

# Modus S Series

INSTALLATION GUIDANCE

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## Equipment list

Prior to starting the installation, check the equipment list to be sure of using the correct tools (mounting screws and nuts are not supplied).

- ✓ 24 mm standard wrench for M16 screws
- ✓ 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 Electro technical Commission (IEC) standards.

**The Luminaire is suitable for wet locations and outdoor use.**

This luminaire should only be replaced by the manufacturer, 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 on 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 that 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 rested on the ground with optics facing down
- ✗ Do not place the Luminaire with the lens on the pavement, dirt and metal surfaces
- ✗ Do not clean the lenses with any industrial detergent, only clean with 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, sensory, and intellectual abilities and having corresponding knowledge and experience may use this device.



Two people are 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 is not to be placed face down on any surface other than the provided foam pad



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



The Luminaire should be positioned so that prolonged staring into the luminaire at a distance closer than 19m (63 ft) is not expected



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



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



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



Do not use a generator!



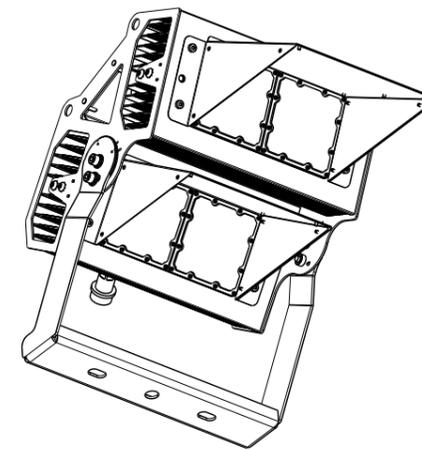
This product meets all legal requirements for CE and UKCA marking.

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

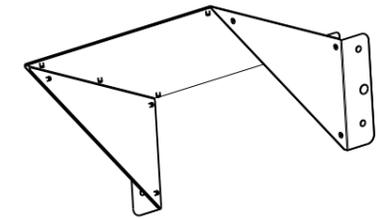
Do not dispose of the device with your normal household waste. Dispose of this device through an approved waste disposal firm or through your local waste facility. Comply with the rules and regulations that apply in your country. If in doubt, consult your local waste disposal facility.

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 in compliance with local laws and regulations

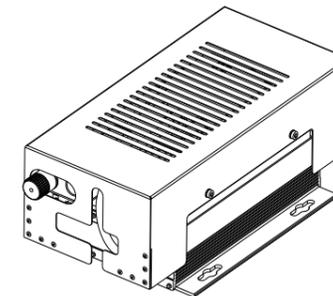
## 3. Contents



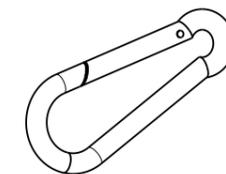
Modus S LED floodlight



Visors with screws and washers x2



Remote driver x1  
(for outdoor or cabinet installation)



Carabiner hook and cable

## 4. Identifying the floodlight optics

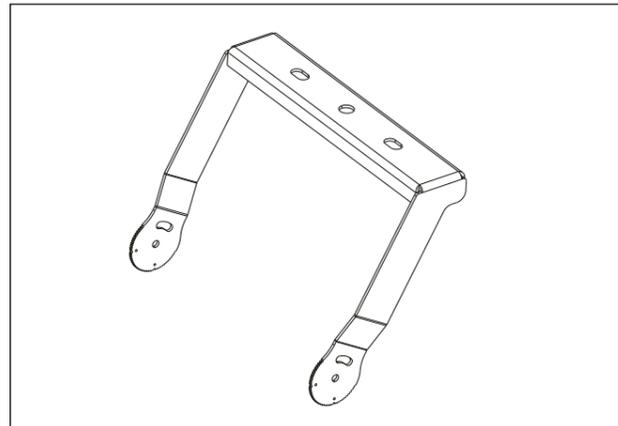
The physical difference between the lenses is hard to spot, so a coloured sticker has been added to the box to make sure that the right optic will be installed in the right place. The WS optic has an orange sticker on the box, the MS optic has a blue sticker and the NS optic has a yellow sticker.



## 5. Bracket mounting and aiming

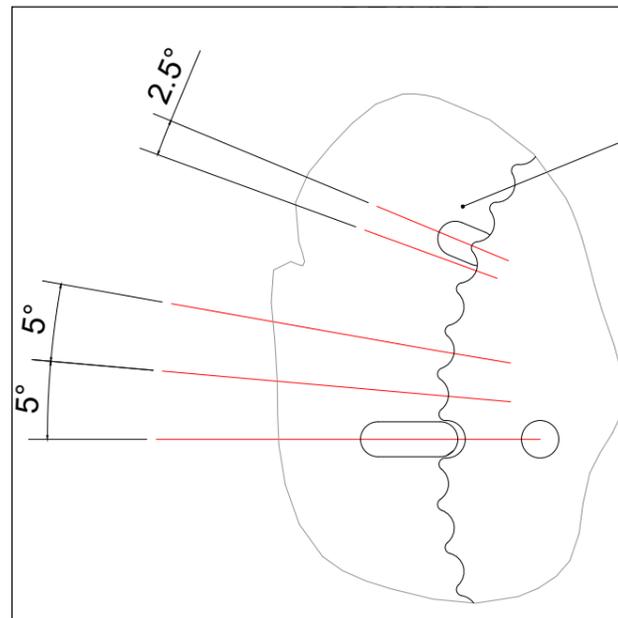


Use A2-80 stainless steel bolts or 8.8 class steel bolts with hot dip galvanised coating



### 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 two slots for M16 screws -tightening torque: 150 Nm.



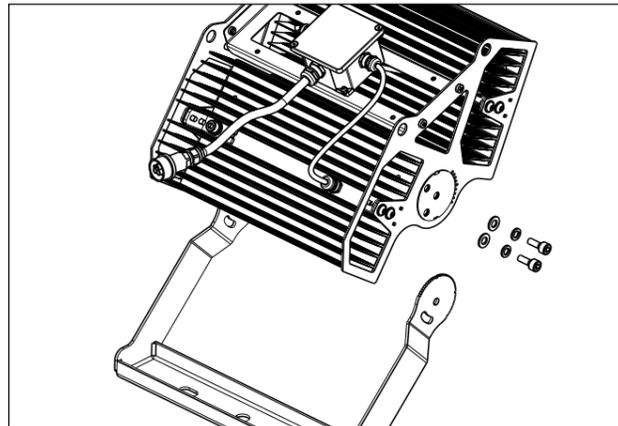
### 3. Adjusting angle

The LED Luminaire can be tilted for  $\pm 20^\circ$  using the scale of  $5^\circ$  intervals when the longer notch sits in one of the bottom land of the gear. If the bracket is rotated and the shorter notch sits in one of the bottom land of the gear, tilt has increased/decreased by  $2,5^\circ$ .

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



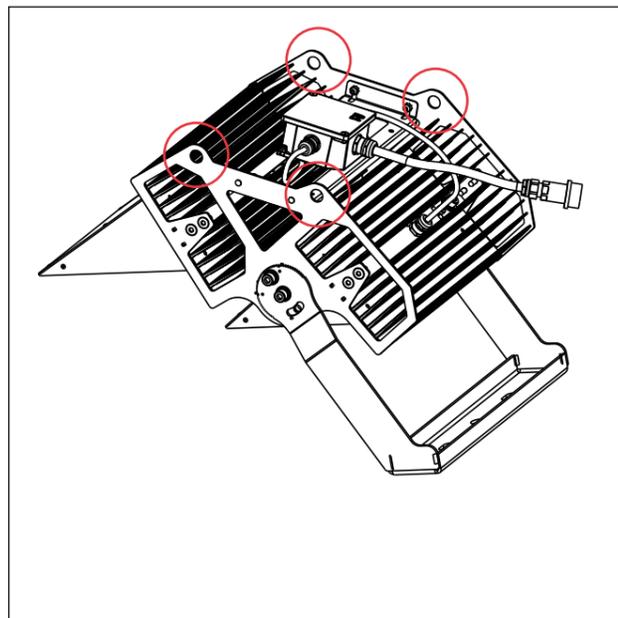
Do not use percussion drills



### 2. Insert screws

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

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

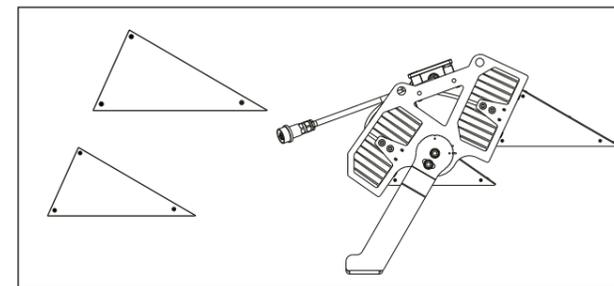
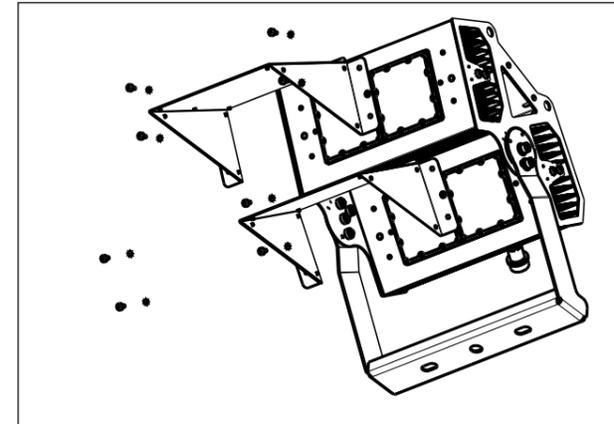


### 4. Mounting

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.

## 6. Visor mounting



### Secure visors

Mount a visor on each LED module. The visor must be secured with the supplied screws along with the serrated washers as shown.

Tightening torque: 7-8 Nm.

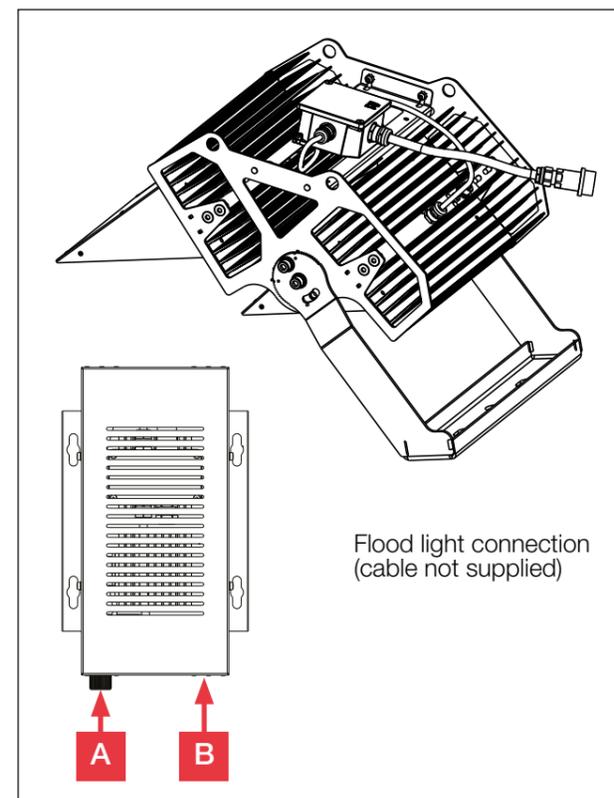
The shape of the visors may vary.

### Important

Mount the shortest visor on the bottom module and the longest visor on the top module, to avoid blocking light.

To protect the floodlight and its components and avoid scratching, please lay the luminaire on the packaging foam when mounting the visors or the bracket.

## 7. Electrical connection



### Securing the cable

The cables for the floodlight connection and power connection must have 3 conductors (max. diameter 13 mm).

The suggested conductor section is a minimum of 1.5 mm<sup>2</sup> for the floodlight connector and 4 mm<sup>2</sup> for the power connection).

Use a cable with 2 conductors for 0-10 V, DALI control connection (max. diameter 12 mm).

On floodlights with an outdoor driver, secure the control plug with the supplied closure cap when the control system is not in use.

A Control cable – 0-10 V, DALI (not supplied)

B Mains cable – power connection (not supplied)

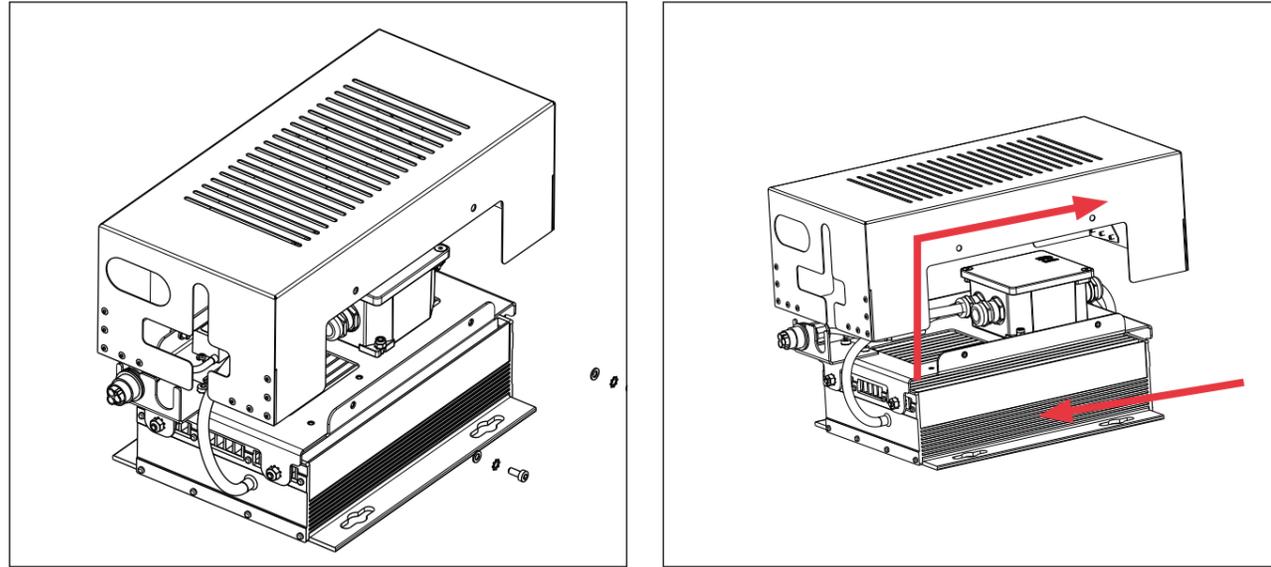


Use a main circuit breaker with a rated current of at least 40A



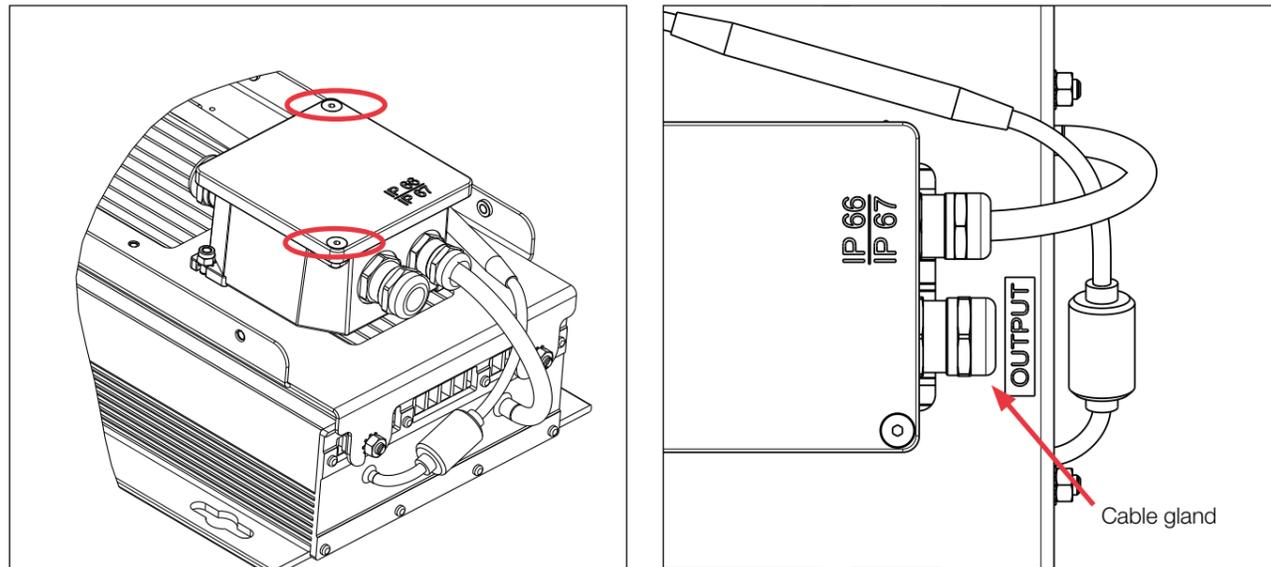
Do not apply mains voltage through the control system cable. This will damage the luminaire.

## 8. Floodlight connection - outdoor driver



### Unscrew the cover

Unscrew the 4 M5 screws. Then remove the plastic cap from the connector plug, push towards the connector side and take away the cover.



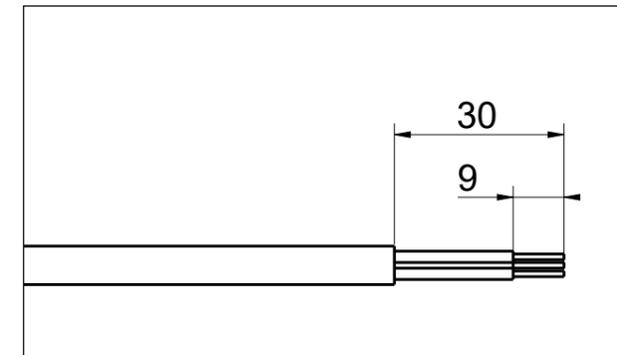
### Connecting via the cable gland

Remove the 4 countersunk screws to remove the junction box lid. Insert the cable through the cable gland. If the connection requires a shielded cable, replace the cable gland with an EMC M20x1.5 one (NOT included in the package). Use monkey pliers to hold the M20 adapter if it is necessary to remove the cable gland. Remove the cable sheath for 65 mm to connect the wires with ease.

**WARNING:** do not unscrew or remove the M20 adapter!

## 9. Floodlight connection with IP68 connector

Follow these instructions to connect the floodlight via IP68 connector, to connect the floodlight with direct wiring, go to page 14.



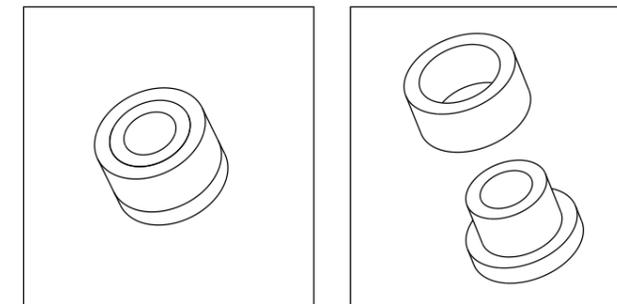
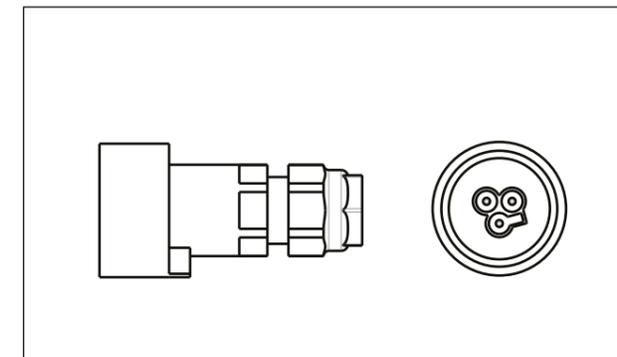
### Stripping the cable

Strip one end of the floodlight connection cable to a length of circa 30 mm; then expose the conductors for 9 mm.

(The cable from the driver to the floodlight is not supplied, the cable used must be a rubber cable H05RN-F or equivalent.)

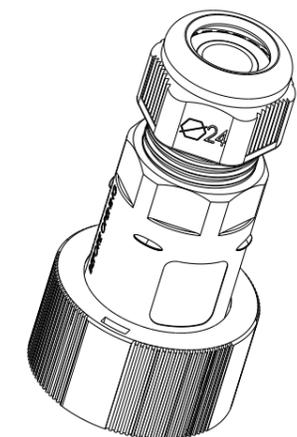
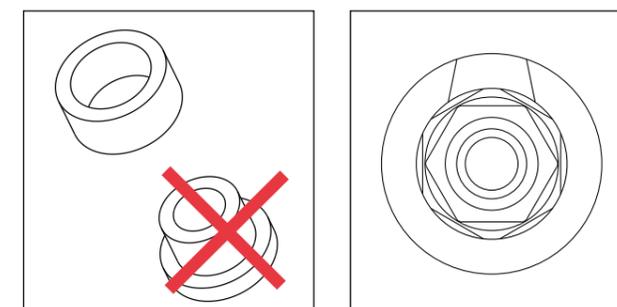
The device has a type Y attachment. If it becomes damaged it should only be replaced by the manufacturer or by its service staff.

Take a TH405 Connector socket. The connector and its housing are supplied in 2 pieces.

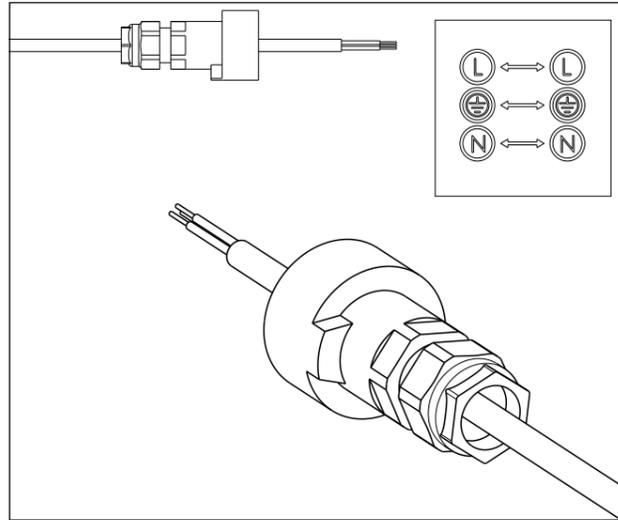


### Adapting the grommet

Remove the inside part of the grommet, when the cable diameter is greater than 9 mm. To remove the gasket, remove cable gland nut first.



## 9. Floodlight connection with IP68 connector



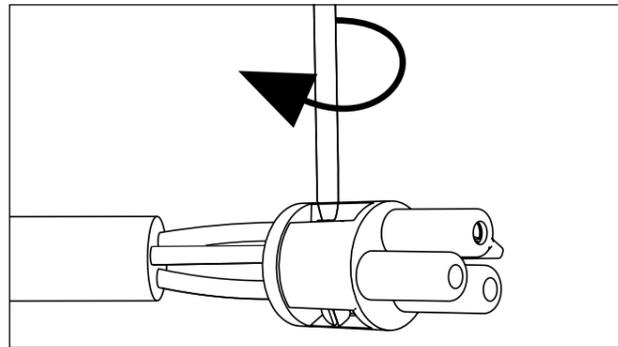
### Stripping the cable

Insert the cable through the connector housing.  
The socket has L, N, earth symbols. Match as follows:

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

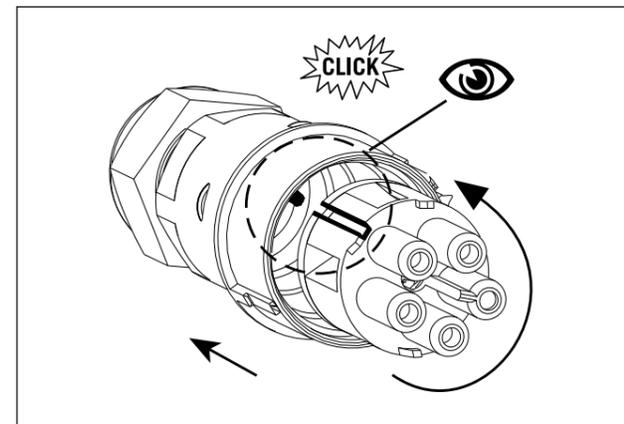
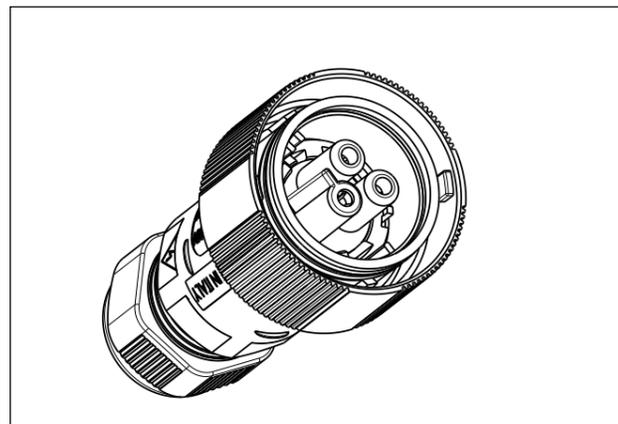
Insert the exposed wires in the plug and tighten each screw.

Pull the wires to check if they are well tightened

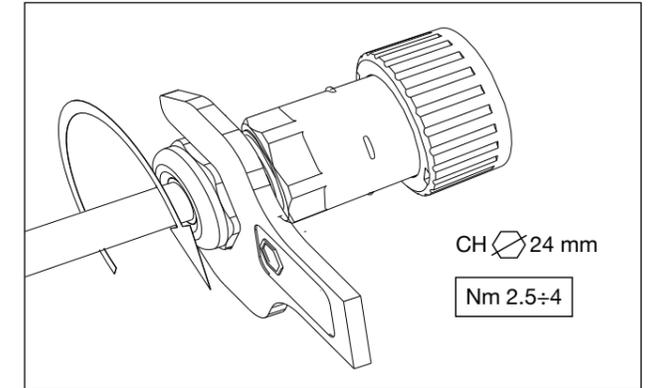
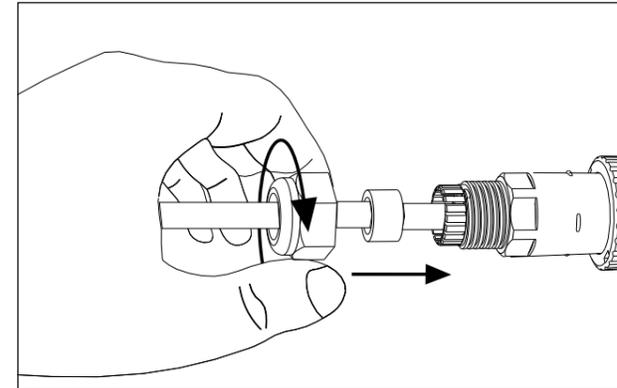


### Inserting the terminal into the socket

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

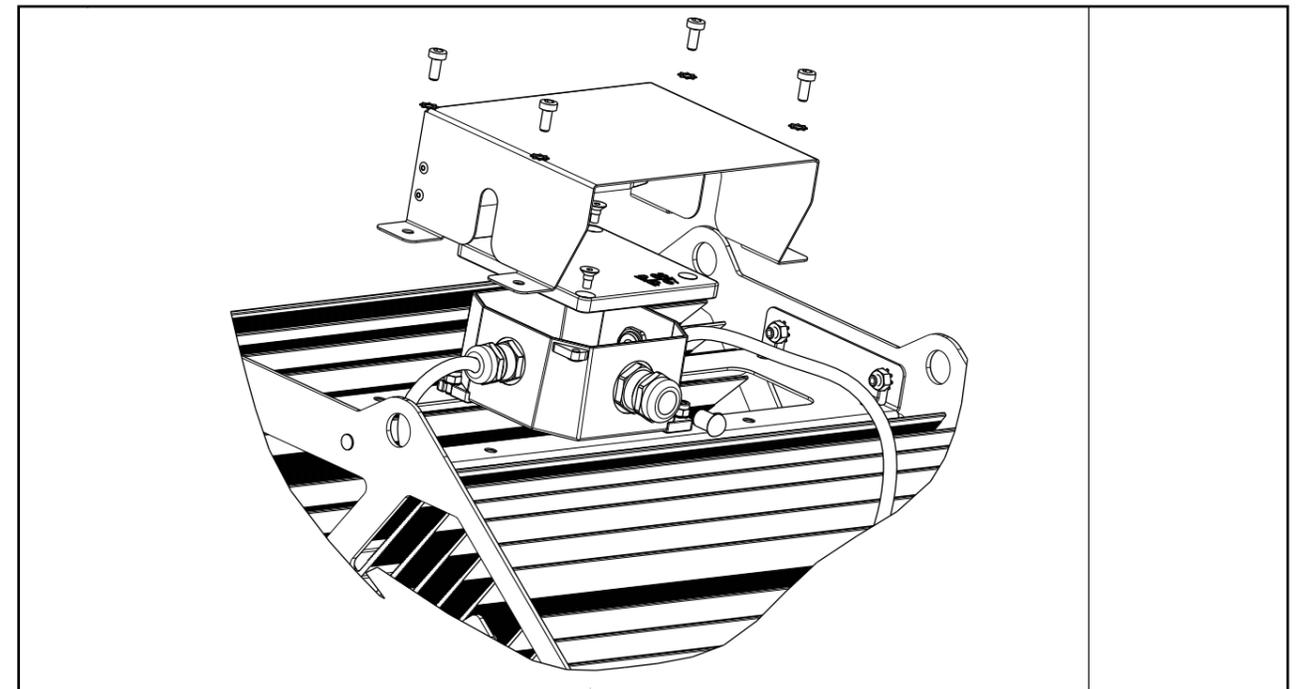


## 9. Floodlight connection with IP68 connector



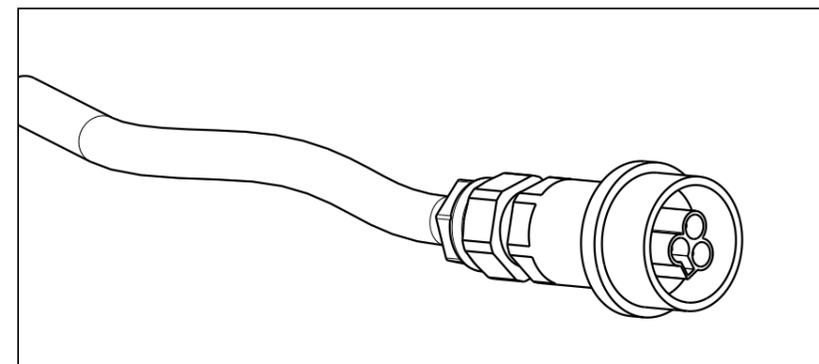
### Tighten the nut

Tighten the plastic nut with a 24 mm wrench key.

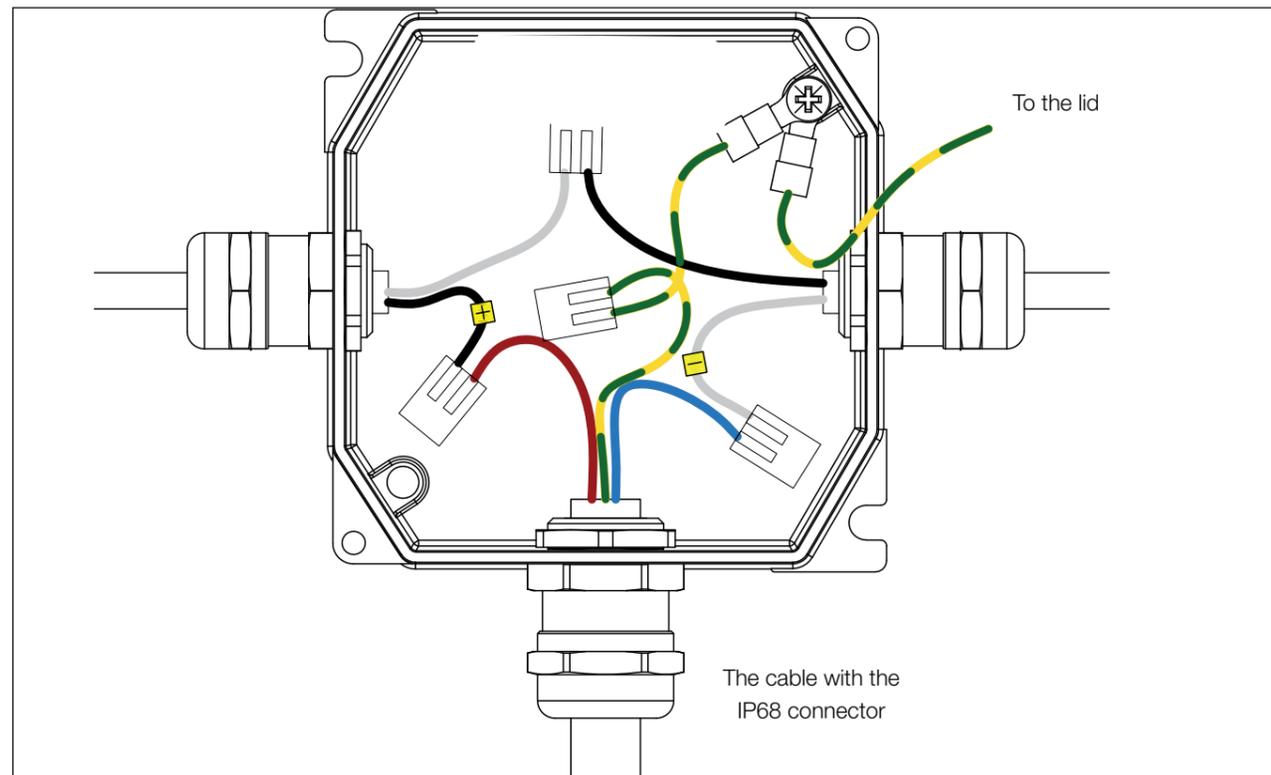


### Inserting the cable with a plug connector into the floodlight junction box.

To connect the accessory provided (cable + plug connector) to the junction box, remove the junction box cover and the junction box lid. Untighten the cable gland with the plastic cap and remove it.



## 9. Floodlight connection with IP68 connector

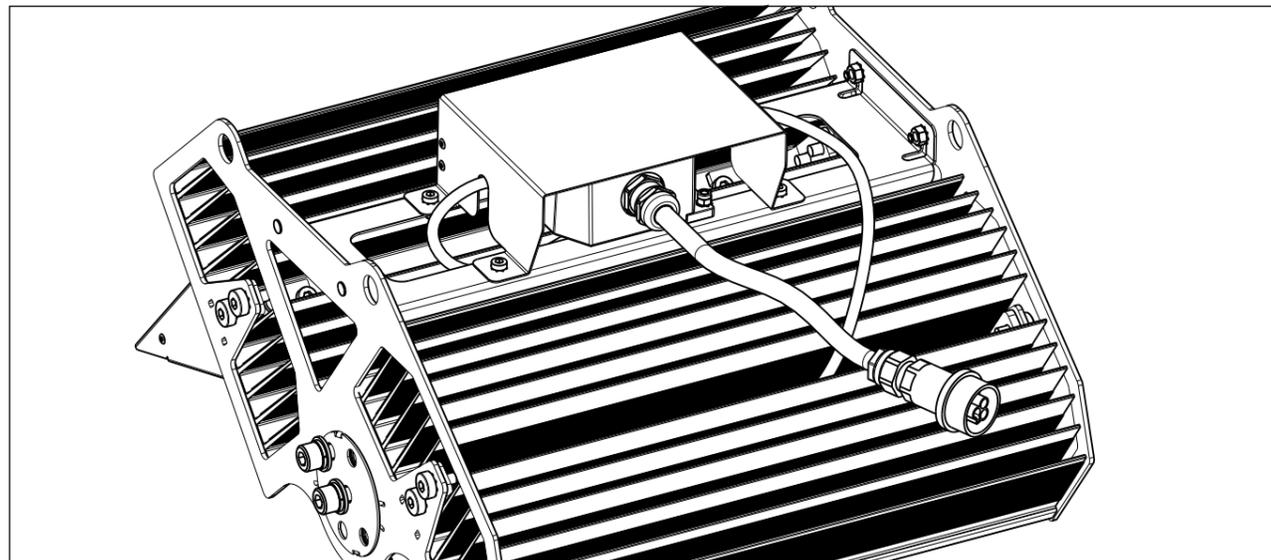


### Connecting the WAGO terminals

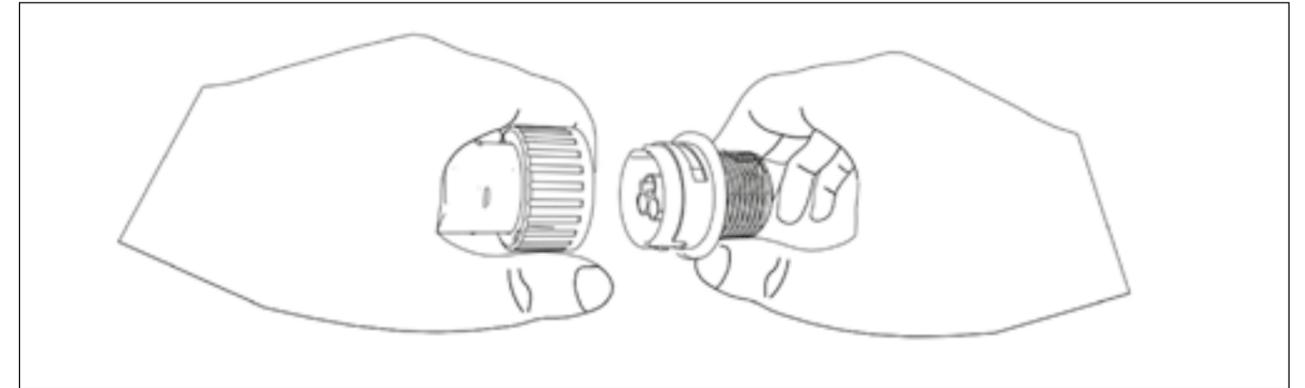
Insert the cable with the connector through the cable gland and connect its wires to the wago terminals as follows:

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

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.

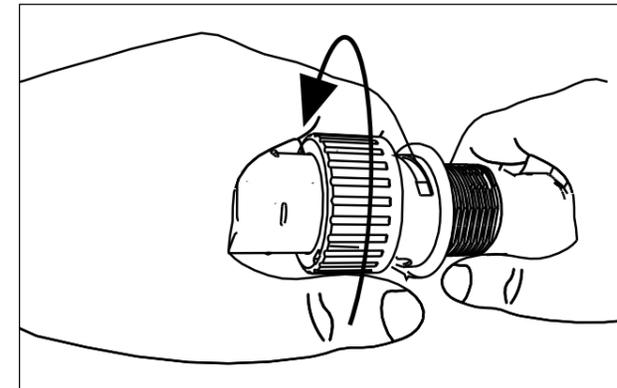


## 9. Floodlight connection with IP68 connector



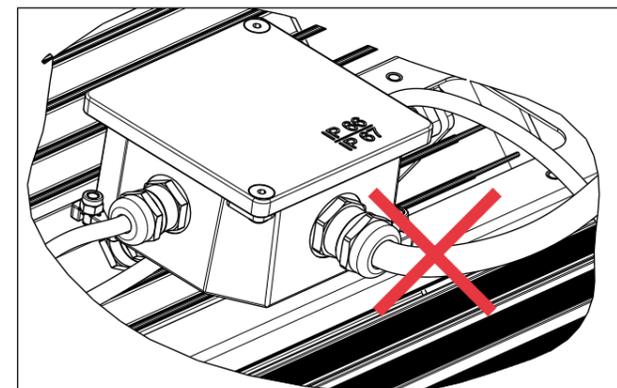
### Connect the plug and socket

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



### Secure the connection

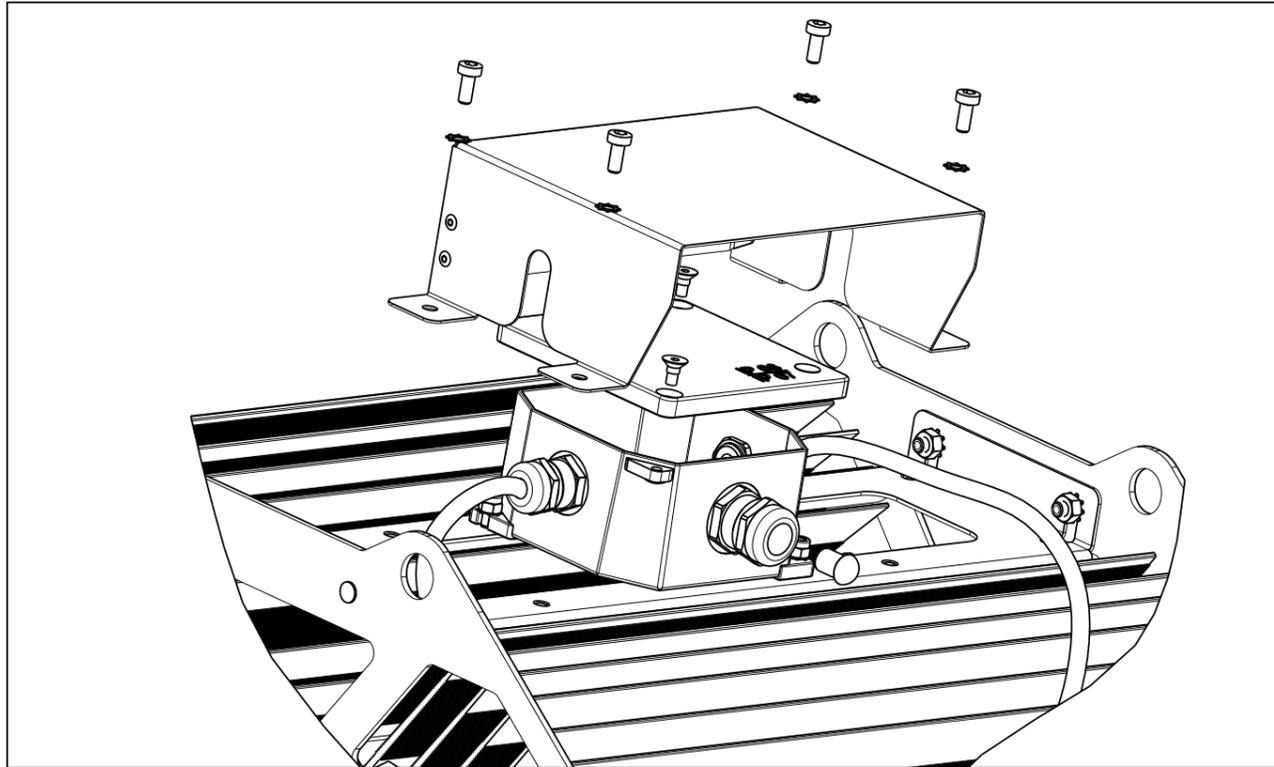
Rotate the outer part of the socket clockwise, then push the red clip to the locked position to secure the connection. If unlocking is required, use a screwdriver to pull the clip to an unlocked position.



### Warning

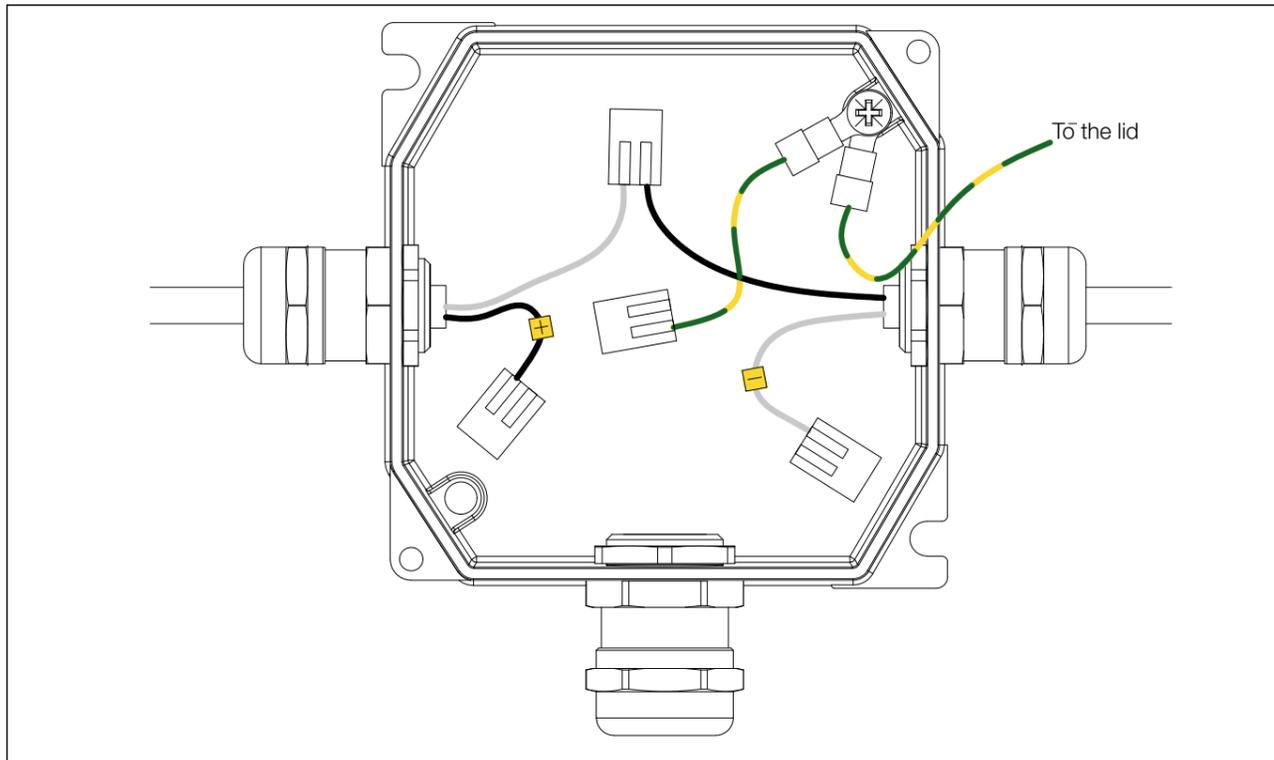
Do not pull the cables during installation. Do not bend the cables more than the minimum bending radius - 5 to 8 times of the diameter of the cable.

## 10. Floodlight connection without connector

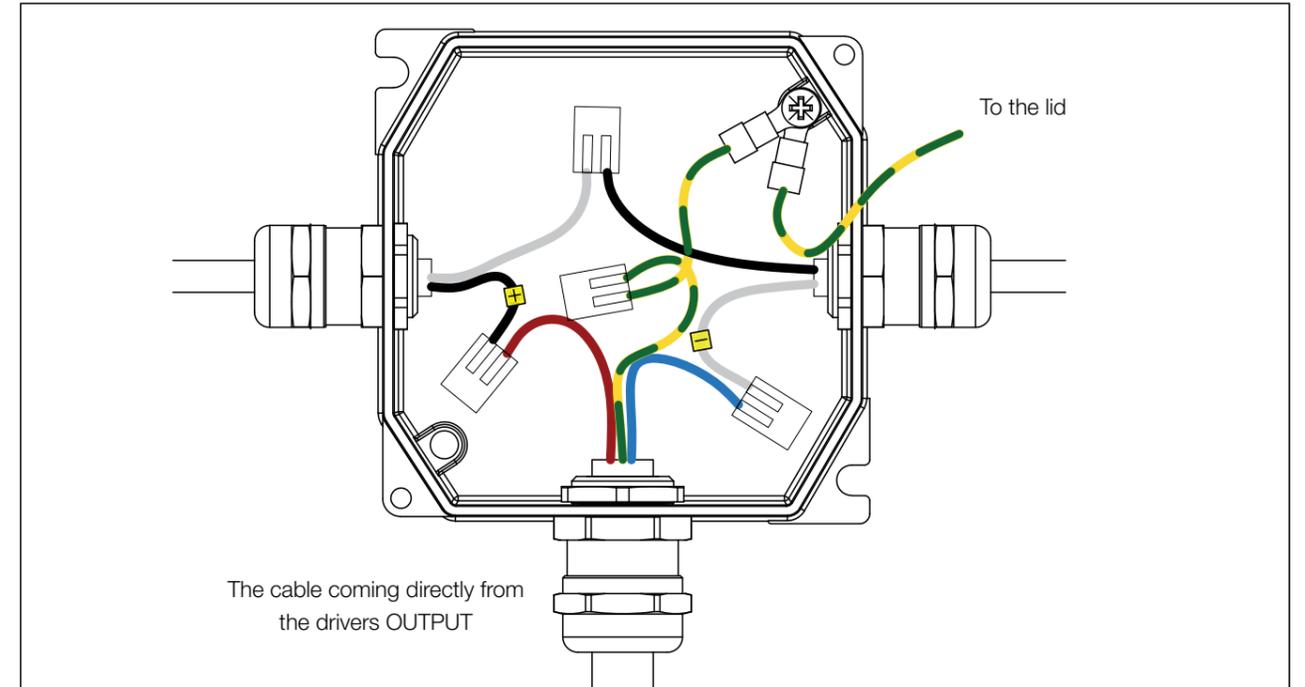


### Inserting the cable into the floodlight junction box

To directly wire the floodlight head using the cable coming directly from driver's output side, remove the junction box cover and the junction box lid. Untighten the cable gland with the plastic cap and remove it



## 10. Floodlight connection without connector

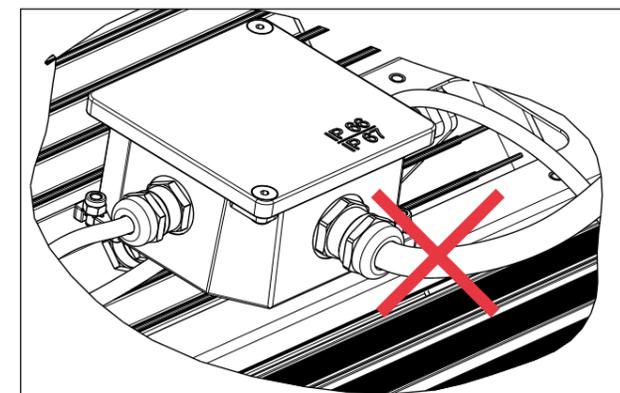


### Connecting the WAGO terminals

Insert the cable coming from the OUTPUT side of the driver through the cable gland and connect its wires to the wago terminals as follows:

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

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.



### Warning

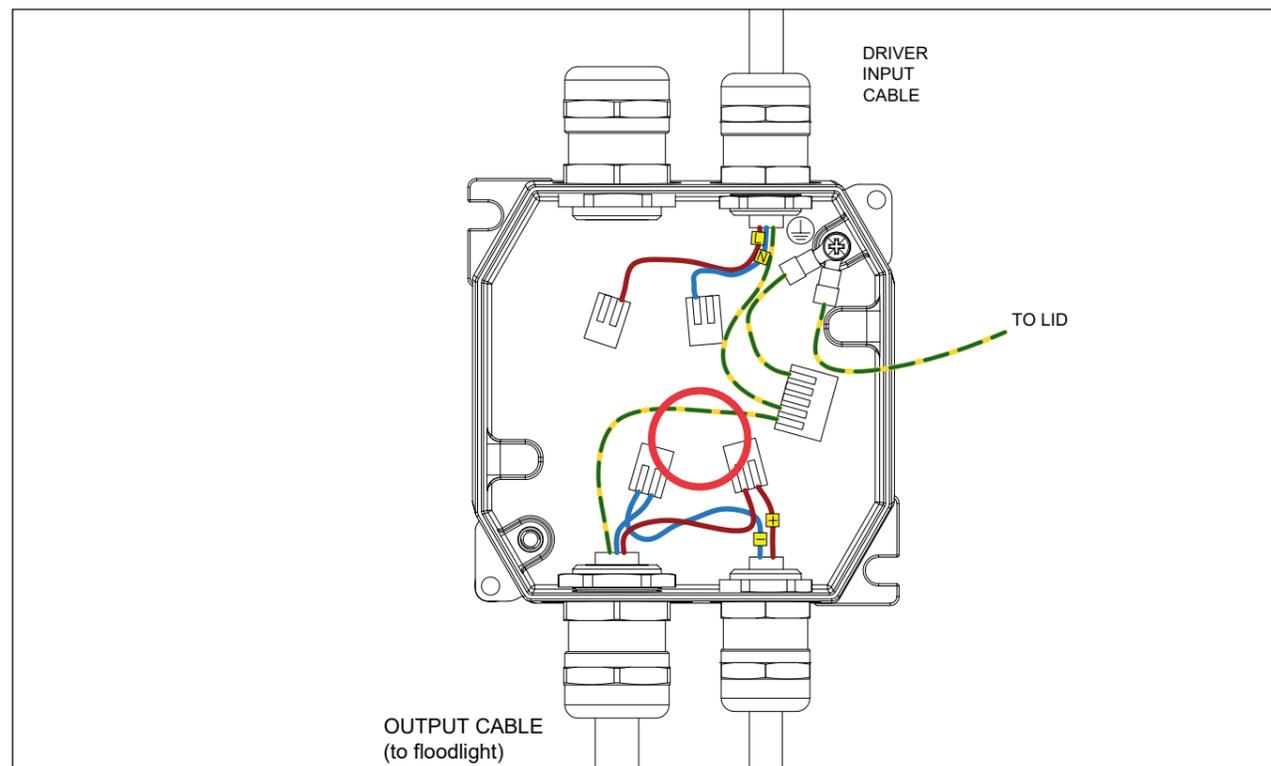
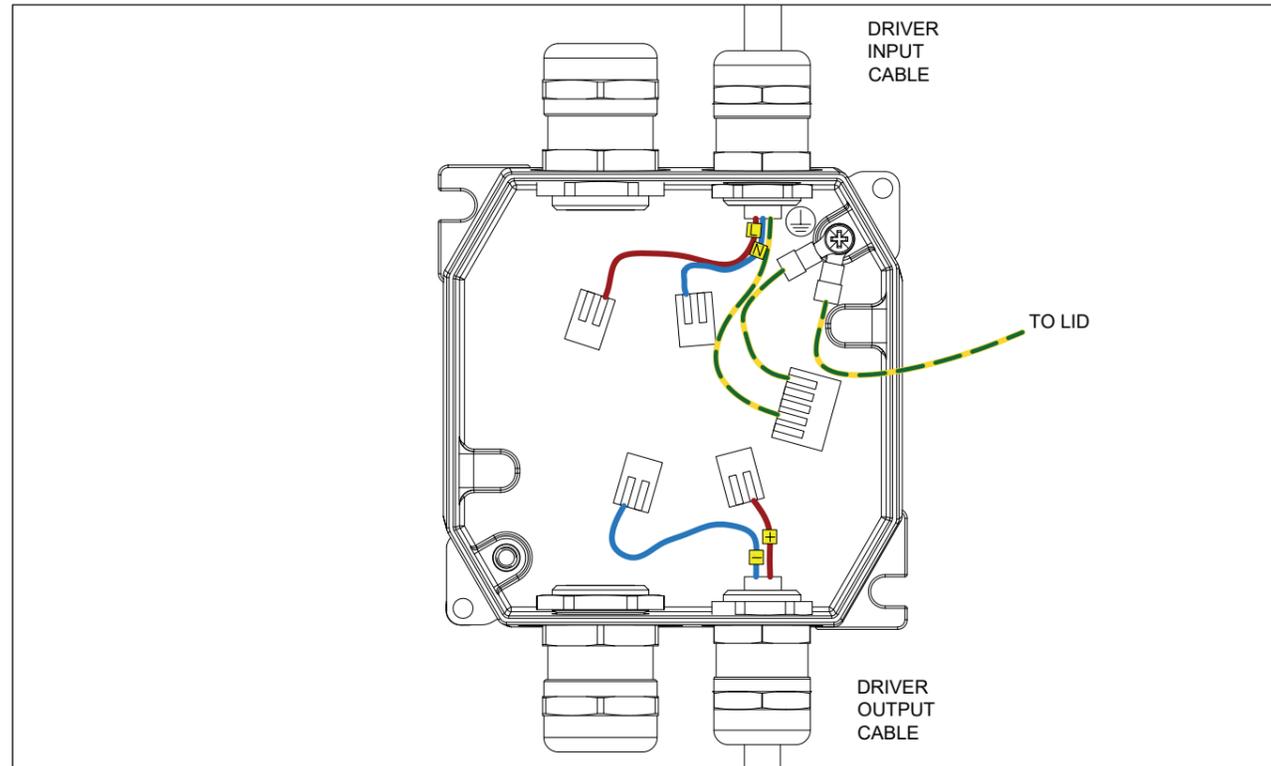
Do not pull the cables during installation. Do not bend the cables more than the minimum bending radius - 5 to 8 times of the diameter of the cable.

## 11. Floodlight connection - Outdoor driver

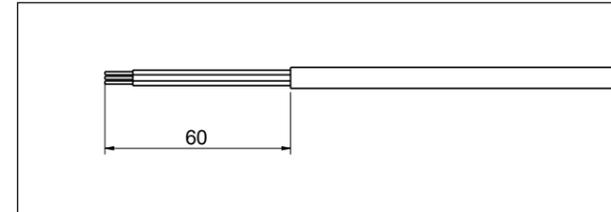
### Connecting the WAGO terminals

Connect the YELLOW-GREEN wire to the 5-way WAGO terminal.

Connect the BROWN wire to the WAGO terminal that has already a brown wire with a "+" sticker. Connect the BLUE wire to the WAGO terminal that has already a blue wire with a "-" sticker.



## 12. Power supply connection - Outdoor driver



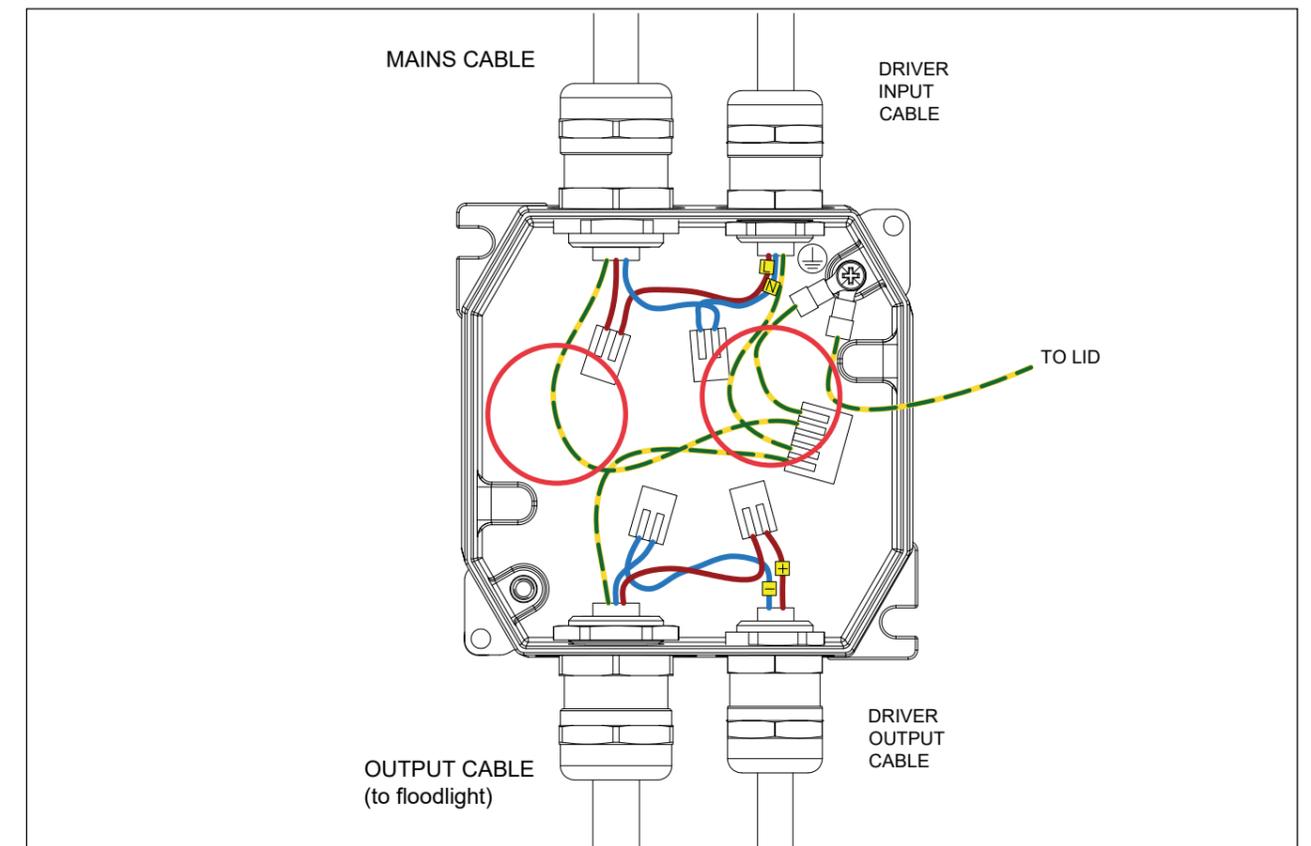
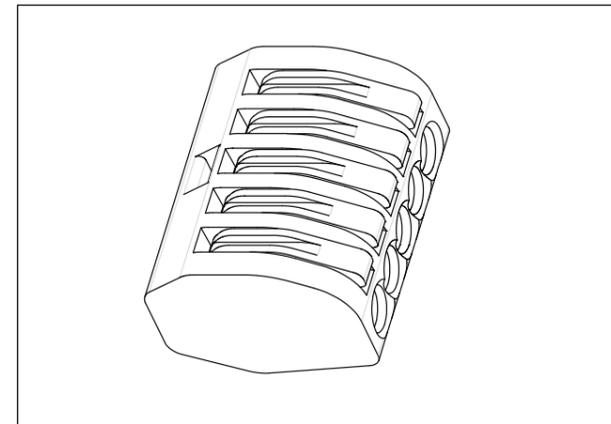
Remove the cable sheath for a length of 60 mm, expose the conductor for 9 mm and insert the mains cable through the cable gland without the adapter.

Connect the YELLOW-GREEN wire to the 5-way WAGO terminal. Close the void position as well, even if there is no wire connected.

Connect the BROWN wire to the 2-way WAGO terminal that has already a brown wire with an "L" sticker.

Connect the BLUE wire to the 2-way WAGO terminal that has already a blue wire with an "N" sticker.

Tighten the M20 cable glands (torque: 8 Nm).



## 12. Power supply connection - Outdoor driver

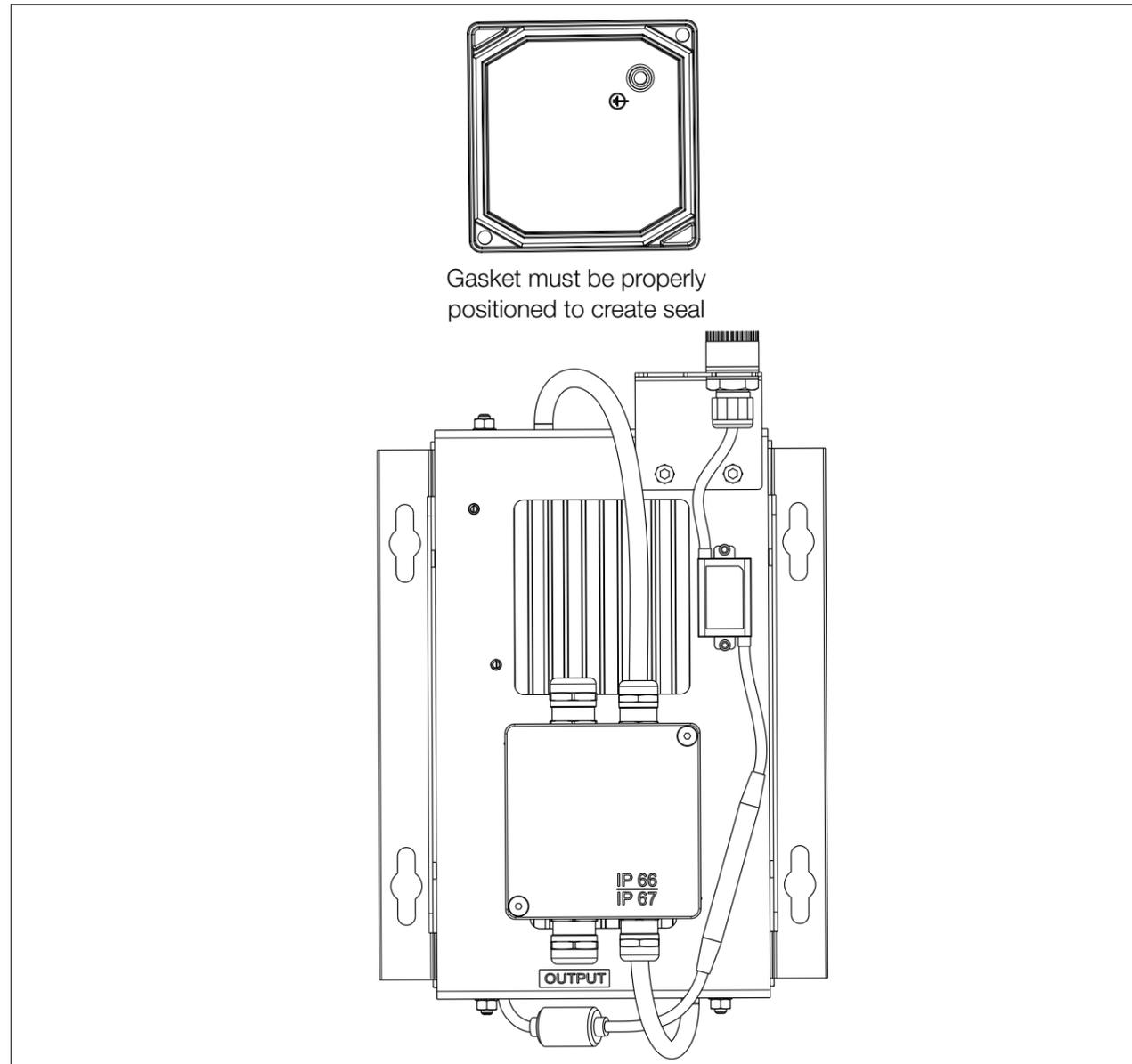
### Checking the gasket

Check that the gasket is properly positioned inside the lid, then close the junction box.

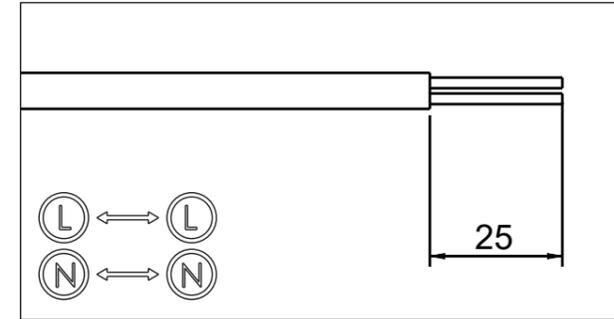
Secure it with 2 countersunk screws (gradually tighten them, do not tighten sequentially).

**WARNING:** if the gasket is wrongly positioned or screws are loose, water may get into the junction box.

Place the cover back on to the driver unit and the cap on the control plug if not needed.



## 13. Control connection - DALI - Outdoor driver



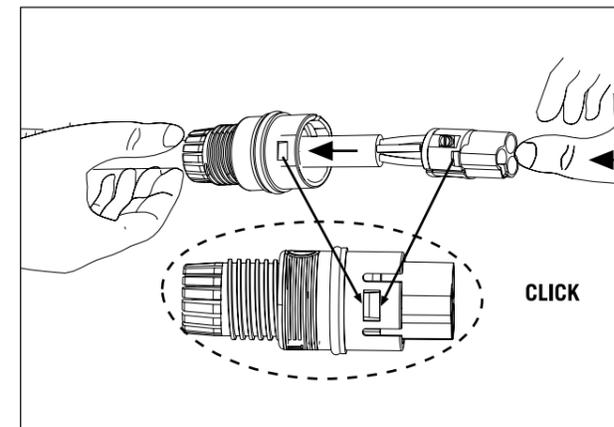
Strip the rubber jacket of the cable, expose 25 mm of conductors. Mount the TH384 – socket connector.

Match

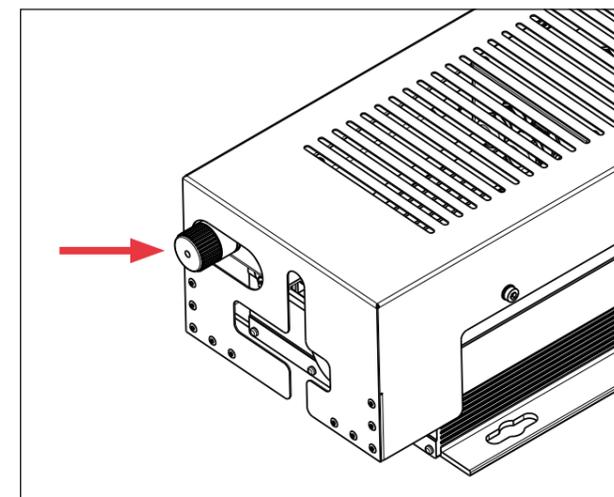
L → RED conductor (+ pole / DA)

N → BLUE conductor (- pole / DA).

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

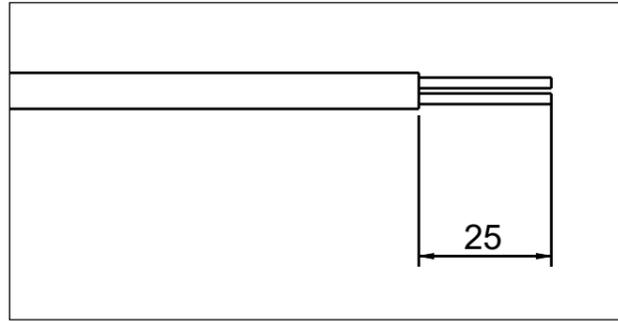


Insert the socket into the connector housing. Tighten the plastic nut to seal the cable with the connector grommet.



Remove the plastic cap to plug the control cable (2 poles, yellow connector).

## 14. Control connection 0-10V - Outdoor driver

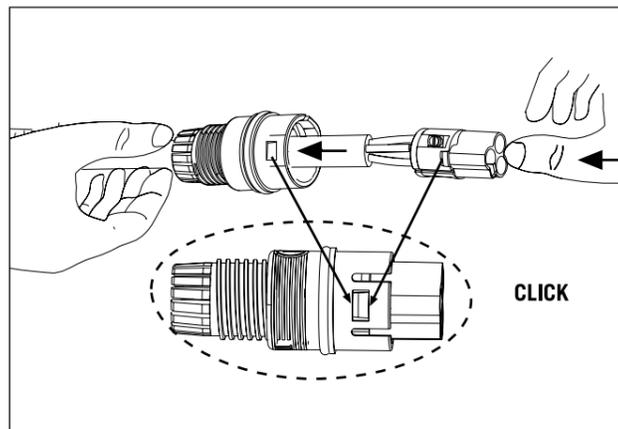


Strip the rubber jacket of the cable, expose 25 mm of conductors. Mount the TH384 – socket connector.

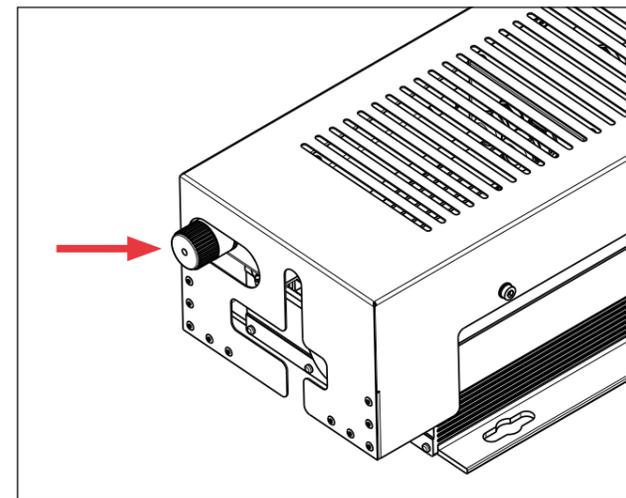
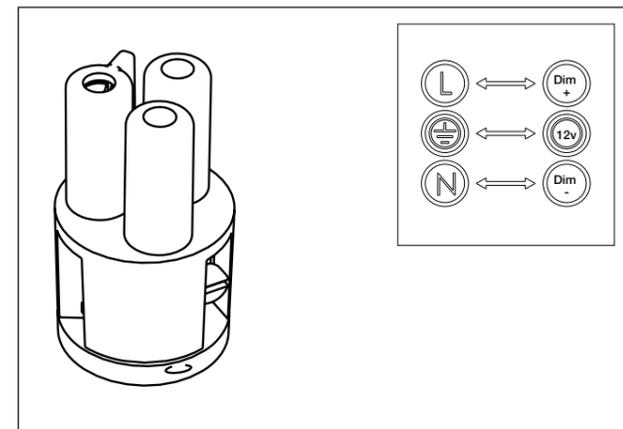
Match

- L → BROWN conductor (Dimming + pole)
- N → BLUE conductor (Dimming - pole)
- Ground pole → with the 12 V aux wire.

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

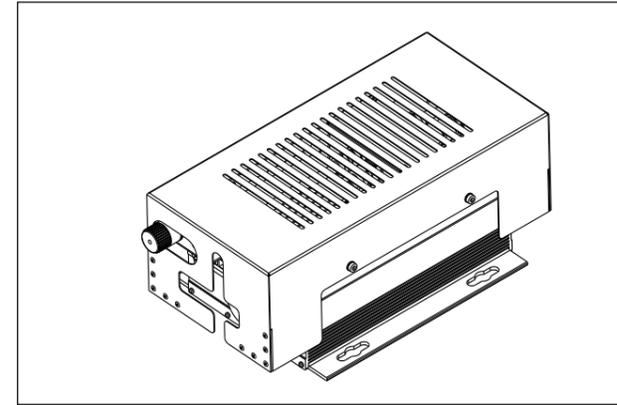


Insert the socket into the connector housing. Tighten the plastic nut to seal the cable with the connector grommet.

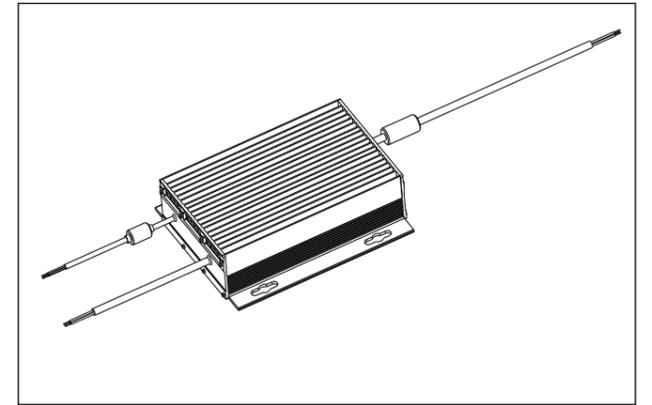


Remove the plastic cap to plug the control cable (3 poles, white connector).

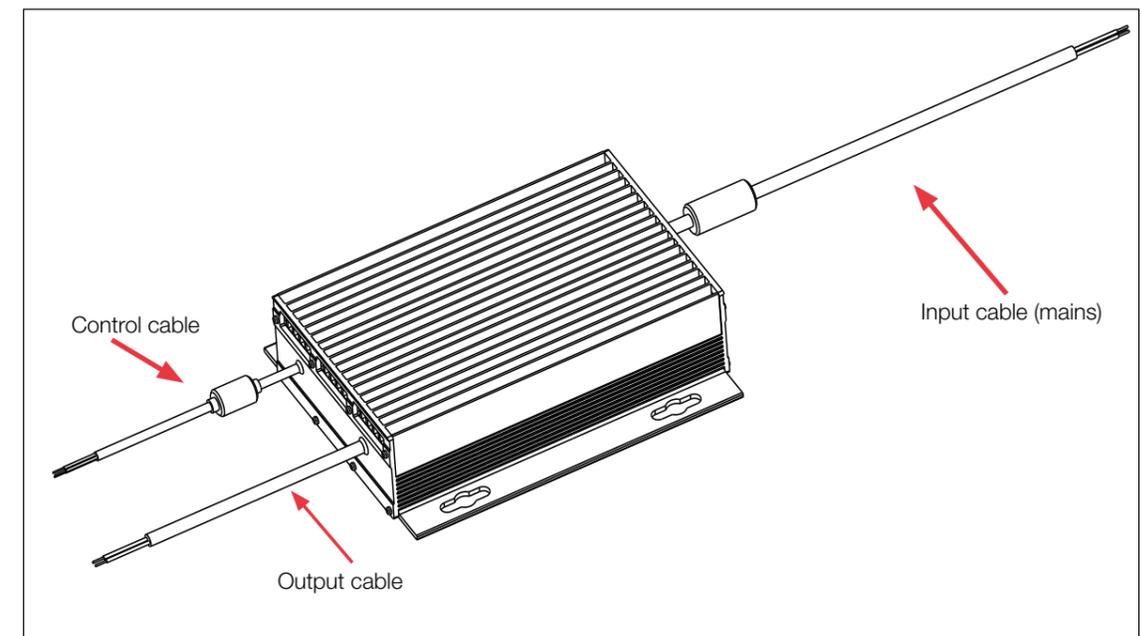
## 15. Cabinet driver



Outdoor layout



Cabinet layout



INPUT cable: this cable power supplies the driver. Its 3 wires have to match these connections:

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

OUTPUT cable: this cable power supplies the floodlight. This cable has 2 wires: brown (+) and blue (-). The connection has to be done in such a way that the 2 wires match these poles on the floodlight connector on the top of the mast:

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

CONTROL cable: this cable controls floodlight output through the control system. This cable has 3 wires: purple (dimming +), gray (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 Auxiliary output voltage (only if needed)

## 16. Electrical specifications

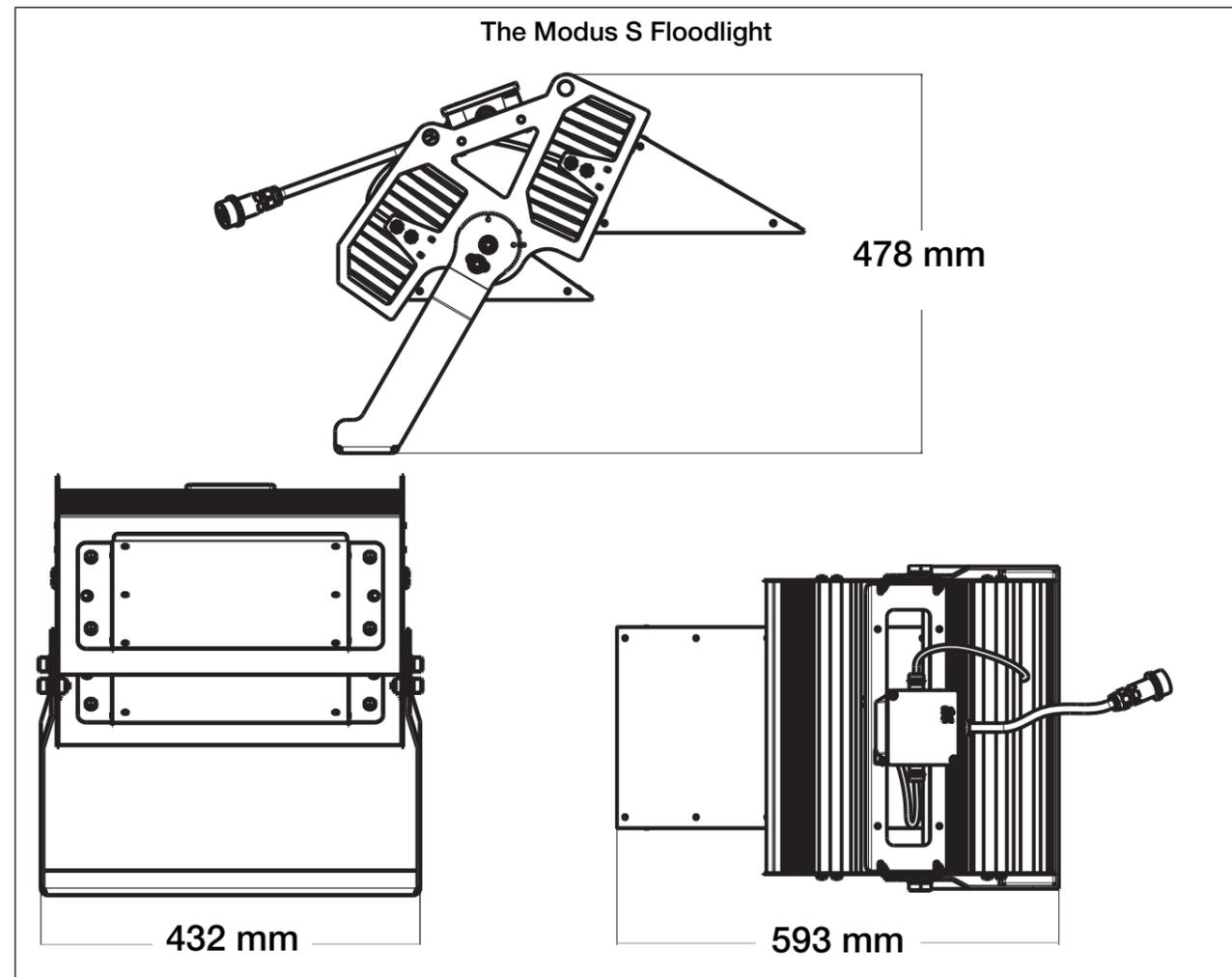
	Modus S 900	Modus S 1100
Input Voltage	200-480 Vac	200-480 Vac
Input Frequency	50 – 60 Hz	50 – 60 Hz
Absorbed Power	999 W	1180 W
Power Factor	0.97	0.97
Inrush Current (I <sub>2t</sub> )	37.5 A <sup>2</sup> s - for 1.18 ms*	37.5 A <sup>2</sup> s - for 1.18 ms*

\* at 220 V ac input, 25°C cold start, 10% I<sub>pk</sub> – 10% I<sub>pk</sub>

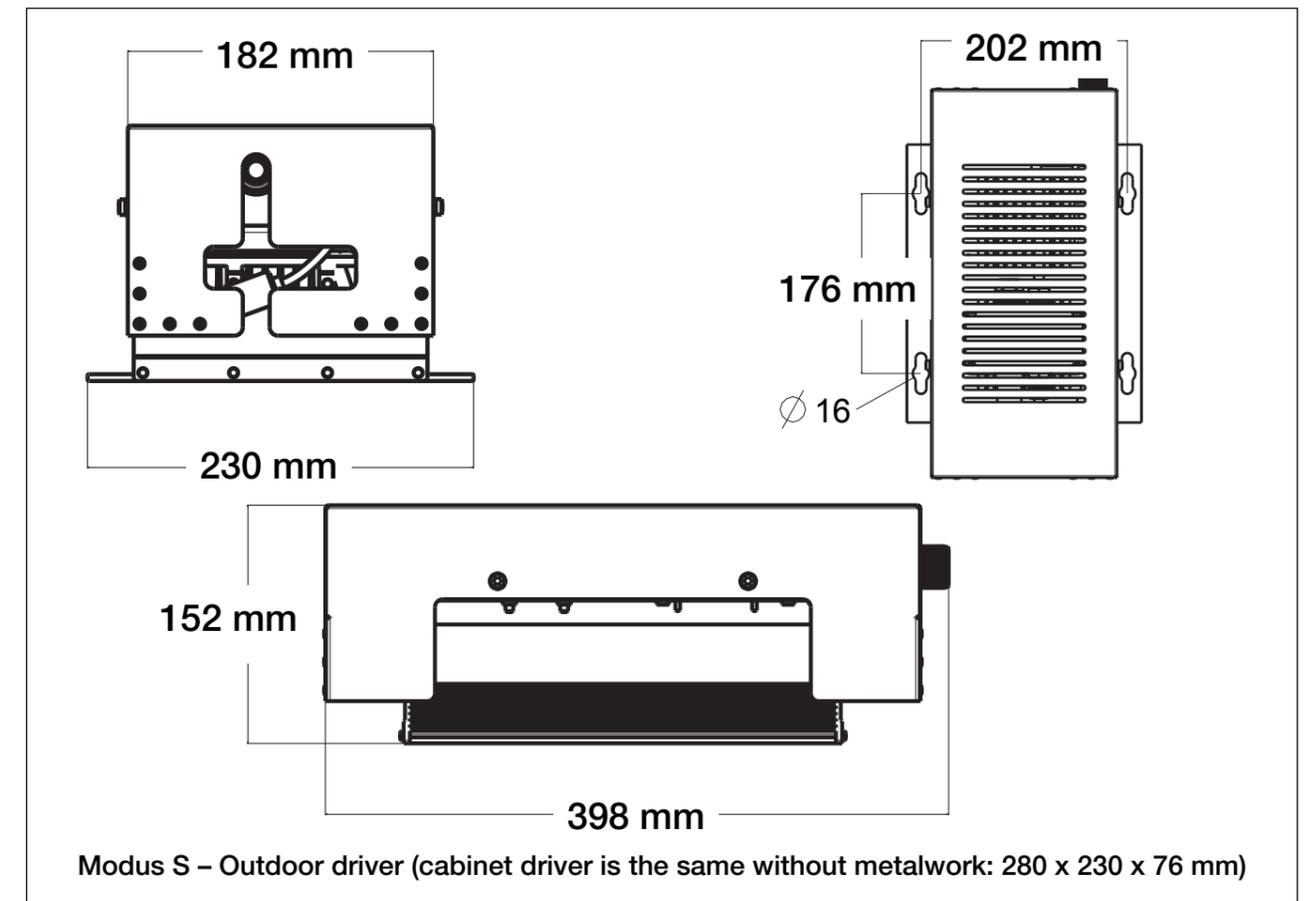
## 17. Weight and windage

	Modus S	Outdoor driver	Cabinet driver
Weight	20kg	9kg	6.5kg
Windage EPA	0.203m <sup>2</sup>	-	-

## 18. Dimensions



## 18. Dimensions

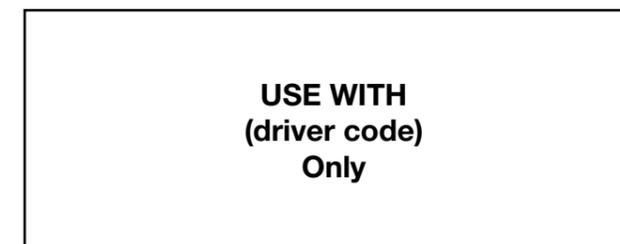


## 19. Driver/floodlight pairing

When you need to install multiple Midstream remote drivers and different models of floodlights with a different power range, please make sure you 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 with which the product must be paired.



Label on floodlight head box



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	MS09xxxxEUxxxxx	MDEU12xx54
Modus S 1100	MS11xxxxEUxxxxx	MDEU12xx60

**For translations, digital versions or more information please head to**

[www.midstreamlighting.com/installation-guides](http://www.midstreamlighting.com/installation-guides)



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