

# Lyrae S SC Lyrae S MC







## **USER MANUAL**

Version 1.2

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#### FOR YOUR OWN SAFETY, PLEASE READ THIS USER MANUAL CAREFULLY BEFORE POWERING OR INSTALLING YOUR LYRAE 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!

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

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

Do not install the fixture near an open flame.

Refer servicing to qualified service personnel.

This fixture falls under protection class I. Therefore this fixture has to be connected to a mains socket outlet with a protective earthing connection.

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.

Avoid brute force when installing or operating the fixture.

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.

Dismantling of the unit in case of its repair must not be carried out in rain or snowfall.

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

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 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.

## 2. Fixture exterior view



- 1. Mounting sleeve
- 2. Temporary cover
- 3. Lyrae
- 4. Junction box
- 5. 2 x cable gland M20x1.5

## 3. Installation

The unit must be installed by a qualified electrician in accordance with all national and local electrical and construction codes and regulations. This device falls under class one and must be grounded! With respect to the purpose of using the unit, the residual current circuit breaker is highly recommended.

Warning! If the Lyrae will be exposed to max. allowed static load, the subsoil under the installation sleeve has to withstand load of: 45kN (standard covering glass) 23kN (antiskid covering glass).

Prepare a mounting hole with a good drainage - minimum depth of the gravel drainage has to be 300mm. There must not stay water in the mounting sleeve (1). If the mounting sleeve will be placed to the concrete hole, suitable draining pipe must be installed on the bottom of the hole.

Prepare supply cables in protection conduit for supply of the Lyrae.



1. Prepare holes (6) on each side of the mounting sleeve according to the size of the protection conduit.



2. Insert the mounting sleeve into the mounting hole and level it using a spirit level (7).



The position mark (8) serves for orientation of the mounting sleeve and should be oriented to the wall for correct direction of the light beam tilting. The position mark (8) also serves for orientation at placing the Lyrae S to the mounting sleeve. The beam can be tilted towards the teeth (13) in the housing of the Lyrae S.



Detail of the Lyrae S inserted in the mounting sleeve – top view (without temporary cover):



**3.** Fasten the mounting sleeve to the bottom of the mounting hole by means of four apertures (9) with diameter of 5.4 mm. Use fasteners suitable for your mounting surface.

4. Unscrew two screws (10) and remove the temporary cover (2) from mounting sleeve.



 Pull the cables (12) through the protection conduit (11) into the mounting sleeve. The recommended cable length is 500mm above the level of the mounting sleeve. The supply/data cables must be placed in a protective conduit (11).



6. Fold cables (12) to the mounting sleeve and screw the temporary cover (2) back on the mounting sleeve.



7. The mounting hole can be filled up with soil, gravel or concrete. Filling material should be in the same level with the top of the mounting sleeve (for Bevel Edge Trim) or in the same level with top of mounting sleeve cover (for Flush Trim).



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Note: the Lyrae S can be installed with the Bevel Edge Trim or the Flush Trim:

**8.** Remove the temporary cover (2) of the mounting sleeve and pull cables out of the mounting sleeve.

**9.** The Lyrae S is equipped with auto-switching power supply that automatically adjusts to any 50-60Hz AC power source from 120-277 Volts.

Remove the cover of the junction box (13) by unscrewing three screws (14). Remove end caps from cable glands before passing cables.

Pass the cables through the cable glands M20x1.5 (16) and connect them to the terminal block (15). Do not assemble the gland yet. Use a wrench size 22 for the cable gland M20x1.5

Remove end caps from cable glands before passing cables.

Two cable glands M20 with standard seals serve for cable of diameter of 6-13mm, for smaller diameter of cable (4-8mm) you have to remove original seal from the cable gland M20 and use the enclosed

reducing seal instead of it. Reducing seal (P/N 13051388) for diameter of cable 4-8mm is enclosed.

This reducing seal has to be used for cable Flamar 3x AWG 16 + 1 x (2x AWG 24) (P/N 1305 1508).

Fully tighten cable gland nuts and check that cables are properly fastened in the cable glands.

Note: To keep declared IP rating, unused cable gland has to be covered with the end cap.



#### Wiring of the Junction box

Terminal block	Function	Terminal block	Function
L	Live	+	Data +
N	Neutral	-	Data -
Ð	Ground (earth)	0	Data ground (0V)

**NOTE**: DMX line of Lyraes S has to be terminated at last fixture. Connect a 120 Ohm resistor between terminals + and - in the junction box at last fixture. Example:



**<u>OR</u>** terminate via RDM Set the 'Manufacturer PID' 'Terminator active' to '1' at last fixture by means of RDM Control Panel.

Terminator active (0-dis 1-en):	00	(hex)	
	-		

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

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 in case that you need to unscrew and remove the cable gland from the housing of the junction box and and screw it back to the housing.



Failure to properly install cable glands will result in failure of the watertight seal!

10. After checking all connections in terminal block (15), fill the connection box with synthetic resin (3M<sup>™</sup> Scotchcast<sup>™</sup> Re-Enterable Electrical Insulating Resin 2123). Make sure the end cap is inserted in any unused cable glands, and the ground wire for cover is pulled from the junction box before filling it with resin. Read and follow all instructions stated on the resin bag prior to filling the junction box. The junction box has to be fully filled by resin.

Connect the ground wire to the cover (13) of the junction box and screw the cover to the junction box by means of three screws (14). Use a tightening torque of 3 Nm for all screws. **Fastening of the cover must be done before hardening the resin.** 







Unscrew two screws (10) and remove the temporary cover (2) from mounting sleeve and insert the Lyrae S (3) to the mounting sleeve (1).

Teeth (16) in the housing of Lyrae S allows you fine positioning of the Lyrae S against the position mark (8) in the mounting sleeve.



**12.** Fasten the Lyrae S to the mounting sleeve by means of the four Allen screws M6x20 (17). Place the trim (19) on the Lyrae S and fasten it by means of two flat Allen screws M6x35 (20).





## 4. Control and connection options

## 4.1 DMX

Example:



Up to 32 Lyraes S can be connected in DMX chain.

Wiring of the Junction box

CE			
Core	Power connection	Core	DATA connection
Black	L	Red	Data +
Blue	Ν	White	Data -
Yellow/Green	(earth)	Shielding	Data ground (0V)

Colours of wires apply to the 5-cored cable Li9YC11Y 3xAWG16+1x(2xAVG24 Shielded and Jacketed) (P/N 3051508)



**NOTE**: DMX line of Lyraes S has to be terminated at the last fixture as stated in the chapter 3. Installation.

## **4.2 DALI**





Up to 64 Calummas can be connected in DALI network.

#### Wiring of the Junction box

CE.

Core	Power connection	Core	DATA connection
Black	Live (L)	Red	Data
White	Neutral (N)	Orange	Data
Yellow/Green	GND	-	-

Colours of wires apply to the 5-cored cable Belcom B2ca DALI 5X1.5mm2 Hybrid LSZH black (P/N 1305 3693).

US.

Core	Power connection	Core	DATA connection
Black	Live (L)	Red	Data
White	Neutral (N)	Orange	Data
Yellow/Green	GND	-	-

Colours of wires apply to the 5-cored cable SJTW 5x 14AWG, black (P/N 13053336).

## 4.3 DMX or Ethernet via E-box

The E-box menu allows you to switch connected Lyraes S to the two modes (Personality  $\rightarrow$ E-box mode):

**Standard** - LED modules are switched to an internal serial connection. DMX addressing of connected LED modules is made automatically (default DMX address = 1, changes can be done by the E-box menu or by RDM).

**Pass-Thr** - (Pass through). LED modules are switched to an internal parallel connection. DMX addressing of connected LED modules has to be done manually by means of the Robe Universal Interface and the software RDM Manager.

Max. 32 fixtures can be connected to one LED output of the E-Box (Star, Daisy, Lite) in this mode.



**NOTE**: DMX Data line of Lyraes S at each LED output of the E-box has to be terminated at the last fixture as stated in the chapter 3 Installation.

Example of connection for E-box Daisy.



#### Wiring of the Junction box.

CE

Core	Power Connection	Core	DATA Connection
Brown	L	Purple	Data +
Blue	Ν	Orange	Data -
Yellow/Green	(earth)	Shielding	Data ground (0V)

Colours of wires apply to the 5-cored cable WCA-2.0x3C+(0.2x1P+D+AL)+MY(05) (P/N 13053138).

US

Core	Power Connection	Core	DATA Connection
Black	L	Red	Data +
White	Ν	Orange	Data -
Green	(earth)	Shielding	Data ground (0V)

Colours of wires apply to the 5-cored cable WCA-14#x3C+(24#x1P+D+AL)(03) (P/N 13053139).

Number of connected Lyraes S to one E-box output depends on a cable length, power voltage and E-box operation mode.

Lyrae S SC Lyrae S MC	Voltage			
Cable length *	120V	190V	230V	277V
10 m	55	87	105	127
20 m	55	87	105	127
30 m	37	87	105	127
50 m	23	57	85	123
70 m	15	41	61	47
100 m	12	29	41	61
200 m	5	13	21	31

The tables below state max. theoretical number of Lyraes S connected to the one LED output of the E-box. **Standard mode of E-box.** 

#### Pass-Through mode of E-box

Lyrae S SC Lyrae S MC		Volt	age	
Cable length *	120V	190V	230V	277V
10 m	32	32	32	32
20 m	32	32	32	32
30 m	32	32	32	32
50 m	23	32	32	32
70 m	15	32	32	32
100 m	12	29	32	32

\* \* Cable length is a total cable length between power supply (e.g. E-box) and last connected Lyrae S. Example: Total cable length=L1+L2+L3



Lyrae S

Lyrae S

## 4.4. 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.

<ul> <li>Control panel</li> </ul>	e	8
Device: 52:53-01:2e:00:7f		
I 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: Lyrae		
Device label:		
DMX512 setup		
DMX512 footprint: 4		
Current personality: DMX Preset 01- 4		
Personalities count: 16		
DMX address: 1		
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 (h	ex)	
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  $\blacktriangleright$  saves changes made in the Control panel to the Lyrae S.

#### **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) Lyrae.

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 fff" (and calibration values cannot be saved to the Lyrae S). *Warning! Changing and saving values in this item will affect calibrated white colour(s) of the Lyrae S*.

<u>Insect friendly light</u> - the item effects RGBA Lyrae S 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>Wireless unlink</u> - the item is inactive for Lyrae S.

Terminator active - the item allows you to terminate line of Lyraes S at last Lyrae S.

Lyrae S

### 4.5. Tilt setting

You can tilt light beam of the Lyrae S by means of the mobile application ROBE COM or by DMX.

#### Mobile application.

Download and install the application ROBE COM from Google Play (for Android 5.0 and higher) or App Store (for iOS 12.0 and higher) to your mobile phone. Your mobile phone has to support NFC (Near-Field Communication).

After installing the ROBE COM, run the application by touching the icon The following screen will appear:



Hold the mobile phone close to the NFC point on the glass cover of the Lyrae M which is marked with the symbol NFC (the Lyrae S has to be connected to power).







<u>Note</u>. Movement of the light beam is approximately 2-3 seconds delayed after writing a tilt value to the Lyrae S. The tilt setting by NFC is disabled If the Lyrae S is set to DMX mode 10.

#### DMX.

DMX mode 10 allows you to control tilt of light beam by DMX command. Set tilt value is immediately saved to the Lyrae S.

<u>Note</u>. Last value of the tilt (set by DMX or by NFC) is saved in the Lyrae until another change of the tilt value is done.

## 5. Software update

Software update of Lyraes S 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 Lyraes S to the update mode automatically.

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

**Note:** Lyraes in ON/OFF connection cannot be updated.

#### **DMX** connection

For updating of Lyraes S, use the file Lyrae.lib.

Example of connection:



#### E-box connection

If the option Standard is selected from the menu E-box mode and LED modules are connected in series,

the E-box will be updated including connected Lyrae modules. You have to use the file <u>EminereEbox.lib</u> in the ROBE Uploader for this operating mode.

If the option **Pass-Thr** is selected from the menu **E-box mode** and LED modules are connected in series, you have to do the following steps to update Lyrae S including the E-box:

- 1. Update connected LED modules by means of the file Lyrae.lib in the ROBE Uploader.
- 2. Set the E-box to the Standard mode and switch it off/on. Only E-box will be shown in the ROBE Uploader. You have to use the file EminereEbox.lib in the ROBE Uploader for software update of the E-box.
- 3. After E-box updating, set the E-box to the Pass-Thorough mode and switch it off/on.

Examples of connection:

1. By means of DMX connection and RUNIT.



## **6.** Technical specifications

#### Power supply

- Electronic auto-ranging
- Input voltage: 120 277V AC, 50/60 Hz
- Power consumption:
  - Lyrae S SC: 30W Lyrae S MC: 27W
- Inrush current:
  - Lyrae S SC: 60A/230VAC, 30A/115vAC Lyrae S MC: 60A/230VAC, 30A/115vAC

#### Optical

- Light source:
  - Lyrae S SC: high power single chip LEDs Lyrae S MC: high power multi chip LEDs
- Colour variants:
  - Lyrae S SC: PW (3000 K)
  - Variants on request: (TW (2700 6500 K), 2500 K, 2700 K, 3500 K, 4000 K, 5000 K,6500 K Lyrae S MC: RGBW (W - 6500 K), RGBA
- Beam angles:

Lyrae S SC:

Clear glass:

symmetrical: 10°, 15°, 25°, 30°, 45°, 65° bi-symmetrical: 10°x30°, 30°x10°, 10°x60°, 60°x10°,15°x45°,45°x15° 30°x60°, 60°x30°

Anti-Skid Glass:

symmetrical: 18°, 22°, 35°, 50°

bi-symmetrical: 20° x 35°, 35° x 20°, 20° x 65°, 65° x 20°, 20° x 50°, 20° x 50°, 35° x 65°, 65° x 35°

Lyrae S MC:

Clear glass:

symmetrical: 9°, 15°, 25°, 30°, 45°, 65° bi-symmetrical: 10°x30°, 30°x10°, 10°x60°, 60°x10°,15°x45°,45°x15° 30°x60°, 60°x30°

Anti-Skid Glass:

symmetrical: 18°, 22°, 35°, 50°

bi-symmetrical: 20° x 35°, 35° x 20°, 20° x 65°, 65° x 20°, 20° x 50°,

20° x 50°, 35° x 65°, 65° x 35°

• Projected Lumen Maintenance: L90B10 >90.000 hrs, Ta = 25°C / 77°F

#### **Operating modes**

• DMX, RDM, DALI, On/Off (SC version only), power line

#### Settings/Addressing

• E-box, RDM, NFC

#### **Compatible drivers**

• E-box Daisy

1 output 1 Main power Input Control: DMX, RDM, Art-Net, sACN , MANet, MANet 2 120-277 V Input Connection via terminal blocks, inlets via grommet IP67

• E-box Star

6 outputs 1 Main power Input Control: DMX, RDM, Art-Net, sACN , MANet, MANet 2 120-277 V Input Connection via terminal blocks, inlets via grommet IP67

• E-box Lite

1 output 1 Main power Input Control: DMX, RDM, Art-Net, sACN , MANet, MANet 2 120-277V Input Connection via screw terminal blocks, inlets via grommet IP67

#### Mounting method

• External mounting sleeve

#### Adjustability

• Motorized tilt 0-25°

#### Housing

- High pressure die-cast aluminium body
- Stainless Flange
- Tempered glass

#### Trim

- Options: Bevel edge trim, Flush trim
- Shape: Round
- Finish options: Stainless steel, Bronze, Brass

#### **Cooling system**

Convection

#### **Total heat dissipation**

- Lyrae S SC: 76 BTU/h (calculated)
- Lyrae S MC: 69 BTU/h (calculated)

#### **Protection factor**

- CE: IP 68 (8h @ 1m)
- US: Suitable for wet location

#### Impact rating

• CE: IK10

#### Max. static load

- Standard tempered glass: 45kN
- Antiskid tempered glass: 23kN

#### Operating ambient temperature range

• -20°C /+40°C (-4°F /+104°F)

#### Connection

• Integrated junction box

Cables - CE

- DMX connection: 5-cored cable cable Li9YC11Y 3xAWG16+1x(2xAVG24 Shielded and Jacketed) (P/N 3051508)
- DALI connection: 5-cored cable Belcom B2ca DALI 5X1.5mm2 Hybrid LSZH black (P/N 1305 3693)
- DMX or Ethernet via E-box: 5-cored cable WCA-2.0x3C+(0.2x1P+D+AL)+MY(05) (P/N 13053138)

#### Cables - US

- DALI connection: 5-cored cable SJTW 5x 14AWG, black
  - (P/N 13053336)
- DMX or Ethernet via E-box: 5-cored cable WCA-14#x3C+(24#x1P+D+AL)(03) (P/N 13053139)

#### Weight

• 9.6 kg | 21.16 lbs

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

## Lyrae S



## Mounting sleeve



#### Included items

- 1 x Lyrae S
- 2 x Reducing seal (P/N 13051388)
- 1 x User manual

#### Accessories (order separately)

P/N 10063655 - E-box Daisy P/N 10063638 - E-box Daisy/W P/N 10063657 - E-box Lite P/N 10063653 - E-box Lite/W P/N 10063656 - E-box Star P/N 10063644 - E-box Star/W P/N 10980981 - Trim for Lyrae S round beveled P/N 10981019 - Trim for Lyrae S round flush P/N 10981020 - Trim for Lyrae S square beveled P/N 10980957 - Mounting sleeve Lyrae S P/N 10980658 - 3M<sup>™</sup> Scotchcast<sup>™</sup> Re-Enterable Electrical Insulating Resin 2123 P/N 13053138 - cable WCA-2.0x3C+(0.2x1P+D+AL)+MY(05) P/N 13053139 - cable WCA-14#x3C+(24#x1P+D+AL)(03) P/N 1305 3693 - cable Belcom B2ca DALI 5X1.5mm2 Hybrid LSZH black P/N 13053336 – cable SJTW 5x 14AWG, black P/N 3051508) - cable Li9YC11Y 3xAWG16+1x(2xAVG24 Shielded and Jacketed)

## 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, nonabrasive 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 the manual	Date of issue	Description of changes
1.1	12/09/2024	DMX chart ver. 1.2
1.2	31/01/2025	Rubber seal P/N 13051388 added

Specifications are subject to change without notice.

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