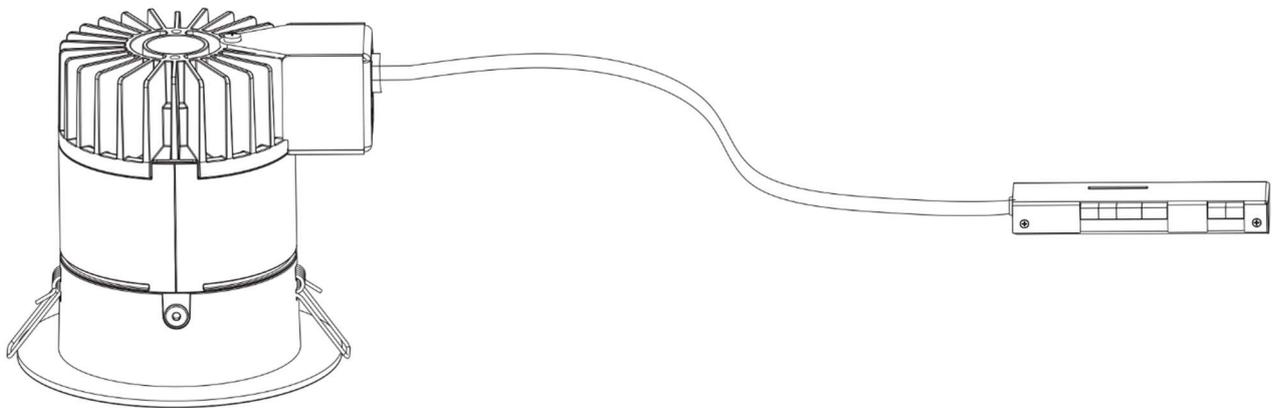


# Ambiane<sup>®</sup> SP16 Recessed US



QR code for user manual



**USER MANUAL**

Version 1.1

## Table of contents

1. Attention.....	3
2. Fixture exterior view.....	4
3. Installation.....	5
3.1. DMX and DALI address setting and control.....	9
3.2 0-10V control.....	10
4. RDM.....	10
4.1 Example of Control panel in RDM manager.....	11
5. DMX protocols.....	12
6. Technical specifications.....	14
7. Cleaning and maintenance.....	17
7.1 Software update.....	17
7.2 Disposing of the product.....	18
8. ChangeLog.....	19

## 1. Attention

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

The unit was designed for indoor use only.

Do not install the unit near highly inflammable liquids or materials.

Do not allow anything to rest on the unit.

Do not install the unit near an open flame.

Do not install the unit in dirty, dusty or badly ventilated location.

Avoid looking directly into the light beam at close range!

A ceiling (structure) intended for installation of the unit(s) must safely hold at least 5 times the weight of the unit(s) fastened on it.

Sufficient air accessing to the housing of the unit has to be ensured, there must not be any heat or anti-noise insulation).



Unsuitable for covering by heat insulation material

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.

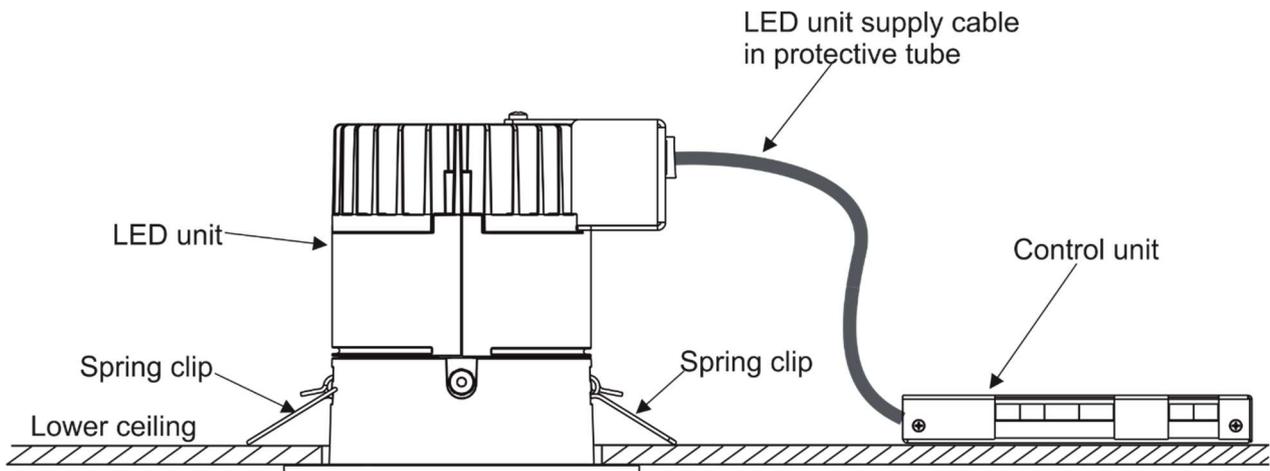
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate 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

(Version with spring clips)



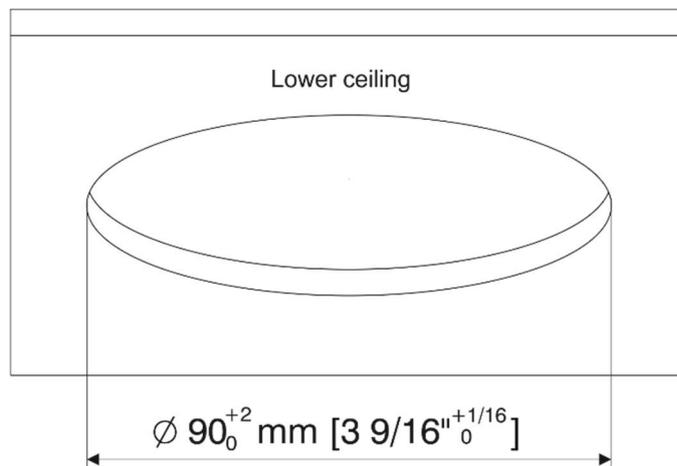
### 3. Installation

The Ambiane SP16 Recessed must be installed by a qualified electrician in accordance with all national and local electrical and construction codes and regulations.

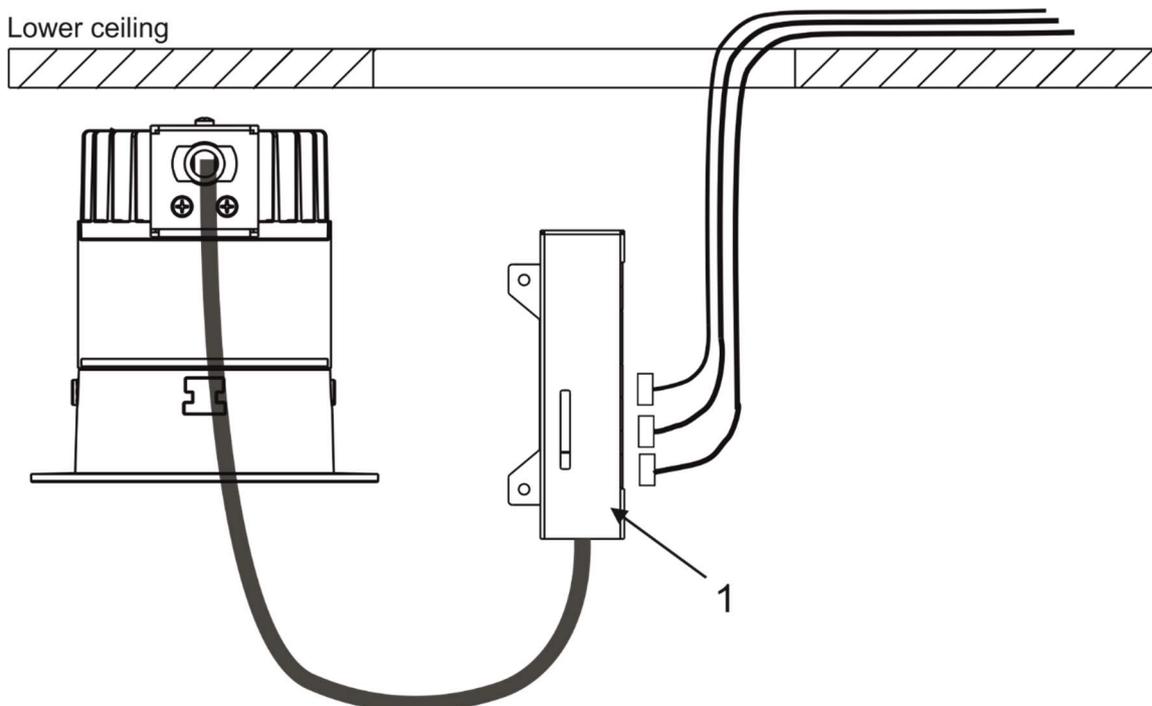
Always switch off power supply of the control unit before connecting or disconnecting the control unit or the LED unit.

The lower ceiling (or another structure) intended for installation of the Ambiane(s) SP16 must safely hold at least 5 times weight of the Ambiane(s) SP16 Recessed placed on it.

1. Prepare a circular opening in the lower ceiling. Max. thickness of the lower ceiling can be 18 mm (0.71 in).

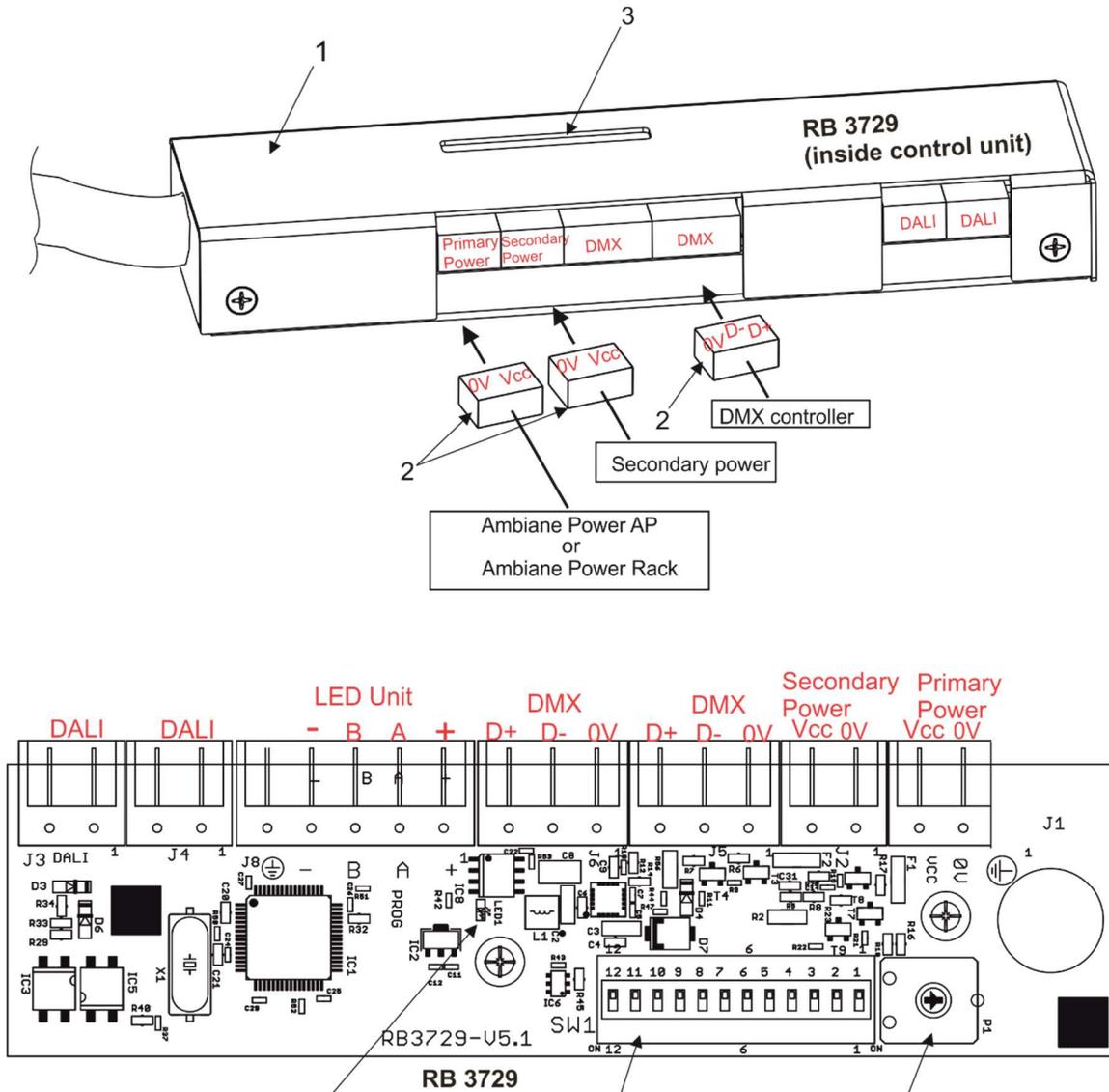


2. Prepare needed connecting cables with terminal plugs (2), pull them through the circular opening and connect to the control unit (1).



# Ambiane SP16 Recessed US

Example of connection



The green LED on the PCB signals way of DMX address setting:  
 LED lights-DMX address is set by means of the DIP switch.  
 LED does not light- DMX address is set by means of RDM.

## Primary power connection

Connector	Vcc	0V
Function	Power +	Power -

## Secondary power connection

Connector	Vcc	0V
Function	Power +	Power -

## Ambiane SP16 Recessed US

Recommended diameter of conductors with respect to distance between the Control unit and the power supply (e.g. Ambiane Power AP):

<b>Distance/cable length</b>	100 m
<b>Diameters of conductors</b>	1 mm <sup>2</sup>

### DMX connection

<b>Connector</b>	<b>D+</b>	<b>D-</b>	<b>0V</b>
<b>Function</b>	Data +	Data-	Data ground (shielding)

### 0-10V connection

<b>Connector</b>	<b>D+</b>	<b>0V</b>
<b>Function</b>	+10V	0V

DMX connectors are used for 0-10V control

### Primary and secondary power.

The primary power input serves for a standard power (e.g., Ambiane Power AP).

The secondary power input serves for a backup power (in case that primary power failed).

If both power inputs are under voltage, the primary power has a priority and the secondary power is disabled. In case of primary power loss, the secondary power is enabled.

If the fixture is supplied via the secondary power, the light output of the fixture is a white colour 3200K (RGBW, TW version) and its light intensity can be set by a trimmer (5).

**3.** Set the DIP switch (4) according to your operation mode. This DIP switch is accessible by aperture (3) in the cover of the control unit (1). Please see the chapter 3.1 DMX and DALI address setting and control.

The fixture can be controlled by one of the following methods: DMX 512

DALI

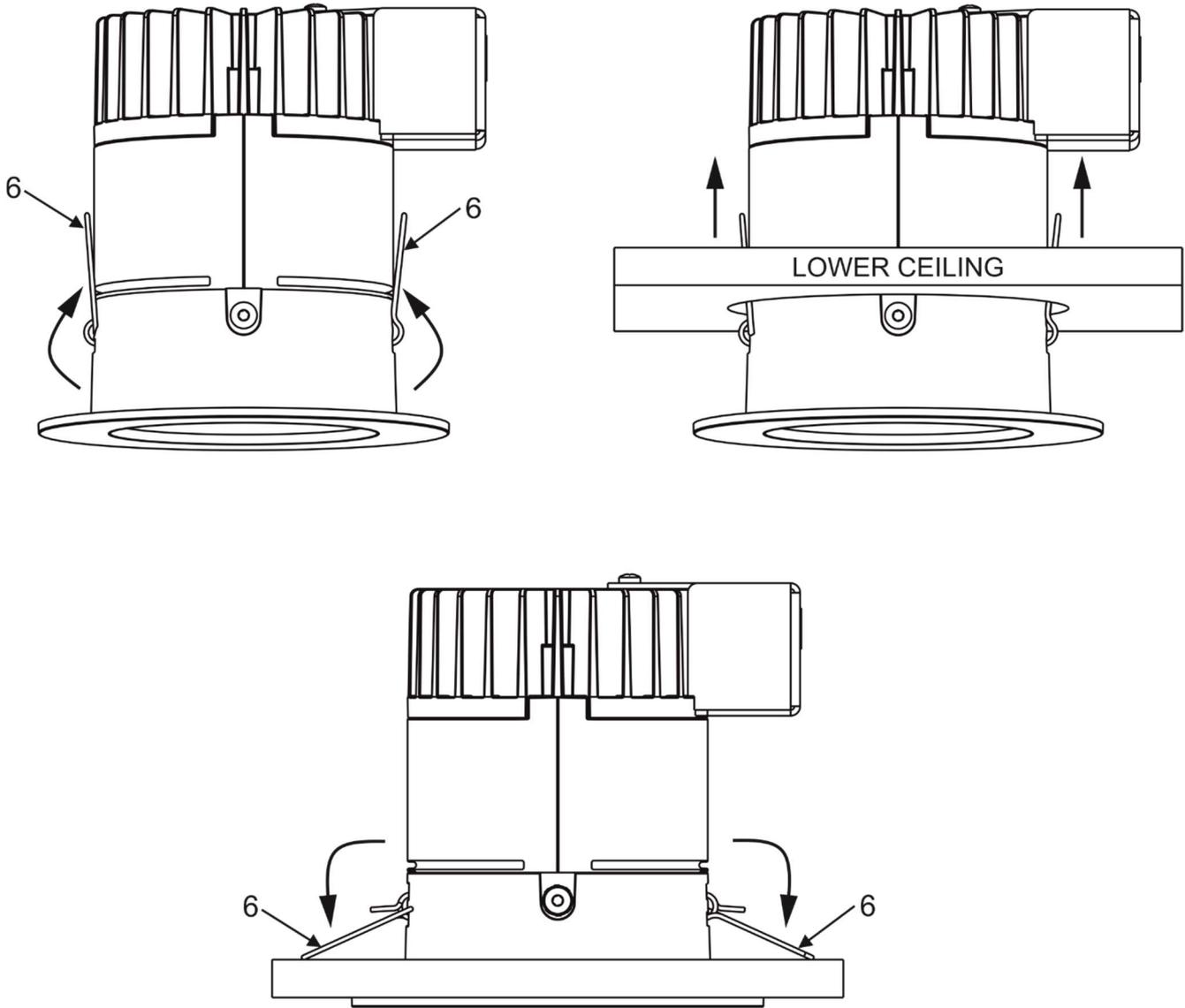
0-10V (PW or TD version only)

The fixture is equipped with two DMX and DALI connection blocks (on the PCB RB 3729) for easy connection to a DMX or DALI chain (In/Out method).

## Ambiane SP16 Recessed US

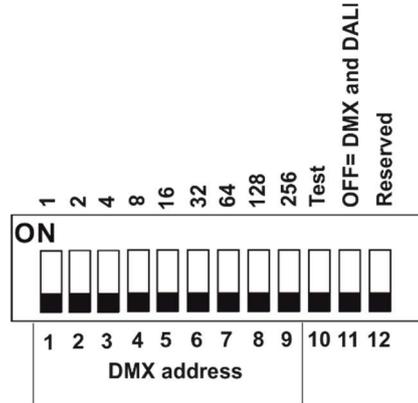
4. After connecting needed cables to the control unit, press both spring clips (6) upwards and insert the LED unit with control unit into prepared hole in the lower ceiling. The LED unit will stay fixed in desired position by means of two springs (6).

The control unit has to be laid or fastened on a non-flammable flat surface.



### 3.1. DMX and DALI address setting and control

The DIP switch on the control PCB (RB3729) allows you to set DMX address and run a test light.



DIP 10 - if it is switched to ON=test light (the fixture lights at 3200K (for RGBW and TW version)).  
 DIP 11 - has to be switched to OFF position to receive DMX 512 and DALI, position ON=0-10V control.

Note: If DIP 11=OFF (fixture is controlled by DMX and DALI), the last coming command switches the fixture to the corresponding operation mode (DMX operation by a DMX command, DALI operation by a DALI command). E.g., the fixture stays in a DALI operation and last coming command is a DMX command which switches the fixture to DMX operation. Next command is a DALI command and switches the fixture to the DALI operation etc.

If you need the permanent DALI operation, you have to send a DALI command 8 to the fixture.

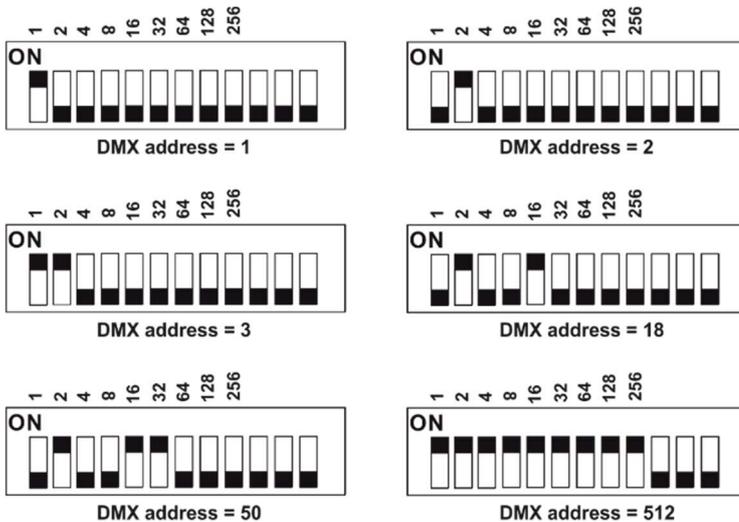
#### DMX control

The DMX start address, is the first channel used to receive instructions from the DMX controller. The address may be any channel from 1 to 512. DMX address can be set either by DIP switch or by RDM. DMX address set by RDM overwrites address set by DIP switch and vice versa. The green LED on PCB signals way of DMX address setting:

- LED lights-DMX address is set by means of the DIP switch.
- LED does not light-DMX address is set by means of RDM.

The DIP 11 has to be set to OFF position.

Example of DMX addresses:



### DAI control

Addressing of the fixture has to be made by means of an external DALI controller.

If you need to start the permanent DALI control of the fixture (fixture will not respond to DMX commands), the external DALI controller has to send activating command (8=ON).

If you need to stop the permanent DALI control of the fixture, the external DALI controller has to send deactivating command (0=OFF).

### 3.2 0-10V control

DIP 11 has to be set in ON position. 0-10V operation has priority to DALI and DMX commands. The option is applicable for the PW and TD version of the Ambiane SP16 Recessed only.

## 4. RDM

This fixture supports RDM operation. RDM (Remote Device Management) is a bi-directional communication protocol for use in DM X512 control systems, it is the new open standard for DMX512 device configuration and status monitoring.

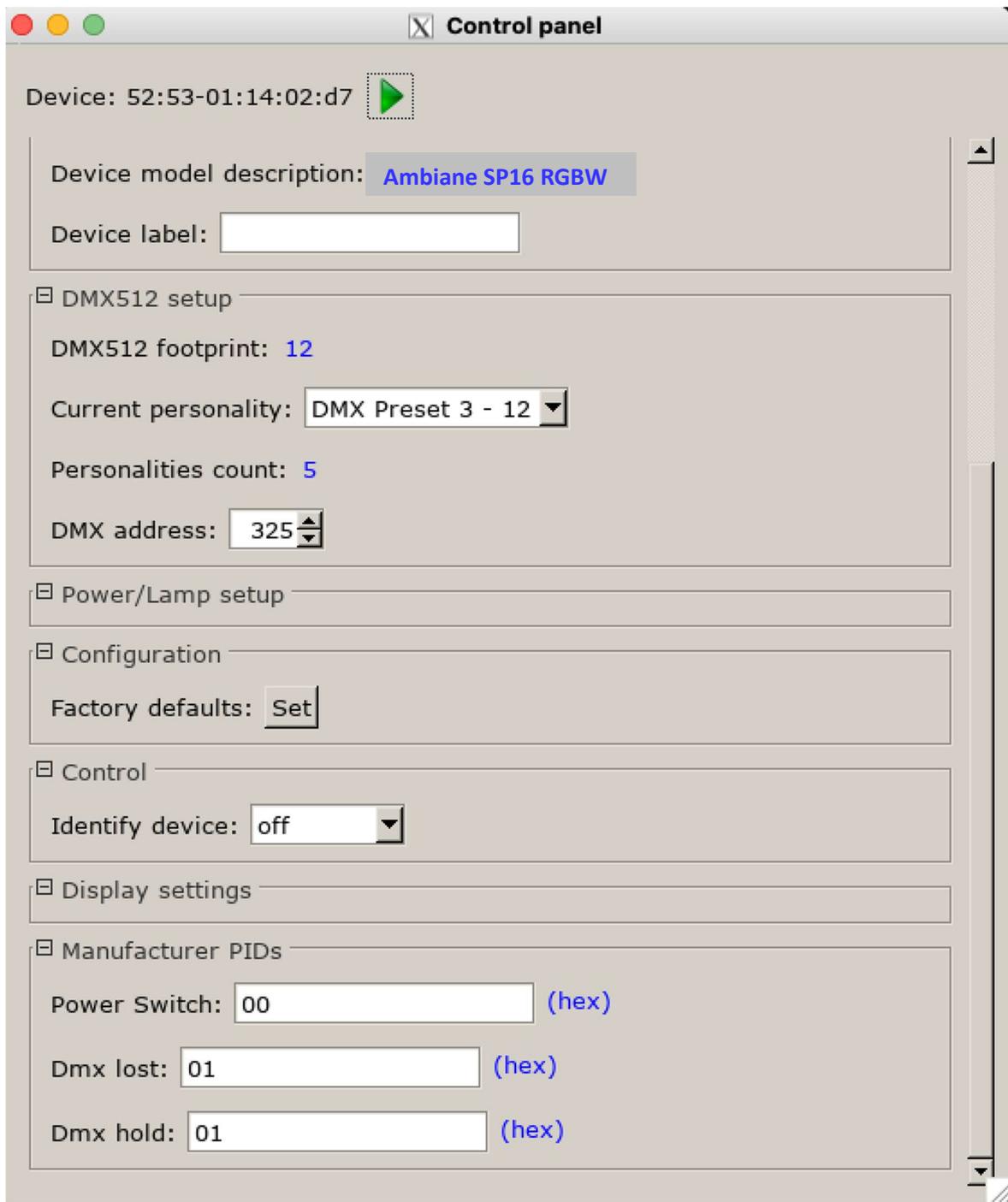
RDM allows you to set a DMX address, select DMX mode, readout software version of the fixture etc. It is also used for fixture software update by means of the Robe Uploader.

RDM model ID for the Ambiane SP16 Recessed 0x012b.

Parameter ID	Discovery command	SET command	GET command
DISC_UNIQUE_BRANCH	*		
DISC_MUTE	*		
DISC_UN_MUTE	*		
DEVICE_INFO			*
SUPPORTED_PARAMETERS			*
SOFTWARE_VERSION_LABEL			*
DMX_START_ADDRESS		*	*
IDENTIFY_DEVICE		*	*
DEVICE_MODEL_DESCRIPTION			*
MANUFACTURER_LABEL			*
DEVICE_LABEL		*	*
DMX_PERSONALITY		*	*
DMX_PERSONALITY_DESCRIPTION			*
SENSOR_VALUE		*	*
SENSOR_DEFINITION			*

SLOT_INFO			*
SLOT_DESCRIPTION			*
DEFAULT_SLOT_VALUE			*
PARAMETER_DESCRIPTION			*

#### 4.1 Example of Control panel in RDM manager



Manufacturer PIDs:

**DMX hold [00]**- last received DMX values are held in case of DMX signal lost.

**DMX hold [01]**- option “DMX lost” is activated and influences behaviour of the fixture at DMX signal lost.  
Default value is [00].

**DMX lost [00]**- the fixture lights on full power (dimmer open) at DMX signal lost.

**DMX lost [01]**- the fixture close light output at DMX signal lost.

Default value is [00].

**Power Switch [00]**- the fixture uses primary power.

**Power Switch [01]**- the fixture uses secondary power.

Default value is [00].

## 5. DMX protocols

Variant RGBW, version 1.0

Mode 1 Channel	Mode 2 Channel	Mode 3 Channel	Mode 4 Channel	Mode 5 Channel	DMX value	Function	Type of control
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 (0-->100%)	proportional
2	2	3	-	2	0-255	<b>Green</b> Green LEDs saturation control (0-100%)	proportional
-	-	4	-	-	0-255	<b>Green Fine</b> Green LEDs saturation control (0-->100%)	proportional
3	3	5	-	3	0-255	<b>Blue</b> Blue LEDs saturation control (0 -->100%)	proportional
-	-	6	-	-	0-255	<b>Blue Fine</b> Blue LEDs saturation control (0-->100%)	proportional
4	-	7	-	4	0-255	<b>White</b> White LEDs saturation control (0-->100%)	proportional
-	-	8	-	-	0-255	<b>White Fine</b> White LEDs saturation control (0-->100%)	proportional
-	-	9	1		0 1-127 128 129- 255	<b>Green correction</b> Uncorrected white Minus green --> uncorrected white Uncorrected white (128=default) Uncorrected white --> Plus green	step proportional step proportional
-	-	10	2		0 1-10 11-20 21-255	<b>Colour temperature correction (CTC)</b> No function (0=default) Tungsten dimming 2700 K Tungsten dimming 3200 K Colour temperature changing 2700 K--> 6500 K	step step step proportional
-	-	11	3	5	0-255	<b>Dimmer</b> Light intensity coarse (0-->100%)	proportional
-	-	12	-	6	0-255	<b>Dimmer Fine</b> Light intensity fine (0-->100%).	proportional

DMX mode has to be set by RDM.

Ambiane SP16 Recessed US

Variant TW, version 1.1

Mode 1 Channel	Mode 2 Channel	Mode 3 Channel	Mode 4 Channel	DMX value	Function	Type of control
1	-	1	-	0-255	<b>White colour selection</b> White from 2700K-->4000K	proportional
-	1	-	1	0-255	<b>Warm White</b> Warm white LEDs saturation control (0-->100%)	proportional
-	2	-	2	0-255	<b>Cool White</b> Cool white LEDs saturation control (0-->100%)	proportional
2	3	2	3	0-255	<b>Dimmer</b> Light intensity (0-->100%)	proportional
-	-	3	4	0-255	<b>Dimmer Fine</b> Light intensity fine (min-->max)	proportional

Variant TD, PW version 1.0

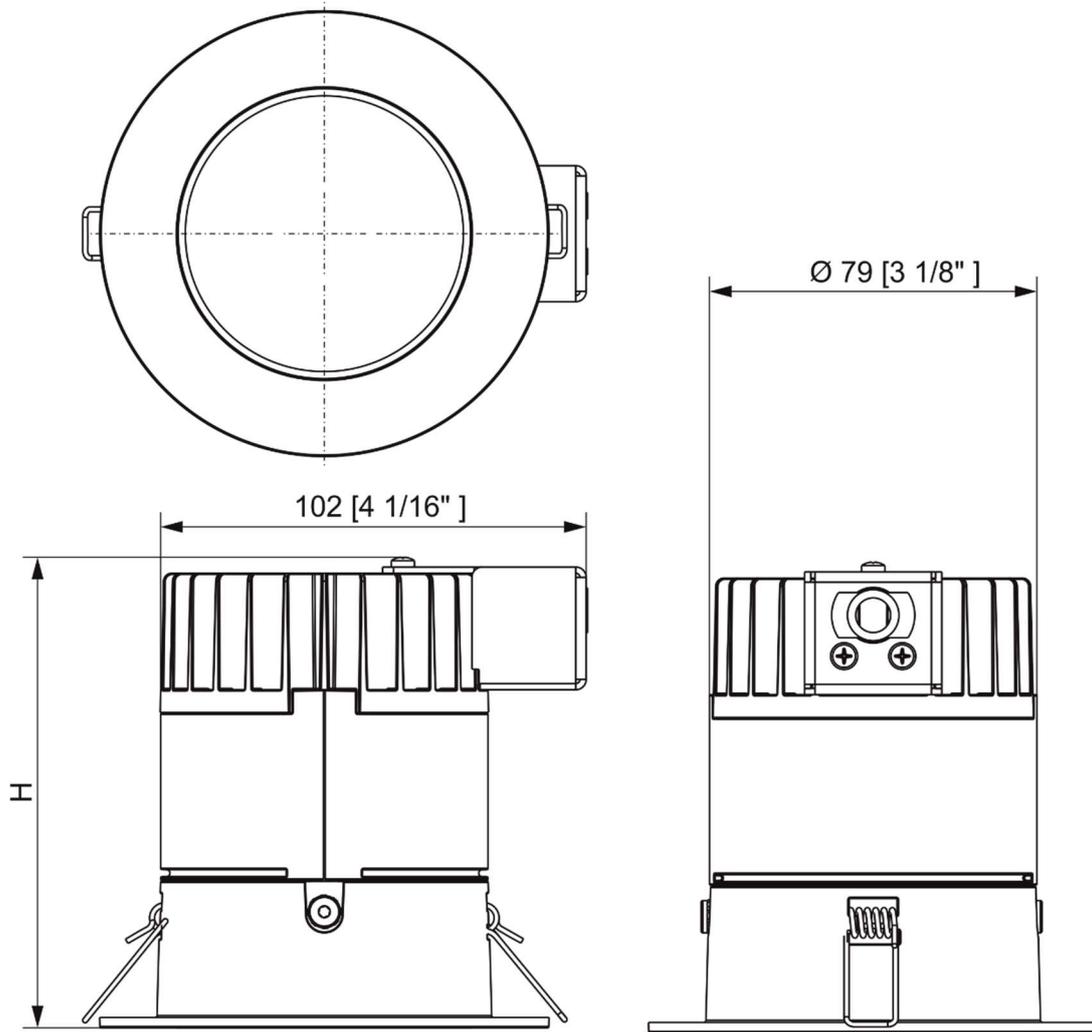
Mode 1 Channel	Mode 2 Channel	DMX value	Function	Type of control
1	1	0-255	<b>Dimmer</b> Light intensity coarse (0-->100%)	proportional
-	2	0-255	<b>Dimmer Fine</b> Light intensity (0-->100%)	proportional

## 6. Technical specifications

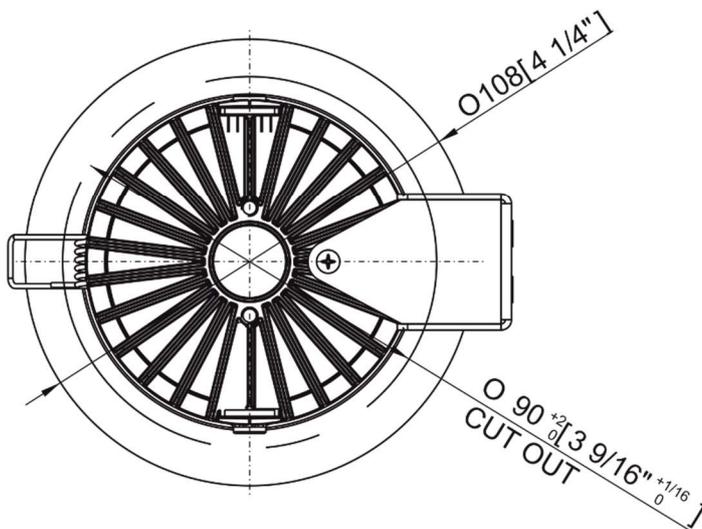
Nominal input voltage:	48V DC
Input voltage range:	44-50V DC
Max. power consumption:	10W
Light source:	15 x single colour LED
CRI:	90+
Beam angle:	30°, 60°
Projected lumen maintenance:	L90B10 >90.000 hrs, Ta = 25°C / 77°F °F)
Colour variants:	RGBW (W - 2700K or 4000K), Pure White, Tunable White, Tungsten Dim
Colour temperature of white:	PW 2700 K or 4000K, TW 2700 - 4000K, TD 3200K
Control:	DMX, DALI 2, RDM, 0-10V
Settings/Addressing:	DIP Switch, RDM
DMX channels (RGBW variant):	4 (Mode 1), 3 (Mode 2), 12 (Mode 3), 3 (Mode 4), 6 (Mode 5)
DMX channels (TW variant):	2 (Mode 1), 3 (Mode 2)
DMX channels (TD, PW variant):	2 (Mode 1), 2 (Mode 2)
Power supply:	Ambiane Power AP, Ambiane Power Rack
Operating ambient temp. range:	-20 °C / +40 °C (-4 °F / +104 °F)
Total heat dissipation:	26 BTU/h (calculated)
Cooling:	convection
Housing:	High Pressure Die-Cast Aluminium Body
Weight (without control unit) :	
Ambiane SP16 Recessed 30°	0.508 kg/ 1.124 lbs
Ambiane SP16 Recessed 60°	0.492 kg/ 1.085 lbs
Mounting Method:	Via two spring clips Cut-Out Diameter: 90 mm / 3.54 in
IC rating:	Non-IC rated
Power connection	Connectors
DMX connection:	Connectors
DALI connection:	Connectors
Protection factor :	Dry locations

Ambiane SP16 Recessed US

Dimensions (spring clips version)  
mm [inch]



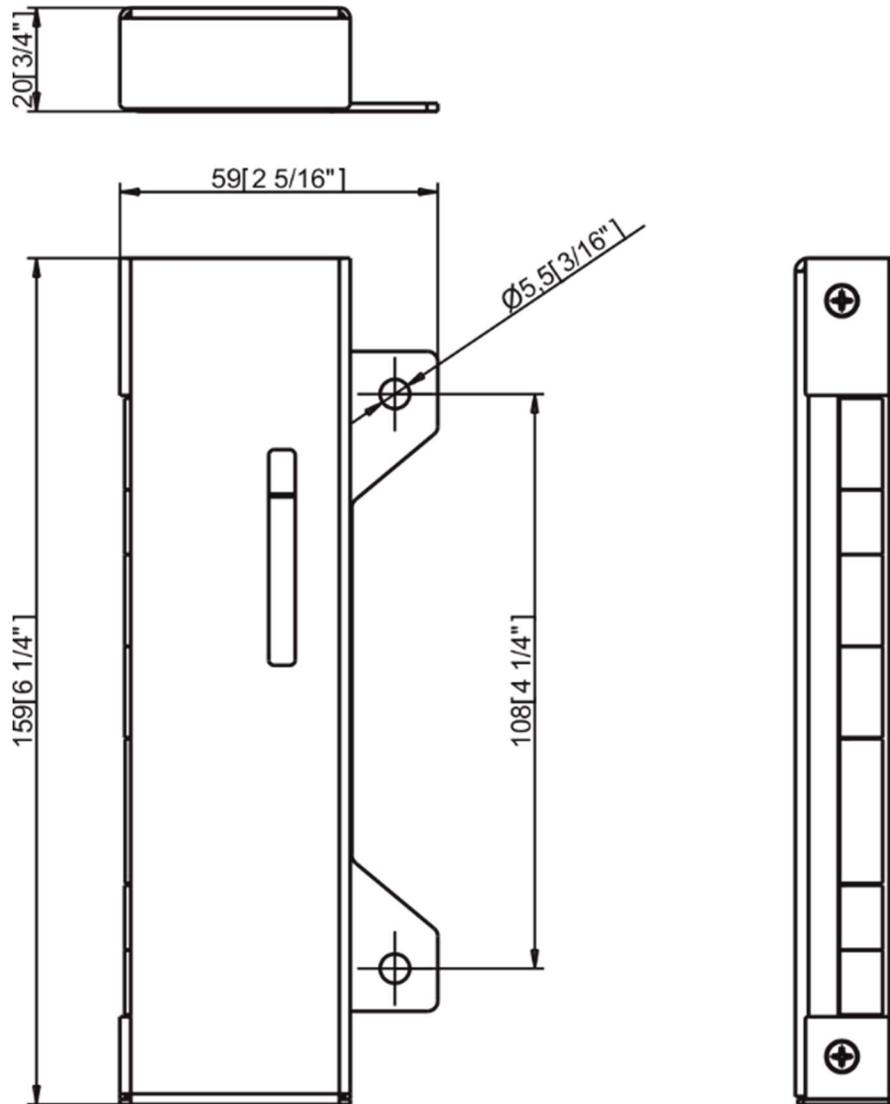
Ambiane SP 30° US      H = 115 [4 1/2"] mm [inch]  
 Ambiane SP 60° US      H = 105 [4 1/8"] mm [inch]



## Ambiane SP16 Recessed US

### Dimensions (Control unit)

mm [inch]



### Included items

- 1 x Ambiane SP16 Recessed US
- 1 x Control unit
- 1 x Set of cable connectors
- 1 x User manual

### Optional items

- Ambiane Power AP (P/N 10063994)
- Ambiane Power Rack US (P/N 10063951)

## 7. Cleaning and maintenance

**Disconnect from the mains before starting any maintenance work**

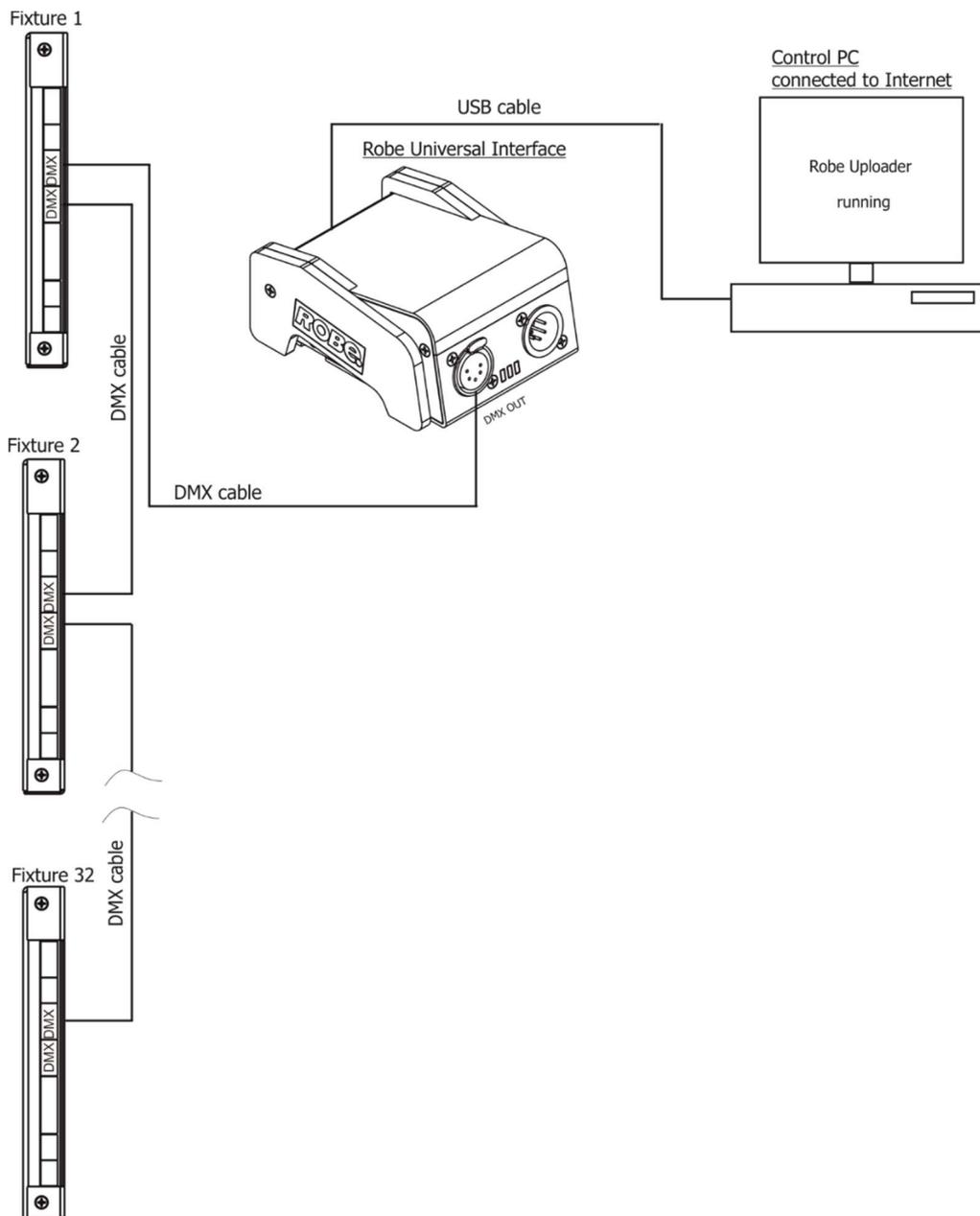
Keep the fixture clean, especially light source and the ribbed heat sink.  
Maintenance and service operations are only to be carried out by a qualified person.  
Should you need any spare parts, please use ROBE OEM parts.

### 7.1 Software update

The fixture has to be connected to power during software update.

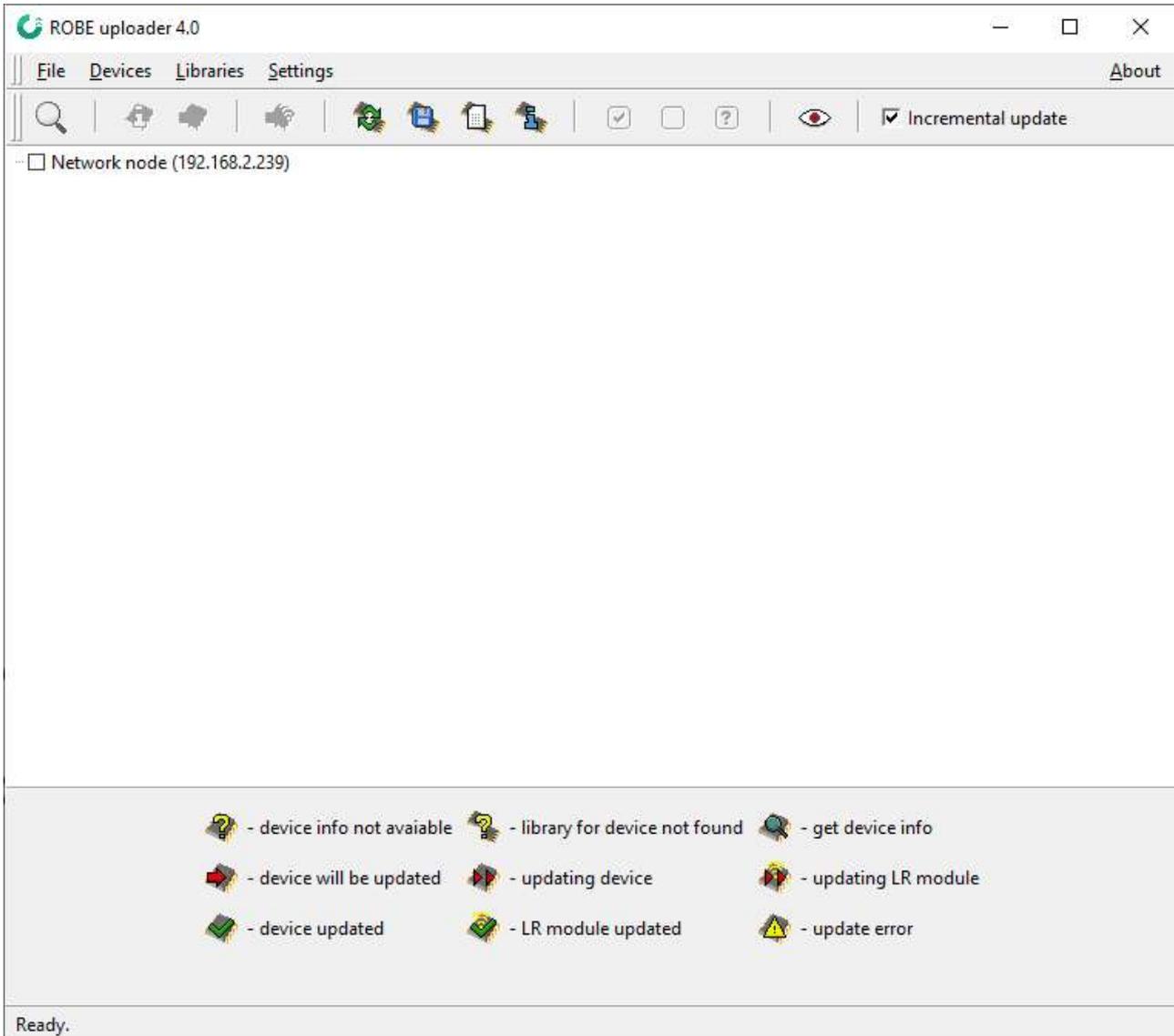
#### Software update by means of the Robe Uploader

The ROBE Uploader is a software for automatized software update of Robe and Anolis fixtures. It can take advantage of RDM support.



## Ambiane SP16 Recessed US

The fixtures have to be connected in a daisy-chain (max. 32 fixtures) and via the Robe Universal Interface/Robe Universal Interface WTX and a USB cable connected to the control PC with the Robe Uploader running. The fixtures have to be connected to power. The control PC should be connected to the Internet.



The Robe Uploader software and user manual is available at <https://www.robe.cz/robe-uploader/>

If you do the software update by means of the Robe Uploader, switching fixtures to the update mode (and from the update mode) is made automatically.

Note: The Robe Uploader software cannot be used if fixtures are connected by means of DALI connection.

## 7.2 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	28/11/2023	Trademark added

*Specifications are subject to change without notice*

*November 28, 2023*

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