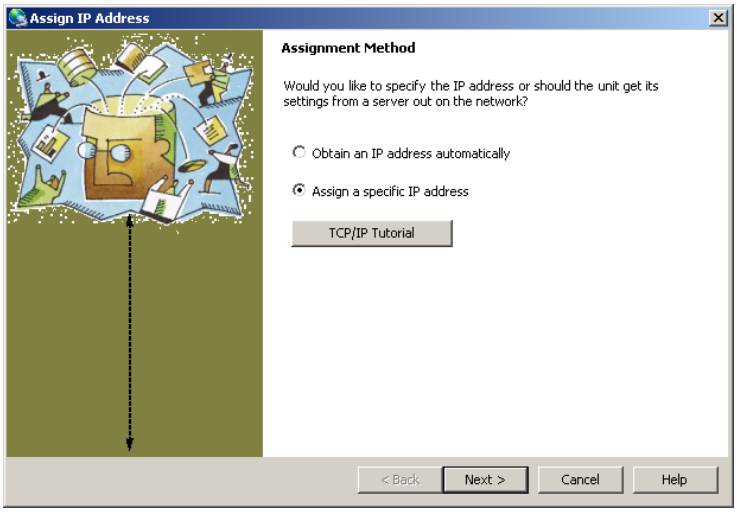
Once the application is running you will see a program window similar to the one shown here:



If the **GPX Pro** is connected correctly it will be listed as one of the found devices in the right hand pane of the screen. To identify the correct **GPX Pro** match the MAC address that is printed on the label found at the left side or bottom of the unit to one listed on the screen.

➲ **Note:** If the **GPX Pro** is connected to a Subnet that has a DHCP server it may have already been assigned a dynamic IP address automatically. SuiteLife Systems strongly recommends that a static IP address be assigned to all **GPX Pro** units.

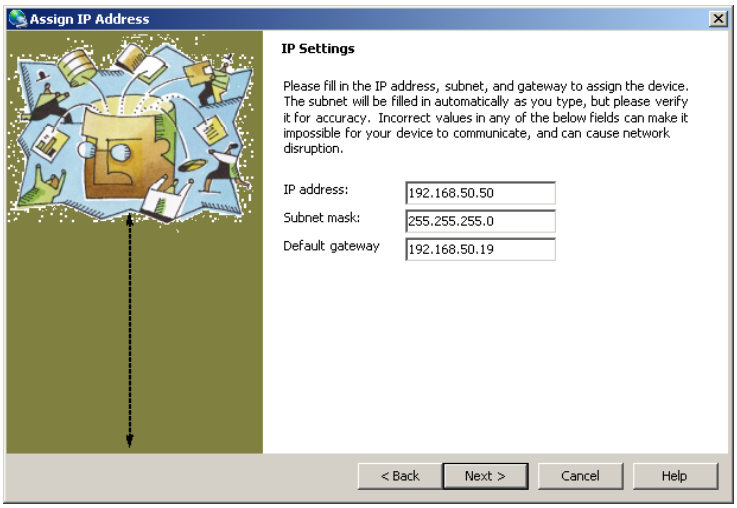
Select the **GPX Pro** unit you wish to assign a static IP address and press the ***Assign IP*** icon button in the toolbar.



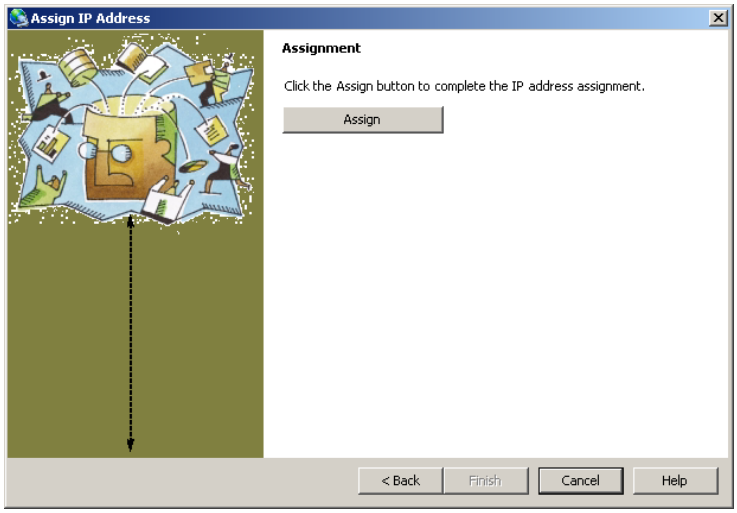
Select the *Assign a specific IP* radio button and press *Next*.

Assigning an IP Address

Enter the IP address Subnet mask and Default gateway and press *Next*.

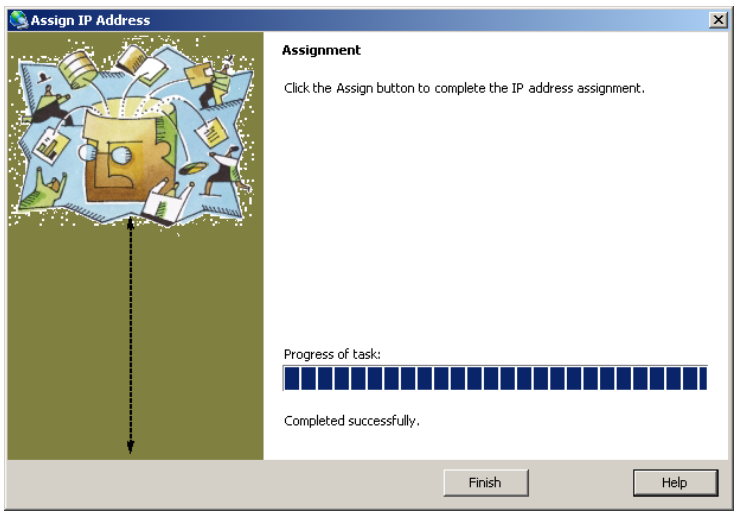


➲ **Note:** If you are unsure of any of these settings or their values please contact your system administrator for assistance. Having multiple devices with the same IP address on the same network will cause severe problems.



Press the *Assign* button to complete the address assignment.

Once the address assignment is complete press *Finish* to close the 'Assign IP Address' dialog.



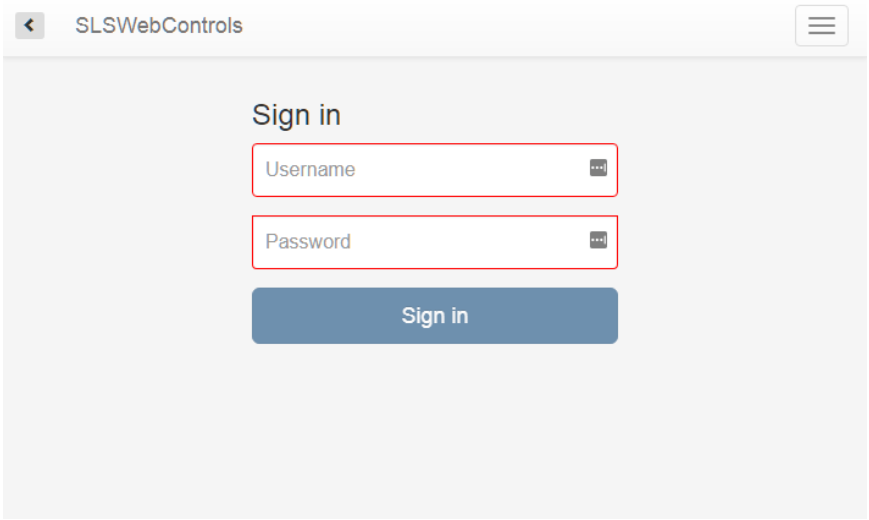
Operating the GPX Pro

The **GPX Pro** is configured and operated via the **SLSWebControls** interface, accessible from any devices browser that has IP connectivity to the network address assigned to the **GPX Pro**.

The **SLSWebControls** interface is a responsive web application designed for use on Mobile, Tablet and desktop browsers.

To access the user interface open your favorite browser and type in the IP address assigned to the **GPX Pro** into the address bar and you will be presented with a ***Sign in*** screen similar to the example below, enter your username and password and click **'Sign in'**.

➲ **Note:** The default username is ***Admin*** and Default Password is ***Sp%8q8up***.



Initial Setup

If this is a new unit please take the time to perform these initial setup tasks. If you are new to the **GPX Pro** and **SLSWebControls**, review the sections that follow to perform these tasks.

1. Change the Admin password, the default password is not secure
2. Create a user account for yourself
3. Configure the **GPX Pro** NTP time source **Main Menu>Setup>NTP**. If you don't have an internal NTP time source please use one of the may publicly available NTP sources e.g. 0.pool.ntp.org

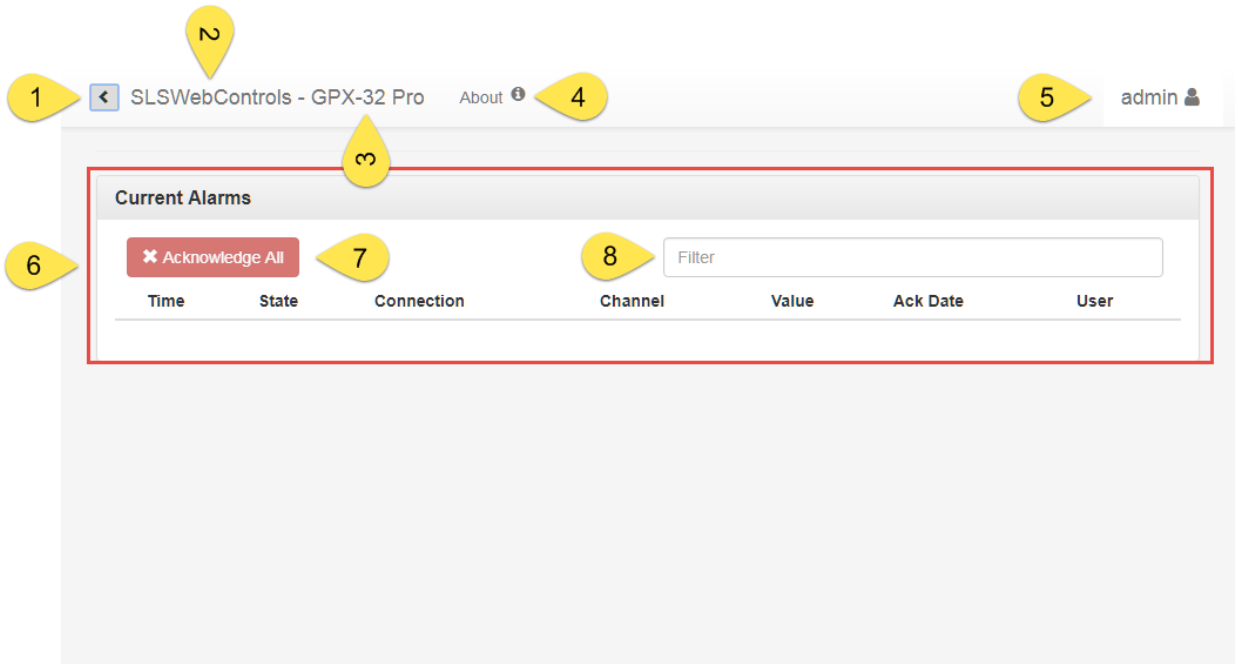
➲ **Note:** The **GPX Pro** does not have a RTC module and as such will reset its time back to Jan 1 1970 00:00:00, at reboot. The **GPX Pro** relies on the existence of a NTP time source for the correct time.

4. Configure the **GPX Pro** Syslog destination **Main Menu>Setup>Syslog**. If you don't already have a Syslog server many open source Syslog server are available for download

➲ **Note:** The **GPX Pro** does not store logs locally, it relies on the existence of a Syslog server to store and archive events and analog readings.

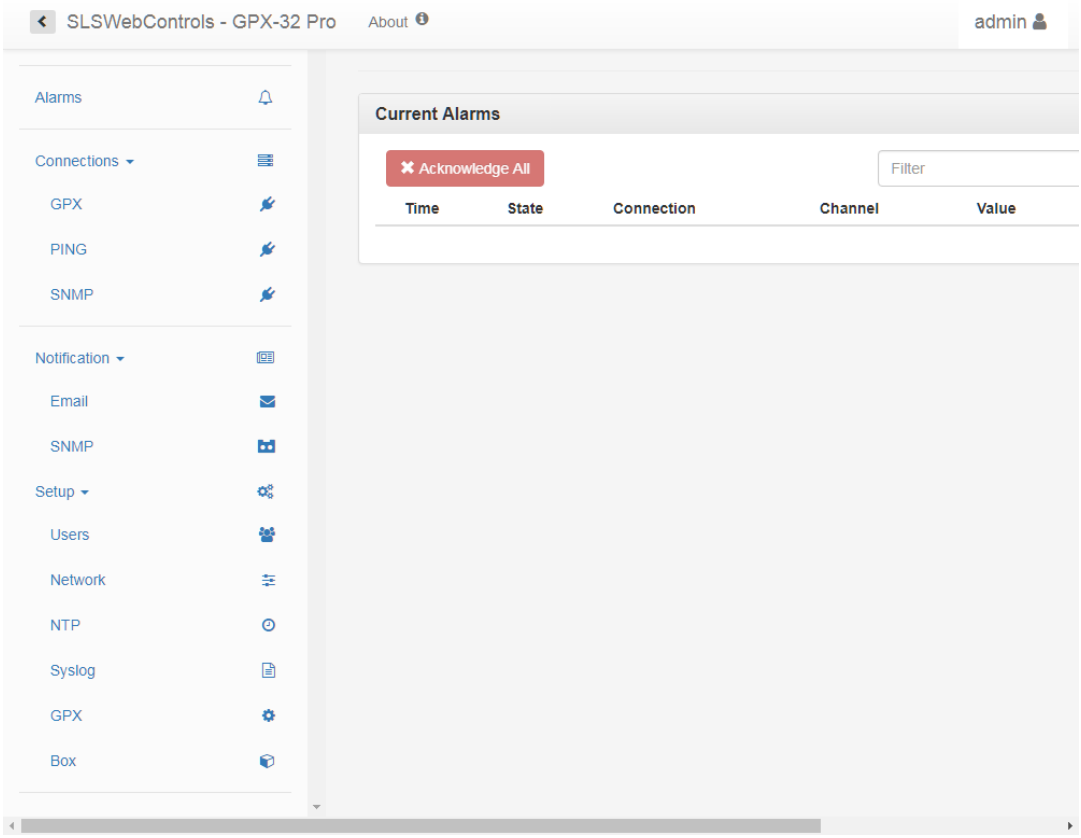
SLSWebControls Navigation

Once signed in you will be presented with the home page where a list of current system alarms are displayed. If this is a new installation no alarms should be present.



1. Main Menu

Clicking the  Chevron will display or collapse the Main Menu. Under the Main Menu there are three sub menus that can either be expanded or collapsed, Connections, Notification and Setup.



- **Alarms** – Clicking takes you back to the Home page displaying a list of current alarms
- **Connections>GPX** –Configured GPX connections
- **Connections>Ping** – Configured PING connections
- **Connections>SNMP** – Configured SNMP connections
- **Notification>Email** – Email notification configuration
- **Notification>SNMP** – SNMP Trap notification configuration
- **Setup>Users** –User configuration
- **Setup>Network** – Network configuration
- **Setup>NTP** – NTP configuration
- **Setup>Syslog** – Syslog configuration
- **Setup>GPX** – GPX Configuration
- **Setup>Box** – Box Configuration

2. Application Name

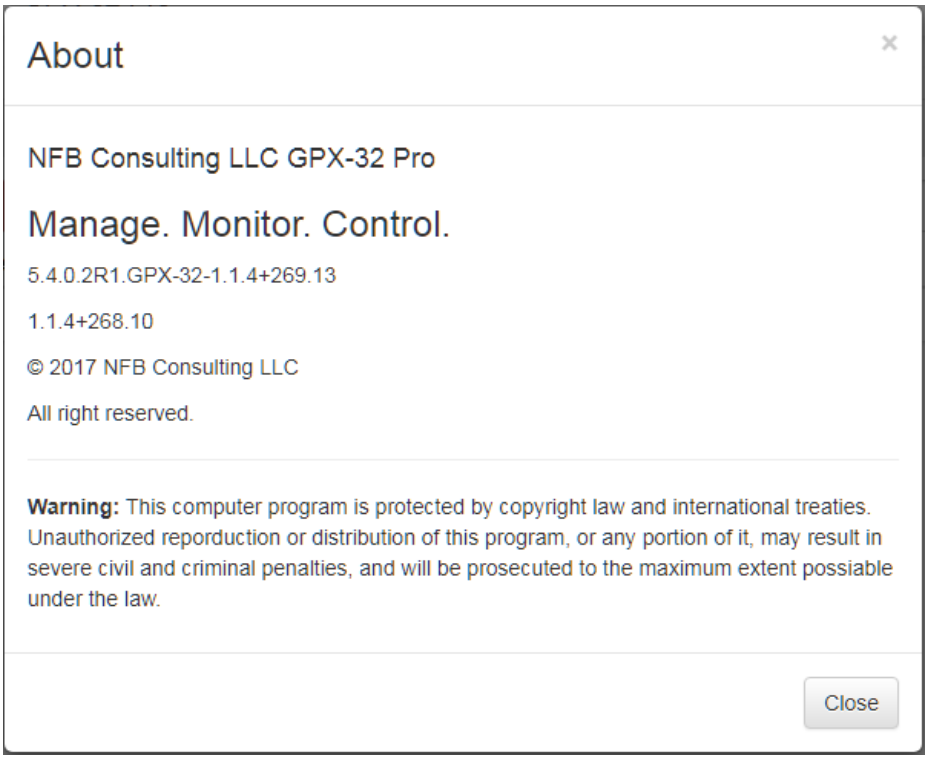
Clicking on **'SLSWebControls'** will return you to the home screen displaying the current alarms

3. Box Name

This name is user definable via **Main Menu>Setup>Box>Short name**

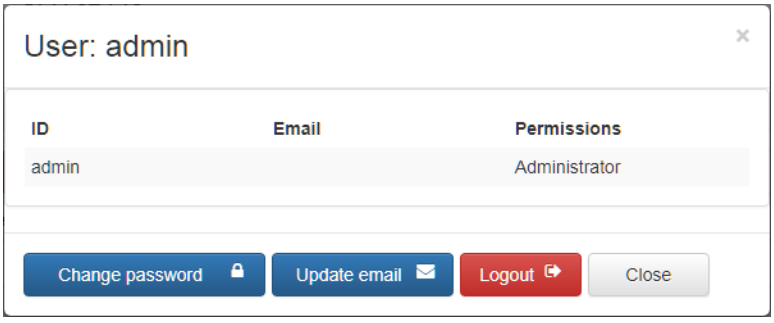
4. About

Clicking the **'About'** button will display the About popup. The first version number displayed is that of the firmware running on the box. The second number is the version of **SLSWebControls**.



5. Signed in User

Clicking on the **'Signed in User name'** in the Top right will display the User popup. From within this popup the user can change their password and email address as well as logout of the application.



User passwords must be a minimum length of 8 and contain the following:

1. At least one lowercase character. a-z
2. At least one uppercase character. A-Z
3. At least one digit. 0-9
4. At least one of the following special characters. !@#$%^&*

6. Alarm Table

Displays a list of active alarms

7. Acknowledge All

Clicking will acknowledge all alarms in the alarm table

8. Alarm List Filter

By typing a search term the alarm list will be filtered

Connection Configuration

The **GPX Pro** is able to Manage, Monitor and Control devices using three connection types: (1) GPX Parallel I/O, (2) PING and (3) SNMP.

Each connection type is user configurable via the SLSWebControls interface by defining individual channels as one of three types, (a) Control, (b) Status or (c) Analog.

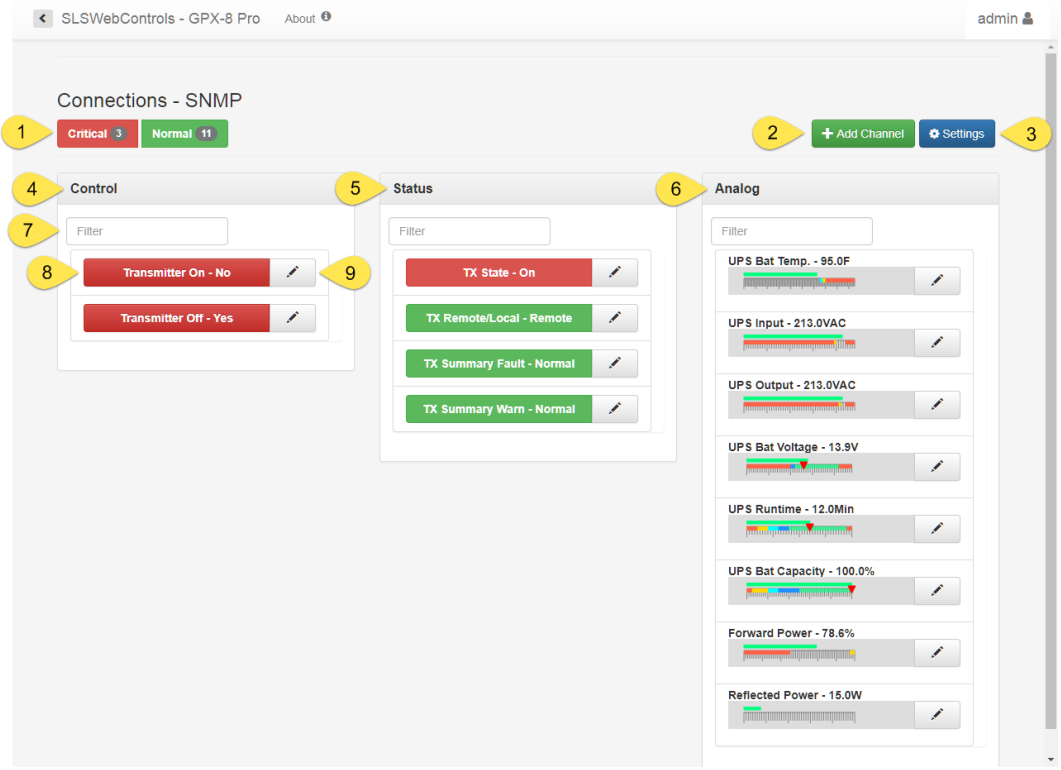
Connection Types

- **GPX** - The GPX connection allows the user to configure data channels using the parallel inputs of the GPX device. In the case of the GPX-32 that is 32 Opto coupled inputs, 32 C-Form relay outputs and 32 Analog inputs with voltage ranges selectable between +/-5v and +/-15v. The GPX-8 Pro has 8 Opto coupled inputs, 8 C-Form relay outputs and 8 Analog inputs with voltage ranges selectable between +/-5v and +/-15v.

- **PING** - The PING connection allows the user to configure Status and Analog channels using ICMP ping request data from one or more network devices.

- **SNMP** - The SNMP connection allows the user to configure Control, Status and Analog channels using SNMP get/set requests to one or more SNMP network devices.

To View and Configure connections select the connection type from ***Main Menu>Connections>GPX/PING/SNMP*** and a screen similar to the following will be shown.



1. Alarm Summary

Summary of the current Alarms in the selected connection type.

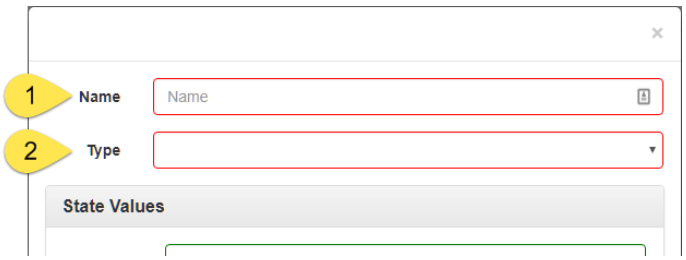
2. Add Connection

Clicking will display the Add Channel popup to allow the addition of a new channel to the connection

1. Start by entering a Channel Name
2. Select the Channel Type from the drop down selection

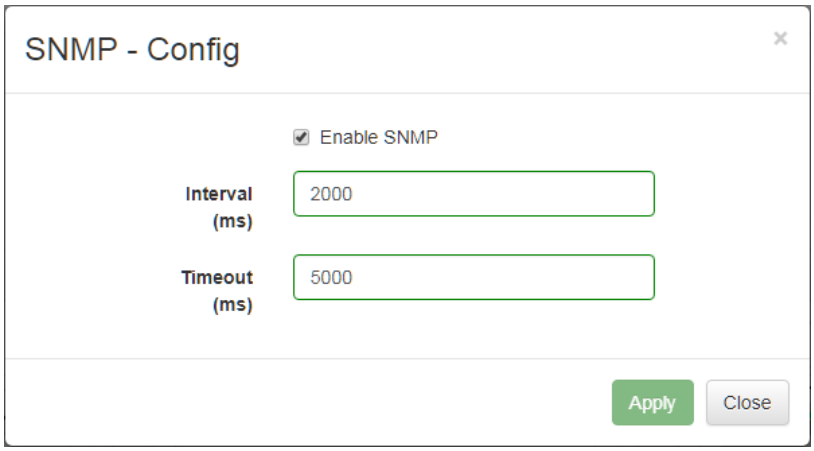
Depending on the channel type selected the configuration settings available will change, please refer to selection **9. Edit Channel** below for more details.

Clicking **'Close'** will cancel the addition of the channel.



3. Connection Settings

Clicking will display the settings for the connection type. This selection may not be available for all connection types.



4. Controls

Refer to list of configured Control channels for the connection type Clicking on the title will collapse or expand the list.

5. Status

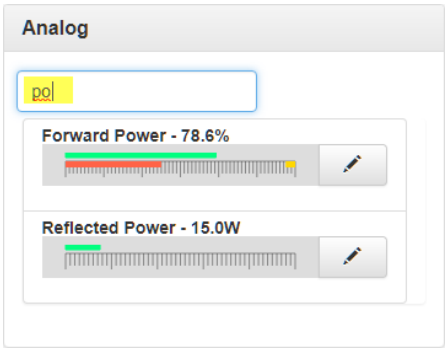
Refer to List of configured Status channels for the connection type. Clicking on the title will collapse or expand the list.

6. Analog

Refer to list of configured Analog channels for the connection type. Clicking on the title will collapse or expand the list.

7. Filter

By entering an expression the list directly below will be filtered to show only the matching channel names.

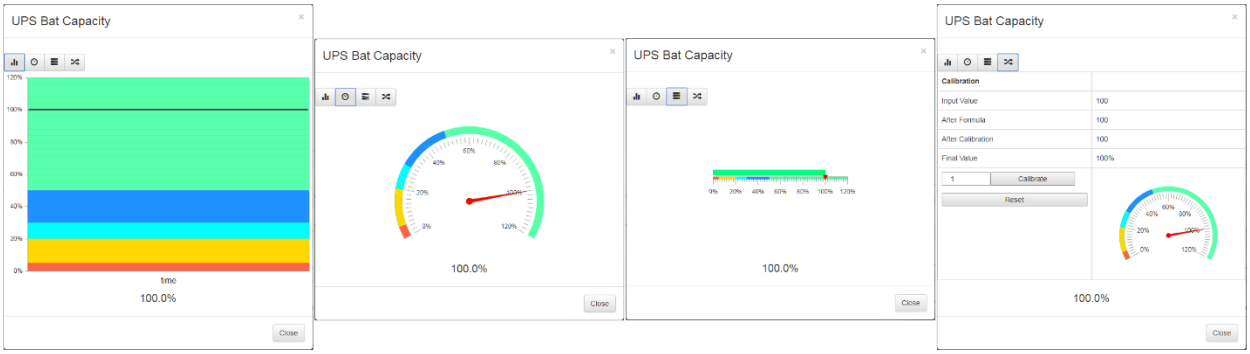


8. Channel State/Value

The bar will change color based on user defined notification values as well as display the current value of the channel.

- **Control Channels** - Clicking this area will send the ***Set Value*** to the connection channel. If a warning message has been configured a popup will be displayed first with the message asking the user to confirm.

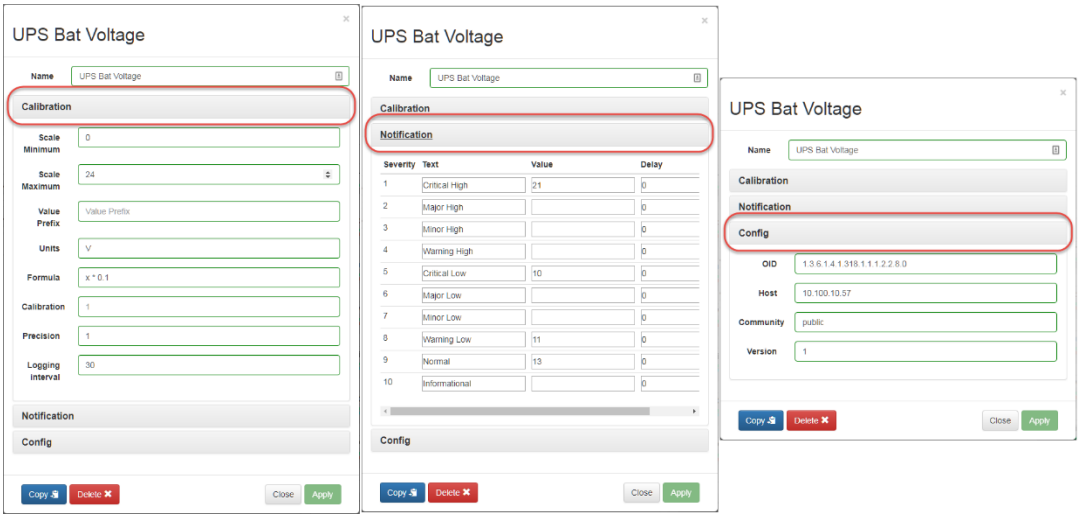
- **Analog Channels** - Clicking this area will open the Analog popup with Graph, Gauge and Bar meter displays as well as the option to calibrate the meter on the fly.



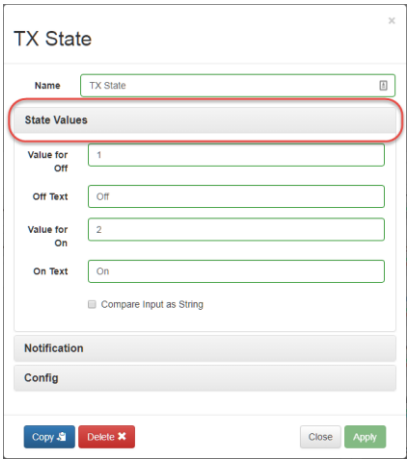
GPX Pro Operation

9. Edit Channel

Clicking the edit channel icon will display the Edit Channel popup to allow configuration of the channel, with each channel showing different options based on the connection and channel type.



Below is an example of a Status channel where the ***Calibration*** section is replaced with ***State Values***.



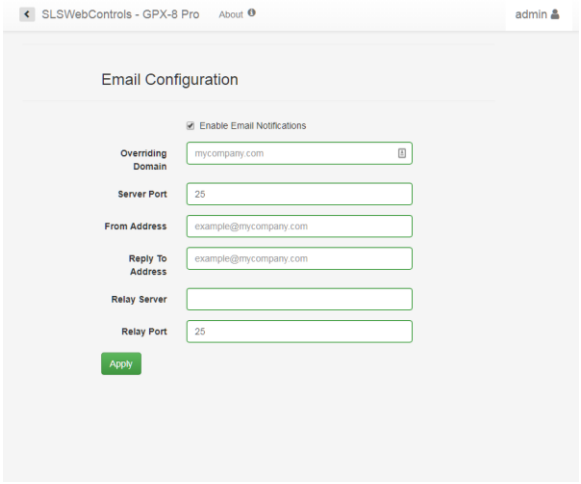
Notification Configuration

The **GPX Pro** is able to send notifications using **Email** (SMTP) and **SNMP** traps when alarms are created and cleared.

Configuration of both **Email** and **SNMP** traps is required before notifications can be successfully sent. To View and Configure notifications select the notification type from ***Main Menu>Notifications>***

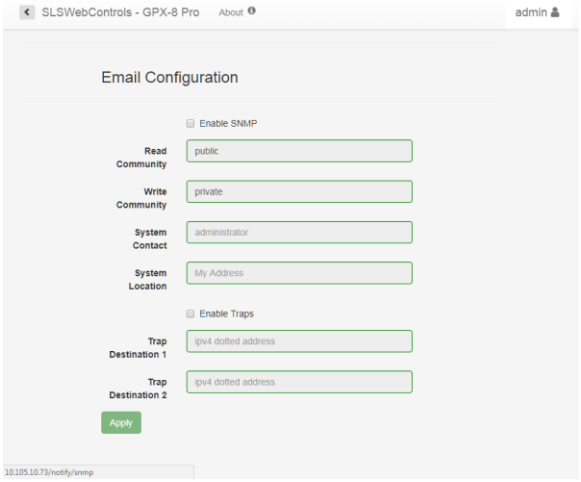
1. Email

Allows the configuration and enabling of **Email** notifications.



2. SNMP

Allows the configuration and enabling of **SNMP** Trap notifications.



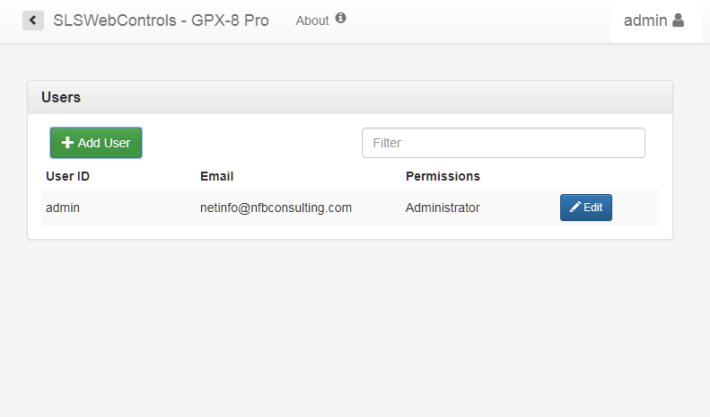
General Configuration

The General configuration of the **GPX Pro** is performed via the **Main Menu>Setup>**

1. Users

Allows for the Addition, Modification and Deletion of users whom have access to the unit. There are three levels of user availability:

1. **Administrator** – Can perform all operations
2. **Operator** – Can press control buttons but cannot add, edit or delete
3. **Viewer** –View only

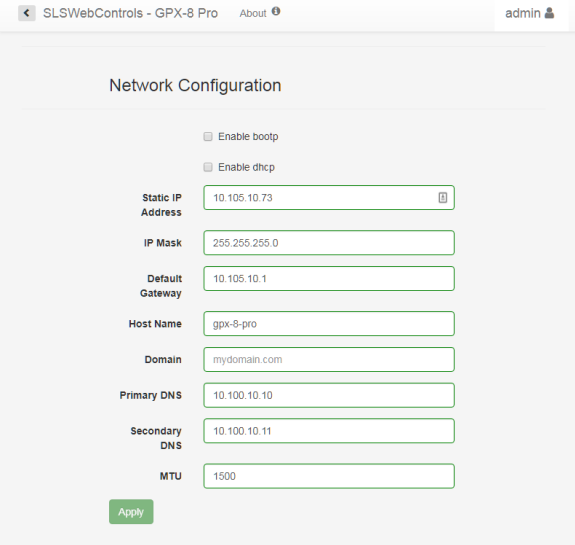


User passwords must be a minimum length of 8 and contain the following:

5. At least one lowercase character. a-z
6. At least one uppercase character. A-Z
7. At least one digit. 0-9
8. At least one of the following special characters. !@#$%^&*

2. Network

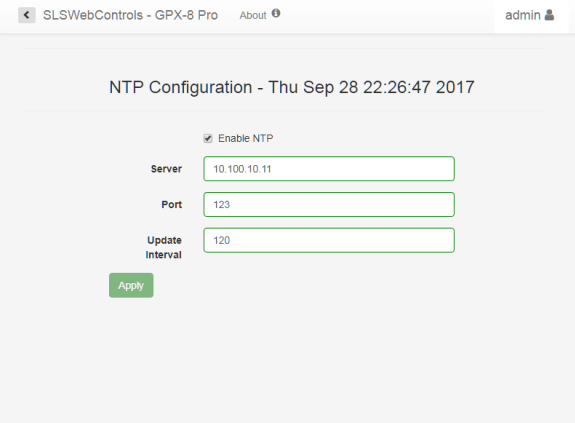
Allows for the configuration of the Ethernet network interface.



3. NTP

Allows for the configuration of NTP (Network Time Protocol) for syncing the **GPX Pro** to a network time source.

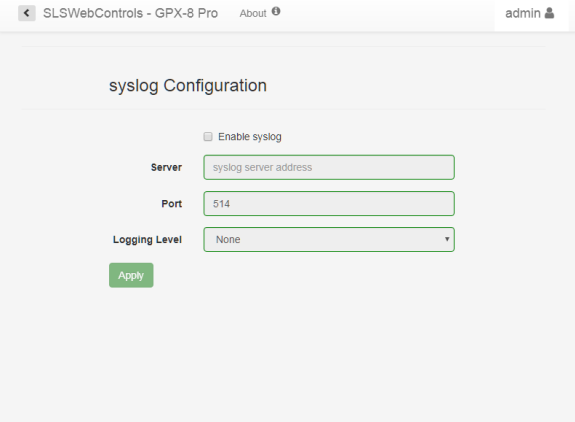
➲ **Note:** The **GPX Pro** does not have a RTC module and as such will reset its time back to Jan 1 1970 00:00:00, at reboot, the GPX Pro relies on the existence of a NTP time source to gather the correct time.



4. Syslog

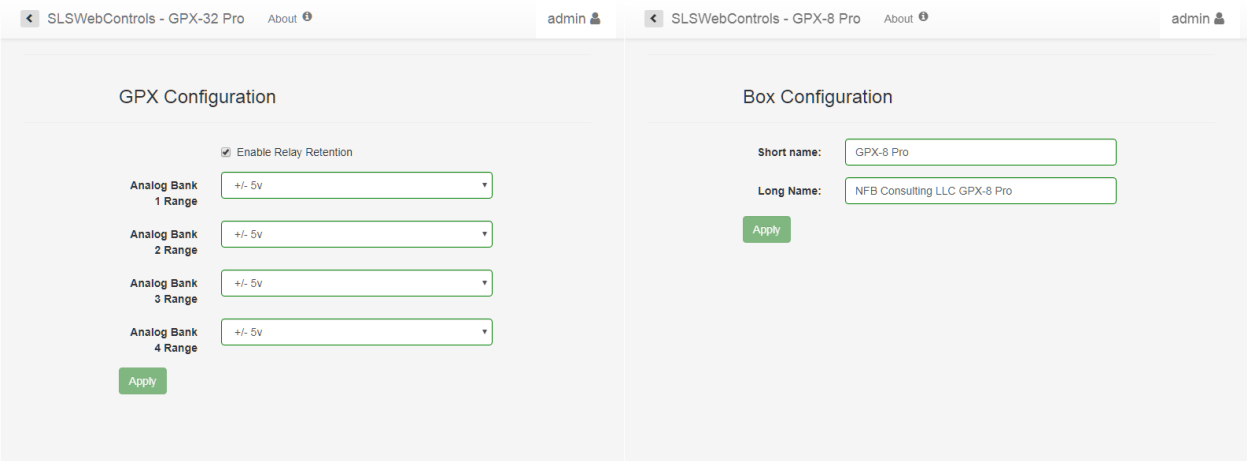
Allows for the configuration of a Syslog server that will accept log entries from the **GPX Pro** for long term log and telemetry storage.

➲ **Note:** The **GPX Pro** does not store logs locally, it relies on the existence of a Syslog server to store and archive events and analog readings.



5. GPX

Allows for the configuration of the GPX parallel interface hardware. The settings shown will differ between the **GPX-32 Pro** and **GPX-8 Pro**.



6. Box

Allows for the configuration of general Box settings.

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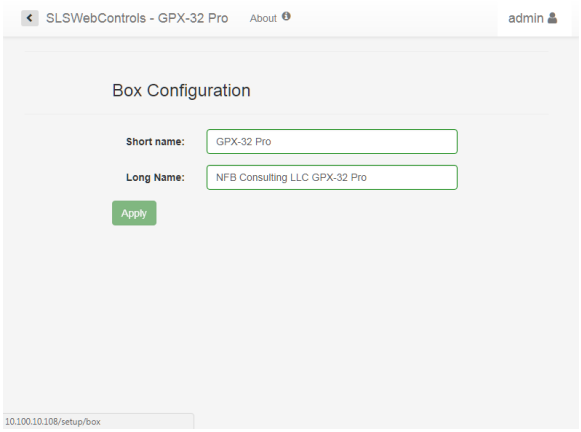

Technical Specifications

Power Supply

- 110-220VAC, 50/60Hz via standard IEC plug.
  Power Supply Specifications
  - Input Voltage: 100 ~ 240VAC
  - Input Frequency: 47 ~ 63Hz
  - Input Current: 0.8A ~ 0.5A

- +/-48VDC input (external battery or solar array) in the event of conventional power failure. Input via 2 position Molex connector.
  DC to DC Converter Specifications
  - Input Voltage: 20VDC - 60VDC
  - 1500V isolation
  - Mating Connector: Molex Part No. 39-01-2020
  - Crimp Pin: Molex Part No. 39-00-0039 #18-24AWG

Operating Temperature

-30°C to +45°C (-22°F to 133°F)

Humidity

10% to 90% RH (non-condensing)

Mechanical Dimensions

19”W X 1.75”H (1U) X 10.5”D, Standard EIA Rack Mounting

Onboard Temperature Sensor

Operating Range: -30°C to +80°C

Onboard Humidity Sensor

10% to 95% RH

Onboard Voltage Monitoring

- AC Mains Voltage
- DC Bus Voltage

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Technical Specifications

Status Indication

- Data – Illuminates with the arrival of incoming host data.
- Error – CRC Communication Error or any general error condition.
- Power – DC Bus Power Good.

Network Interface

- Ethernet 10Base-T or 100Base-TX (Auto-Sensing)
- Connector - RJ45
- Indicators (LED)
    - 10Base-T/100Base-TX connection
    - Link & activity indicator – Full/half duplex

Digital I/O

Opto-Isolated Inputs

- Number of Inputs: 32 Total
- I/O Connector: 0.050” 68 Pin SCSI Connector
- Input Voltage Range: +5VDC to +30VDC Non-Polarized Anode and Cathode available on isolated pins

Analog Inputs

- Number of Inputs: 32 Balanced Differential
- I/O Connector: 0.050” 68 Pin SCSI Connector
- Input Voltage Range: +/-5VDC and +/-15VDC, selectable in 4 banks of 8
- Input Modes:
    1. Differential – Both AIN+ and AIN- inputs driven within voltage range however neither signal falls below a common or ground reference. The difference in the 2 signals is amplified across the full scale input of the ADC.
    2. Bipolar – AIN+ input driven within voltage range above and below AIN- while it is held at fixed reference. The signal is amplified across the full scale input of the ADC.
    3. Unipolar – AIN+ input driven within voltage range while AIN- is held at a fixed reference. The signal is amplified across ½ full scale of the ADC.
- Input Impedance: Minimum 100K
- ADC: 16 bit, 200Ksps, +/-2LSB INL, accurate to within +/-5% of input voltage

Relay Outputs

- Number of Outputs: 32 Total
- I/O Connector: 2 X 0.050” 50 Pin SCSI Connector
- Contact Rating: 1A @ 30VDC
- Maximum Switching Power: 30W
- Maximum Switching Voltage: 60VDC
- Maximum Switching Current: 1A

Connector Pinouts

Opto Inputs 1 – 32

Connector	Input Number	Opto A	Opto B
68 Pin SCSI	1	1	2
68 Pin SCSI	2	35	36
68 Pin SCSI	3	3	4
68 Pin SCSI	4	37	38
68 Pin SCSI	5	5	6
68 Pin SCSI	6	39	40
68 Pin SCSI	7	7	8
68 Pin SCSI	8	41	42
68 Pin SCSI	9	9	10
68 Pin SCSI	10	43	44
68 Pin SCSI	11	11	12
68 Pin SCSI	12	45	46
68 Pin SCSI	13	13	14
68 Pin SCSI	14	47	48
68 Pin SCSI	15	15	16
68 Pin SCSI	16	49	50
68 Pin SCSI	17	17	18
68 Pin SCSI	18	51	52
68 Pin SCSI	19	19	20
68 Pin SCSI	20	53	54
68 Pin SCSI	21	21	22
68 Pin SCSI	22	55	56
68 Pin SCSI	23	23	24
68 Pin SCSI	24	57	58
68 Pin SCSI	25	25	26
68 Pin SCSI	26	59	60
68 Pin SCSI	27	27	28
68 Pin SCSI	28	61	62
68 Pin SCSI	29	29	30
68 Pin SCSI	30	63	64
68 Pin SCSI	31	31	32
68 Pin SCSI	32	65	66
68 Pin SCSI	+15VDC	33	34
68 Pin SCSI	Ground	67	68

Analog Inputs 1 – 32

Connector	Analog Input Number	Analog IN+	Analog IN-

Connector Pinouts

68 Pin SCSI	1	1	2
68 Pin SCSI	2	35	36
68 Pin SCSI	3	3	4
68 Pin SCSI	4	37	38
68 Pin SCSI	5	5	6
68 Pin SCSI	6	39	40
68 Pin SCSI	7	7	8
68 Pin SCSI	8	41	42
68 Pin SCSI	9	9	10
68 Pin SCSI	10	43	44
68 Pin SCSI	11	11	12
68 Pin SCSI	12	45	46
68 Pin SCSI	13	13	14
68 Pin SCSI	14	47	48
68 Pin SCSI	15	15	16
68 Pin SCSI	16	49	50
68 Pin SCSI	17	17	18
68 Pin SCSI	18	51	52
68 Pin SCSI	19	19	20
68 Pin SCSI	20	53	54
68 Pin SCSI	21	21	22
68 Pin SCSI	22	55	56
68 Pin SCSI	23	23	24
68 Pin SCSI	24	57	58
68 Pin SCSI	25	25	26
68 Pin SCSI	26	59	60
68 Pin SCSI	27	27	28
68 Pin SCSI	28	61	62
68 Pin SCSI	29	29	30
68 Pin SCSI	30	63	64
68 Pin SCSI	31	31	32
68 Pin SCSI	32	65	66
68 Pin SCSI	Ground	33	34
68 Pin SCSI	Ground	67	68

Relay Outputs 1 – 16

Connector	Relay Number	Common	Open	Closed
50 PIN SCSI	1	2	1	3
50 PIN SCSI	2	5	4	6
50 PIN SCSI	3	8	7	9
50 PIN SCSI	4	11	10	12
50 PIN SCSI	5	14	13	15
50 PIN SCSI	6	17	16	18
50 PIN SCSI	7	20	19	21
50 PIN SCSI	8	23	22	24
50 PIN SCSI	9	27	26	28
50 PIN SCSI	10	30	29	31
50 PIN SCSI	11	33	32	34
50 PIN SCSI	12	36	35	37
50 PIN SCSI	13	39	38	40
50 PIN SCSI	14	42	41	43
50 PIN SCSI	15	45	44	46
50 PIN SCSI	16	48	47	49

Unused Pins: 25 and 50

Relay Outputs 17 – 32

Connector	Relay Number	Common	Open	Closed
50 PIN SCSI	17	2	1	3
50 PIN SCSI	18	5	4	6
50 PIN SCSI	19	8	7	9
50 PIN SCSI	20	11	10	12
50 PIN SCSI	21	14	13	15
50 PIN SCSI	22	17	16	18
50 PIN SCSI	23	20	19	21
50 PIN SCSI	24	23	22	24
50 PIN SCSI	25	27	26	28
50 PIN SCSI	26	30	29	31
50 PIN SCSI	27	33	32	34
50 PIN SCSI	28	36	35	37
50 PIN SCSI	29	39	38	40
50 PIN SCSI	30	42	41	43
50 PIN SCSI	31	45	44	46
50 PIN SCSI	32	48	47	49

Unused Pins: 25 and 50

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