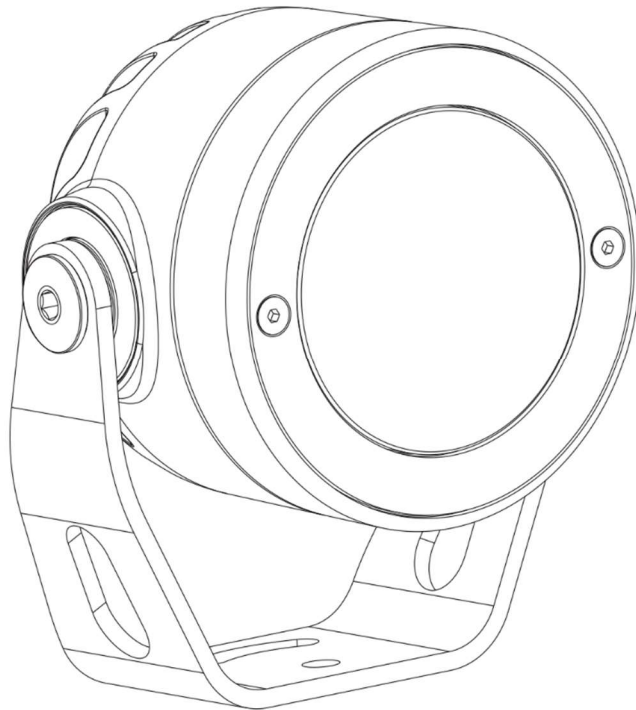


# Calumma XS MC Calumma XS SC



QR code for user manual



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**FOR YOUR OWN SAFETY, PLEASE READ THIS USER MANUAL CAREFULLY  
BEFORE POWERING OR INSTALLING YOUR Calumma !  
Save it for future reference.**

This device has left our premises in absolutely perfect condition. In order to maintain this condition and to ensure safe operation, it is absolutely necessary for the user to follow the safety instructions and warnings written in this manual.

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual or any unauthorized modification to the device.

Unauthorized modification will void warranty.

## 1. Safety instructions

**DANGEROUS VOLTAGE CONSTITUTING A RISK OF ELECTRIC SHOCK IS PRESENT WITHIN THIS UNIT!**

Always disconnect the fixture from power before cleaning, servicing or installing.

This fixture should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied, consult your authorized distributor or local power company.

Always disconnect the fixture from AC power before servicing or cleaning.

Make sure the power/data cable is not damaged by sharp edges.

Do not install the unit near an open flame.

Refer servicing to qualified service personnel.

Do not connect this fixture to a dimmer pack.

***LED light emission. Risk of eye injury. Do not look into the beam from a short distance without suitable protective eyewear. Do not look at LEDs with magnifiers or similar optical instruments that may concentrate the light output.***

The fixture was designed for outdoor use. This fixture must not be used for underwater installation.

When choosing the installation spot, please make sure that the fixture is not exposed to extreme heat or dust.

Avoid using the unit in locations subject to possible impacts.

The fixture body never must be covered with cloth or other materials when the fixture is under operation.

Only operate the fixture after having checked that the housing is firmly closed and all screws are tightly fastened.

The fixture becomes hot during operation. Allow the fixture to cool approximately 30 minutes prior to servicing or maintenance.

Operate the fixture only after having familiarized yourself with its functions. Do not permit operation by persons not qualified to operate the fixture. Most damages are the result of unprofessional operation!

Immunity of the equipment is designed for electromagnetic environments E1, E2, E3 according to the standard EN55103-2 ed.2 Electromagnetic compatibility. Product family standard for audio, video, audiovisual and entertainment lighting control apparatus for professional use. Part 2: Immunity.

The product (covers and cables) must not be exposed to a high frequency electromagnetic field higher than 3V/m.

The installation company should check levels of possible interferences above the tested levels E1,E2,E3 given by this standard (e.g. transmitters in surrounding area) before installing the equipment.

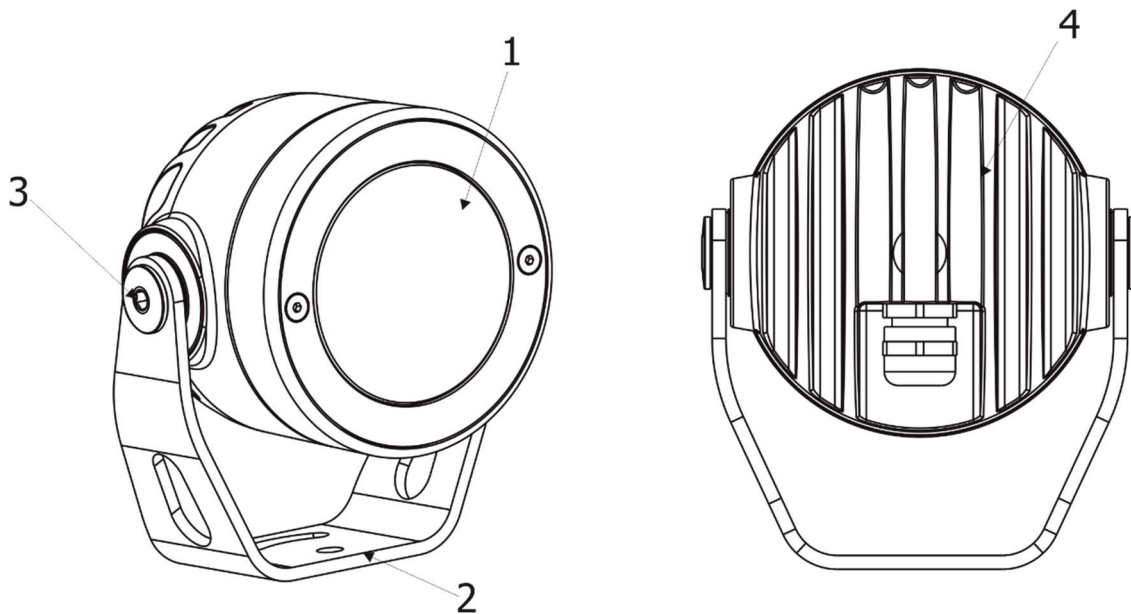
Emission of the equipment complies with the standard EN55032 Electromagnetic compatibility of multimedia equipment – Emission Requirements according to class B.

Please consider that unauthorized modifications on the fixture are forbidden due to safety reasons!

Please use the original packaging if the fixture is to be transported.

If this device will be operated in any way different to the one described in this manual, the product may suffer damages and the warranty becomes void. Furthermore, any other operation may lead to dangers like short-circuit, burns, electric shock etc.

## 2. Fixture exterior view



1. Transparent glass cover
2. Mounting yoke
3. Tilt adjusting lock
4. LED module with heat sink

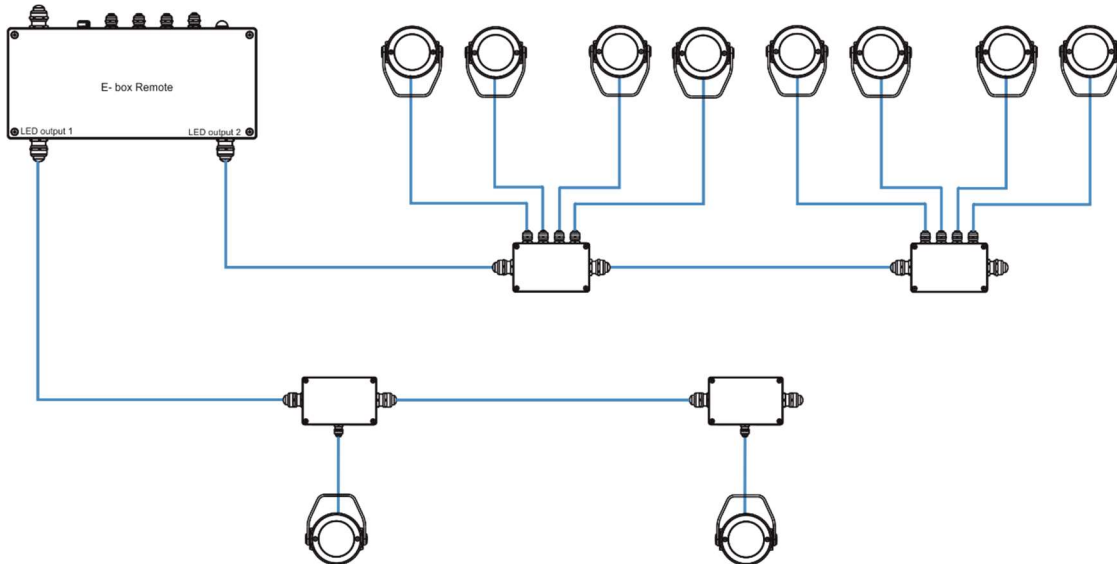
### 3. Control and connection

The Eminere Remote modules should be connected to the E-Box Remote or E-Box Remote basic via junction boxes.

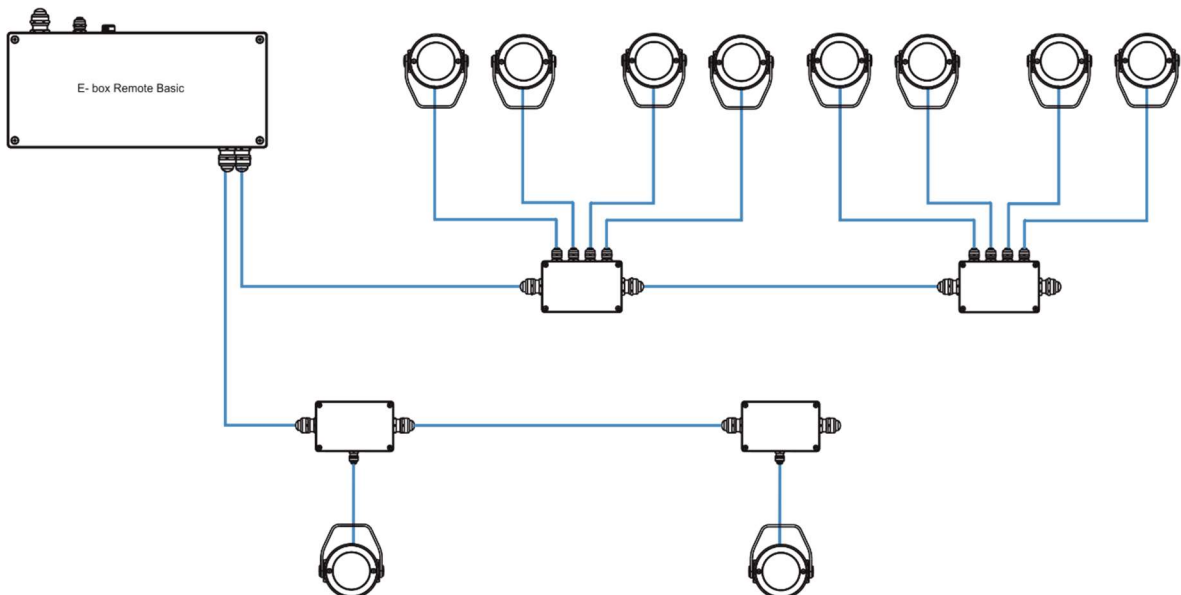


**The E-box Remote has to be switched to the Pass-Through mode.**

#### Example of connection with E-box Remote



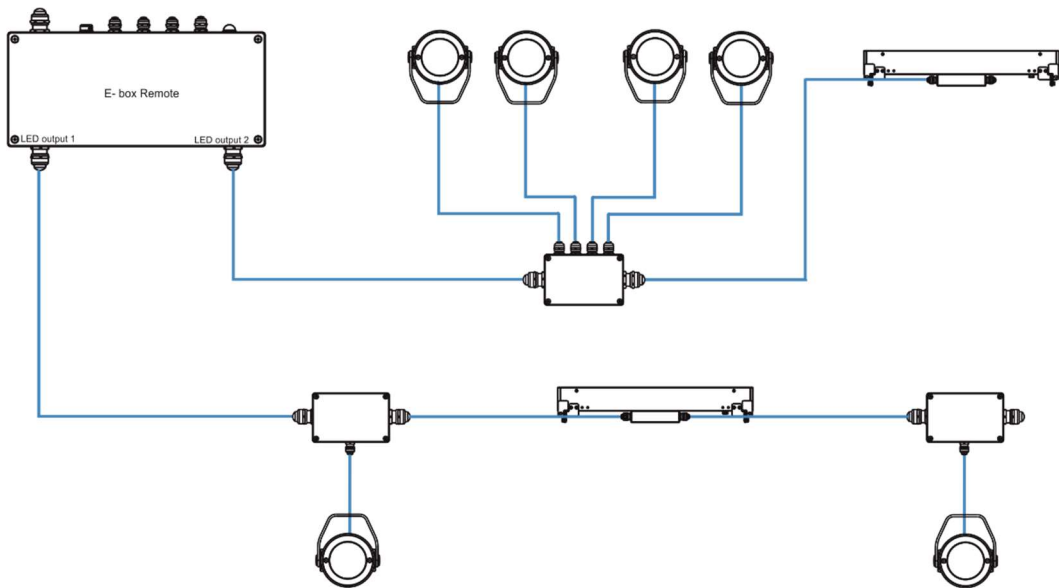
#### Example of connection with E-box Remote Basic



## Calumma XS

Note. Combination of Calummas XS and Emineres Remote is also possible.

Example:



From point of view of driver load (E-box Remote/E-box Remote Basic), max. number of Calummas connected to one E-box Remote/E-box Remote Basic is 40 but Calummas XS have to be operated in the Pass-through mode, it means that max. 32 Calummas XS can be connected in one string.

Max. number of Calummas XS connected to the E-box Remote/E-box Remote Basic also depends on cable length.

### E-box Remote

Cable length *	Max. number of Calummas XS
50 m	25 per output, 40 in total
100 m	20 per output, 40 in total

### E-box Remote Basic

Cable length *	Max. number of Calummas XS
50 m	25
100 m	20

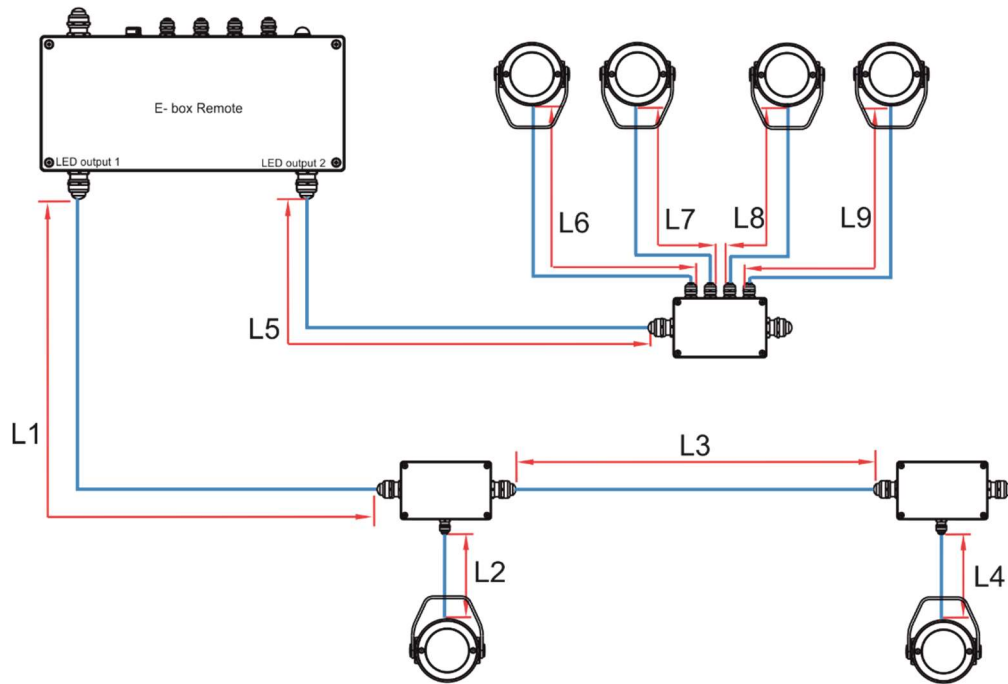
## Calumma XS

\* Cable length is a total cable length between one output of the E-box Remote (E-box Remote Basic) and last connected Calumma XS.

Example:

Total cable length(output 1)=L1+L2+L3+L4

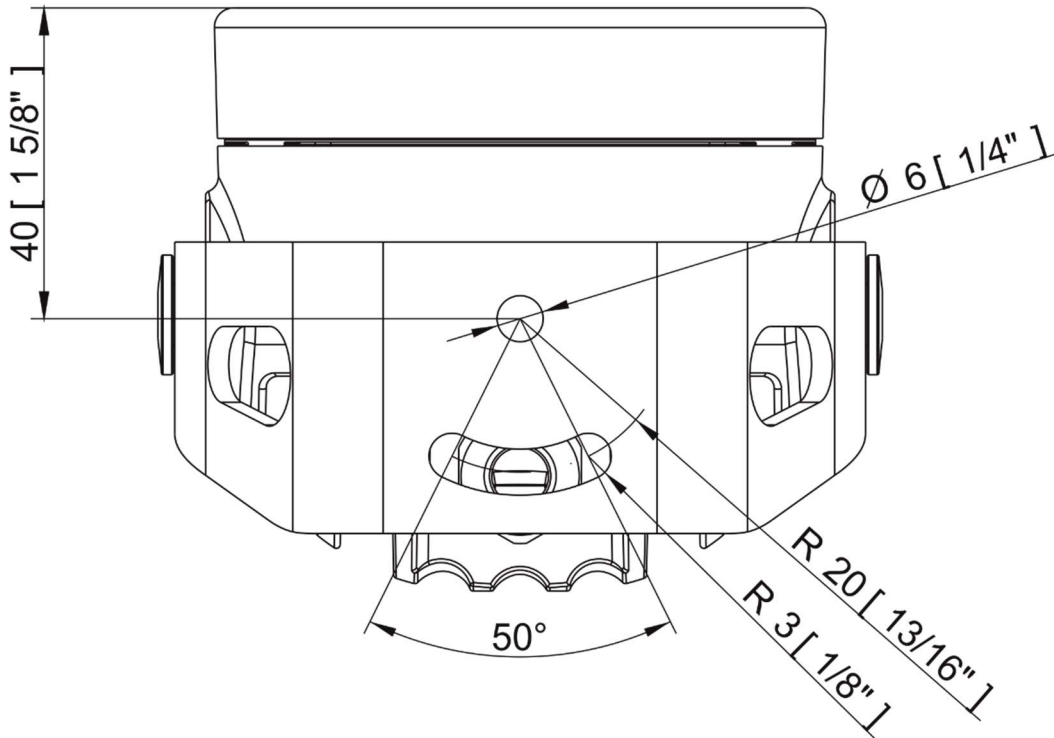
Total cable length(output 2)=L5+L6+L7+L8+L9



## 4. Installation

### 4.1 Mounting the fixture

The Calumma can be fastened in any orientation on a flat, non-flammable surface by means of mounting yoke (2).



The LED module (4) can be tilted  $+180^\circ/-180^\circ$ . Use an Allen key 2.5 for adjusting a LED module position.

**Ensure that the structure to which you are attaching the fixture is secure.**

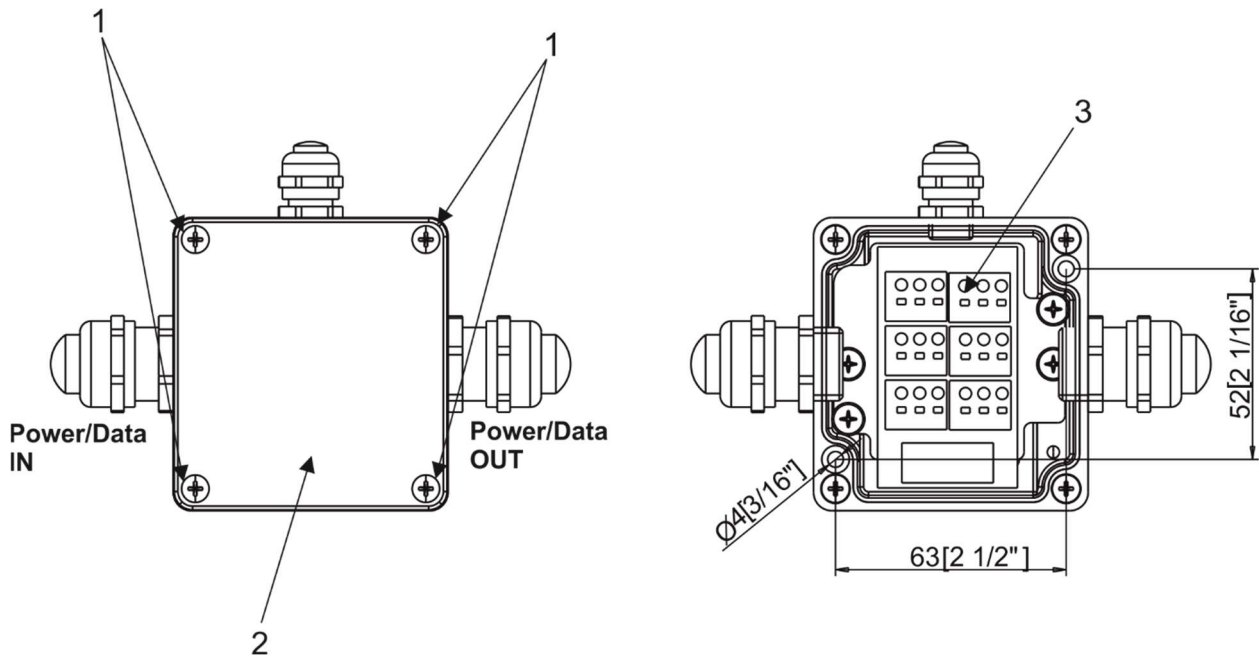


## 4.2 Connection to power

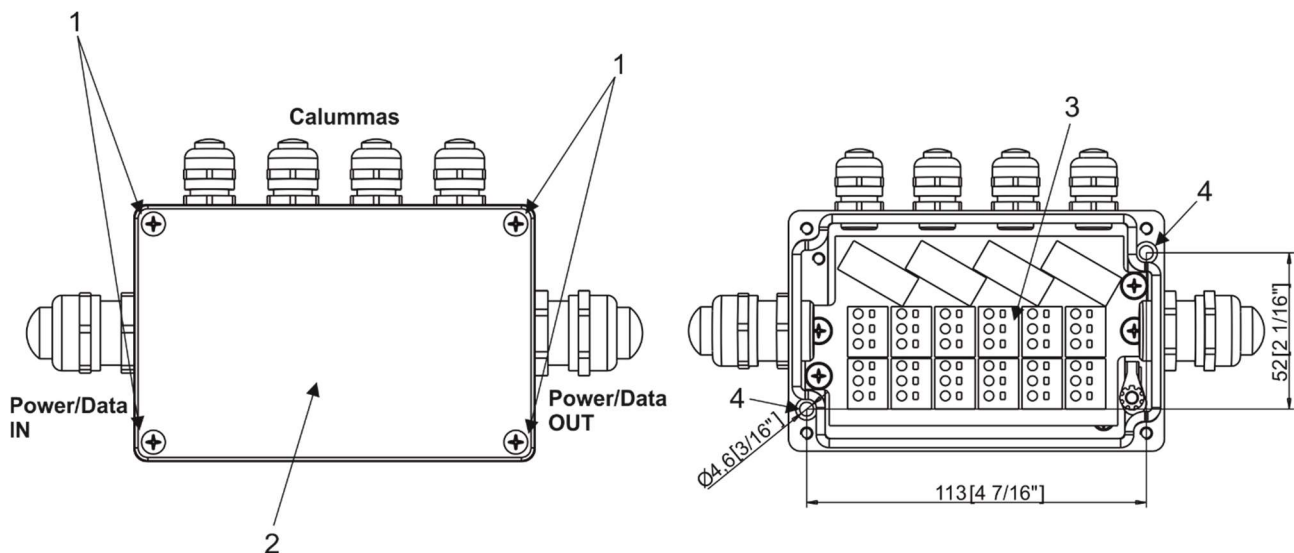
**The unit must be installed by a qualified electrician in accordance with all national and local electrical and construction codes and regulations.**

### 3.2.1 Junction box installation

Junction box with one output



Junction box with four outputs



1. Unscrew the four screws (1) from the cover (2) on the junction box to get access to the DPS with terminal blocks (3) and two mounting holes (4).

2. Screw the junction box on a non-flammable flat surface.

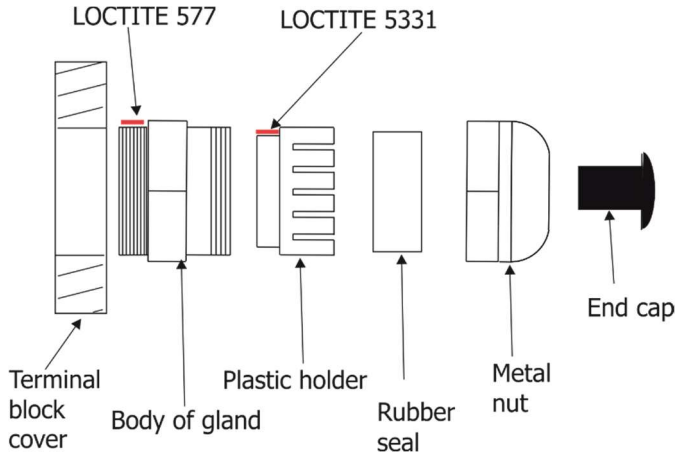
3. Connect cables to terminal blocks.

Two cable glands M20 x 1.5 serves for a power/data cable. One (or four) cable gland M12 x 1.5 serves for Calumma XS connection cable.

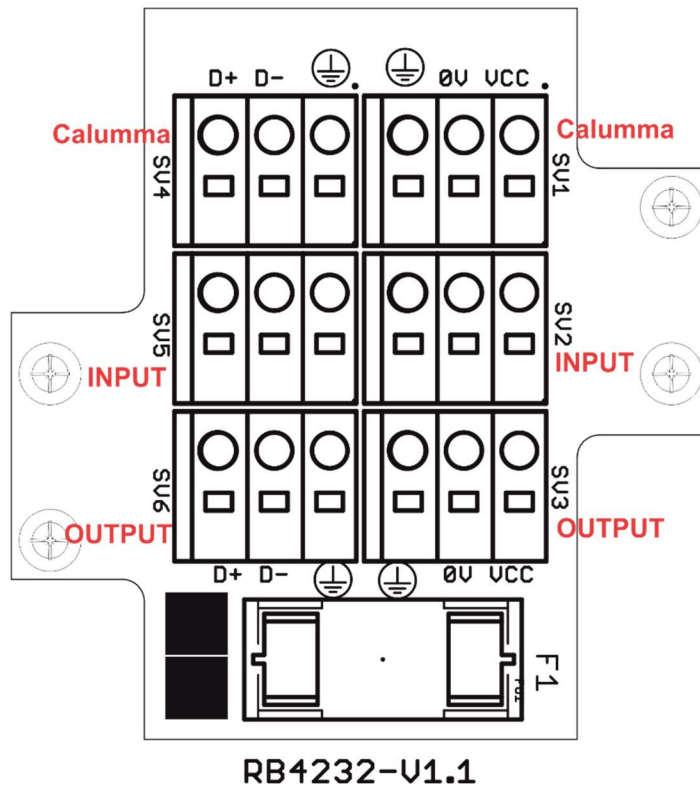
Remove the end cap from the cable gland before passing the cable.

We recommend to apply an adequate layer of the paste LOCTITE 5331 on the plastic holder of the cable gland before inserting it into the body of the gland and an adequate layer of the paste LOCTITE 577 on the thread of the gland body.

Cable gland M20x1.5 and M12x1.5



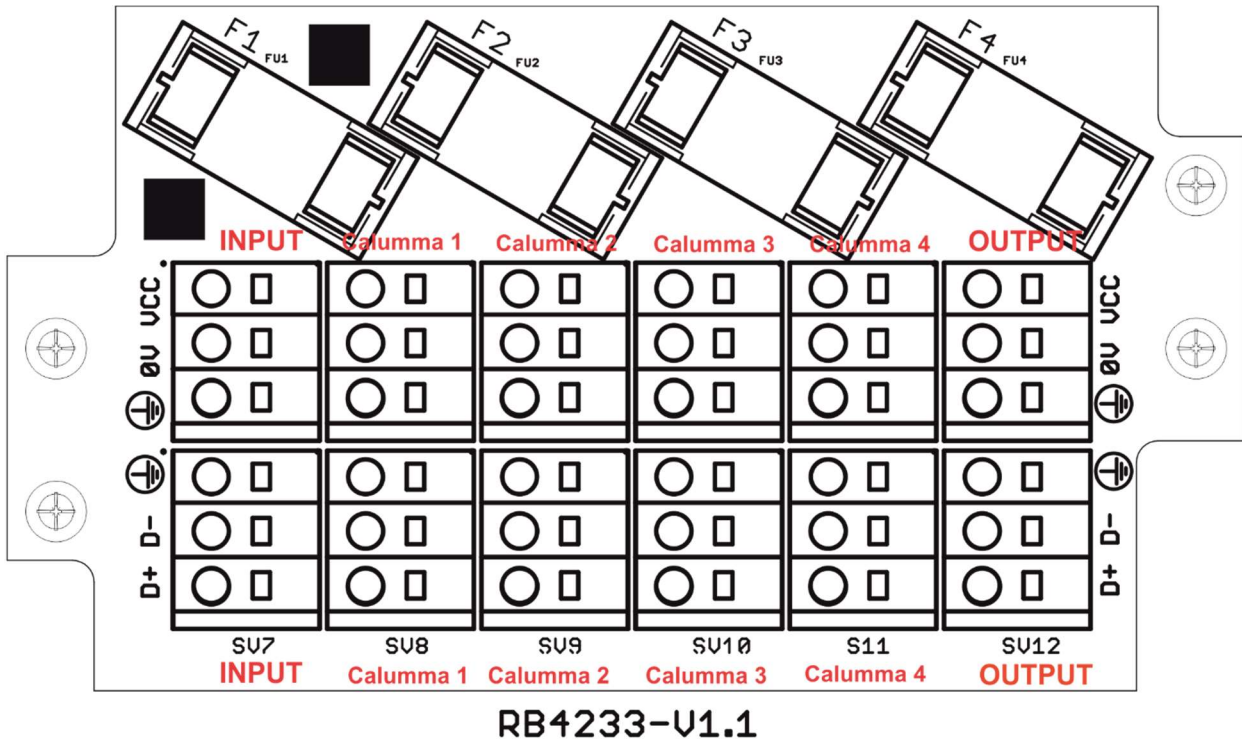
Wiring of connection blocks on DPS RB4232 in the junction box with one LED output.



Fuse F1: 2A/500V AC.

## Calumma XS

Wiring of connection blocks on DPS RB4233 in the junction box with four LED outputs.



Fuse F1-F4: 2A/500V AC.

Calumma XS connection:

Connector	Vcc	D+	D-	0V	
Function	LEDs +	Data +	Data -	LEDs -	Not connected
Colour of wire	Red	Orange	White	Black	

Colours of wires apply to the 5-cored cable UL 20969 5x 20AWG (P/N 13053481)

Connection between junction box and E-box Remote and among junction boxes:

Connector	Vcc	D+	D-	0V	
Function	LEDs +	Data +	Data -	LEDs -	Not connected
Colour of wire	Red	Orange	White	Black	

Colours of wires apply to the 5-cored cable SJTW 5x 14AWG (P/N 1305 3336).

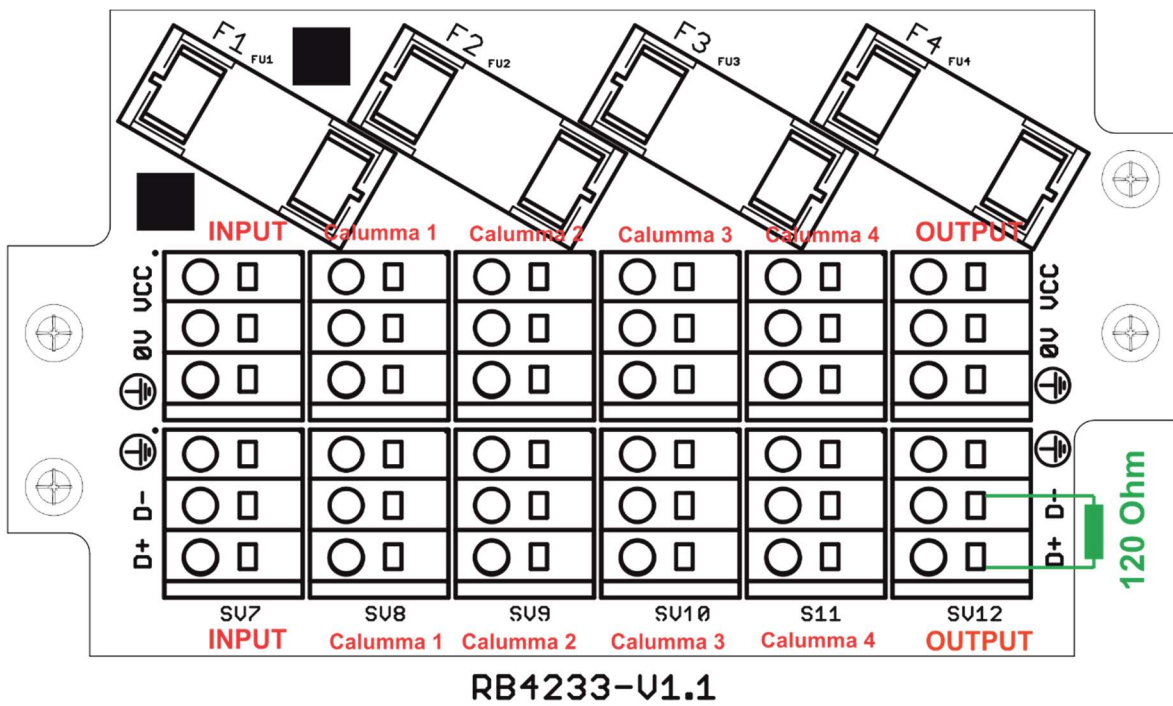
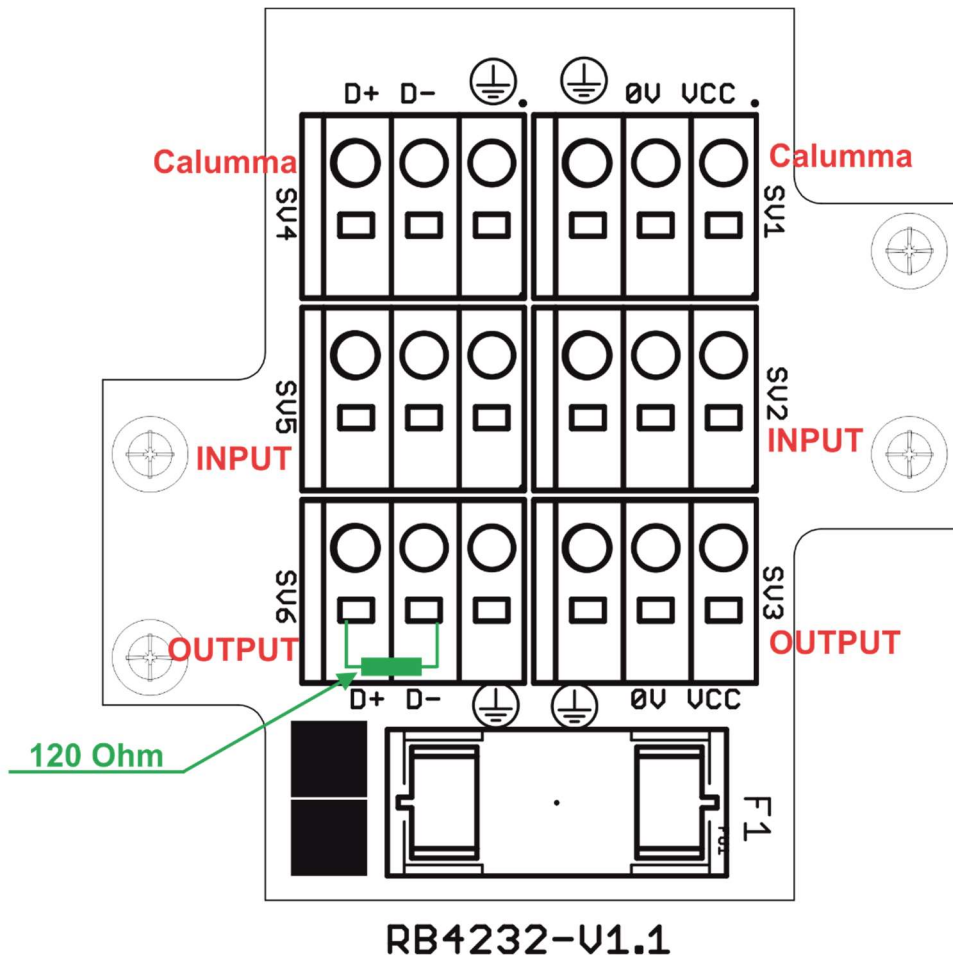
**NOTE:** Each line of Calummas XS connected to the LED output of the E-box Remote has to be terminated at the last fixture.

**EITHER** connect a 120 Ohm resistor between terminals D+ and D- in the last fixture,  
**OR** terminate via RDM as described in the E-box Remote user manual.

Ensure **ONLY** the last fixture in the line is terminated using **ONE** of the above methods!

Examples

Termination via 120 Ohm resistor



Termination via RDM:

A screenshot of a configuration interface. It features a light gray background with a darker gray horizontal bar. Inside this bar, the text "Terminator active (0-dis 1-en):" is followed by a white input field containing the value "00". To the right of the input field is a blue button labeled "(hex)". A red rectangular box highlights the input field and the "(hex)" button.

4. Screw the cover (2) back on the junction box.

## 5. Software update

Software update of Calumma XS modules has to be done by means of the software ROBE Uploader running on PC. The ROBE Uploader is a software for automatized software update of ROBE fixtures. The ROBE Uploader switches Calummas XS to the update mode automatically.

Please see <https://www.robe.cz/robe-uploader/> for more information.

The Calummas XS have to be operated in the Pass-Through mode only.

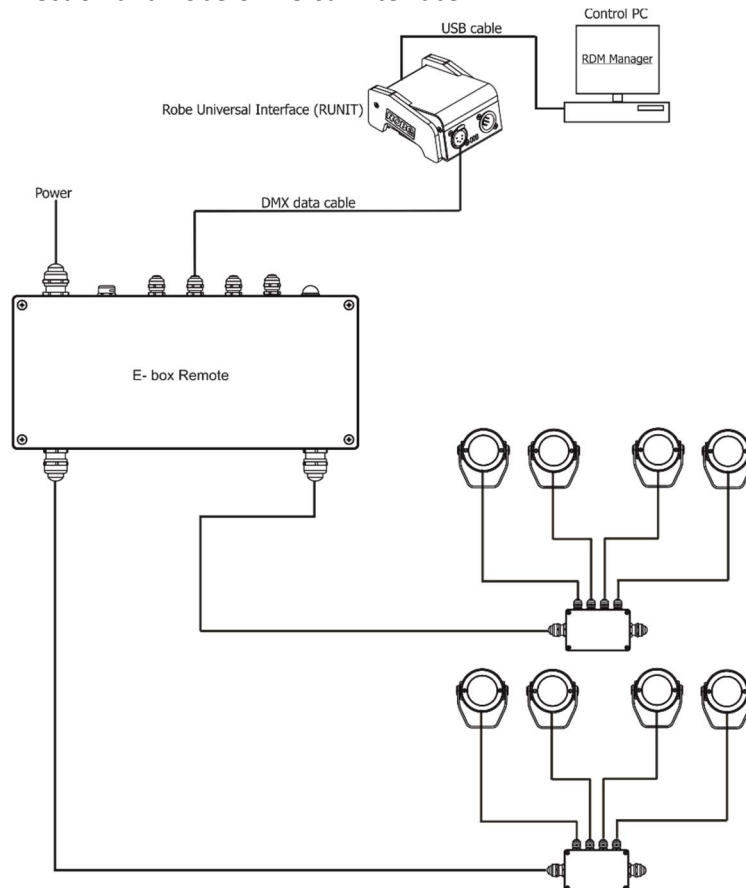
To update Calummas XS including the E-box Remote.

1. Update connected LED modules by means of the file Calumma.lib in the ROBE Uploader.
2. Set the E-box Remote to the Standard mode and switch it off/on. Use the file EminereEbox.lib in the ROBE Uploader for software update of the E-box Remote.
3. After updating the E-box Remote, set the E-box Remote to the Pass-Through mode and switch it off/on.

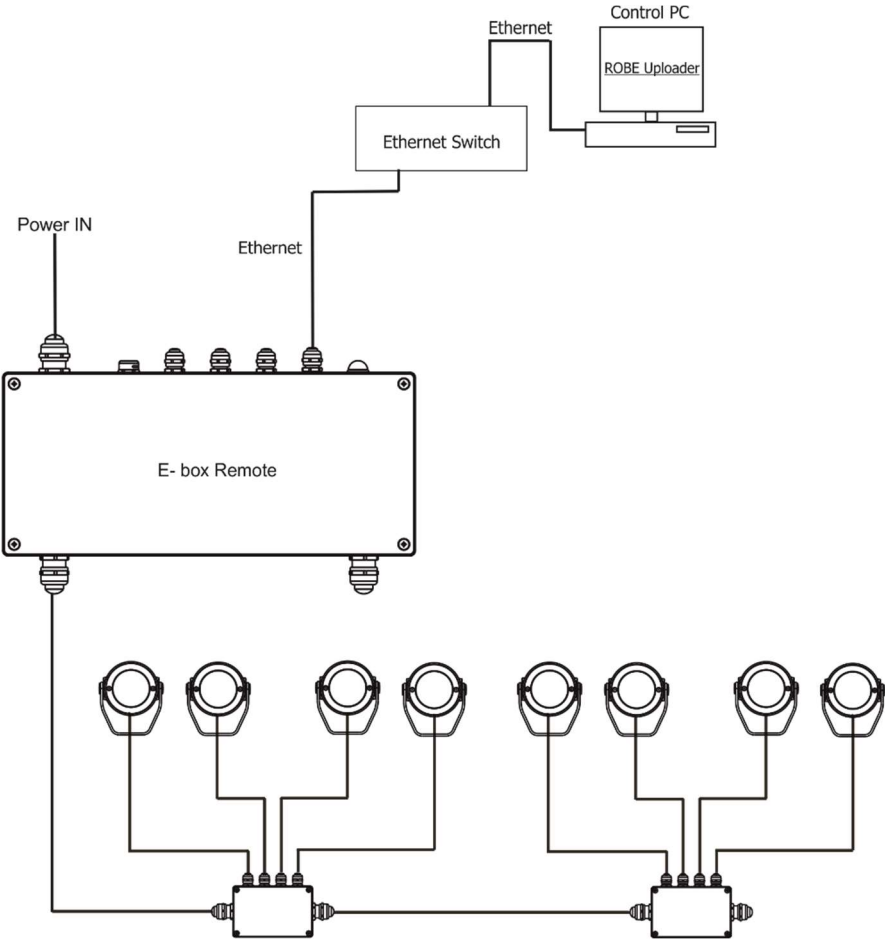
For more information about updating please see the E-box Remote user manual and E-box Remote Base user manual.

### Examples of connection for software update

1. By means of DMX connection and Robe Universal Interface.



2. By means of the Ethernet connection



## 6. Technical specifications

### Power supply

- Input voltage: 48 V
- Power consumption:
  - Calumma XS MC: 10 W
  - Calumma XS SC: 10 W

### Optic

- Light source:
  - Calumma XS MC: one high power multichip LEDs
  - Calumma XS SC: 4 x high power single chip LED
- Colour variants Calumma XS MC: RGBW (W - 6500 K), RGBA, PW (W - 3000 K)
- Colour variants Calumma XS SC: PW (W - 3000 K)
- Beam Angle Calumma XS MC:
  - Symetrical: 9°, 15°, 25°, 30°, 45°, 65°, 100°
  - Bi-symetrical: 10° x 30°, 30° x 10°, 10° x 60°, 60° x 10°, 15° x 45°, 45° x 15°, 15°x90°, 90°x15°, 30°x60°, 60°x30°, 30°x90°, 90°x30°
- Beam Angle Calumma XS SC:
  - Symetrical: 10°, 15°, 25°, 30°, 45°, 65°, 100°
  - Bi-symetrical: 10° x 30°, 30° x 10°, 10° x 60°, 60° x 10°, 15° x 45°, 45° x 15°, 15°x90°, 90°x15°, 30°x60°, 60°x30°, 30°x90°, 90°x30°
- Projected Lumen Maintenance: L90B10 >90.000 hrs, Ta = 25°C / 77°F

### Compatible drivers

- E-box Remote
- E-box Remote Basic

### Mounting method

- Via yoke
- Adjustability: -180°/+180°

### Housing

- High pressure die-cast aluminium body
- Tempered glass

### Cooling system

- Convection

### Total heat dissipation

- Calumma XS MC: 25 BTU/h (calculated)
- Calumma XS SC: 25 BTU/h (calculated)

### Protection factor

- CE: IP 67 (IP 66 junction box)
- US: Suitable for wet location

### Impact rating

- IK10

### Operating ambient temperature range

- -20°C /+40°C (-4°F /+104°F)



## Calumma XS

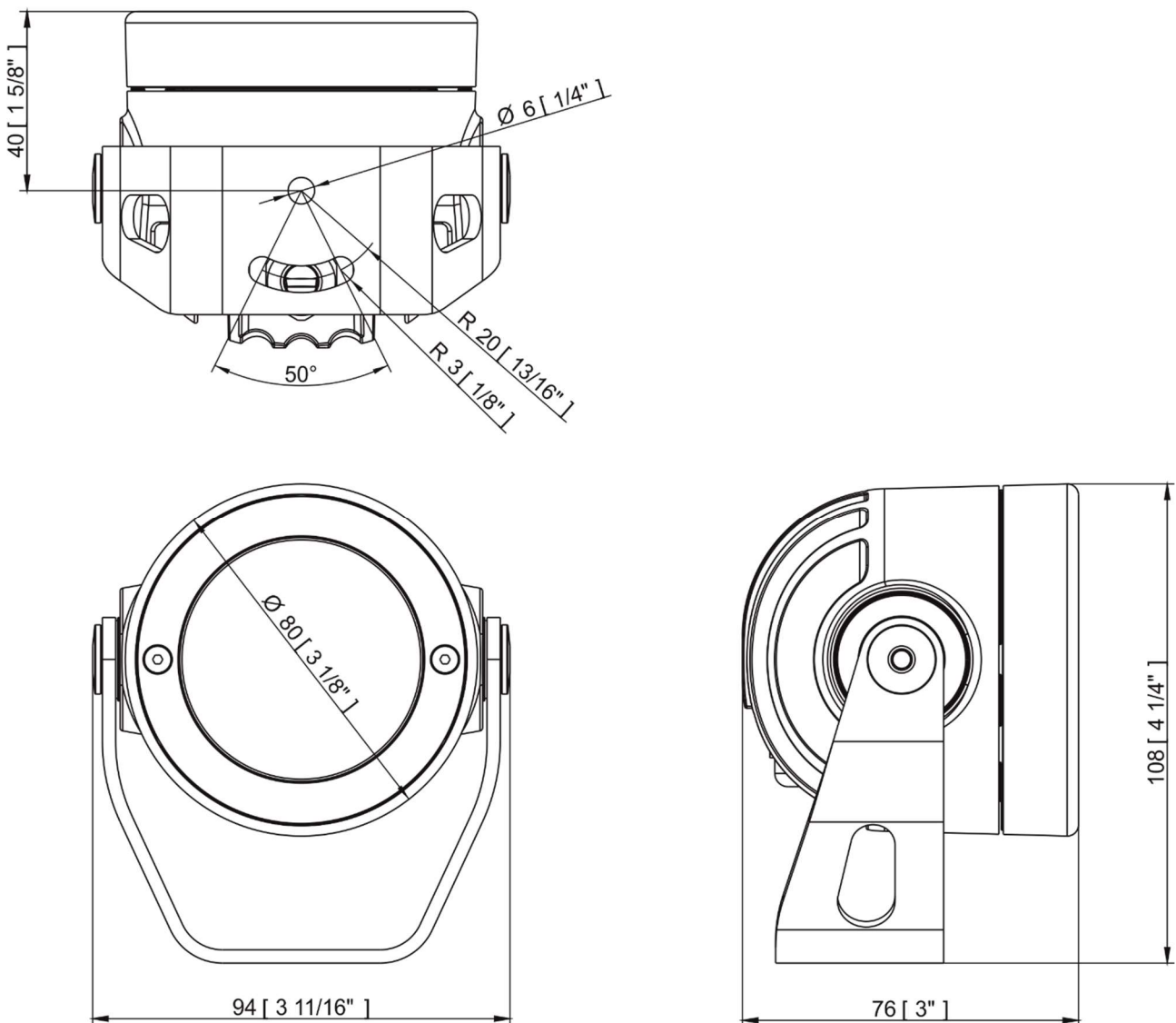
### Connection

- Via E-box Remote/E-box Remote Basic  
Calumma IN: cable UL 20969 5x 20AWG (P/N 13053481), length 1m standard  
Interconnecting cable between junction boxes: SJTW 5x 14AWG (P/N 13053336)  
Junction Box for Calumma XS, (1x Output)  
Junction Box for Calumma XS, (4x Output)

### Weight

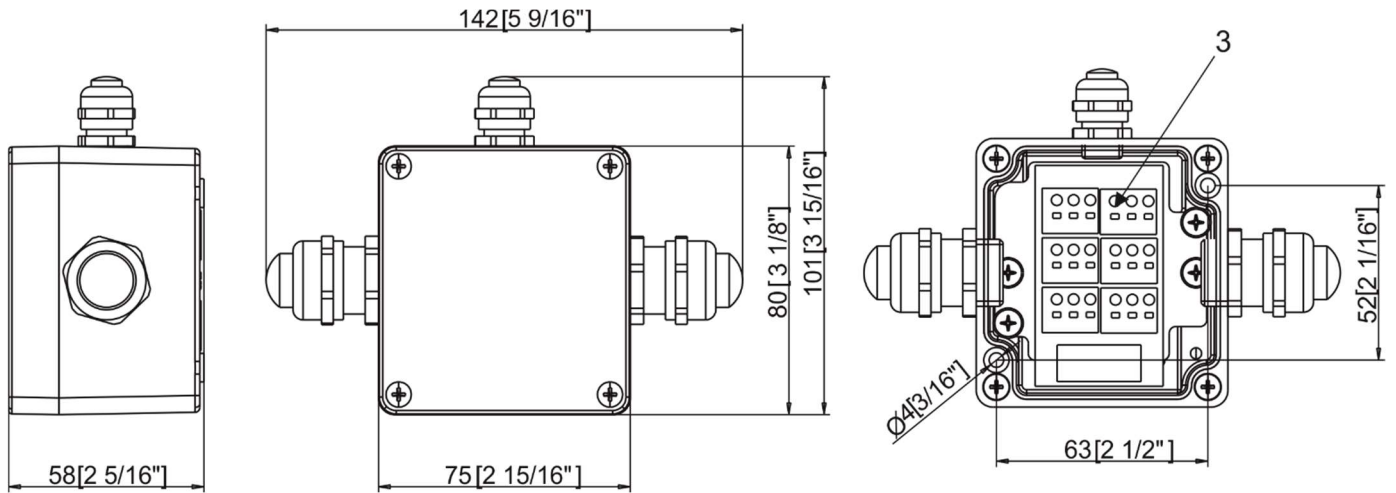
- Calumma XS MC: 0.59 kg (1.3 lbs)
- Calumma XS MC: 0.6 kg (1.3 lbs)

### Dimensions (All dimensions in mm [inch])

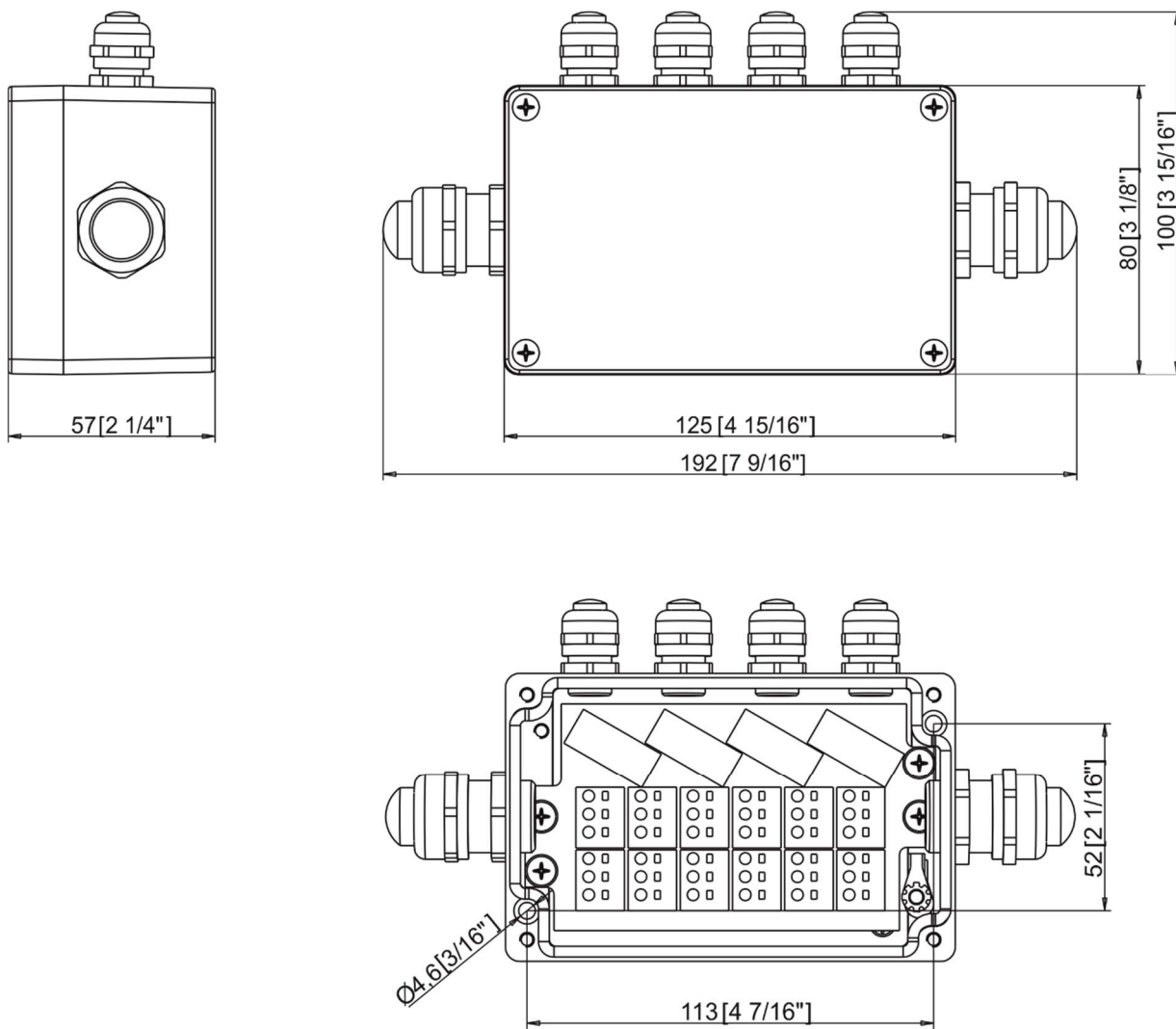


Calumma XS

Junction box with one output



Junction box with four outputs



**Included items**

- 1 x Calumma XS MC / Calumma XS SC
- 1 x User manual

**Optional accessories**

Top Hat Calumma XS RAL9011 (P/N 10980732)

Half Top Hat Calumma XS RAL9011 (P/N 10980736)

Tenon Adaptor for Calumma XS

Pole Mount Bracket for Calumma XS

Junction Box for Calumma XS, 1x Output, Ral 9011 (P/N 10980715)

Junction Box for Calumma XS, 4x Output, Ral 9011 (P/N 10980716)

**7. Cleaning and maintenance**

***DANGER !***  
***Disconnect from the mains before starting any maintenance or cleaning work***

Rinse off loose dirt with low pressure water spray. Wash the housing with a soft brush or sponge and a mild, non-abrasive washing detergent. Rinse it.

Maintenance and service operations are only to be carried out by a qualified person.

Should you need any spare parts, please use ROBE OEM parts.

**7.1 Disposing of the product**

To preserve the environment please dispose or recycle this product at the end of its life according to the local regulations and codes.

**8. ChangeLog**

This section summarizes changes in the user manual.

<b>Version of manual</b>	<b>Date of issue</b>	<b>Description of changes</b>
1.1	13/09/2022	Junction box connection change
1.2	13/10/2022	DMX chart ver. 1.1 added
1.3	14/10/2022	Numbers of connected Calummas to E-box changed
1.4	05/01/2022	Description of the software update changed

*Specifications are subject to change without notice.*

*January 5, 2023*

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Made in CZECH REPUBLIC by ROBE LIGHTING s.r.o. Palackeho 416/20 CZ 75701 Valasske Mezirici

**DMX protocol for Calumma - All sizes - RGBW(A)**

Version: 1.1 (16 modes in total)

Mode/Channels in all							Mode 1- RGBW(A)-8bit, Mode 2- RGB 8-bit, Mode 3- full RGBW(A)		
1	2	3	4	5	6	7-10	Mode 4- White-full control, Mode 5- Reduced RGBW(A)		
4	3	12	3	6	8	Reserved	Mode 6- Reduced RGBW(A)+white control		
Mode/channels							DMX Value	Function	Type of control
1	2	3	4	5	6	DMX Value	Function	Type of control	
1	1	1	-	1	1	0 - 255	<b>Red</b> Red LEDs saturation control (0-100%)	proportional	
-	-	2	-	-	-	0 - 255	<b>Red Fine</b> Red LEDs saturation control fine	proportional	
2	2	3	-	2	2	0 - 255	<b>Green</b> Green LEDs saturation control (0-100%)	proportional	
-	-	4	-	-	-	0 - 255	<b>Green Fine</b> Green LEDs saturation control fine	proportional	
3	3	5	-	3	3	0 - 255	<b>Blue</b> Blue LEDs saturation control (0-100%)	proportional	
-	-	6	-	-	-	0 - 255	<b>Blue Fine</b> Blue LEDs saturation control fine	proportional	
4	-	7	-	4	4	0 - 255	<b>White (Amber)</b> White LEDs saturation control (0-100%)	proportional	
-	-	8	-	-	-	0 - 255	<b>White (Amber) Fine</b> White LEDs saturation control fine	proportional	
-	-	9	1	-	5	0	<b>Green correction</b> Uncorrected white	step	
						1-127	Minus green - uncorrected white	proportional	
						128	Uncorrected white (128=default)	step	
						129-255	Uncorrected white - Plus green	proportional	
-	-	10	2	-	6	0	<b>Colour temperature correction (CTC)</b> No function (0 - default)	step	
						1 - 10	Tungsten dimming 2700 K	step	
						11 - 20	Tungsten dimming 3200 K	step	
						21-255	Colour temperature changing from 1800 K --> 6500 K (21-1800K, 66-2700K, 91-3200K,141-4200K, 211-5600K, 255-6500K)	proportional	
-	-	11	3	5	7	0 - 255	<b>Dimmer</b> Light intensity coarse (0-100%)	proportional	
-	-	12	-	6	8	0 - 255	<b>Dimmer Fine</b> Light intensity fine	proportional	

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All Specifications subject to change without notice

<b>DMX protocol for Calumma - All sizes - MC and SC</b>					
Version: 1.1 (16 modes in total)					
<b>Mode/Channels in all</b>				<b>TW Modes: Mode 6- White selection + Dimmer, Mode 7- WW + CW</b>	
<b>11</b>	<b>12</b>	<b>13</b>	<b>14-16</b>	<b>PW Mode: Mode 8- Dimmer</b>	
3	4	2	Reserved		
<b>TW and PW modes</b>					
<b>Mode/channels</b>			<b>DMX Value</b>	<b>Function</b>	<b>Type of control</b>
<b>6</b>	<b>7</b>	<b>8</b>			
<b>1</b>	-	-		<b>White colour selection</b>	
			0 - 255	White from 2700 K - 6500 K	proportional
-	<b>1</b>	-		<b>Warm White</b>	
			0 - 255	Warm White LEDs saturation control (0-100%)	proportional
-	<b>2</b>	-		<b>Cool White</b>	
			0 - 255	Cool White LEDs saturation control (0-100%)	proportional
<b>2</b>	<b>3</b>	<b>1</b>		<b>Dimmer</b>	
			0 - 255	Light intensity coarse (0 - 100%)	proportional
<b>3</b>	<b>4</b>	<b>2</b>		<b>Dimmer Fine</b>	
			0 - 255	Light intensity fine	proportional
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All Specifications subject to change without notice					