VARIO2

Installation Guide

VARIO2 w16   VARIO2 i16   VARIO2 w8   VARIO2 i8   VARIO2 i6   VARIO2 w4   VARIO2 i4   VARIO2 w2   VARIO2 i2

Contents :

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Box Contents :

VARIO2 Illuminator , 60° beam angles ILS
(ILS: Interchangeable Lens System)
Accessories (Optional) :VARIO Remote Control for additional Programming;
80˚ beam and 120˚ beam angle ILS; Bracketry

VARIO2 Enhancements
- Increased Distance
- Default time for illuminator to go into Operating Mode reduced
- PIN function for enhanced security
- Manual Control added – Push Buttons Accessible on the illuminator
- Improved RESET Options
- The 3 single colour feedback LED's have been replaced with
  2 tri-colour LED's

Safety Information

Eye Safety : IR Variants (850nm and 940nm)
Caution – IR emitted from this product EN62471 Risk Group 2 Do not stare at the lamp. Avoid exposure or use appropriate shielding / eye protection. Risk Group 2 for cornea / lens infrared hazard. For VAR-i2, VAR-i4, VAR-i6 and VAR-i8 variants hazard distance is 1500mm. For VAR-i16 hazard distance is 1840mm. Max IR EHV (Exposure Hazard Value) : 69% of Risk Group 2 Limit at 200mm from the lamp.

Eye Safety : White Light Variants
Caution – EN62471 Risk Group 2 Classification - Possible hazardous optical radiation emitted from this product. May be harmful to eyes, do not stare at the lamp. For VAR-w2, VAR-w4, VAR-w8 Hazard distance is 1500mm. For VAR-w16 hazard distance is 1840mm. Max WL EHV (Exposure Hazard Value) : 68% of Risk Group 2 Limit at 200mm from the lamp.

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Installation Steps – Short Guide :

1. VARIO2 is factory set and delivered with a 35°
   beam width.
   To alter to 10°, simply remove interchangeable
   lens (ILS). See page 4 for detailed instructions
   To alter to 60°, replace with other ILS lens
   supplied.
2. Mount Illuminator
3. Connect Illuminator to low voltage input 12-24V
   AC/DC (For Vario 16 variants : 24V AC or DC
   only)
4-6. Complete configuration, wiring and final
   set-up using manual push buttons on the illuminator
   or VARIO Remote Controller (VRC)
   - VRC is an optional accessory
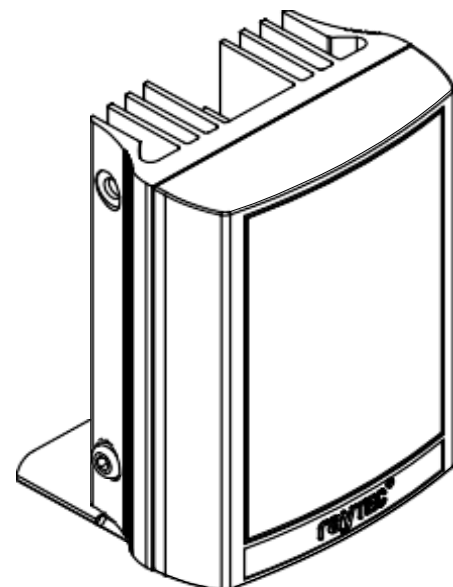
Wiring – six core cable
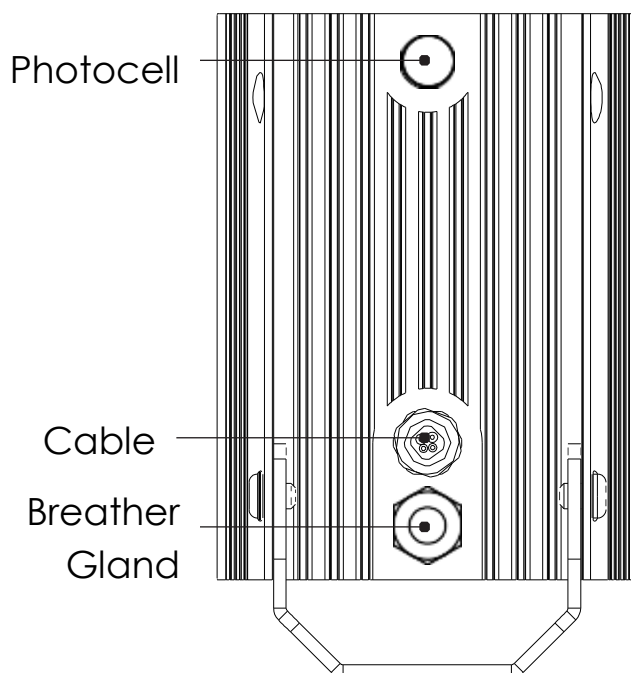
	DC	AC
Black Wire	-	~
Red Wire	+	~

White & Yellow wires =
Photocell following contact,
Volt free output, Non polarity sensitive

Orange and Purple Wires =
Telemetry input Volt free / dry contact or
TTL input (see Page 5 and 6 for more detail)

Photocell

Cable

Breather
Gland

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Factory Default Set-Up:

35° Beam Angle ; Max 100% Power
Telemetry Input – closed ; Photocell sensitivity – MID
Status LEDs – ON ; No PIN Set ; Manual Button Control Enabled
Programming function will auto-disable after 7 Days

VARIO2 Complete Set up and Installation
Step 1. Select different beam angle – if required

> VARIO is factory set and delivered with a 35° beam width angle.

To alter to 10°, simply remove interchangeable lens (ILS).

To alter to 60°, replace with other ILS lens supplied.

Other angle ILS lenses are available to order: 80° and 120°.

All ILS lenses will be clearly marked with the angle which they will produce when inserted into VARIO2.

Please handle ILS lenses with care – and do not touch optical film.

Only 1 ILS lens can be inserted into the product at anytime. The product cannot accommodate multiple ILS lenses at the same time.

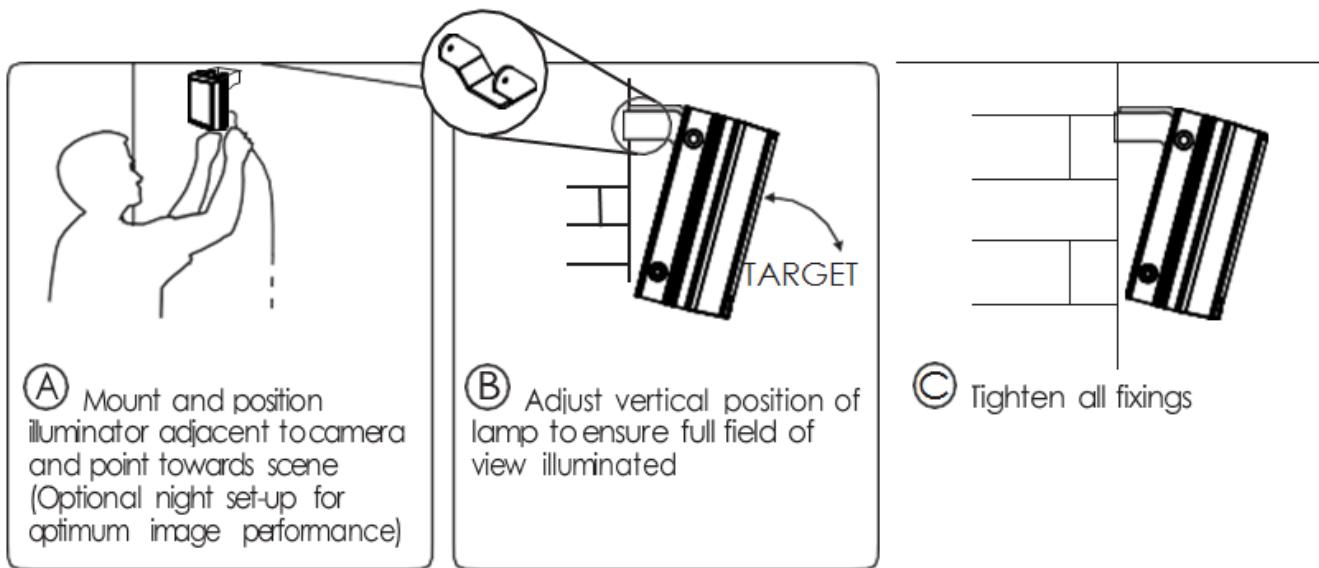We would recommend that power is turned off when replacing ILS lenses.

Remove base plate from VARIO2 unit using 2.5mm allen/hex key. Insert required ILS lens and re-attach base plate securely ensuring gasket is correctly located.
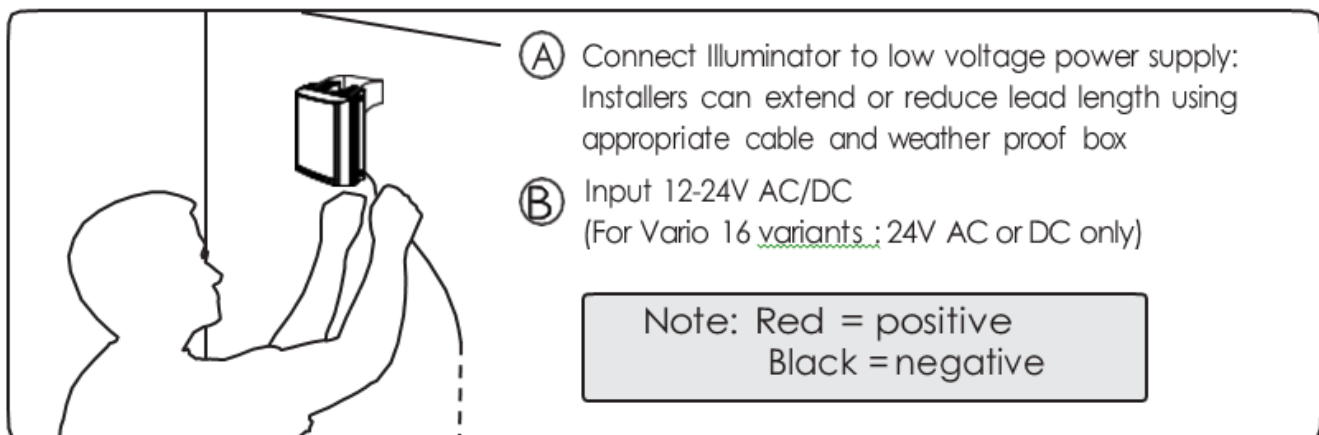
> **Important Note :** Ensure base plate is securely located, the gasket is correctly located and the screws correctly fastened to ensure and maintain IP66 rating of the product

Step 2. Mounting Illuminator

VARIO2 is delivered as standard with bracket at the bottom of the unit.
This can be moved to the top of the unit if required. See page 18 for
optional brackets

(A) Mount and position illuminator adjacent to camera and point towards scene (Optional night set-up for optimum image performance)

(B) Adjust vertical position of lamp to ensure full field of view illuminated

(C) Tighten all fixings

Step 3. Connect to low voltage power supply and input 12-24 AC/DC (24 AC/DC only for Vario 16 variants)

(A) Connect Illuminator to low voltage power supply: Installers can extend or reduce lead length using appropriate cable and weather proof box

(B) Input 12-24V AC/DC
(For Vario 16 variants : 24V AC or DC only)

Note: Red = positive
Black = negative

Step 4. Telemetry Input (Orange & Purple)

As default the telemetry input will be wired together so that the unit turns on/off automatically via the photocell. If required to be activated by PIR or alarm system, connect to appropriate, volt-free or TTL input. Volt free input/dry contact: Non polarity sensitive, short circuit = light on
TTL input: Orange = TTL +ve, Purple = TTL –ve (GND) 0V = Light on, 3V = Light off

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Step 5. Photocell following output (White & Yellow)
Volt free output - normally open (day) to normally closed (night).
Connect direct to camera if required to control switchover of day/night cameras.

Step 6. Programme using optional VARIO Remote Control (VRC) or the manual control buttons.

Step 7. Set PIN (If Required) (Can only be done with the optional VARIO Remote Control(VRC)

LED Status Indicators- Feedback system :

There are two tri-coloured LEDs visible on the base of the VARIO2 illuminator. The two LEDs provide important operating and status information.

The status information provided by each of these LEDs differs depending on which of the two operating modes the VARIO2 illuminator is in: (A) Programming OR (B) Operating

The LED Indicators also give feedback if you are using the Remote, PIN Function or Manual Control Modes – Please see Pages 10 to 17 for detail on the LED status indicator feedback for these functions

Left Hand Side LED (LHS)   Right Hand Side LED (RHS)
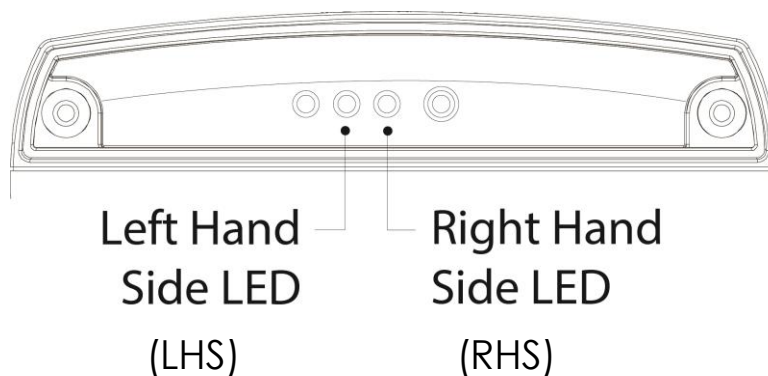
Programming Mode and Operating Mode

On powering up the illuminator, it automatically enters programming mode to allow the user to adjust set-up and operation. The programming mode automatically times out after 7 Days or until the user actively disables the programming mode and changes to Operating Mode

During Programming Mode and Operating Mode the two LED's indicate the following status (unless detailed below):

LHS SOLID GREEN: Power Applied

LHS FLASHING GREEN: Remote control IR receiver problem (Max VRC distance is 8m (26ft)

RHS FLASHING AMBER: Indicates unit is in programming mode (Programming Mode Only)

RHS SOLID AMBER: Indicates that a valid command is being received from the remote (Programming Mode Only)

LHS FLASHING RED: Voltage supply problem detected

LHS SOLID RED: Illuminator fault detected

All functions of the remote control and buttons are available in Programming Mode.
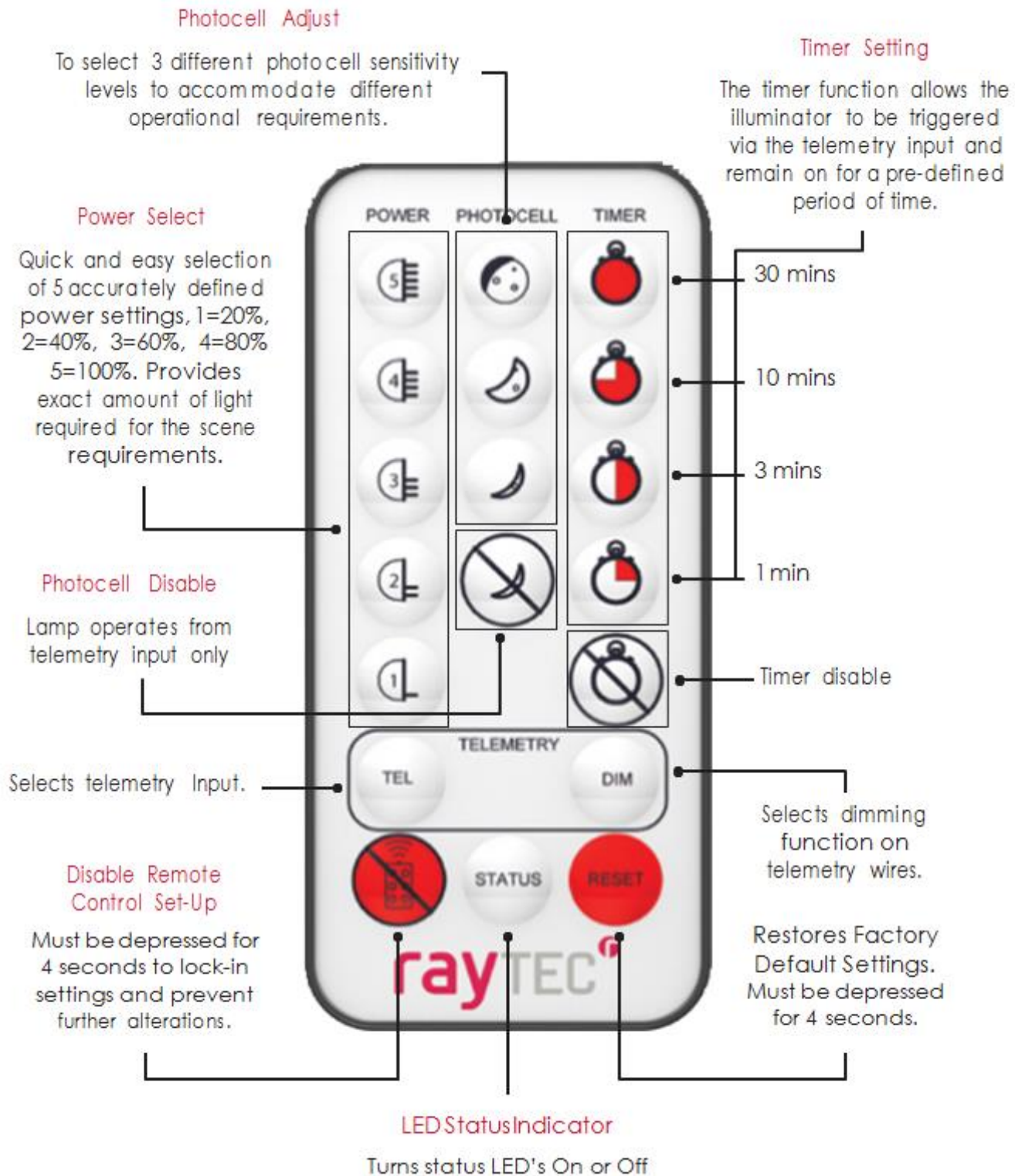
The only function of the Remote Control available during Operating Mode is LED Status Indicators Enable/Disable, entering a PIN or disabling manual buttons (if done at the same time as disabling the remote – see P.17)

Factory Default: On initial power-up, Programming Mode.

VARIO Remote Controller (VRC) :

Optional Accessory

Full instructions provided with VRC when supplied

Photocell Adjust

To select 3 different photocell sensitivity levels to accommodate different operational requirements.

Timer Setting

The timer function allows the illuminator to be triggered via the telemetry input and remain on for a pre-defined period of time.

Power Select

Quick and easy selection of 5 accurately defined power settings, 1=20%, 2=40%, 3=60%, 4=80% 5=100%. Provides exact amount of light required for the scene requirements.

30 mins

10 mins

3 mins

1 min

Photocell Disable

Lamp operates from telemetry input only

Timer disable

Selects telemetry Input.

Selects dimming function on telemetry wires.

Disable Remote Control Set-Up

Must be depressed for 4 seconds to lock-in settings and prevent further alterations.

Restores Factory Default Settings. Must be depressed for 4 seconds.

LED Status Indicator

Turns status LED's On or Off

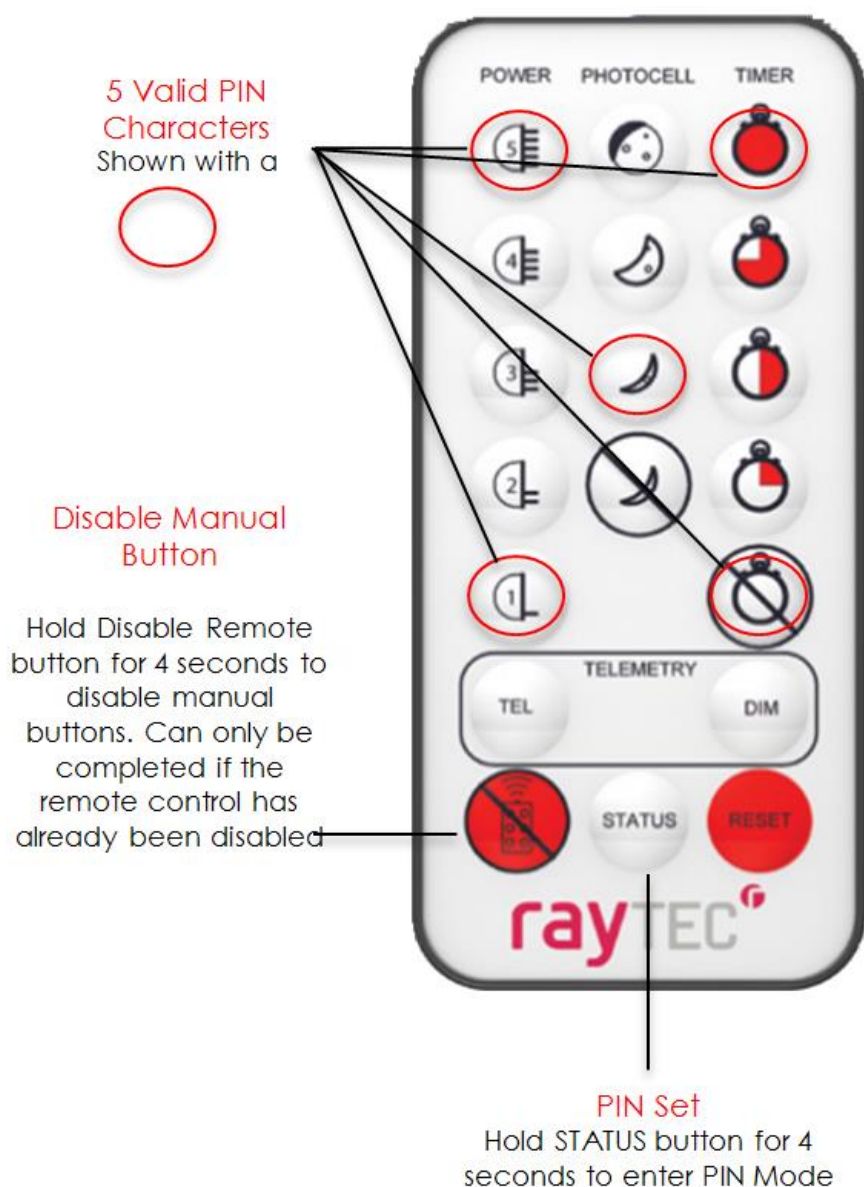Note : Reset button will not remove a PIN if one is present

Note : Unless detailed as part of the functionality, if an invalid or blocked command is attempted, both LEDs will flash RED

Extra VRC Functionality :

- PIN Function

For extra security VARIO2 allows a PIN (Personal Identification Number) to be set for each lamp

The PIN is set by using the Vario Remote Control (VRC). There are five buttons / characters on the remote that can be used for this purpose. Please see PIN Function Detail (P. 10) for full details on how to use the PIN function.

5 Valid PIN Characters Shown with a

Disable Manual Button

Hold Disable Remote button for 4 seconds to disable manual buttons. Can only be completed if the remote control has already been disabled

PIN Set
Hold STATUS button for 4 seconds to enter PIN Mode

Note : Unless detailed as part of the functionality, if an invalid or blocked command is attempted, both LEDs will flash RED

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PIN Function Detail :

The PIN is set by using the Vario Remote Control (VRC). There are five buttons / characters on the remote that can be used for this purpose. They are Power 5, Power 1, Min Photocell (Smallest moon), Max Timer (Full Red Circle) & Timer Disable (Timer Circle image with a line through) . Note – invalid characters will not be recognised.

To create a PIN, press STATUS BUTTON for 4 seconds. LHS LED will flash RED/GREEN. This indication will always show that you are in PIN mode. RHS LED FLASHING RED shows there you are in PIN set mode. The number of flashes indicates how many characters are required to complete the PIN entry. There are four characters to be entered to successfully set up a PIN.

As you enter the characters, the number of flashes will decrease until all characters are entered. Note, illegal characters will not be recognised and will not reduce the number of flashes. When the PIN is set the illuminator will revert to Programming Mode.

When a PIN is Set :
Using the remote you can access the illuminator settings from operating mode by entering the PIN.
You cannot access Programming Mode by power re-cycling only.

In operating mode, if you want to go back into programming mode simply enter your PIN. To do this, press STATUS BUTTON for 4 seconds. LHS LED will flash RED/GREEN to show you are in PIN mode. RHS LED FLASHING GREEN shows that a PIN has been previously set. As you input the four correct characters the number of flashes will reduce and you will be returned to programming mode.

If legal characters but not the correct sequence of characters is entered the number of flashes will still reduce and after 4 characters have been entered an error will be shown by both LED`s flashing RED.

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If an illegal character is used when entering a pin, it will be ignored and the PIN character count will not reduce. The process to enter a PIN will have to be repeated.

To delete a PIN you first need to be in Programming Mode. Press STATUS BUTTON for 4 seconds to go into PIN set mode. LHS LED will flash RED / GREEN. RHS LED FLASHING RED. Instead of entering one of the known legal characters press the RESET BUTTON four times. The illuminator will return to program mode. Note – if you delete the PIN and the illuminator goes into operating mode, you will not be able to go back to program mode without recycling the power.

*Note - If you forget your pin and need to make adjustments to the illuminator you need to do full Re-set. This requires power recycling whilst pressing the two manual control buttons at the same time. This will restore factory default settings AND remove the previously programmed PIN. Both LEDs will flash AMBER to signify that the process has been completed.

*Note – If you do not want to set a PIN, but want to prevent another person with a remote setting a PIN, then you need to Disable both the Remote and the Manual Buttons (See Manual Control Buttons section – Page 12) The only way another user can then access the illuminator is by performing a full re-set (see Page 18)

*Note – If you are trying to access a PIN in Operating Mode, hold the status button down for 4 seconds and both LEDs flash RED, this means there is no PIN present.

Manual Control – Buttons :

Left Hand Button

Right Hand Button

Left Hand LED

Right Hand LED
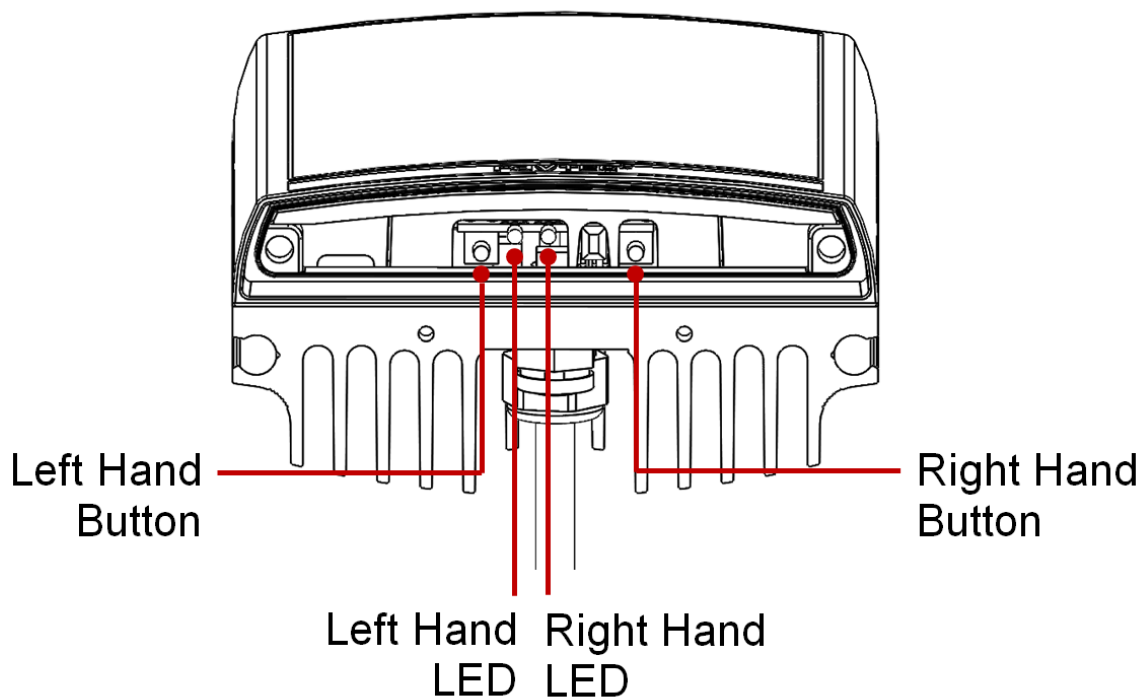
The two manual control buttons gives a wide selection of user control :

1. Power Control – 100%, 80%, 60%, 40%, 20% of maximum. (Factory Default is 100%)
2. Photocell Control – 3 levels, 25 Lux on, 50 Lux off, 10 Lux on 30 Lux off, 5 Lux on 15 Lux off and photocell disable.
3. Turn LED indicators on & off
4. Illuminator Reset Options
5. Disable Remote Control and enter Operating Mode or Enable Remote Control and enter Programming Mode
6. Button Enable & Disable

Manual buttons can be accessed by removing the base cover of the illuminator

The buttons are active in both programming mode and operating mode regardless of whether a PIN is present or not unless you have previously disabled the manual buttons

As soon as manual button mode is entered by pressing the Left Hand Button, the standard LED indicators will be disabled and offer a new set of indicating modes, Standard LED indicators are enabled after exiting manual button modes.

Note : Unless detailed as part of the functionality, if an invalid or blocked button push is attempted, both LEDs will flash Red

Manual Mode Selection by using LHS Button :

A momentary press of LHS button turn LHS LED solid RED and enters the user into the **Illuminator Setting Modes**.
In these modes you can change the following settings :
- Power Level
- Photocell sensitivity
- Indicator LED status (On or Off)

A continuous 4 second press of the LHS button turns LHS LED flashing RED and enters the user into the **Illuminator Configuration Modes**.
In these modes you can change the following Configurations :
- Illuminator Re-set
- Disable Remote Control and enter Operating Mode or Enable Remote Control and enter Programming Mode
- Manual Button Enable / Disable

*Note – If the status indicator LEDs are disabled and you use the manual buttons the indicator LEDs will still illuminate accordingly

Manual Setting / Level Indication using RHS Button :

The RHS BUTTON will only have an effect if you have selected a mode using LHS Button – pressing RHS Button without previously pressing LHS Button will have no effect on the Illuminator operation – it is used to control the setting for the mode chosen by LHS Button

When you select a mode using LHS BUTTON, the LHS LED will confirm which mode you are in and RHS LED will show the current setting / level of that mode for the Illuminator.

Sequential presses of RHS BUTTON will take you through the available options to get to the required setting you want within that mode. The Illuminator will stay at this setting / level providing you do not push the RHS BUTTON again. Once you have reached the required setting as shown in the following text, either press the LHS BUTTON to cycle through the modes until LHS LED extinguishes showing that you are at the end of the mode loop.

You can also wait 2 minutes for the illuminator to time out and the value shown by RHS LED will be stored into the illuminator memory.

The settings programmed will be retained on power recycling unless a reset has been performed, in which case the factory defaults will be applied

Illuminator Setting Modes Detail :

Enter this mode by a momentary press of LHS button to turn LHS LED solid RED.

Pressing the LHS button again will turn the LED solid GREEN and pressing a third time will turn the LED solid AMBER. Each of these colours indicates which setting mode you are in.

A further momentary press of LHS Button will exit from the mode entry, both LEDs will go out for 1 second and then return to the standard indication of either operating mode or programming mode (depending on which mode the Illuminator was in previously before selecting manual controls

The following modes are available :

Power Level Mode (LHS LED : Solid RED)

RHS LED :

20% Power Setting: 1 Flash GREEN
40% Power Setting: 2 Flashes GREEN
60% Power Setting: 3 Flashes GREEN
80% Power Setting: 4 Flashes GREEN
100% Power Setting: 5 Flashes GREEN

Photocell Level Mode (LHS LED : Solid GREEN)

RHS LED:

Low sensitivity: 1 Flash GREEN
Medium Sensitivity: 2 Flashes GREEN
High Sensitivity: 3 Flashes GREEN
Disabled photocell: Solid RED

Enable / Disable Status Indicator LEDs Mode (LHS LED: Solid AMBER)

RHS LED:

Enable LEDs: Solid GREEN

Disable LEDS: Solid RED

NOTE – If no buttons are pressed within 2 minutes the Illuminator times out and returns to the previous mode it was in – either operating or programming mode.

Illuminator Configuration Modes Detail :

Enter this mode by a long 4 second press of LHS button to turn LHS LED Flashing RED.

Pressing the LHS button again momentarily will turn the LHS LED Flashing GREEN and pressing a third time momentarily will turn the LHS LED Flashing AMBER. Each of these colours indicates which setting mode you are in.

A further momentary press of LHS Button will exit from the mode entry, both LEDs will go blank for 1 second and then return to the standard indication of either operating mode or programming mode (depending on which mode the illuminator was in previously before selecting manual controls)

The following modes are available :

Illuminator Reset Mode (LHS LED : Flashing RED)

RHS LED: Solid RED

Keep RHS BUTTON depressed for 4 seconds. RHS LED stays solid RED and then after 4 seconds both LEDs flash AMBER to show the illuminator has been reset. This operation is equivalent to the factory reset button on the remote control. It will not re-set a PIN if one is present.

Remote Control Disable and Enter Operating Mode or Remote Control Enable and enter Programming Mode (LHS LED : Flashing GREEN)

RHS LED:

Enable Remote: Solid GREEN

Disable Remote: Solid RED

Note : If the a PIN is present and the Illuminator is in Operating mode you cannot enable the Remote Control and enter Programming Mode

Enable & Disable of Manual Control Buttons (LED A : Flashing AMBER)

RHS LED:

Enable Manual Button Control – Solid GREEN

Disable Manual Button Control – Solid RED

Note : If the illuminator is in Operating Mode and the buttons are currently disabled, you cannot re-enable.

NOTE – If no buttons are pressed within 2 minutes the illuminator times out and returns to the previous mode it was in – either Programming Mode or Operating Mode.

Disabling the Manual Buttons :

If the Illuminator is in Operating Mode, once the disable manual buttons command is executed the buttons will be disabled after 30 minutes. This is to allow the user to re-enable manual buttons if required.

During this 30 minutes the button response will be the following

- LHS Button
    - o Illuminator Settings Modes cannot be accessed. A momentary press of the button will not be recognised and the indicator LEDs will not change
    - o Illuminator Configuration Modes can be accessed in the normal way by a continuous 4 second press
- RHS Button
    - o Pushing this button will cause both indicator LEDS to flash RED

Once the 30 minutes has expired any button push (LHS or RHS) will cause both indicator LEDs to flash RED and the manual buttons are fully disabled

Disabling the Manual Buttons Using the Remote :

The manual buttons can be disabled using the remote.

Once the illuminator is put into Operating mode if the disable remote control Set Up button (see diagram on Page 8) is pressed again and held for 4 seconds the manual buttons will be disabled. This is shown by both indicator LEDs flashing RED after 4 seconds.

Note : This command can only be used within 5 minutes of the illuminator being put into Operating Mode

(If the Manual Buttons are already Disabled , both LEDs will flash RED straight away)

Power Up Functionality :

After power is supplied to the unit :

If no PIN is present the Illuminator will go into Programming Mode for 7 Days and then will default to Operating Mode

- During this time if the remote is used to change settings the illuminator will still default into Operating Mode after 7 Days from the power up (unless the remote disable button is used to change the illuminator to Operating Mode)
- During this time if the manual buttons are used in either Illuminator Settings Modes or Illuminator Configuration Modes the Illuminator will default into Operating Mode 30 minutes after the last button press

RESET Options :

There are Two Re-set options for resetting your VARIO2 illuminator

Settings Re-set :

Pressing and holding the RESET BUTTON on the remote control or using the manual buttons to complete a RESET will restore the factory settings to the illuminator. Note : If a PIN is present it will not be removed and the illuminator will return to the mode you were in (Programming or Operating) prior to the re-set command. Both indicator LEDs will flash AMBER when completed.
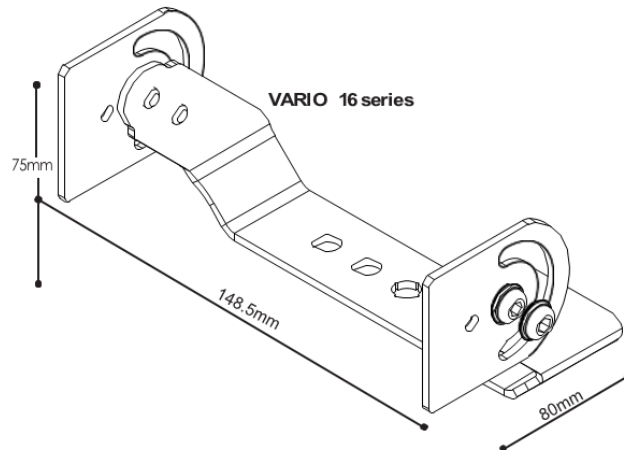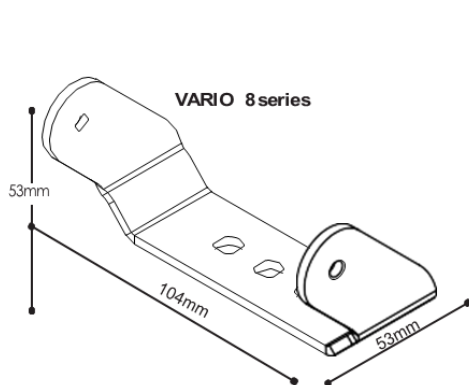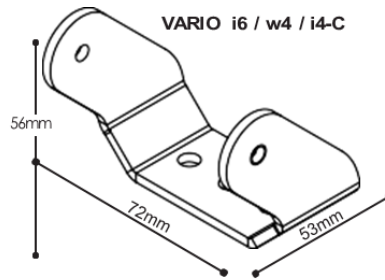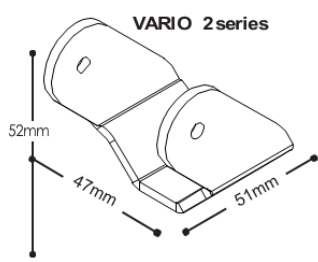
Full Re-Set :

The other option to reset your illuminator is available by recycling the power whilst holding down the two manual buttons. This is a FULL RESET and will restore factory settings AND remove the PIN if one has been set. Both Indicator LEDs will flash AMBER when completed.

Standard Bracketry :

Supplied with the Product (Model Dependant)

(not to scale, dimensions rounded to nearest mm)

VARIO 2 series

52mm
47mm
51mm

VARIO i6 / w4 / i4-C

56mm
72mm
53mm

VARIO 8 series

53mm
104mm
53mm

VARIO 16 series
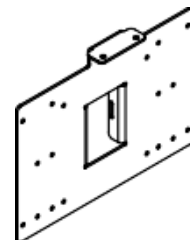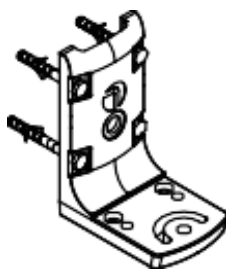
75mm
148.5mm
80mm

Optional Bracketry (not to scale - other Bracketry also available)

VUB-Pole   VUB-Wall   VUB-Plate   VUB-PSU Plate

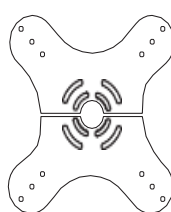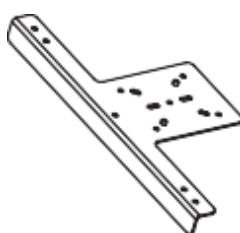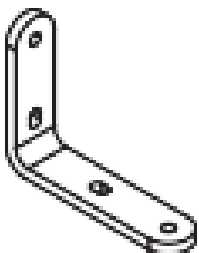Wall Mount   PTZ Mount   Dome Mount   Pole Mount

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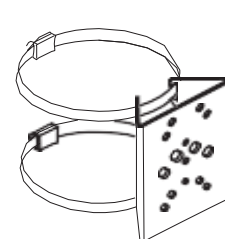
VARIO2 Specifications Table :

Infra-Red Series & White-Light Series

	i16	w16	i8	w8	i6	i4	w4	i2	w2
10°	500m (1640ft)	250m (820ft)	350m (1148ft)	180m (591ft)	200m (656ft)	144m (472ft)	110m (361ft)	78m (256ft)	60m (197ft)
35°	250m (820ft)	125m (410ft)	165m (541ft)	95m (312ft)	120m (394ft)	78m (256ft)	65m (213ft)	54m (177ft)	40m (131ft)
60°	135m (443ft)	70m (230ft)	95m (311ft)	50m (164ft)	70m (230ft)	54m (177ft)	35m (115ft)	36m (118ft)	25m (82ft)
80°	105m (344ft)	48m (157ft)	70m (230ft)	35m (115ft)	50m (164ft)	36m (118ft)	25m (82ft)	24m (79ft)	20m (66ft)
120°	65m (213ft)	35m (115ft)	45m (148ft)	25m (82ft)	30m (98ft)	24m (79ft)	18m (59ft)	18m (59ft)	12m (39ft)
Consumption	100W max	84W max	46W max	42W max	25W max	13W max	24W max	10W max	11W max
Input	24V AC/DC		12-24V AC/DC		12-24V AC/DC			12-24V AC/DC	
Weight	3.1kg (6.8lbs)		1.65kg (3.61lbs)		950g (2.1lbs)			600g (1.3lbs)	
Number of LED's	48		24		12	9	12	6	6
Environment	IP66		IP66		IP66			IP66	
Dimensions	180 x 277 x 75mm 7"x11"x2.9"		135 x 180 x 68mm (5"x7"x3")		100 x 135 x 66m 4"x5"x2.5")			75 x 100 x 64mm 3"x4"x2.5")	
Cable Length	2.5m	2.5m	2.5m	2.5m	2.5m	2.5m	2.5m	2.5m	2.5m

For IR940nm Distances please contact Raytec

Standards:

CE (Covering EMC, Safety, IP rating)

FCC

IEC/EN 62471 (Photobiological Safety)

VARIO2 Troubleshoot :

Ensure all tests are undertaken by a qualified, trained engineer. Ensure safe working practices are followed at all times.

Step 1: Basics

- Check polarity of illuminator connection red=+ve, black=-ve

- Ensure power is 12-24V AC or DC (For Vario 16 variants : 24V AC or DC only)

- Ensure telemetry wires are shorted out or valid telemetry input (zero volt or TTL) is applied and correctly wired

- Check photocell is working. Cover photocell fully, light should turn on if valid telemetry input. It is sometimes difficult to see Infra-Red illuminators working in high brightness conditions.

- Ensure power supply is suitably rated to product - check page 19 for specifications

- If longer cables used, ensure sufficient voltage is provided to allow for drops across the cable

If OK…

Step 2: Illuminator Test

- Check current is being drawn – amount of current will depend on power setting of unit. Please note – use appropriate multimeter depending on how the unit is being powered (AC or DC)

- To test this you must ensure photocell fully covered (or disabled using optional VARIO remote controller or manual control buttons) and ensure telemetry wires are shorted out or valid telemetry input (zero volt or TTL) is applied and correctly wired

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Step 3: Set up camera, lens, and illumination

- Check model number to Raytec performance specification to ensure required distance is achievable;

- Check unit is set to max power
- Check orientation of unit and ensure it is pointing in correct direction
- Check angle of unit (Interchangeable lens) – Too narrow may cause hot spots and the aperture of the camera lens to close down. Too wide and there may be insufficient light on scene and light going where it is not needed.

- Check the LED status indicators for the status of the illuminator. The LED indicators will display differently depending on which mode the illuminator is in (see below)

Programming mode – (RHS LED flashes AMBER 1 second on/1 second off)

LHS SOLID GREEN: Power Applied
LHS FLASHING GREEN: Remote control IR receiver problem
RHS FLASHING AMBER: Indicates unit is in programming mode
RHS SOLID AMBER: Indicates that a valid command is being received
LHS FLASHING RED: Voltage supply problem detected
LHS SOLID RED: Illuminator fault detected

Note: the if there is a voltage supply error, the LHS RED LED will FLASH RED but extinguish and revert to the standard SOLD GREEN when the correct voltage has been restored.

The fault indications are non latching

Normal operating mode

LHS SOLID GREEN: Power Applied
LHS FLASHING GREEN: Remote control IR received problem (Max VRC distance is 8m (26ft)
LHS FLASHING RED: Voltage supply problem detected
LHS SOLID RED: Illuminator LED fault detected

• Check unit is responding to remote /Manual Control buttons.
If not..

- Status indicators may be turned off. Turn on with remote or with manual buttons. This can be done even if programming has been disabled
- In extreme sunlight conditions, distance between remote and unit may need to be reduced
- Programming may be disabled. Enter PIN to retrieve control or RESET illuminator using one of the two RESET modes.
- Battery failure. Check battery on remote (CR2025). Test 3 volt battery, replace if necessary. Ensure battery has clean contacts.
- Remote failure. Test with new remote

Step 4: Call Raytec for further assistance
Note down:
- Model and serial number of illuminator
- Camera make and model
- Camera Lens make and model

If the Raytec illuminator or remote control is still not delivering the required performance, please contact us for further assistance:

UK / Europe Tel: +44 (0) 1670 520055
Americas Tel: +1 613 270 9990

Raytec Warranty

Please register your Raytec LED Illuminator(s) for its 5 year warranty by visiting www.rayteccctv.com/products/warranty-card

Quick Reference Table for Manual Button Operation :

Buttons are accessed by removing the base plate at the bottom of the unit (2 screws)

Action Required	Step1 : LHS Button	Step 2 : RHS Button	LHS LED	RHS LED	Comment
Power Adjust	1 x Push	Each Push cycles through power levels	Solid Red	Green flashes indicate level. High power (5 flashes) to Low power (1 flash)	
Photocell Adjust	2 x Push	Each Push cycles through photocell levels	Solid Green	Green flashes indicate setting. Low sensitivity to High sensitivity. Solid Red indicates Photocell disabled	
Status Indicator LEDS On / Off	3 x Push	Each Push cycles between On and Off	Solid Amber	On – Green Off - Red	
Factory Re-set (Does not Re-set PIN)	1 x Long Push (4 Seconds)	Push and Hold until both LEDs flash Amber	Flashing Red – After 4s Flashing Amber	Solid Red – After 4s Flashing Amber	Reverts to Programming Mode unless a PIN is present. If a PIN is present reverts to original mode before re-set
Disable Remote and Enter Operating Mode or Enable Remote and Enter Programming Mode	1 x Long Push (4s) and 1 x short Push	Push to cycle Disable / Enable	Flashing Green	Disable – Red Enable - Green	Reverts to the Mode requested unless a PIN is present. If a PIN is present and you are in Operating Mode you cannot change to Programming Mode

Action Required	Step 1 : LHS Button	Step 2 : RHS Button	LHS LED	RHS LED	Comment
Disable / Enable Manual Buttons	1 x Long Push (4s) and 2 x short Push	Push to cycle Disable / Enable	Flashing Amber	Disable – Red Enable - Green	Buttons will be Disabled 30 minutes after this selection is made – This is to allow the user to re-enable manual buttons if required
Full Re-set (including PIN re-set)	Keep both buttons depressed during power up – LEDs will both flash Amber	Keep both buttons depressed during power up – LEDs will both flash Amber			Illuminator will revert to Programming Mode, Full factory default including No PIN

The illuminator has two modes; (1) Programming Mode when the remote control can be used and (2) Operating Mode when most of the remote control functions are disabled (see Remote Control Instructions for more details

Manual Buttons are always available in programming mode or if they have been disabled, they can be enabled in programming mode.

Manual Buttons are available in operating mode, provided they have not already been disabled.

The number of button pushes indicated above are based on the user starting with the illuminator in either programming or operating mode.

If the user has already started to program the units, then the number of button pushes on the left hand will take them to the next function as per the sequence in the table.

If no buttons are pressed within 2 minutes then the illuminator will automatically default back into the previous mode it was in – programming or operating mode.

Raytec Global Tel : +44(0) 1670 520055
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Quick Reference Table for Remote Control Operation for PIN set and Manual Button Disable / Enable :

Most remote control features can only be used/accessed when the illuminator is in programming mode.

The only features of the remote that can be used during operating mode are:

Turn Status Indicator LEDs on/off using "STATUS" Button on remote
Enter an existing PIN code
Disable manual buttons - but this must be done at the same time as disabling the remote (going into programming mode)

Valid characters for PIN Numbers are: Power 5, Power 1, Min Photocell (Smallest Moon), Max Timer (Full Red Circle), Timer Disable

The unit will NOT accept any invalid characters - and the countdown will not reduce.

If valid characters are entered in the wrong order when entering a PIN , the unit will accept the input and reduce the countdown, but at the end of the countdown the illuminator will stay in operating mode, show an error and the procedure to enter a valid PIN will have to be repeated

Action Required	Available Mode	Step1 : LHS Button	Step 2 : RHS Button	LHS LED	RHS LED	Comment
Disable Remote	Prog Mode	Press <Disable Remote Control> for 4 seconds	N/A	Solid Green	Flashing Amber – Solid Amber - Off	Right Hand flashing Amber LED will stop RHS LED will go Amber when the button is pressed and turn off when in Operating Mode

Action Required	Available Mode	Step1 :LHS Button	Step 2 : RHS Button	LHS LED	RHS LED	Comment
Disable Manual Buttons	Operating Modes	Press <Disable Remote Control> for 4 seconds	N/A	Solid Green – After 4 seconds Flashing Red (Returns to Solid Green after button release)	Off – Solid Amber - After 4 seconds Flashing Red (Returns to Solid Green after button release)	Must be done within 5 minutes of Disabling remote / entering Operating Mode. Change will take effect after 30 minutes
Create or Change PIN	Prog Mode	Press <Status Button> for 4 seconds	Enter valid PIN character x 4	Green – Intermittent Flashing Red / Green - Green	Solid Amber – Flashing Red counts down the No. of valid characters required – Flashing Amber	Stays in Programming Mode after PIN created or changed
Enter existing PIN	Prog Mode	Press <Status Button> for 4 seconds	Enter valid PIN character x 4	Green – Intermittent Flashing Red / Green - Green	Solid Amber – Flashing Green counts down the No. of characters required – Flashing Amber	Enters Programming Mode after valid PIN entered If invalid PIN entered both LEDs flash red and unit will stay in Operating Mode
Delete PIN	Prog Mode	Press <Status Button> for 4 seconds	Press <Re-Set> button 4 times	Green – Intermittent Flashing Red / Green - Green	Solid Amber – Flashing Red counts down the No. of valid characters required – Flashing Amber	Stays in Programming Mode after PIN deleted

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