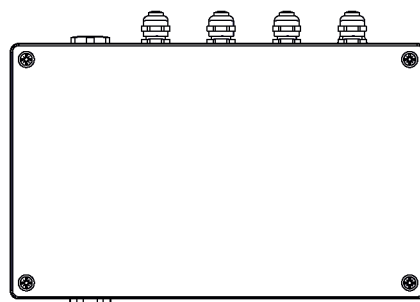
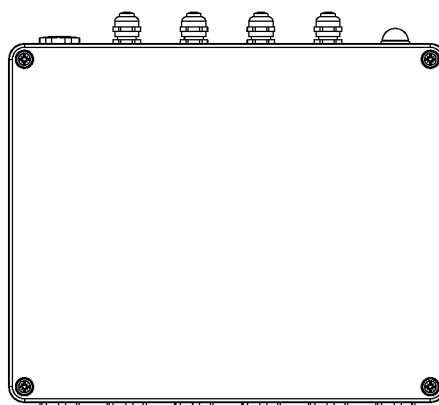


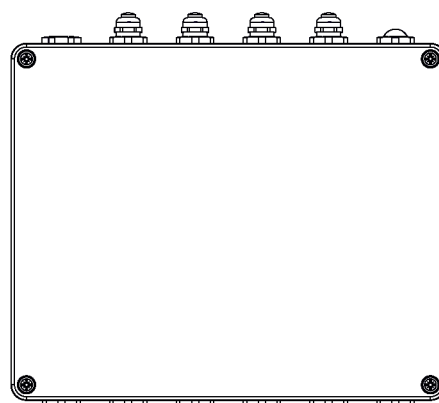
E-box Daisy



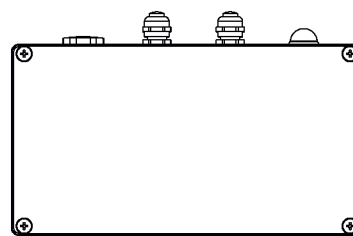
E-box Star



E-box Pro



E-box Lite



USER MANUAL

Version 1.3

E-box Daisy E-box Star E-box Pro E-box Lite

Table of contents

1. Safety information	3
2. Fixture description	4
2.1 E-box Daisy	4
2.2 E-box Star	6
2.3 E-box Pro	8
2.4 E-box Lite	10
3. Mounting	12
4. E-box menu	17
4.1 DMX Addr	17
4.2 Info	17
4.3 Personality	18
4.3 Test programs	19
4.4 Special settings	19
5. DMX protocol	21
6. Technical specifications	22
7. Disposing of the product	26
8. ChangeLog	26

1. Safety information

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

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

Make sure that the available voltage is not higher than stated on the fixture.

Always disconnect the fixture from AC power before removing its cover.

Make sure that the supply cables are not crimped or damaged by sharp edges. Check the fixture and the cables from time to time.

Do not install the fixture near an open flame.

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.

Keep combustible materials at least 10 cm away from the fixture.

Do not cover the fixture with cloth or other materials.

If the fixture has been exposed to drastic temperature fluctuation (e.g. after transportation), do not switch it on immediately. The arising condensation of water might damage your device. Leave the device switched off until it has reached room temperature.

The fixture was designed for outdoor use and it is intended for professional application only. It is not for household use.

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

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

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!

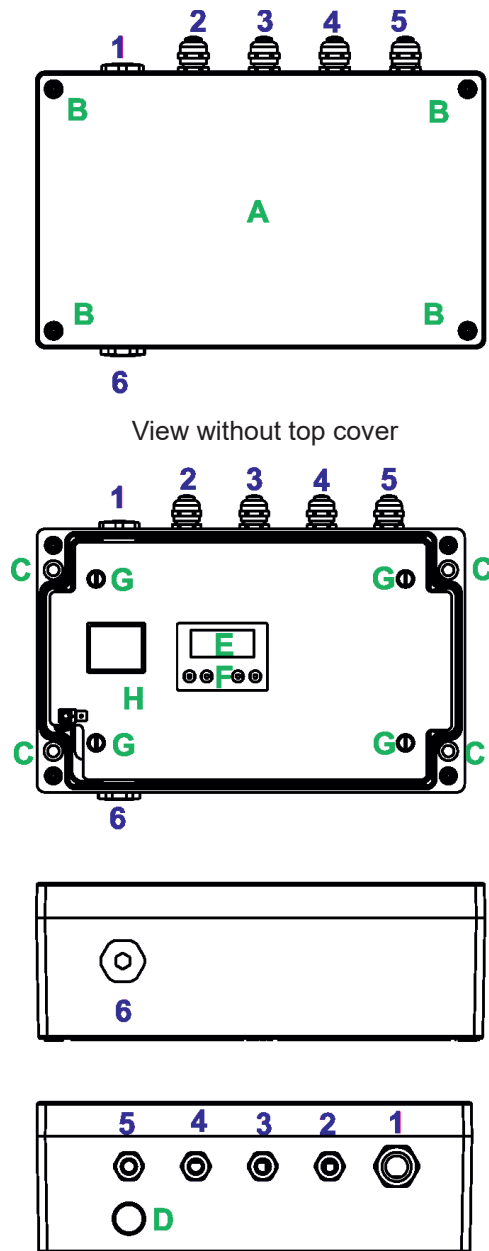
Please consider that unauthorized modifications on the fixture are forbidden due to safety reasons!

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.

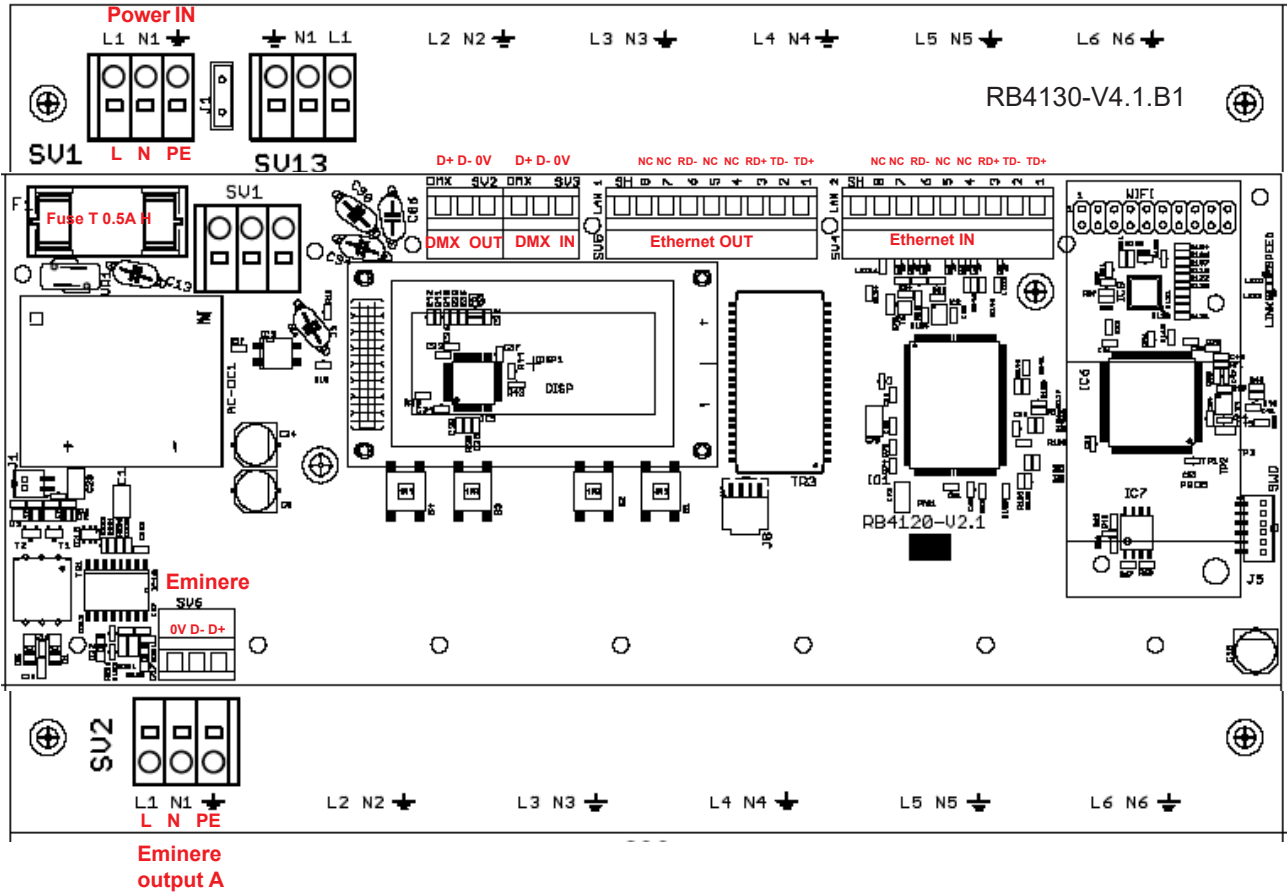
2. Fixture description

2.1 E-box Daisy

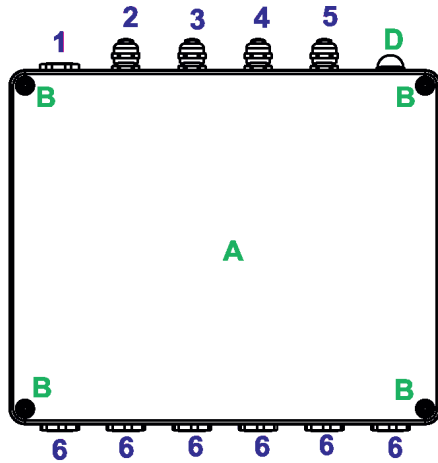


- A - Top cover
- B - Top cover screws
- C - Mounting holes
- D - Antenna cover
- E - Display
- F - Control buttons
- G - Screws
- H - Terminal blocks cover

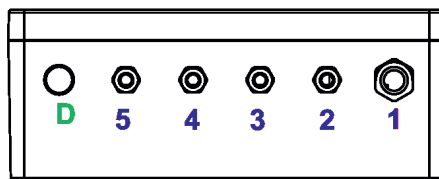
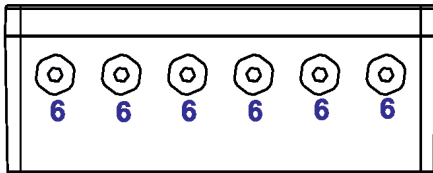
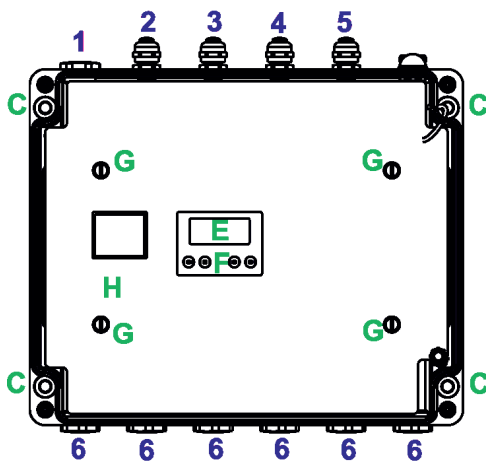
- 1 - Power IN (cable gland M20x1.5)
- 2 - DMX OUT(cable gland M12x1.5)
- 3 - DMX IN (cable gland M12x1.5)
- 4 - Ethernet OUT (cable gland M12x1.5)
- 5 - Ethernet IN (cable gland M12x1.5)
- 6 - Eminere OUT(cable gland M20x1.5)



2.2 E-box Star

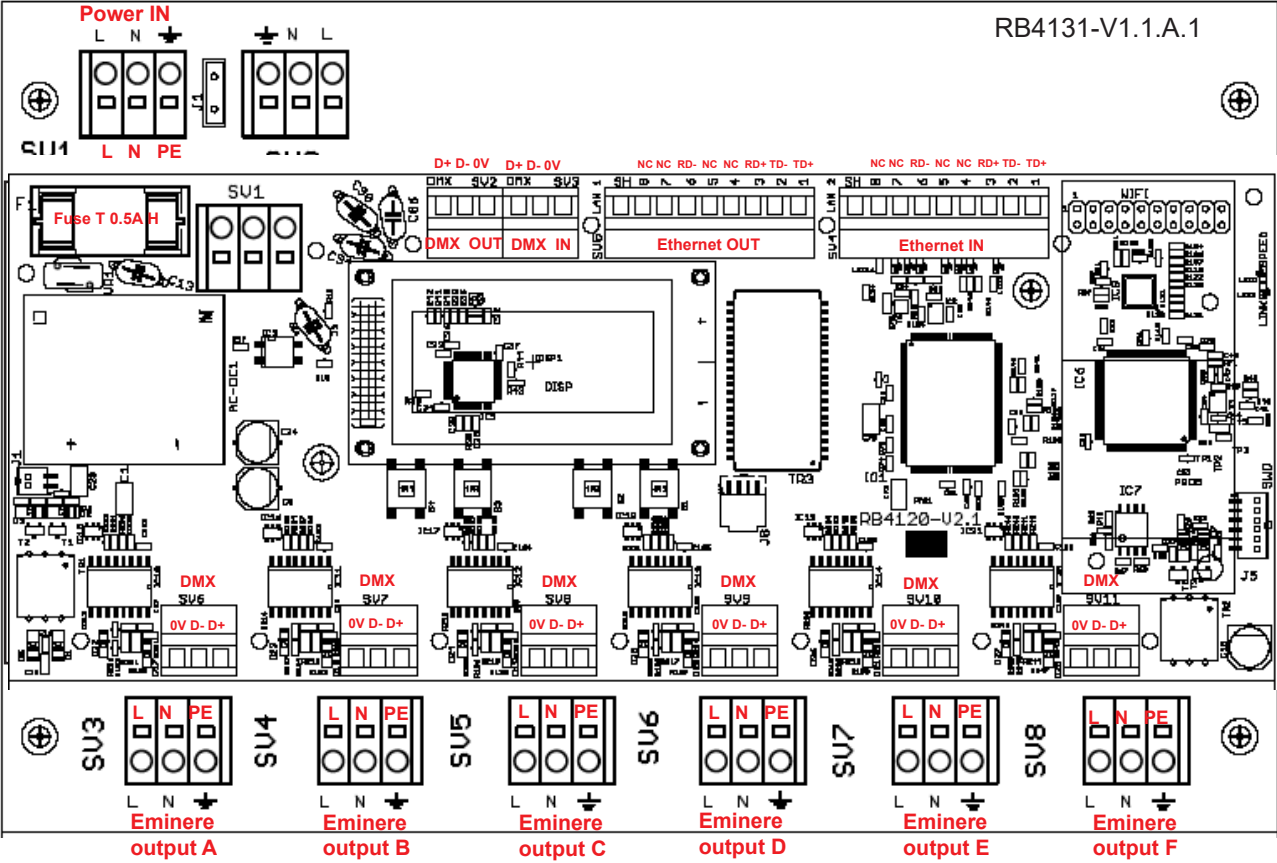


View without top cover

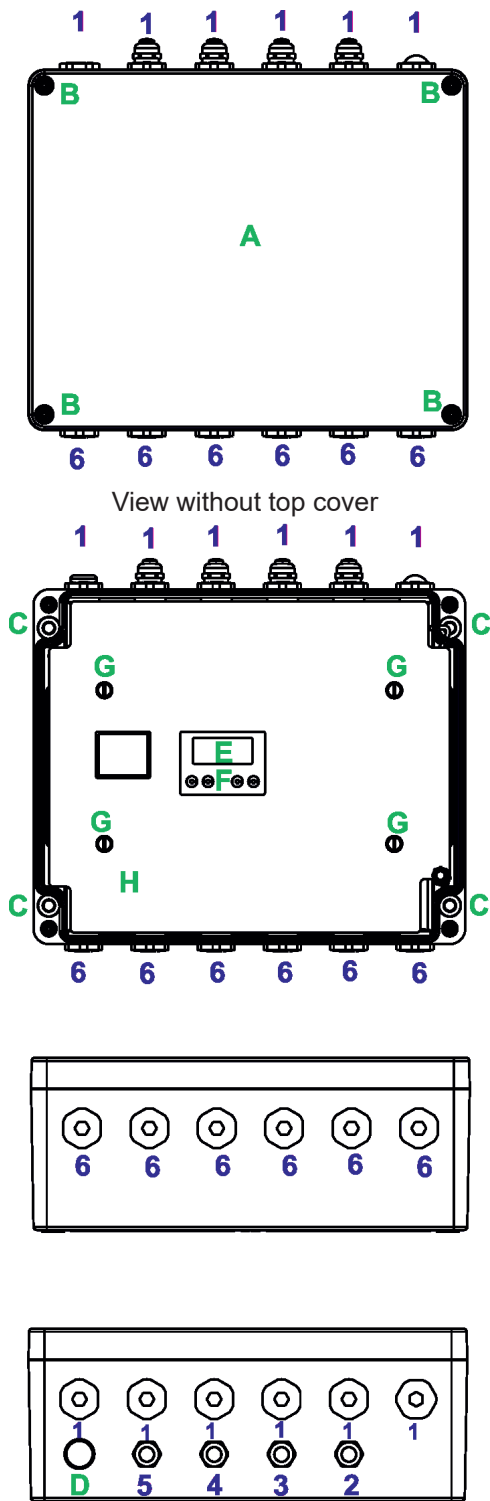


- A - Top cover
- B - Top cover screws
- C - Mounting holes
- D - Antenna cover
- E - Display
- F - Control buttons
- G - Screws
- H - Terminal blocks cover

- 1 - Power IN (filler plug M25 x 1.5/ cable gland M20x1.5)
- 2 - DMX OUT (cable gland M12x1.5)
- 3 - DMX IN (cable gland M12x1.5)
- 4 - Ethernet OUT (cable gland M12x1.5)
- 5 - Ethernet IN (cable gland M12x1.5)
- 6 - Eminere OUT (filler plug M25 x 1.5/ cable gland M20x1.5)

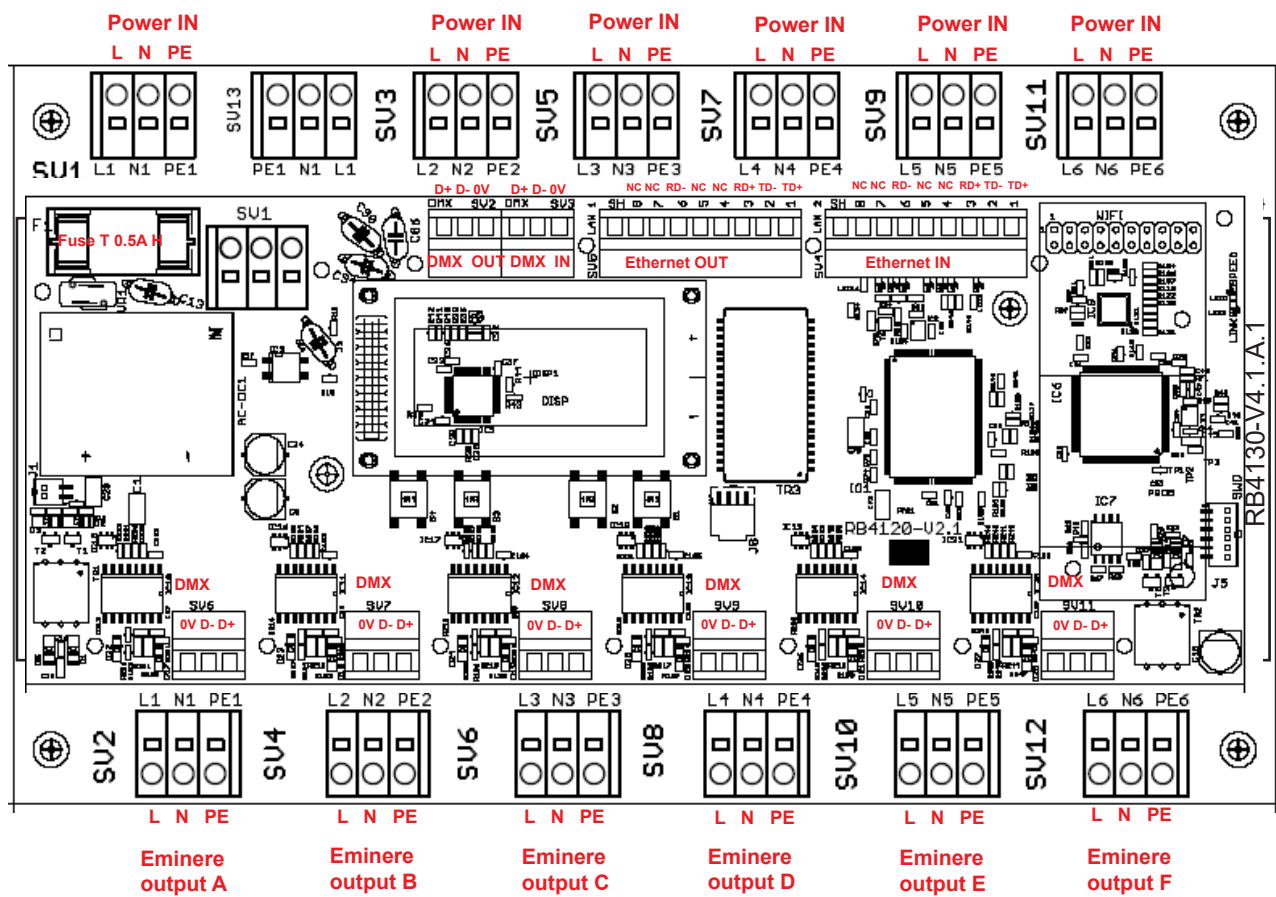


2.3 E-box Pro

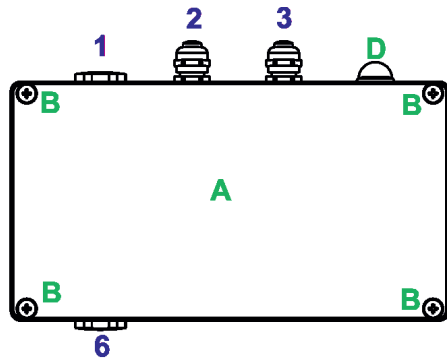


- A - Top cover
- B - Top cover screws
- C - Mounting holes
- D - Antenna cover
- E - Display
- F - Control buttons
- G - Screws
- H - Terminal blocks cover

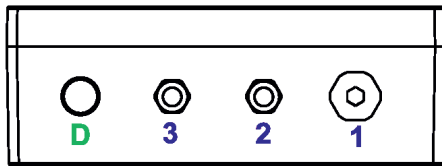
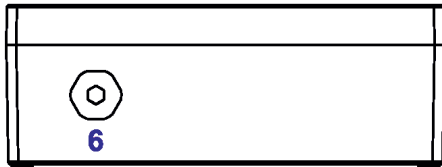
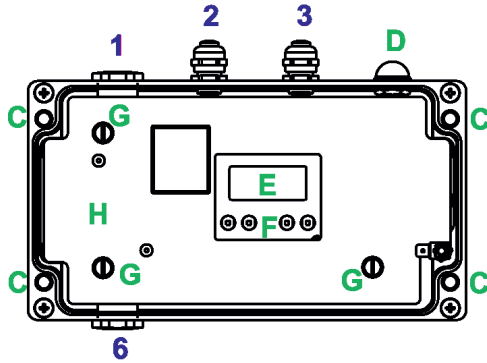
- 1 - Power IN (filler plug M25 x 1.5/ cable gland M20x1.5)
- 2 - DMX OUT (cable gland M12x1.5)
- 3 - DMX IN (cable gland M12x1.5)
- 4 - Ethernet OUT (cable gland M12x1.5)
- 5 - Ethernet IN (cable gland M12x1.5)
- 6 - Eminere IN (filler plug M25 x 1.5/ cable gland M20x1.5)



2.4 E-box Lite



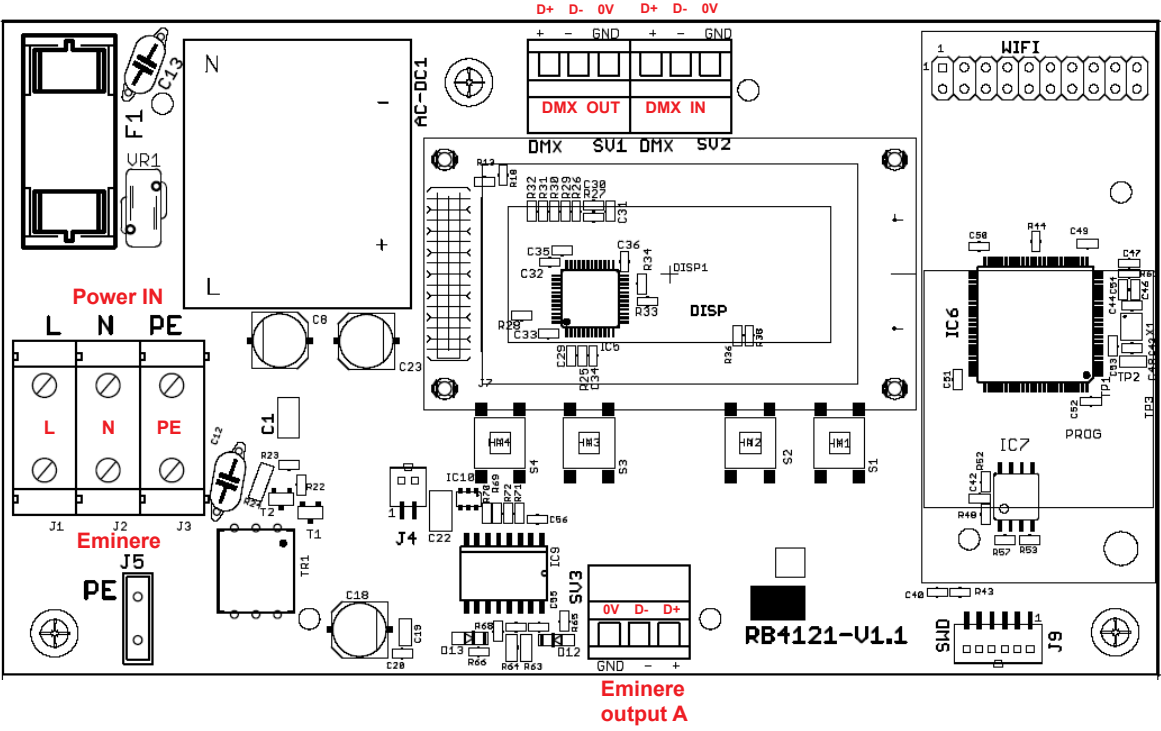
View without top cover



- A - Top cover
- B - Top cover screws
- C - Mounting holes
- D - Antenna cover
- E - Display
- F - Control buttons
- G - Screws
- H - Terminal blocks cover

- 1 - Power IN (cable gland M20x1.5)
- 2 - DMX OUT (cable gland M12x1.5)
- 3 - DMX IN (cable gland M12x1.5)
- 6 - Eminere IN (cable gland M20x1.5)

E-Box Lite - detail view on the PCB RB4121-V1.1.A.1

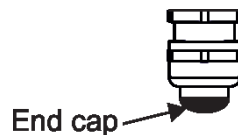


3. Mounting

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

Setting and addressing the E-box without top cover can be done by a qualified person only!

1. Remove the top cover (A) from the E-box by unscrewing four fastening screws (B) in order to get access to the display (E), control buttons (F).
2. Fasten the E-box on a non-flammable flat surface via four mounting holes (C) of a diameter of 6 mm in its housing.
3. Remove the terminal blocks cover (H) from the E-box by unscrewing fastening screws (G) in order to get access to the terminal blocks.
4. Unscrew needed filler plugs M25 x 1.5 (which are installed instead of cable glands M20x1.5) from the housing of the E-box (for E-box Star and E-box Pro only) and install cable glands M20x1.5.
We recommend you to unscrew always one filler plug (side as first), install the cable gland with a cable, connect the cable to the terminal blocks and tighten the cable in the cable gland, than unscrew the neighbouring filler plug and proceed with installation of cable gland. Repeat this process for all needed cable glands.
5. Pass cables for DMX and Ethernet through cable glands M12x1.5 and connect them to the terminal blocks and tighten the cables in the cable glands.
Note: Remove end caps from cable glands before passing cables To keep declared IP rating of the device, every cable gland has to be covered with the end cap if the cable gland is not used.



Cable glands serve for cables of the following diameters:

Cable gland M12x1.5 (DMX IN/OUT, Ethernet IN/OUT) - for cable of a diameter of 3-7mm.

Cable gland M20x1.5 (Power IN/ Eminere OUT) - for cable of a diameter of 7-13mm.

6. Check that all screws and cable glands are firmly tightened.
7. Screw the terminal blocks cover (H) back to the E-box.
8. Connect the E-box to mains.
9. Set the E-box by means of the control panel (E) and buttons (F).
10. Disconnect the E-box from mains and screw the cover (A) back on the box.

ALWAYS DISCONNECT THE E-BOX (and BOOSTER BOX) FROM MAINS BEFORE CONNECTING/DISCONNECTING EMINERE MODULES

This device falls under protection class I. Therefore every E-box has to be connected to a mains socket outlet with a protective earthing connection

Power connection

	L	N	PE
Core (EU)	Braun	Blue	Green/yellow
Core (US)	Black	White	Green

DMX connection

D+	D-	0V
Data +	Data -	Data ground (shielding)

Ethernet connection

Pin	1	2	3	4	5	6	7	8
Function	TD+	TD-	RD+	NC	NC	RD-	NC	NC

Eminere connection

If the ROBE 5-cored **Cable CE Leader** is used for Eminere connection, the cores of the cable have to be

connected as follows:

Core	Power Connection	Core	DMX Connection
Brown	L	Orange	Data +
Blue	N	Red	Data -
Yellow/Green	PE (earth)	Shielding	Data ground (0V)

If the ROBE 5-cored **Cable US Leader** is used for Eminere connection, the cores of the cable have to be connected as follows:

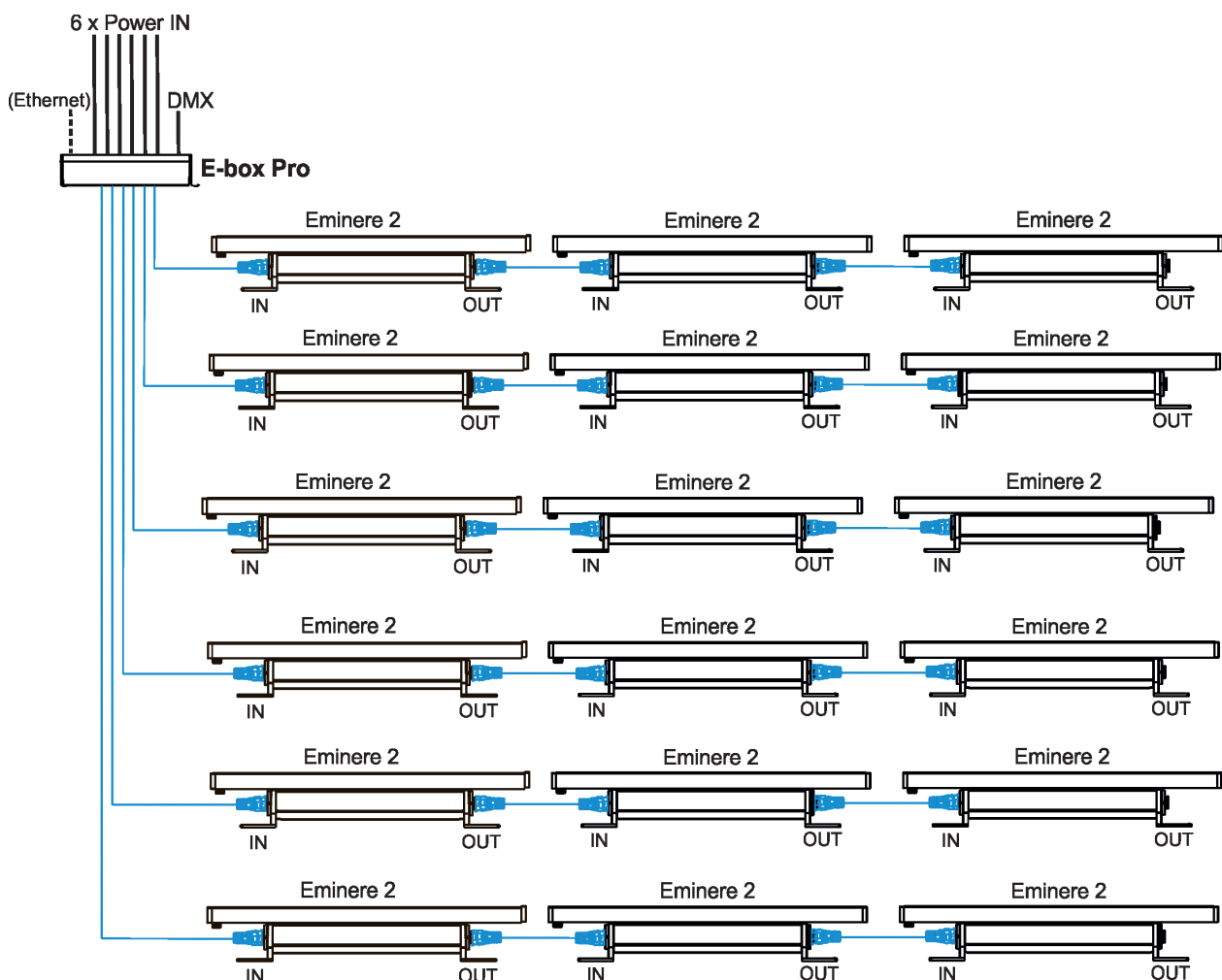
Core	Power Connection	Core	DMX Connection
Black	L	Orange	Data +
White	N	Red	Data -
Green	PE (earth)	Shielding	Data ground (0V)

Number of connected Emineres to one E-box output depends on a cable length, power voltage, type of Eminere and E-box.

Type of Eminere	Max. number of connected Eminers*
Eminere 1	191
Eminere 2	94
Eminere 3	64
Eminere 4	48

* The value gives max. possible number of connected Emineres from data point of view regardless of voltage and cable length. In order to use the max. possible number of Emineres, the Booster boxes (which compensate a voltage drop) have to be used.

Example of connection



The tables below state max. number of Emineres connected to the one Eminere output of the E-box without using of Booster boxes.

EMINERE 1	Voltage				
Cable length *	100V	120V	190V	230V	277V
10 m	69	83	131	159	191
20 m	61	83	131	159	191
30 m	40	58	131	159	191
50 m	24	35	88	128	186
70 m	17	25	63	92	133
100 m	12	17	44	64	93
200 m	6	9	22	32	47

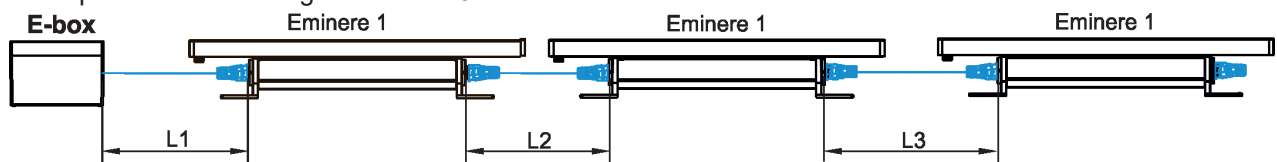
EMINERE 2	Voltage				
Cable length *	100V	120V	190V	230V	277V
10 m	34	41	64	78	94
20 m	30	41	64	78	94
30 m	20	28	64	78	94
50 m	12	17	43	63	91
70 m	8	12	31	45	65
100 m	8	9	21	31	46
200 m	3	4	11	16	23

EMINERE 3	Voltage				
Cable length *	100V	120V	190V	230V	277V
10 m	23	28	44	53	64
20 m	20	28	44	53	64
30 m	13	19	44	53	64
50 m	8	12	29	43	62
70 m	6	8	21	31	44
100 m	4	6	15	21	31
200 m	2	3	7	11	16

EMINERE 4	Voltage				
Cable length *	100V	120V	190V	230V	277V
10 m	17	21	33	40	48
20 m	15	21	33	40	48
30 m	10	15	33	40	48
50 m	6	9	22	32	47
70 m	4	6	16	23	38
100 m	3	4	11	16	23
200 m	2	2	5	8	12

* Cable length is a total cable length between E-box and last connected Eminere.

Example: Total cable length=L1+L2+L3



Important note for E-box Star

-

Example 1:

E-box Star, voltage=230V, cable length=100m, fixture= Eminere 4, total max. number of Emineres 4 =16 pcs, without Booster box.

Eminere output 1=4 x Eminere 4

Eminere output 2=4 x Eminere 4

Eminere output 3=4 x Eminere 4

Eminere output 4=4 x Eminere 4

Eminere output 5=not connected

Eminere output 6=not connected

Eminere outputs 5 and 6 are not connected, otherwise max. number of 16 pieces of Eminere 4 will be exceeded.

Example 2:

E-box Star, voltage=230V, cable length=100m, fixture= Eminere 4, total max. number of Emineres 4 =16 pcs, without Booster

box.

Eminere output 1=16 x Eminere 4

Eminere output 2= not connected

Eminere output 3= not connected

Eminere output 4= not connected

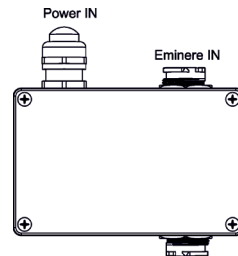
Eminere output 5=not connected

Eminere output 6=not connected

Eminere outputs 2-6 are not connected because the max. number of 16 pieces of Eminere 4 is connected to the output 1.

The Booster box

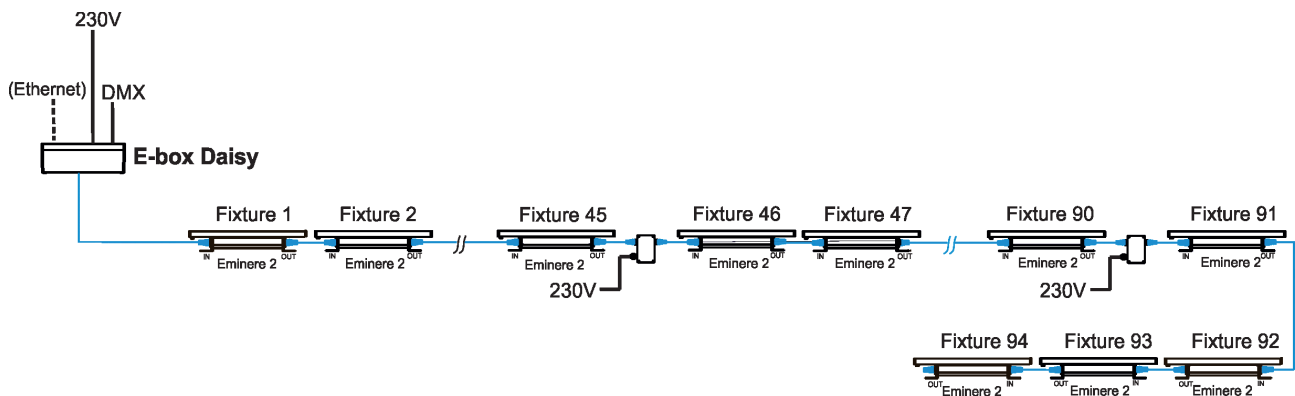
To compensate a voltage drop in a large installation, the Booster boxes have to be connected in the chain of Emineres at output (s) of the E-box.



Example: E-box Daisy, Power supply= 230V, Cable length= 90m, Emineres 2

The Booster box has to be connected after every 45th Eminere (fixture 45 and fixture 90) from 94 fixtures.

The following tables give numbers of Emineres after which the Booster box has to be installed in the chain of Emineres (at one output of the E-box).



EMINERE 1	Max. number of Emineres 1= 191				
	Voltage				
Cable length	100V	120V	190V	230V	277V
10 m	69,138	83,166	131	159	-
20 m	61,122,183	83,166	131	159	-
30 m	40,80,120,160	58,116,174	131	159	-
50 m	24,48,72,96,120,144,168	35,70,105,140,175	88,176	128	186
70 m	17,34,51,68,85,102,119,136,153,170,187	25,50,75,100,125,150,175	63,126,189	92,184	133
100 m	12,24,36,48,60,72,84,96,108,120,132,144,156,168,180	17,34,51,68,85,102,119,136,153,170,187	44,88,132,176	64,128	93,186
200 m	6,12,18,24,30,36,42,48,54,60,66,72,78,84,90,96,102,108,114,120,126,132,138,144,150,156,162,168,174,180,186	9,18,27,36,45,54,60,72,81,90,99,108,117,126,135,144,153,162,171,180,189	22,44,66,88,110,132,154,176	32,64,96,128,160	47,94,141,188

EMINERE 2	Max. number of Emineres 2= 94				
	Voltage				
Cable length	100V	120V	190V	230V	277V
10 m	34,68,	41,82	64	78	-
20 m	30,60,90	41,82	64	78	-
30 m	20,40,60,80	28,56,84	64	78	-
50 m	12,24,36,48,60,72,84	17,34,51,68,85	43,86	63	91
70 m	8,16,24,32,40,48,56,64,72,80,88	12,24,36,48,60,72,84	31,62,93	45,90	65
100 m	8,16,24,32,40,48,56,64,72,80,88	9,18,27,36,45,54,60,72,81,90	21,42,63,84	31,62,93	46,92
200 m	3,6,9,12,15,18,21,24,27,30,33,36,39,42,45,48,51,54,57,60,63,66,69,72,75,78,81,84,87,90,93	4,8,12,16,20,24,28,32,36,40,44,48,52,56,60,64,68,72,76,80,84,88,92	11,22,33,44,55,66,77,88	16,32,48,64,80	23,46,69,92

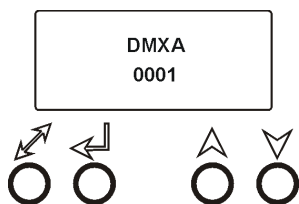
EMINERE 3	Max. number of Emineres 3= 64				
	Voltage				
Cable length	100V	120V	190V	230V	277V
10 m	23,46	28,56	44	53	-
20 m	20,40,60	28,56	44	53	-
30 m	13,26,39,52	19,38,57	44	53	-
50 m	8,16,24,32,40,48,56	12,24,36,48,60	29,58	43	62
70 m	6,12,18,24,30,36,42,48,54,60	8,16,24,32,40,48,56	21,42,63	31,62	44
100 m	4,8,12,16,20,24,28,32,36,40,44,48,52,56,60	6,12,18,24,30,36,42,48,54,60	15,30,45,60	21,42,63	31,62
200 m	2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46,48,50,52,54,56,58,60,62	3,6,9,12,15,18,21,24,27,30,33,36,39,42,45,48,51,54,57,60,63	7,14,21,28,35,42,49,56,63	11,22,33,44,55	16,32,48,

EMINERE 4	Max. number of Emineres 4= 48				
	Voltage				
Cable length	100V	120V	190V	230V	277V
10 m	17,34	21,42	33	40	-
20 m	15,30,45	21,42	33	40	-
30 m	10,20,30,40	15,30,45	33	40	-
50 m	6,12,18,24,30,36,42	9,18,27,36,45	22,44	32	47
70 m	4,8,12,16,20,24,28,32,36,40,44	6,12,18,24,30,36,42	16,32	23,46	38
100 m	3,6,9,12,15,18,21,24,27,30,33,36,39,42	4,8,12,16,20,24,28,32,36,40,44	11,22,33,44	16,32	23,46
200 m	2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46	2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46	5,10,15,20,25,30,35,40,45	8,16,24,32,40	12,24,36

Please see the Eminere user manual for more information about the Booster box installation.

4. E-box menu

The E-box is equipped with 2-row LCD display and four buttons which allows to address the fixture and set the fixture's behaviour according to your needs.



The four control buttons have the following functions:

- ↗ - ESCAPE button- to escape function or menu.
- ↘ - ENTER button- to select a function or confirm adjusted value.
- ▲, ▼ - UP and DOWN buttons - to move within the menu.

When you change any setting of the E-box, disconnect the E-box from power and connect it to power again to activate changes which you have made.

4.1 DMX Addr

Set DMX Address - use this menu item to set the DMX start address of the fixture, which is defined as the first channel from which the E-box will respond to a DMX controller.

IP address* - select this menu item to set desired IP address. IP address is the Internet protocol address. The IP uniquely identifies any node (fixture) on a network. There cannot be 2 fixtures with the same IP address on the network!

Default Address. This address is derived from fixture's MAC address and cannot be changed. Confirm the item **"Set Address"** to select this address.

Custom Address. IP address consists of four decimal numbers, each ranging from 0 to 255, separated by dots, e.g., 172.16.254.1. Each part represents a group of 8 bits (octet) of the address.

The following items **"IP Adr 1"**, **"IP Adr 2"**, **"IP Adr 3"**, **"IP Adr 4"** allow to set each part (number) of the address. After setting desired IP address, confirm the item **"Set Address"** to save this address.

Network mask* - select this menu item to set desired network mask. A network mask is a 32-bit mask used to divide an IP address into subnets and specify the networks available hosts.

The following items **"Net M.1"**, **"Net.M.2"**, **"Net.M.3"**, **"Net.M.4"** serve for setting of each part (number) of the net mask.

After setting desired network mask, confirm the item **"Set Net M."** to save adjusted values.

* E-box Daisy, E-box Star and E-box Pro only.

4.2 Info

Use this menu to read useful information about the fixture.

Software version - select this menu item to read software versions of the E-box and connected Emineres.

Databox - version of the E-box.

Line v1 - version of connected Emineres. If connected Emineres have two or more versions, the items Line v2, Line v3.... will appear in the menu and you should to update the software in Emineres to the latest version.

IP Addr - - **IP address.** This menu item shows the current IP address (the IP address "runs" on display).

RDM UID - - **RDM UID.** Select this menu item to read the RDM UID (the RDM UID "runs" on display).

MAC Addr - - **MAC Address.** Select this menu item to read the MAC address (the MAC address "runs" on display).

Outputs Info - information about Emineres connected to the Eminere outputs A, B, C, D, E and F.

Example for output A:

Output A

4.....Footprint (number of used channels depends on setting in menu "DMX Preset").

Press the ENTER button and use the UP and DOWN buttons to display the following information:

Lines

Cnt: 2.....Number of connected Emineres

Data Cnt

4.....Footprint

If some Eminere output is not used, the message "No output" will be displayed.

Temp - Temperature. Temperature inside the E-box.

4.3 Personality

Use this menu to modify the E-box operating behaviour.

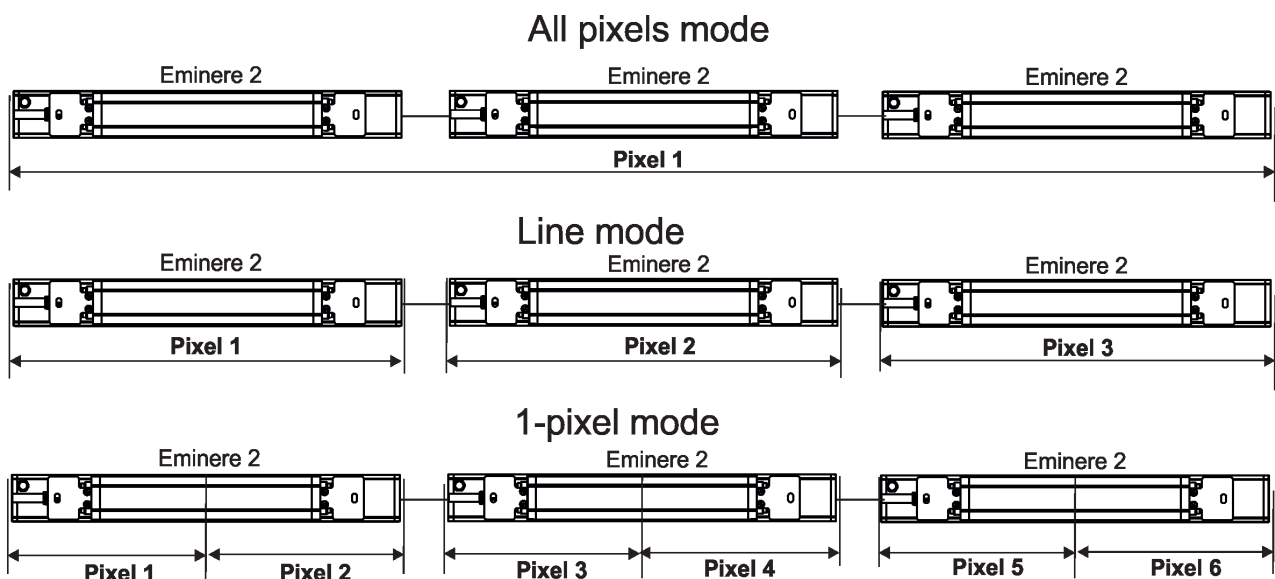
DMX Preset - DMX preset. Use the menu to select desired channel mode.

ALL PIX Mode - All pixels mode. All connected Emineres behave as one pixel and they are controlled together.

Line Mode - Line mode. Each Eminere behaves as one pixel.

1 IPix Mode - 1-pixel mode. 12 LEDs create one pixel (Eminere 1).

Examples of modes stated above for three Eminere 2 :



DMX Input - this menu allows you to choose desired DMX data input:

Wired - DMX signal is received by means of the standard DMX cable.

Wireless* - DMX signal is received by means of the inbuilt wireless DMX module.

Wireless Out DMX* - the fixture receives wireless DMX and sends the signal to its wired DMX output.

The fixture behaves as a "Wireless/Wired" adapter.

Ethernet** - DMX signal is received by means of the Ethernet cable.

* If wireless DMX module is installed.

Ethernet Settings** - use the menu item to select and set desired operating mode.

Ethernet mode - use the menu to select a protocol.

Artnet - fixture receives ArtNet protocol

sACN - fixture receives sACN protocol

gMAI - fixture receives MANet 1 protocol

gMAII - fixture receives MANet 2 protocol

ArtNet Settings - use the menu item to set parameters for ArtNet operation.

ArtNet Uni. 1 - selection of the ArtNet Universe (1-12)

Net - selection of a network (0-127)

Sub-Net - selection of a subnet (0-15).

Universe - selection of an Universe (0-15).

Menu items "ArtNet Uni. 1" and "Universe" allow a "crossing of Universes".

sACN Settings - use the menu item to set parameters for sACN operation.

sACN Uni - selection of the sACN Universe (1-12). To the selected universe can be assigned universe from range of 1-63999. It allows a "crossing of Universes".

MANet Settings - Use this menu to set parameters for MANet operation.

MA. Uni - MANet I (II) universe. The value of this item can be set in range of 1-256.

MA. S. ID - MANet I(II) session ID. The value of this item can be set in range of 1-32.

IGMP rep - Repeating time for Internet Group Management Protocol (Off, 1s-10s).

** E-box Daisy, E-box Star and E-box Pro only.

Display Settings - this menu allows you to change the display settings.

Display Off Timer - if this item is on, the display will be switched off 2 minutes after last pressing any button on the control panel.

Display Lightness - select this menu item to adjust the display intensity (0-100%).

Display Contrast - select this menu item to adjust contrast of the display (0-100%).

RGB(W) Split - this menu item allows you to select a way how the last pixel of the actual DMX Universe will be split to the next DMX Universe if the actual DMX Universe does not offer enough free channels for the pixel. (DMX Universe= set of 512 channels).

Disabled - pixel will be moved to another DMX Universe. Some channels will stay unused.

Enabled - pixel will use channels of actual DMX Universe and also channels of next DMX Universe. All channels of the actual DMX Universe will be used.

E-box mode - this menu item allows you to select a way of Emineres connection.

Normal - Emineres are connected in series.

Pass Thr - Emineres are connected in parallel.

Default setting - select this option to set fixture personalities to the default (factory) values.

4.3 Test programs

Use the menu to run a test sequences without an external controller, which will show you some possibilities of using the E-box in conjunction with LED modules.

Colors - runs a colour changing of all LEDs in a loop

Pixels - runs a pixel program in a loop (number of pixels depends on setting in the menu DMX Pres).

4.4 Special settings

Wireless - **Wireless DMX information.** The menu allows to read some information about Wireless DMX operation

Stat - **Wireless status.** Use the menu to read wireless DMX status.

Unlink - use this item to unlink the fixture from wireless DMX.

Update Software - The menu item allows you to update software in the E-box and connected LED modules via either serial or USB port of PC.

The following items are required in order to update software:

- PC running Windows or Linux or macOS

- DSU file

- Flash cable RS232/DMX P/N13050624 (if you want to use a serial port of PC)

- Robe Universal Interface or Robe Universal interface WTX (if you want to use an USB port of PC)

After the software updating the fixture will be set to default (factory) values.

To update software in the fixture:

1. DSU file is available from the Robe web site at WWW.robe.cz.

File with extension zip is intended for Windows (used and tested from XP to W10 on 32/64bit systems).

File with extension tbz is intended for Linux (used and tested on Debian and Ubuntu 32/64bit).

File with extension dmg is intended for macOS (used and tested on OSX up to Sierra) XQuartz required, install it from <https://www.xquartz.org/>

Save the download file to a folder on your computer.

In case that you use windows, extract files in the zip file (e.g. DSU_Eminere_17080432.zip)

2. Disconnect the fixture from DMX controller.

3. If you use the flash cable RS232/DMX, connect a serial port of your computer with DMX input of the fixture by means of the cable.

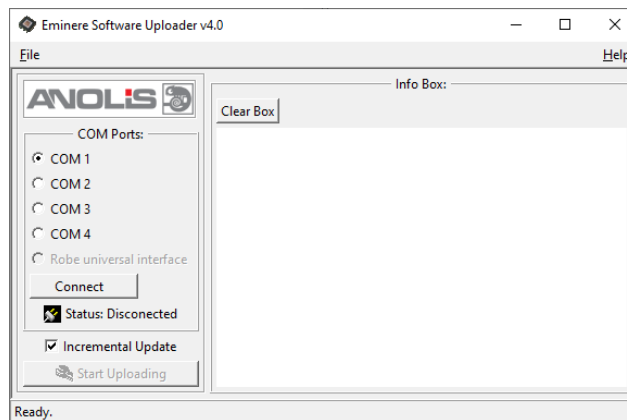
If you use the Robe Universal Interface, connect a USB port of your computer with the Robe Universal Interface by means of the USB cable and DMX input of the fixture with the DMX output of the Robe Universal Interface via a DMX cable.

4. Switch the fixture to the update mode (Special Settings--> Update Software).

Note: If you do not want to continue in the software update, you have to switch off and on the fixture to escape from the updating mode.

We recommend to cancel all running programs on your computer before starting the software update.

5. Double-click the software uploader file (e.g. DSU_Eminere_17080432.exe) in the extracted files. The Software Uploader program will start running.



6. Select correct "COM " number if you use a Flash cable RS232/DMX or select "Robe Universal Interface " if you use the Robe Universal Interface/Robe Universal Interface WTX and then click on the "Connect" button.

7. If the connection is OK, click the "Start Uploading" button to start software uploading. It will take several minutes to perform software update.

If the option "Incremental Update" is not checked, all processors will be updated (including processors with the same software version).

If you wish to update only processors with not topical versions of software, check the "Incremental Update box".

Avoid interrupting the process. Update status is being displayed in the "Info Box" window.

When the update is finished, the line with the text "The fixture is successfully updated" will appear in this window.

In case upload process is interrupted (e.g. power loss), the fixture stays in "Updating mode" and you will have to repeat the software update again.

Another way, how to update software in the fixtures (especially large installation of fixtures) is to use the ROBE Uploader. It is a software for automatized software update of ROBE fixtures. It can take advantage of Ethernet ports and RDM support if present in the units.

For more information please see <https://www.robe.cz/robe-uploader/>.

5. DMX protocol

Version 1.0

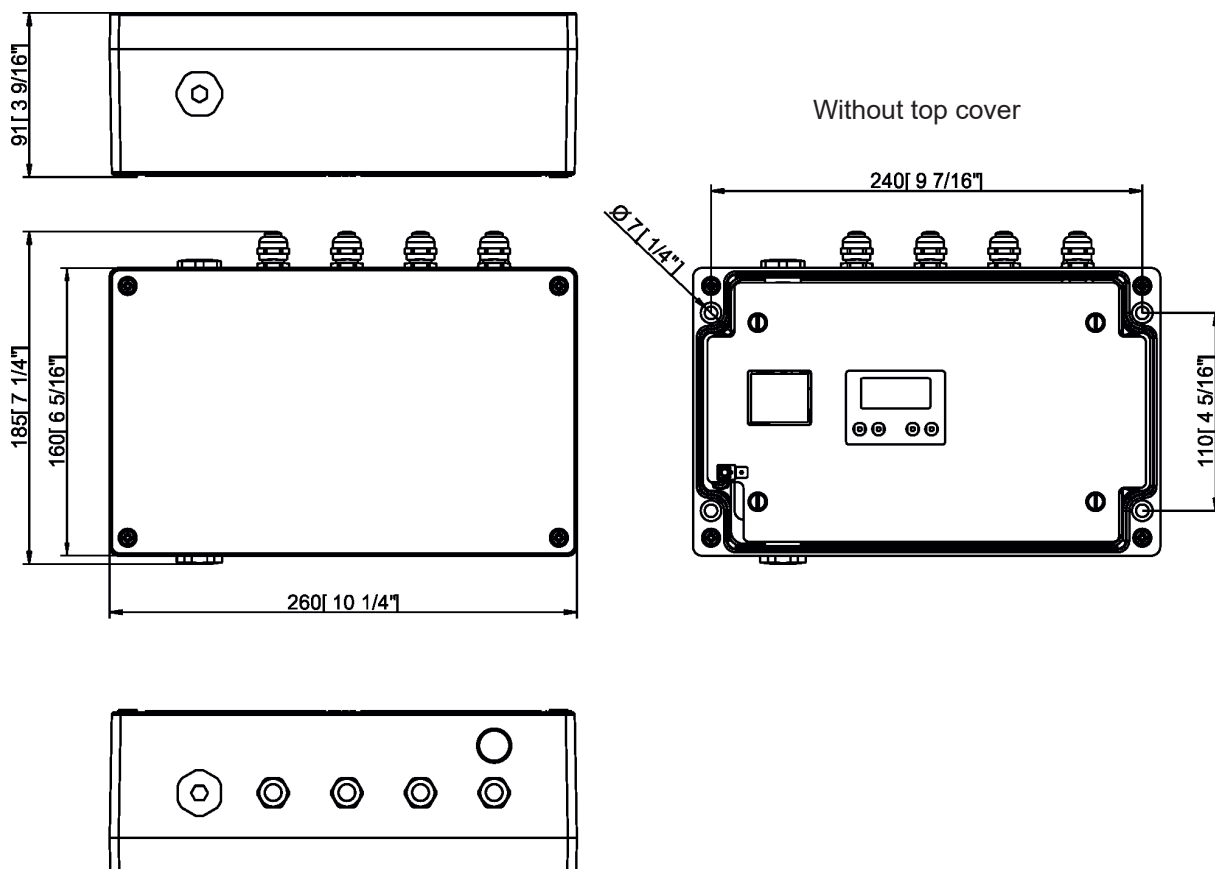
Channel	DMX Value	Function	Type of control
1	0-255	Red LEDs (Pixel 1) Red LEDs saturation control (0-100%)	proportional
2	0-255	Green LEDs (Pixel 1) Green LEDs saturation control (0-100%)	proportional
3	0-255	Blue LEDs (Pixel 1) Blue LEDs saturation control (0-100%)	proportional
4	0-255	White LEDs (Pixel 1) White LEDs saturation control (0-100%)	proportional
5	0-255	Red LEDs (Pixel 2) Red LEDs saturation control (0-100%)	proportional
6	0-255	Green LEDs (Pixel 2) Green LEDs saturation control (0-100%)	proportional
7	0-255	Blue LEDs (Pixel 2) Blue LEDs saturation control (0-100%)	proportional
8	0-255	White LEDs (Pixel 2) White LEDs saturation control (0-100%)	proportional
:	:	:	:
depends on number of pixels N	0-255	White LEDs (Pixel N) White LEDs saturation control (0-100%)	proportional

6. Technical specifications

E-box Daisy

Number of outputs:	1
Input voltage	100-277 V AC; 50-60Hz
Power consumption	5W (self-consumption of the E-box)
Fuse	T 0.5A H
Output	
Number of outputs	1
Voltage	100-277 V
Max. Current	16A
Control	2-row LCD display & 4 buttons
Supported protocols	USITT DMX 512, ArtNet, sACN, RDM
W-DMX control (optional)	
Connection	
Power	terminal block Phoenix 2 SPT_2.5/3-V-5.0
Ethernet	terminal block Phoenix SPTAF_1/9-3.5
DMX	terminal block Phoenix SPTAF 1/3-3,5
Eminere supply	terminal block Phoenix SPT_2.5/3-V-5.0
Eminere DMX	terminal block Phoenix SPTAF 1/3-3,5
Operating ambient temperature range	-20/+40°C (-4°F / +104°F)
Protection factor	CE: IP67
Weight	3.6 kg (7.9 lbs)

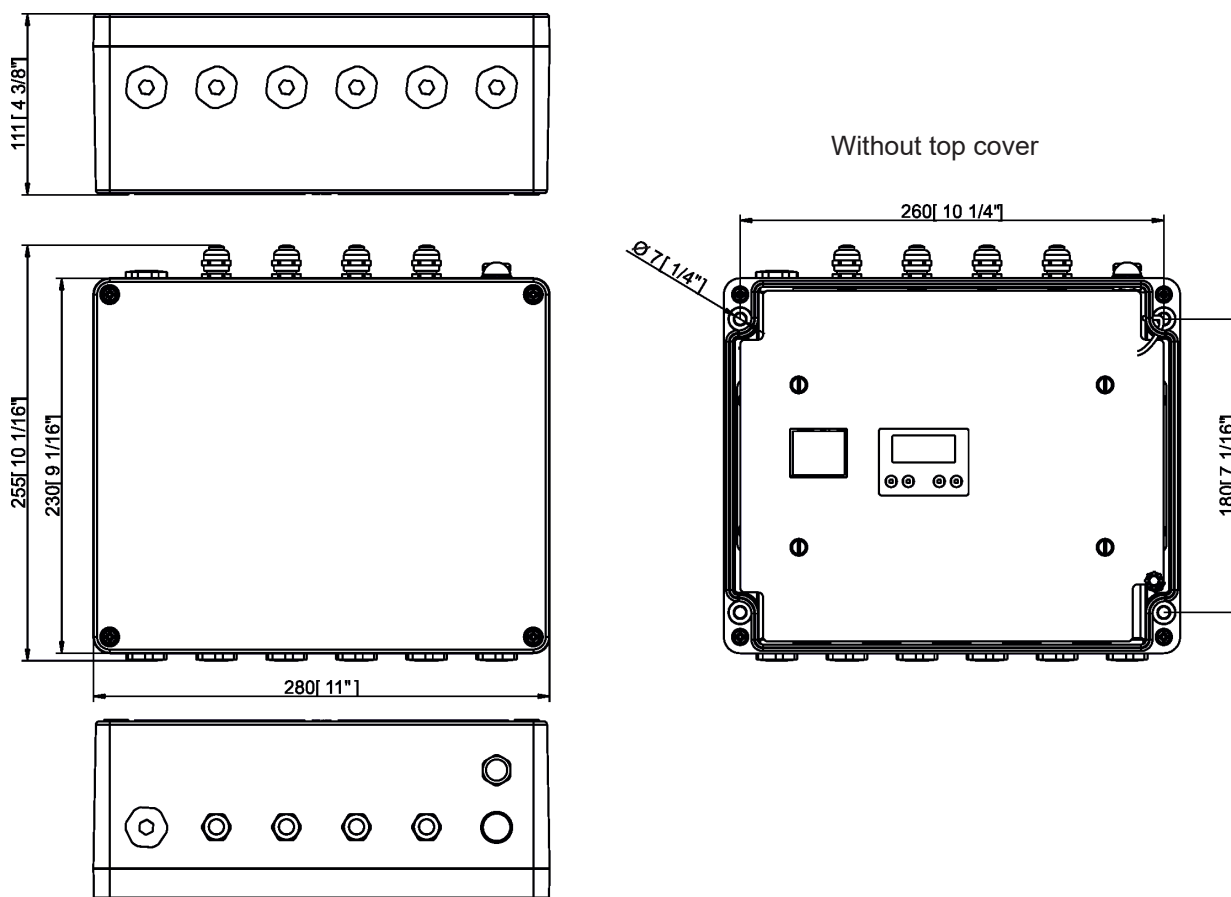
Dimensions
mm [inch]



E-box Star

Number of outputs:	1
Input voltage	100-277 V AC; 50-60Hz
Power consumption	5W (self-consumption of the E-box)
Fuse	T 0.5A H
Output	
Number of outputs	6
Voltage	100-277 V each output)
Max. current	16A (in total for all outputs)
Warning: The E-box Star has only one power input, for that reason Eminere outputs cannot be so loaded as Eminere outputs at the E-box Pro.	
Control	2-row LCD display & 4 buttons
Supported protocols	USITT DMX 512, ArtNet, sACN, RDM
W-DMX control (optional)	
Connection	
Power	terminal block Phoenix 2 SPT_2.5/3-V-5.0
Ethernet	terminal block Phoenix SPTAF_1/9-3.5
DMX	terminal block Phoenix SPTAF 1/3-3,5
Eminere supply	terminal block Phoenix SPT_2.5/3-V-5.0
Eminere DMX	terminal block Phoenix SPTAF 1/3-3,5
Operating ambient temperature range:	-20/+40°C (-4°F / +104°F)
Protection factor:	CE: IP67
Weight	4.4 kg (9.7 lbs)

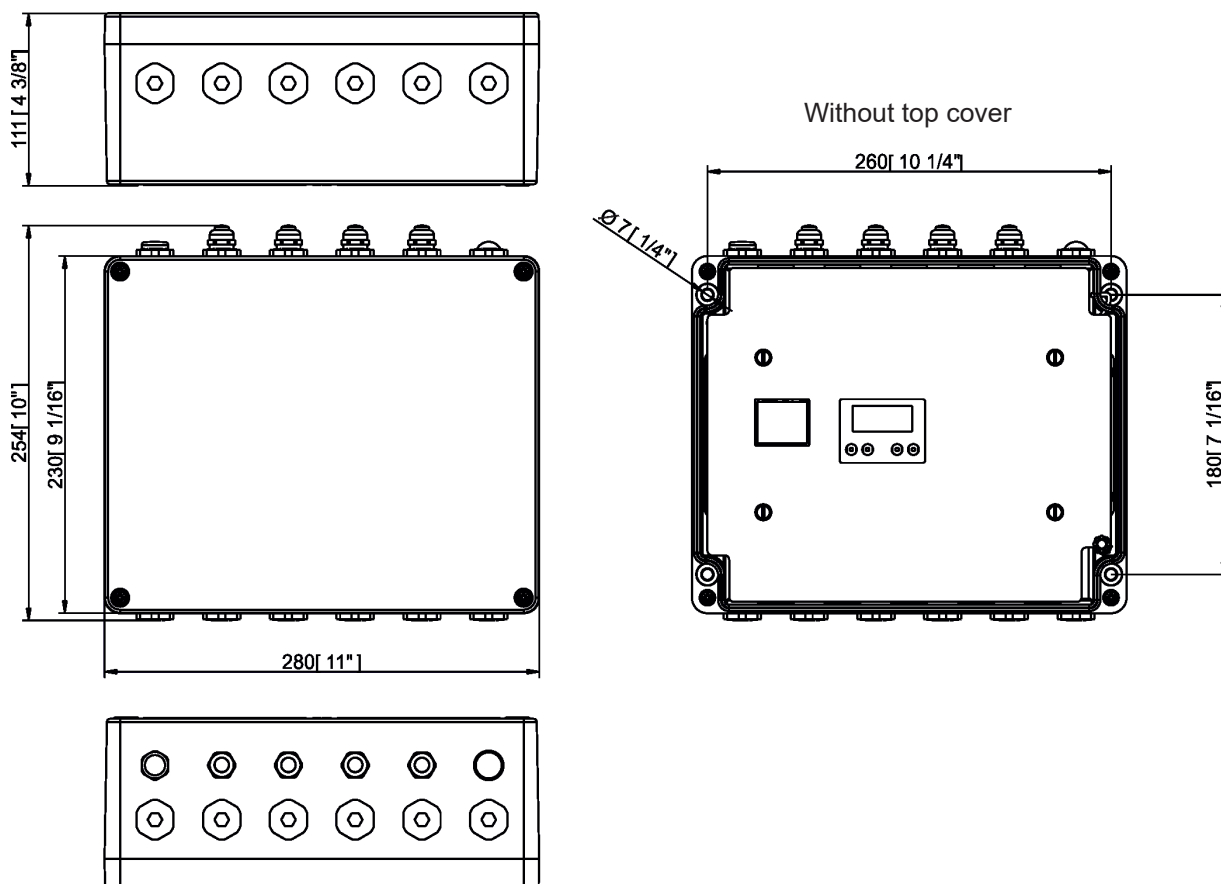
Dimensions mm [inch]



IE-box Pro

Number of outputs:	6
Input voltage	100-277 V AC; 50-60Hz
Power consumption	5W (self-consumption of the E-box)
Fuse	T 0.5A H
Output	
Number of outputs	6
Voltage	100-277 V (each output)
Max. current	16 A (each output)
Control	2-row LCD display & 4 buttons
Supported protocols	USITT DMX 512, ArtNet, sACN, RDM
W-DMX control (optional)	
Connection	
Power	terminal block Phoenix 2 SPT_2.5/3-V-5.0
Ethernet	terminal block Phoenix SPTAF_1/9-3.5
DMX	terminal block Phoenix SPTAF 1/3-3,5
Eminere supply	terminal block Phoenix SPT_2.5/3-V-5.0
Eminere DMX	terminal block Phoenix SPTAF 1/3-3,5
Operating ambient temperature range	-20/+40°C (-4°F / +104°F)
Protection factor	CE: IP67
Weight	4.5 kg (9.9 lbs)

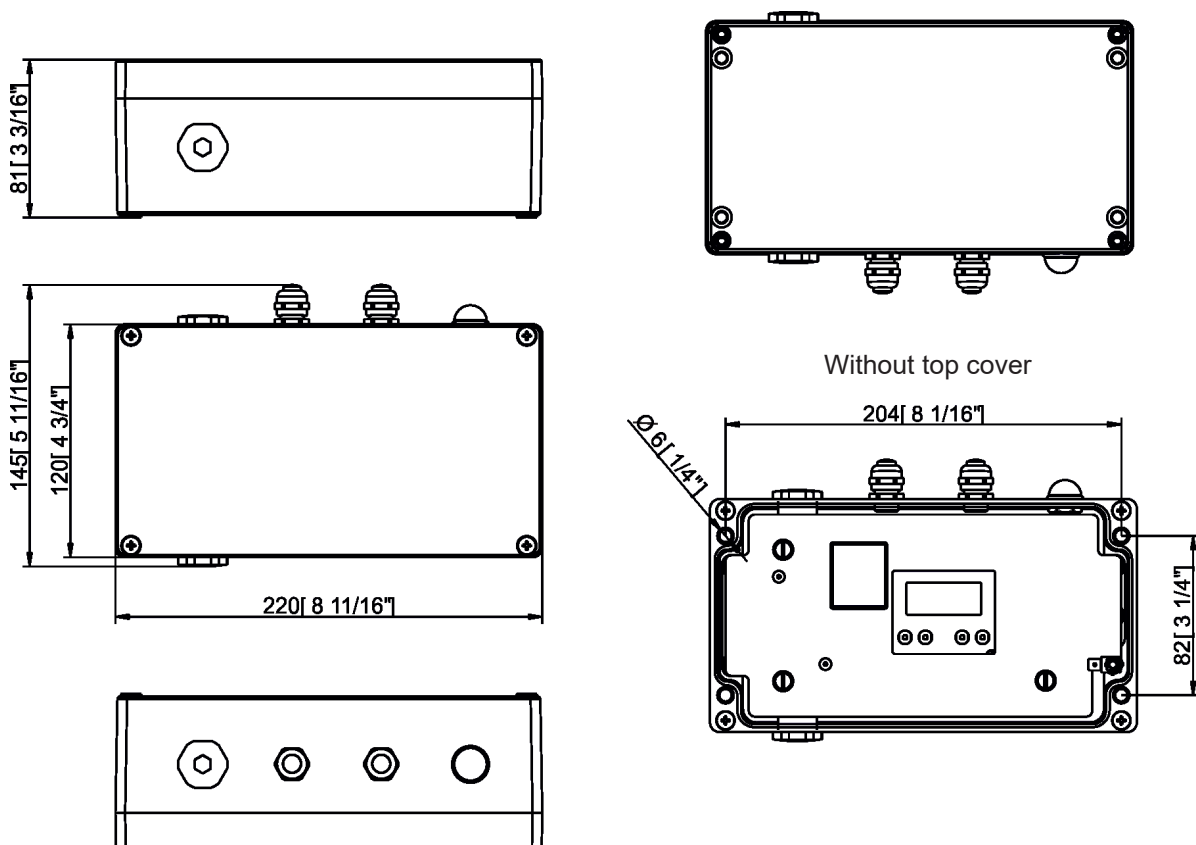
Dimensions
mm [inch]



E-box Light

Number of outputs:	1
Input voltage	100-277 V AC; 50-60Hz
Power consumption	5W (self-consumption of the E-box)
Fuse	T 0.5A H
Output	
Number of outputs	1
Voltage	100-277 V
Max. current	16A
Control	2-row LCD display & 4 buttons
Supported protocols	USITT DMX 512, RDM
W-DMX control (optional)	
Connection	
Power	terminal block Phoenix KDS4
DMX	terminal block Phoenix SPTAF 1/3-3,5
Eminere supply	terminal block Phoenix KDS4
Eminere DMX	terminal block Phoenix SPTAF 1/3-3,5
Operating ambient temperature range	-20/+40°C (-4°F / +104°F)
Protection factor	CE: IP67
Weight	2.1 kg (4.7 lbs)

Dimensions
mm [inch]



Included items

- 1 x E-box
- 1 x User manual

7. 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	2/10/2019	Changes in menu Personality
1.2	17/10/2019	E-box Light added
1.3	25/11/2019	Booster box added

November 25, 2019

Specifications are subject to change without notice.

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