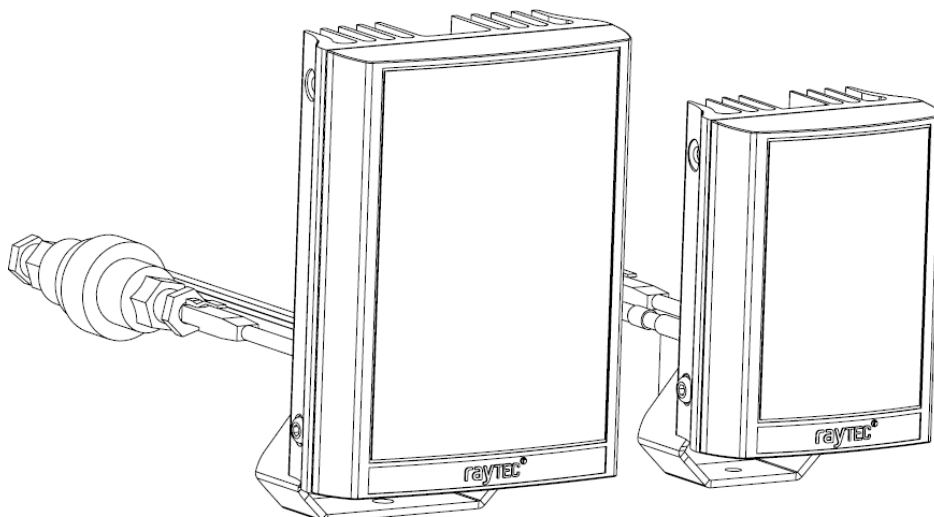


PoE Network Illuminators



Installation should be carried out by suitably trained and qualified personnel

These Products are Suitable for Internal and External Applications

BOX CONTENTS

VARIO IP PoE LAMP
USB Memory Stick
Quick Start Instructions

Either Infra-Red or White-Light
Containing Full User instructions & Raytec Discovery Tool App

Minimum System requirements: - PC running Windows 7 with IE8 and network access.



WARNINGS

- Install in a well ventilated area
- IR Variants
CAUTION - IR emitted from this product – Risk Group 2. Avoid prolonged exposure or use appropriate shielding or eye protection. Risk Group 2 for cornea/lens infrared hazard. At a distance of more than 1500mm for all IR850 (VAR-IPPOE-i4-1, i8-1) products or 1300mm for all IR940 (VAR-IPPOE-i4-1-c, i8-1-c) products the unit is in the exempt group.
- White Light Variants
Risk Group 1 classification. Precautions are only required for prolonged eye exposure. Do not stare at the lamp.

Wiring

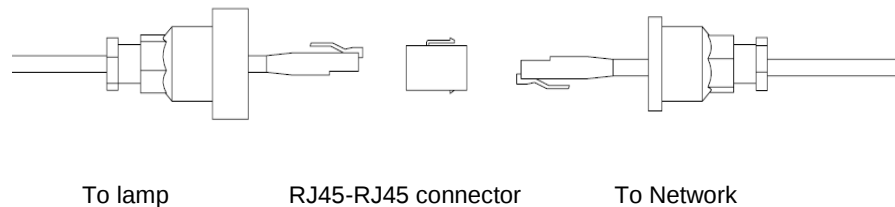
The lamp is supplied with a waterproof Ethernet connection (RJ45) on a flying lead and a Multi-core auxiliary power and control cable.

If using PoE, connect an Ethernet cable (category 5 or better) between the Power Sourcing Equipment (PSE) and the lamp. Ensure that the PSE is sufficiently rated to power the Vario IP POE device. Requirements are as follows:

VARIO IP PoE Unit	PoE Requirement
VAR-IPPOE-w4-1, i4-1, i4-1-c	IEEE 802.3at (HP PoE) 25.5W
VAR-IPPOE-w8-1, i8-1, i8-1-c	4-pair POE >50W

When using PoE the CAT5 cable is both the power and data connection for the lamp. The maximum Ethernet cable length is 100m (328') without boosting the signal.

Ensure you make a waterproof connection to the RJ45 as shown below. Ensure the connector is waterproof and sealed after the connection is made.



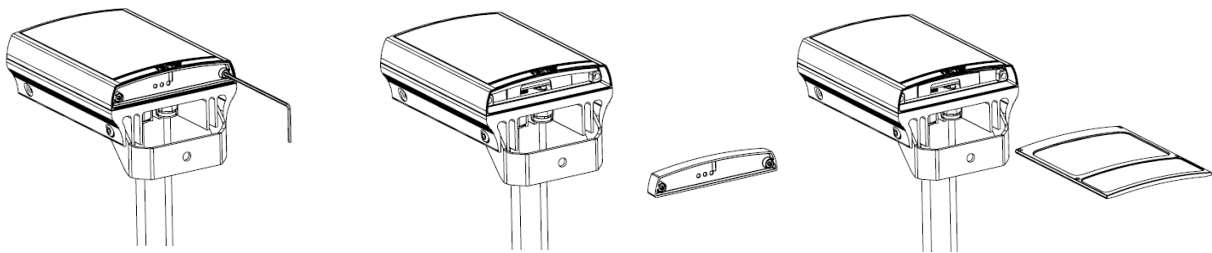
If using Auxiliary Power, connect **24V DC** to the red (+ve) and black (-ve) cables of the multicore auxiliary cable. In this case the Ethernet cable is a data connection only and supplies data signals to/from the lamp.

Connect external input trigger and external output as required – see table below

Colour	Description	Wire Gauge (AWG)	
		w8-1, i8-1, i8-1-c	w4-1, i4-1, i4-1-c
Red	+ve Auxiliary Power	18	22
Black	-ve Auxiliary Power	18	22
Orange	External Input (Only if TTL: +ve)	22	22
Purple	External Input (Only if TTL: GND)	22	22
Yellow	External Output	22	22
White	External Output	22	22

Please Note : To maintain the environmental integrity of the product, as part of the installation, the multicore auxiliary cable must be terminated appropriately regardless of which cores are being used.

Changing Interchangeable Lenses



To alter the angle of your lamp – see the drawings above.

The lamp is delivered with a 35° angle. To alter to 10°, remove the baseplate from the bottom of the product and remove the existing lens and then re-attach the baseplate.

To alter to any other angle, remove the existing lens and insert the required lens (which will have its angle indicated). Ensure the baseplate is securely re-attached to maintain waterproof integrity of the product.

POE Detection Resistance Selection Switch

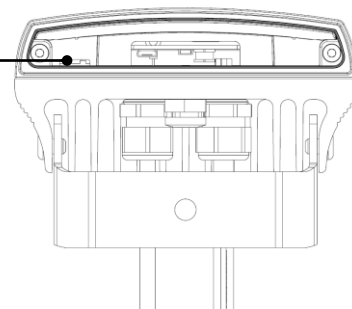
There is a switch on the **VAR-IPPOE-w8-1**, **i8-1** and **i8-1-c** lamps which can be used to change the POE detection resistance of the lamp.

Turn the power to the lamp OFF, remove the baseplate and access the switch as shown.

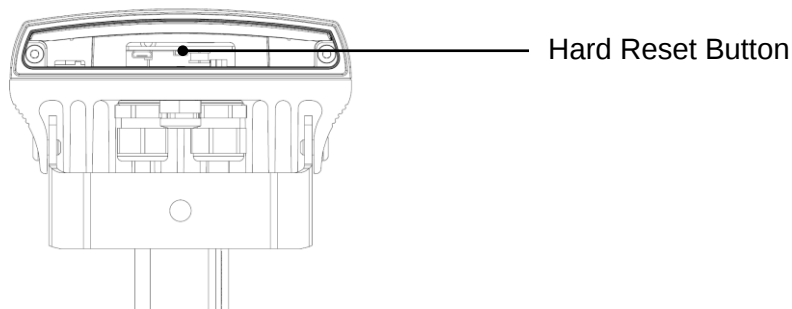
The majority of PSE equipment requires a detection resistance of 24.9KΩ to establish a POE link. Some Pihong brand PSE equipment requires a 12.5KΩ detection resistance.

For 24.9 KΩ, slide switch to the LEFT (as shown). For 12.5 KΩ, slide switch to the RIGHT.

Detection Resistance Selection Switch



Hard Reset – On the Lamp



There is a hard reset button on the lamp which can be used to reset the lamp in case all connectivity is lost.

Turn the power to the lamp OFF, remove the baseplate and access the button as shown.

Press and hold the Reset button and reconnect power. Keep the Reset button pressed for about 5 seconds until the lamp flashes. Release the Reset button. Ensure the baseplate is securely re-attached to maintain waterproof integrity of the product.

All settings will be lost and the factory default settings will be restored.

WARNING: We recommend attempting to reconnect with the lamp by firstly restarting the lamp or restoring factory settings via the integrated web interface. The hard reset button on the lamp should be used only as a last resort to restore connection to the lamp.

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Introduction

VARIO IP PoE is a Network Illuminator designed to connect to any suitable network and is provided with an integrated Web Interface. The product is delivered with a Discovery Tool Application for easy identification and connection to the lamp on the network. You can also connect directly to the lamp by typing its IP address into a web browser. An API is also available for easy integration within a VMS environment.

The lamp has Operator and Administrator log-on and access rights. The Operator has access to the Homepage/Instant Control and Diagnostic pages. The Administrator has access to all pages.

Initial Setup

Ethernet Cable

Cat5e (or better) – using the T-568B wiring standard. See connection on page 2

Multi-core Power & Signal Cable

Colour	Description	Wire Gauge (AWG)	
		w8-1, i8-1, i8-1-c	w4-1, i4-1, i4-1-c
Red	+ve Auxiliary Power	18	22
Black	-ve Auxiliary Power	18	22
Orange	External Input (Only if TTL: +ve)	22	22
Purple	External Input (Only if TTL: GND)	22	22
Yellow	External Output	22	22
White	External Output	22	22

QUICK START

Select required angle for lamp. Standard angle is 35°. Change angle as required (see page 2).

Attach lamp to wall, housing or pole using U-bracket provided or dedicated Raytec bracketry.

Connect lamp to PSE and network using waterproof connector provided or separate junction box. See page 2 for diagrams.

To use Auxiliary Power, connect lamp to 24V DC (50W required for **VAR-IPPOE-w8-1, i8-1** and **i8-1-c**, 25.5W required for **VAR-IPPOE-w4-1, i4-1** and **i4-1-c**) and apply power to the lamp.

We strongly recommend that you load the Discovery Application onto your computer - and then run it - with the VARIO IP powered and attached to the same network as your computer. Press Discover – and the Discovery Tool will display a list of lamps available on the network. You can double click onto the lamp from the Discovery Tool to navigate directly to the lamp. The default IP address of the product: 192.168.2.80 - which is likely to be outside of your network range.

The lamp does NOT have DHCP enabled to auto allocate IP addresses - but you can activate that from the Discovery Tool. This is likely to be the easiest and fastest way to allocate a new IP address, provided that your network is DHCP enabled.

The lamp responds to multicast messages - and therefore does not need to have a valid IP address for the Discovery Tool to find it. But it does require a valid IP address for communication.

To change the IP address so you can communicate with the lamp you can either:

1. Run Discovery Tool. Single click on lamp to highlight it. Select <Network> from bottom menu. Highlight DHCP option. Press save. Then return to Discovery Tool. Press Discover. Lamp should now appear with a valid IP address. You can now double click lamp to navigate to it. **WARNING:** Your network must have DHCP capability.

2. Run Discovery Tool. Single click on lamp to highlight it. Select <Network> from bottom menu. Write in a new IP address and subnet mask - which must be compatible with your network. Check with your IT manager. After changing the IP address and subnet mask, press save. Press Discover. You can now double click lamp to navigate to it.

Alternatively, you can navigate directly to the lamp by typing in the IP address of lamp into a web browser on a computer located on the same network as the lamps. To ensure successful communications the IP address of the PC must be in the same IP address range of the lamps.

Log-on using Operator/User or Administrator user names and passwords. Operator has limited access rights. Administrator has full access rights.

Defaults (User Names & Passwords are case sensitive):

Users & Passwords	name	password
Operator	user	password
Administrator	admin	password

In order to maintain maximum security of your system, you may want to consider changing the passwords at the earliest opportunity – see page 23.

Take instant control of lamp by pressing Override button on home page. This will countdown for 30 minutes to allow user to control and then will revert to standard settings automatically or if the override button is deselected.

If you wish to have lamp operated via its integrated web browser – then ensure that local control box on Settings/Groups page is ticked. This is the default. To operate the lamp via VMS or Raytec software, then deselect the local control box.

Standard set up – see factory defaults below for all default settings.

The lamp will turn on/off automatically when the photocell detects it is dark/light@ 100% (soft start) via the photocell.

The External Input will activate the lamp @ 100% (NOT soft start) for the duration of the input provided the photocell detects it is dark.

External Output: activated by photocell, short circuit

Different Settings can be selected on Settings/Groups page. Settings must be saved for them to take effect.

We recommend that you log off after using the lamp.

Hierarchy of Photocell Vs Telemetry

If the telemetry function is enabled, then the photocell must detect that it is dark for the telemetry function to operate. The photocell overrides the telemetry function during the day.

If the external input/telemetry function needs to be operated 24/7, then the photocell function should be disabled from the settings/groups page.

The system requires 15 seconds of light to deactivate the photocell and turn the lamps off to avoid accidental turn off of the lamps via car headlights or torches.

Quick Troubleshoot

Ensure correct lens angle selected for required distance – check stated performance.

Ensure lamp in correct orientation.

Ensure camera fully operational and lens fully open at night.

Check POE equipment is correctly rated for the Vario IP POE unit. On **VAR-IPPOE-w8-1**, **i8-1** and **i8-1-c** units check the detection resistance switch is in the correct position for your PSE.

If using Auxiliary power, check voltage applied to VARIO IP PoE: - **24V DC** (50W required for **VAR-IPPOE-w8-1**, **i8-1** and **i8-1-c**, 25.5W required for **VAR-IPPOE-w4-1**, **i4-1** and **i4-1-c**).

Check connection and wiring of Cat 5/6 cable to VARIO IP. Verify link has been established with the router/switch to which the lamp is connected.

If a physical connection is present run the Discovery Application and try to discover the lamp on the network.

If the lamp is discovered and the “State” indicator is grey, this indicates that there is no communications with the lamp – check IP Address and Subnet Mask are set within the correct range.

Factory Defaults

Name	VARIOIP
Group Name	<Deliberately Left Blank>
IP Address	192.168.2.80
Enable DHCP Checkbox	Not Selected – IP addresses will NOT be automatically allocated. If lamp is being operated on a DHCP enabled network, DHCP can be selected for automatic allocation of IP address.
Local (No VMS server)	selected to enable operation of lamp using integrated web interface. If lamp is to be operated using VMS or other control system then this option should NOT be selected.

	<i>Photocell</i>	<i>External Input</i>
Trigger Control	Lamp Control	Lamp Control
Respond to Group Commands	No, ignore group command	No, ignore group command
Lamp Mode on Trigger	On	On
Power (%)	100%	100%
Duration	All night	Duration of Input
Soft Start	On	Off

Deterrent

Pattern = SOS

Frequency = Slow

Manual Override

Countdown Duration = 30 mins

Advanced Settings

External Input

Type of Input = Volt Free

Active State = Short Circuit/Low

External Output

Trigger State = Photocell Only

Active State = Short Circuit/Low

Photocell Sensitivity = 20 lux

Connecting to the Network

Basic

Assign an IP Address

Most networks today have a DHCP server that automatically assigns IP addresses to connected devices. If your network does not have a DHCP server, the VARIO IP Lamp will use 192.168.2.80 as the default IP address. Raytec's Discovery Application is the recommended method for changing an IP address. This free application is available on the USB Memory Stick supplied with the product or please contact Raytec to supply the latest version.

See page 6 for how to change the IP address of lamp using the Discovery Tool.

Note: - If assigning the IP address fails, check that there is no firewall blocking the operation and that the computer and lamp have IP addresses in the same range.

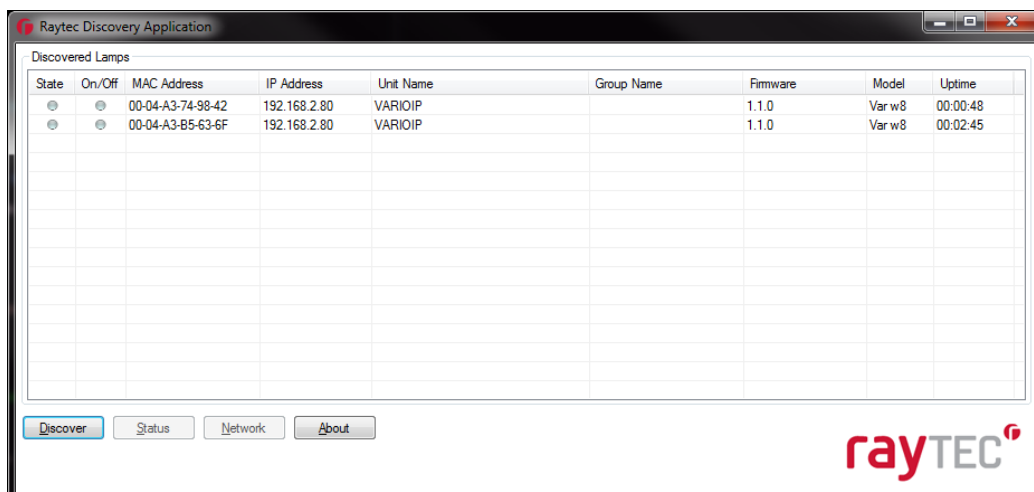
Advanced

Accessing the lamp from the Internet

Once installed, your Network Lamp is accessible on your local network (LAN). If you wish to access via the internet, please contact your IT specialist.

Discovery Application

The Raytec Discovery Application will discover and display all VARIO IP Lamps on your network. Load The Discovery Tool Application from the USB provided (or contact Raytec for a copy) onto a computer on the same network as the lamp. Run the application and press "Discover".



The Raytec Application allows you to:-

- Navigate directly to each lamp
- Change Network Settings

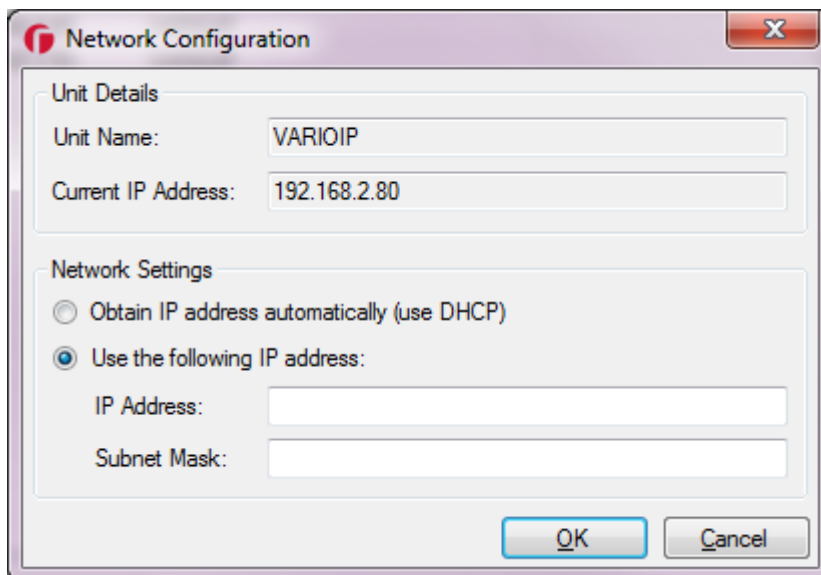
- Change the Name and Group Name
- See the lamps status
- See lamp details including Names, Firmware version, Time lamp has been powered etc

To be able to do this communications with the lamp is needed. On the image shown above two lamps have been discovered on the network. They are unique in that they have different MAC addresses, but the same IP Address and Unit Name. The application allows the lamps now to be configured.

Network Settings

To change the network settings highlight the lamp to be changed and press “Network”.

The “Network Configuration” screen will be shown.



Two options are available to set the IP Address at this stage:-

1. Enable DHCP – if the network is DHCP enabled (Recommended)
2. Enter a Static IP Address and Subnet Mask

DHCP – Automatic allocation of IP address

Select “Enable DHCP” and press OK.

The unit will now be allocated an IP Address via the network’s DHCP server. Refresh the Discovery Application by pressing “Discover”. The lamp’s IP address should automatically be updated into the required range and can be accessed directly from the Discovery Tool now by double clicking on the lamp from the list of discovered lamps.

Static Network Configuration – Manual allocation of IP address

To use static network configuration it is important that the network administrator controls and ensures the IP Addresses issued are unique and not repeated. Enter the appropriate IP Address and Subnet Mask in the “Use the following IP address” section and press “OK”.

The unit will now be allocated the IP Address as entered. Refresh the Discovery Application by pressing “Discover”.

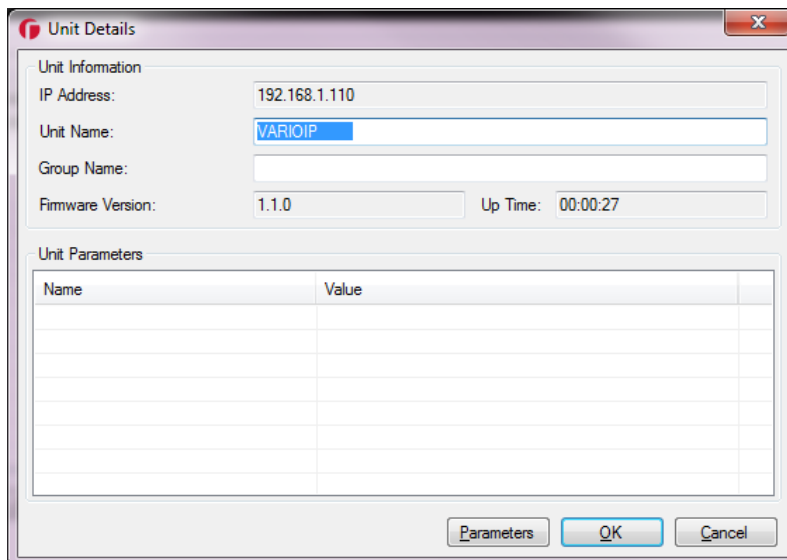
Name and Group Name

All lamps have the default name of “VARIOIP”. This should be changed so that the lamp can be easily identified.

The group name is always left blank as default. The group name is used to associate/group lamps together and allow them to interact using group commands.

Both Name and Group Name can be modified directly from the Discovery Application or via the web interface.

To change these via the Discovery Application, highlight the lamp you want to change. Then press “Status”.



The image shows a screenshot of the 'Unit Details' dialog box. It contains two main sections: 'Unit Information' and 'Unit Parameters'.

Unit Information:

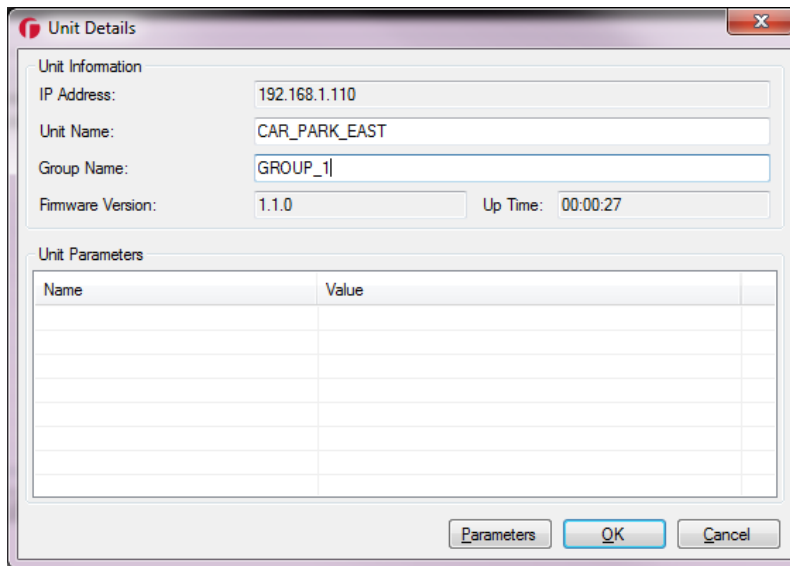
- IP Address: 192.168.1.110
- Unit Name: VARIOIP
- Group Name: (empty field)
- Firmware Version: 1.1.0
- Up Time: 00:00:27

Unit Parameters:

Name	Value

At the bottom of the dialog are three buttons: 'Parameters', 'OK', and 'Cancel'.

Unit Name and Group Name can both be edited by entering a new value in their fields.



The image shows a 'Unit Details' dialog box with the following fields:

- Unit Information:
 - IP Address: 192.168.1.110
 - Unit Name: CAR_PARK_EAST
 - Group Name: GROUP_1
 - Firmware Version: 1.1.0
 - Up Time: 00:00:27
- Unit Parameters:

Name	Value

Buttons at the bottom: Parameters, OK, Cancel.

After the change has been made save the edited names by pressing “OK”.

The selected unit name and group has now been changed. Refresh the Discovery Application by pressing “Discover” and the updated information should be displayed.

Lamp Status

The Discovery Application has two status indicators for each lamp. The colours of these indicators change depending on the state of the lamps as described below:-

	Red	Green	Grey
State	Lamp Fault	Lamp OK	No communication
On/Off	N/A	Lamp On	Lamp Off

A lamp fault is indicated if:-

1. An LED fault exists within the lamp.
2. The input voltage is outside specified limits.

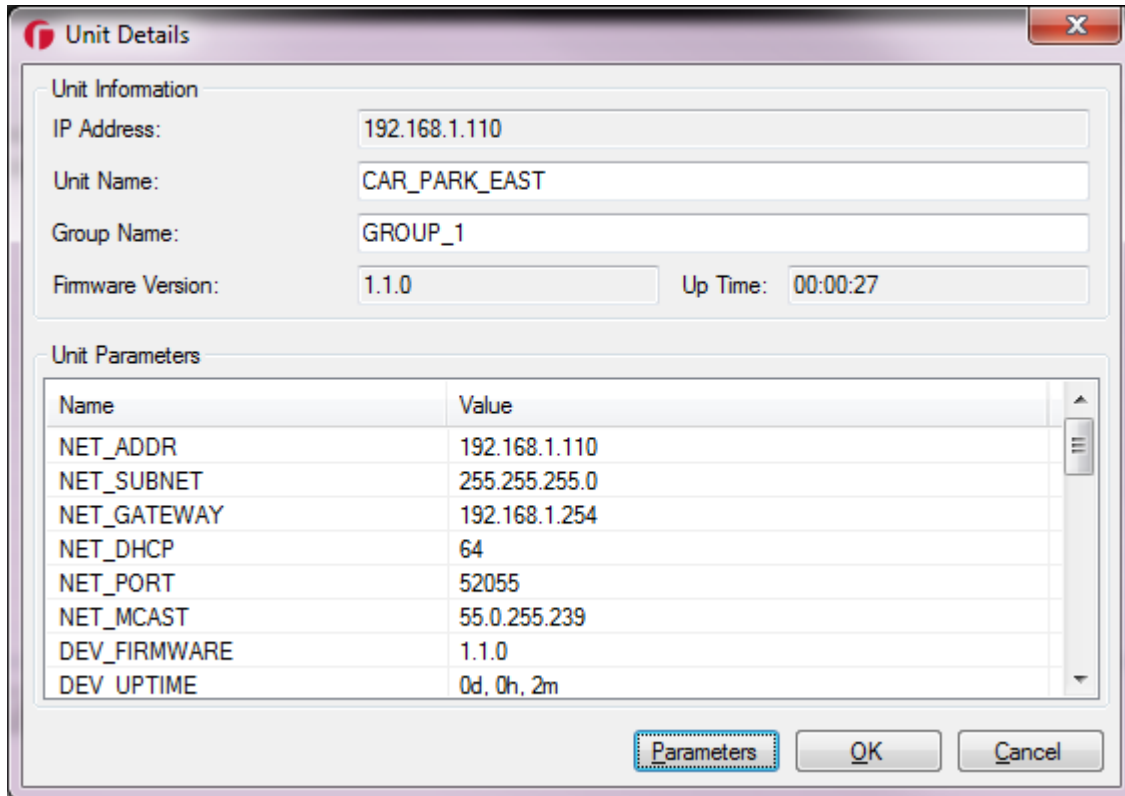
Other Information

The Discovery Application does not automatically refresh, therefore to view any changes it is important that the page is refreshed - using function key “F5” or by pressing “Discover”.

When changes are made to a lamp or a new lamp is added there may be a small delay in making contact or updating the information and so “Discover” may need to be pressed more than once.

Unit Details – Parameters

Selecting the Parameters button within the Unit Details screen provides a high level of detailed information regarding the performance and operation of the lamp. This is designed to be used during detailed diagnostics of the lamp with Raytec or your supplier.



The dialog box titled "Unit Details" contains two main sections: "Unit Information" and "Unit Parameters".

Unit Information:

- IP Address: 192.168.1.110
- Unit Name: CAR_PARK_EAST
- Group Name: GROUP_1
- Firmware Version: 1.1.0
- Up Time: 00:00:27

Unit Parameters:

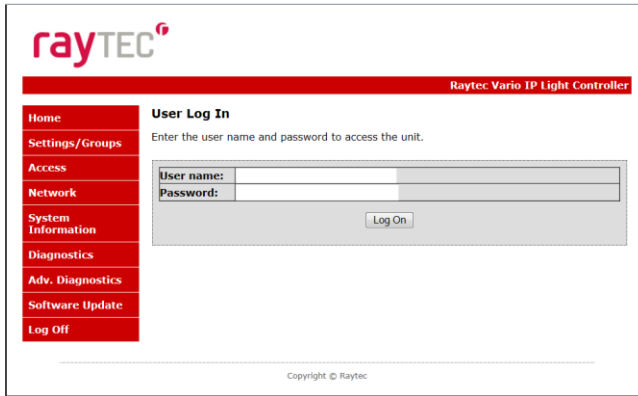
Name	Value
NET_ADDR	192.168.1.110
NET_SUBNET	255.255.255.0
NET_GATEWAY	192.168.1.254
NET_DHCP	64
NET_PORT	52055
NET_MCAST	55.0.255.239
DEV_FIRMWARE	1.1.0
DEV UPTIME	0d, 0h, 2m

At the bottom of the dialog box, there are three buttons: "Parameters" (highlighted with a dashed border), "OK", and "Cancel".

Web Pages

LOG-IN PAGE

Access Log-In page for individual lamp by double-clicking on the lamp from the Discovery Tool or by typing the IP address into the web browser.



User Names & Passwords are case sensitive.

Log on using either **Operator** User Name and Password or **Administrator** User Name and Password.

Operator has restricted access to Home Page/Instant Control and Diagnostic Pages only. Administrator has access to all pages.

The Administrator can change passwords by using the “Access” Page. Ensure you keep a note of passwords used in a secure place.

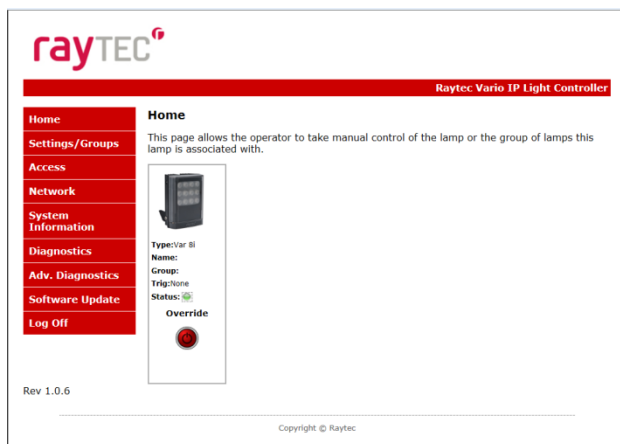
Users & Passwords	name	password
Operator	user	password
Administrator	admin	password

Forgotten password

If you are an operator, please request the assistance of the administrator. They can reset the password through the “Access” Web page.

If you are an administrator, you will have to use the Hard Reset button on the lamp – refer to instructions on page 30. This will restore the lamp to factory defaults which includes user names and passwords.

HOME PAGE



After a successful log-in, the Home Page/Instant Control page will be displayed. You can navigate to all pages using the side navigator bar which is available on all pages.

The Home Page/Instant Control page displays the current status of the lamps including the following information:

- A visual representation of the product and its current state (ON/OFF)
- Product Type & Model
- Product Name - if a name has been assigned (using Network Page or Discovery Tool)
- Group Name - if a name has been assigned (using Settings/Group Page or Discovery Tool)
- Trig – if lamp is on, this will indicate the nature of the input trigger type

HOME PAGE/INSTANT CONTROL

All users can access Instant Control features shown below by selecting the “Override” button.

When selected, additional features will appear and Override countdown will commence. Factory default Override countdown is 30 minutes. This setting can be adjusted by administrator on Settings/Group page. The countdown duration can be reset at any time and will restart from maximum time. The Instant Control Override function can be deselected at any time and the lamp will return to normal operating mode.

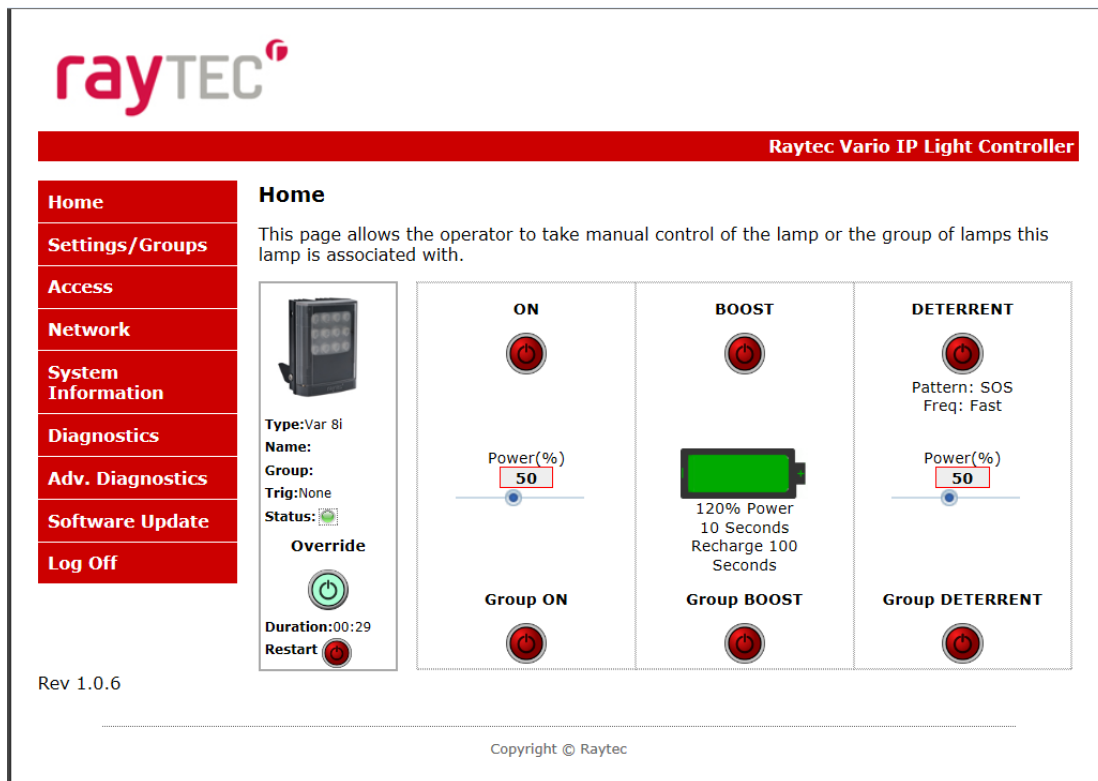
ON & GROUP ON

The current on/off status will be displayed by the red/green button together with the current power level of the individual lamp. To alter power, use the slider bar from 20% to 100%.

To turn all lamps on in the same group and control power level – select the Group ON button.

All lamps in a group will turn on to the power setting selected.

When ON or GROUP ON button is turned off, lamps will return to their normal operating mode.



Important - If a lamp is in group override control from another lamp you will not be able to access the override control on that lamp.

BOOST & GROUP BOOST

This will boost individual lamp or all lamps in a group (if GROUP BOOST selected) to 120% of normal output power for a period of 10 seconds. Boost will then be disabled for 100 seconds whilst system recharges.

DETERRENT & GROUP DETERRENT

This will turn individual lamp or all lamps in group (if GROUP DETERRENT selected) into deterrent mode. The current pattern and frequency of the deterrent is displayed and can be changed on SETTINGS/GROUP Page. Power setting of lamp(s) in deterrent mode can also be adjusted by using slider bar.

SETTINGS/GROUPS

This page is used to configure the operation of the lamp based on Photocell and/or External Inputs.

The lamp can be configured to operate from the above inputs independently and the power level, duration and soft start function can be configured.



Raytec Vario IP Light Controller

Home
 Settings/Groups
 Access
 Network
 System Information
 Diagnostics
 Adv. Diagnostics
 Software Update
 Log Off

Settings / Groups

This page allows the operator to amend settings associated with this unit.

☒ Local (No VMS server)
Name:
 Enter Group Name:
 or select from existing ▼

	Photocell	Ext Input
Trigger Control:	Lamp Control ▼	Lamp Control ▼
Respond to Group Commands:	No, Ignore group commands ▼	No, Ignore group commands ▼
Lamp Mode On Trigger:	On ▼	On ▼
Power (%):	100	100
Duration (mins):	60	60
Soft Start:	On ▼	Off ▼

	Pattern	Frequency (Hz)
Deterrent	SOS ▼	Slow ▼

Countdown Duration (mins)
 Manual Override 30 ▼

Advanced Settings

	Type Of Input	Active State
External Input	Volt Free ▼	Short Circuit / Low ▼

	Trigger State	Active State
External Output	Photocell Only ▼	Short Circuit / Low ▼

Photocell Sensitivity -

20

+

Save

Copyright © Raytec

WARNING: For changes to take effect, the SAVE button must be pressed

WARNING: You cannot see the effect of your changes if the override button on the Home Page is still active (green) or your lamp is in group override control from another lamp

Local (No VMS server)

For the lamp to operate from the integrated web interface – this tick box must be selected. If the lamp is to be operated from a VSM or other control system, then this tick box must NOT be selected.

Group Name

A lamp can be associated with a new or existing group to enable it to follow group commands from the photocell input and/or External Input. A new group name can be created by typing into the <Enter Group Name> box. Ensure that duplicate names are avoided. Or the lamp can be allocated to an existing group by selecting an existing group from the drop down list of groups.

Trigger Control

	Photocell	Ext Input
Trigger Control:	Lamp Control	Lamp Control
Respond to Group Commands:	No, Ignore group commands	No, Ignore group commands
	Inactive	Inactive
	Lamp Control	Lamp Control
	Group Control	Group Control

For both Photocell and External Input, the user can select 3 action states:

1. Inactive the lamp ignores the input
2. Lamp Control the lamp will respond to its own input
3. Group Control the lamp will respond to an input from lamps within its named Group – based on selection from Respond to Group Commands below

Factory Defaults: **Photocell** **Lamp Control**
 External Input **Lamp Control**

Respond to Group Commands

Respond to Group Commands:	No, Ignore group commands	No, Ignore group commands
Lamp Mode On Trigger:	Yes, Send & Receive	Yes, Send & Receive
	Yes, Recieve only	Yes, Recieve only

If Group control is NOT selected from Trigger Control options, then the lamp will not respond to any Group commands.

If Group Control is selected from Trigger Control options, then the user can select two modes of operation in response to Group Commands:

1. Yes, Send & Receive	The lamp will both originate group commands based on the trigger AND respond to group commands from other lamps in its group
2. Yes, Receive only	The lamp will only respond to group commands from other lamps in its group but it will NOT originate any group commands

Factory Defaults: **Photocell** **No, ignore group commands**
 External Input **No, ignore group commands**

Lamp Mode on Trigger

Lamp Mode On Trigger:	☐ On	☐ On
Power (%):	☐ Off	☐ Off
	☒ On	☒ On
		☐ Deter

This will dictate the status of the lamp on receipt of a valid instruction from Photocell and/or External Input. For both the Photocell and the External Input, the lamp can either be programmed to stay off or to turn on.

In addition, the External Input can activate the Deter mode – which can be configured below.

Factory Defaults: **Photocell** **On**
 External Input **On**

Power

Power (%):	<input type="range" value="100"/>	<input type="range" value="100"/>
------------	-----------------------------------	-----------------------------------

This will dictate the power the lamp turns on at in response to a valid instruction. Power levels can be set from 20% min to 100% max by using the slider bar.

Factory Defaults: **Photocell** **100%**
 External Input **100%**

Duration

Duration (mins):	All Night ☐
	<input type="range" value="30"/>

This will dictate the amount of time the lamp turns on (if on command is selected) from receipt of a valid instruction.

For the Photocell input, user can select “All Night” in which case the lamp will stay on (if on command is selected) for the whole period of time that the photocell indicates it is dark. Alternatively, a specific time period can be selected using the slider bar.

The timer will only operate whilst the photocell indicates it is dark. If the photocell indicates it is light before the timer has elapsed then the timer is ignored and the light turns off.

For the External Input, user can select “For Duration of Input” in which case the lamp will stay on or deter (if on or deter command is selected) for the whole period of the duration of the input.

Alternatively, a specific time period can be selected using the slider bar. The lamps will operate immediately and the timer duration starts from the end of the External Input signal. The External Input can be reactivated within the timer period and it will have the effect of restarting the timer.

The lamp will stay on until the end of the timed period even if the lamp photocell says it is daylight.

Min and Max timer settings are:

Photocell Min:	30 mins	External Input Min:	1 mins
Photocell Max:	720 mins	External Input Max:	60 mins

Factory Defaults:	Photocell	All Night
	External Input	Duration of Input

Soft Start

Soft Start:	Off
	Off
	On

There is the option, when a valid on instruction is received, for the lamp to either start immediately (Soft Start Off) or to ramp up to selected power level (Soft Start On). The length of time of the ramp up depends on power level selected. (Max 10 seconds for 100% power)

Factory Defaults:	Photocell	On
	External Input	Off

Deterrent Pattern & Frequency

	Pattern	Frequency (Hz)
Deterrent	SOS	Fast
	Wave	Slow
	Hi-Lo	Medium
	Countdown Duration (SOS)	Fast

There are 3 selectable deterrent patterns available if Deter feature selected from Lamp Mode on Trigger:

Traditional SOS pattern – 3 short on/off, 3 longer on/off, 3 short on/off
 Wave The lamp slowly ramps up and down from 100% to 20%
 Hi-Lo The lamp alternates between 100% and 20% setting

Factory Defaults: SOS

There are 3 selectable deterrent speeds available; Slow, Medium, Fast

Factory Defaults: Slow

Countdown Duration of Override

There are 4 selectable durations from a drop down list for the Countdown Duration of the Manual Override feature on the home page.

Countdown Duration (mins)	
Manual Override	30
Advanced Settings	10
	15
	20
	30
Type Of Input	30

Factory Defaults: 30 minutes

External Input – Select type of Input & Active State on Input

The External Input wires will accept either volt free or TTL inputs – see polarity on wiring instructions on page 2. The correct type of input must be selected from the drop down list to match the input to ensure correct operation.

Advanced Settings			
	Type Of Input		Active State
External Input	Volt Free		Short Circuit / Low
	Volt Free		Short Circuit / Low
	TTL		Open Circuit / High

Factory Defaults: Volt free

Factory Defaults: Short Circuit/Low

Advanced settings- External Output

	Trigger State	Active State
External Output	Photocell AND Ext I/P	Short Circuit / Low
	Disable	Short Circuit / Low
	Photocell Only	Open Circuit / High
	Photocell AND Ext I/P	Short Circuit / Low
	Ext I/P	Open Circuit / High
	Photocell OR Ext I/P	Open Circuit / High

The External Output is a volt free open/closed output.

External Output Trigger State : The drop down box gives you the option to disable the external output signal or make the signal dependant on active states of either the photocell or External Input or a combination of the two. (Photocell Active State = Darkness. External Input Active State = Valid Trigger received.)

The External Output active state provided above conditions are met can be selected to be open/high or closed/low.

Note : External output is triggered by the local lamp Photocell and the local lamp External Input only.

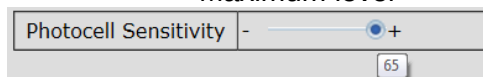
Factory Defaults: Photocell Only

Factory Defaults: Short Circuit/Low

Photocell Sensitivity

The photocell switch-on level can be altered by using the slider bar.
Levels are:

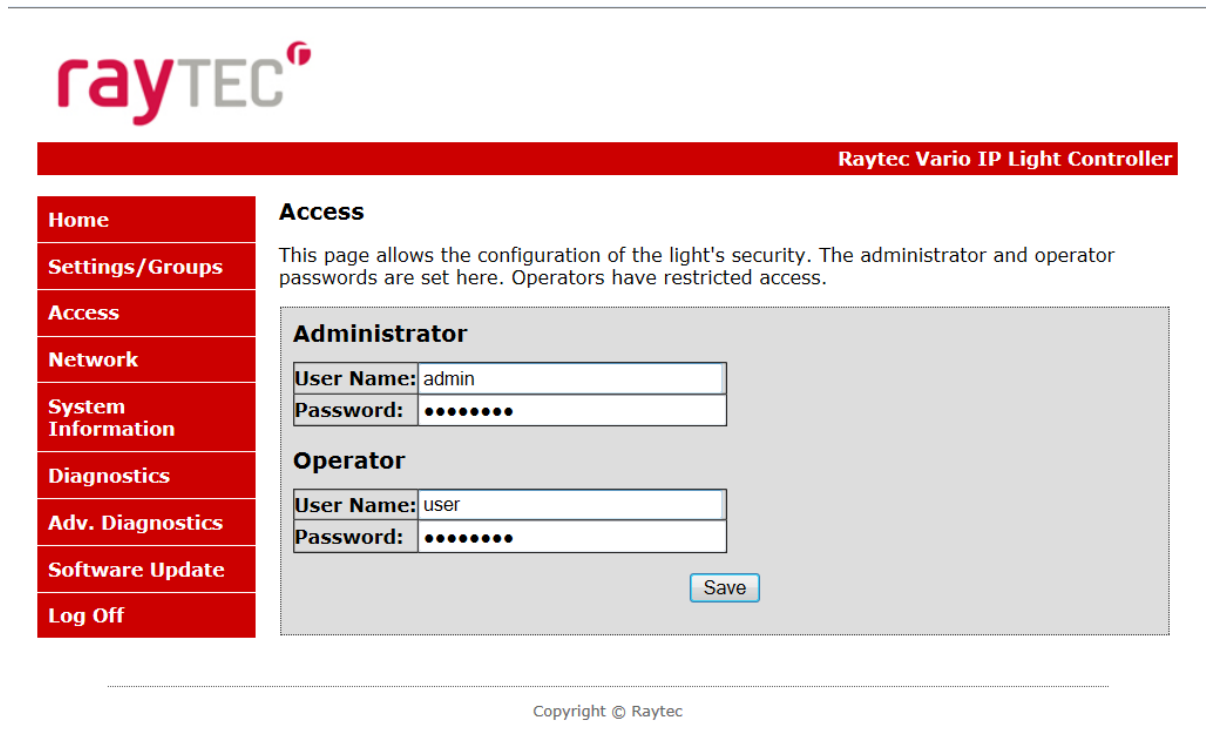
Minimum level = 5 lux
Maximum level = 65 lux



Factory Defaults: 20 lux

There is a high level of hysteresis and an in-built delay incorporated to avoid switching on/off in marginal lighting conditions.

ACCESS/PASSWORDS



The screenshot shows the Raytec Vario IP Light Controller web interface. On the left is a red navigation menu with links: Home, Settings/Groups, Access, Network, System Information, Diagnostics, Adv. Diagnostics, Software Update, and Log Off. The main content area is titled 'Access' and contains a description: 'This page allows the configuration of the light's security. The administrator and operator passwords are set here. Operators have restricted access.' Below this are two sections: 'Administrator' and 'Operator'. Each section has input fields for 'User Name' and 'Password'. The Administrator fields are pre-filled with 'admin' and 'password'. The Operator fields are pre-filled with 'user' and 'password'. A 'Save' button is located at the bottom right of the Operator section. At the bottom of the page, there is a copyright notice: 'Copyright © Raytec'.

Caution:

All passwords are case sensitive.
Keep a note of passwords used in a safe place.

Defaults

Operator User Name & Password	user	password
Administrator User Name & Password	admin	password

Only the Administrator can change passwords.

Maximum number of characters

User Name 32 characters – alpha, numeric and symbols allowed

Passwords 32 characters – alpha, numeric and symbols allowed

WARNING: For changes to take effect, the SAVE button must be pressed

NETWORK

This page allows the configuration of the lamp's network settings and to create a name for individual lamps

MAC Address is a unique identifier and cannot be changed

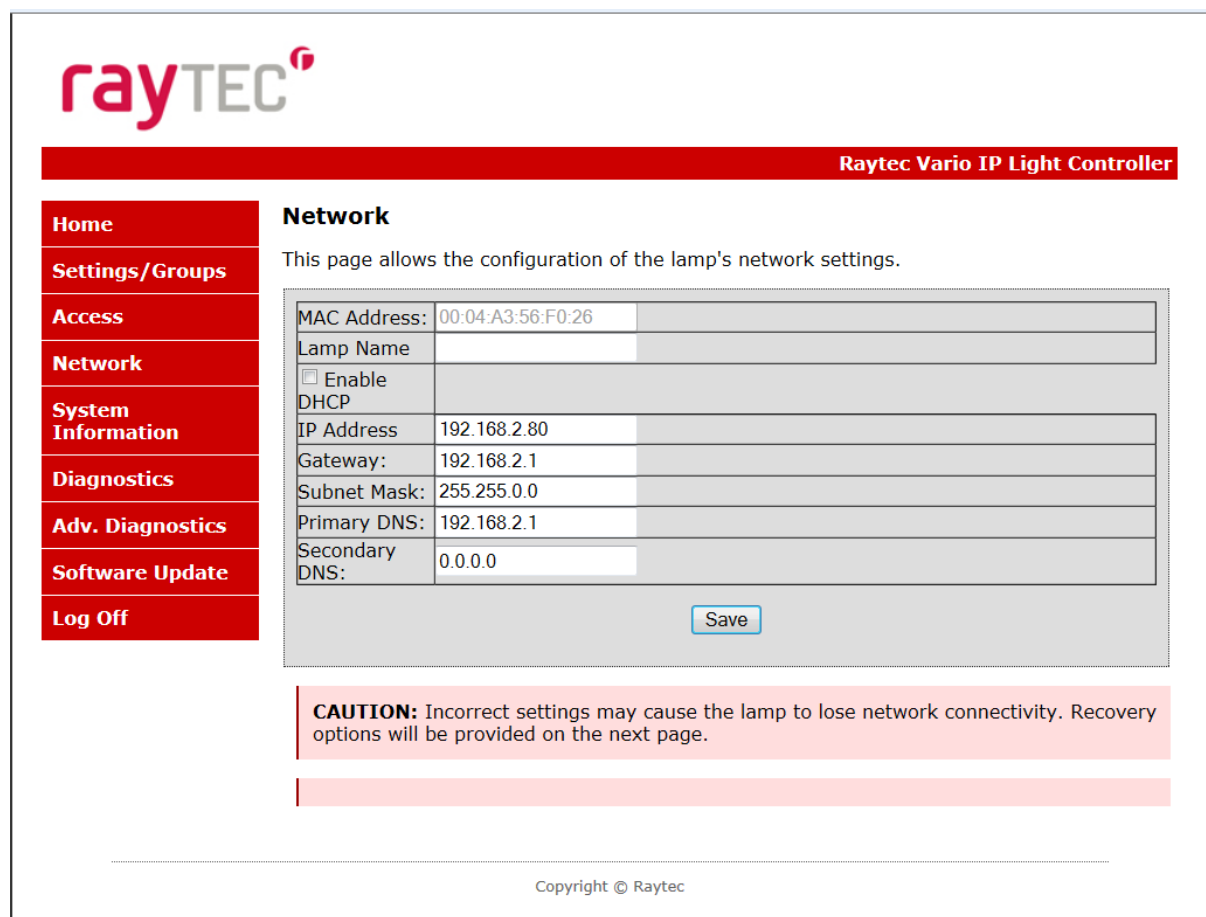
Lamp Name Avoid duplicates
 Max number of characters is 15– alpha/numeric

IP Address We recommend selecting DHCP if your network is compatible and then IP addresses will be allocated automatically without creating duplicates.

Otherwise, change to IP address into suitable range for your network.
 It is important to avoid duplicate IP addresses.

Gateway, Subnet Mask, Primary DNS and Secondary DNS can all be changed on this page.

WARNING: Please check with your IT Manager to ensure any changes are compatible with your network and the VARIO IP lamp. We suggest that these settings should only be changed by experienced users.



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Raytec Vario IP Light Controller

Network

This page allows the configuration of the lamp's network settings.

MAC Address:	00:04:A3:56:F0:26
Lamp Name	
☐ Enable DHCP	
IP Address	192.168.2.80
Gateway:	192.168.2.1
Subnet Mask:	255.255.0.0
Primary DNS:	192.168.2.1
Secondary DNS:	0.0.0.0

Save

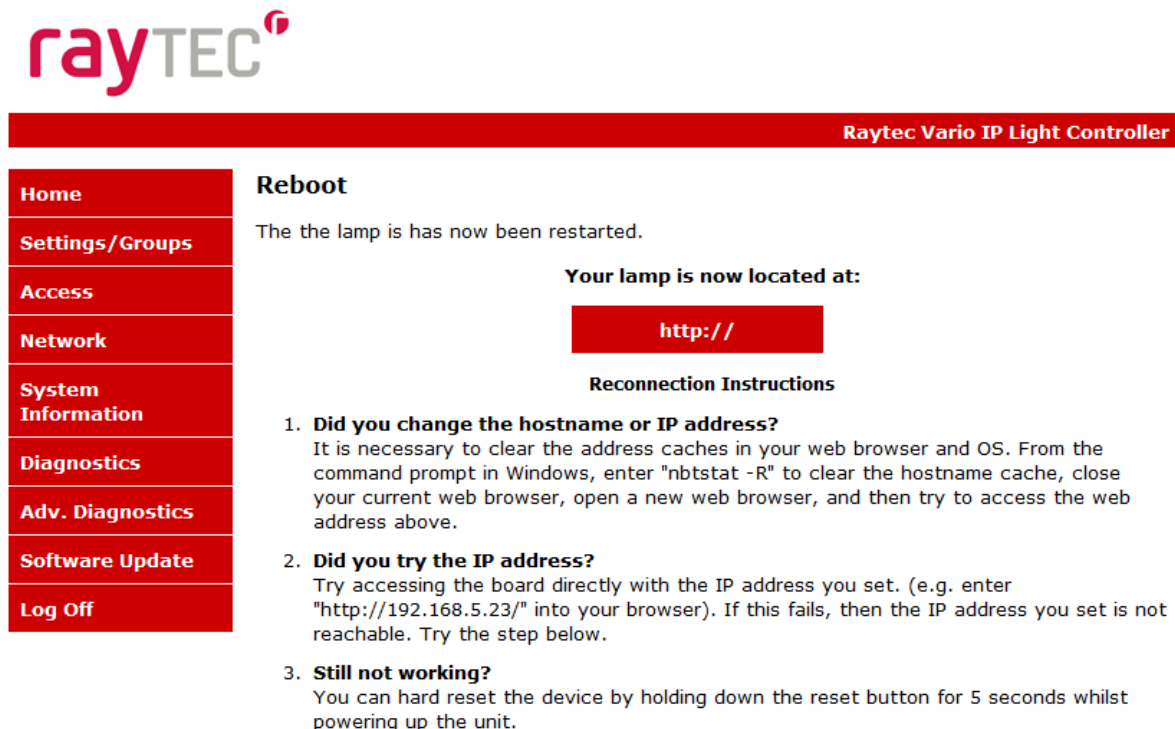
CAUTION: Incorrect settings may cause the lamp to lose network connectivity. Recovery options will be provided on the next page.

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WARNING: For changes to take effect, the SAVE button must be pressed

Network - IP address changed- Reboot

After a network change the system will reboot to ensure all the changes have been applied. The Reboot Screen is shown to instruct the user on how to access the lamp after the new network settings have been applied.



The screenshot shows the Raytec Vario IP Light Controller interface. On the left is a navigation menu with options: Home, Settings/Groups, Access, Network, System Information, Diagnostics, Adv. Diagnostics, Software Update, and Log Off. The main content area is titled 'Reboot' and contains the following text: 'The the lamp is has now been restarted.' Below this, it states 'Your lamp is now located at:' followed by a red button labeled 'http://'. Underneath the button is the heading 'Reconnection Instructions' followed by three numbered steps: 1. 'Did you change the hostname or IP address?' with instructions to clear caches; 2. 'Did you try the IP address?' with instructions to try the IP directly; 3. 'Still not working?' with instructions to hard reset the device.

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Warning: We strongly recommend that IP addresses are changed via the Discovery Application Tool. This is the safest way to ensure that connection is not lost with the lamp by setting up an invalid IP address.

System Information

This page shows basic information regarding the lamp including software version, product type, lamp name and group name. This is for information only and cannot be altered on this page.

Reboot/Restart Lamp

It is also possible to reboot/restart the lamp. The lamp will restart using the existing settings of the lamp.

A reboot/restart is generally recommended if a system becomes unresponsive or you want to ensure settings have been stored and implemented

During the reboot/restart process the lamp may come on/flash for a short period.

Restore Factory Settings

At any stage, it is possible to restore the original factory settings of the lamp. Any settings that have been previously changed will be lost. During the restore factory settings the lamp may come on/flash for a short period.

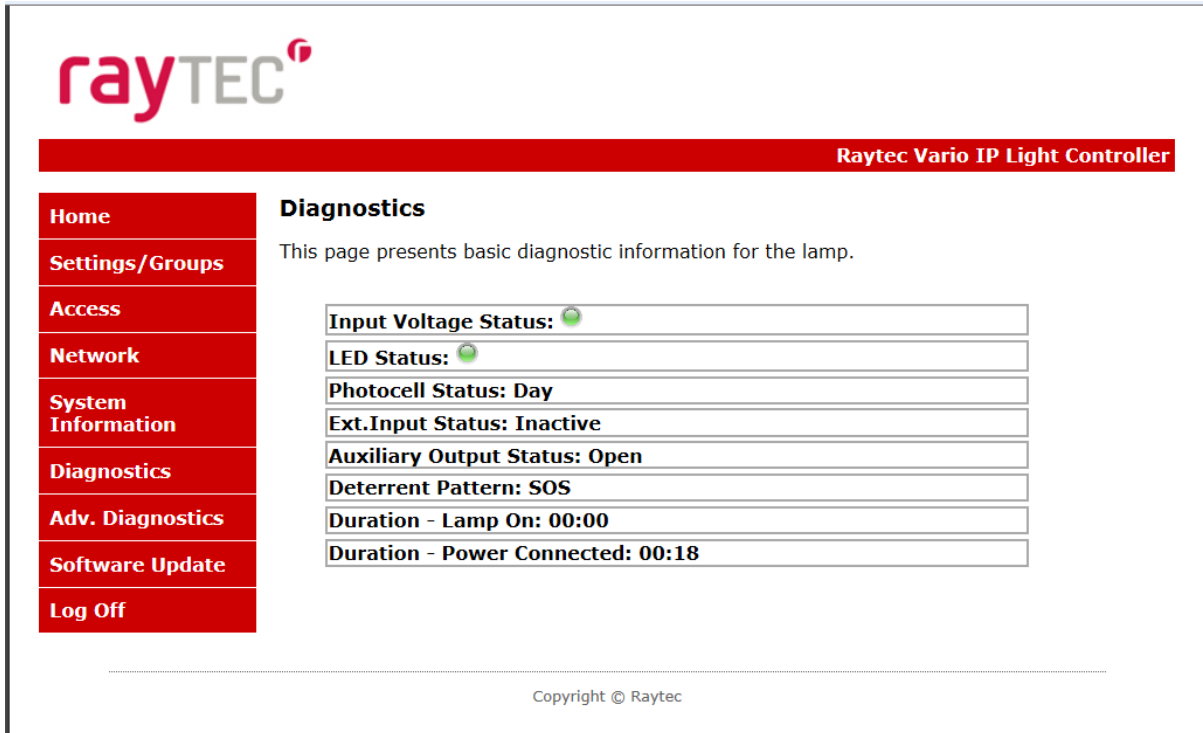


Raytec Vario IP Light Controller

Home	System Information This page presents basic information for the lamp. Software Version: 1.0.7 Product Type: Var 8w Lamp Name: Group Name: test2 Restore Factory Settings Reboot / Restart Lamp
Settings/Groups	
Access	
Network	
System Information	
Diagnostics	
Adv. Diagnostics	
Software Update	
Log Off	

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DIAGNOSTICS



The screenshot shows the Raytec Vario IP Light Controller web interface. On the left is a navigation menu with red buttons: Home, Settings/Groups, Access, Network, System Information, Diagnostics (selected), Adv. Diagnostics, Software Update, and Log Off. The main content area has a red header bar with the Raytec logo and the title 'Raytec Vario IP Light Controller'. Below this, the 'Diagnostics' section is titled, followed by a description: 'This page presents basic diagnostic information for the lamp.' A table displays the following status information:

Input Voltage Status:	
LED Status:	
Photocell Status:	Day
Ext.Input Status:	Inactive
Auxiliary Output Status:	Open
Deterrent Pattern:	SOS
Duration - Lamp On:	00:00
Duration - Power Connected:	00:18

At the bottom of the page, it says 'Copyright © Raytec'.

This page is useful for first level troubleshooting and displays basic diagnostics and information of the lamp as follows:

Input Voltage Status	green/red LED indicates if Input Voltage correctly within specified range
LED Status	green/red LED indicates if all LED strings of lamp operating correctly
Photocell Status	indicates if photocell status is day or night
Ext Input Stat	indicates if an external input is being received (Active) or not (Inactive)
Auxiliary Output Status	indicates if external output is active (closed) or not (open)
Deterrent Pattern	indicates which deterrent pattern is selected
Duration – Lamp On	indicates the amount of time the lamp has been on
Duration- Power connected	indicates the amount of time the lamp has been connected to power source

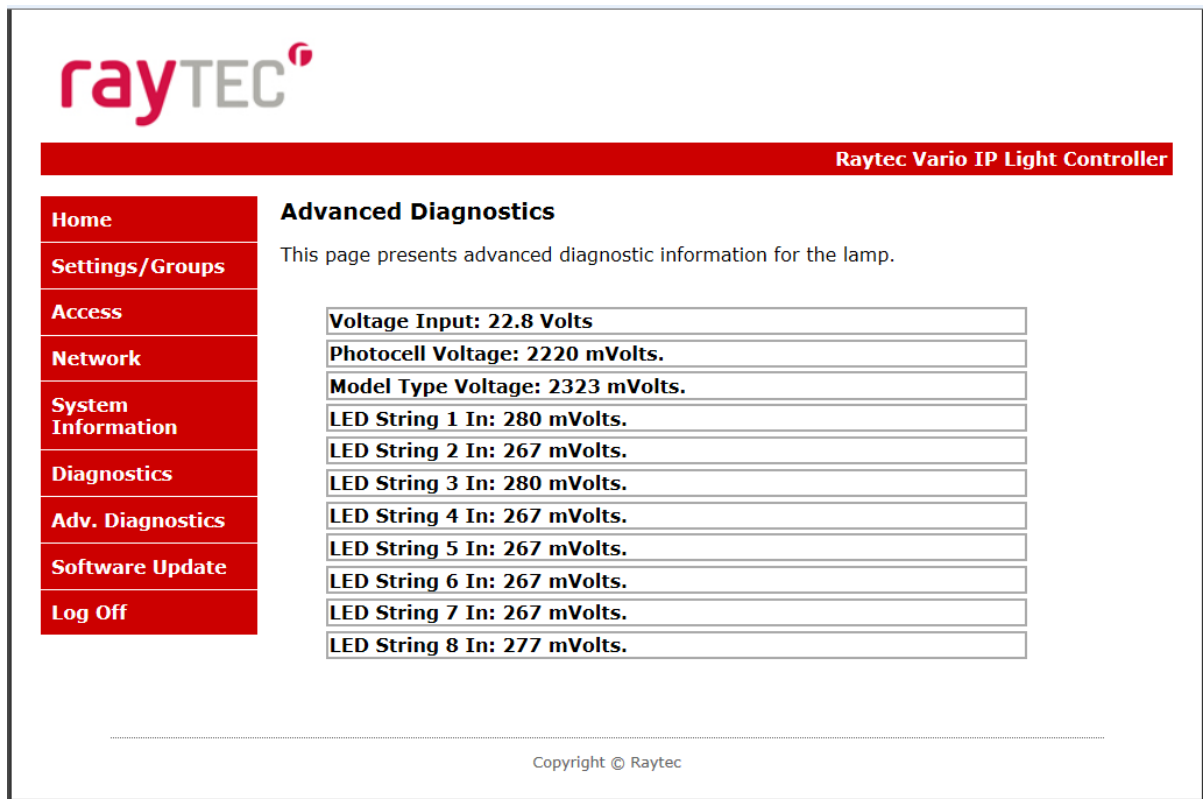
Note information on this page is not refreshed automatically and requires the page to be reloaded or refreshed by pressing function key F5 or pressing the refresh on your web browser or simply selecting the page again from the navigation bars on the left.

The LED status indicators are latched indicators, this means that an LED fault will be shown when a fault is detected and remain lit. This will occur if the input voltage is outside the required/specified range or there is an open circuit or short circuit LED fault detected

If these faults are cleared the LED indicators will remain red until the system is rebooted from the System Information screen. The LEDs will turn Green, but if the faults persist the LEDs will turn Red.

ADVANCED DIAGNOSTICS

This page is useful for detailed troubleshooting and displays diagnostics and information about the lamp. It is intended to be used for detailed troubleshooting with Raytec.



The screenshot shows the 'Advanced Diagnostics' page of the Raytec Vario IP Light Controller. The page has a red header with the Raytec logo and the title 'Raytec Vario IP Light Controller'. On the left is a navigation menu with options: Home, Settings/Groups, Access, Network, System Information, Diagnostics, Adv. Diagnostics (selected), Software Update, and Log Off. The main content area is titled 'Advanced Diagnostics' and includes a description: 'This page presents advanced diagnostic information for the lamp.' Below this is a table of diagnostic data:

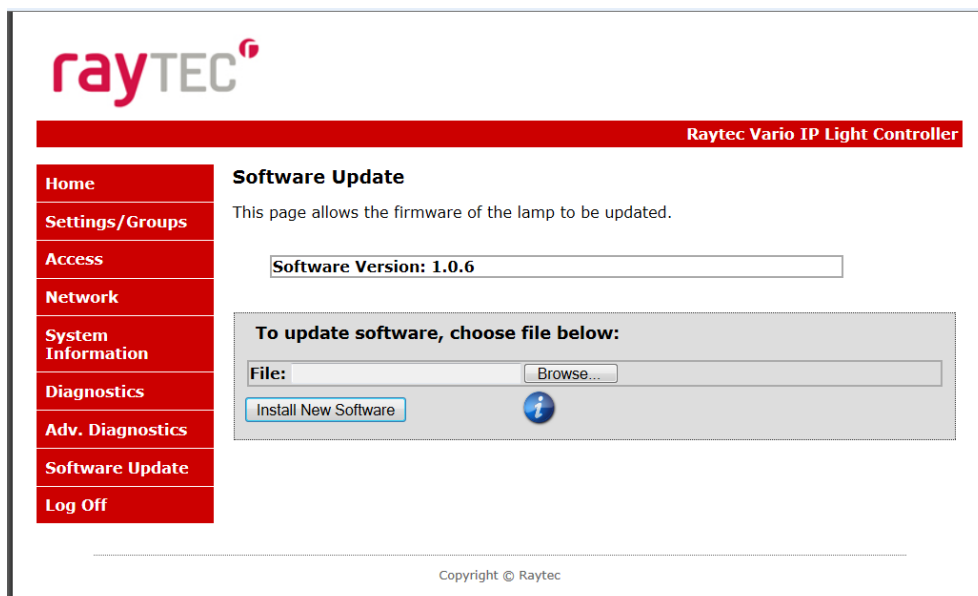
Voltage Input: 22.8 Volts
Photocell Voltage: 2220 mVolts.
Model Type Voltage: 2323 mVolts.
LED String 1 In: 280 mVolts.
LED String 2 In: 267 mVolts.
LED String 3 In: 280 mVolts.
LED String 4 In: 267 mVolts.
LED String 5 In: 267 mVolts.
LED String 6 In: 267 mVolts.
LED String 7 In: 267 mVolts.
LED String 8 In: 277 mVolts.

At the bottom, there is a copyright notice: 'Copyright © Raytec'.

Note information on this page is not refreshed automatically and requires the page to be reloaded or refreshed by pressing function key F5 or pressing the refresh on your web browser or simply selecting the page again from the navigation bars on the left.

SOFTWARE UPDATE

This page indicates the current version of the software/firmware and also enables the software/firmware to be updated over the network.



The screenshot shows the 'Software Update' page of the Raytec Vario IP Light Controller. The page has a red header with the Raytec logo and the title 'Raytec Vario IP Light Controller'. On the left is a navigation menu with options: Home, Settings/Groups, Access, Network, System Information, Diagnostics, Adv. Diagnostics, Software Update (selected), and Log Off. The main content area is titled 'Software Update' and includes a description: 'This page allows the firmware of the lamp to be updated.' Below this is a text box showing the current 'Software Version: 1.0.6'. Further down, there is a section titled 'To update software, choose file below:' which contains a 'File:' label, a 'Browse...' button, and an 'Install New Software' button. At the bottom, there is a copyright notice: 'Copyright © Raytec'.

To upload a new version of software/firmware, please contact Raytec to receive a copy of the latest version software.

Once received or downloaded onto a computer on the network, select file to upload – then press Install New Software.

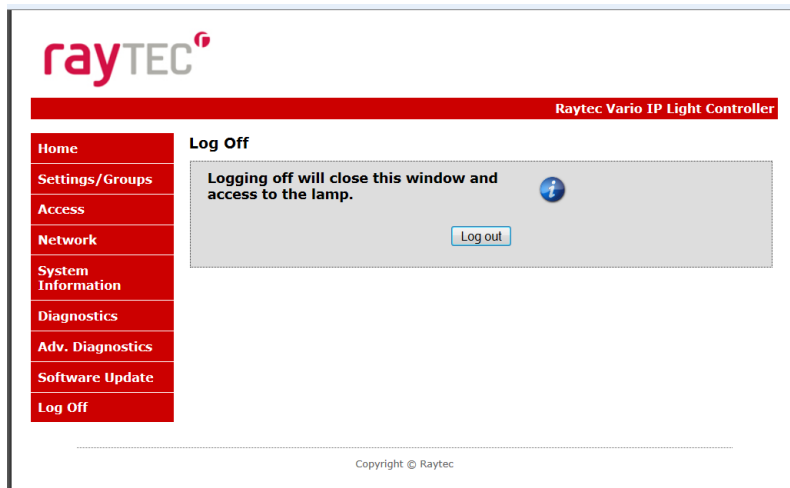
We would recommend that the software update is undertaken when network traffic is at a minimum.

The update will restart the unit and all settings will revert to the Factory Defaults of the new software/firmware version uploaded.

For information on available software updates and how to access them, please contact Raytec.

LOG OFF

We recommend after using the lamp web interface that users log off using the Log Off page.



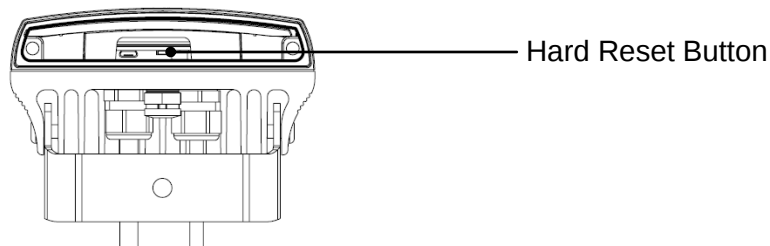
Hard Reset Button – Located on lamp

A hardware reset button feature has been provided that will allow the factory defaults to be restored.

To reset all parameters and the IP address to Factory Default settings:

1. Disconnect power from the lamp.
2. Remove the bottom cover plate on the lamps to access the reset button.
3. Press and hold the Reset button and reconnect power.
4. Keep the Reset button pressed for about 5 seconds until the lamp flashes. Release the Reset button.
5. Replace the bottom cover.

The lamp can now be discovered using the Discovery Application and can be configured as required following the instructions in this manual.



Troubleshooting & FAQs

Please refer to the VARIO IP product pages on our website www.rayteccctv.com which has a comprehensive list of troubleshooting support and FAQ's. Also, please feel free to contact us directly on the following contact numbers:

Raytec HQ (Excluding Americas): +44 (0)1670 520055

Raytec Americas: +1 613 270 9990

Typical Questions:

I can't discover my lamp on the network using the Raytec Discovery Tool

I can't communicate with my lamp by typing in the IP address

I can't communicate with my lamp from the Raytec Discovery Tool

I can't log-on to the lamp

My lamp turns on too early or too late

I want my lamp to turn on via the photocell

My lamp doesn't trigger from an external input

My lamp is not responding to group messages correctly

API

The Raytec Network Lamp has been designed such that it can be integrated into a 3rd party system such as a VMS. Please contact Raytec to discuss your particular requirements.

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