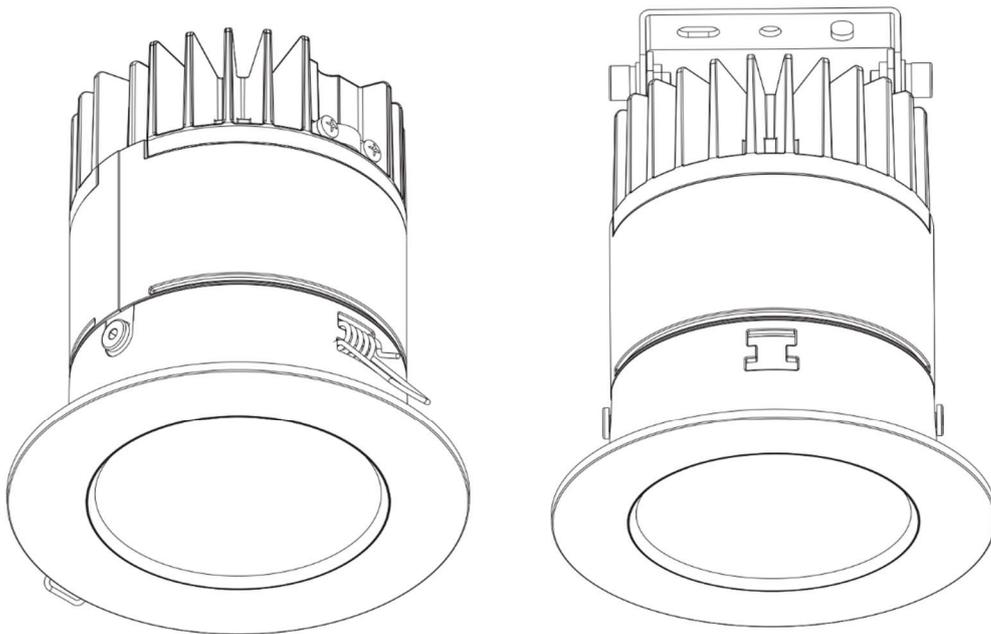


# Ambiane<sup>®</sup> SP16 Recessed



QR code for user manual



**USER MANUAL**

Version 1.6

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## 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

Type Non-IC Recessed.

Blinking light of this thermally protected luminaire may indicate overheating.

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

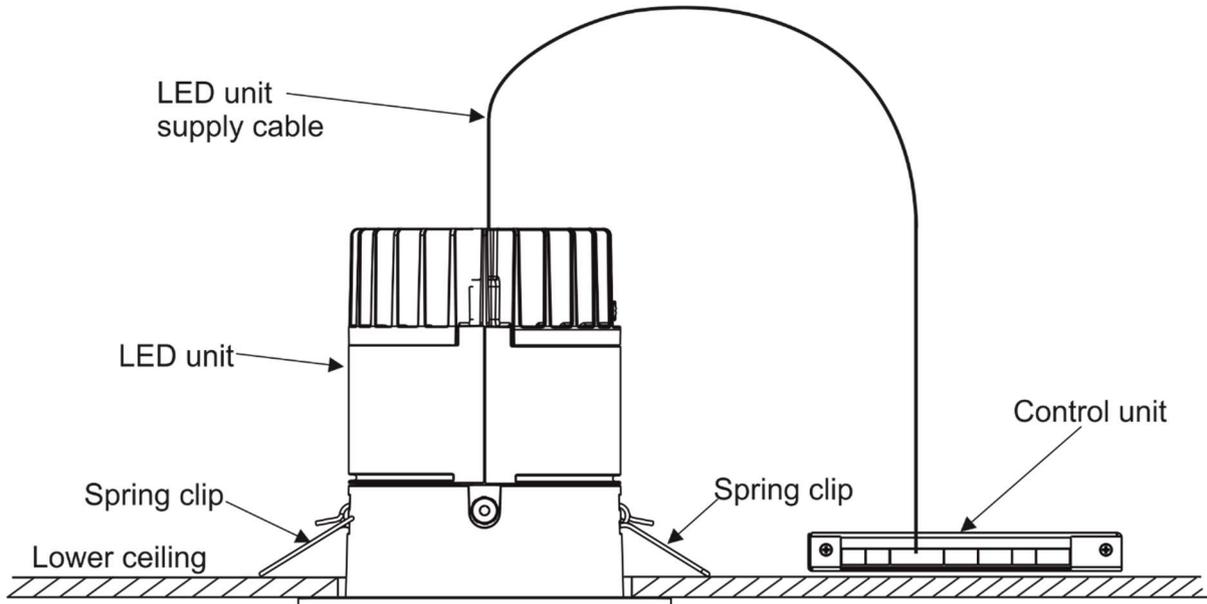
## Ambiane SP16 Recessed

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:

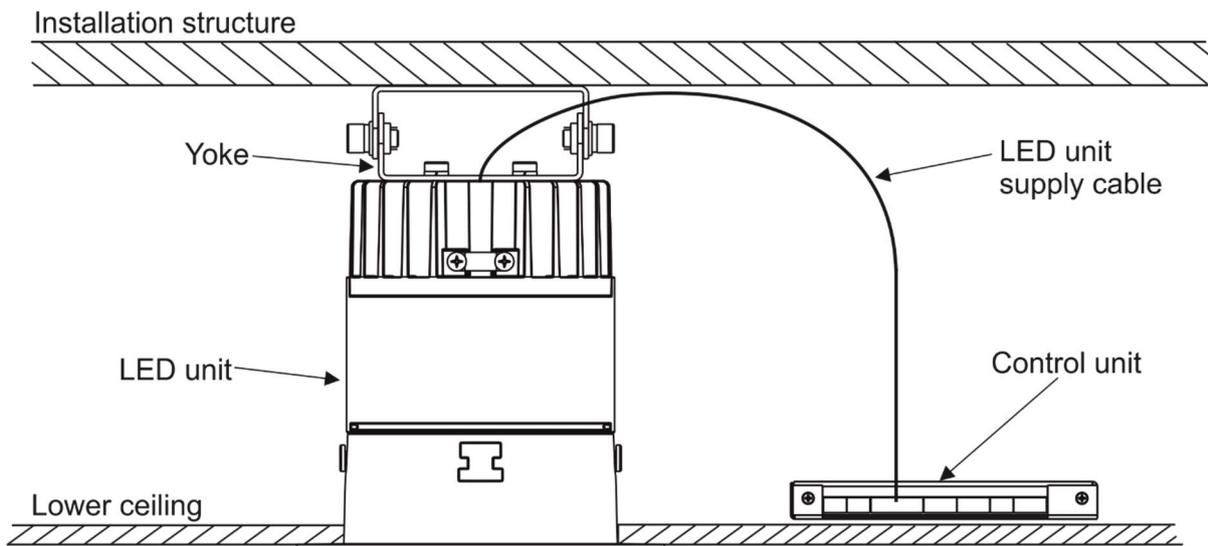
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

## 2. Fixture exterior view

### Version with spring clips



### Version with yoke



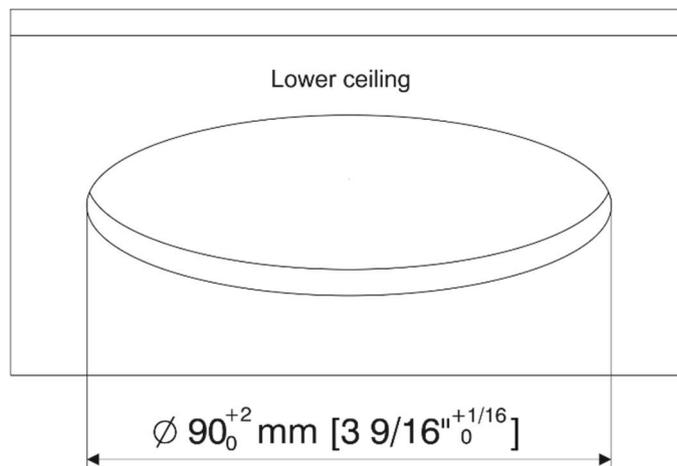
### 3. Installation

The Ambiane SP16 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.

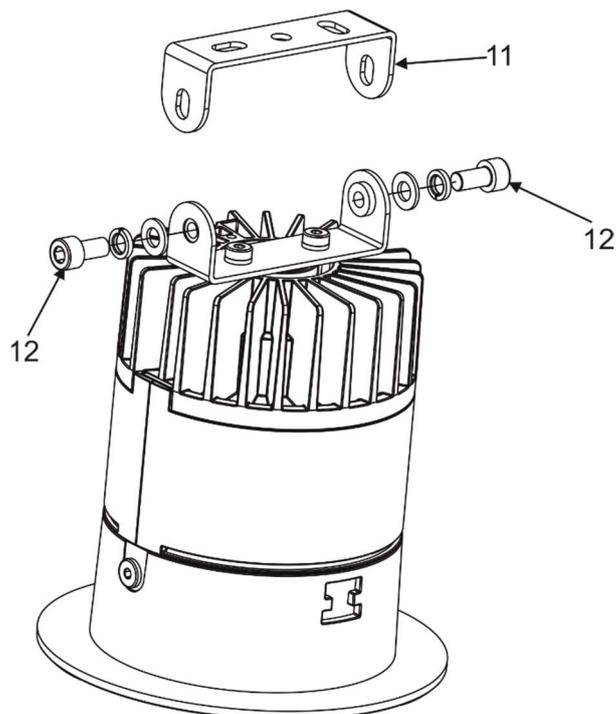
The lower ceiling (or another structure) intended for installation of the Ambiane(s) SP16 must safely hold at least 5 times weight of the Ambiane(s) SP16 placed on it.

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



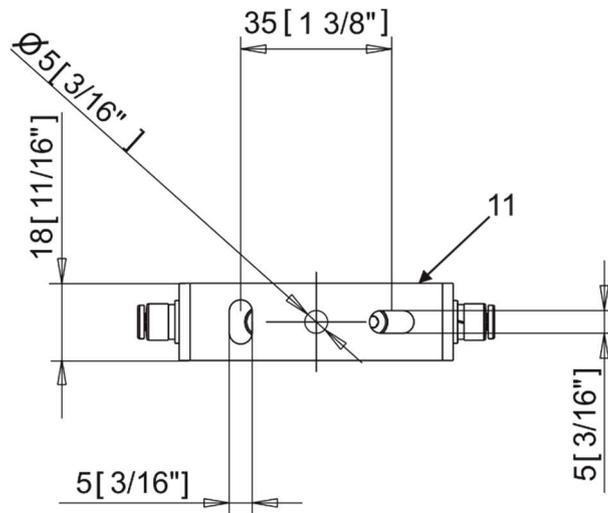
2. If you install Ambiane SP16 Recessed with yoke.

Remove the top part of the yoke (11) from the unit by unscrewing two screws (12) with washers.

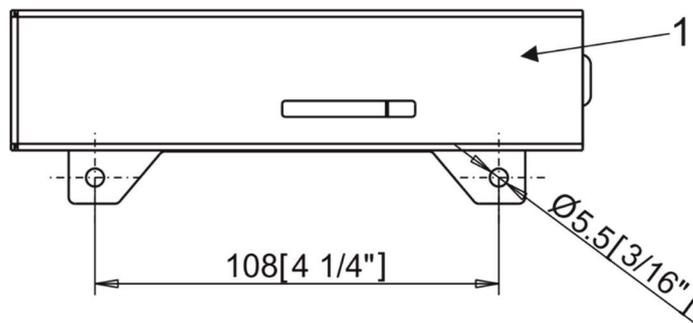


## Ambiane SP16 Recessed

Fasten the top part of the yoke (11) on the ceiling or another structure by means of three openings in the yoke.



3. Fasten the control unit (1) on the ceiling by means of two holes in the housing of the control unit.



4. Install the terminal block (2) on the LED unit cable.

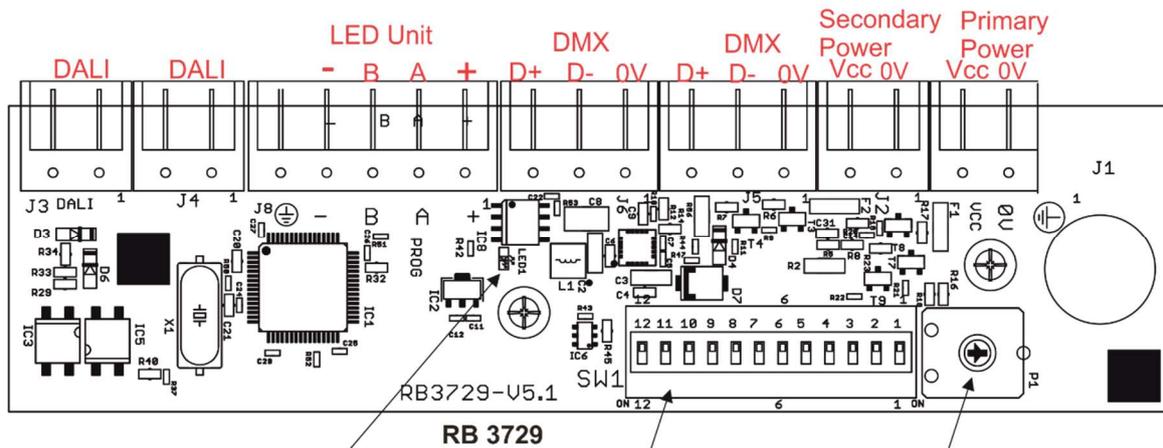
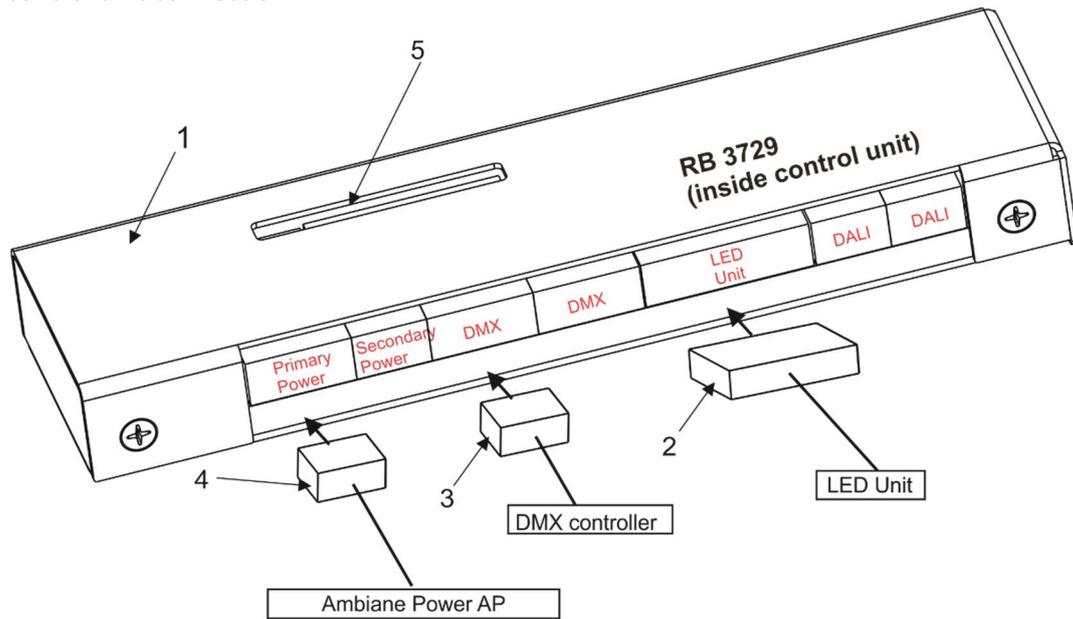
5. Install the terminal block (3) on the DMX cable and connect it to the PCB RB 3729 of the control unit (1).

6. Install the terminal block (4) on the supply cable connect it to the PCB RB 3729 of the control unit (1).

7. Install another terminal blocks on cables according to requirements of current installation.

# Ambiane SP16 Recessed

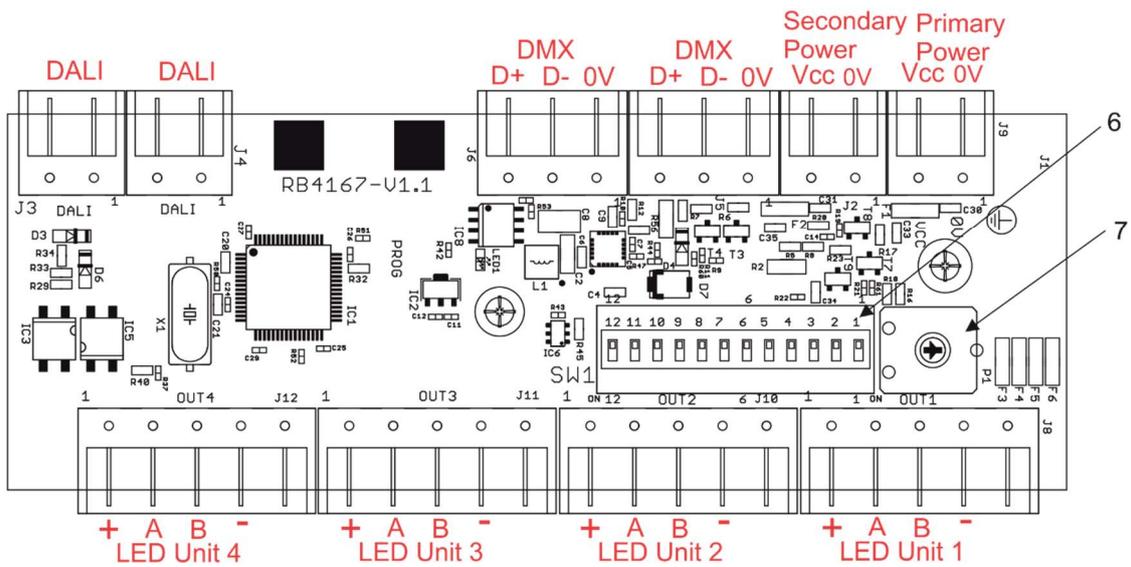
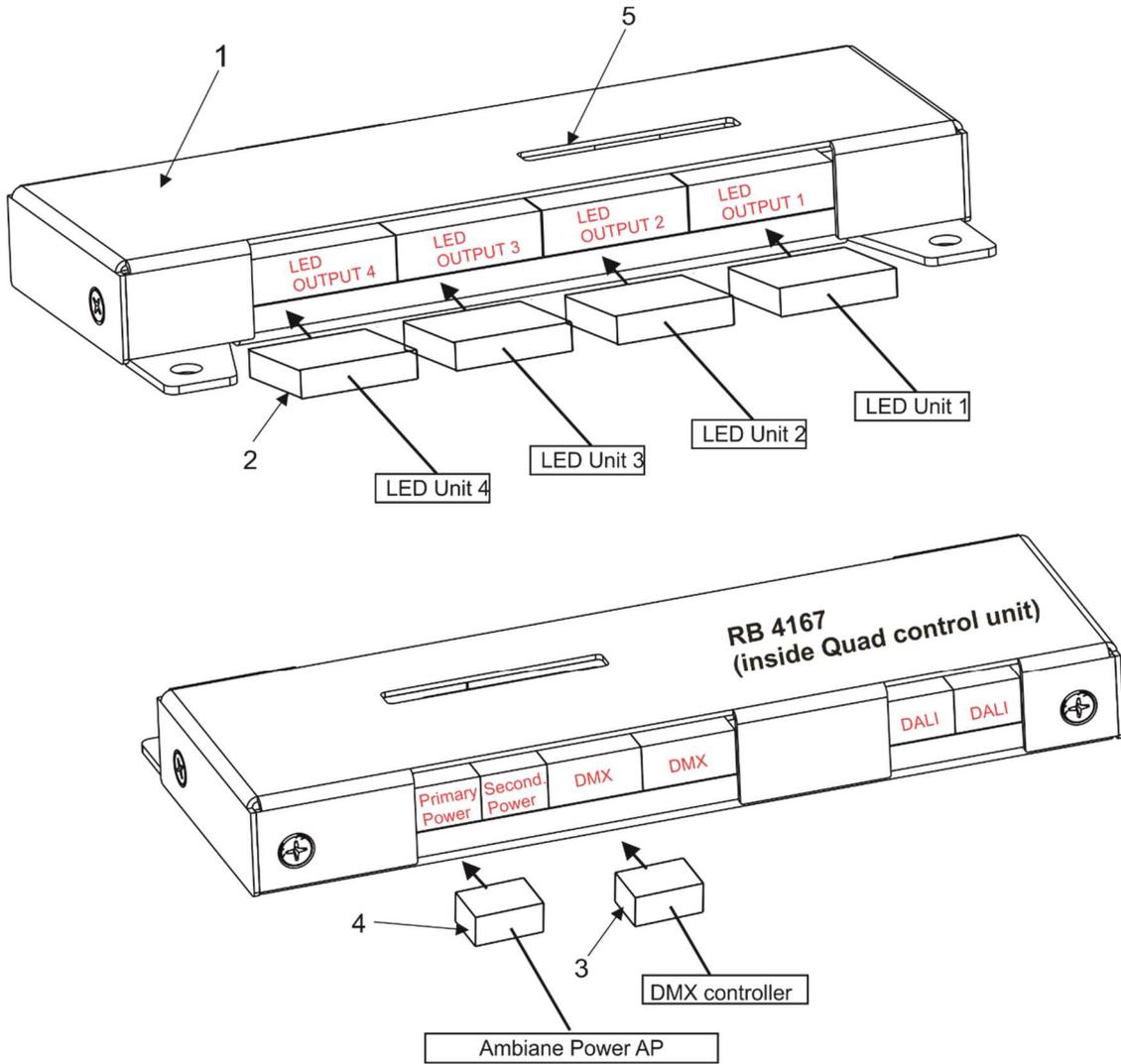
Example of control unit connection:



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.

# Ambiane SP16 Recessed

Example of Quad control unit connection:



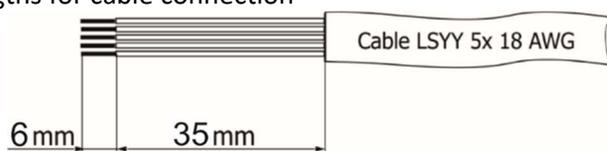
## Ambiane SP16 Recessed

The DIP switch (6) is accessible by the aperture (5) in the cover of the control unit (1).

### LED unit connection (cable LSYY 5x18 AWG)

| Connector      | +      | A      | B      | -      |
|----------------|--------|--------|--------|--------|
| Function       | LEDs + | Data A | Data B | LEDs - |
| Colour of wire | Red    | White  | Blue   | Black  |

Strip these lengths for cable connection



### Primary power connection

| Connector | Vcc     | 0V      |
|-----------|---------|---------|
| Function  | Power + | Power - |

### Secondary power connection

| Connector | Vcc     | 0V      |
|-----------|---------|---------|
| Function  | Power + | Power - |

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

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

### DMX connection

| Connector | D+     | D-    | 0V                      |
|-----------|--------|-------|-------------------------|
| Function  | Data + | Data- | Data ground (shielding) |

### 0-10V connection

| Connector | D+   | 0V |
|-----------|------|----|
| Function  | +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 (7).

## Ambiane SP16 Recessed

8. Set the DIP switch (6) according to your operation mode. This DIP switch is accessible by aperture (5) in the cover of the control unit (1). Please see the chapter 3.1 DMX and DALI address setting and control.

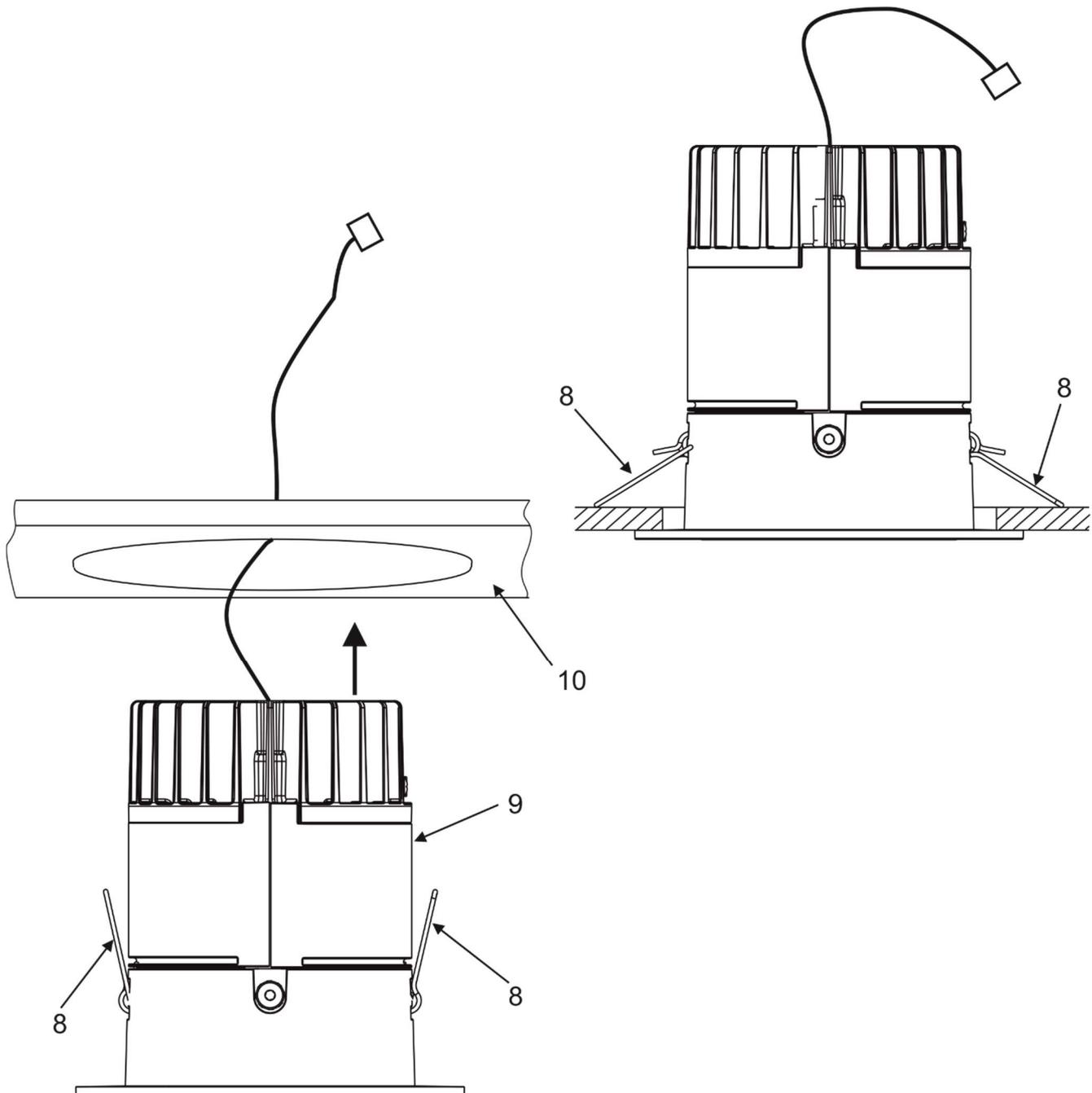
The fixture can be controlled by one of the following methods: DMX 512

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).

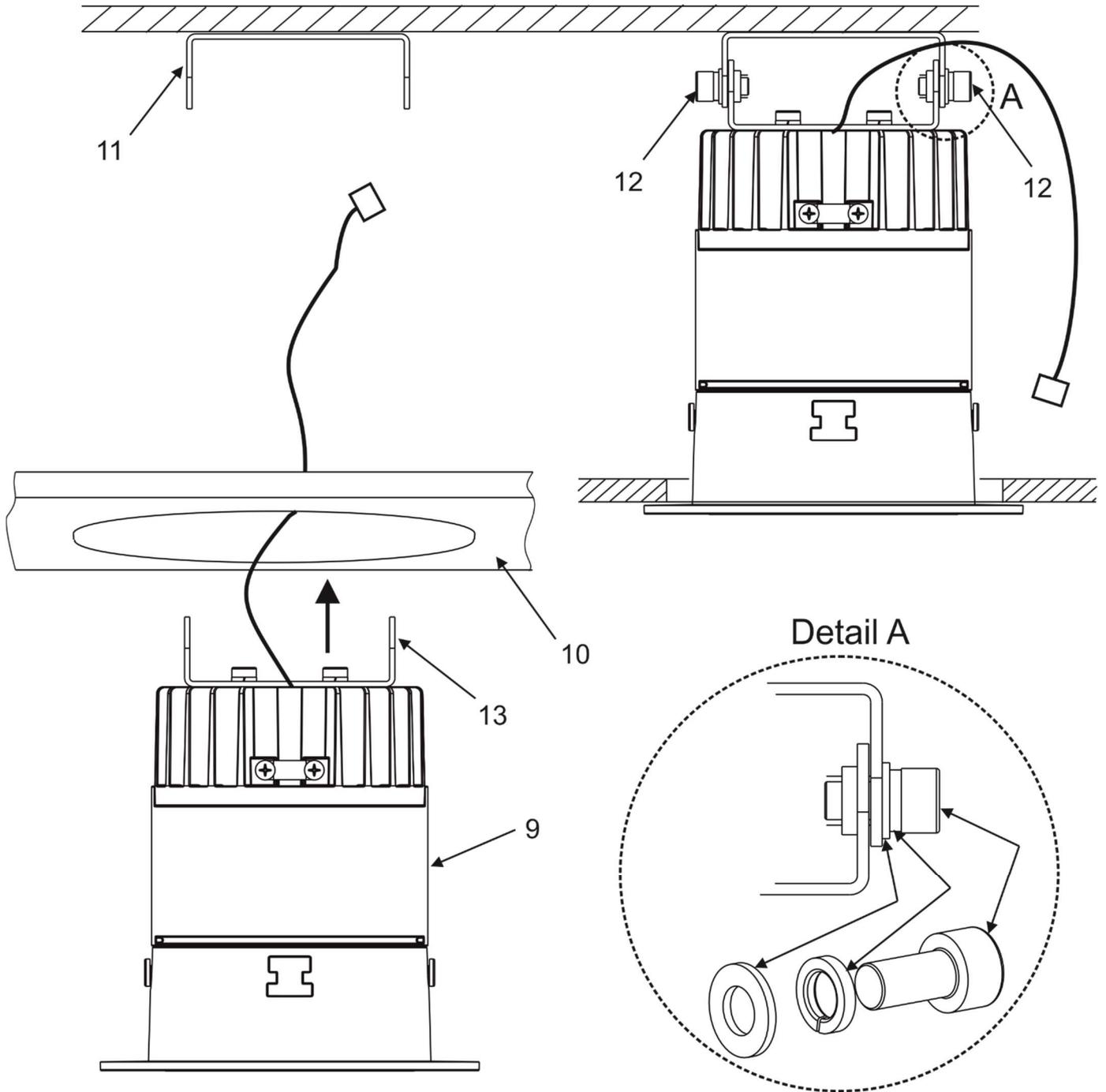
9. After connecting needed cables to the control unit, press both spring clips (8) upwards and insert the LED unit (9) into prepared hole in the lower ceiling (10). The LED unit will stay fixed in desired position by means of the two springs. Connect the terminal block on the LED unit cable to the control unit.



## Ambiane SP16 Recessed

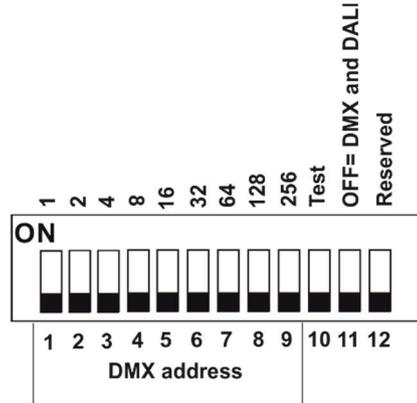
**10.** If you install Ambiane SP16 Recessed with yoke.

After connecting needed cables to the control unit, insert the LED unit (9) into prepared hole in the lower ceiling (10) and screw the bottom part of the yoke (13) to the top part of the yoke (11) by means of two screws (12) with washers. Connect the terminal block on the LED unit cable to the control unit.



### 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.

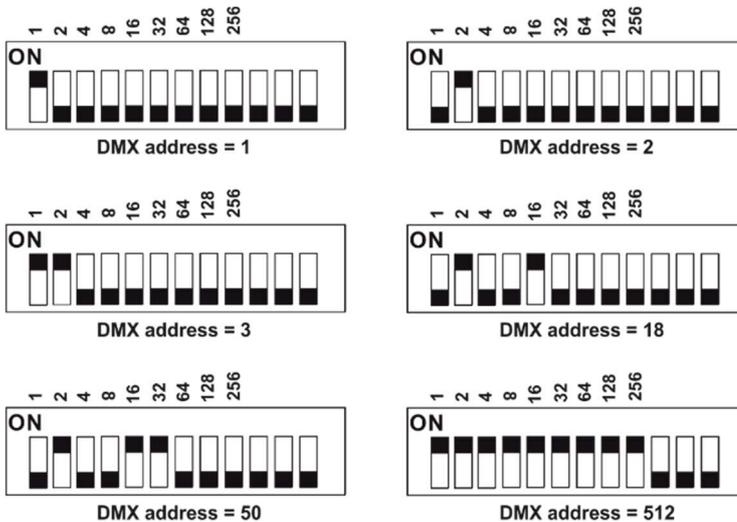
#### DMX control

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:



**DALI 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 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.

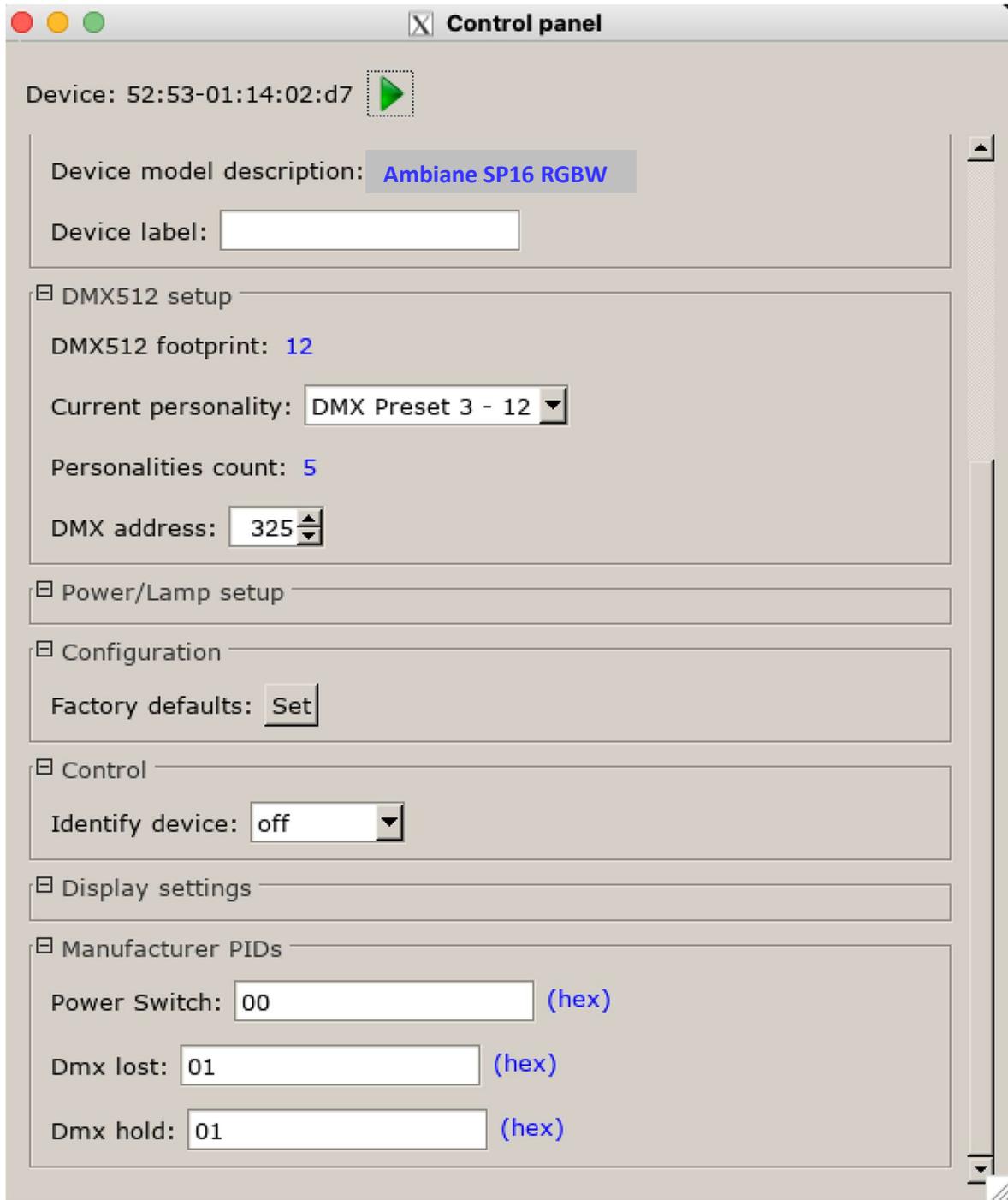
RDM allows you to set a DMX address, select DMX mode, readout software version of the fixture etc. It is also used for fixture software update by means of the Robe Uploader.

RDM model ID for the Ambiane SP16 Recessed is 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



## Ambiane SP16 Recessed

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

DMX mode has to be set by RDM.

Ambiane SP16 Recessed

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><br>White from 2700K-->4000K          | proportional    |
| -              | 1              | -              | 1              | 0-255     | <b>Warm White</b><br>Warm white LEDs saturation control (0-->100%) | proportional    |
| -              | 2              | -              | 2              | 0-255     | <b>Cool White</b><br>Cool white LEDs saturation control (0-->100%) | proportional    |
| 2              | 3              | 2              | 3              | 0-255     | <b>Dimmer</b><br>Light intensity (0-->100%)                        | proportional    |
| -              | -              | 3              | 4              | 0-255     | <b>Dimmer Fine</b><br>Light intensity fine (min-->max)             | proportional    |

Variant TD, PW version 1.0

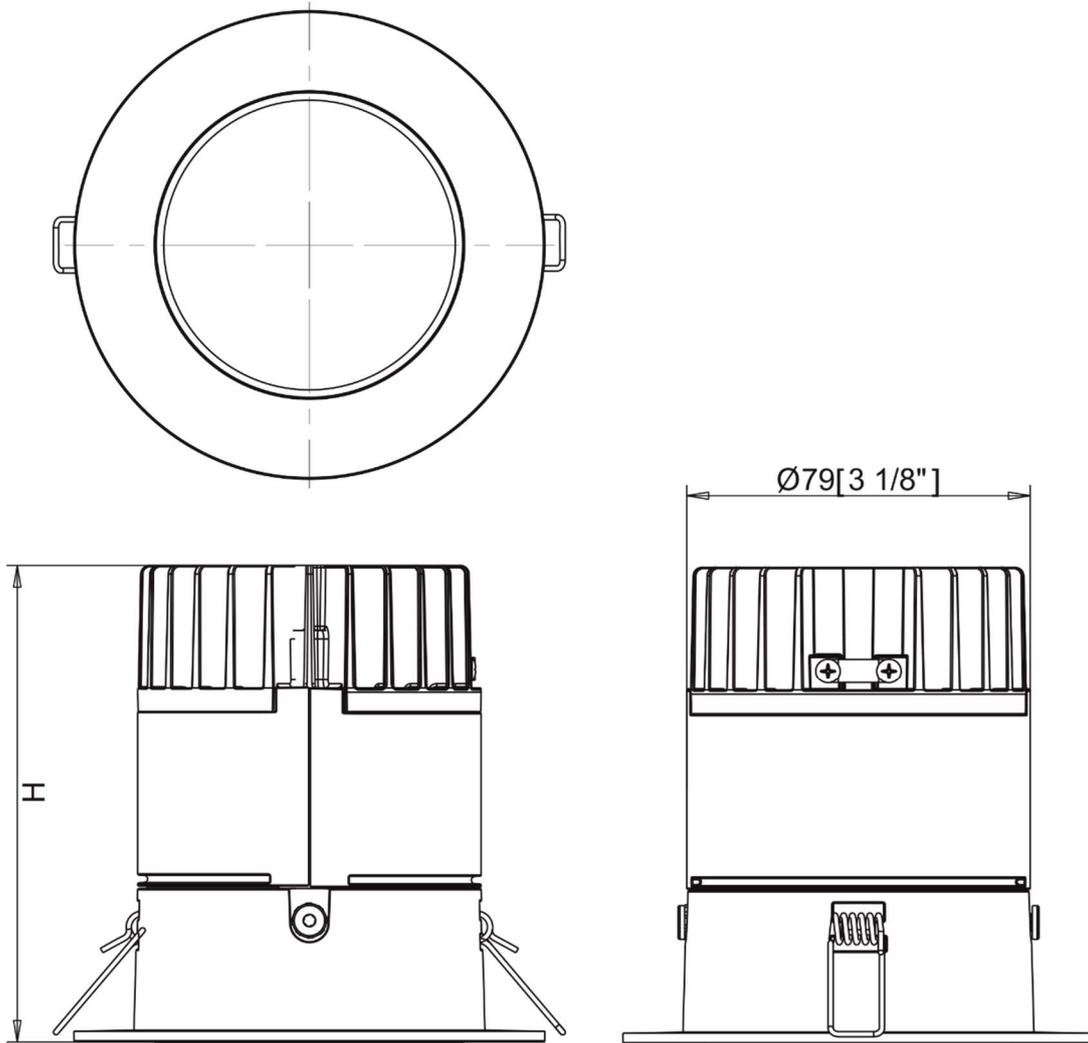
| Mode 1 Channel | Mode 2 Channel | DMX value | Function   | Type of control |
|----------------|----------------|-----------|--|-----------------|
| 1              | 1              | 0-255     | <b>Dimmer</b><br>Light intensity coarse (0-->100%) | proportional    |
| -              | 2             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

## 6. Technical specifications

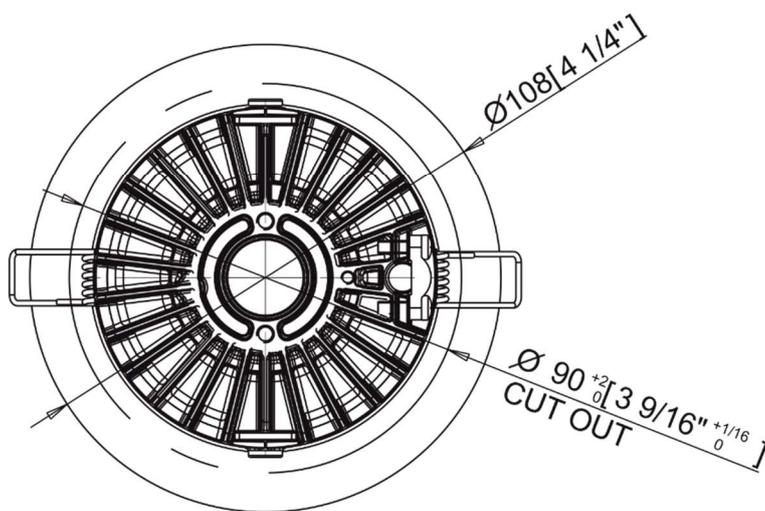
|                                 |   |
|---------------------------------|---|
| Nominal input voltage:          | 48 V DC   |
| Input voltage range:            | 44-50 V DC  |
| Max. power consumption:         | 14 W  |
| Light source:                   | 15 x single colour LED  |
| CRI:                            | 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<br>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 30°                | 0.508 kg/ 1.124 lbs   |
| Ambiane SP16 60°                | 0.492 kg/ 1.085 lbs   |
| Mounting Method:                | Via two spring clips or via yoke<br>Cut-Out Diameter: 90 mm / 3.54 in |
| IC rating:                      | Non-IC rated  |
| Power connection                | Connectors  |
| DMX connection:                 | Connectors  |
| DALI connection:                | Connectors  |
| LED unit connection:            | Connector   |
| Protection factor :             | IP20 (CE)/ Dry locations (US)   |

Ambiane SP16 Recessed

Dimensions (spring clips version)  
mm [inch]



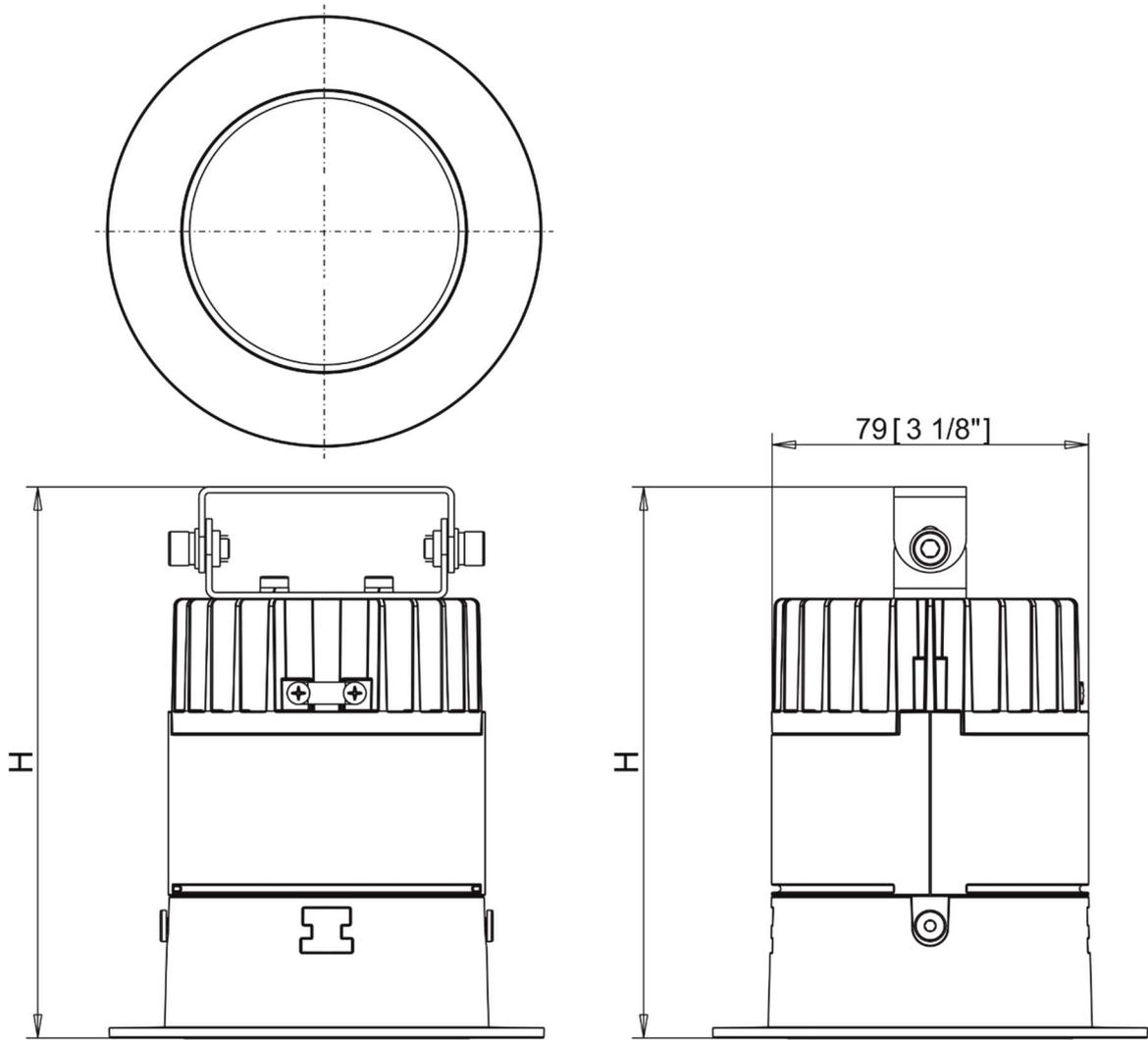
Ambiane SP 30° H = 110 [4 5/16"] mm [inch]  
Ambiane SP 60° H = 100 [3 15/16"] mm [inch]



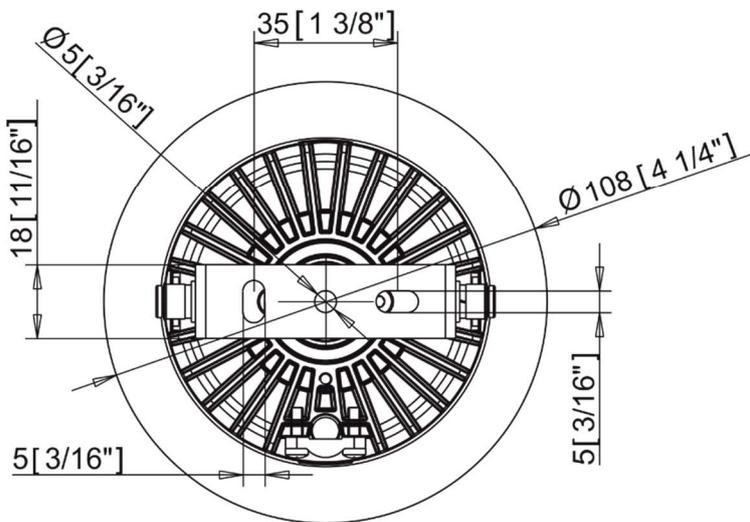
Ambiane SP16 Recessed

Dimensions (yoke version)

mm [inch]

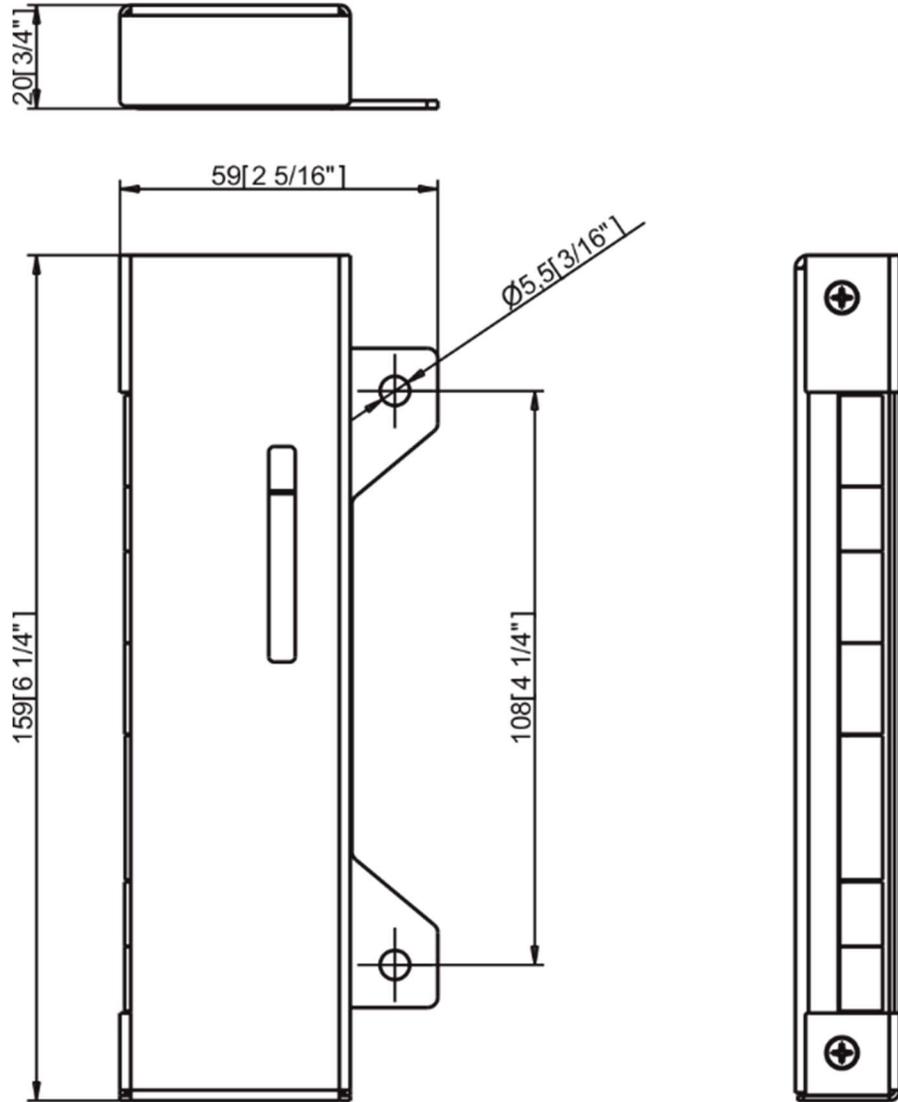


Ambiane SP 30° H = 135 [5 5/16"] - 138 [5 7/16"] mm [inch]  
 Ambiane SP 60° H = 125 [4 5/16"] - 128 [5 1/16"] mm [inch]



Ambiane SP16 Recessed

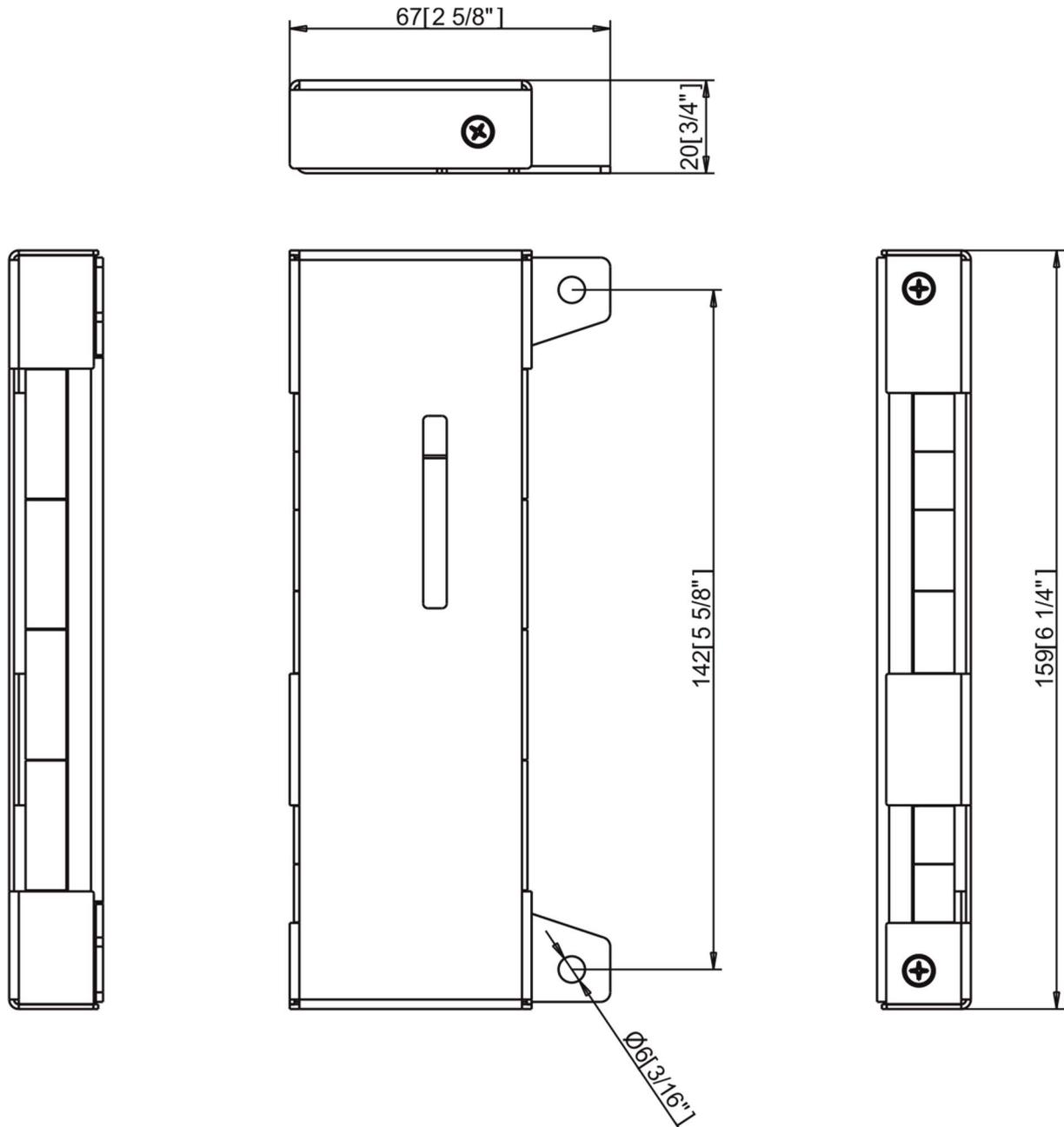
Dimensions (Control unit)  
mm [inch]



## Ambiane SP16 Recessed

### Dimensions (Quad Control unit)

mm [inch]



### Included items

- 1 x Ambiane SP16 Recessed
- 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 (P/N 10063873), Ambiane Power Rack US (P/N 10063951)
- Quad Control Unit (P/N 99018091)

## 7. Cleaning and maintenance

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

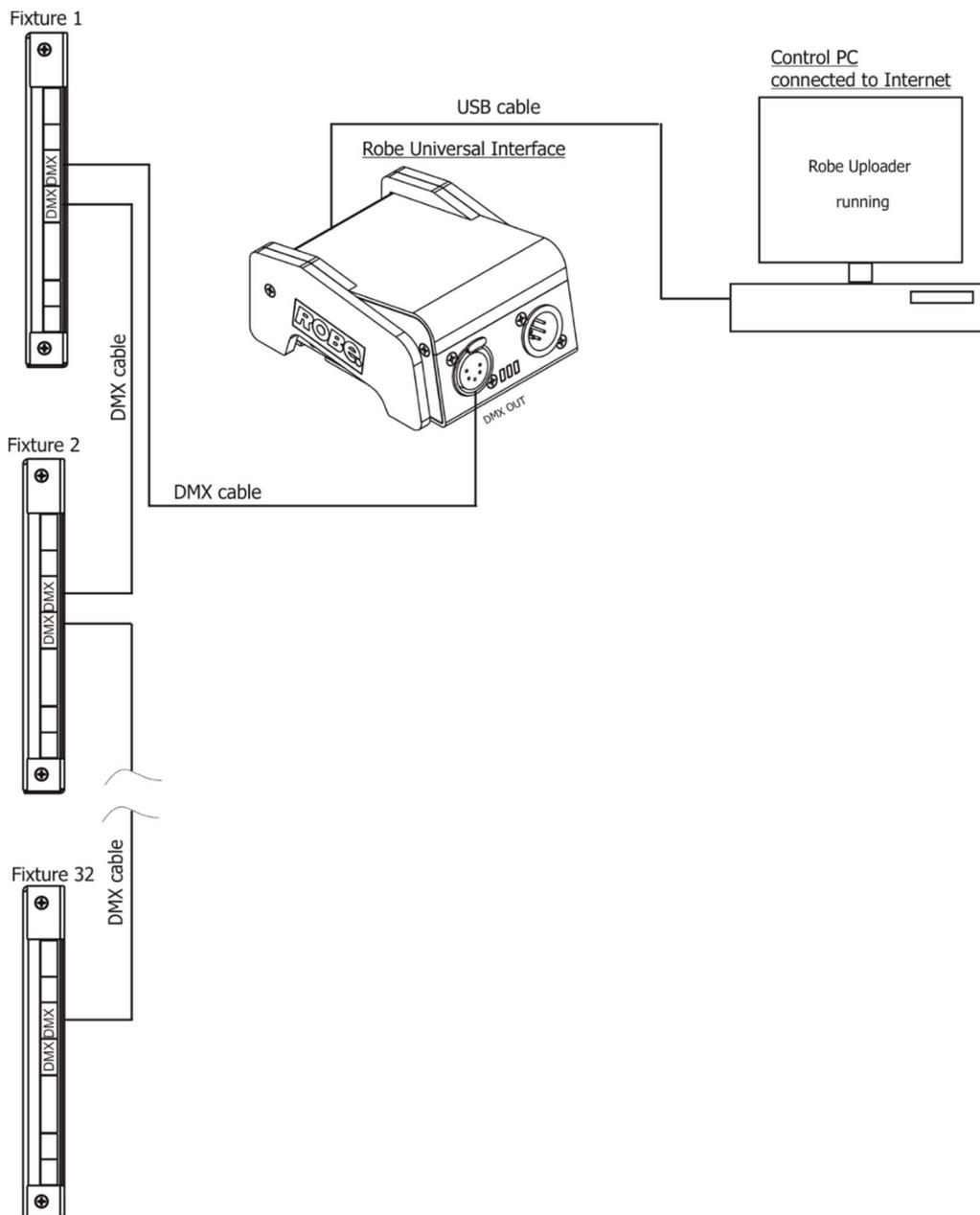
Keep the fixture clean, especially light source and the ribbed heat sink.  
Maintenance and service operations are only to be carried out by a qualified person.  
Should you need any spare parts, please use ROBE OEM parts.

### 7.1 Software update

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

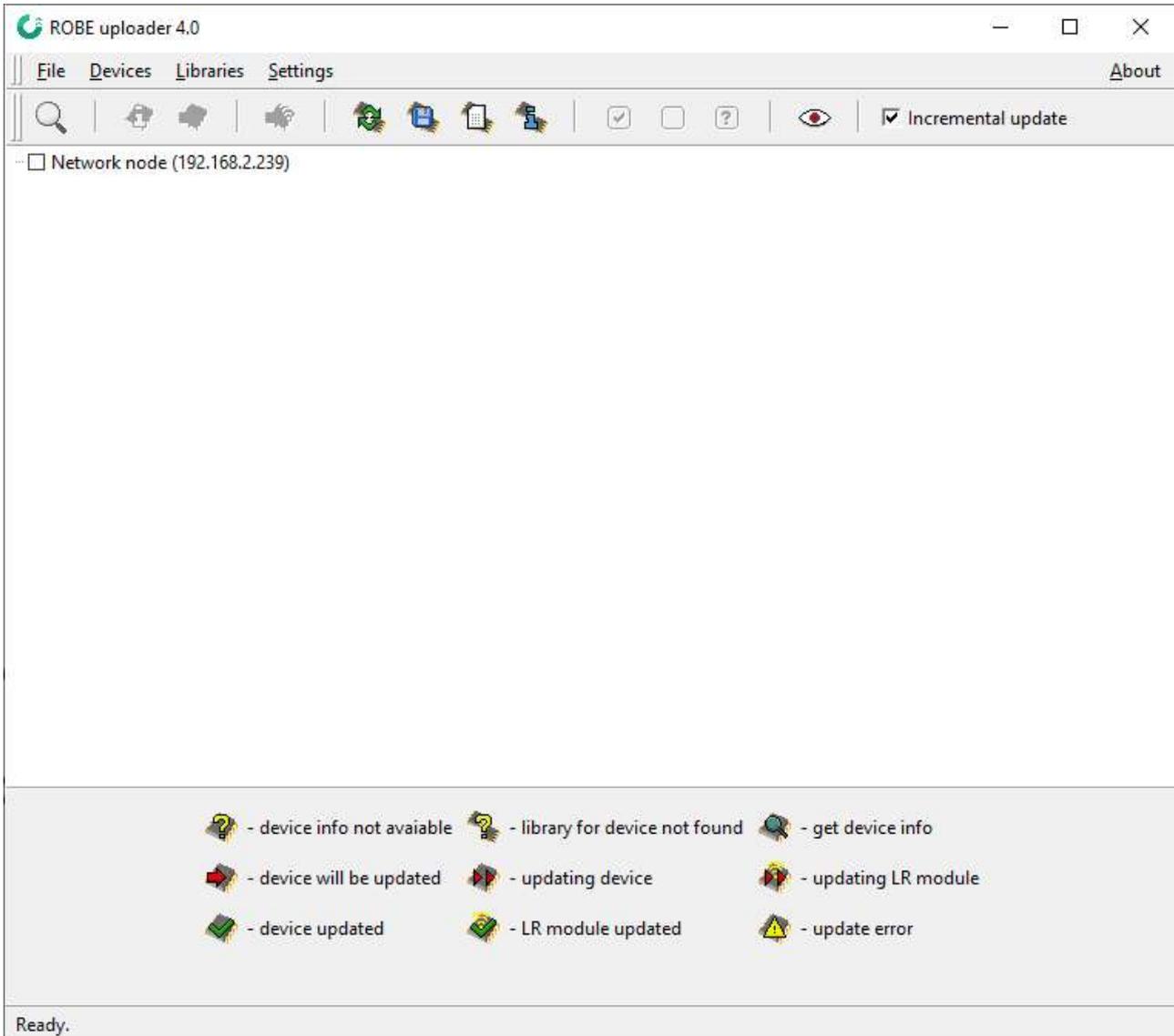
#### Software update by means of the Robe Uploader

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

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               | 23/11/2022    | Version with yoke added |
| 1.2               | 04/07/2023    | Ambiane Power AP added  |
| 1.3               | 01/11/2023    | RDM manager panel added |
| 1.4               | 28/11/2023    | Trademark added         |
| 1.5               | 31/01/2024    | Quad control unit added |
| 1.6               | 25/11/2024    | Safety warning chaged   |

*Specifications are subject to change without notice*

*November 25, 2024*

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