VARIO LITE

Installation Guide

rayTEC

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

Contents

Box Contents

VARIO2 Illuminator, spare 60° beam angles ILS

(ILS: Interchangeable Lens System)

Accessories (Optional): 80˚ beam and 120˚ beam angle ILS; Bracketry

VARIO2 Enhancements
- Increased Distance

Safety Information

Eye Safety : IR Variants (850nm and 940nm)

Caution – EN62471 Risk Group 2 Classification - IR emitted from this product. Do not stare at the lamp. Avoid exposure or use appropriate shielding / eye protection. For VAR2-i2-1, VAR2-i4-1, VAR2-i6-1, VAR2-i8-1 and VAR2-i2-2, VAR2-i4-2, VAR2-i6-2 variants hazard distance is 1900mm (Risk Group 1 distance 800mm). For VAR2-i16-1 and VAR2-i4-3, VAR2-i6-3, VAR2-i8-2/-3 variants hazard distance is 2700mm (Risk Group 1 distance 900mm).

Eye Safety : White Light and 730nm 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 VAR2-w2-1, VAR2-w4-1, VAR2-w8-1 and VAR2-w2-2, VAR2-w4-2 variants hazard distance is 1500mm. For VAR2-w16-1 and VAR2-w4-3, VAR2-w8-2/-3 variants hazard distance is 1840mm.

Eye Safety: Other Wavelengths - Contact Raytec.

The Illuminator is Class III for insulation

Illuminators are suitable for use Outdoors and Indoors

To reduce the risk of strangulation the flexible wiring connected to this luminaire shall be effectively fixed to the nearest structure if the wiring is within arm`s reach.

The PSE / Power supplied must be sufficiently rated for the load from the Luminaires.

The illuminator cable conductor ends must be terminated; secured and in conformance with the requirements of the PSE / Power supply they are connected to.

Installation Steps

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**)
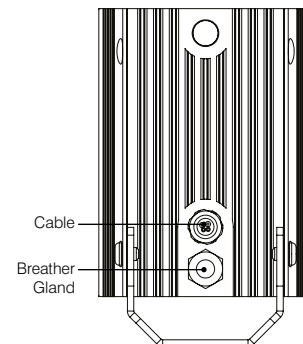4. Complete configuration - Telemetry Input
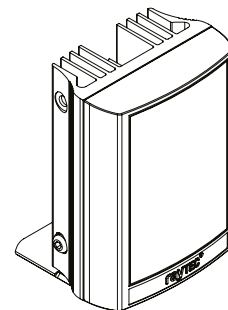
Wiring - four core cable

	DC	AC
Black wire	-	~
Red wire	+	~

Orange & Purple wires =
Telemetry input Volt free/dry contact or TTL input (See Page 5 and 6 for more details)

Cable

Breather Gland

The external cable cannot be replaced. If it is damaged and the customer is unable to shorten and re-use the cable, the illuminator must not be powered.

Factory Default Set-Up

35˚ Beam Angle ; 100% Power Only

Telemetry Input – closed

VARIO2 Lite 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.

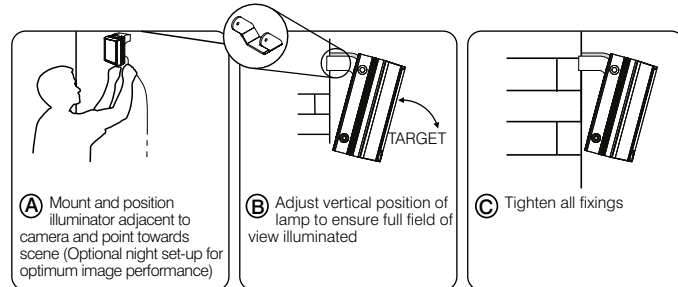We would recommend that power is turned off when replacing ILS lenses.

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. (Screw Torque 0.6Nm)
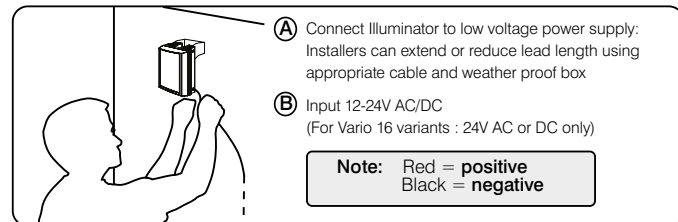
> **IMPORTANT NOTE:** Ensure base plate is securely located, the gasket is correctly located and the screws correctly fastened to ensure and maintain IP66 rating of the product.

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 6 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**

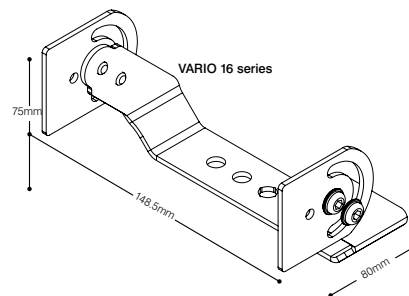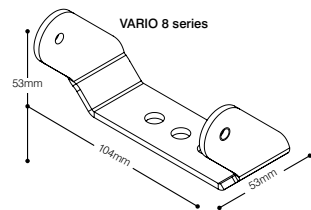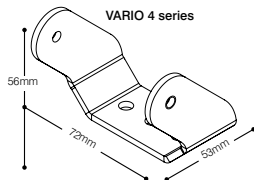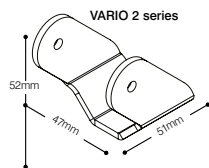**Step 4.** Telemetry Input (Orange & Purple)

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
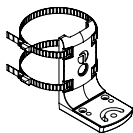
Standard Bracketry

Supplied with the Product (Model Dependant)
(not to scale, dimensions rounded to nearest mm)

VARIO 2 series
52mm
47mm
51mm

VARIO 4 series
56mm
72mm
53mm

VARIO 8 series
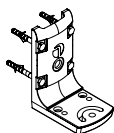53mm
104mm
53mm

VARIO 16 series
75mm
148.5mm
80mm

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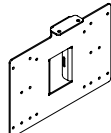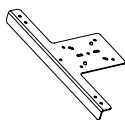
VUB-Pole

VUB-Wall

VUB-Plate
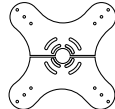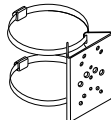(Various Sizes)

VUB-PSU Plate

Wall Mount

Ptz Mount

Dome Mount

Pole Mount

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 LEDs	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

- For i16; w16; i8; w8 the supply to the units should be limited to/ fused at 5A
- For i6; w4 the supply to the units should be limited to/ fused at 3.15A
- For i4; i2; w2 the supply to the units should be limited to/ fused at 1.6A

Standards:

CE (Covering EMC, Safety, IP rating)
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
- Ensure power supply is suitably rated to product - check specifications table
- 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 telemetry wires are shorted out or valid telemetry input (zero volt or TTL) is applied and correctly wired

Step 3: Set up camera, lens, and illumination

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

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

(Note: The light source (LEDs) of this Illuminator is not replaceable. When the unit reaches its end of life the whole Illuminator shall be disposed of and re-cycled where possible.)

Raytec Warranty

All Raytec luminaires are provided with an industry leading 5 year warranty and have an expected useful life in excess of 10 years.

Contact Raytec for more details.

8 rayteccctv.com   Raytec Global Tel: +44 (0) 1670 520055
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