ROOF MAKER

WORLD CLASS ROOFLIGHTS

PRODUCT SPECIFICATION AND INSTALLATION GUIDE

HINGED OPENING FLAT ROOFLIGHT

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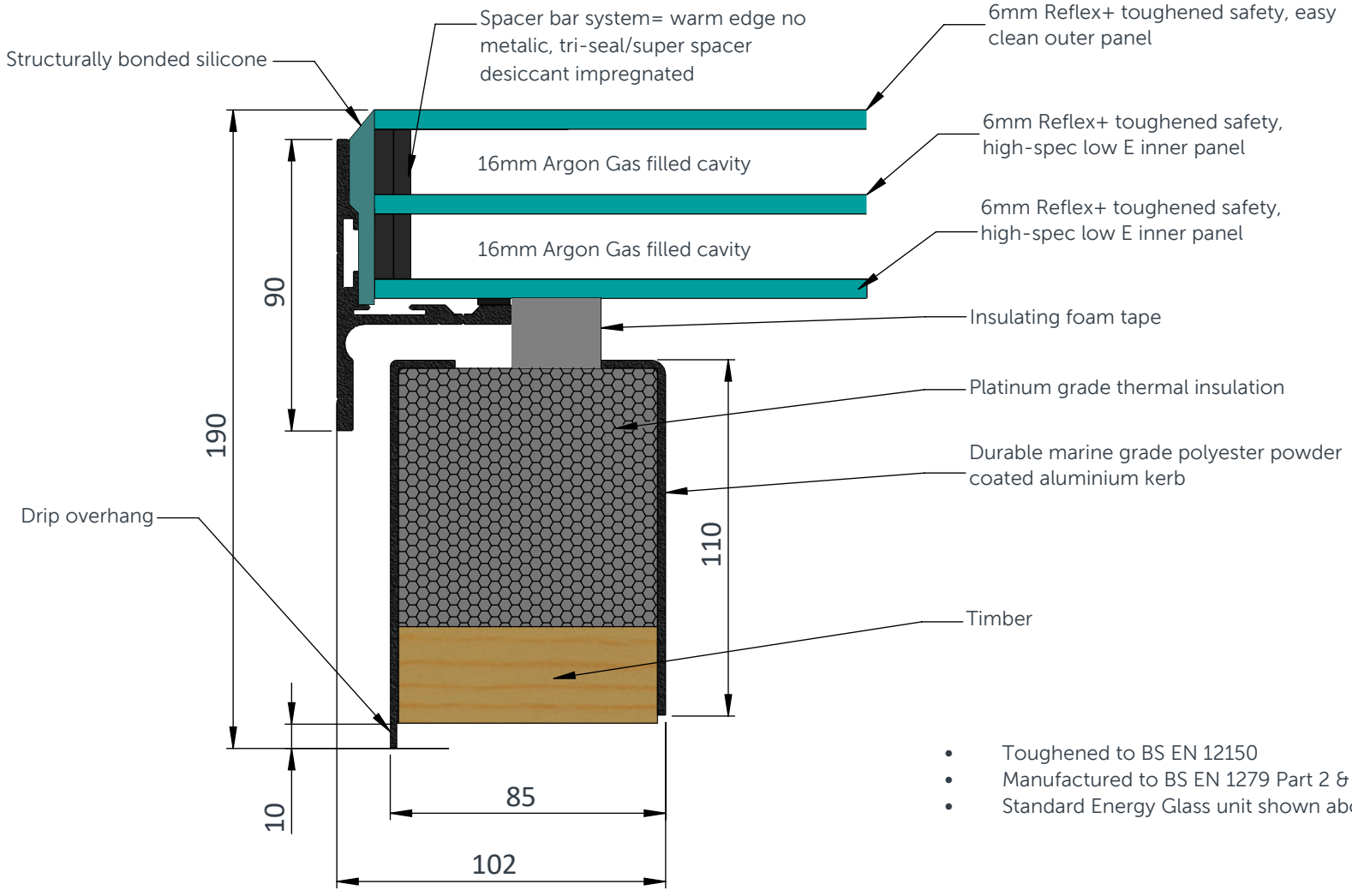
HINGED OPENING FLAT ROOFLIGHT: STANDARD PRODUCT SPECIFICATION



- Toughened to BS EN 12150
- Manufactured to BS EN 1279 Part 2 & 3
- Standard Energy Glass unit shown above

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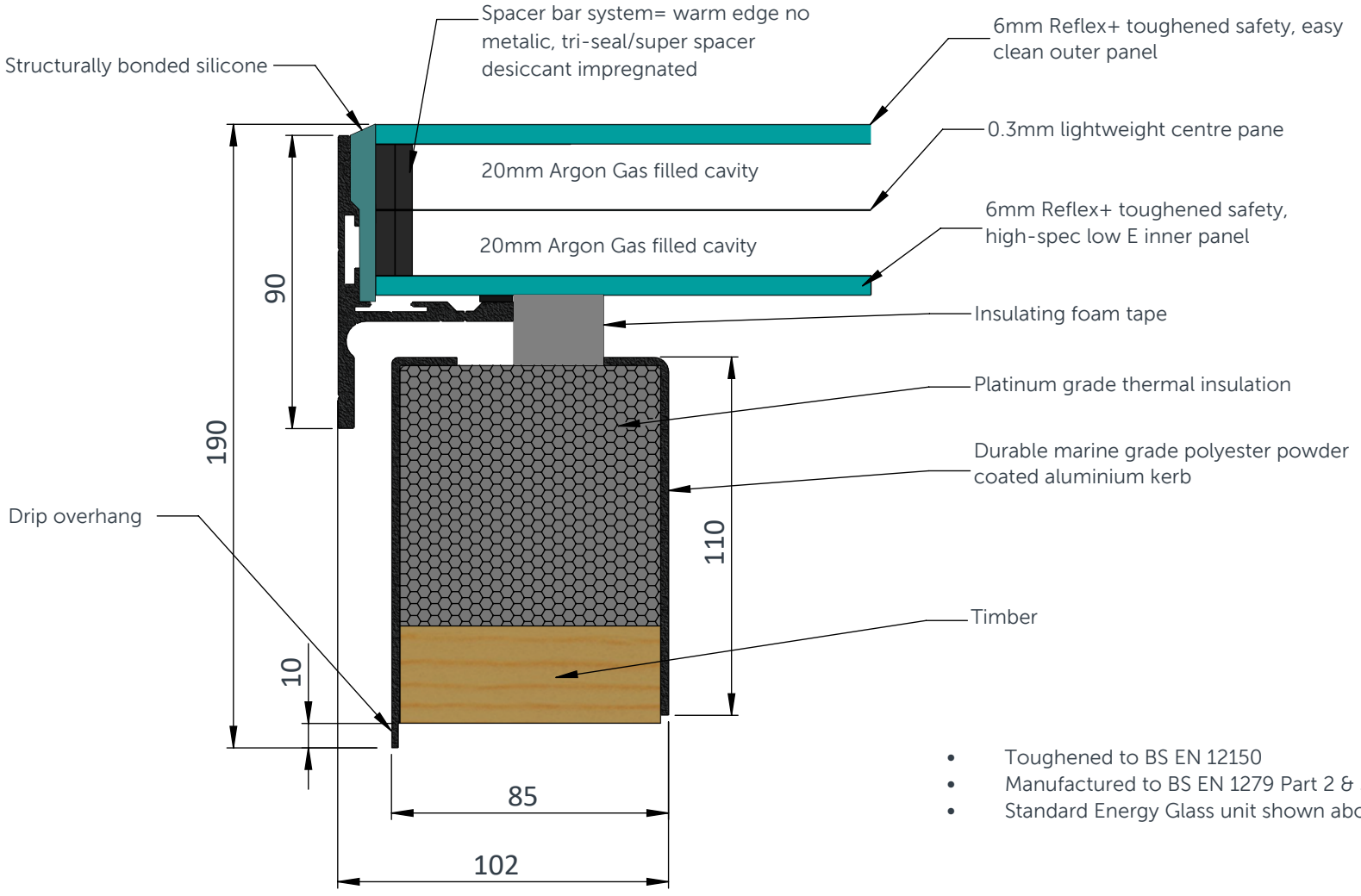
HINGED OPENING FLAT ROOFLIGHT: PRODUCT SPECIFICATION

(LARGER ROOFLIGHTS WITH LIGHTWEIGHT GLAZING UNIT)



- Toughened to BS EN 12150
- Manufactured to BS EN 1279 Part 2 & 3
- Standard Energy Glass unit shown above

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HINGED OPENING FLAT ROOFLIGHT: INSTALLATION GUIDE

ON DELIVERY OF YOUR NEW HINGED OPENING FLAT ROOFLIGHT, IN ADDITION YOU WILL RECIEVE;

**IF REMOTE CONTROLLED WITH A RAIN SENSOR...*

- Control box (200mm x 120mm x 75mm) with 3 pin power flex
- Remote control and key fob remote
- Long Screws for fixing the rooflight to the timber kerb

The Rain sensor comes pre-mounted to the rooflight as mentioned in the guide

**IF ROCKER SWITCH CONTROLLED...*

- Rocker switch
- Long Screws for fixing the rooflight to the timber kerb

**All additional accessories and components will come with your rooflight delivery and be packaged in a cardboard box.*

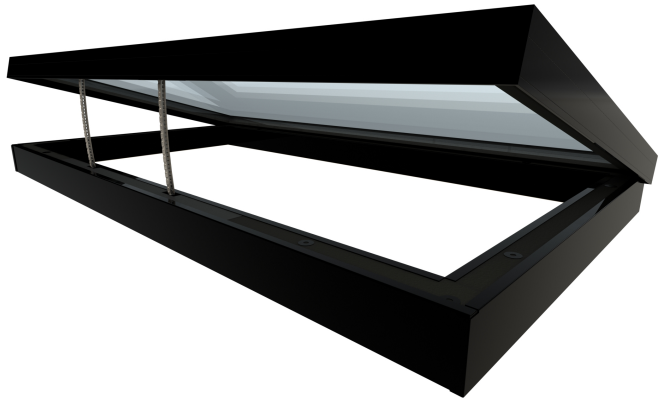
IN ADDITION TO YOUR NEW HINGED OPENING FLAT ROOFLIGHT, YOU WILL NEED;

- Silicone Adhesive Sealant (high quality; Dow Corning 791 recommended)
- Drill, bits and screws as required
- Materials to prepare a timber kerb

INSTALLATION GUIDE

Make sure to read through all steps and understand all requirements before beginning assembly. We also recommend that you study the 'cable location guide' which provides further guidance on how to run the rooflight cabling into the property as part of the installation. This is located at the end of this guide, alongside the wiring guide and a roof section diagram.

Please take precaution when moving heavy objects and working at height. Be sure to use the correct equipment. Guide weights based on size, are shown on the chart to the right.



GUIDE WEIGHTS	
Size (mm)	Weight (kg)
500x400	33
700x700	57
1000x1000	93
1500x1000	127
2000x1000	161
2500x1000*	152
3000x1000*	178
1500x1200	146
2000x1200*	143
2500x1200*	173
1500x1500*	173

**rooflights in this size are constructed using lightweight triple glazed units*

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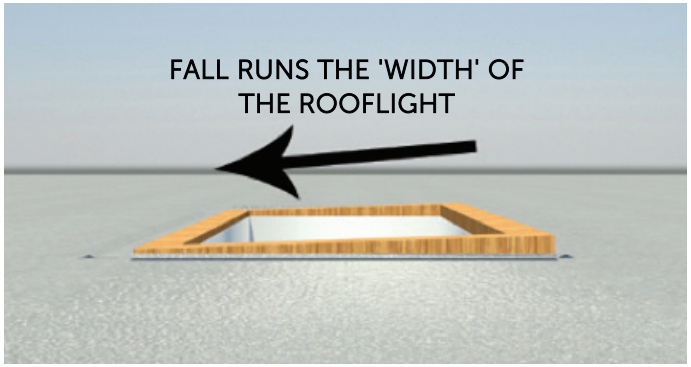
STEP ONE

PREPARE A TIMBER KERB FOR YOUR ROOFLIGHT

Prepare a 70mm width timber kerb for your rooflight. This should be a minimum of 30mm in height from the finished roof level (at the lowest side). The internal dimensions of your kerb should match the internal dimensions of the rooflight/ size ordered.

SETTING THE DIRECTION OF THE FALL

The rooflight always opens across the 'width' of the rooflight, so the hinges and motors will always be located on the longer sides of the rooflight, which are the sides that should be set 'level.'

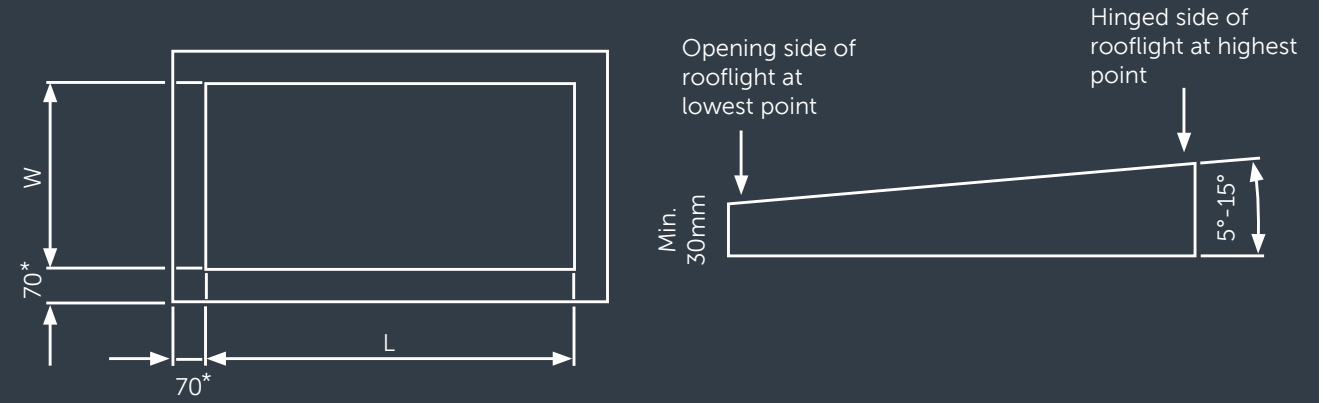


Your hinged opening rooflight needs to be pitched between 5°-15° for rain to run off. If your roof does not have this pitch, build the angle into your kerb.

IMPORTANT - You will also need to ensure that the hinged side of your rooflight is located at the highest side of the timber Kerb, with the opening side being located at the lowest side of the timber kerb. For remote controlled rooflights, the rain sensor will be located on the opening side.

It is also important that the hinged side of the rooflight and the side that opens (rain sensor side) are set 'level,' with the sides that are pitched between 5°-15° running between these 2 sides.

Timber Kerb Dimensions (mm)

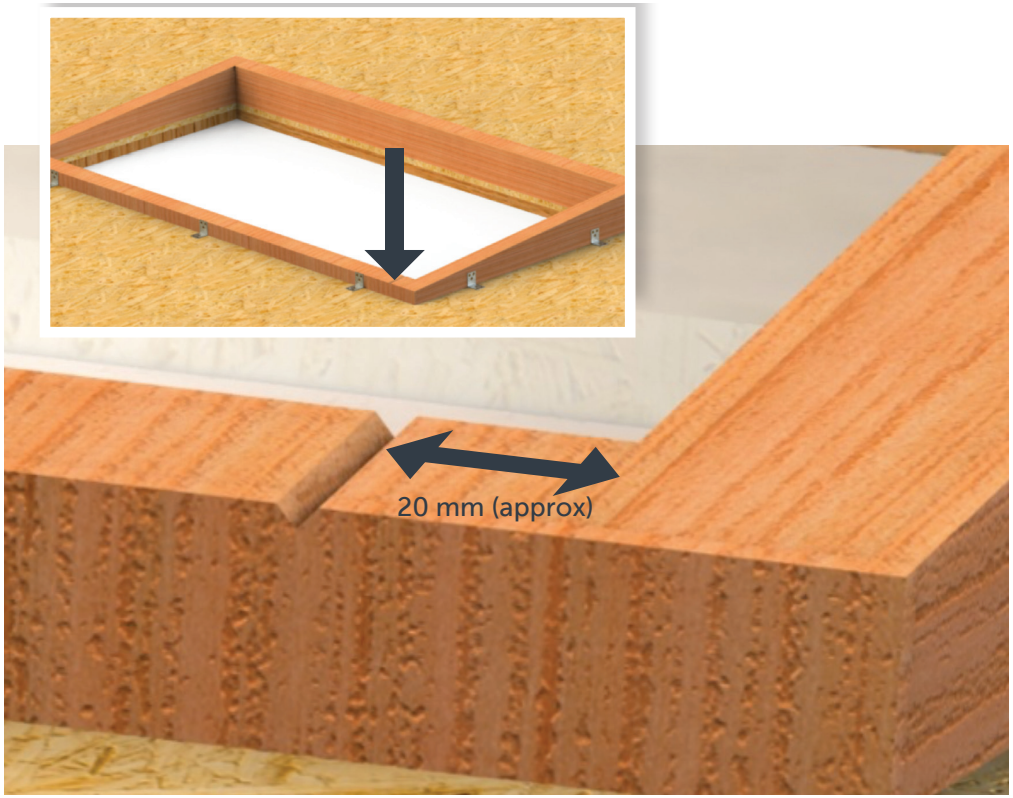


**IMPORTANT - Width of timber kerb must not exceed 70mm as this will affect the performance of the integrated drip lip on your rooflight.*

STEP TWO

RAIN SENSOR (FOR REMOTE CONTROLLED/RAIN SENSOR ROOFLIGHTS ONLY)

It is advised that a small groove/notch (5mm max depth) is cut into your kerb in line with where the rain sensor will be positioned. This will allow you to run the wire through for your rain sensor. *The rain sensor is always located at the right hand side as the below diagram shows.*

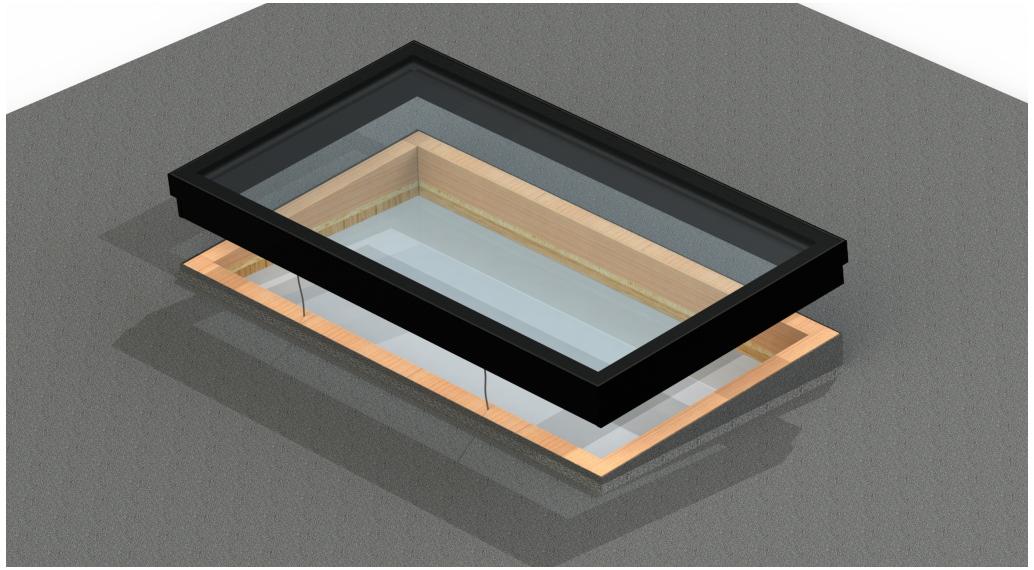


STEP THREE

CREATE HOLES/GROOVES IN THE TIMBER KERB TO RUN THE ROOFLIGHT CABLING INTO THE PROPERTY

Trial fit your rooflight and mark a suitable location to drill a hole/s or create notches for the rooflight's actuator cables - *Please refer to the cable location guide located on page 11 of this document, if you have opted for the remote controlled/rain sensor option. This gives advice as to where we recommend the control box can be located within the property.*

You do not need to refer to this guide if you have a rocker switch controlled rooflight. For switch controlled rooflights, you will just be extending the actuator cable/s to your chosen location of the rocker switch in the room below.

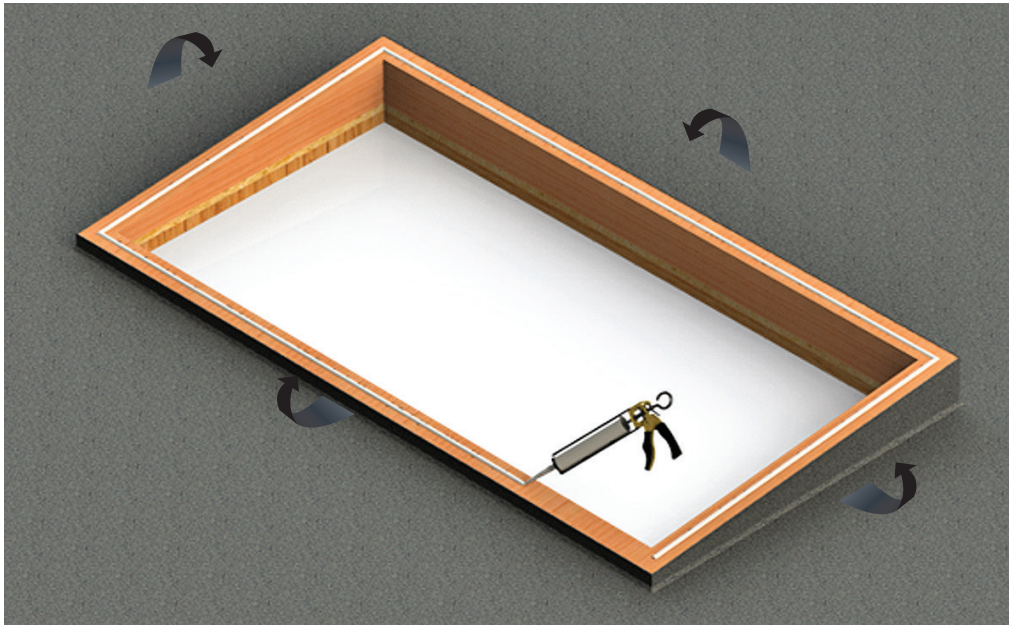


STEP FOUR

APPLY SILICONE AROUND THE TOP FACE OF THE TIMBER KERB

Apply the flashing/roof membrane to the sides of the kerb (Leaving the top face as exposed timber) and apply a thick bead of silicone around the top face, closer to the outside edge of the kerb.

You can now place the rooflight onto the kerb and connect it to the power supply, ready to open the rooflight and fix it with the provided long screws. The wiring guides for both rocker switch and remote controlled variations, can be found at the end of this document.

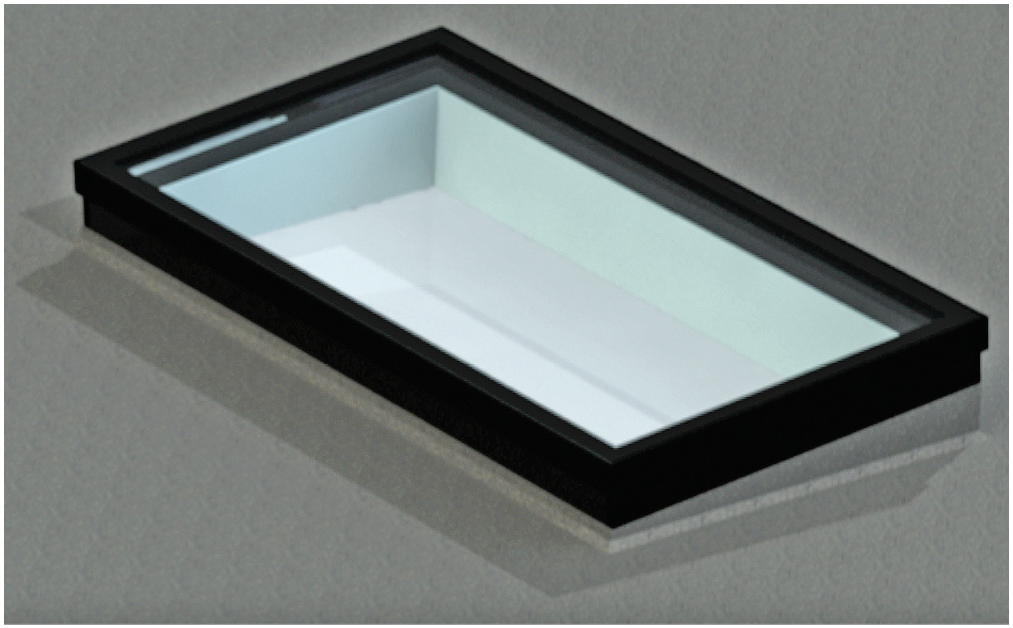


STEP FIVE

SCREW FIX THE ROOFLIGHT TO THE TIMBER KERB

Open the rooflight via the remote control/rocker switch and secure it to your kerb through the preformed holes in the top of the rooflight's base frame with the long screws*. For plastering finish guidelines, please follow the roof section fitting guide, on page 7 of this document. **Your Hinged Opening Flat Rooflight is now fully installed.**

***Wiring guides for both rocker switch controlled and remote controlled rooflights can be found on pages 8-16.**



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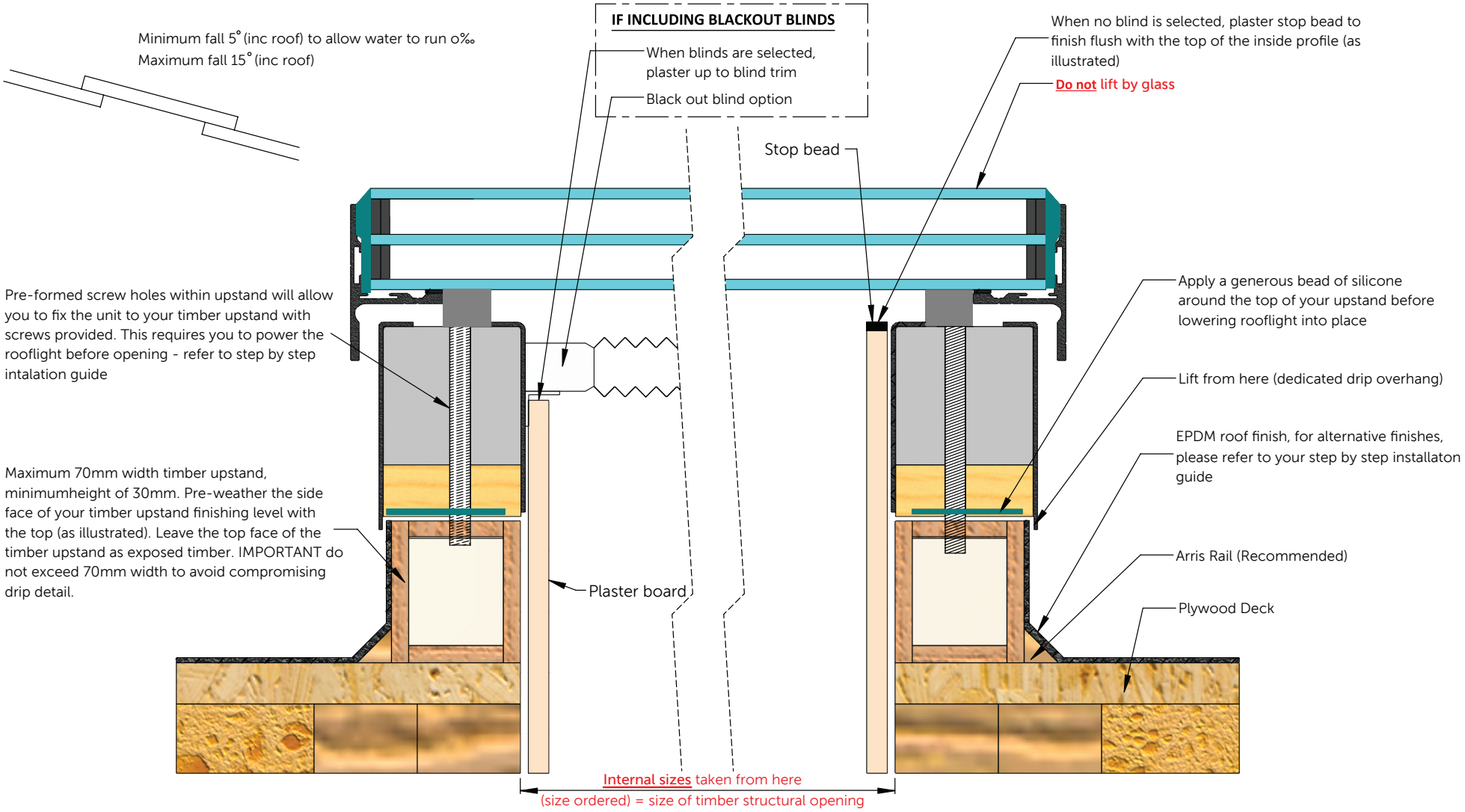
ROOF SECTION FITTING GUIDE



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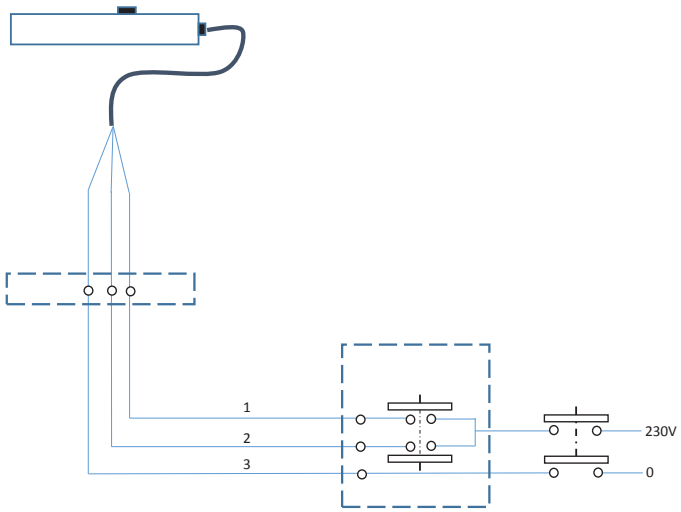
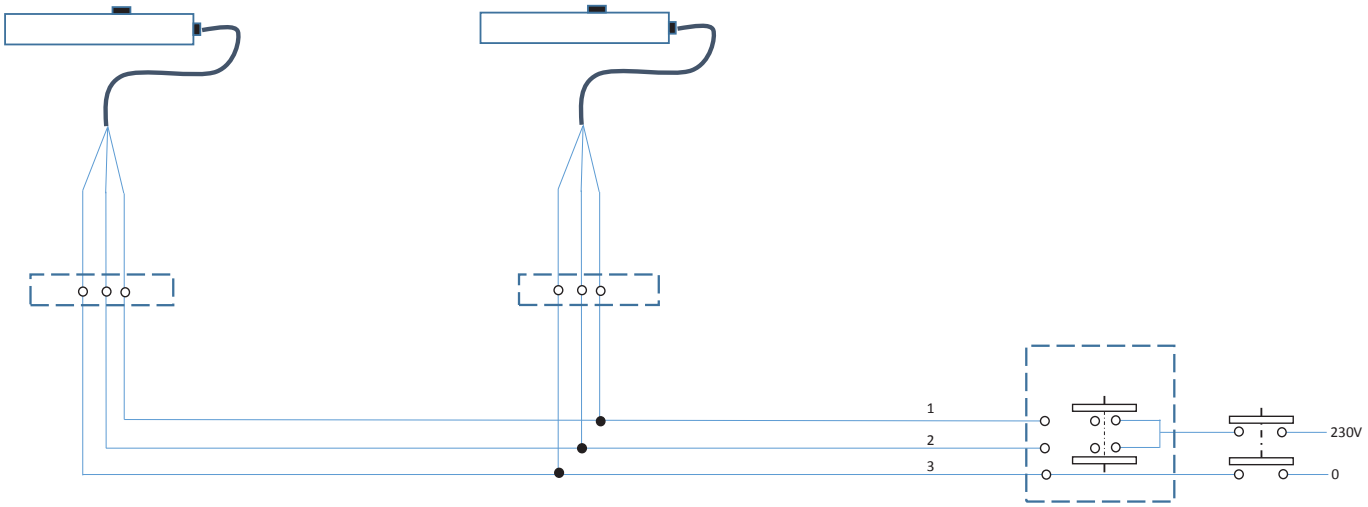
ROCKER SWITCH WIRING DIAGRAMS (3 CORE)

NOTE: THE TYPE OF MOTOR YOU RECEIVE IS JUSTIFIED BY THE SIZE OF THE ROOFLIGHT ORDERED.

3 CORE - SINGLE MOTOR



3 CORE - MULTIPLE MOTORS



Colour	Number	Signal
Brown	1	Opens
Black	2	Closes
Grey/Blue	3	Common

Refers to both single and multiple motors.

Please note - We provide a white plastic rocker switch when you have opted for a rocker switch controlled rooflight. If you would like to replace this for something that matches the remaining switches you have in the property, please ensure that it is a '2 way and off' retractive switch, that springs back to the central (off) position.

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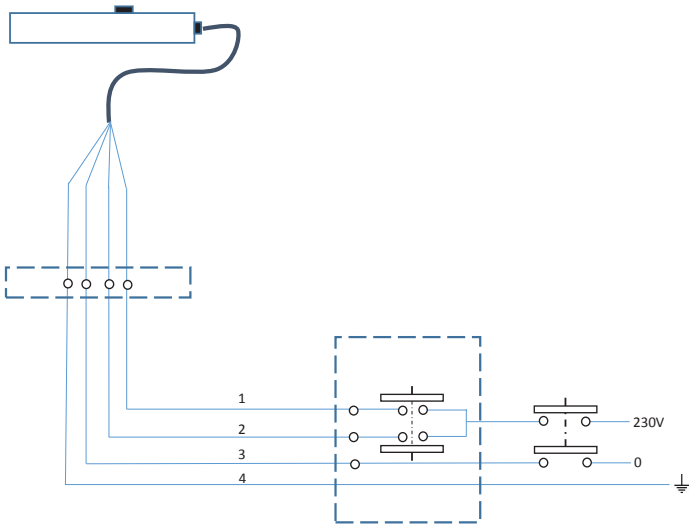
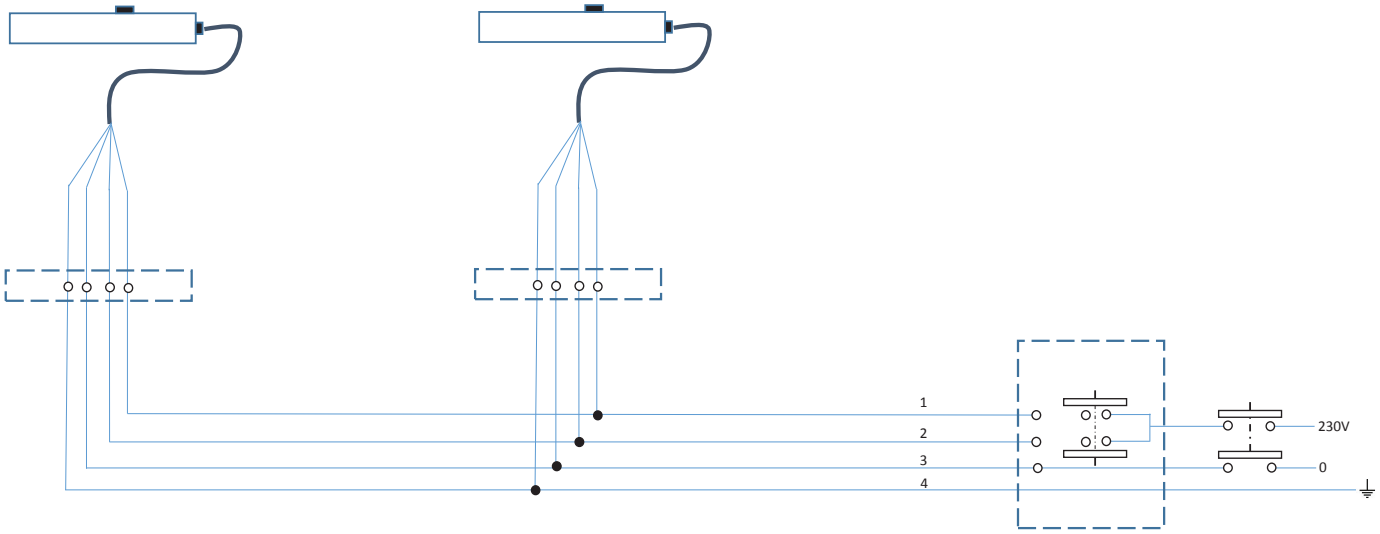
ROCKER SWITCH WIRING DIAGRAMS (4 CORE)

NOTE: THE TYPE OF MOTOR YOU RECEIVE IS JUSTIFIED BY THE SIZE OF THE ROOFLIGHT ORDERED.

4 CORE - SINGLE MOTOR



4 CORE - MULTIPLE MOTORS



Colour	Number	Signal
Brown	1	Opens
Black	2	Closes
Blue	3	Common
Yellow/Green	4	Ground

Refers to both single and multiple motors.

Please note - We provide a white plastic rocker switch when you have opted for a rocker switch controlled rooflight. If you would like to replace this for something that matches the remaining switches you have in the property, please ensure that it is a '2 way and off' retractive switch, that springs back to the central (off) position.

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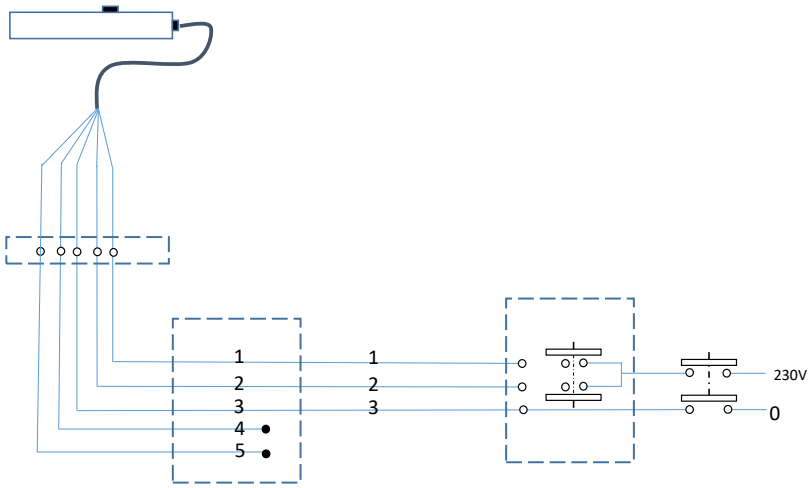
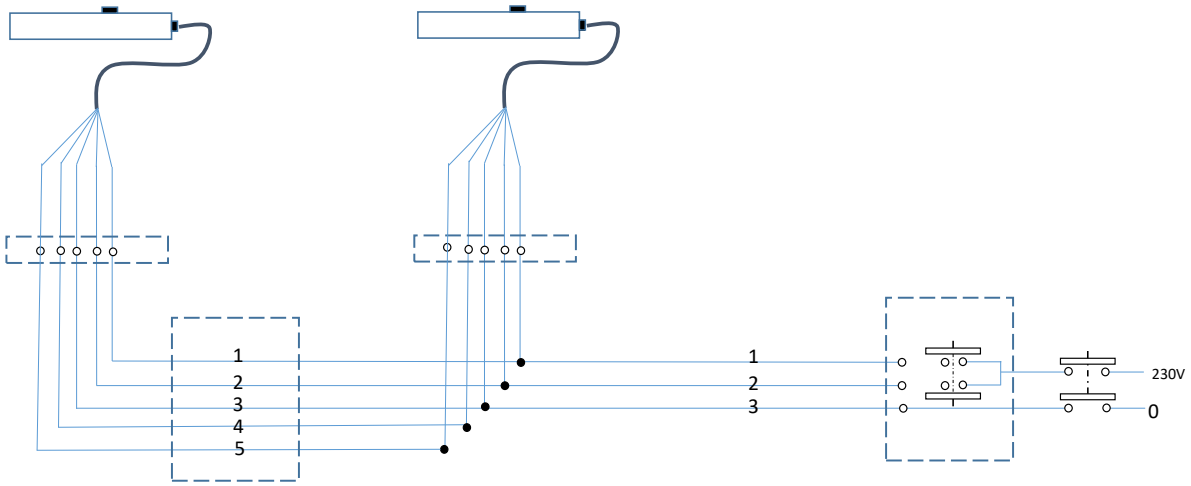
ROCKER SWITCH WIRING DIAGRAMS (5 CORE)

NOTE: THE TYPE OF MOTOR YOU RECEIVE IS JUSTIFIED BY THE SIZE OF THE ROOFLIGHT ORDERED.

5 CORE - SINGLE MOTOR



5 CORE - MULTIPLE MOTORS



Colour	Number	Signal
Brown	1	Opens
Black	2	Closes
Blue	3	Common
Red	4	Sync
White	5	Sync

Refers to both single and multiple motors.

Please note - We provide a white plastic rocker switch when you have opted for a rocker switch controlled rooflight. If you would like to replace this for something that matches the remaining switches you have in the property, please ensure that it is a '2 way and off' retractive switch, that springs back to the central (off) position.

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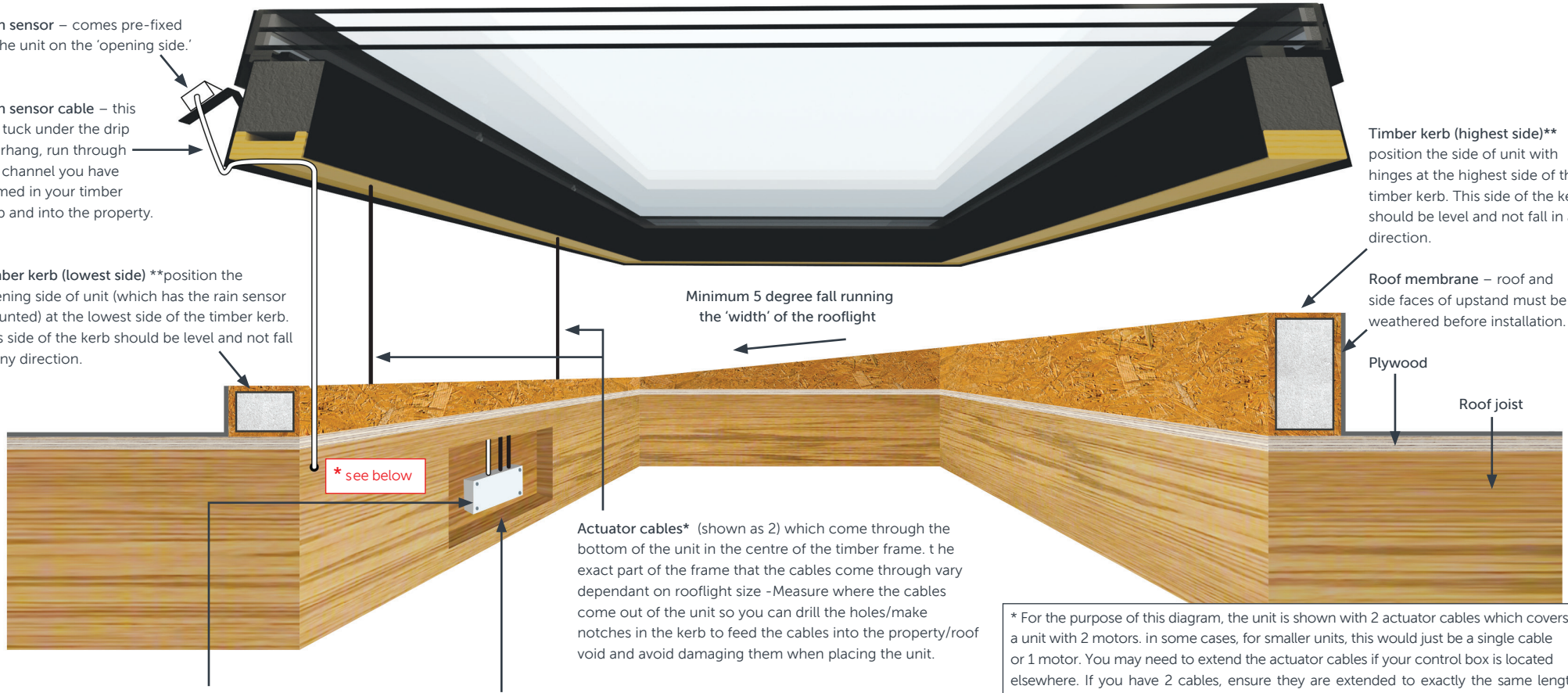
HINGED OPENING FLAT ROOFLIGHT - CABLE LOCATION GUIDELINES (not to scale)

(REMOTE CONTROLLED ROOFLIGHTS WITH RAIN SENSOR)

Rain sensor – comes pre-fixed to the unit on the 'opening side.'

Rain sensor cable – this will tuck under the drip overhang, run through the channel you have formed in your timber kerb and into the property.

Timber kerb (lowest side) **position the opening side of unit (which has the rain sensor mounted) at the lowest side of the timber kerb. t his side of the kerb should be level and not fall in any direction.



Actuator cables* (shown as 2) which come through the bottom of the unit in the centre of the timber frame. t he exact part of the frame that the cables come through vary dependant on rooflight size -Measure where the cables come out of the unit so you can drill the holes/make notches in the kerb to feed the cables into the property/roof void and avoid damaging them when placing the unit.

Control Box (200mm x 120mm x 75mm) – install this in the void of the roof, between the joists. t his is where your actuator cables and rain sensor cable will be wired in to when you have fed them through into the property. t his is powered by a standard 3 pin plug socket, which you will need to install into this area in advance, positioning within 400mm of the control box location. t he control box also acts as the remote receiver.

Optional access panel – we advise that you install an access panel where the control box is located when adding your plaster finish to the timber eveals. t his will maintain accessibility to the electronics for maintenance purposes in future.

* if you are running cables down the face of the timber reveal (as pictured here) and into the ceiling void, you will need to notch a channel to run the cable into, so the plasterboard will fit flush to the face f the timber (as per our finishin guidelines). t his will also apply if running the actuator cables down face of the timber reveal. please ensure you do not put fixings th ough the cabling when adding your plasterboard.

* For the purpose of this diagram, the unit is shown with 2 actuator cables which covers a unit with 2 motors. in some cases, for smaller units, this would just be a single cable or 1 motor. You may need to extend the actuator cables if your control box is located elsewhere. If you have 2 cables, ensure they are extended to exactly the same length. Ensure this is carried out by a qualified electrician. Cable thickness required will vary dependant on the length being added– this is covered in the wiring and cable extension guide.

**the timber kerb in this diagram is shown as being angled to give the required minimum 5 degree fall. In cases that the roof has a sufficient pitch and doesn't require an angled kerb, ensure that the opening part of the unit is still positioned at the lower part of the fall.

IMPORTANT ensure that the timber kerb doesn't exceed the recommended 70mm width.

REMOTE CONTROLLED ROOFLIGHTS: WIRING AND CABLE EXTENSION GUIDE

Wiring Guide - Control Box

The diagram below shows the PCB located inside the control box. The dimensions of the control box are 200mm x 120mm x 75mm and we advise this to be consealed but kept accessible, as explained in the seperate cable location guide. The diagram below explains how to connect the power supply, the rooflight actuator/s, rain sensor and also covers the wiring for an optional rocker switch, should this be required. There are various different types of actuator cabling, which will vary dependant on the type and size of the rooflight. These options can be found overleaf along with guidelines on how to wire them in to the motor output pairs.

Control Input/Outputs Key

GND: Ground (-ve)
12V: +12V DC regulated supply

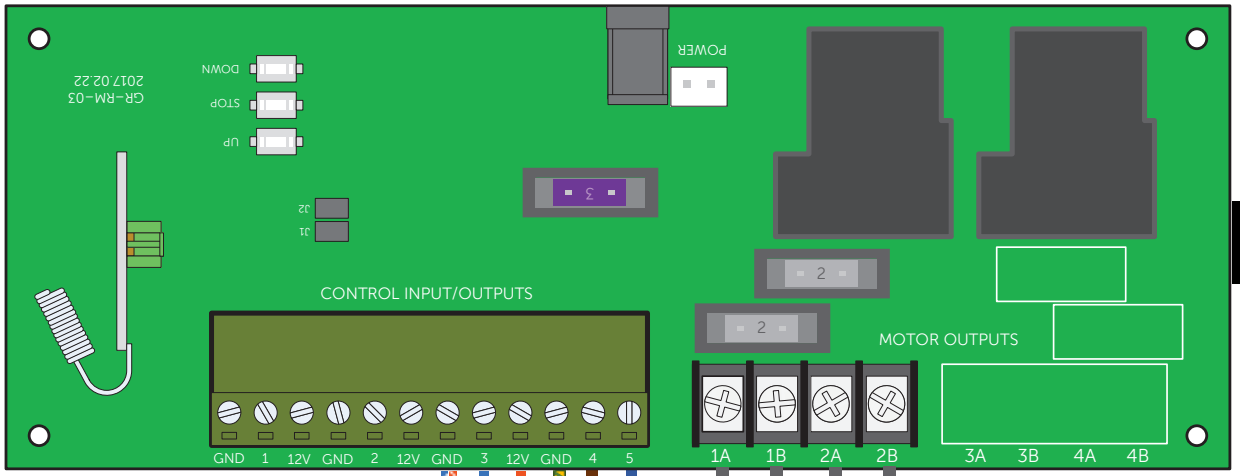
1: Safety Switch Signal Input
Connect to any ground, GND, to stop/switch off the output

2: Thermostat Signal Input
Connect to any ground, GND, to switch output to 'down'

3: Rain Sensor Signal Input
Connect to any ground, GND, to switch output to 'down'

4: Control up
Connect via switch any ground, GND, to switch output to 'UP'

5: Control down
Connect via switch any ground, GND, to switch output to 'DOWN'



Kemo Rain Sensor

Connect:
Orange to any "12V
Blue to "3"
Orange/white to any "GND"
Blue/white also to any "GND"

3-Pin Power Flex (500mm approx.)

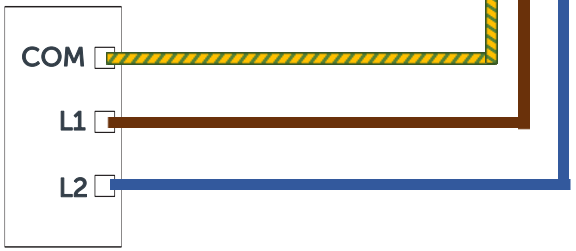
Use the provided 3-pin power flex cable to plug the control box in to the mains power supply. Please use the provided plug and do not remove to wire directly to the mains supply. We advise that you run the plug socket off a fused spur.

Motor Output Pairs to Actuator(s)

If only using one actuator then either of the output pairs 1A and 1B or 2A and 2B can be used. Each numbered output is individually fused and is capable of supplying up to 2.1A continuous at 24VDC. The polarity at each output inverts when swapping between 'up' and 'down'. Outputs 3 and 4 are not used **(cables here shown as grey – please see overleaf, which shows various types of cabling and where cables need to be wired into the output pairs, which is dependent on the type/size of rooflight being installed).**

Optional Rocker Switch Integration

Adding a rocker switch uses zero voltage switching and requires a '2 way and off' retractive switch, that springs back to the central (off) position when not engaged (can be provided as an additional extra). Connect L1 on the switch into number 4 (control up) and L2 into 5 (control down). Lastly, connect common on the switch to ground (GND) as the diagram to the right shows. A 1.5mm 'twin and earth' cable is sufficient for this.



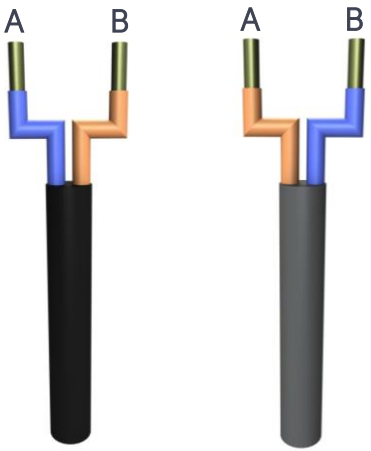
WARNING

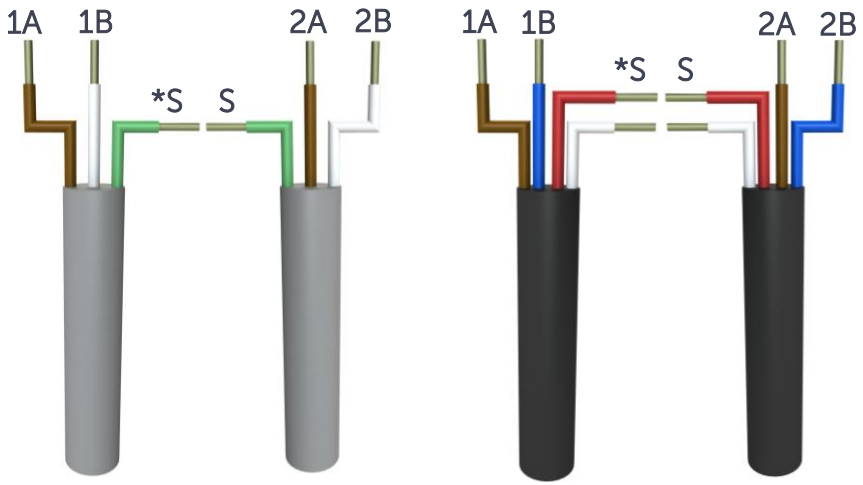
Ensure the combined load at the three "12V" output terminals does not exceed 1A. A single Kemo rain sensor should consume less than 0.2A, so if using a rain sensor there should be a further 0.8A available at 12VDC (~9W) to also operate thermostats, safety sensor switches and similar devices. DO NOT connect any 12V directly to any GND, or any of 1, 2, 3, 4, 5 to any 12V

REMOTE CONTROLLED ROOFLIGHTS: WIRING AND CABLE EXTENSION GUIDE

Wiring Guide - Actuator Cable Types

The table below shows the different types of actuator cabling provided when you have a remote controlled rooflight with a rain sensor. The cable type will vary dependant on the type and size of rooflight motor that is fitted. The table below has been broken down by rooflight type and provides advice on where to wire in to the motor output pairs inside the control box. If you need to extend either the actuator cables or rain sensor cable, we have instructions on how this can be done overleaf. We advise you follow these instructions to avoid experiencing voltage drop. You will need to extend the cables if you want to locate the control box further away from the rooflight than we advise in the cable location guide.

<table>
<tr><th>Slide Opening
Rooflights & Lanterns</th><th colspan="2">Hinged Opening Flat Rooflight & Hinged Opening Luxlite™
(cabling type varies dependant on required motor/s)</th></tr>
<tr><td> 
</td><td>2 core cable/s
 

If cabling is black
If cabling is grey</td><td>3 & 4 Core cable/s
 

* “S” Synchronisation wires to be connected to each other inside the control box</td></tr>
<tr><td>Slide opening flat rooflights and lanterns will always have 2 actuator cables. Wire in to the output pairs, as per the above diagram</td><td>The 2 core cable options will vary between black and grey cabling. Ensure that you wire into the control box as per the relevant diagram above, as it is important that the polarity is correct. Some rooflights will have a single cable and some will have 2 cables. For single motor rooflights with a single cable, you can use either the 1a/1b or 2a/2b output pairs. For units with 2 motors/cables, you will use both output pairs</td><td>The 3 and 4 core options of cable will feature 1 or 2 synchronisation cables. These must be connected inside the control box and wired in to the output pairs as per the above diagrams, when there are 2 motors and 2 cables.

In scenarios that there is a single motor & cable, the synchronisation cables will be redundant and you can use either the 1a/1b or 2a/2b output pairs.</td></tr>
</table>

REMOTE CONTROLLED ROOFLIGHTS: WIRING AND CABLE EXTENSION GUIDE

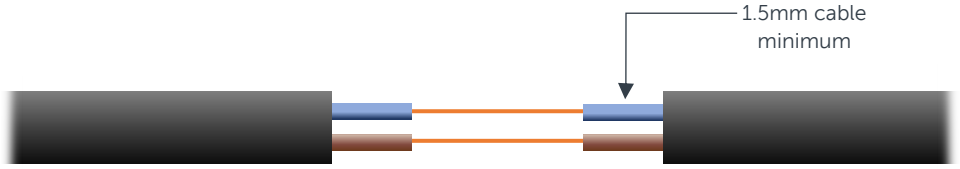
Cable Extension Guide

This guide explains how to extend the cabling for opening rooflights, which feature remote controlled operation and rain sensors. In some scenarios, dependant on where your rooflight is located and where you wish to place the control box, extending the cables might be a requirement. Your electrician must ensure that a suitable cable is used to avoid voltage drop occurring. This guide covers the **Slide Opening Rooflight and Lantern** and the remote-controlled versions of the **Hinged Opening Flat Rooflight** and **Hinged Opening Luxlite™.**

Here you will find guidance for extending cables up to a length of 15 metres. If you do need to extend further than 15 metres, please contact our technical department for advice.

The cable extension requirements for the rain sensor cable are outlined below and remain the same for all rooflights covered in this guide.

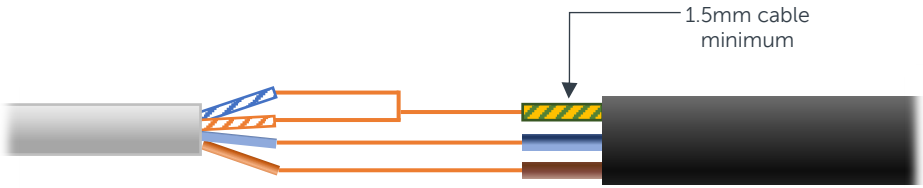
2 CORE ACTUATOR CABLE/S



For your extension cable, you will require a 2-core cable (minimum) with core cabling of a minimum 1.5mm diameter to avoid voltage drop, up to 10 metres. **If extending between 10-15 metres, use a minimum 2.5mm core cable.**

**If your rooflight has 2 actuator cables that need to be extended, please ensure they are extended to exactly the same length to avoid the motors operating at different speeds.*

RAIN SENSOR CABLE



Rain sensor cable will be a 4-core cable;
12-volt input (orange)
Signal (blue)
2 ground cables
(white/orange)
(white/blue)

For your extension cable, you will require a 3-core cable with core cabling of a minimum 1.5mm diameter to avoid voltage drop, up to 10 metres. **If extending between 10 -15 metres, use a minimum 2.5mm core cable.**

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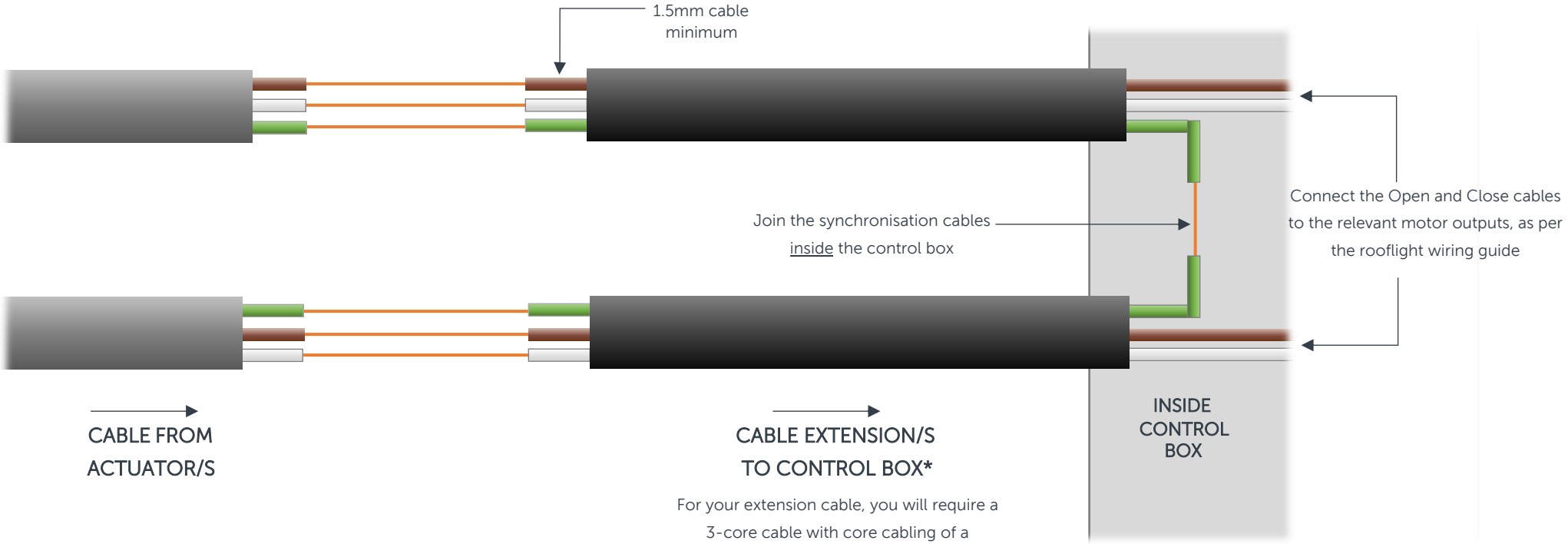
REMOTE CONTROLLED ROOFLIGHTS: WIRING AND CABLE EXTENSION GUIDE

3 CORE ACTUATOR CABLE/S

This is shown below as 2 cables to illustrate how the synchronisation cables are joined together inside the control box, when the rooflight has 2 actuators. Should you have a rooflight with just a single '3 core' cable from the actuator, the synchronisation (green) cable will be redundant



For your extension cable, you will require a 3-core cable with core cabling of a minimum 1.5mm diameter to avoid voltage drop. **If extending between 10 -15 metres, use a minimum 2.5mm core cable.**

**If your rooflight has 2 actuator cables that need to be extended, please ensure they are extended to exactly the same length to avoid the motors operating at different speeds.*

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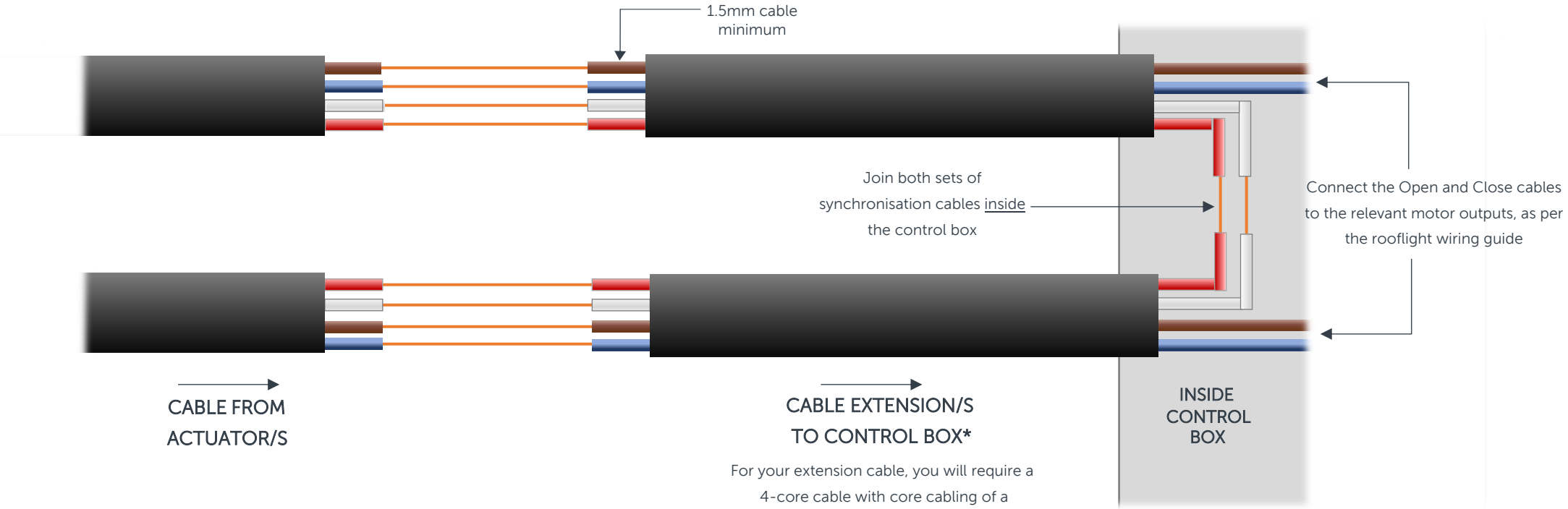
REMOTE CONTROLLED ROOFLIGHTS: WIRING AND CABLE EXTENSION GUIDE

4 CORE ACTUATOR CABLE/S

This is shown below as 2 cables to illustrate how both pairs of synchronisation cables are joined together inside the control box (when the rooflight has 2 actuators). Should you have a rooflight with just a single '4 core' cable from the actuator, the synchronisation (red and white) cables will be redundant.



For your extension cable, you will require a 4-core cable with core cabling of a minimum 1.5mm diameter to avoid voltage drop. **If extending between 10 -15 metres, use a minimum 2.5mm core cable.**

**If your rooflight has 2 actuator cables that need to be extended, please ensure they are extended to exactly the same length to avoid the motors operating at different speeds.*