Midstream lighting commissioning report

Project Reference:	**ML2115 – Eastcote Hockey club**
Date:	06.08.24
Addressed to:	**Eastcote Hockey club**
Made By:	Tom Ray – Midstream lighting.

Executive Summary

Commissioning by: Tom Ray – Midstream lighting, ECS limited.

Site Location: Eastcote Hockey Club (Eastcote Hockey Club King, Ruislip, London, HA4 7JZ)

Details of the installation:

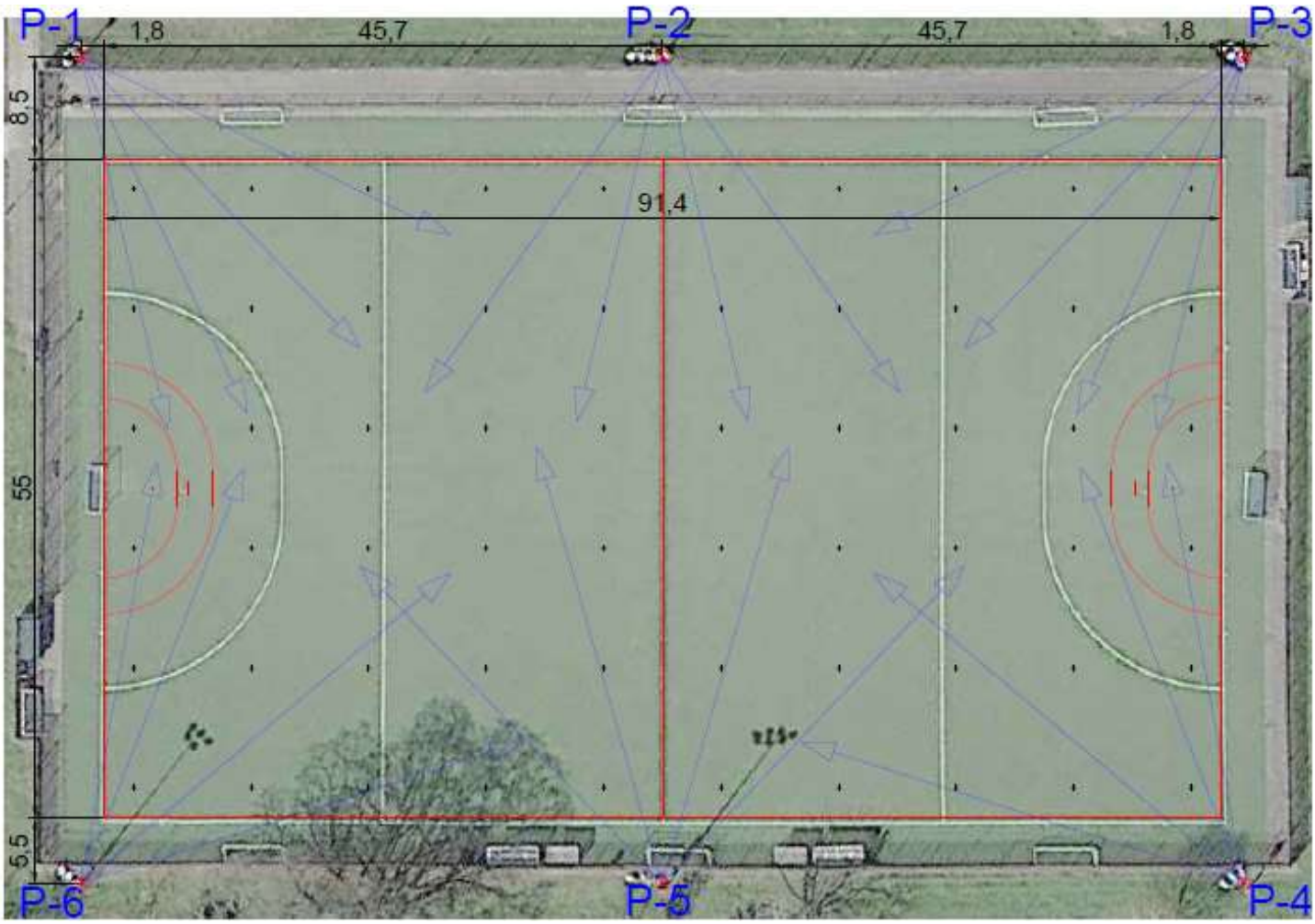
Midstream engineers employed a multi-step approach for project delivery:

- **Lighting design**: Build the lighting design in accordance with site specifics.
- **Preconstruction meeting**: Review site with Midstream engineers to ensure the project operates smoothly.
- **Project management**: Ensure on-time delivery of materials and managing the team on site.
- **Testing:** Handover control system functionality, lux test and electrical test the system.
- **Handover**: Provide all testing certification to the client.

Project scope:

- A retrofit hockey project consisting of twenty-four luminaires on static masts.
- Attend a pre-project commencement meeting on site.
- The removal of existing fixtures with the sub-contractor supplied access equipment. This includes the removal of existing gear from boxes currently housed on lighting column.
- Retrofit install 24 x Modus S1100 onto free issue 'diving board' brackets over the existing T brackets, with the LED drivers being housed in the existing boxes on the lighting column. Mount the drivers in such a way which support correct heat dissipation.
- Use the existing flex cable from the driver output to the junction box of the luminaire. This cable should be evaluated and only replaced if proved to be non-complaint. It is a requirement for the cable to be hard wired into the luminaire junction box.
- Connection of the driver to the 410v supply, the driver requires 410v to function.
- Use existing MCB's on each column.
- Installation of a control system to a 240v supply, which allows for remote switching.
- Removal of old floodlighting system from site
- Lux test to Midstream design IAW FIH guidance.
- Provide a NICEIC minor works electrical certificate.

Midstream column identification:



Control system requirements:

- Dali.
- Wireless switching.
- 21:30 curfew, Monday – Saturday.
- 18:00 curfew, Sundays.
- 20:00 onwards, 175 lux Monday – Saturday.
    - Option one – LPA, 78% capacity.
    - Option two – 350 lux.
    - Option three - Half one
    - Option four - Half two
    - Option five - 175 lux
    - Option six -Off

NOTE: The half pitch switching is managed by mast. Therefore, when the half pitch option is selected, all luminaires on the middle masts will illuminate.

Control system bill of materials:

6 x WIB boxes.

6 x Din rails.

12 x M20 glands.

6 x TRAN-L-CSB-D.

1 x Casambi Cloud Gateway.

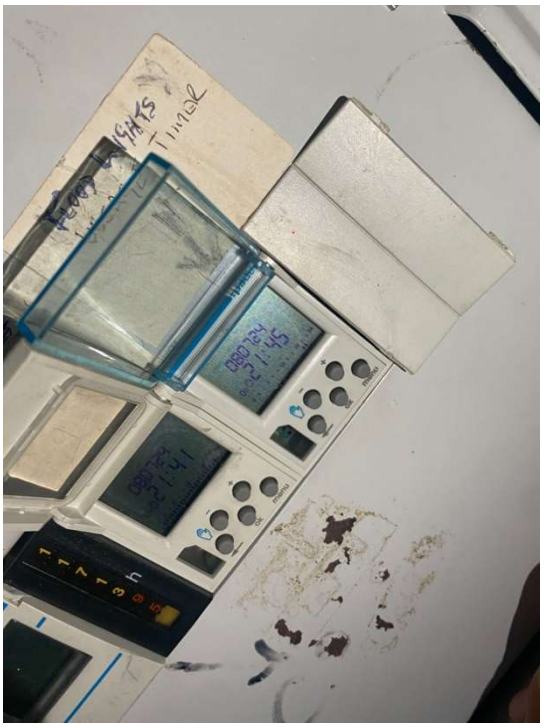
1 x PTS_EU_CBU-TED-LR signal booster.

Control system installation:

- Midstream have installed 6 x WIB 2 boxes, one for each lighting column.
- Inside each one of the WIB boxes, Midstream installed a din rail, which houses the TRAN-L-CSB-D.
- The WIB box has 2 x glands, one gland is for the Dali line and the other 240v power.
- The TRAN-L-CSB-D is connected to each LED driver via a 1.5mm 2 core cable per column.
- The WIB has been mounted to the underside of each existing Musco box, to enable a clear line of site from the PTS_EU_CBU-TED-LR.
- At distribution point, a Casambi Cloud Gateway in the distribution board, plugged into the existing socket. The gateway unit has been connected to a 5G router via ethernet cable, to allow off site switching.
- The PTS_EU_CBU-TED-LR will be installed into the same place, requiring a 240v supply – this is acting as a mesh booster on the exterior of the distribution cabinet.
- Inside of the distribution cabinet, there is a On / Off overwrite button – this is to be left permanently on so the floodlights can be managed via the Casambi application and is in place as a failsafe.
- A digital timer is also in place, as a failsafe.
- The Casambi system has a programmed 21:30 curfew, Monday – Saturday and 18:00 curfew, Sundays.
- The Casambi system has been programmed so 20:00 onwards, 175 lux will display Monday – Saturday.
- As the system over performs, the system has been programmed to work at 78% capacity, which means the system operates below a 350-lux average.
    - Programmed setting:

Distribution board:

Green – On
Red – Off



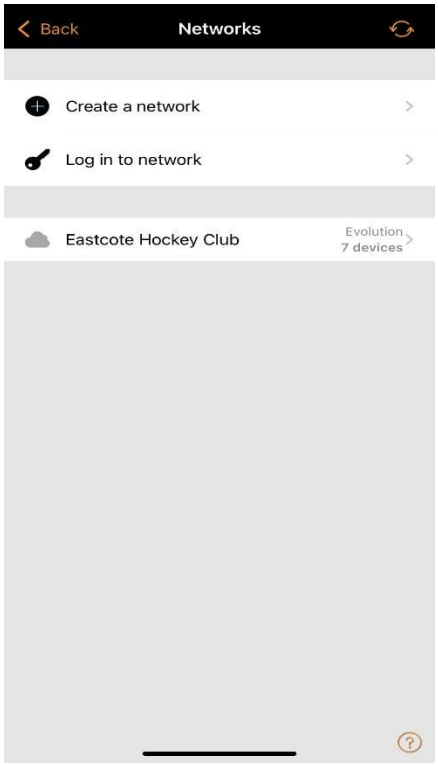
Failsafe timer.

Casambi remote switching

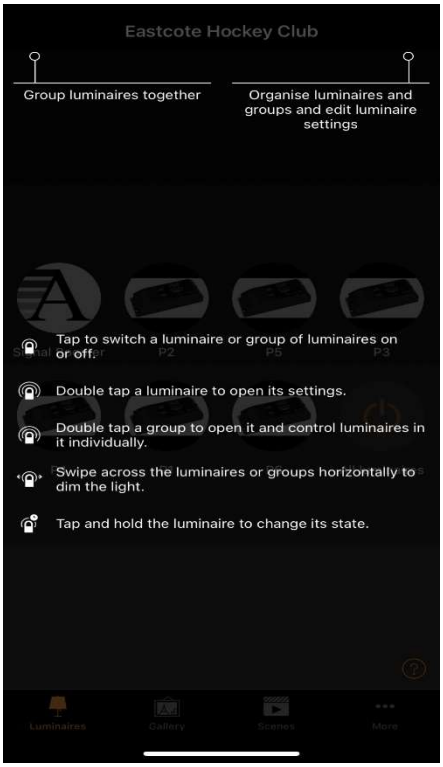
Midstream lighting will provide a username and password for the Casambi application.

1) Download the below application, Casambi, on the required device.

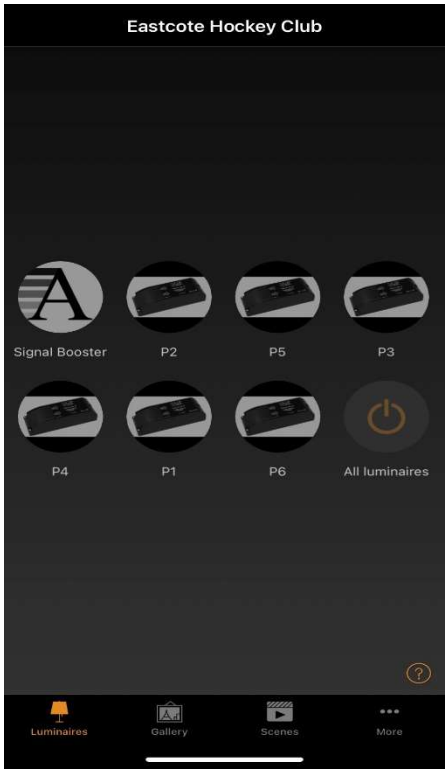
2) Using the client provided Username and password, login to the Eastcote hockey club network.



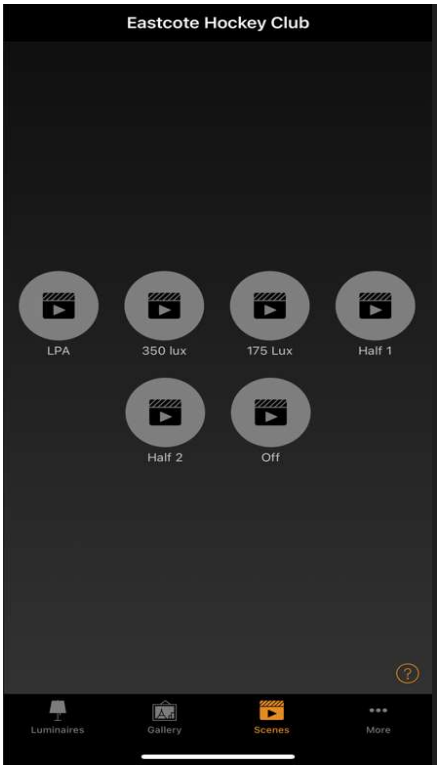
3) The application provides a user guide for operation, upon entry.



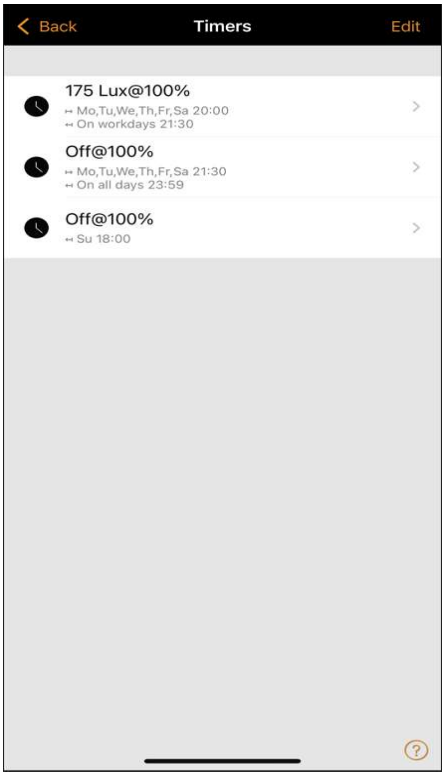
4) Within the luminaires section, all control system items will be listed.



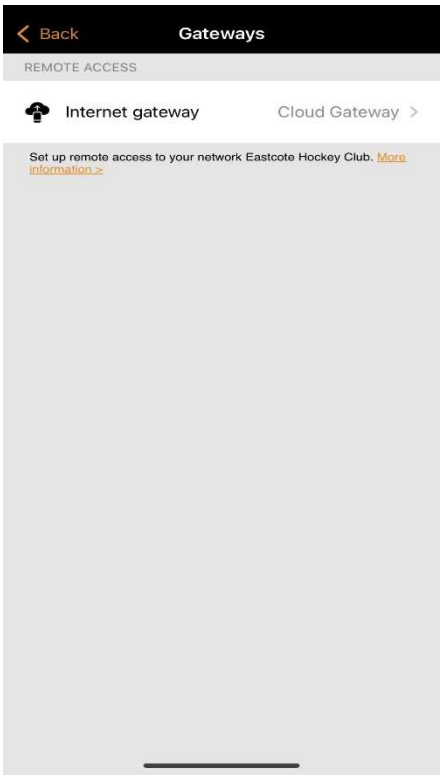
5) Within the scene section, the switching options as per the scope of works will be listed.



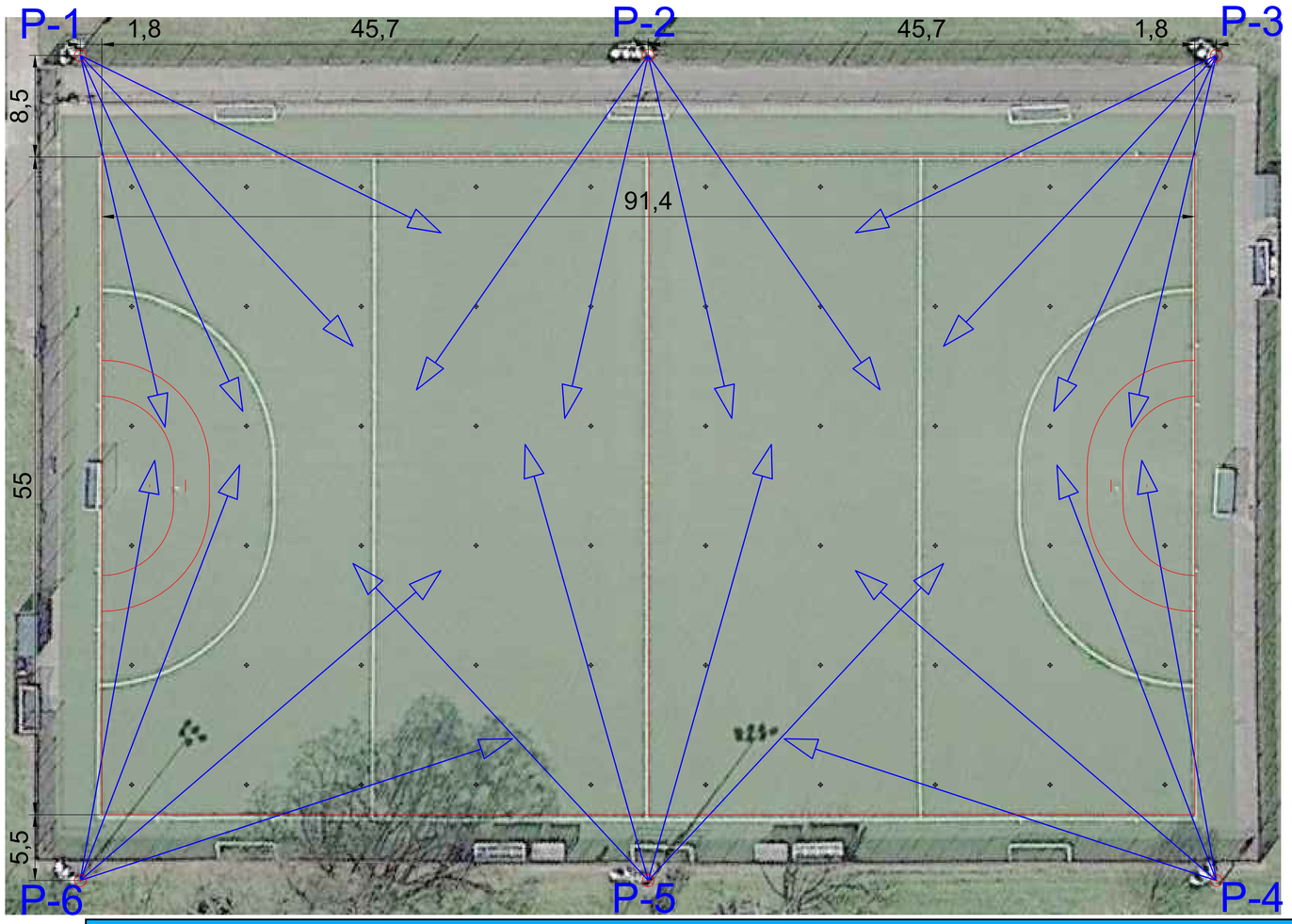
6) A timer has been set within the application to manage the curfew requirements.



7) The internet gateway component is also shown within the application.



END OF DOCUMENT

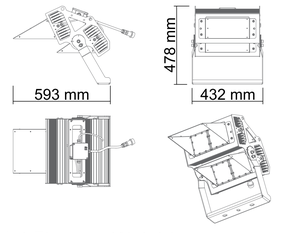


Calculated Lighting Values			
ML2115 - Eastcote Hockey Club			
E_{av} [lx]	E_{min} [lx]	E_{max} [lx]	Emin/Eav
374	286	571	0,76

MIDSTREAM LED PROPOSAL								
COLUMN No.	HEIGHT [m]	Luminaire	No. of Luminaires	Wattage	Absorbed Wattage	Consumption per Mast [kW]	Annual Consumption [kWh] [1000h]	Notes
P-1	15	Modus S1100 NS (4000K)	4	1180	4720,0	4,72	4720,00	
P-2	15	Modus S1100 NS (4000K)	4	1180	4720,0	4,72	4720,00	
P-3	15	Modus S1100 NS (4000K)	4	1180	4720,0	4,72	4720,00	
P-4	15	Modus S1100 NS (4000K)	4	1180	4720,0	4,72	4720,00	
P-5	15	Modus S1100 NS (4000K)	4	1180	4720,0	4,72	4720,00	
P-6	15	Modus S1100 NS (4000K)	4	1180	4720,0	4,72	4720,00	
			24		28320,0	28,32	28320	TOTAL

LUMINAIRES USED

MODUS S1100



Net Flux 135.500lm | Weight 20Kg | Power 1180W

Total HM (All)	Total Luminaires (All)
- 6 with height of 15m	- 24 x Modus S1100 NS (4000K)

FIH Calculation Grid: 10 x 6 Points ⌖

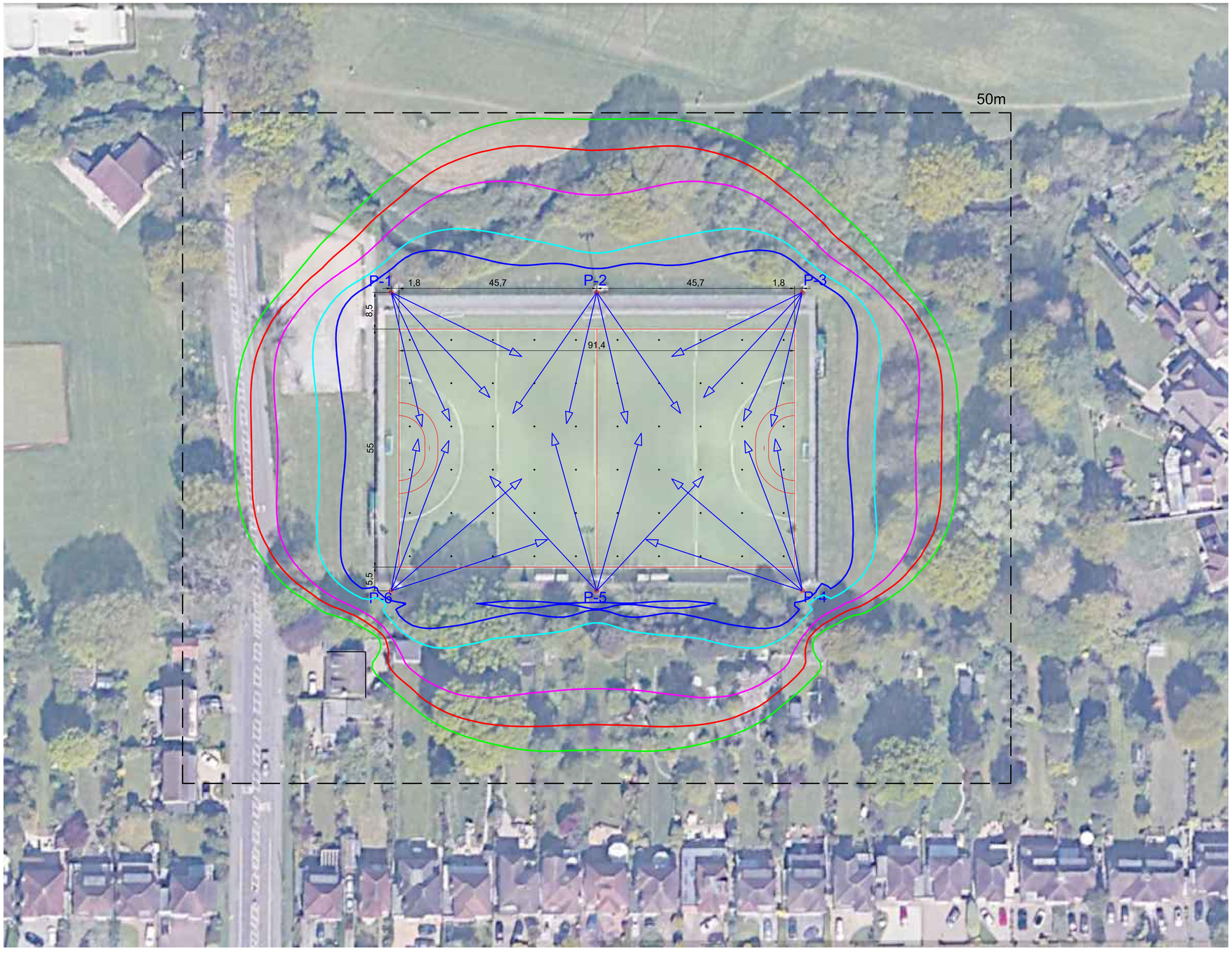
Maintenance Factor - 0.9

HM = HIGH MAST
E_{av} = AVERAGE Lux LEVEL
u_0 = UNIFORMITY E_{min} / E_{av}

MIDSTREAM

Drawing by	Checked by	Approved by	Date	Revision	Sheet
MC	PC	MIDSTREAM	09/11/2023	06	1/4

ML2115 - Eastcote Hockey Club - HMs Description & Isolines

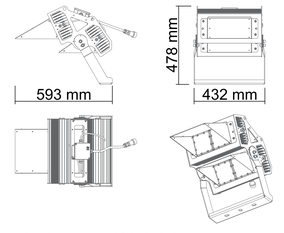


Isolines

- 5.0 lx
- 6.5 lx
- 10.0 lx
- 25.0 lx
- 50.0 lx

LUMINAIRES USED

MODUS S1100



Net Flux 135.500lm | Weight 20Kg | Power 1180W

Total HM (All)	Total Luminaires (All)	
- 6 with height of 15m	- 24 x Modus S1100 NS (4000K)	HM = HIGH MAST E_{av} = AVERAGE Lux LEVEL u_0 = UNIFORMITY E_{min} / E_{av}

FIH Calculation Grid: 10 x 6 Points ⌖

Maintenance Factor - 0.9

MIDSTREAM

Drawing by	Checked by	Approved by	Date	Revision	Sheet
MC	PC	MIDSTREAM	09/11/2023	06	2/4

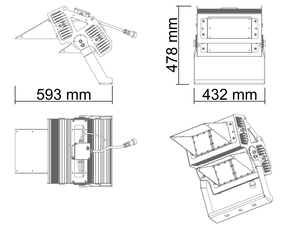
ML2115 - Eastcote Hockey Club - HMs Description & Isolines - Horizontal Spill

Isolines

- 5.0 lx
- 6.5 lx
- 10.0 lx
- 25.0 lx
- 50.0 lx

LUMINAIRES USED

MODUS S1100



Net Flux 135.500lm | Weight 20Kg | Power 1180W

	Total HM (All)	Total Luminaires (All)	
FIH Calculation Grid: 10 x 6 Points ⌖	- 6 with height of 15m	- 10 x Modus S1100 NS (4000K) ON Dimmed to 65%	HM = HIGH MAST E_{av} = AVERAGE Lux LEVEL u_0 = UNIFORMITY E_{min} / E_{av}
Maintenance Factor - 0.9			

MIDSTREAM

Drawing by	Checked by	Approved by	Date	Revision	Sheet
MC	PC	MIDSTREAM	09/11/2023	06	3/4

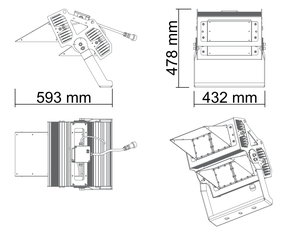
ML2115 - Eastcote Hockey Club - Half Pitch 1 - HMs Description & Isolines - Horizontal Spill

Isolines

- 5.0 lx
- 6.5 lx
- 10.0 lx
- 25.0 lx
- 50.0 lx

LUMINAIRES USED

MODUS S1100



Net Flux 135.500lm | Weight 20Kg | Power 1180W

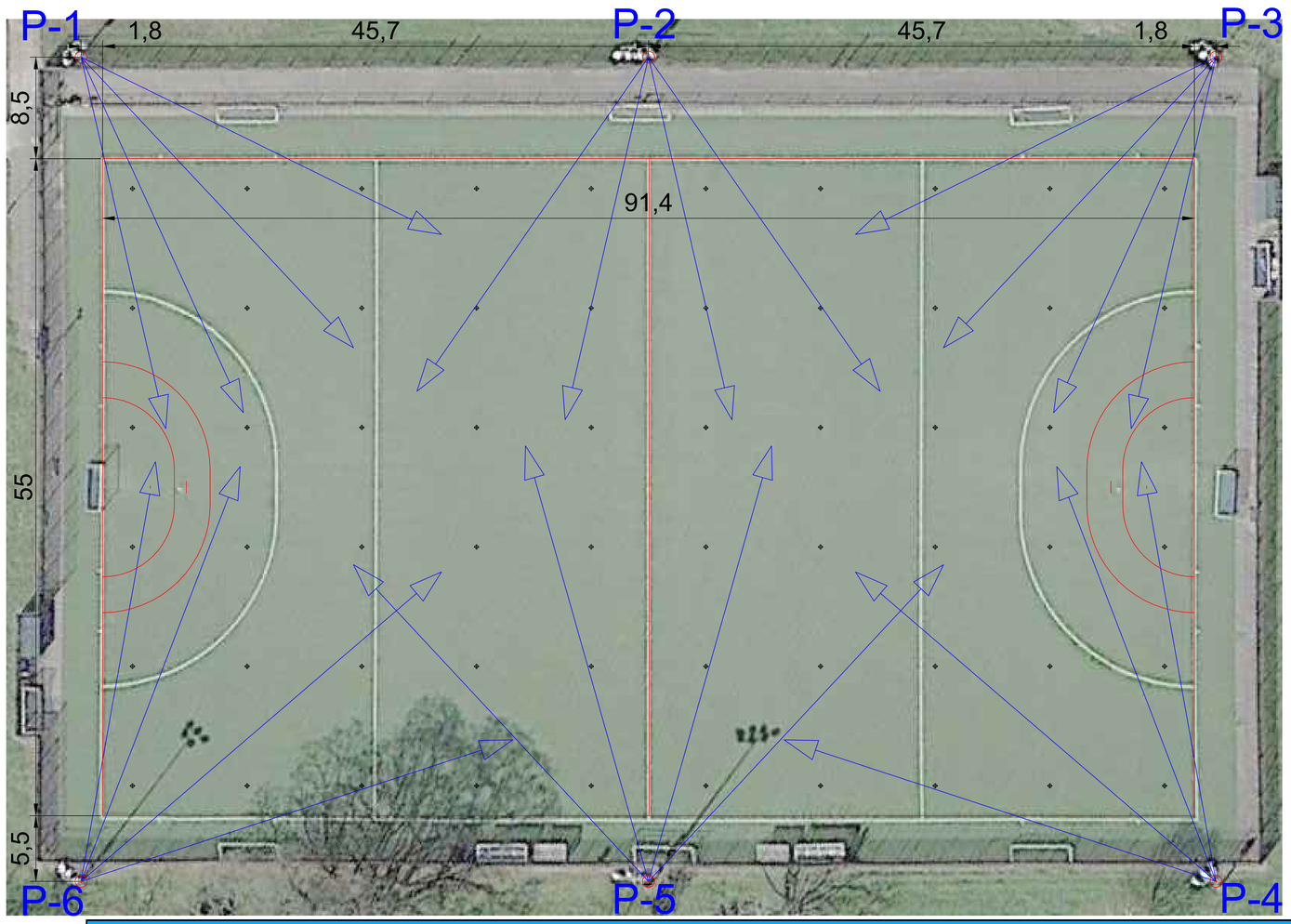
FIH Calculation Grid: 10 x 6 Points ⌖	Maintenance Factor - 0.9	Total HM (All) - 6 with height of 15m	Total Luminaires (All) - 10 x Modus S1100 NS (4000K) ON Dimmed to 65%

HM = HIGH MASS
E_{av} = AVERAGE Lux LEVEL
u_0 = UNIFORMITY E_{min} / E_{av}

MIDSTREAM

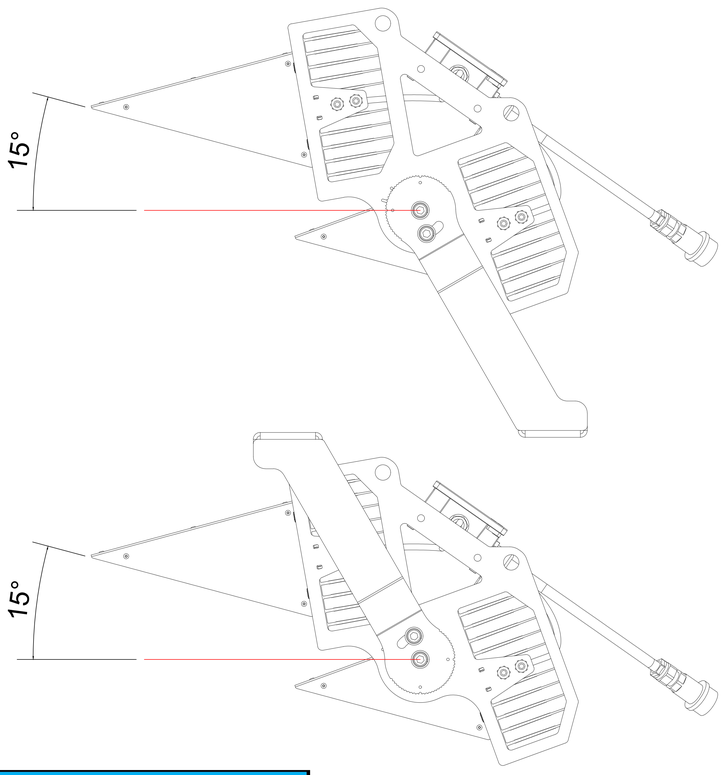
Drawing by	Checked by	Approved by	Date	Revision	Sheet
MC	PC	MIDSTREAM	09/11/2023	06	4/4

ML2115 - Eastcote Hockey Club - Half Pitch 2 - HMs Description & Isolines - Horizontal Spill



Example of the side view of the Luminaire with a Tilt of 15°

REFER TO THE FOLLOWING PAGES FOR INDIVIDUAL TILT OF THE LUMINAIRE



MIDSTREAM LED PROPOSAL								
COLUMN No.	HEIGHT [m]	Luminaire	No. of Luminaires	Wattage	Absorbed Wattage	Consumption per Mast [kW]	Annual Consumption [kWh] [1000h]	Notes
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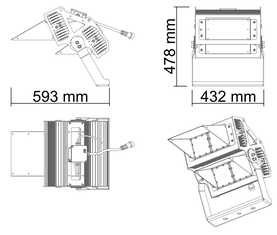
P-4	15	Modus S1100 NS (4000K)	4	1180	4720,0	4,72	4720,00	
P-5	15	Modus S1100 NS (4000K)	4	1180	4720,0	4,72	4720,00	
P-6	15	Modus S1100 NS (4000K)	4	1180	4720,0	4,72	4720,00	
			24		28320,0	28,32	28320	TOTAL

LUMINAIRES USED

MODUS S1100



Net Flux 135.500lm | Weight 20Kg | Power 1180W

Total HM (All)	Total Luminaires (All)
- 6 with height of 15m	- 24 x Modus S1100 NS (4000K)

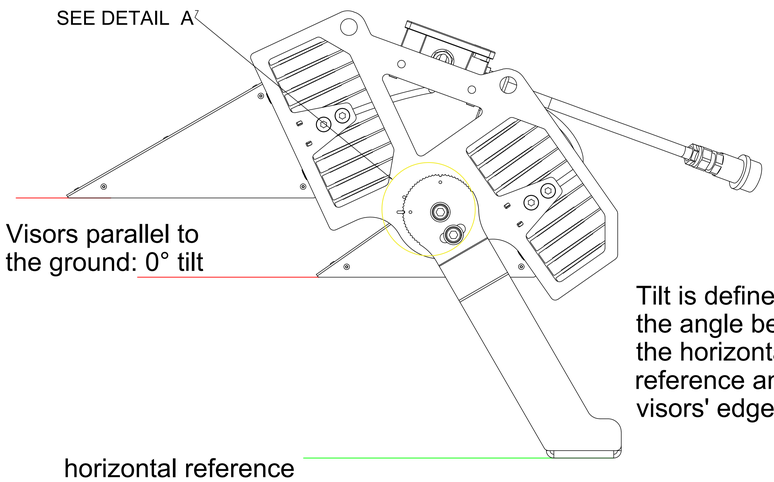
HM = HIGH MAST
E_{av} = AVERAGE Lux LEVEL
u_0 = UNIFORMITY E_{min} / E_{av}

MIDSTREAM

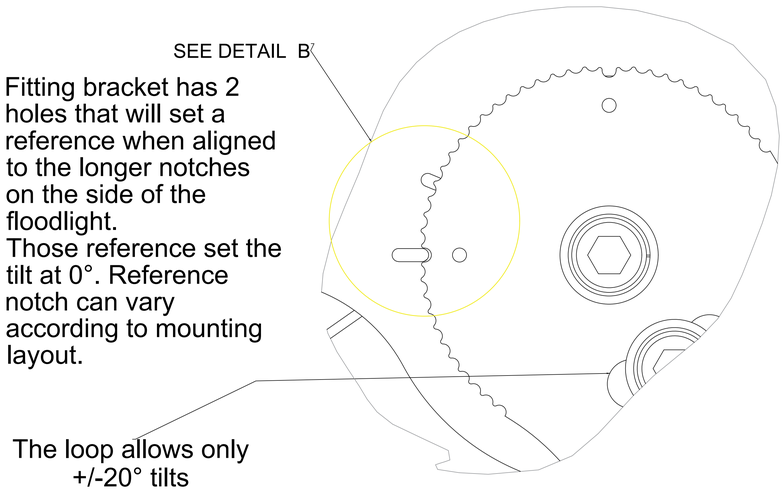
Drawing by	Checked by	Approved by	Date	Revision	Sheet
MC	PC	MIDSTREAM	25/06/2024	00	1/3

ML2115 - Eastcote Hockey Club - Mounting Instructions - Ref. to REV06 - KeyPlan

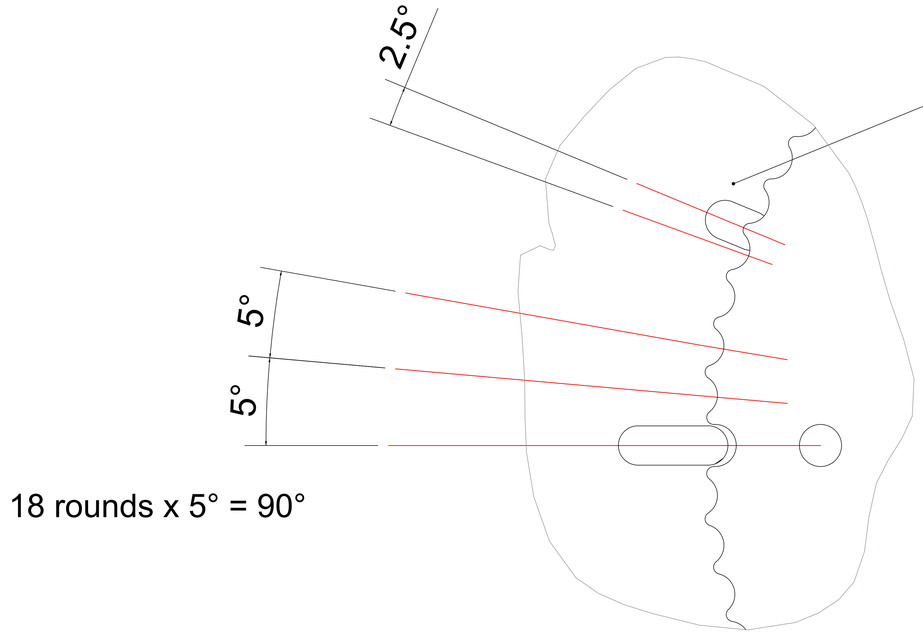
Side View of the Luminaire with a Tilt of 0.0°



DETAIL A



DETAIL B



18 rounds x 5° = 90°

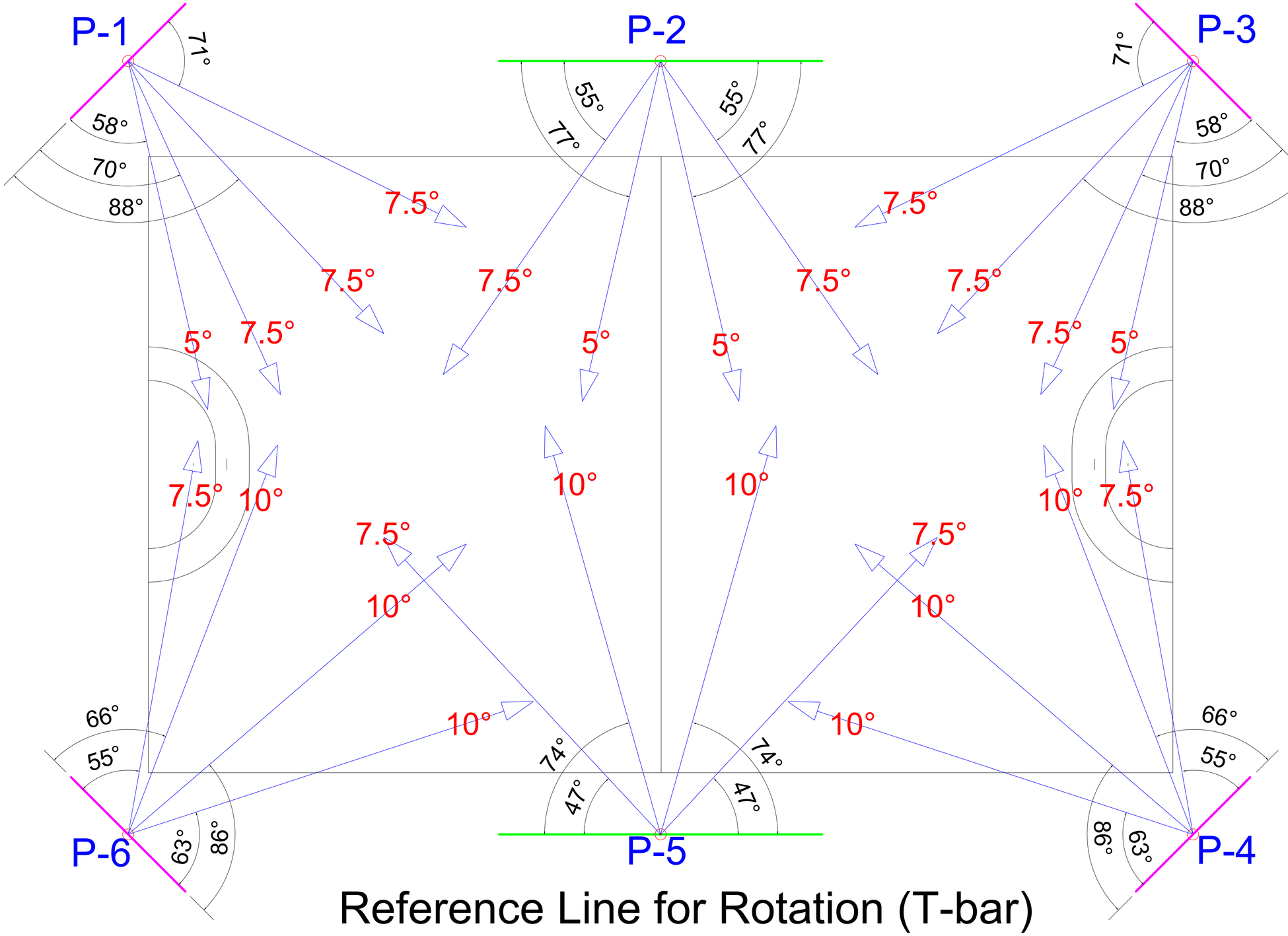
Range of tilt allowed is +/-20°
Every round sets a 5° interval, but resolution of bracket can be as precise as 2,5°.

The angular rotation between a crest and a round is exactly 2,5°.

When the longer notch sits in a round, tilt is a multiple of 5°, but then if the bracket is rotated to center the shorter notch in a round, tilt has increased / decreased by 2,5°.

Drawing by	Checked by	Approved by	Date	Revision	Sheet
MC	PC	MIDSTREAM	25/06/2024	00	2/3

ML2115 - Eastcote Hockey Club - Mounting Instructions - Ref. to REV06 - Luminaire Details



Reference Line for Rotation (T-bar)

Tilt angle are showed in RED

Rotation angle are showed in BLACK

Total HM (All) - 6 with height of 15m	Total Luminaires (All) - 24 x Modus S1100 NS	HM = HIGH MAST E_{av} = AVERAGE Lux LEVEL u_0 = UNIFORMITY E_{min} / E_{av}

Drawing by	Checked by	Approved by	Date	Revision	Sheet
MC	PC	MIDSTREAM	25/06/2024	00	3/3

ML2115 - Eastcote Hockey Club - Mounting Instructions - Ref. to REV06 - Aiming Angles

MIDSTREAM

Illuminance Check

FIH Hockey 60 Point Lighting Survey

Project No.: ML2115

Customer Order No.: 5294

Location: Kings College Rd, Ruislip HA4 7JZ

Switching Level: 100%

Date of Visit: 22.07.24

Time on: 21:30 **Time off:** 22:15

Weather Conditions:

Light Meter: LM193

Design Illuminance Level

Ei.des= 350 **Lux**

P1

	1	2	3	4	5	6	7	8	9	10
1	343.2	396.24	276.9	261.3	303.42	304.2	265.2	300.3	431.34	377.52
2	471.9	430.56	307.32	372.84	380.64	436.8	443.04	295.62	423.54	482.82
3	288.6	308.88	270.66	258.96	258.18	276.12	252.72	302.64	302.64	258.18
4	262.08	263.64	260.52	260.52	258.18	269.88	262.86	269.1	269.88	255.06
5	447.72	327.6	332.28	332.28	446.94	401.7	375.96	295.62	405.6	449.28
6	489.84	499.2	296.4	253.5	499.2	500.76	363.48	319.8	518.7	489.06

Recorded Illuminance Levels

Ei.ave = 346.0 **Lux**

Ei.max = 518.7 **Lux**

Ei.min = 252.7 **Lux**

Min/Ave = 0.7

Min/Max = 0.5

Comments:
There is a tree which obstructs some light on row 6. Should this be cut back, lighting will further improve.

These results have been lowered to 78% capacity based on the results recorded 22.07.24.

Survey Conducted By: JHP

Site contact: Roger Anthony

CERTIFICATE OF CALIBRATION

Issued By The Calibration Centre Ltd
Date of Issue 22 May 2023

Certificate Number 0523255

the calibration centre
TEST INSTRUMENT CALIBRATION & REPAIR SERVICE COMPANY

Unit 1 Antom Court
Tollgate Drive
Stafford
Staffs
ST16 3AF

Approved Signatory

M. Stewart ☐ J. Murray ☑ J. Patel ☐ J. Taylor ☐ G. O'Donnell ☐

Customer : JHP Electrical
Bushy Mill Lane,
Watford, WD24 7AB

Date Received : 22 May 2023

Instrument :

System ID :	TCC130794	Job Number :	235238-1
Description :	Light Meter	Cust Ref :	
Manufacturer :	Martindale		
Model Number :	LM192		
Serial Number :	245257113		
Procedure Version	TCC LUX		

Environmental Conditions

Temperature :	20°C ± 5°C	Mains Voltage :	240V ± 23V
Relative Humidity :	50%RH ± 10%RH	Mains Frequency :	50Hz ± 1Hz

Comments

Instrument tested to manufacturers specification
No adjustments made unless stated

Traceability Information

Instrument Description	*Serial Number*	*Certificate Number*	*Cal. Date*	*Cal. Period*
TES-1336 Light Meter	010507319	140119/AAU UKAS	28/07/2022	52
TES-1336 Light Meter	010507319	140119/AAU UKAS	28/07/2022	52
TES-1336 Light Meter	010507319	140119/AAU UKAS	28/07/2022	52
TES-1336 Light Meter	010507319	140119/AAU UKAS	28/07/2022	52

Calibrated By : J. Murray **Date of Calibration : 22 May 2023**

CERTIFICATE OF CALIBRATION

Certificate Number
0523255

AS FOUND RESULTS

Test Title	Tolerance	Applied Value	Reading	Pass / Fail
The UUT was intercompared using a variable Tungsten Halogen light source.				
All measurements made in a sealed non reflective environment.				
0-200 Lux Range				
0-200 Lux Range	8Lux	101Lux	104Lux	PASS
0-2000 Lux Range				
0-2,000 Lux Range	8Lux	101Lux	104Lux	PASS
0-2,000 Lux Range	20Lux	510Lux	515Lux	PASS
0-2,000 Lux Range	35Lux	1020Lux	1028Lux	PASS
0-2,000 Lux Range	50Lux	1535Lux	1542Lux	PASS

END OF TEST DATA

Uncertainties

Current below 200uA : 0.05 + 0.2pA

MIDSTREAM LIGHTING LTD

WESSEX HOUSE
1 CHESHAM STREET
LONDON, SW1X 8ND
UNITED KINGDOM

+44 (0) 207 584 8310
www.midstreamlighting.com
sales@midstreamlighting.com

VAT No: GB 248 812 878
Company No: 08106829

LIGHT TEST CERTIFICATE

ML2115 - Eastcote Hockey Club

Ordered by: 2377
Eastcote Astro limited

Kings College Road
Ruislip
HA47JZ Greater London
United Kingdom
Contact Name: Graham Pile

Deliver to:
Eastcote Astro limited

Kings College Road
Ruislip
HA47JZ Greater London
United Kingdom
Contact Name: Graham Pile

Order Number:	5294
Quotation Number:	6680
Order Date:	03/05/2024
Page:	1 / 1
Your Reference:	Q6680V2
Sales Person:	Alex Forsyth

Notes

PAYMENT TERMS
30% DUE IMMEDIATELEY UPON ORDER PLACEMENT
30% DUE IMMEDIATELEY UPON GOODS READY
20% DUE IMMEDIATELEY UPON INSTALL COMPLETION
10% DUE IMMEDIATELEY UPON COMMISSIONING LUX TEST
10% DUE IMMEDIATELEY UPON LPA APPROVAL

Midstream Lighting Ltd are pleased that has successfully met the required light levels stated in the scope of works.

MIDSTREAM LIGHTING LTD

WESSEX HOUSE
1 CHESHAM STREET
LONDON, SW1X 8ND
UNITED KINGDOM

+44 (0) 207 584 8310
www.midstreamlighting.com
sales@midstreamlighting.com

VAT No: GB 248 812 878
Company No: 08106829

PROJECT COMPLETION CERTIFICATE

ML2115 - Eastcote Hockey Club

Ordered by: 2377
Eastcote Astro limited

Kings College Road
Ruislip
HA47JZ Greater London
United Kingdom
Contact Name: Graham Pile

Deliver to:
Eastcote Astro limited

Kings College Road
Ruislip
HA47JZ Greater London
United Kingdom
Contact Name: Graham Pile

Order Number:	5294
Quotation Number:	6680
Order Date:	03/05/2024
Page:	1 / 2
Your Reference:	Q6680V2
Sales Person:	Alex Forsyth

Notes

PAYMENT TERMS
30% DUE IMMEDIATELEY UPON ORDER PLACEMENT
30% DUE IMMEDIATELEY UPON GOODS READY
20% DUE IMMEDIATELEY UPON INSTALL COMPLETION
10% DUE IMMEDIATELEY UPON COMMISSIONING LUX TEST
10% DUE IMMEDIATELEY UPON LPA APPROVAL

Midstream Lighting Limited are pleased to announce the completion of the below project in line with the approved scope of works and the site has been handed back to customer/end-user

The below documents will have been shared and can also be found in the shared DropBox link:
1. NICEIC Certificate (if applicable)
2. Light Level results
3. Light meter calibration certificate (used to conduct light level results)
4. Inspection report (if applicable)
5. Commissioning Report (if applicable)
6. As-built Drawings (if applicable)
7. Light Design (if applicable)
8. Mounting instructions

Project - ML2115 - Eastcote Hockey Club

Customer reference - Q6680V2

All sales are conducted as per Midstream General Terms and conditions of Sales, available at https://www.midstreamlighting.com/terms-and-conditions/

To view Installation
manuals online view https://www.midstreamlighting.com/installation-guides/

For Warranty information and Fault Reporting process view https://www.midstreamlighting.com/warranty/

PROJECT COMPLETION CERTIFICATE

ML2115 - Eastcote Hockey Club

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Q6680V2

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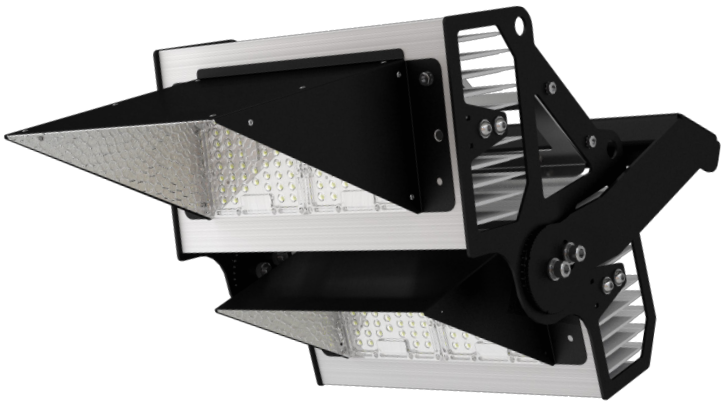
MODUS S

The Modus S Series is built for small to medium-sized sports applications and offers high lumen packages with greatly reduced weight.
The lightweight design minimises the number of floodlights required per mast and the uniquely designed light shields allow the Modus S to have a high level of uniformity across sports areas whilst delivering limited light spill for neighbours and residents. A great solution for both new-build and retrofit projects with features such as remote drivers for flexible installation and a 2 module configuration design to help light optimization of specific applications.

CE LED IP66



Technical data

Performance	
Luminaire Output	Up to 140.000 lm
Power Absorption	1180W
Lumen Maintenance [L80 B10]	>60.000h
Lumen Maintenance [L70 B50]	>100.000h
Optoelectronics	
CRI	70 - 80 - 90
Colour Temperature	• 3000K Warm White • 4000K Neutral White • 5000K Pure White • 5700K Cool White
Secondary Optics	weather proof, Anti-yellowing PC refraction matrix
No of LEDs	256
Luminaire Body	
Chassis and Bracket	Stainless Steel
Metal Finish	Powder Coating
Heatsinks	Anodized Extruded Aluminium (Copper Content <0.1%)
Bracket	Angled Reversible bracket, M20 or 2 x M16 Fixing points
Weight	20 Kg
Dimensions (L-W-H)	592L x 432W x 478H
Protection Level	IP66
Impact Resistance	IK09
Windage EPA	0.179 m2
Driver Unit	
Dimensions (L-W-H)	398mm-230mm-152mm
Weight	9Kg

Protection Level	IP67
Electronics	
Voltage input	200-480 VAC 50-60Hz
Active Power F.C.	0.97
Surge Protection	10kV line-earth, 6kV line-line
Insulation class	IEC Class I
Short Circuit Protection	Auto-recovery
Over Heat Protection	Drops output current
Operation Conditions	
Working temperature	-40°C / +50°C
Humidity Range	0% - 94%

Normative reference

EN 60598-1:2008 + A11: 2009 - Luminaires - Part 1: General requirements and tests

EN 60598-2-5:2003 - Luminaires - Part 2-5: Particular requirements - Floodlights

EN 62031:2008 + A1: 2013 - LED modules for general lighting - Safety specifications

EN 62493-2010 - Assessment of lighting equipment related to human exposure to electromagnetic fields

EN 60529:1991 + A1:2000 + A2:2013 - Degrees of protection provided by enclosures (IP Code) IEC 60068-2-52 - Environmental test: Salt mist test

EN 55015: 2003 - Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment

EN 61547: 2009 - Equipment for general lighting purposes - EMC immunity requirements

EN 61000-3-2: 2006 + A1: 2009 + A2: 2009 - Electromagnetic compatibility (EMC) -- Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)

EN 61000-3-3: 20013 - Electromagnetic compatibility (EMC) -- Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection.

MIDSTREAM
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www.midstreamlighting.com

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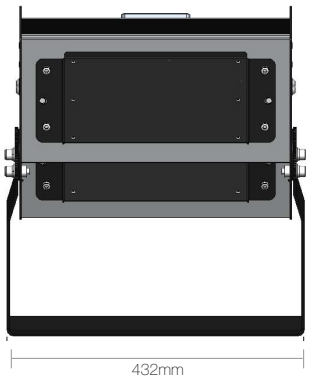
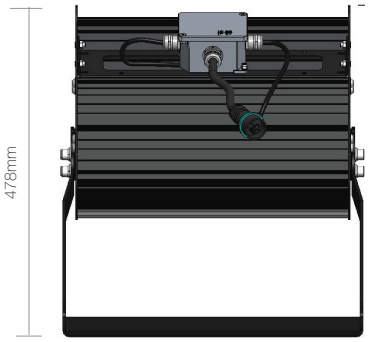
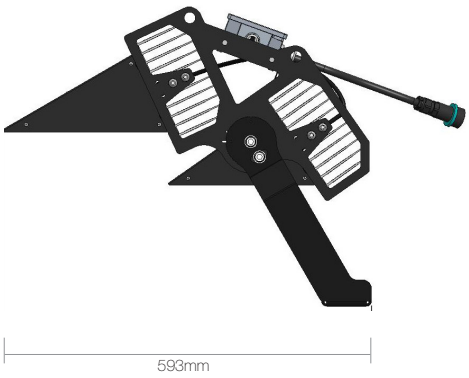
MODUS S

Dimensions

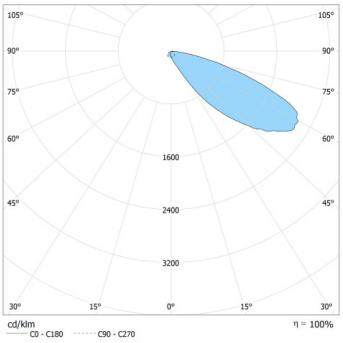




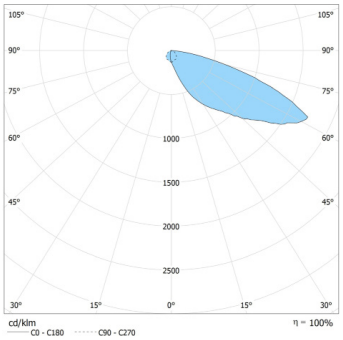


Photometrics

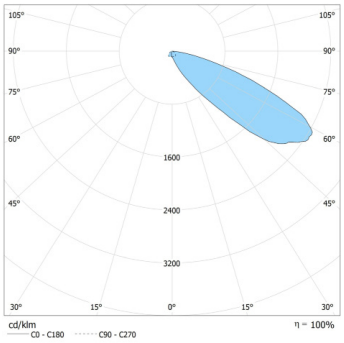
NS



WS



MS



Ordering codes

Product Family	Power	Optic	CCT	CRI	Voltage Input	Control System	Driver	Bracket	Optional
MS	11 (1180W)	NS (Narrow Beam - Spill Control)	A (5000k)	70	EU (200-480 VAC)	10 (0-10v)	C (Driver for Cabinet/ Mast Shaft mounting)	A (Angled Bracket)	0
	09 (999W)	MS (Medium Beam - Spill Control)	B (4000k)	80		DA (DALI)	O (Driver for Outdoor installation)		
		WS (Wide Beam - Spill Control)	C (3000K)	90		DX (DMX)			
			D (5700k)						

Example: MS09WSA70EU10CA

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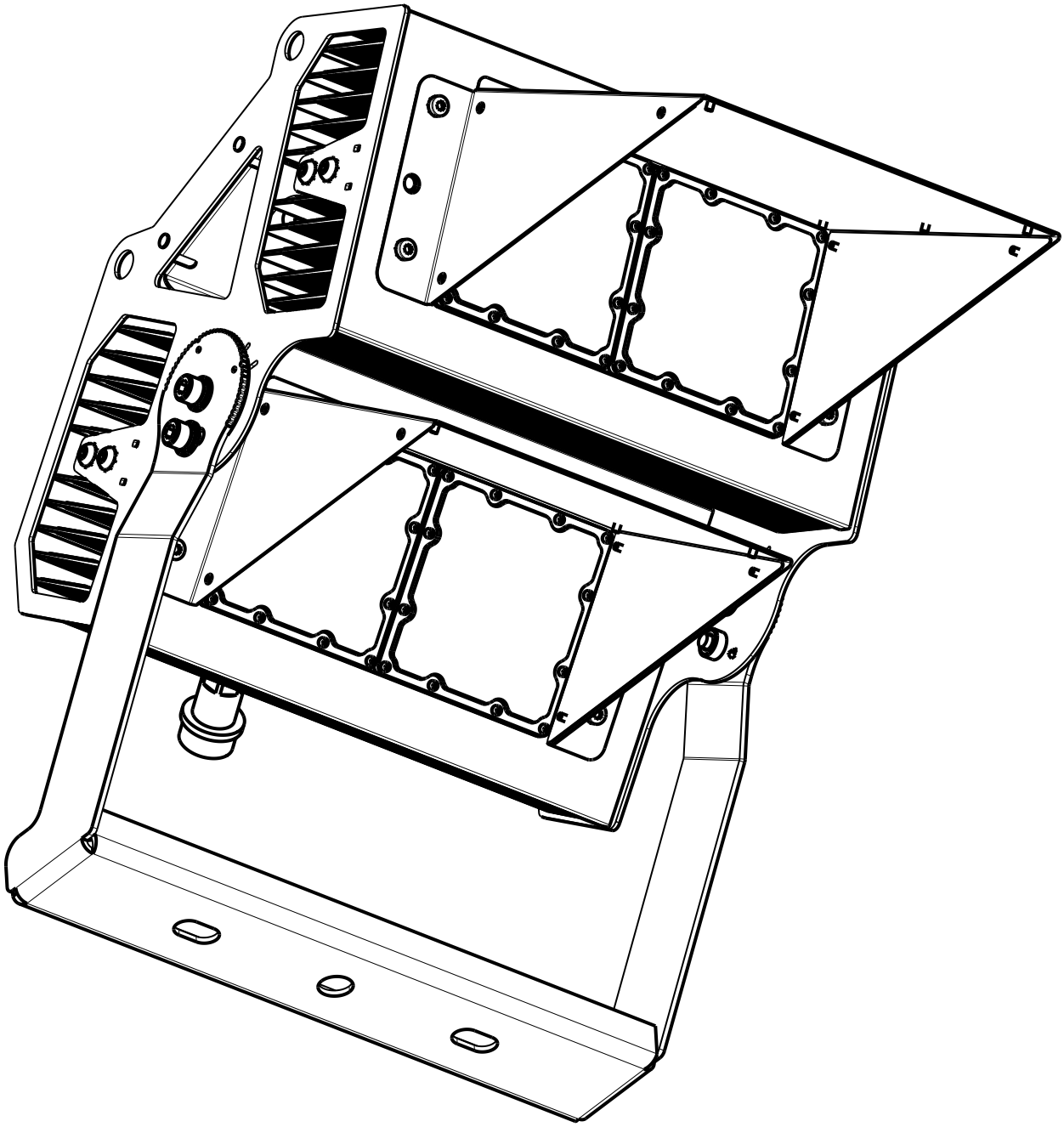


Modus S Series

INSTALLATION GUIDANCE

MIDSTREAM

Contents

Equipment list

- ✓ 24 mm standard wrench for M16 screws and M20 glands
- ✓ 30 mm standard wrench for M20 screws
- ✓ #8 allen key
- ✓ Powered drill-screwdriver with adjustable torque (clutch)
- ✓ Torx T25 insert bit for powered screwdriver (to be used with M5 screws)
- ✓ Torx T25 manual screwdriver
- ✓ Torx T30 insert bit for powered screwdriver (to be used with M6 screws)
- ✓ Torx T30 manual screwdriver
- ✓ Monkey pliers
- ✓ Electrician scissors for wires
- ✓ Ph2 screwdriver
- ✓ Slotted manual screwdriver for connector's screws (blade dimensions: 3,5(w) x 0,6(t) [mm])
- ✓ Wire stripping pliers

DO NOT USE PERCUSSION DRILLS!

1. General notes

This user manual contains important information on safe operation of the Luminaire.

Read and follow all safety notes and all instructions. Save this manual for future reference.

Make sure that it is available to all persons using this device.
All wiring should be done by a licensed electrician in accordance with state codes, local codes, and National Electric Code (NEC) standards or International Electrotechnical Commission (IEC) standards.

The Luminaire is suitable for outdoor use and wet locations.

This luminaire must only be replaced by the manufacturer, by its service staff or by qualified personnel.

IP66: The product is protected against powerful water jets.

DO

- ✓ Store the Luminaire with care, avoiding placing the lenses to the ground which may scratch or damage them
- ✓ To avoid damaging the Luminaire, keep it in the original packaging when storing
- ✓ When handling the Luminaire, wear industrial safety gloves and safety boots
- ✓ Operate on circuitry when the electrical power supply is disconnected

DO NOT

- ✗ Do not apply mains voltage through the control system cable. This will damage the luminaire and it will no longer be covered by warranty.
- ✗ Do not unnecessarily remove the Luminaire from the box
- ✗ Do not leave the LED Luminaire switched on when resting on the ground with optics facing down
- ✗ Do not place the Luminaire with the lens on the ground, dirty or metal surfaces
- ✗ Do not clean the lenses with any industrial detergent. Only use a water-soaked cloth if needed

H&S check

- ✓ Wear adequate working gloves, safety shoes and hard hats to protect yourself from material dropping
- ✓ Never energize the lamp if wiring operation are not completed

2. Safety instructions

Use the device only as described in this user manual. Any other use or use under other operating conditions is considered to be improper and may result in personal injury or property damage as well as voiding the warranty.

No liability will be assumed for damages resulting from improper installation.

Only persons with sufficient physical, sensorial, and intellectual abilities and having corresponding knowledge and experience may use this device.

Two persons required to complete the installation

Risk of electric shock
Disconnect the electrical supply power before commencing the installation. Failure to do so could result in serious injury

The Luminaire should be positioned so that prolonged staring into the luminaire at a distance closer than 28m (92 ft) is not expected

Contains parts and assemblies susceptible to damage by electostatic discharge (ESD)

The luminaire is not to be placed face down on any surface other than the provided foam pad

Hard Hats, Safety shoes, Hi-Vis vest and Safety Gloves must be worn at all times

The light source of this appliance must only be replaced by the manufacturer, its after-sales service or qualified personnel

Do not power the luminare with a generator!

The minimum safety distance from illuminated object to avoid any damages is 1 m.

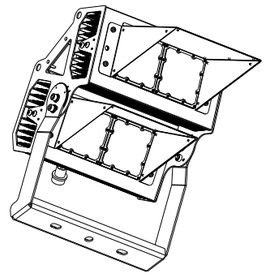
This product meets all legal requirements for CE marking and UKCA

This device is subject to the European directive 2002/96/EC.

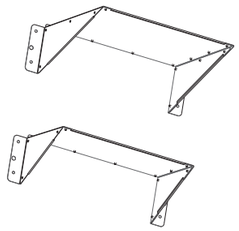
Do not dispose of the device with your normal household waste. Dispose of this device through an approved waste disposal firm or through your local waste facility. Comply with the rules and regulations that apply in your country. If in doubt, consult your local waste disposal facility.

Waiver: This document represents information compiled to the best of our present knowledge. It is not intended to as a representation or warranty of fitness of the products described for any particular purpose. This document details guidelines for general information purposes only. Always seek specialist advice when planning installations and ensure the installation is carried out by a properly qualified installer.

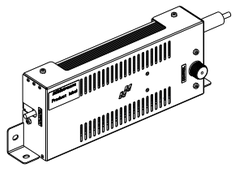
3. Contents



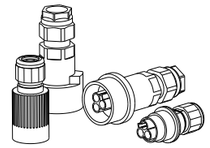
Modus S LED Floodlight



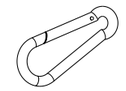
Visors with screws and washers x2



Driver pack
(Available with or without bracket mounting hardware)

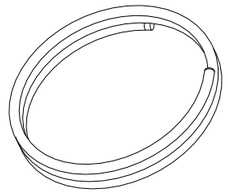


Connectors

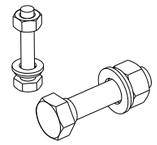


Carabiner hook and cable

Not supplied



Output cable for remote driver installation



Mounting screws and nuts

4. Identifying the floodlight optics

The physical difference between the lenses is hard to spot, so a coloured sticker has been added to the box to make sure that the right optic will be installed in the right place. The WS optic has an orange sticker on the box, the MS optic has a blue sticker, the NS optic has a yellow sticker and the S1 optic has a green sticker.

MIDSTREAM
WS
WIDE OPTIC

MIDSTREAM
MS
MEDIUM OPTIC

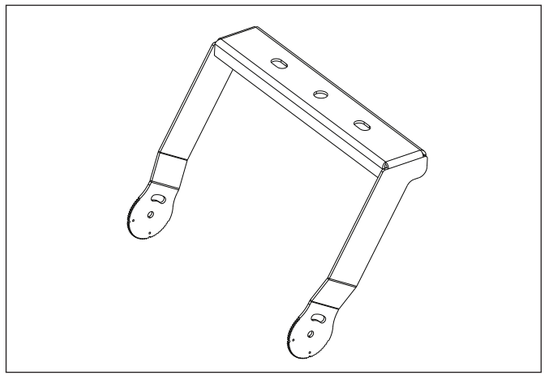
MIDSTREAM
NS
NARROW OPTIC

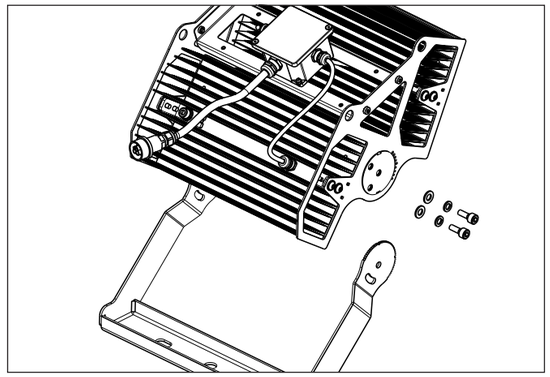
MIDSTREAM
S1
ULTRA NARROW OPTIC

5. Bracket mounting and aiming

Use A2-80 stainless steel bolts or 8.8 class steel bolts with hot dip galvanised coating

Do not use percussion drills





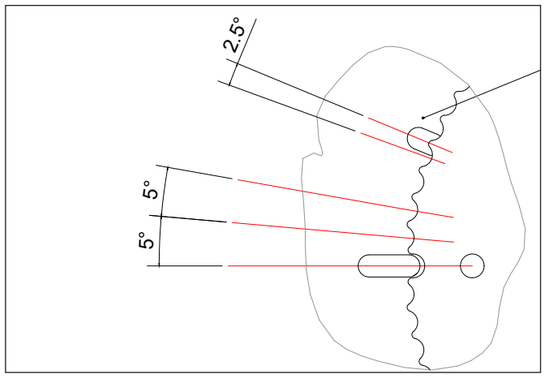
1. Angled bracket

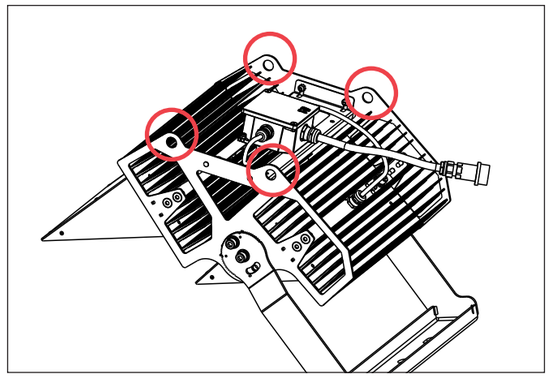
The floodlight is equipped with an angled bracket that has a central hole for an M20 screw (tightening torque 250 Nm) and one slot for M16 screw (tightening torque: 150 Nm).

2. Insert screws

Insert each screw with its plain washer and spring washer through the central hole and through a side loop of the fitting bracket and slightly tighten.

You will need to rotate the bracket with ease to adjust the tilt.





3. Adjusting angle

The LED luminaire can be tilted at 5° or 2,5° intervals using the notches on the frame and the references on the bracket.

Once the tilting operation is complete, tighten and lock the screws (tightening torque: 60 Nm).

4. Mounting

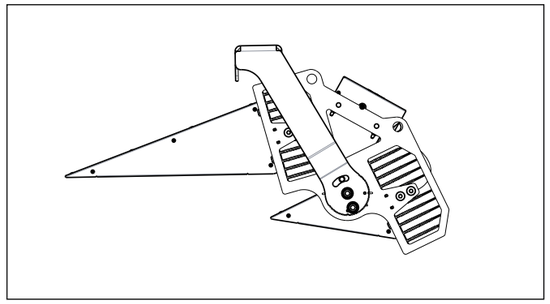
When the LED luminaire installation has been completed, secure the floodlight to the mounting structure via the safety cable.

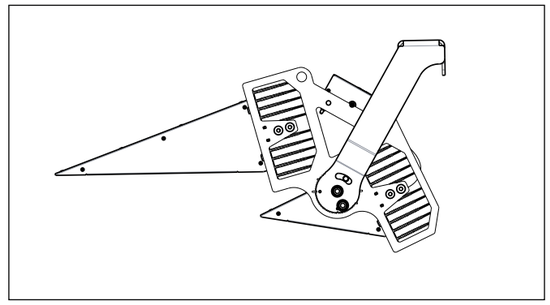
Connect the safety cable to the holding frame with the supplied carabiner hook.

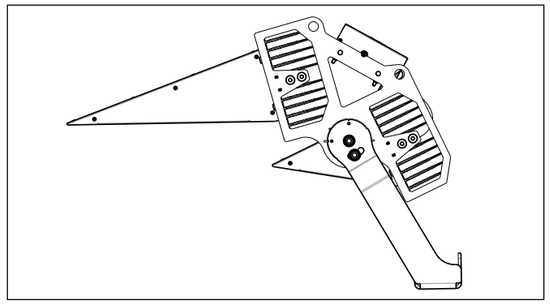
5. Bracket mounting and aiming

5. Bracket orientations

Bracket can be oriented in different ways in order to install it in multiple positions.



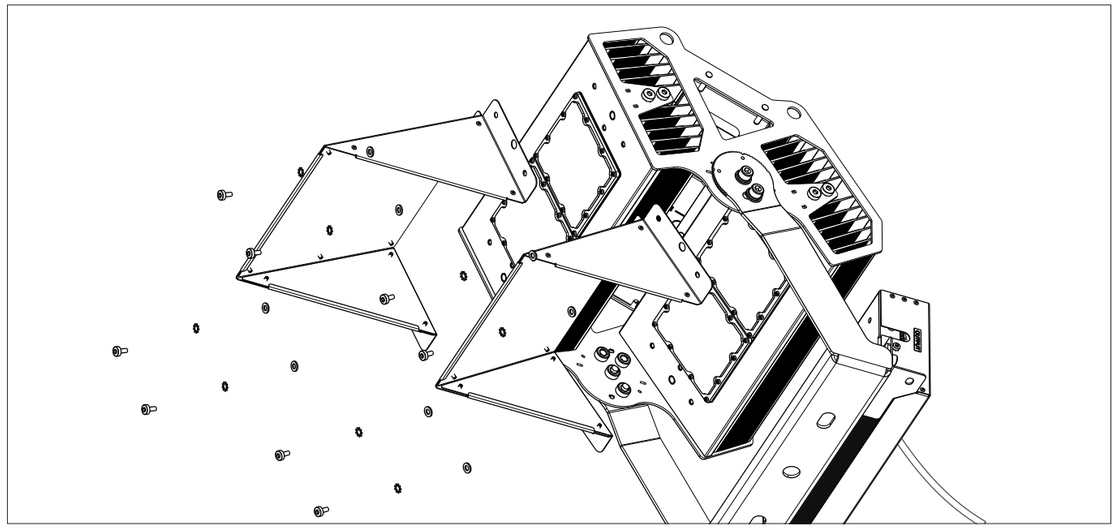




6. Visor mounting

Mount a visor on each LED module (the shape of the visors may vary). The visor must be secured with the supplied screws along with the serrated washers as shown.

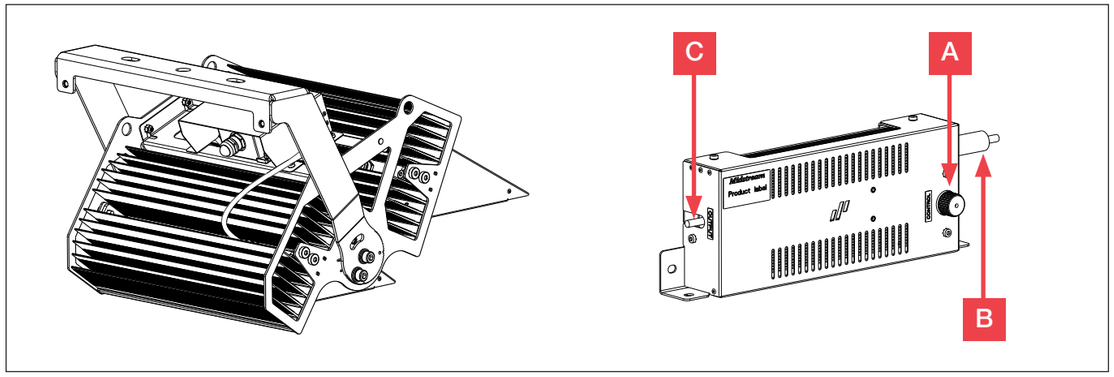
Tightening torque: 7-8 Nm. The shape of the visors may vary.



7. Electrical connection

Use a type B main circuit breaker with a rated current of at least 25A

Do not apply the mains voltage through the control system or the output cable. This will damage the luminaire



A Control connection

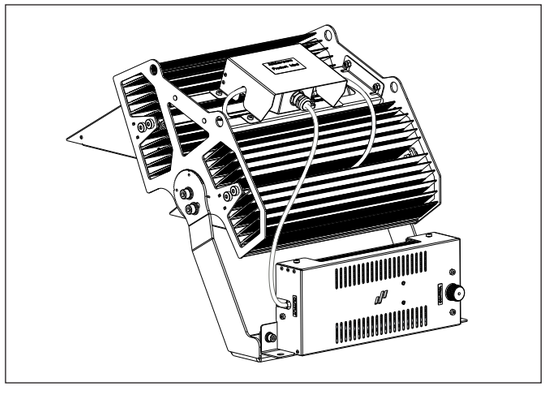
Use a cable with 3 conductors for 0-10 V and with 2 conductors for DALI control connection (max. diameter 12 mm, suggested section 1.5mm^2).

On floodlights with drivers equipped with bracket mounting hardware, secure the control plug with the supplied closure cap when the control system is not in use.

B C Power input and power output

The cables for the floodlight connection and power connection must have 3 conductors (max. diameter 13.5 mm, suggested section 1.5mm^2).

A Control connectors – 0-10 V or DALI (cables not supplied)
B Mains cables – power connection
C Output cables - to floodlight head



Drivers mounted on the floodlight bracket

If the luminaire installation includes a driver mounted onto the floodlight bracket or near the floodlight head, the output cables have to be directly wired inside the floodlight junction box. If needed the supplied 3 poles connectors should be used to power the drivers from the INPUT side (only if the input voltage is 100-240 V ac.)

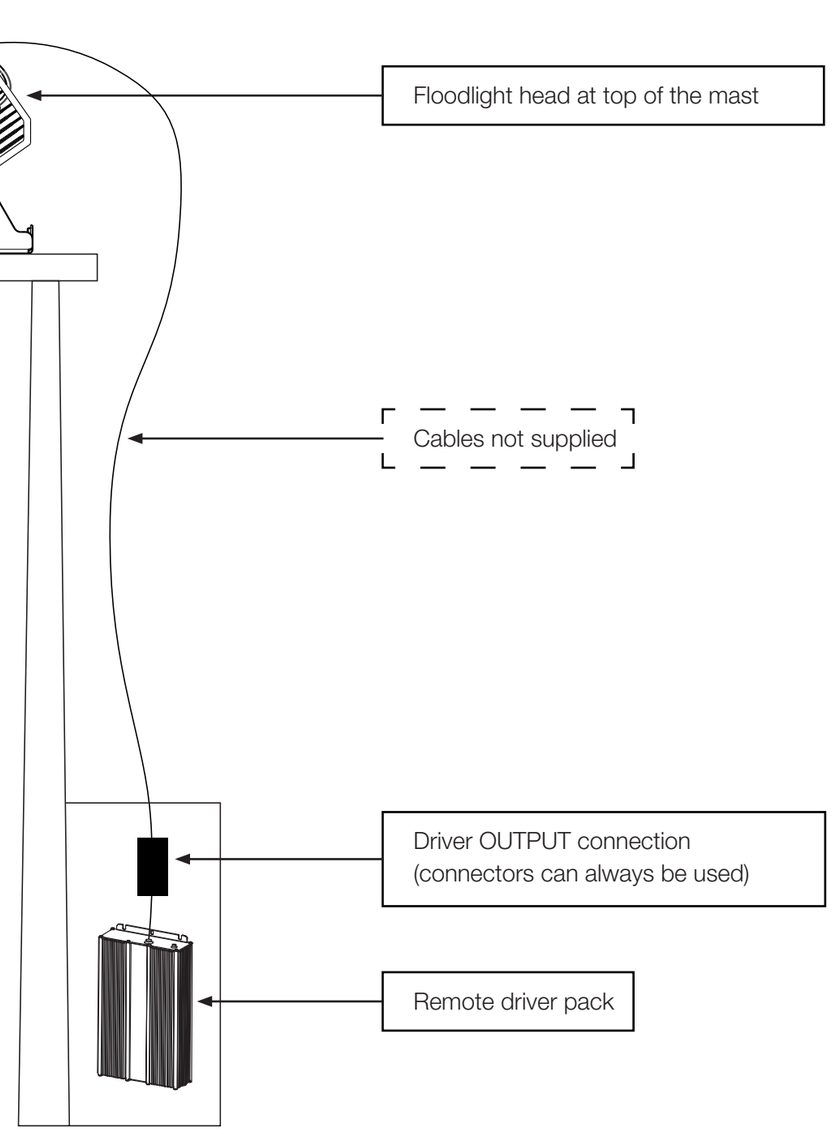
To hard wire the junction box, follow the instructions at chapter “Floodlight junction box connection”.

7. Electrical connection

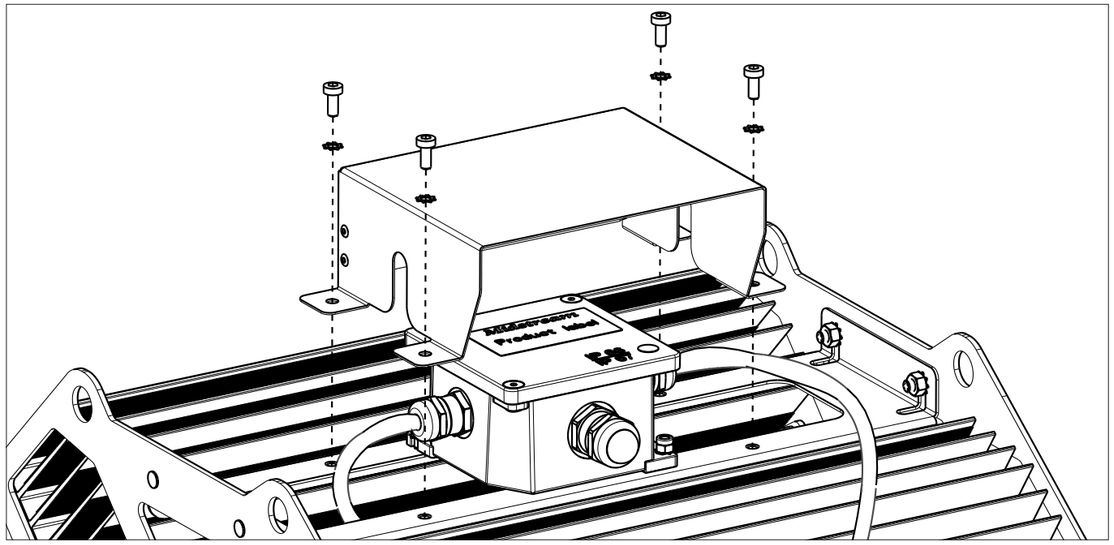
Drivers mounted in a cabinet at the base of the mast or more than 1m away from the floodlight

If needed, for a remote installation, the IP68 connectors provided should be used to connect the output side of the driver to the floodlight head (cables not provided).
The connectors can always be used to connect the OUTPUT side of the driver to the floodlight head.

To connect the floodlight using IP68 connectors, follow the instructions at chapter “Connection with IP68 connectors”.

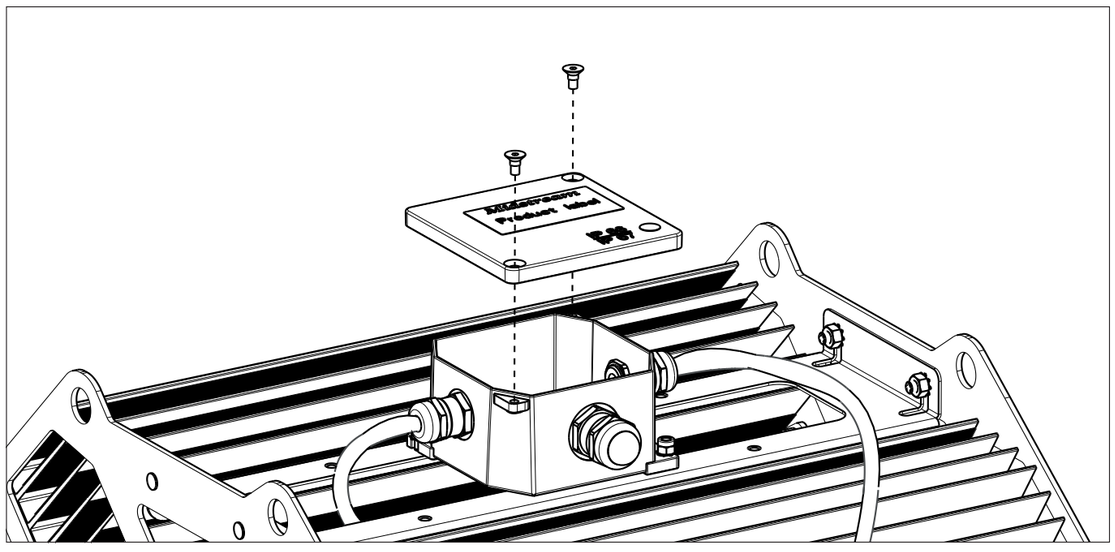


8. Floodlight junction box connection



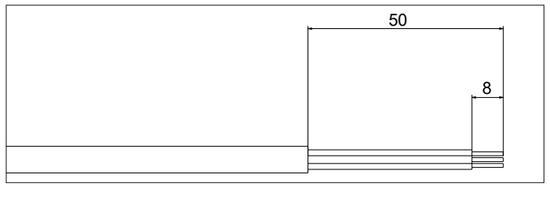
Remove the junction box cover

Unscrew the 4 x M5 screws to remove the cover.



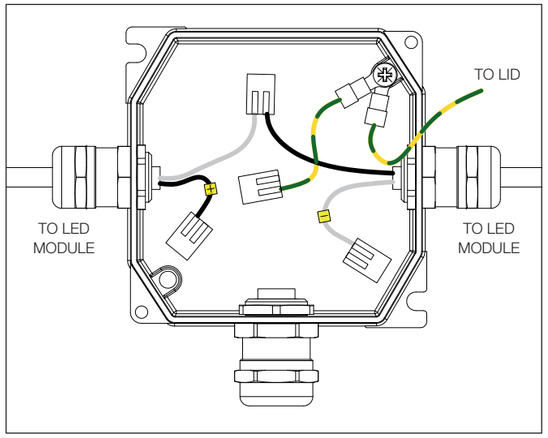
Remove the junction box lid and the plastic plugs for output cable ingress

Remove the 2 countersunk screws to remove the junction box lid. Gently loosen the cable glands to make sure you are able to remove the plastic plugs and that the cables can easily pass through.



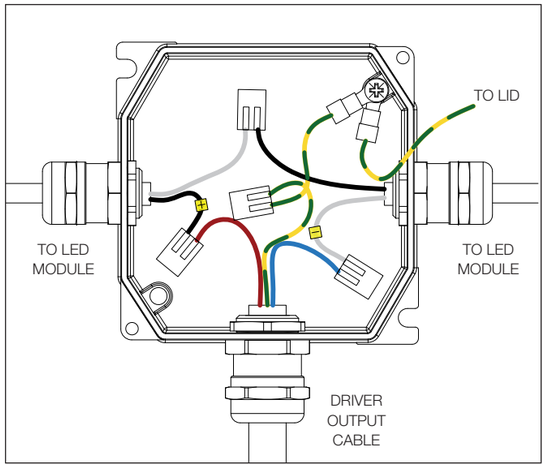
Cables that are going inside the junction box must have the sheath removed for 50 mm and 8 mm of exposed conductors.

8. Floodlight junction box connection



Floodlight junction box

The junction box has 5 terminals inside:
2 for each LED module and 1 common ground.
Each driver cable has to be connected to one LED module.



Connecting the WAGO terminals

Insert the output cable through the cable gland and connect its wires to the wago terminal as follows:

BROWN (+)	→	Wire that has the + sticker
BLUE (-)	→	Wire that has the - sticker
YELLOW & GREEN (GND)	→	YELLOW & GREEN wire

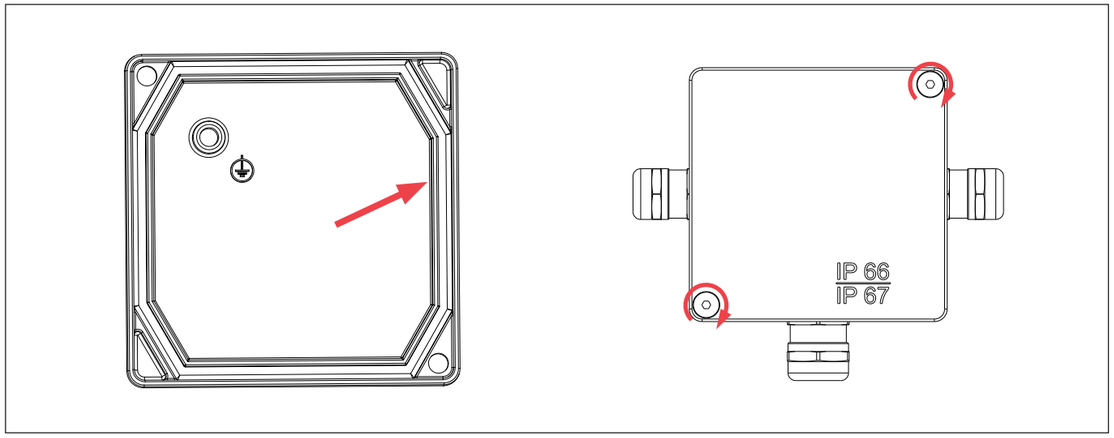
Once everything is connected, perform a pull test to check that the wires securely sit inside the WAGO terminals. Firmly tighten the cable glands.

8. Floodlight junction box connection

If the gasket is wrongly positioned or screws are loose, water may get into the junction box

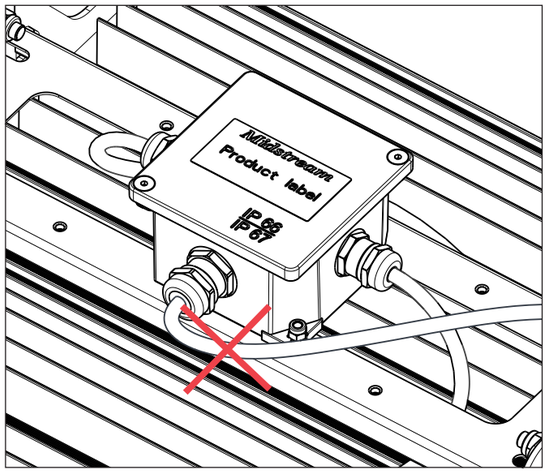
Checking the gasket

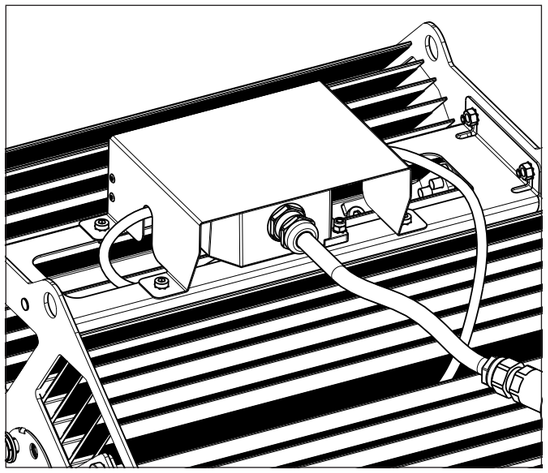
Check that the gasket is properly positioned inside the lid and that there is no dirt in it, then close the junction box. Secure it with 2 countersunk screws (gradually tighten them, do not tighten sequentially).



Do not pull the cables during installation.
Do not bend the cables more than the minimum bending radius - 5 to 8 times of the diameter of the cable.

Firmly tighten the cable gland, close the junction box lid, and mount the junction box cover back in position. Make sure everything is properly tightened.



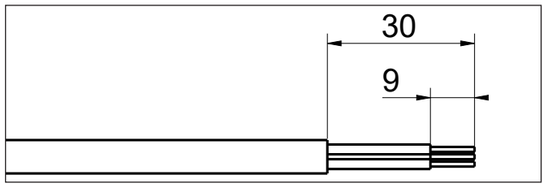


9. Connection with an IP68 connector

There are a couple of TH405 IP68 connectors that can be used according to the needs of the installation. The connectors are IP68 rated and match together two 3-wire cables. They can be used to connect:

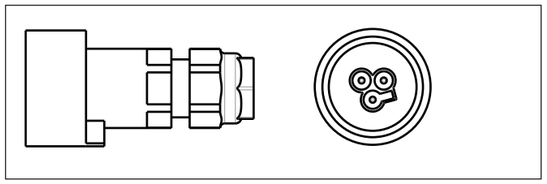
- Driver OUTPUT to floodlight
- Mains to driver INPUT (if you are using a 200-240 V AC power input)
- DO NOT use the connectors to connect mains to driver INPUT when sourcing power from a 277-480 V AC line.

To install the connector in a proper way, please follow the instructions below:



Stripping the cables

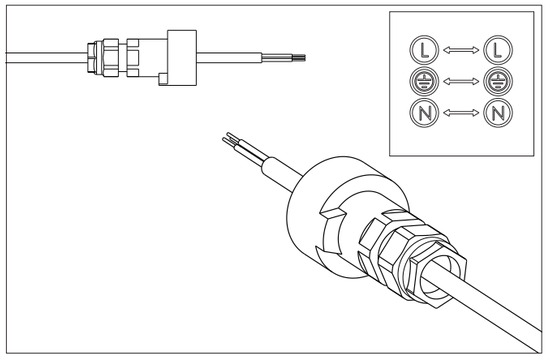
Strip the cables to a length of circa 30 mm, then expose the conductors for 9 mm.



Connector plug & socket

Take a TH405 connector plug and a TH405 connector socket. Connectors and their housings are supplied in 2 pieces.

The device has a type Y attachment. If it becomes damaged, it should only be replaced by the manufacturer or by its service staff

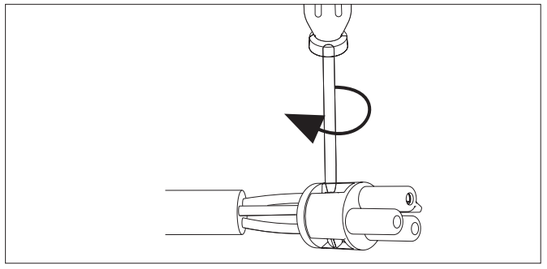


Insert the cable through the connector housing.

The plug has L, N, earth symbols. Match as follows:

Live	→	BROWN wire
Neutral	→	BLUE wire
Earth symbol	→	YELLOW/GREEN wire

Insert the exposed wires in the plug/socket and tighten each screw.

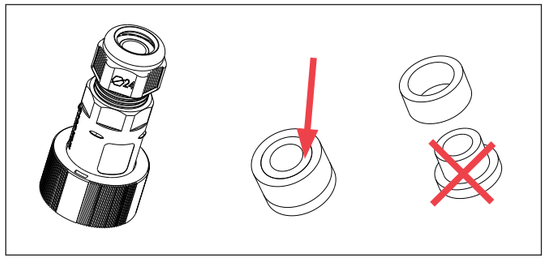


Pull the wires to check they are well tightened.

Perform the same operation with the socket/plug connector.

Suggested wire section is 1,5 mm^2. Maximum cable diameter is 13.5 mm, but if the cable diameter is greater than 9 mm, the inner part of the grommet has to be removed.

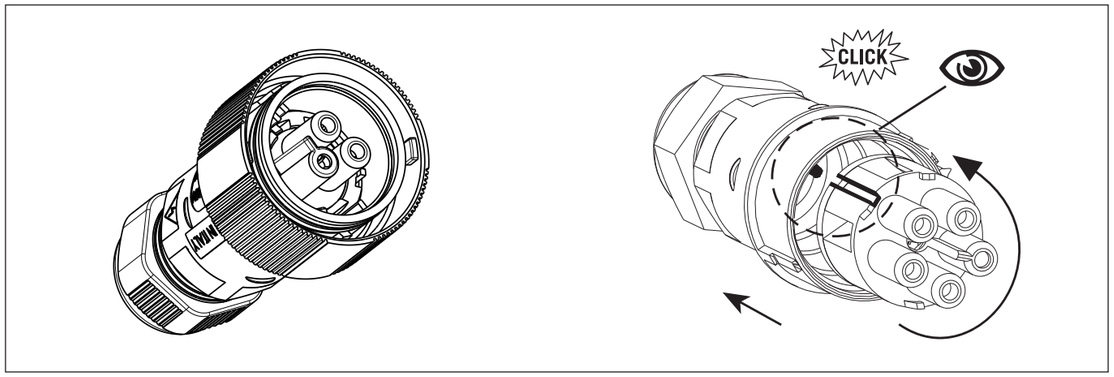
9. Connection with an IP68 connector



Adapting the grommet

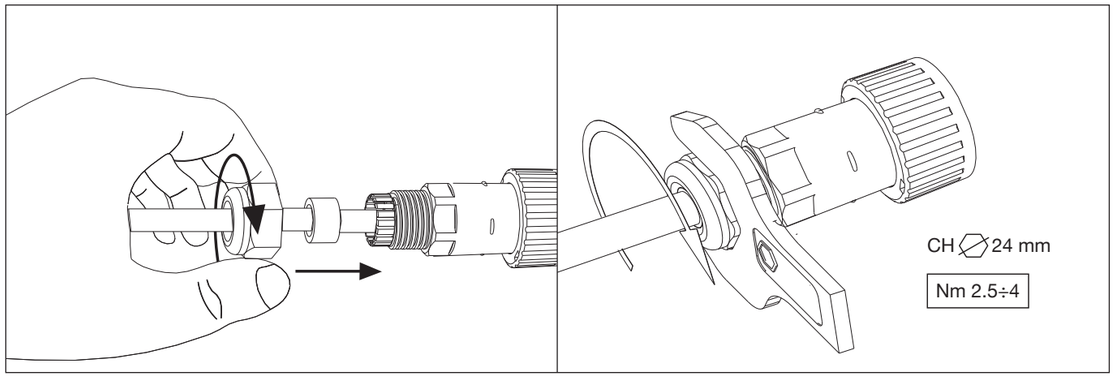
If the cable diameter is greater than 9 mm remove the inside grommet.

To remove the gasket, remove cable gland nut first.



Inserting the terminal into the connector housing

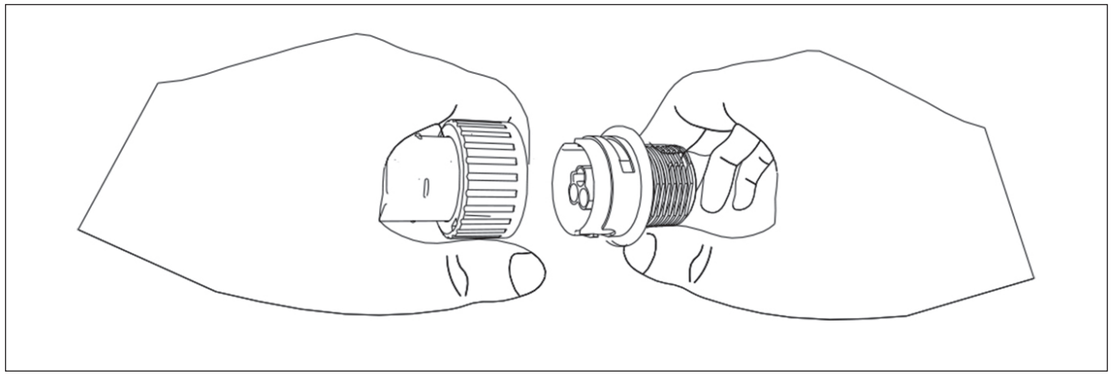
Rotate the 3-pole terminal into the shown position to insert into the housing. Then push and rotate counter-clockwise until you hear a click. The click means the terminal is properly locked into the housing.



Tighten the nut

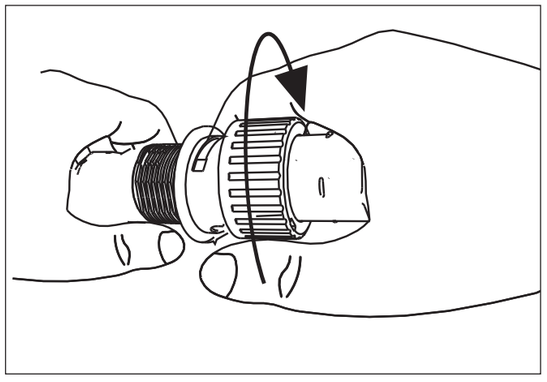
Tighten the plastic nut with a 24 mm wrench key.

9. Connection with an IP68 connector



Connect the plug and socket

Connect the plug to the socket. The arrow on the plug and the arrow on the socket must face each other.

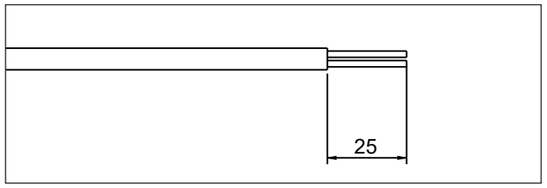


Secure the connection

Rotate the outer part of the socket clockwise, then push the red clip to the locked position to secure the connection. If unlocking is required, use a screwdriver to pull the clip to an unlocked position.

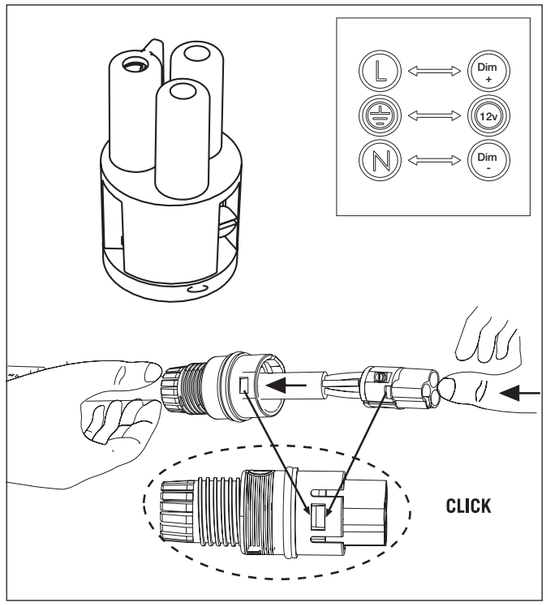
10a. Control connection 0-10V

If there's a need to use control connectors to connect your control system to the drivers, follow the below instructions.



Stripping the cables

Strip the cables to a length of circa 25 mm, without exposing the conductor.



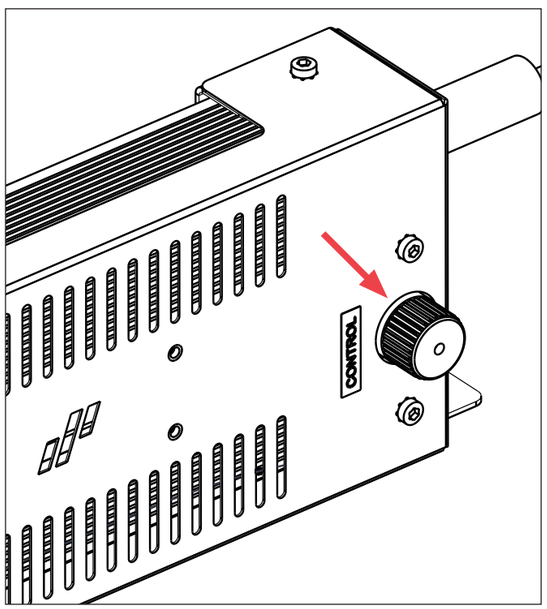
Mounting socket and housing connector

Mount the TH384 – socket connector.
If the control system operates with 0-10V, the connector has 3 poles:

L	→	Brown conductor (Dimming + pole)
N	→	Blue conductor (Dimming - pole)
Ground	→	12 V aux wire

Tighten the screws and pull each wire to check if they are well clamped. Conductor colours may vary.

Insert the socket into the connector housing. Tighten the plastic nut to seal the cable with the connector grommet.



Plugging control cable

Remove the plastic cap to plug the control cable (3 poles, white connector).

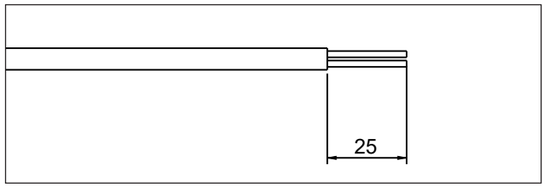
The plastic cap cover a control connector of the driver pack.

If you are not using a driver with mounting hardware, your control system have to be connected to the driver's wires as follows:

Dimming +	→	Purple wire
Dimming -	→	Grey wire
12 V aux	→	Black & White wire

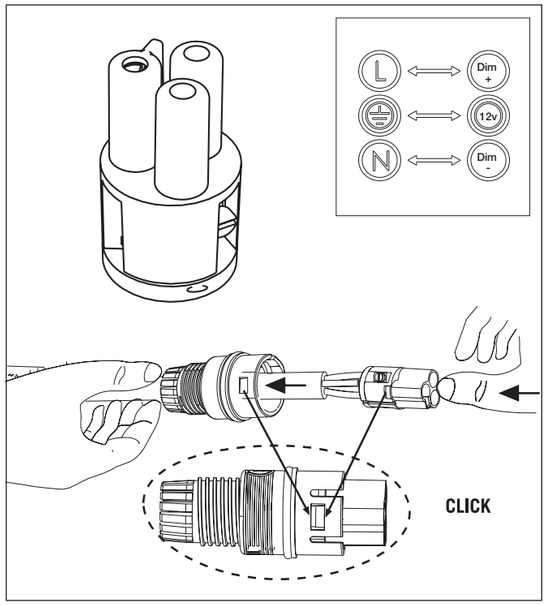
10b. Control connection DALI

If there's a need to use control connectors to connect your control system to the drivers, follow the below instructions.



Stripping the cables

Strip the rubber jacket of your control cable for 25 mm, without exposing the conductor.



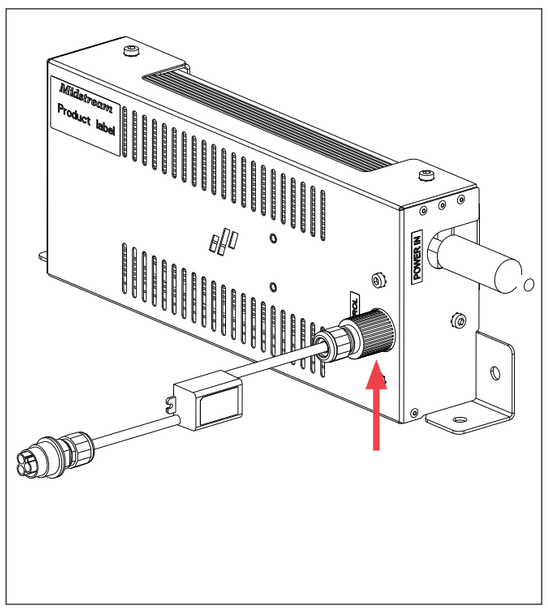
Mounting socket and housing connector

Mount the TH384 - socket connector.
If the control system operates with DALI protocol, the connector has 2 poles, match:

L	→	DALI +
N	→	DALI -

Tighten the screws and pull each wire to check if they are well clamped. Conductor colours may vary.

Insert the socket into the connector housing. Tighten the plastic nut to seal the cable with the connector grommet.

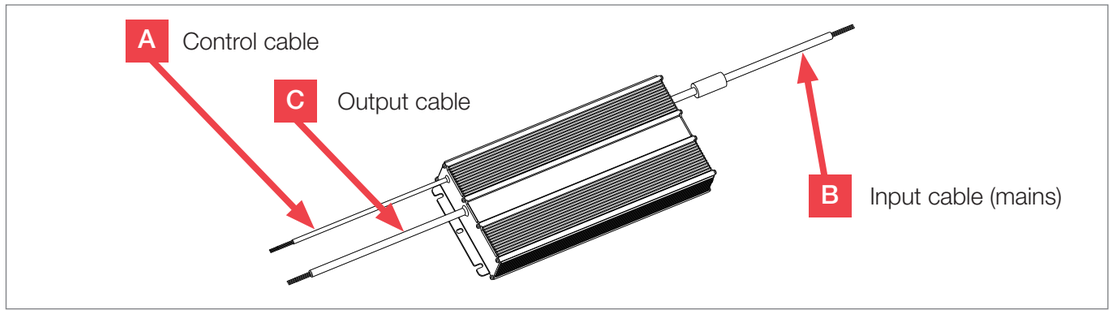


Plugging DALI control cables

Connect your DALI control cable to the DALI converter (2 poles, yellow connectors), then remove the plastic cap and plug the DALI converter to the driver pack (3 poles, white connector).

11a. Driver without mounting hardware

Layout of the driver without bracket mounting hardware



A **CONTROL cable:** this cable controls floodlight output through the control system. This cable has 3 wires: purple (dimming +), grey (dimming -) and black & white (12V aux). The connection has to be done in such a way that the 3 wires match these poles inside your cabinet.

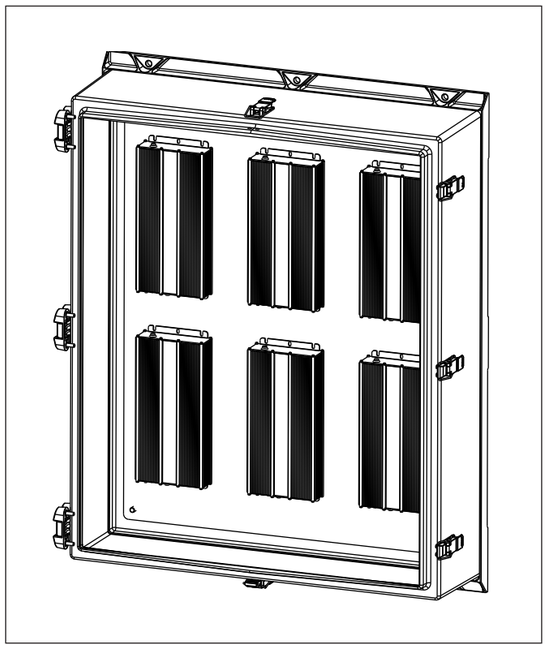
Purple	→	Dimming +
Grey	→	Dimming -
Black & White	→	12 V aux output voltage (only if needed)

B **INPUT cable:** this cable power supplies the driver. Its 3 wires must match these poles.

Brown	→	L / L1
Blue	→	N / L2
Yellow & Green	→	Ground

C **OUPUT cable:** these cable supply DC power to the floodlight. Its 3 wires must match these poles.

Brown	→	L (or + if you don't use the IP68 connector)
Blue	→	N (or - if you don't use the IP68 connector)
Yellow & Green	→	Ground



All the electrical connections must be done by a licensed electrician in accordance with state codes, local codes, and National Electric Code (NEC) standards or International Electro technical Commission (IEC) standards. Please follow all the health and safety rules during installation of electrical equipment.

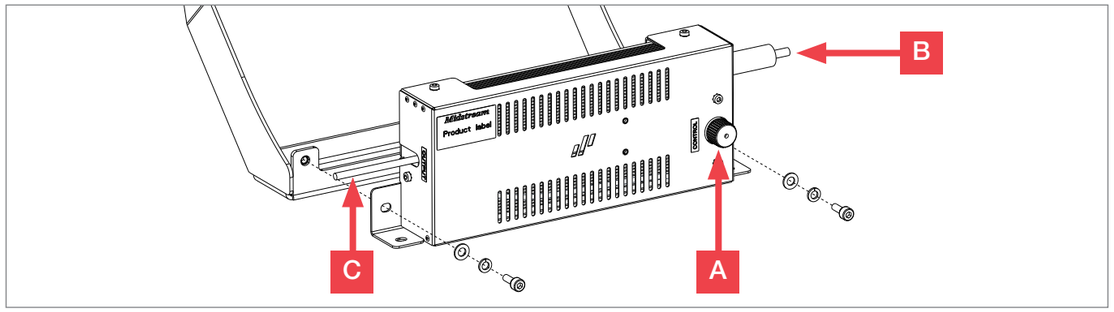
When installing the drivers in a cabinet or inside the mast, please make sure to gently lay the cables and do not pull them: this can damage the driver. Do not remove, for any whatsoever reason, any mechanical part of the driver: this may damage the unit that will no longer be covered by warranty.

When connecting the driver, make sure that both INPUT and OUTPUT cables are connected the ground of your electrical infrastructure.

Use the holes and loops on the driver base to mount them in the cabinet. Make sure to place the drivers at minimum 90 mm distance in any direction.

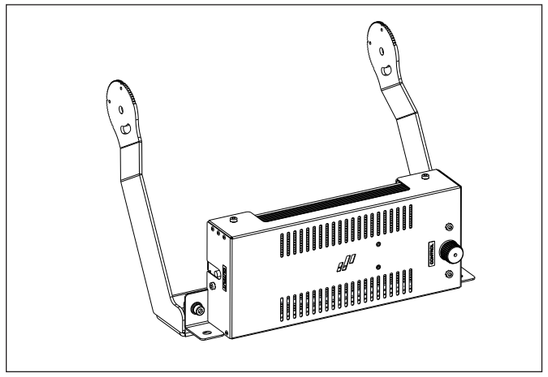
11b. Driver with bracket mounting hardware

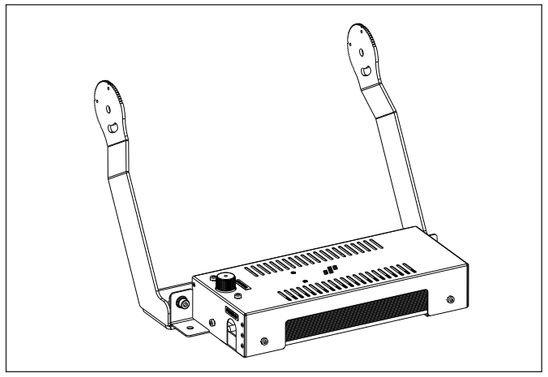
Layout of the driver pack with bracket mounting hardware



This driver pack is equipped with the hardware that allows it to be mounted on the floodlight bracket (tightening torque: 30 Nm).

Choose the best orientation (vertical or horizontal) according to your needs and to the overall dimensions of the floodlight.





A **CONTROL connector:** this connector control floodlight output through the control system.

Purple	→	Dimming +
Grey	→	Dimming -
Black & White	→	12 V aux output voltage (only if needed)

B **INPUT cables:** this cable supply power to the driver. Its 3 wires must match these poles.

Brown	→	L / L1
Blue	→	N / L2
Yellow & Green	→	Ground

C **OUPUT cables:** this cable supply DC power to the floodlight. Its 3 wires must match these poles.

Brown	→	L (or + if you don't use the IP68 connector)
Blue	→	N (or - if you don't use the IP68 connector)
Yellow & Green	→	Ground

12. Driver/floodlight pairing

When you need to install multiple Midstream remote drivers and different models of floodlights with a different power range, please make sure to pair the floodlight with its correct driver.

Drivers may have a different current set-up according to the version / power of the floodlight.

A label on the product box identifies the item to which the product must be paired.

USE WITH
(Floodlight code)
Only

Label on driver box

Please follow the instructions shown on the labels. Floodlights and drivers must be paired according to the table below:

Floodlight name	Floodlight code	Driver code
Modus S 900	MS09xxxxxx	xxx-X-x
Modus S 1100	MS11xxxxxx	xxx-Y-x

13. Electrical specifications

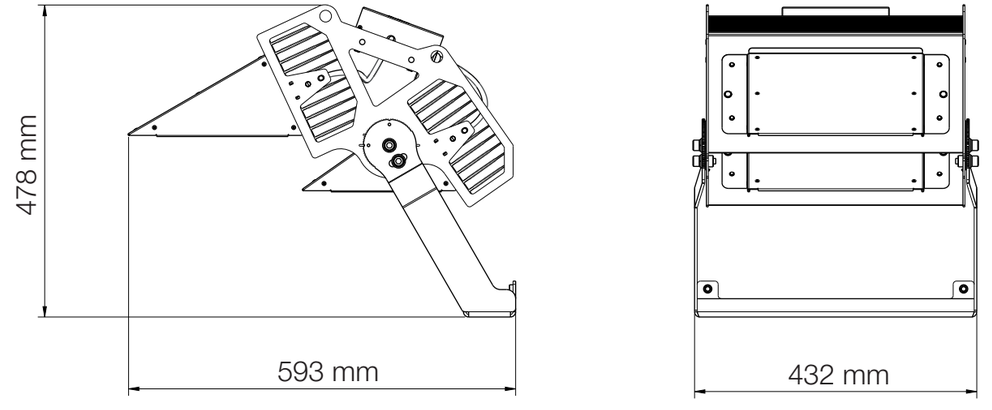
	Modus S 900 (230 V)	Modus S 900 (400 V)	Modus S 1100 (230 V)	Modus S 1100 (400 V)
Input Voltage	200-240 V AC	277-480 V AC	200-240 V AC	277-480 V AC
Input Frequency	50 – 60 Hz	50 – 60 Hz	50 – 60 Hz	50 – 60 Hz
Absorbed Power	999 W	999 W	1180 W	1180 W
Power Factor	>0.97	>0.96	>0.97	>0.96
Inrush Current	2.70 A^2s - for 19.8 ms*	4.20 A^2s - for 12.7 ms**	2.70 A^2s - for 19.8 ms*	4.20 A^2s - for 12.7 ms**

* at 220 V ac input, 25°C cold start, 10% Ipk – 10% Ipk
** at 480 V ac input, 25°C cold start, 10% Ipk – 10% Ipk

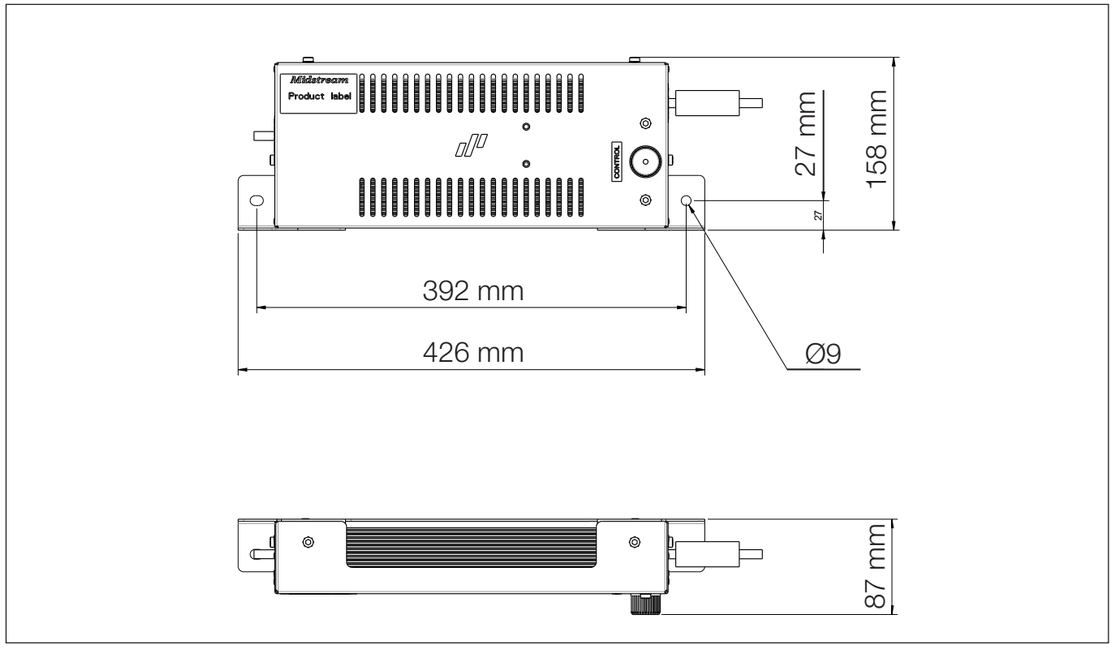
14. Weight and windage

	Modus S body	Outdoor driver	Cabinet driver
Weight	20 kg	9 kg	3.8 kg
Windage	0.203 m^2	0.070 m^2	-

15. Dimensions



Modus S Floodlight



Modus S – Driver pack with bracket mounting hardware

(Driver pack without the hardware are 426x158x87 mm)

For translations, digital versions or more information please head to

www.midstreamlighting.com/installation-guides

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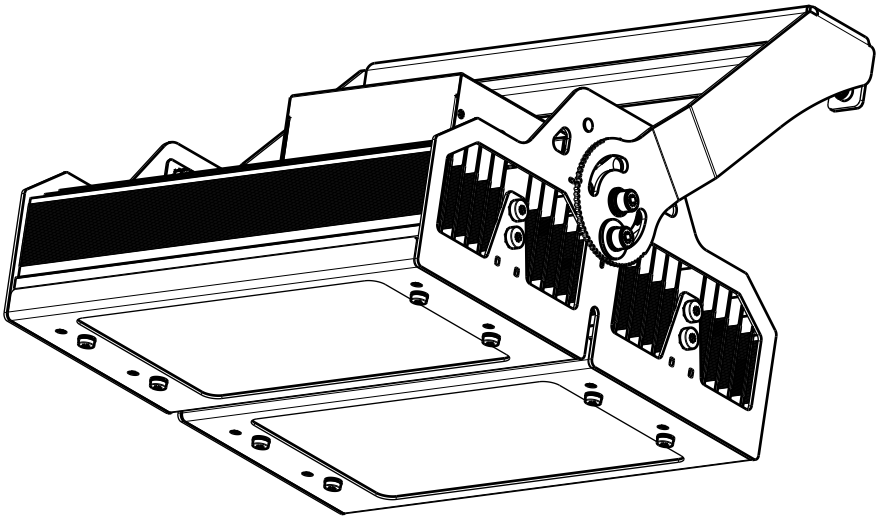
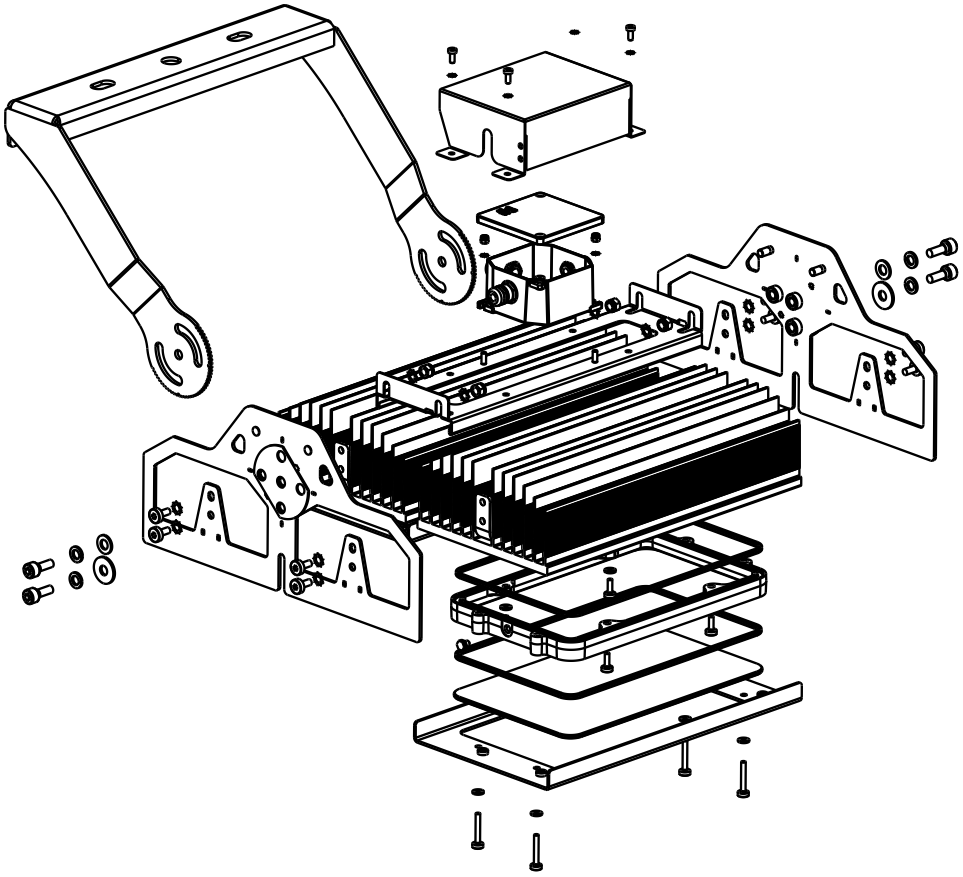
2020





Maintenance manual

FOR MIDSTREAM BRANDED LUMINAIRES

MIDSTREAM

Contents

Equipment list

- ✓ 21 mm standard spanner
- ✓ 24 mm standard spanner
- ✓ Slotted manual screwdriver
  (blade dimensions: 3,5(w) x 0,6(t)mm)

For checking mounting screws tightening:

- ✓ 17 mm standard spanner for M10 hex head screws
- ✓ 19 mm standard spanner for M12 hex head screws
- ✓ 24 mm standard spanner for M16 hex head screws
- ✓ 30 mm standard spanner for M20 hex head screws

For checking bracket side screws tightening

- ✓ 6 mm allen key for M8 hex socket screws
- ✓ 8 mm allen key for M10 hex socket screws
- ✓ 10 mm allen key for M12 hex socket screws
- ✓ 14 mm allen key for M16 hex socket screws

For checking bracket side screws tightening

- ✓ 6 mm allen key for M8 hex socket screws

For lens cleaning:

- ✓ Water soaked cloth

1. General information

Carefully read and follow the instructions contained in this guide.

The purpose of this guide is to illustrate the actions that should be performed periodically on Midstream floodlights in order to provide the optimal working conditions in every environment.

During wiring maintenance keep the wiring diagram of the LED luminaire model close at hand as well as the installation manual.

If maintenance is needed on connectors/wires disconnect the electrical supply power before commencing the maintenance. Failure to do so could result in serious injury or death.

If the luminaire has to be taken down make sure it is placed on a soft and non abrasive surface and the lenses are not directly placed on the ground. The Luminaire must not be switched on when laying it on the ground with the optics facing down as they could be damaged.

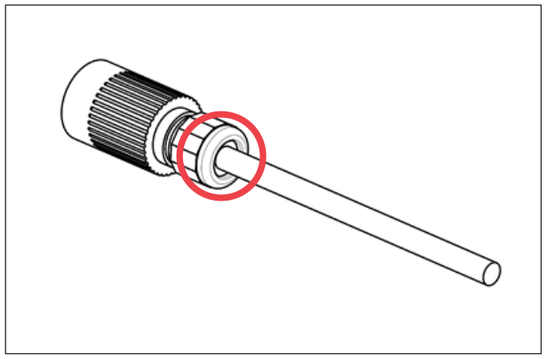
2. Maintenance schedule

It is recommended that regular maintenance is performed on the installed luminaires, as generally towers are lowered on a yearly base for regular maintenance of the raise and lower system it is a very easy task to carry out.

The following table provides a recommended schedule of tasks:

	Normal environment	High dust / Sand environment
Lens cleaning	Every 2 years	Every 6 months (or after every sandstorm event)
Heat sink inspection & cleaning	Every 3 years	Every 12 months
Checking driver enclosure	Every 2 years	Every 2 years
Screws tightening	Every 2 years	Every 2 years
Connector check	Every 2 years	Every 2 years
Safety cable check	Every 2 years	Every 2 years
Check cables layout & integrity	Every 3 years	Every 3 years

3. Maintenance checks

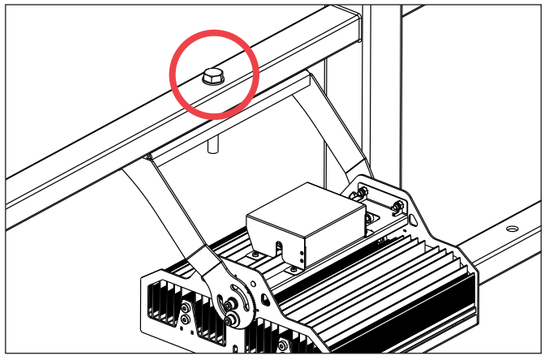


Connector Check

Perform a visual inspection on of all the connectors, ensuring that every connector is secured and the grommets are still in their original mounting positions, preventing water and dust from entering the connector.

Check that the cables are not under tension throughout the installation nor have any sharp bends as instructed in the installation manual.

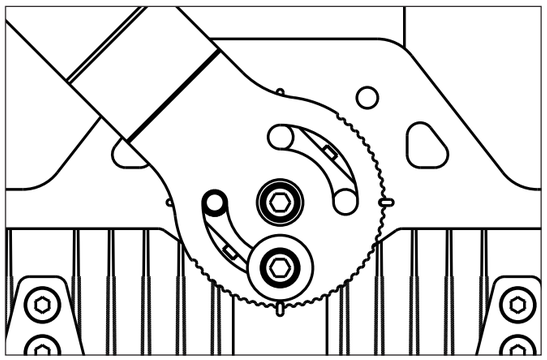
If the control system is not in use, check that the cap on the control outlet is firmly tightened.



Mounting screw and safety cable check

Check every mounting point, ensuring that every screw is tightened.

Check the safety cable and carabiner hook to ensure they are secure.



Bracket side screws check

Perform a visual check on every screw on each bracket, make sure that every screw has not come loose compared to the original tightening torque.

Make sure that the floodlight is in the same position and that the tilt angles have not changed over time.

Depending on the floodlight line and model, side screws may be 1, 2 or 3 per side. Check the installation manual for confirmation.

Heat sink inspection

Foreign matter can accumulate in between the heat sink fin. Carry out a visual inspection regularly to ensure that this component is not filled with sand, insects, bird's nest etc as there will be a significant reduction in heat exchange with the airflow blockage.

Checking driver enclosure

Ensure that the cabinet (or enclosure) holding the driver(s) is well ventilated to avoid uncontrolled temperature increase, as this may cause the driver to malfunctioning or sustain permanent damage. Electrical enclosures should be sheltered from rain showers and water accumulation. In the case of outdoor rated drivers, regularly check the tightening torques of cable glands and junction box lid screws.

Lens cleaning

Cleaning the lens array is a very important task in floodlight maintenance, excessive dirt or dust the build up may cause loss of optic efficiency and, in extreme cases, irreparable damage of the optical system, which will not be covered by warranty. Please use only a cloth and fresh water, do not clean the lenses with any industrial detergent.
The aim of the cleaning process is to prevent any obstruction of the light flux emitted by the luminaire.

Sand storm events and local pollution can deposit enough sand and dust to completely obstruct the light emission of a luminaire, when this events occur lights must remain switched off and a cleaning activity must be carried out prior to the lights being switched back on.

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Project:

Reference Type:

Item Code:

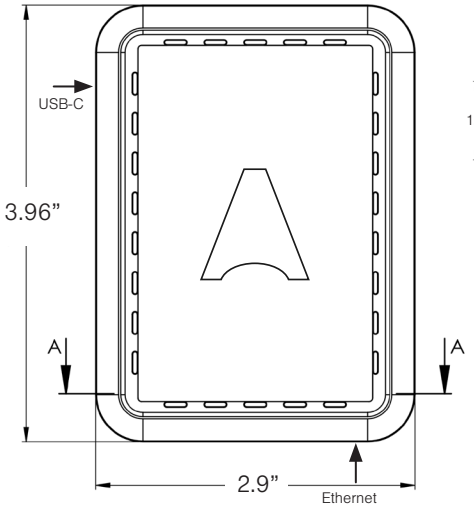
Date:

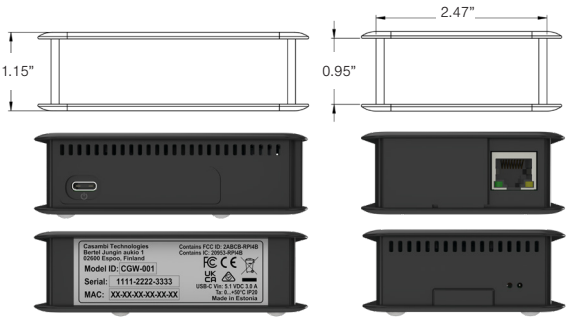
Notes:

Casambi Cloud Gateway

CGW-001-PSU
CGW-001-POE

Receive data from your Casambi network and remotely control it over the internet with a Casambi Cloud Gateway. Two product variants are available; PSU (CGW-001-PSU) and PoE-enabled (CGW-001-POE). The Power Supply Unit (PSU) version comes with a power adapter that's suitable for the EU, UK, US, AU and PRC regions. The Power over Ethernet (PoE) version comes with a splitter to separate the power from the data and feed it into a separate input.





Certifications

Contains FCC ID: 2ABCB-RPI4B
Contains IC: 20953-RPI4B

PSU cable

PoE cable

Installation guide here:

www.casambi.com

Project:

Reference Type:

Item Code:

Date:

Notes:

User interface and Functionality

The Casambi Cloud Gateway affords much of the same end-user functionality as the Casambi App, the latter being the user interface for this gateway.

Lighting control options

- Create groups, scenes, animations.
- Dim or turn on/off singular or groups of luminaires.
- Dim or turn on/off a whole network.
- Turn on/off scenes and animations.
- Control color temperature, hue and saturation utilizing the control slider in the app.
- Create and edit timers.

Security

- Instructions for the required network settings are provided in the installation guide.
- The Casambi Cloud Gateway initiates all network traffic – there are no incoming network connections.
- All internet connections are encrypted (HTTPS).
- We advise installers to follow industry best practices such as adding the gateway to a network that is separate from business-critical devices and storing the gateway in a secure location.

Further considerations

- For indoor use only.
- Use one Casambi Cloud Gateway per Casambi network.
- Works with Casambi's Evolution firmware.
- For remote control and monitoring of a Casambi network in real-time.

Technical specification

The Casambi Cloud Gateway comes with Ethernet and Wi-Fi connections for internet access and flash memory on a hardware-dedicated SD card. It is based on the Raspberry Pi 4, which has 47 certifications spanning CE, FCC, IC, UK CA, KCC, and features the following specifications:

- Broadcom BCM2711, Quad-core Cortex-A72 (ARM v8) 64-bit SoC @ 1.5GHz
- 4GB LPDDR4-3200 SDRAM
- 2.4 GHz and 5.0 GHz IEEE 802.11ac wireless, Bluetooth 5.0, BLE
- Gigabit Ethernet
- USB-C and Ethernet ports
- 5V DC via USB-C connector (minimum 3A)
- Power over Ethernet (PoE) enabled
- Operating temperature: 32 – 122 degrees F ambient (0 – 50 degrees C ambient).

CBU-TED-LR

Bluetooth-controlled trailing edge dimmer.

Warning!

Hazardous voltages. Risk of electric shock or fire. Only qualified professionals should make the connections. Disconnect the mains power supply and verify its absence prior to installation.

PRODUCT DESCRIPTION

CBU-TED-LR is a Bluetooth-controlled, long-range, Casambi-enabled, trailing-edge dimmer for incandescent lamps, dimmable LED lamps and dimmable LED control gear. With Casambi's CBU-TED-LR compatible dimmable load can be easily converted to become a part of a Casambi mesh radio network.

CBU-TED-LR can control up to 100 W at 230 VAC. It features an overcurrent and over temperature protection.

CBU-TED-LR can be controlled with the Casambi App, available for iOS and Android devices, as well as with traditional wall switches. The Casambi App can be downloaded free of charge from the Apple App Store and Google Play Store.

Different Casambi-enabled products can be used from a simple one-luminaire direct control setup to a complete and full-featured lighting control system, in which up to 250 units automatically form an intelligent mesh network.

TECHNICAL DATA

Input

- Voltage: 85–240 VAC
- Frequency: 50 or 60 Hz
- Max. mains current: 0,43 A
- No-load standby power: < 0,3 W

Output

- Dimming method: trailing-edge phase control
- Max. output power: 100 W @ 230 VAC
- Max. output current: 0,43 A
- Min. load requirement: 1 W
- Max. load inrush current: 10 A, 100 ms

Radio transceiver

- Operating frequencies: 2402...2480 MHz
- Maximum output power: +8 dBm

Operating conditions

- Ambient temperature, t_a : -20 to +45°C
- Max. case temperature, t_c : +75°C
- Location of t_c point: bottom side, underneath output connector. The t_c point is marked on the enclosure.
- Storage temperature: -25...+75°C
- Max. relative humidity: 0...80%, non-condensing

Connectors

- Wire range, solid: 0,5–1,5 mm^2, 16–20 AWG
- Wire strip length: 6-8 mm

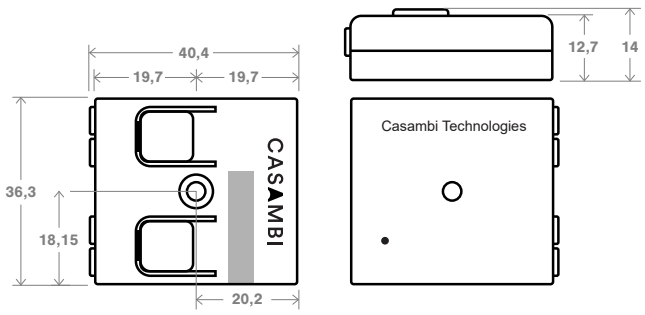
Mechanical data

- Dimensions: 40,4 x 36,3 x 14,0 mm
- Weight: 15 g
- Degree of protection: IP20 (indoor use only)

Certifications

- CE
- AU/NZ

DIMENSIONS (IN MM)



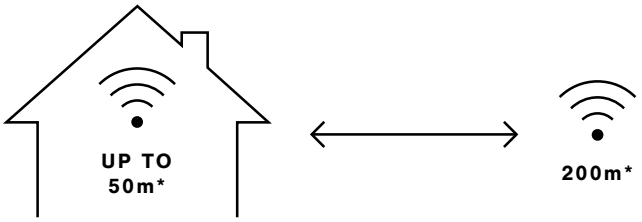
*t_c point is on bottom side •

Mounting hole diamter 3,5mm

Antenna location

RANGE

The communication range in radio technology may ultimately vary depending on the design of the product in which the antenna is housed and on the environment in which it operates. In practice, this means a well-designed product from a radio point of view, with a good line of sight connection between nodes, can achieve radio coverage up to 50 meters indoors, and, in theory, up to 200 meters in the open air. Casambi uses a mesh network technology, whereby each Casambi unit, or Casambi Ready product, also acts as a repeater. Hence, longer ranges can be achieved by using multiple Casambi products within the network.



*The wireless range of a Casambi unit is dependent on several factors; how it has been integrated into a luminaire, where it has been installed; taking into consideration surrounding obstacles such as walls and other building materials that may block signals.

CASAMBI MESH-NETWORK COMPATIBILITY

There are different radio modes that can be selected when creating a network in the Casambi App: ‘Balanced’, ‘Better Performance’ and now ‘Long Range’ options. The CBU-TED-LR enables long-range capabilities only when the long-range radio mode has been selected and all the other devices within the network are long-range capable. It will revert to the shorter, standard range when deployed in networks set to ‘Balanced’ or ‘Better Performance’ modes.

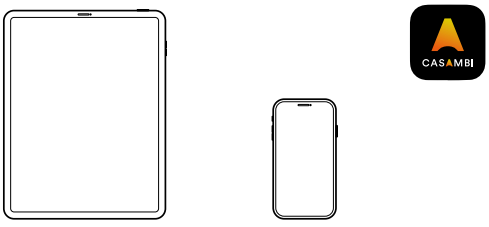
COMPATIBLE DEVICES

Download on the App Store

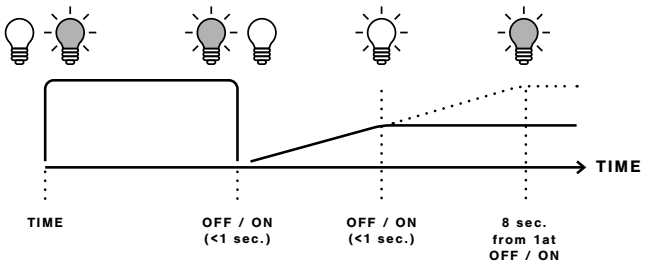
GET IT ON Google Play

Compatible devices: Android and iOS Operating Systems.

We support the latest OS versions for Android and iOS, and their last two major versions respectively.



DIMMING WITHOUT APP



1. Turn lights on from a wall switch.
2. Quickly flick the wall switch off (max. 1sec.) and back on. The light level starts to increase gradually.
3. Flick the switch again at the desired dim level. The selected level is saved automatically.
4. If the second flick is not done within 8 seconds, the light intensity reaches its maximum level.
5. Flicking the switch can also be used to switch between predefined scenes.

TYPE OF LOAD	MAX. LOAD
Incandescent and high-voltage halogens	100 W
Dimmable LED bulbs (C)[1)]	100 W
Dimmable CFL bulbs (C)[1)]	100 W
Trailing edge dimmable LED drivers[1)]	100 W
Low voltage halogens with electronic transformers	100 W
High voltage AC LED modules[1)]	100 W
Wire wound transformers, electric motors and other inductive loads	**Not allowed**
Non-dimmable fluorescent lamps, LED and CFL bulbs	**Not allowed**

Never connect inductive loads, such as iron core transformers. This could cause permanent damage to the dimmer. Do not mix different types of loads.

[1)] Dimming quality depends solely on the load electronics. Do not mix different types of bulbs or loads. Some luminaires may flicker at low dimming levels.

WARNING!

- Using CBU-TED-LR with maximum load will make it hot.
- Make sure to place the product in well-ventilated space and away from any flammable material.
- Maximum allowable ambient temperature must be observed.
- Changes or modifications not expressly approved by Casambi Technologies Oy could void the user's authority to operate the equipment.

INSTALLATION

Make sure that the mains voltage is switched off before making any connections. Use 0,5–1,5 mm² solid conductor electrical wires. Strip the wire 6–8 mm from the end. Press the buttons on top of the dimmer case and insert the wires into the corresponding terminals. Make sure to connect the input and output correctly. The input connector is marked with letters L and N, while the output connector is marked with the letter N and a symbol with a wave and an arrow. If you install the dimmer in a heat-sensitive environment (e.g. inside a luminaire or in a ceiling outlet box above a luminaire), make sure that the ambient temperature does not exceed the specified maximum value. Using the dimmer in a heat-sensitive environment may limit the maximum output power.

When the Smart Switching feature is enabled with the Casambi App, the CBU-TED-LR can control the connected luminaire according to the mains switching sequence.

FIXTURE PROFILES

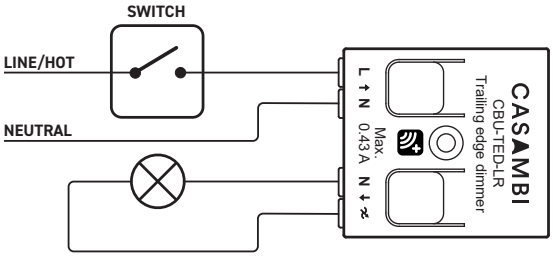
Profile#	Profile name / in app description	Description	Wiring
526*	CBU-TED	Trailing edge phase cut dimmer for 50/60Hz load. Light level is controllable with a slider in the Casambi App.	1
11766	CBU-TED (Linear)	Trailing edge phase cut dimmer for 50/60Hz load. Light level is controllable with a slider in the Casambi App.	1
8123	CBU-TED (Log)	Trailing edge phase cut dimmer for 50/60Hz load. Light level is controllable with a slider in the Casambi App.	1
3534	CBU-TED Presence	CBU-TED-LR acting as a presence sensor or Bluetooth enabled switch. The fixture provides presence information to the mesh network when the CBU-TED-LR is powered up.	2A, 2B

* Default profile

WIRING DIAGRAMS

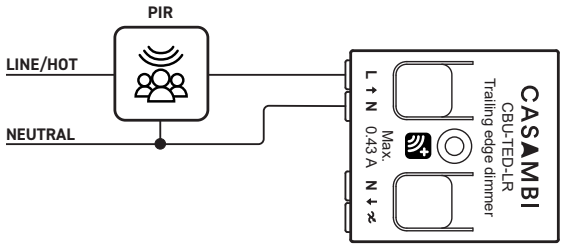
Each CBU product can operate in various roles according to the chosen profile. It is possible to change the profile of an unpaired device using the Casambi App. Above are listed the fixture profile options for the CBU-TED-LR.

1.

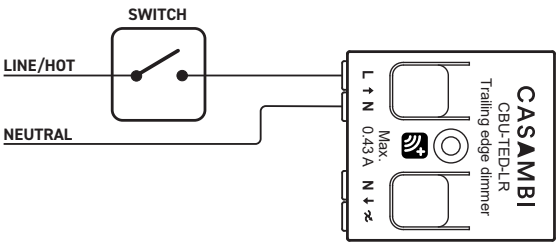


Max. load inrush current = 10A, 100ms

2A.



2B.



TRAN-L-CSB-D

Technical Datasheet for Bluetooth DALI Controller

Description

The TRAN-L-CSB-D is a system protocol translator with Casambi integration, converting the wireless commands to a DALI output.

Capable of broadcasting DALI to a maximum of 8 devices, or individually addressing up to 4 DALI devices.

- DALI Broadcast Mode
- Casambi Enabled
- Addressable DALI Mode
- 1 Channel Wireless/DALI Dimming Controller
- Wireless Beacons

Technical Specifications

Mechanical

Housing	Black Plastic Injection Moulded ABS
Dimensions	103mm x 35mm x 28mm
Weight	52g
Protection	IP20
Mounting	Screwdown

Input

Voltage Range	120-277VAC
Frequency	50-60Hz
Max Mains Current	20mA
No-load Standby Power	<500mW (No loads on DALI bus)

DALI Output

Voltage Range	16VDC @ 16mA Max
Max. drivers	8

Radio Transceiver

Operating Frequencies	2.4Ghz - 2.483Ghz
Maximum Output Power	+4dBm
Wireless Protocol	Casambi Wireless Mesh

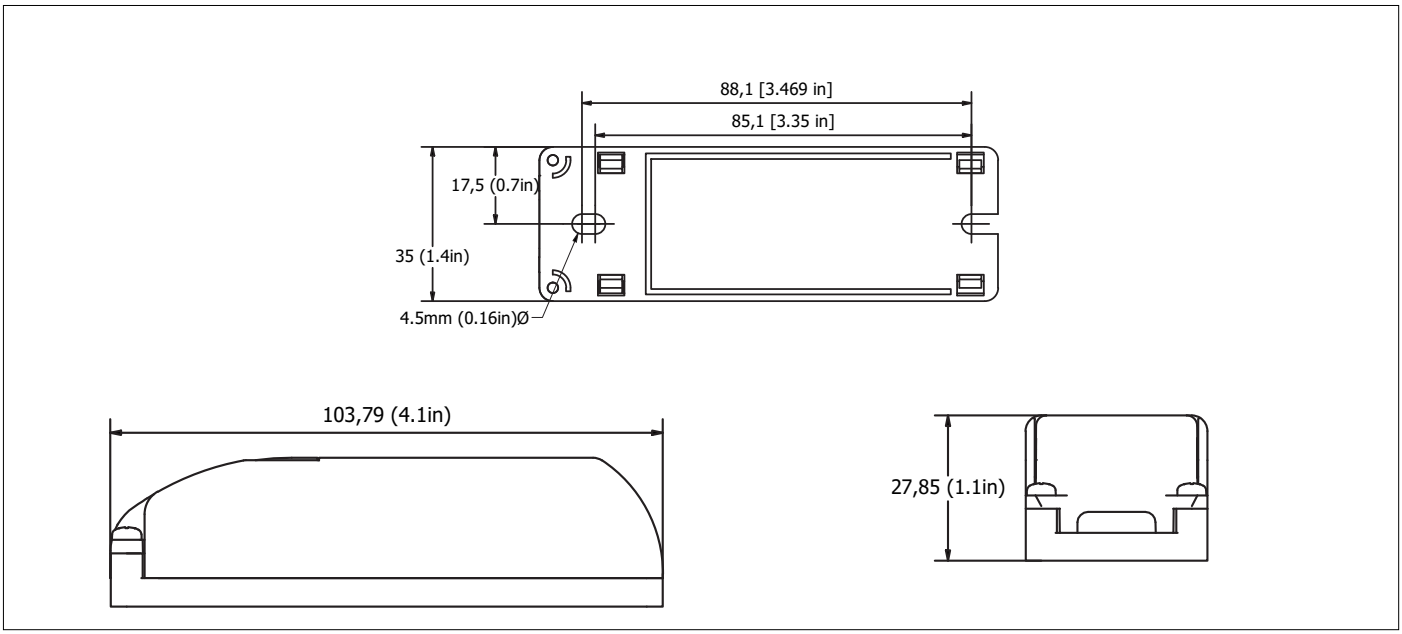
Operating Conditions

Ambient Temperature	0°c to +50°c
Max. Case Temperature	+75°c
Storage Temperature	-40°c to +80°c
Max. Relative Humidity	80% non-condensing

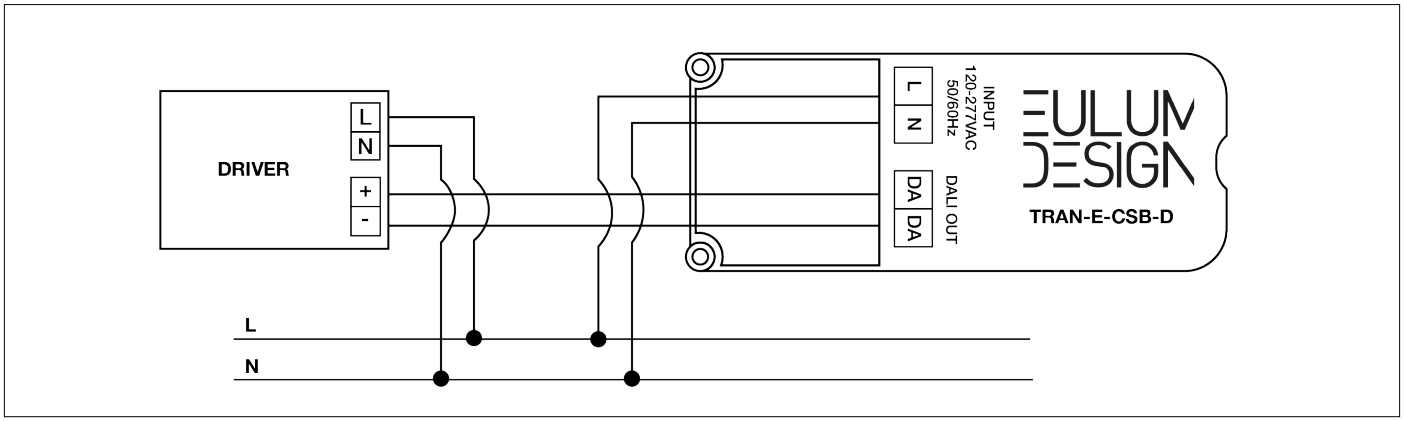
Connectors

Wire Range	0.2mm - 1.5mm
Wire Strip Length	5mm

Dimensions



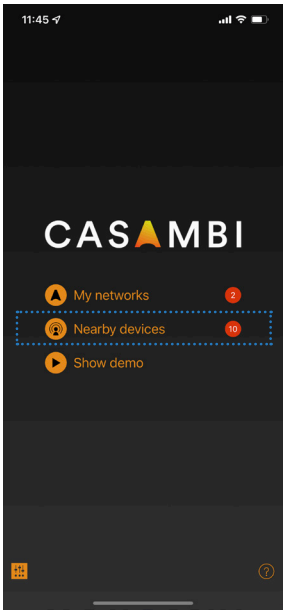
Wiring Diagram



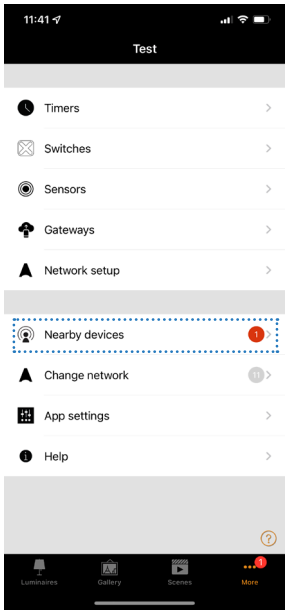
Profiles

Profile Name	Description
TRAN-L-CBDA-1	Broadcase, single colour
TRAN-L-CBDA-4	4 address-auto, independent channels
TRAN-L-CBDA-RGB	3 address-auto, RGB
TRAN-L-CBDA-RGBW	3 address-auto, RGB
TRAN-L-CBDA-TW	2 address-auto, tunable
Version	Long Range

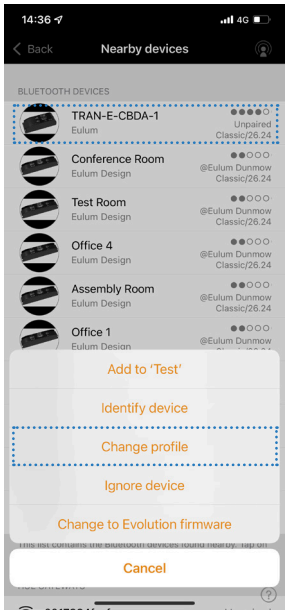
Calibration



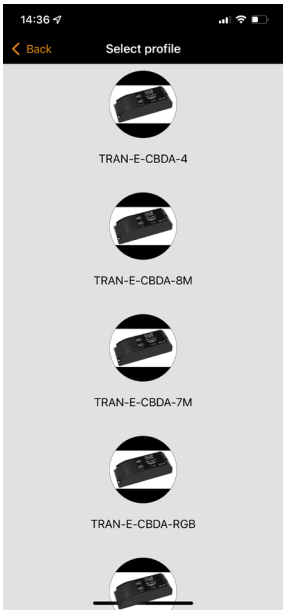
1. Power on the device and open the Casambi App, select “Nearby devices”.



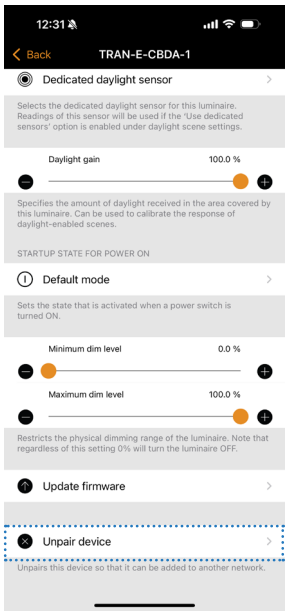
2. Tap “Nearby Devices”



2. Tap the TRAN-D and then “Change profile”.



4. Choose your desired profile. TRAN-E-CBDA-1 is the standard profile and will not show.



NOTE: The TRAN must be unpaired to change the profile. To unpair, double tap the TRAN-L-CBDA-1 in the network and scroll to the bottom of the options to “Unpair Device”, then follow step on from Step 1 above.

Range

In open air, the wireless range can reach up to 75m. This will be reduced when placed inside a building. Please note that putting the unit inside a metal enclosure is unadvised as this will dramatically reduce the signal range.

Compatible Devices:

iPhone iOS and later are supported
iPad iOS 10 and later are supported
Android 4.4 version (KitKat) and later are supported.

Warranty

For information on our warranty, please visit: www.eulum.com/warranty/

Product Data Sheet

WIB 2

Surface Sealed Box - Light Grey

Products may differ in size, colour and appearance to those shown. If you require further information or customisation, please contact us directly.

Material	Thermoplastic
Protection class	IP65
Temp. range min	-25 °C
Temp. range max	85 °C
Temperatures during install.	-5°C - 60°C
Glow wire test	650 °C
Impact resistance	IK08
External dimensions LxWxH	160x120x70mm
Type	WIB 2
UK-Number	816LH
Product Color	RAL 7035
WISKA-Order no.	10104630
Packing unit	1

Description:

1/4 turn fast screw system
1 screw attached to lid
Tamper-proof seal
smooth sides

Recommended accessories

PM816/1	10104690

19.06.2024

Your Contact:
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☎ +44-12-08816062 · 🖷 +44-12-08816708
info@wiska.co.uk · www.wiska.co.uk

Warranty Terms

Modus Series LED Luminaire

This document sets out the warranty policy of the Midstream group of companies ('Midstream') from which you ('Purchaser') purchase your LED Luminaires. This policy is applicable only to Midstream branded Modus LED luminaires ('Products') and only for products purchased from November 2014 onwards.

A. Warranty period

Midstream warrants its lighting products of the Modus series to be free from defects in materials and workmanship under normal application, installation, and use and service conditions. If Modus products fail to conform to this warranty, then for a period ending one hundred and twenty (120) months from the date of sale as shown on the invoice, Midstream will, at its option, either repair or replace the product or the defective part thereof. The repair or replacement shall be the sole and exclusive remedy provided under the above warranty ("the Limited Product Warranty") and shall not extend beyond the One hundred and twenty (120) months period set forth therein.

On request, an 'extended warranty' or 'customised project warranty' can be agreed after evaluation of the specific application conditions.

B. Exclusions, Limitation and Conditions

- All warranty claims must be filed within the applicable warranty period.
- The "Limited Product Warranties" do not apply to any defect in any Product which is due to:
- Misuse, abuse, neglect or accident; alteration, improper installation, wiring or application and environment;
- Non-observance of Midstream's installation instructions and/or any storage and maintenance instructions including, without limitation, those contained in the latest safety, industry and/or electrical standards for the relevant region(s);
- Repair or modifications by someone other than a Midstream approved service technician;
- Power failure surges, lightning, flood, fire, vandalism, accidental breakage or other events outside the control of Midstream.
- Electrical installation in which the Product operates is subjected to voltage fluctuations exceeding +/- 10% of 230 V.
- Ambient temperature exceeding of falling short of the operating temperature range of the product data sheet issues by Midstream.
- Electrical supply conditions, including supply spikes, over-voltage/under-voltage and Ripple Current control systems that are beyond the specified limits of the products and those defined by relevant supply standards (e.g. EN 50160 norms).
- The "Limited Product Warranties" do not cover transportation charges, customs clearance or any other costs for return of the Modus product, the reshipment of any repaired or replaced Modus product, or costs associated with installation, removal or reinstallation of the Modus product.
- For the avoidance of doubt, loss of revenue/profits, damage to property or other miscellaneous costs including but not limited to labour costs or expenses whatsoever, or any special, incidental and consequential damages are not covered under this warranty.
- Warranty claims will not be honoured if the type or serial number of the Modus product has been altered, removed or made illegible or the tamper-proof stickers on the product have been activated (voided).
- No agent, distributor or dealer is authorised to change, modify or extend the terms of the warranty on behalf of Midstream.

C. Limitations of Warranty Scope

This "Limited Product Warranty" as set forth herein is expressly in lieu of and excludes all other express or implied warranties, including but not limited to warranties of merchantability or quality and of fitness for particular purpose, use, application, and all other obligations which are hereby disclaimed to the fullest extent permitted by applicable law. Purchaser shall not rely on any other information or documentation.

These terms state Midstream's entire liability and obligation to Purchaser and Purchaser's sole and exclusive remedy in connection with any claim relating to defective or non-conforming Products supplied by Midstream, whether or not any such claim is based on any warranty representation or other provisions not explicitly mentioned in these terms, and whether arising in tort, contract or any other legal theory, even if Midstream has been advised or is aware of such defects.

D. Warranty Claims

If the Purchaser considers it has a claim covered by this "Limited Product Warranty" for Modus products, an immediate notification directly to Midstream shall be filed, but in any case no later than 30 days after discovery, by mailing a registered letter in writing to the address of Midstream listed at the bottom of this document, or, sending an email letter to the email account of Midstream listed at the bottom of this document. Together with the notification, the Purchaser should enclose the evidence of the claim with the corresponding serial number of the Modus product(s) and the invoice copy on which the Modus product(s) have been purchased, as well as adequate records of operating history.

Upon request, Midstream's representatives shall be allowed access to the defective Product, system or application for verification of non-compliance.

The return of any Modus product will not be accepted without prior written authorisation by Midstream.

E. Severability

If any part, provision or clause of this "Limited Product Warranty", or the application there of to any person or circumstance, is held invalid, void or unenforceable, such holding shall not affect and shall leave all other parts, provisions, clauses or applications of this Limited Product Warranty and to this end such other parts, provisions, clauses or applications of this Limited Product Warranty shall be treated as severable.

F. Disputes

In case of any dispute concerning a warranty claim, a first-class international test-institute such as NEMKO shall be involved to judge the claim, (acting as expert not arbitrator) and the parties agree to be bound by the decision. All fees and expenses shall be borne by the losing party, unless otherwise awarded.

G. Various

- The repair or replacement of the Modus product or the supply of additional Modus product does not cause the beginning of new warranty terms, nor shall the original terms of this "Limited Product Warranty" be extended. Any replaced Modus product shall become the property of Midstream.
- Midstream has the right to deliver another type of product (different in size, colour, shape and/or power) if at the time of the claim the Modus product to be replaced is no longer in production by Midstream.
- Midstream reserves to itself the right of final decision on the interpretation of this Limited Product Warranty.

H. Force Majeure

Midstream shall not be responsible or liable in any way to the customer or to any third-party for any non-performance or delay in performance of any terms and conditions of sale, including this Limited Product Warranty, due to Acts of God, war or warlike conditions, sanctions, riots, strikes, plague or other epidemics, fire, flood, or any other similar cause or circumstance beyond the reasonable control of Midstream. In such cases, performance by Midstream of this Limited Warranty shall be suspended without liability for the period of delay reasonably attributable to such causes.