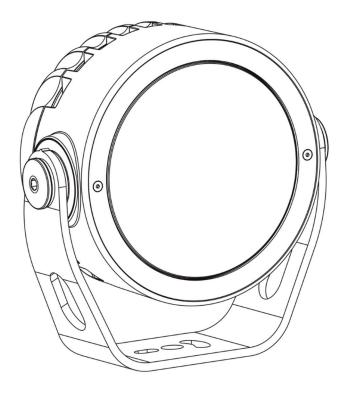


Calumma Remote S MC Calumma Remote S SC



QR code for user manual



USER MANUAL

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FOR YOUR OWN SAFETY, PLEASE READ THIS USER MANUAL CAREFULLY BEFORE POWERING OR INSTALLING YOUR Calumma Remote S ! 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!

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.

This fixture falls under protection class III.

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!

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.

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

Immunity of the equipment is designed according to the standard EN 55035 Electromagnetic compatibility of multimedia equipment - Immunity requirements

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

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

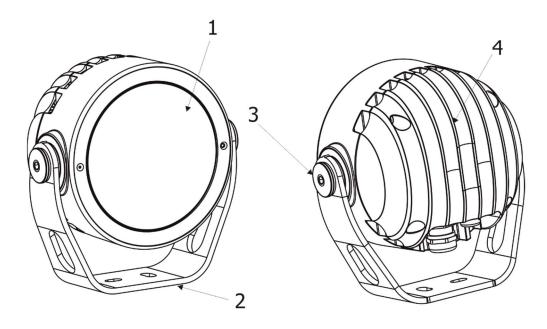
The [Device] wireless operation is safe and complies to RF Exposure requirements.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Warning for fixtures with Harsh Environment Finish (HEF): Handle with care! Avoid any damage to the painted surface. Damaging the paint may result in corrosion and loss of warranty.

2. Fixture exterior view



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

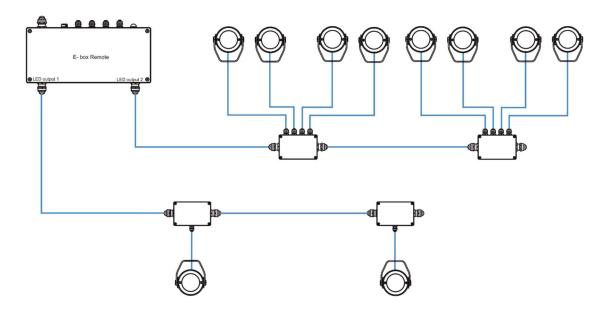
3. Control and connection

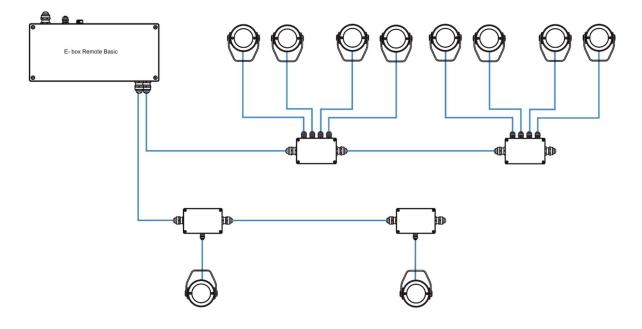
The Calumma Remote S modules should be connected to the E-Box Remote or E-Box Remote basic via junction boxes.



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

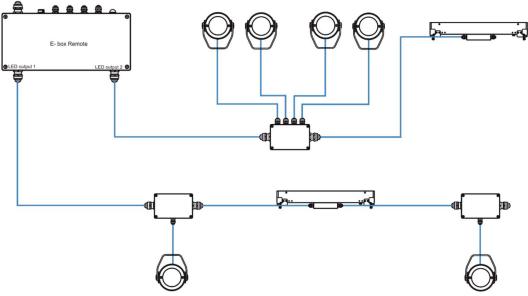
Example of connection with E-box Remote





Example of connection with E-box Remote Basic

Note. Combination of Calummas Remote S and Emineres Remote is also possible. Example:



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

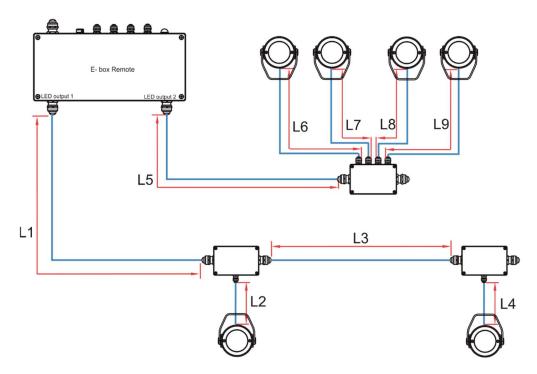
Cable length *	Max. number of Calummas Remote S SC/Calummas Remote S MC
25 m	13
25 111	15
50 m	10
75 m	8
100 m	6

E-box Remote/E-box Remote Basic

* Cable length is a total cable length on both outputs of the E-box Remote (E-box Remote Basic).

Example:

Total cable length(output 1+output 2)=L1+L2+L3+L4+L5+L6+L7+L8+L9

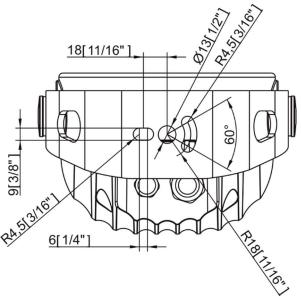


Max. number of Calummas Remote M SC/MC connected to the one output of the E-box Remote/E-box Remote Basic is 10.

4. Installation

4.1 Mounting the fixture

The Calumma Remote S 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°/-180°. Use an Allen key 2.5 for adjusting a LED module position.

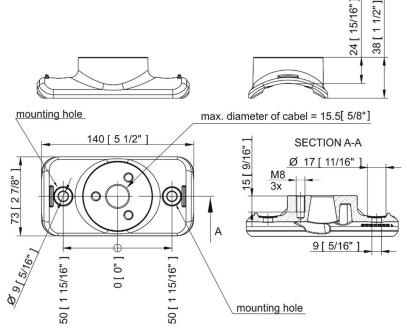
Ensure that the structure to which you are attaching the fixture is secure.

Mounting the fixture via the pole clamp adaptor

The pole clamp adaptor serves as a fastening element for Calumma Remote S on a pole of diameter of 76-116mm or on the flat pole. The Calumma Remote S has to be equipped with a modified mounting yoke (P/N 11418772) intended for this way of installation.

The pole clamp adaptor set includes: 1x pole clamp adaptor, 1x rubber cable gland, 3x Allen screw M8x20, 3x flat washer, 3x spring washer, 2x tube spacer.

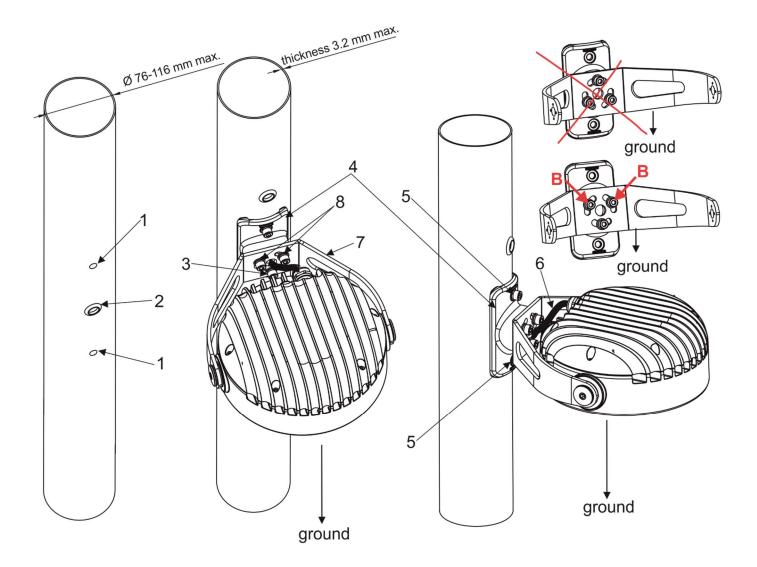
1. The pole clamp adaptor can be screwed on the pole by means of two screws or fixed by means of a steel clamping tape (max. width of tape=20mm).



Calumma Remote S

If you use two screws for fastening the pole clamp adaptor on the pole, drill two holes (1) for fastening the pole clamp adaptor on the pole. Diameter of holes depends on material of pole and used screws. Be sure that fastening of the pole clamp adaptor is secure to keep weight of Calumma Remote S.

2. Drill the hole (2) for rubber cable gland (diameter of hole=20mm, max. thickness of pole wall= 3.2mm), make drilled hole edges clean (without burrs) and insert the rubber gland into the hole.



- Screw the pole clamp adaptor (4) on the pole by means of two screws (5) with spring washers or use a steel clamping tape for fastening the pole clamp adaptor on the pole.
 In case of screwing the pole clamp adaptor (7) on a flat surface (pole), two pole spacers have to be inserted under two mounting holes of the pole clamp adaptor (on fastening screws (5)) to fill up space between the pole and the pole clamp adaptor
- 4. Pass the Calumma Remote S cable (6) through mounting yoke (7), pole clamp adaptor (4) and through cable gland (2) into the pole.
- Screw the Calumma mounting yoke (7) on the pole clamp adaptor (4) by means of three Allen screws M8x20 (3) with washers (Allen screw + spring washer+ flat washer). Keep correct orientation of the fastening screws (3) as drawn on the picture – two screws (B) have to aim upwards, one screw has to be orientated towards ground.

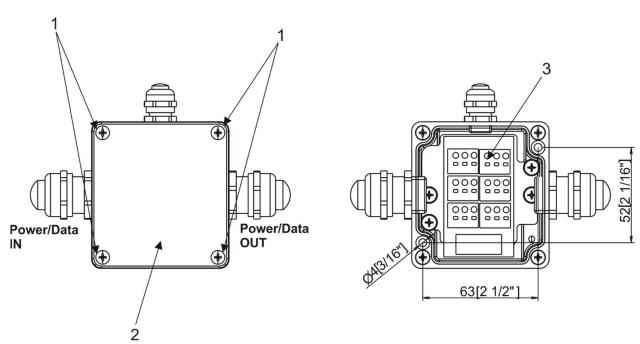
NOTE. Three mounting openings in the mounting yoke allow positioning of the mounting yoke.

4.2 Connection to power

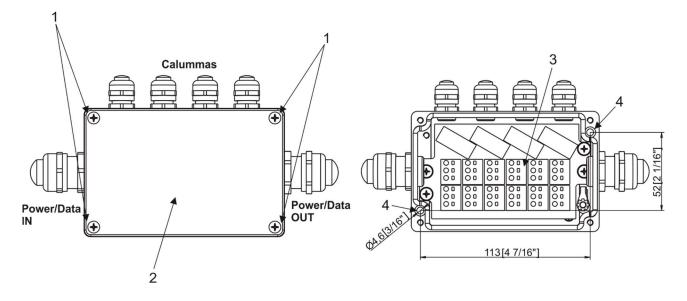
The unit must be installed by a qualified electrician in accordance with all national and local electrical and construction codes and regulations.

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.

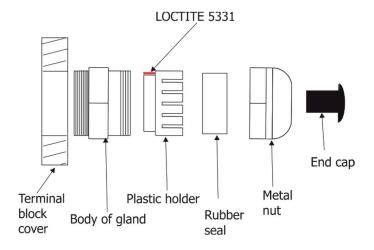
3. Connect cables to terminal blocks.

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 Remote S connection cable.

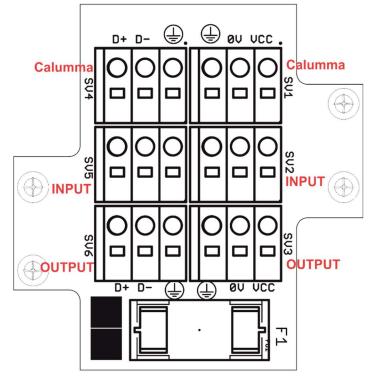
Remove the end cap from the cable gland before passing the cable.

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.

Cable gland M20x1.5 and M12x1.5



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



RB4232-V1.1

Fuse F1: 2A/500V AC.

Calumma Remote S

3 7 INPUT OUTP lumma 1 Calum Calumma 3 nma 4 200 202 ΟΟ Π 00 П 00 Ð Ð Ð ⊕ ()4 占 Π ÷ ÷ SV7 SV8 SV9 SV10 S11 SV12 INPUT Calumma 4 OUTPUT Calumma 1 Calumma 2 Calumma 3

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

RB4233-V1.1

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

Calumma Remote S 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 Remote S connected to the LED output of the E-box Remote has to be terminated at the last fixture.

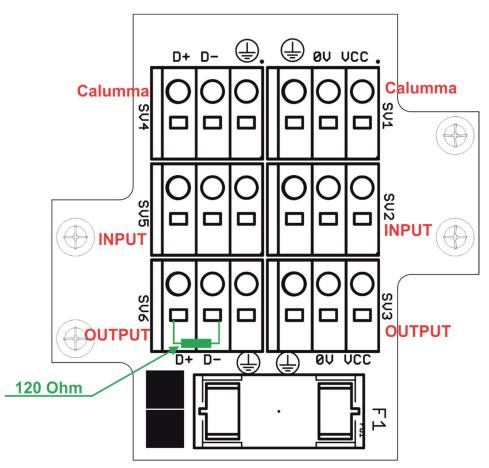
EITHER connect a 120 Ohm resistor between terminals D+ and D- in the last fixture,

<u>OR</u> terminate via RDM as described in the E-box Remote user manual.

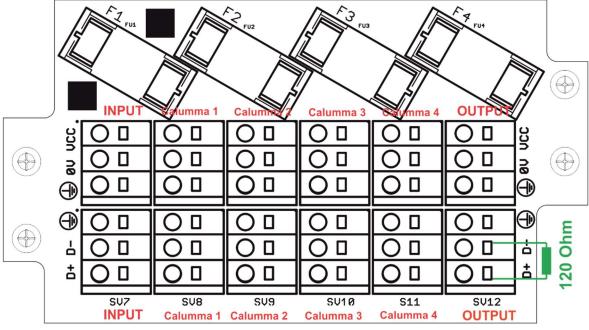
Ensure **ONLY** the last fixture in the line is terminated using **ONE** of the above methods!

Examples

Termination via 120 Ohm resistor



RB4232-V1.1



RB4233-V1.1

Calumma Remote S

Termination via RDM:

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

4.3 Example of Control panel in RDM manager

The software RDM manager is available on the ROBE website (<u>https://www.robe.cz/support</u>), product RUNIT WTX.

Control panel	ø	8
Device: 52:53-01:2e:00:7f 🕨		
Product information		
RDM protocol version: 0x0100		
Device model ID: 0x012e		
Product category: 0x0102		
Software version: 23		
Subdevice count: 0		
Sensor count: 2		
Manufacturer label: ROBE lighting s.r.o.		
Device model description: Calumma		
Device label:		
DMX512 setup		5
DMX512 footprint: 4		
Current personality: DMX Preset 01- 4		
Personalities count: 16		
DMX address:		
Power/Lamp setup		
Device hours: 3728		
Configuration		
Factory defaults: Set		
Control		
Identify device: off		
Display settings		
Manufacturer PIDs		
LED calibration 4byte HEX! (RGBW/RGBA): ff ff ff ff ff (ff	nex)	
Insect friendly light (0 = off, 1 = on): 00 (hex)		
WiFi unlink (1-unl): 00 (hex)		
Terminator active (0-dis 1-en): 00 (hex)		

Green arrow saves changes made in the Control panel to the Calumma.

Manufacturer PIDs

<u>LED calibration 4byte HEX! (RGBW/RGBA)</u> - the item shows 4 bytes of calibration values for calibrated white colours of RGBW(RGBA) Calumma.

E.g.

LED calibration 4byte HEX! (RGBW/RGBA): ff 88 00 08 (hex)

CTC channel has to be set to some calibrated white colour (21 DMX-1800K, 66 DMX-2700K, 91 DMX-3200K, 141 DMX-4200K, 211 DMX-5600K, 255 DMX-6500K) otherwise the item shows values "ff ff ff ff" (and calibration values cannot be saved to the Calumma).

Warning! Changing and saving values in this item will affect calibrated white colour(s) of the Calumma .

<u>Insect friendly light</u> - the item effects RGBA Calumma only. If the item is on, blue colour is not used in calibrated white colours. This modification of white lights results in a smaller attraction of white light for insects (mosquitos, moths..). The function is also available from DMX chart (channel Special Function, range 7-10 DMX).

<u>WiFi unlink</u> - the item is inactive for the Calumma Remote S.

<u>Terminator active</u> - the item allows you to terminate line of Calummas.

5. Software update

Software update of Calumma Remote S 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 Remote S to the update mode automatically.

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

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

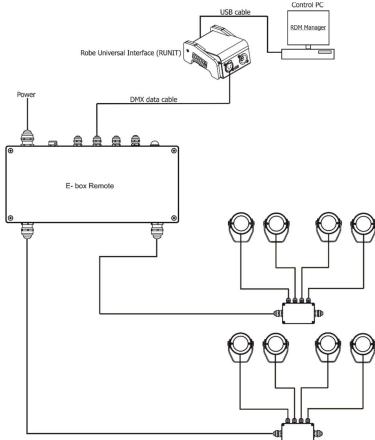
To update Calummas Remote S including the E-box Remote.

- 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.

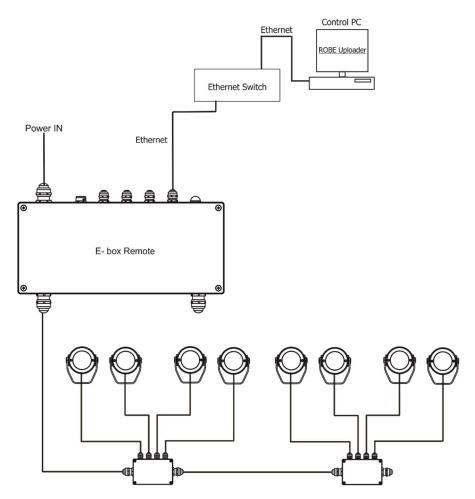
For more information about updating please see the E-box Remote user manual and E-box Remote Base user manual.

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 Remote S MC: 30 W
 - Calumma Remote S SC: 30 W

Optic

- Light source:
 - Calumma Remote S MC: 3 x high power multichip LEDs Calumma Remote S SC: 19 x high power single chip LEDs
- Colour variants: RGBW (W 6500 K), RGBA, PW (W 3000 K)
- Beam Angle Calumma Remote S 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 Remote S 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 Remote S MC: 77 BTU/h (calculated)
- Calumma Remote S SC: 77 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)

Connection

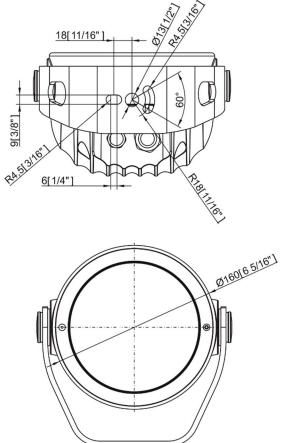
• Via E-box Remote/E-box Remote Basic

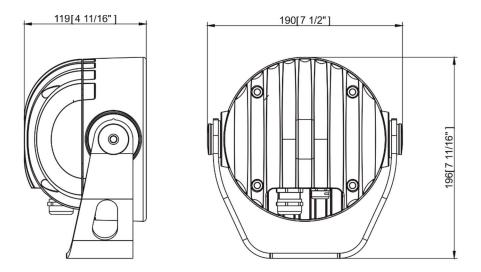
Calumma IN: cable UL 20969 5x 20AWG (P/N 13053481), length 1m standard Interconnecting cable between junction boxes: SJTW 5x 14AWG (P/N 13053336) Junction Box for Calumma XS, (1x Output) Junction Box for Calumma XS, (4x Output)

Weight

- Calumma Remote S SC: 3.45 kg (7.6 lbs)
- Calumma Remote S MC: 2.95 kg (6.5 lbs)

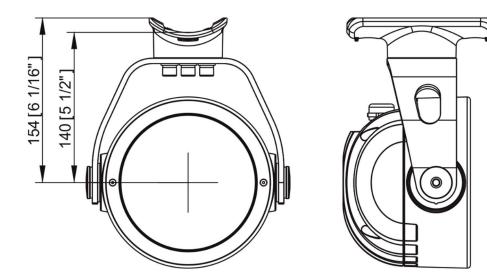
Dimensions (All dimensions in mm [inch])



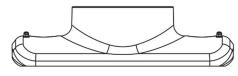


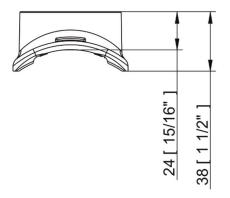
Calumma Remote S

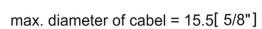
Calumma S with Pole clamp adaptor

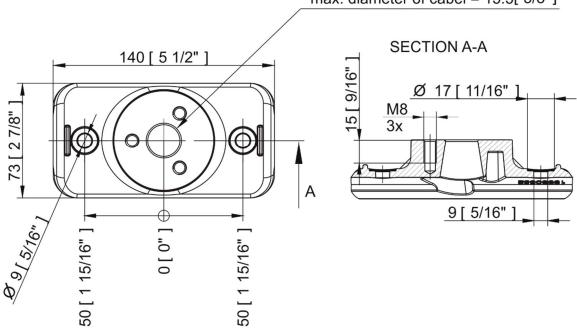


Pole clamp adaptor for Calumma

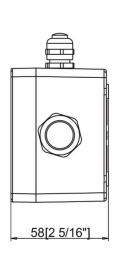


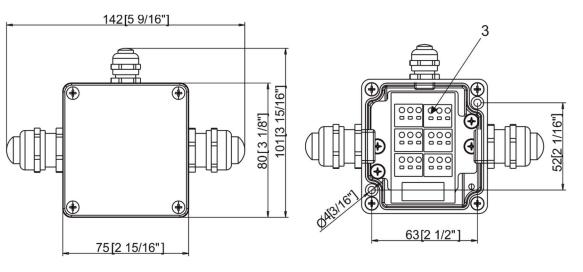




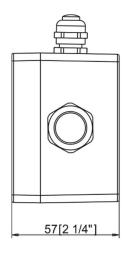


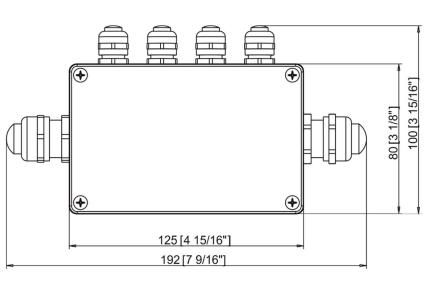
Junction box with one output

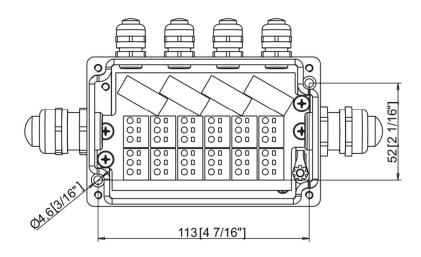




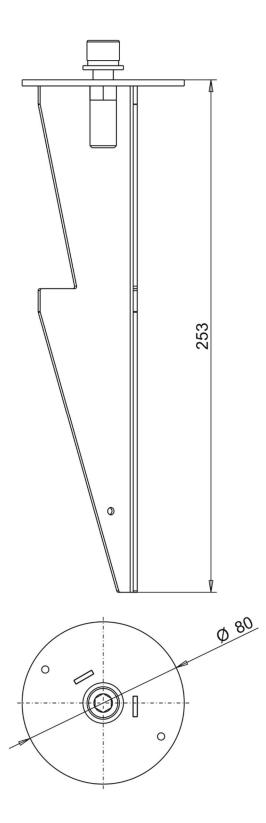
Junction box with four outputs

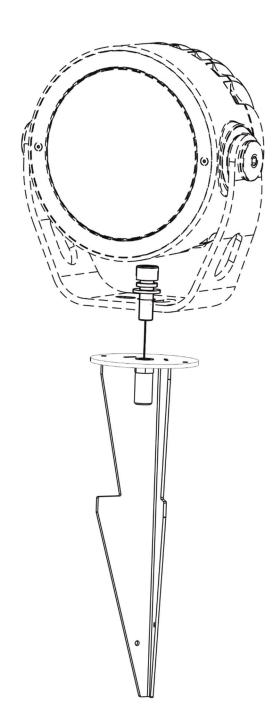






Land Spike





Included items

- 1 x Calumma Remote S MC / Calumma Remote S SC
- 1 x User manual

Optional accessories

Top Hat Calumma XS RAL9011 (P/N 10980732) Half Top Hat Calumma XS RAL9011 (P/N 10980736) Top Hat Calumma S RAL9011 (P/N 10980733) Half Top Hat Calumma S RAL9011 (P/N 10980737) Pole clamp adaptor for Calumma RAL 9011 (P/N 10980783) Land Spike for Calumma S, M, L, XL (P/N 10981065) Tenon Adaptor for Calumma S Pole Mount Bracket for Calumma S Floor Stand for Calumma S, M

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.

Version of manual	Date of issue	Description of changes
1.1	11/05/2023	Dimensions more specified
1.2	23/01/2024	Control panel of RDM manager added, DMX chart ver. 1.3
1.3	16/02/2024	Notice about Protection class III added to Safety instructins
1.4	17/06/2024	Land Spike added to optional accessories

Specifications are subject to change without notice. June 17, 2024 Copyright © 2022-2024 Robe Lighting - All rights reserved Made in CZECH REPUBLIC by ROBE LIGHTING s.r.o. Palackeho 416/20 CZ 75701 Valasske Mezirici

Version: 1.3 (16 modes in total) Mode/Channels in all Mode 1- RGBW(A)-8bit, Mode 2- RGB 8-bit, Mode 3- full RGBW(A)									
			-	-		-	1	Mode 1- RGBW(A)-8bit,Mode 2- RGB 8-bit,Mode 3- full RGBW(A)	
1	2	3	4	5	6	7	8-10	Mode 4- White-full control, Mode 5- Reduced RGBW(A)	
4	3	12	3	6	8	15	Reserved	Mode 6- Reduced RGBW(A)+white control, Mode 7- Full control	
								Mode 7-Full RGBW(A)+virt. Colour wheel	
								RGBW/RGBA/RGB modes	
1	2	Mode 3	e/cha 4	nnels 5	6	7	DMX Value	Function	Type of contro
	2	5	4	5		-		Special functions	
-	-	-	-	-	-	1	0	No function	step
								To activate following functions , stop in DMX value for at least 3 sec.	
							1-2	Save current DMX values to fixture as initial DMX values.	step
							3-4	Show saved initial DMX values	step
							5-6	Run factory demo sequences at switching fixture on (without DMX)	step
							7-8	Insect friendly light On (RGBA version only)	step
							9-10	Insect friendly light Off (RGBA version only)	step
							11-255	Reserved	
1	1	1	-	1	1	2		Red	
							0 - 255	Red LEDs saturation control (0-100%)	proportional
-	-	2	-	-	-	3		Red Fine	
							0 - 255	Red LEDs saturation control fine	proportional
2	2	3	-	2	2	4		Green	
							0 - 255	Green LEDs saturation control (0-100%)	proportional
-	-	4	-	-	-	5		Green Fine	
							0 - 255	Green LEDs saturation control fine	proportional
3	3	5	-	3	3	6		Blue	
							0 - 255	Blue LEDs saturation control (0-100%)	proportional
-	-	6	-	-	-	7		Blue Fine	
							0 - 255	Blue LEDs saturation control fine	proportional
4	-	7	-	4	4	8		White (Amber)	
							0 - 255	White LEDs saturation control (0-100%)	proportional
-	-	8	-	-	-	9		White (Amber) Fine	
						-	0 - 255	White LEDs saturation control fine	proportional
-		9	1		5	10	0 200	Green correction	propertional
	_	5	-	_		10	0	Uncorrected white	step
							1-127	Minus green - uncorrected white	proportional
							128	Uncorrected white (128=default)	
							129-255	Uncorrected white - Plus green	step
		10	2			11	129-233		proportional
-	-	10	2	-	6	11	0	Colour temperature correction (CTC) No function	
							0		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	proportional
								(21-1800K, 66-2700K, 91-3200K,141-4200K, 211-5600K, 255- 6500K)	
_	_	_	_	_	-	12		Virtual Colour Wheel	
-	<u>⊢</u> –		-	-	-	12	0	No function	step

DMX protocol

		Mod	e/cha	nnels				Function		
1	2	3	4	5	6	7	DMX Value	, and a second	Type of contro	
							1-2	White 1800 K	step	
							3-4	White 2700 K	step	
							5-6	White 3200 K	step	
							7-8	White 4200 K	step	
							9-10	White 5600 K	step	
							11-12	White 6500 K	step	
							13	Blue (Blue=full, Red+Green+White/Amber=0)	step	
							14-23	Red=0, Green->up,Blue =full, White/Amber=0	proportional	
							24	Cyan (Red=0, Green=full, Blue =full, White/Amber=0)	step	
							25-34	Red=0, Green=full, Blue->down, White/Amber=0	proportional	
							35	Green (Red=0, Green=full, Blue =0, White/Amber=0)	step	
							36-45	Red->up, Green=full, Blue=0, White/Amber=0	proportional	
							46	Yellow (Red=full, Green=full, Blue=0, White/Amber=0)	step	
							47-56	Red=full, Green->down, Blue=0, White/Amber=0	proportional	
							57	Red(Red=full, Green=0, Blue=0, White/Amber=0)	step	
		1					58-67	Red=full, Green=0, Blue->up, White/Amber=0	proportional	
							68	Magenta (Red=full, Green=0, Blue=full, White/Amber=0)	step	
							69-78	Red -> down, Green=0, Blue=full, White/Amber=0	proportional	
							79	Blue (Red=0, Green=0, Blue=full, White/Amber=0)	step	
								Transition effects		
							80-87	Rainbow effect (with fade time) from slow-> fast	proportional	
							88-95	Rainbow effect (without fade time) from slow-> fast	proportional	
							96-103	Full dynamic white (1800K->6500K->1800K) (with fade time)	proportional	
								from slow-> fast		
							104-111	Full dynamic white (1800K->6500K->1800K) (without fade time)	proportional	
							112-119	from slow-> fast Dynamic warm white (1800K-3000K-1800K) (with fade time)	proportional	
							112-119	from slow-> fast	proportional	
							120-127	Dynamic warm white (1800K-3000K-1800K) (without fade time)	proportional	
								from slow-> fast		
							128-135	Rainbow effect + full dynamic white (with fade time) from slow-	proportional	
							126 1 12	> fast	una na ntia na l	
							136-143	Rainbow effect + full dynamic white (without fade time) from slow-> fast	proportional	
							144-151	Blue/Green effect (with fade time) from slow-> fast	proportional	
							152-159	Blue/Green effect (without fade time) from slow > fast	proportional	
							160-167	Red/Blue effect (with fade time) from slow > fast	proportional	
							168-175	Red/Blue effect (without fade time) from slow-> fast	proportional	
							176-183	Green/Red effect (with fade time) from slow-> fast	proportional	
							184-191	Green/Red effect (with rade time) from slow-> fast	proportional	
							192-199	Blue/4000K effect (with fade time) from slow-> fast	proportional	
							200-207	Blue/4000K effect (with lade time) from slow-> fast	proportional	
							208-215	Green/4000K effect (with fade time) from slow-> fast	proportional	
							216-223	Green/4000K effect (with hade time) from slow-> fast	proportional	
							224-231	Red/4000K effect (with fade time) from slow-> fast	proportional	
							232-239	Red/4000K effect (without fade time) from slow-> fast	proportional	
						13	232-233	Shutter/Strobe	1 sherenenen	
						13	0-31	Shutter/Strobe	cton	
									step	
							32-63 64-95	Shutter open Strobe-effect from slow to fast	step proportional	

		Mode	e/cha	nnels				Function	
1	2	3	4	5	6	7	DMX Value		Type of control
							96-127	Shutter open	step
							128-143	Opening pulse in sequences from slow to fast	proportional
							144-159	Closing pulse in sequences from fast to slow	proportional
							160-191	Shutter open	step
							192-223	Random strobe-effect from slow to fast	proportional
							224-255	Shutter open	step
-	-	11	3	5	7	14		Dimmer	
							0 - 255	Light intensity coarse (0-100%)	proportional
-	-	12	-	6	8	15		Dimmer Fine	
							0 - 255	Light intensity fine	proportional
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ersion: 1	.3 (16 mod	es in total)		
	Mode/Cha	nnels in a	II	TW Modes: Mode 11- White selection + Dimmer, Mode 12- WW + CW	
11	12	13	14-16	PW Mode: Mode 13- Dimmer	
3	4	2	Reserved		
				TW and PW modes	
N	lode/channe	els	DMX	Freestigen	
11	12	13	Value	Function	Type of contro
1	-	-		White colour selection	
			0 - 255	White from 2700 K - 6500 K	proportional
-	1	-		Warm White	
			0 - 255	Warm White LEDs saturation control (0-100%)	proportional
-	2	-		Cool White	
			0 - 255	Cool White LEDs saturation control (0-100%)	proportional
2	3	1		Dimmer	
			0 - 255	Light intensity coarse (0 - 100%)	proportional
3	4	2		Dimmer Fine	
			0 - 255	Light intensity fine	proportional
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