User Manual

keypadCUE-8-L
keypadCUE-8-E

Version 01

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1. Introduction

1.1. Overview ....

Featuring a beautiful stainless steel architectural finish, these keypads are elegant and powerful wall mounted control panels designed to be built into standard European electrical wall boxes. Each keypad provides 8 buttons and programmable indication. Button labels can be engraved upon the plastic strips on the front panel. keypadCUE-8-L makes it possible to use temporary printed or hand-written labels for the trial operation. The full function console keypad may be used as a dedicated wired control panel for audio, video and operating environment functions. Thanks to the built-in IR receiver, it is possible to use the irCUE panel in the room where keypadCUE-8 is installed, without necessity to install a separate IR receiver. keypadCUE-8-L and keypadCUE-8-E differ only in the way custom labels are made. They are identical from the programming point of view. Where the description is relevant for both models, we use the name keypadCUE-8 without the distinguishing letters E and L.

1.2. Models ....

Model	Product code	Description
keypadCUE-8-E	CS0288	On-wall keyboard, (8) buttons, engravable labels
keypadCUE-8-L	CS0287	On-wall keyboard, (8) buttons, engravable labels, temporary paper labels for the trial period

1.3. Features ....
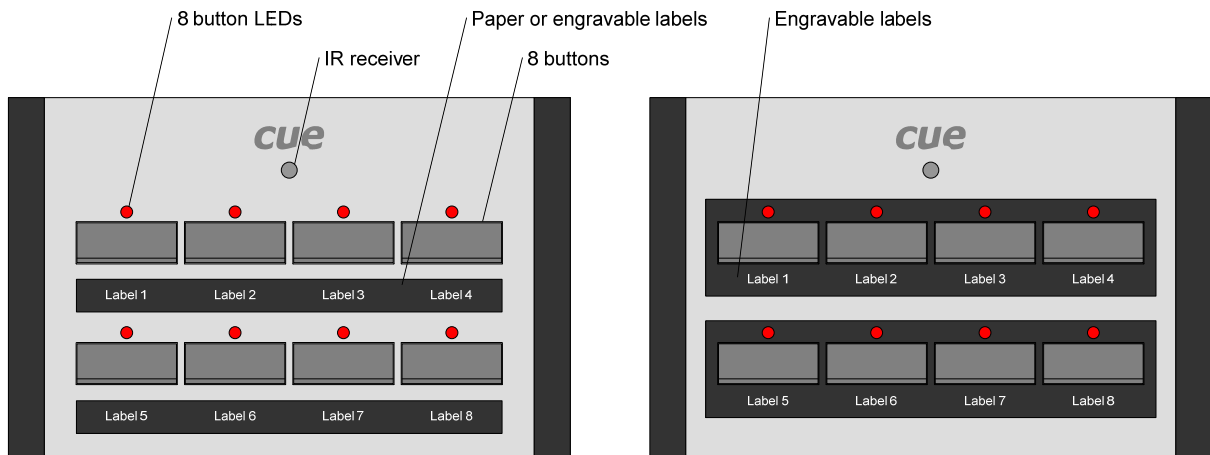
- 8 buttons
- Programmable LED indication for each button
- Front panel plastic strips for custom engraved button labels for final installation
- Labels for hand-written button names for trial operation (only keypadCUE-8-L)
- Built-in IR sensor for irCUE link
- Stainless steel + plastic or wood enclosure
- On-wall installation
- Compatible with standard European wall boxes
- System connection by CUEwire

1.4. Programming ....

All keyboards are programmed using the **Cue Director** programming tool. Control commands are described in the **Programming Manual CPL References**, chapter Keyboards.

2. Front Panel

The front panel is equipped with 8 buttons and 8 indication LEDs - see picture.

keypadCUE-8-L   keypadCUE-8-E

Button LEDs and their ON or OFF state are controlled by special programming commands from the controller.

Brightness of indication LEDs and backlight can be set by special programming commands from the controller.

In the upper part of the front panel, there is the sensor of the built-in IR receiver. It makes it possible to use the irCUE panel in the room where keypadCUE-8 is installed, without necessity to install a separate IR receiver.
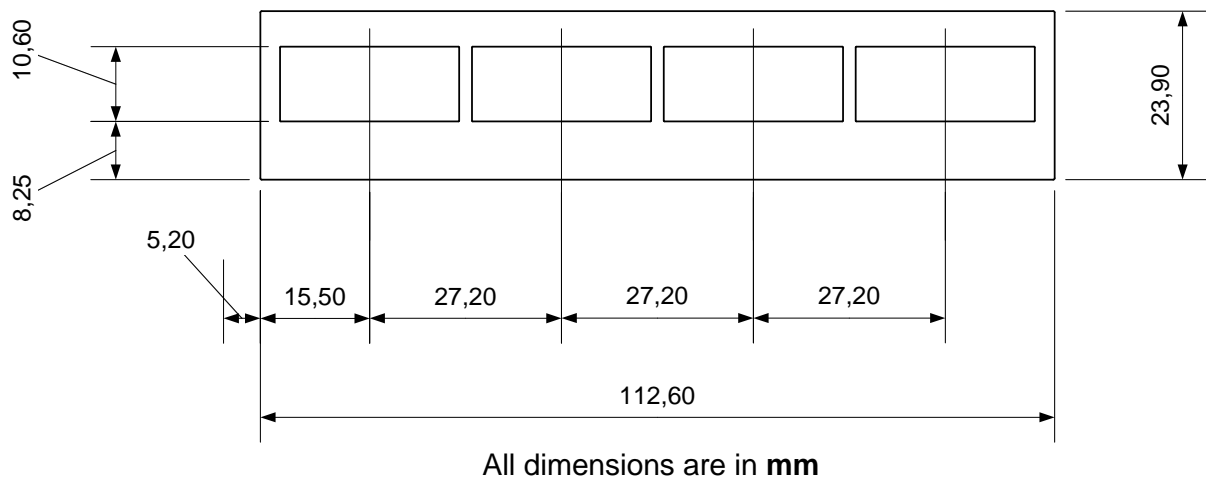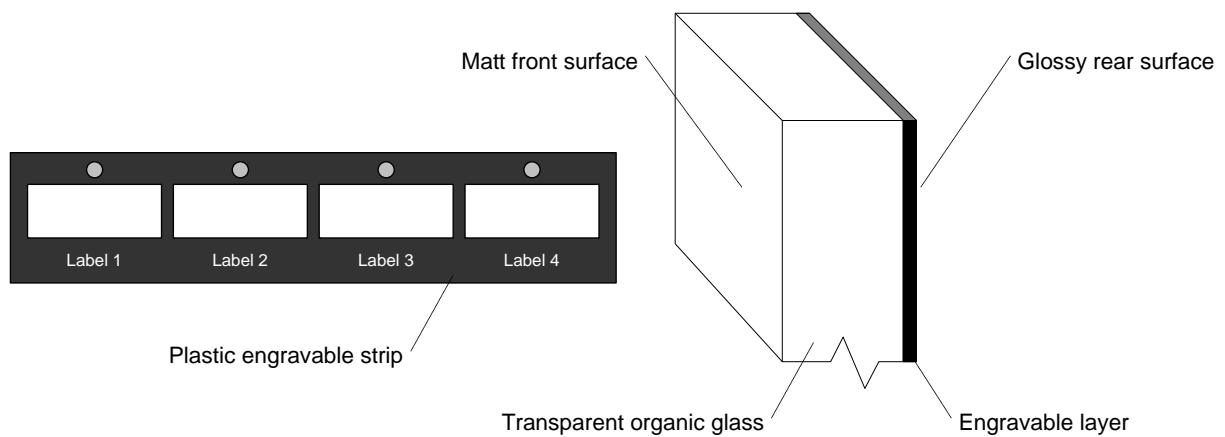
3. Button Labels

3.1. Button labels for keypadCUE-8-E

keypadCUE-8-E uses the separate plastic stripe on the front panel for customized engraved labels for all buttons.

Steps:

1. Have the labels engraved on the rear surface of the plastic stripes on the front panel. Labels must be engraved specularly. Recommended fonts are Nimbus, Trebuchet, Verdana or Arial, size 9 points, bold.

Matt front surface

Glossy rear surface

Label 1   Label 2   Label 3   Label 4

Plastic engravable strip

Transparent organic glass

Engravable layer

10,60

8,25

23,90

5,20

15,50   27,20   27,20   27,20

112,60

All dimensions are in **mm**

2. Clean and degrease the rear glossy part of engraved stripes by denatured alcohol.
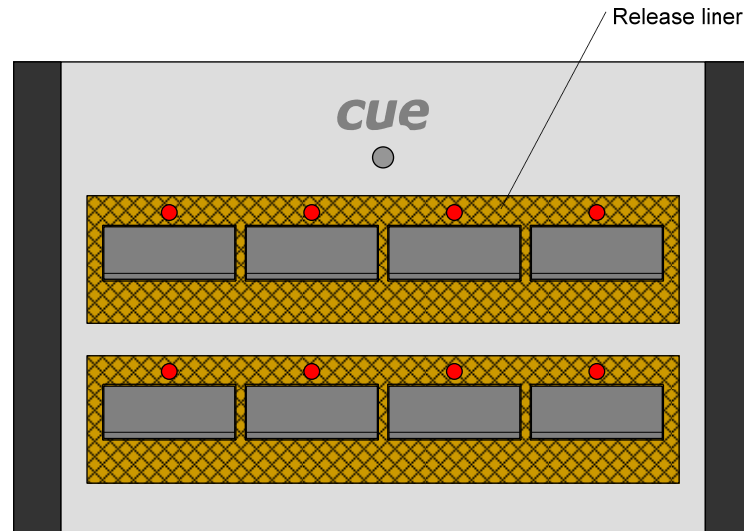
Release liner

3. Remove the release liner from the top part of keypadCUE-8-E.
4. Place the engraved front panel to keypadCUE-8-E, make sure that the buttons can be pushed easily and then press the panel to stick together with the keypadCUE-8-E. Be as precise as possible, because it is very difficult to remove the panel once it has been glued.

3.2. Button labels for keypadCUE-8-L

For keypadCUE-8-L, two types of custom labels can be used. Paper labels can be used temporarily during trial operation (or for permanent installation in technical areas where design is not critical). Paper labels can be written on by hand or printed. For final installation, have labels engraved upon the organic glass.

### 3.2.1. Using temporary paper button labels

Steps:

1. Create paper labels and write or print the required legends on them. The size and button layout is pictured below. Recommended fonts are Nimbus, Trebuchet, Verdana or Arial, size 9 points, bold.
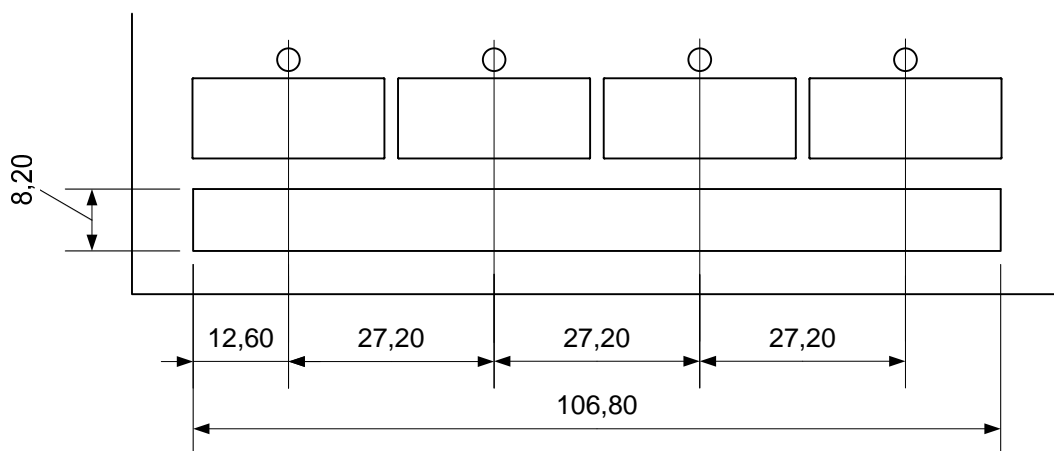

All dimensions are in **mm**

2. Place the paper labels in their right spaces. Then put the transparent cover over them. In doing that, insert the transparent cover under one side of the keypad and bend it slightly until it is possible to insert the other side of the cover as well.

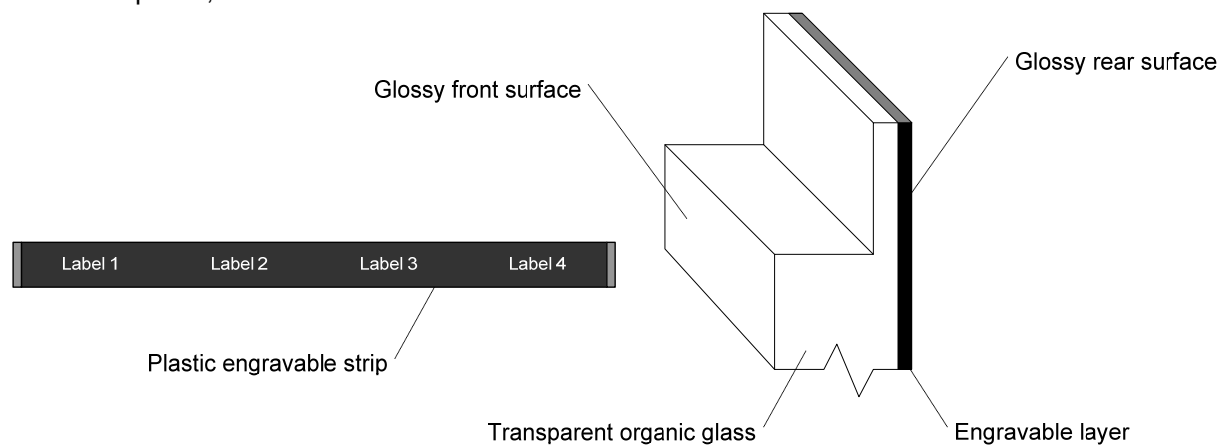Transparent cover   Paper label
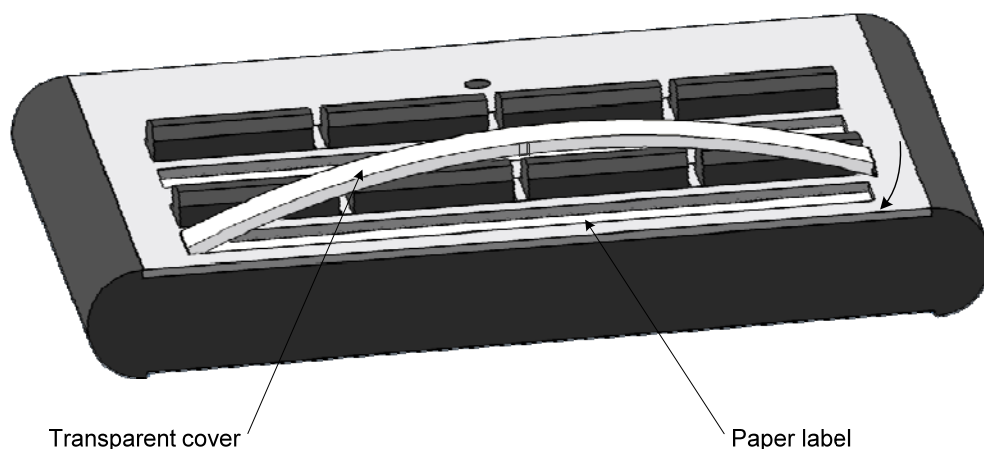
3. When changing the label, it is necessary to remove the transparent cover carefully. Use a small screwdriver to do this. Insert the screwdriver into the small slot in the bottom part of the cover. Bend the middle part of the cover carefully until the cover is released on one side. Then remove the whole cover.
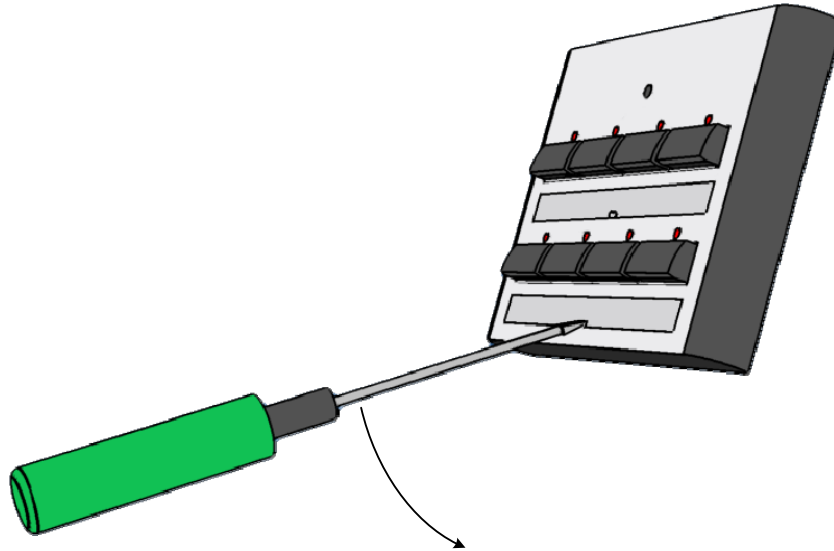
3.2.2. Using the final engraved button labels

Steps:

1. Have the labels engraved on the rear surface of the plastic stripes of the front panel. Labels must be engraved specularly. Recommended fonts are Nimbus, Trebuchet, Verdana or Arial, size 9 points, bold.

Glossy rear surface

Glossy front surface

| Label 1 | Label 2 | Label 3 | Label 4 |

Plastic engravable strip

Transparent organic glass

Engravable layer

2. Place the stripes onto the keypad, using the same procedure as described in the previous chapter (on placing the transparent cover over paper labels).

3. Engraved strips do not have slots for easy removing because of design reasons. If you do need to remove the engraved strip, stick some tool to the centre of the strip using a piece of double-sided foam adhesive tape. Then lift the central part of the strip, insert a screwdriver under it and bend the strip slightly until it is released on one side. Then you can remove the strip.

4. Addressing

4.1. Addressing buttons of keypadCUE-8

4.1.1. Addressing rules

The ADDRESS of the buttons and LEDs of keypadCUE-8 can be set in the range **0 to 207**. Default button panel ADDRESS is 1.

The BUTTON_ID transmitted by the panel is the LINK number used in the programming for button identification. The BUTTON_LED_ID is LED identification for *ButtonLed…* commands. Both values depend on the button (LED) position and on a keyboard ADDRESS too. BUTTON_ID is calculated according to the formulas described below.

BUTTON_ ID = (32 * ADDRESS) + Button Code

BUTTON_LED_ID = (32 * ADDRESS) + Button LED Code

The lowest BUTTON_ID is generated by the button in the upper left corner; the highest BUTTON_ID is generated by the button in the lower right corner - see example in the picture below.
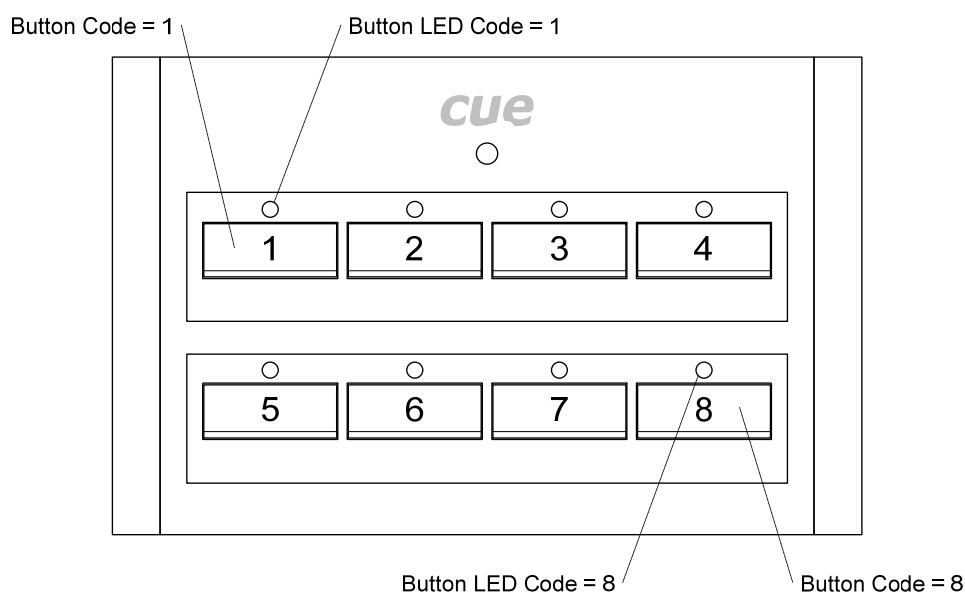

In the table below Button ID range for some addresses is shown.

ADDRESS	BUTTON_ID range = BUTTON_LED_ID range	
0	1	8
1	33	40
2	65	72
…	…	…
207	6625	6632

4.1.2. Setting-up keypad buttons ADDRESS

keypad button addressing switch
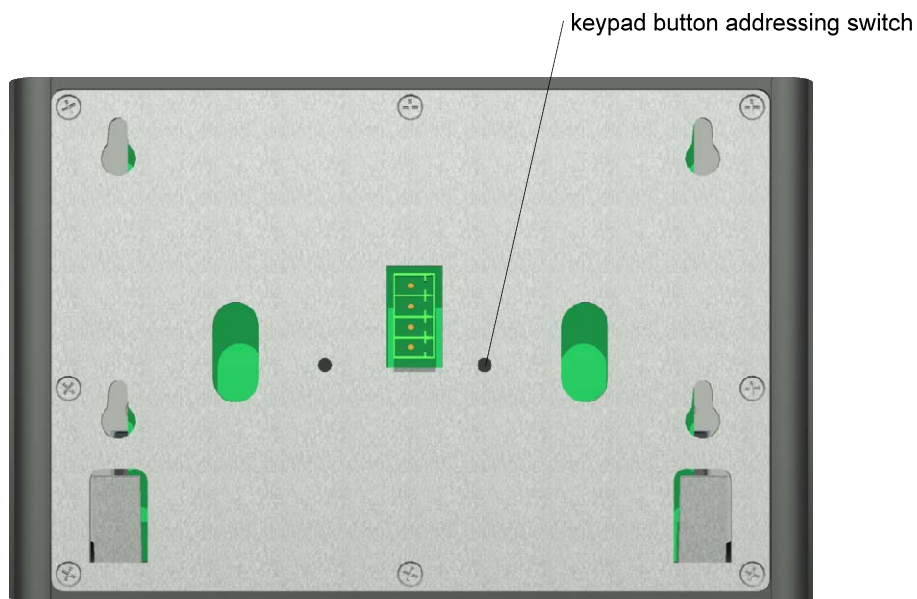
1. Push the keypad button addressing switch on the rear side of keypadCUE-8 by small screwdriver or wire; backlight LEDs are switched off to indicate Set Address Mode.
2. Button LEDs indicate ADDRESS in binary code – Button 1 bit 0, Button 2 bit 1 etc… Push buttons to toggle address bits to the requested value of ADDRESS (see examples in the picture below).
3. Push keypad button addressing switch to save ADDRESS to non-volatile memory and to enter keyboard Standard Mode - backlight LEDs are switched on to indicate Standard Mode.

ADDRESS: 0

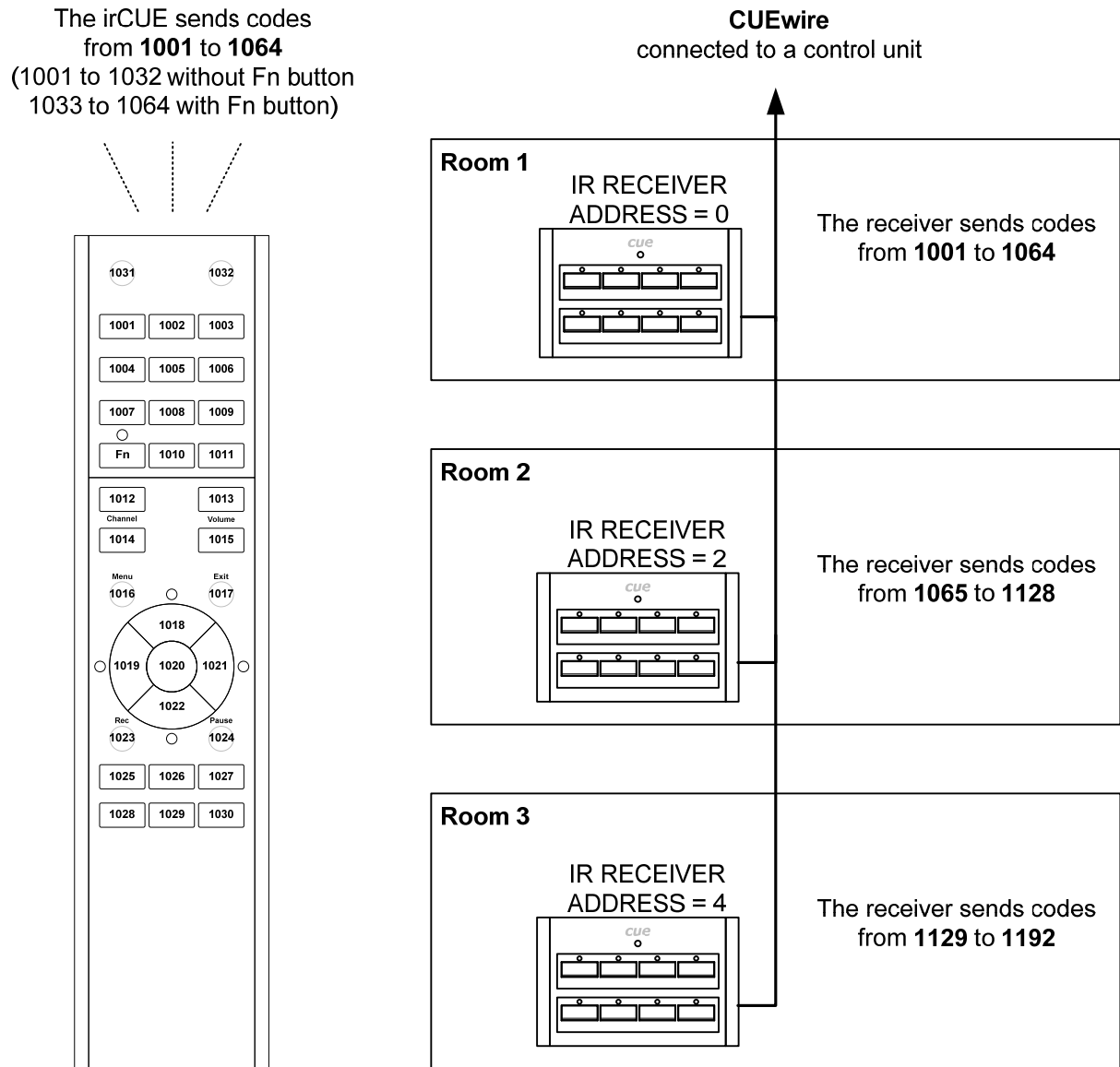ADDRESS: 1

ADDRESS: 2
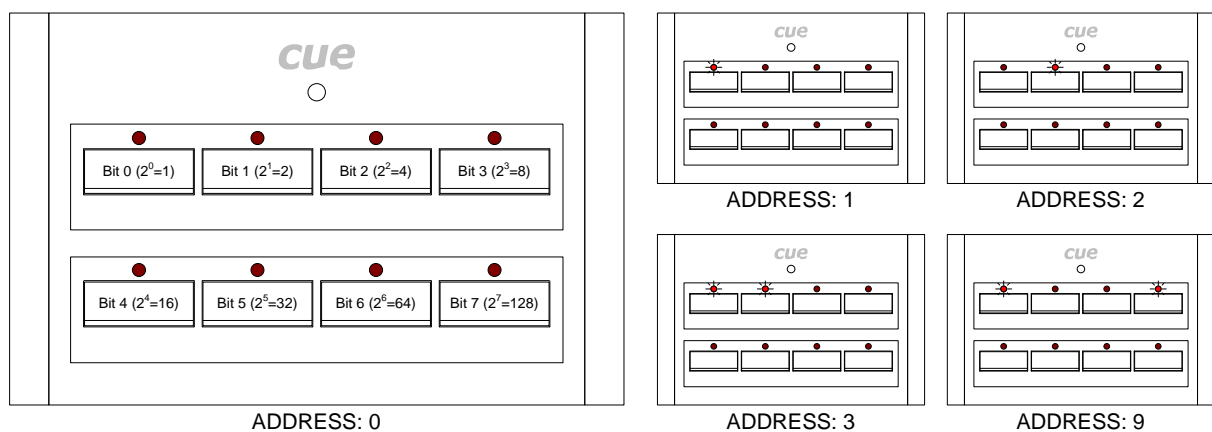
ADDRESS: 3

ADDRESS: 9

4.1.3. Troubleshooting

Flashing backlight LEDs indicate non-volatile memory ERROR. Try the Power OFF – Power ON sequence to restart the device and set ADDRESS again.

4.2. Addressing the built-in IR receiver in keypadCUE-8

4.2.1. Addressing rules

It is possible to add an offset to a BUTTON_ID sent by the irCUE control panel using the IR receiver built in keypadCUE-8. It can be very helpful in multi-room installation - the same irCUE can be identified in each room. That means one panel can initiate different actions in different rooms - see an example in the picture below.

The irCUE sends codes
from **1001** to **1064**
(1001 to 1032 without Fn button
1033 to 1064 with Fn button)

CUEwire
connected to a control unit

Room 1

IR RECEIVER
ADDRESS = 0

The receiver sends codes
from **1001** to **1064**

Room 2

IR RECEIVER
ADDRESS = 2

The receiver sends codes
from **1065** to **1128**

Room 3

IR RECEIVER
ADDRESS = 4

The receiver sends codes
from **1129** to **1192**

The BUTTON_ID sent by irCUE Receiver 485 to the control unit is the BUTTON_ID sent by IR wireless control panel with an added OFFSET value. Button ID and OFFSET values are calculated according to the formulas shown below.
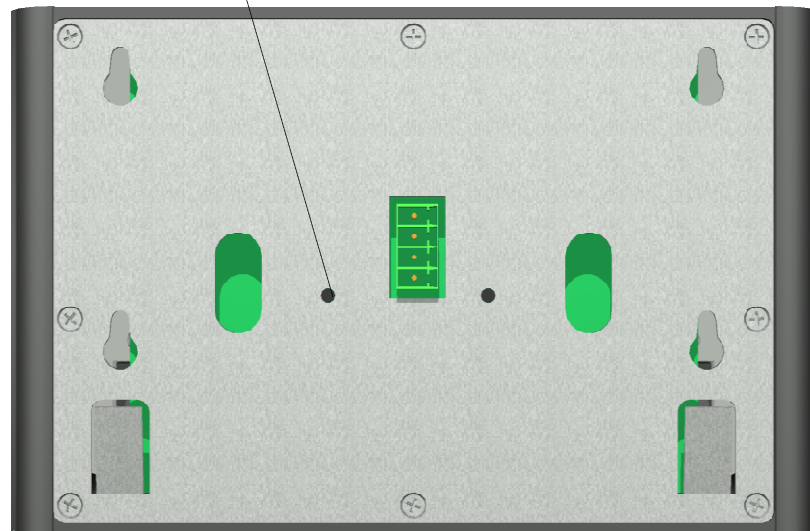
BUTTON_ID (irCUE Receiver 485) **= Offset + BUTTON_ID** (IR wireless control panel)

Offset = 32 * ADDRESS

4.2.2. Setting up IR receiver ADDRESS

The address of the receiver can be set up by the Address Switch - see picture below.

IR receiver addressing switch

4. Push the IR receiver addressing switch on the rear side of keypadCUE-8 by a small screwdriver or wire; backlight LEDs are switched off to indicate Set Address Mode.
5. Button LEDs indicate ADDRESS in binary code – Button 1 bit 0, Button 2 bit 1 etc… Push buttons to toggle address bits to requested value of ADDRESS (this is the same as in addressing keypad buttons, see above).
6. Push the keypad button addressing switch to save ADDRESS to non-volatile memory and to enter keyboard Standard Mode - backlight LEDs are switched on to indicate Standard Mode.

5. Mounting

keypadCUE-8 can be mounted into a standard European electrical wall box with spacing 60 mm between mounting screws.

Steps:

1. Mount the rear supporting panel to the electrical wall box by two suitable screws.
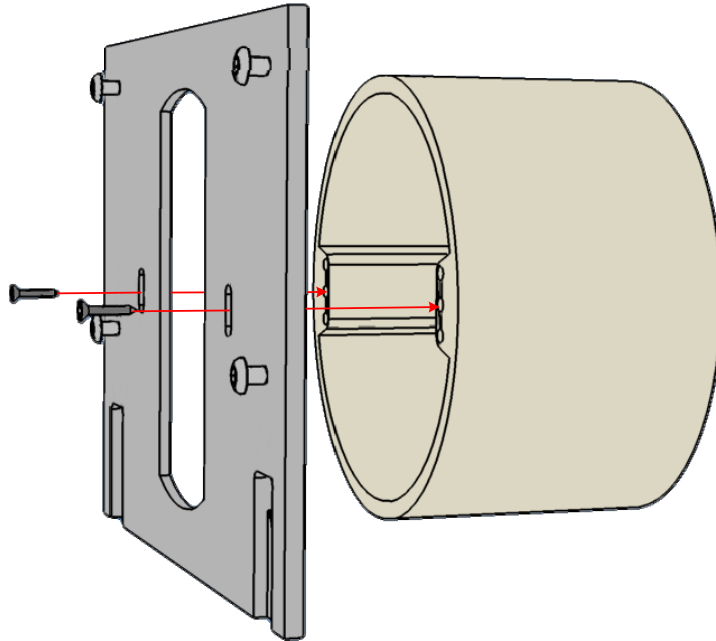
2. The construction of keypadCUE-8 facilitates secure mounting to the wall using a locking catch. You can activate this catch by leaning it out of the keypad body by approx. 1 mm with the help of a screwdriver (see picture below). The locking catch is not activated by default.
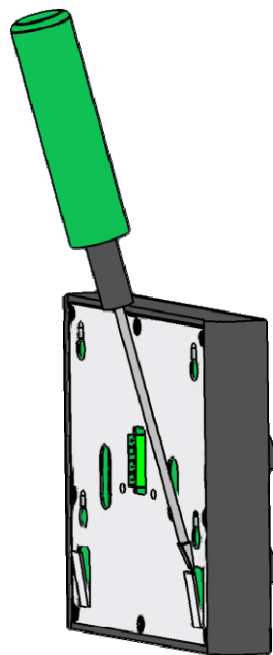
3. Place keypadCUE-8 onto the supporting panel as indicated by the arrows in the picture bellow.
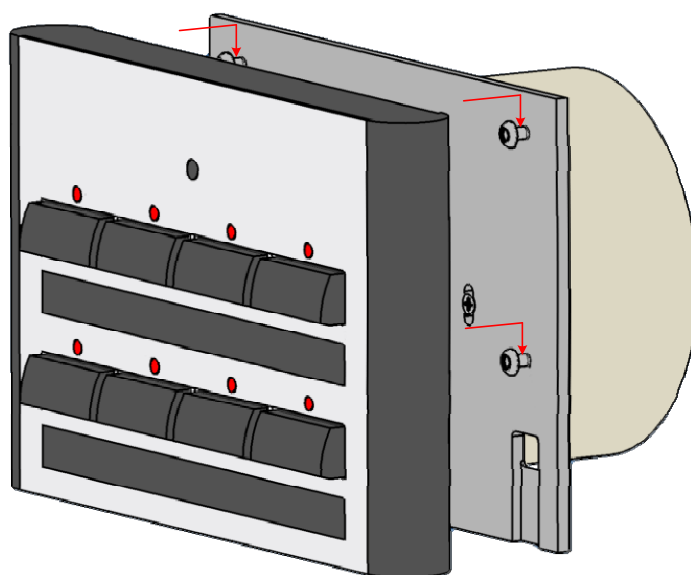
4. To remove keypadCUE-8 with the activated locking catch, insert the unlocking tool into one of the holes in the bottom part of keypadCUE-8 and then the other, release the catches and take keypadCUE-8 off the wall (see picture below).

Unlocking tool
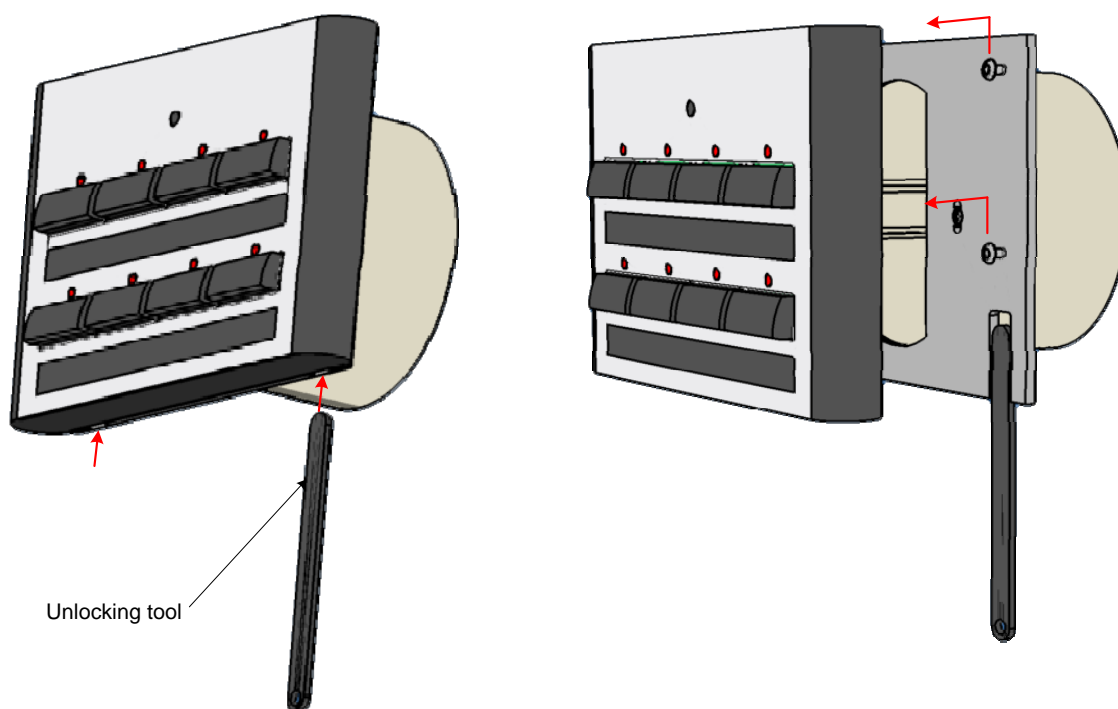
6. Connecting

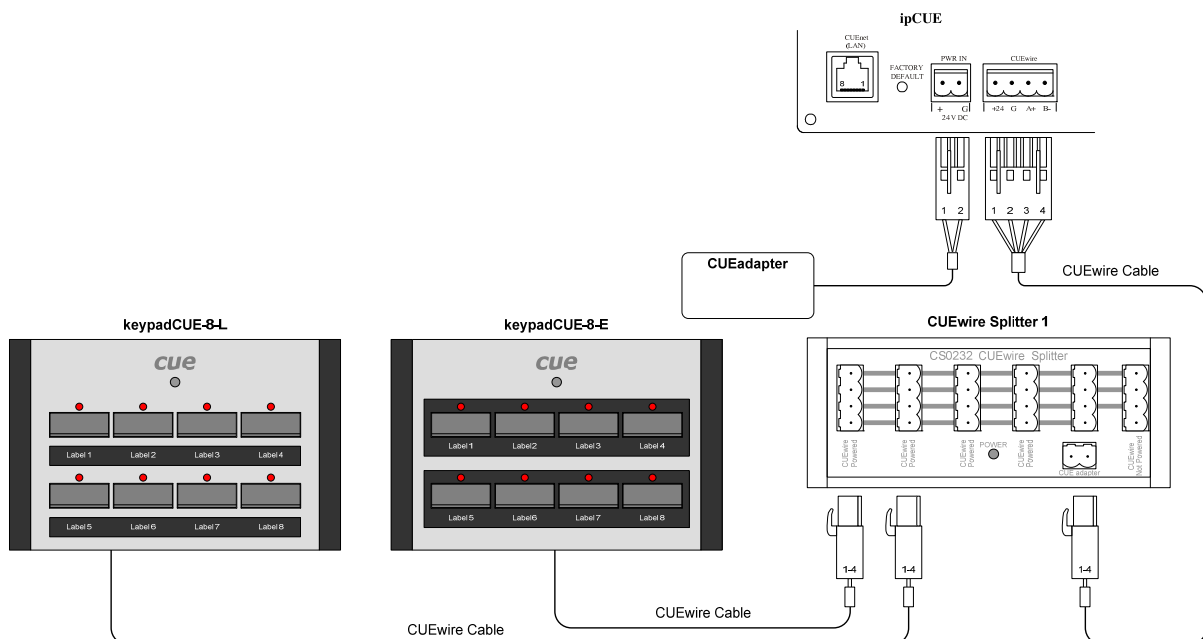keypadCUE-8 is connected to the system by CUEwire. Pin connection of the CUEwire connector is described in the following picture.

keypadCUE-8 rear view
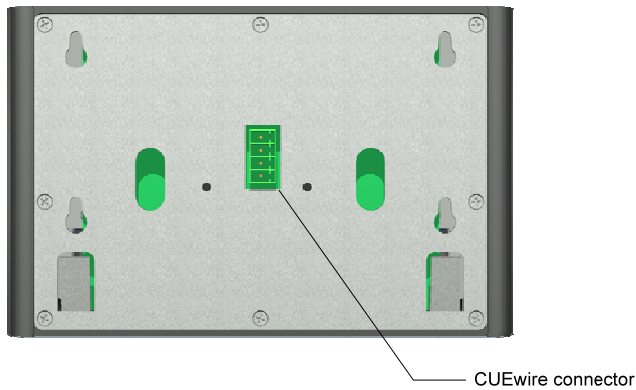
CUEwire connector			
Pin	Signal	Description	Phoenix 4-pin 3.5 mm
1	+24	Power +24 VDC	
2	G	Ground	
3	A+	RS-485 Data +	
4	B-	RS-485 Data -	

CUEwire connector

Example of a connection

7. Specifications and Mechanical Drawings

Buttons layout .... 8 buttons
Indication .... 8 LEDs
System connection .... CUEwire (RS-485), 4-pin connector Phoenix 3.5 mm
Power supply .... 24 VDC (+/- 20%), 3 W
Enclosure .... Stainless steel + plastic or wood enclosure
Dimensions (WxHxD) .... 141 mm (5.5") x 90 mm (3.5") x 20 mm (0.8")
Weight .... 0.4 kg / 0.9 lb
Operating environment .... Temperature 10° to 40° C
.... Humidity 10% to 90% non-condensing

All dimensions are in mm.
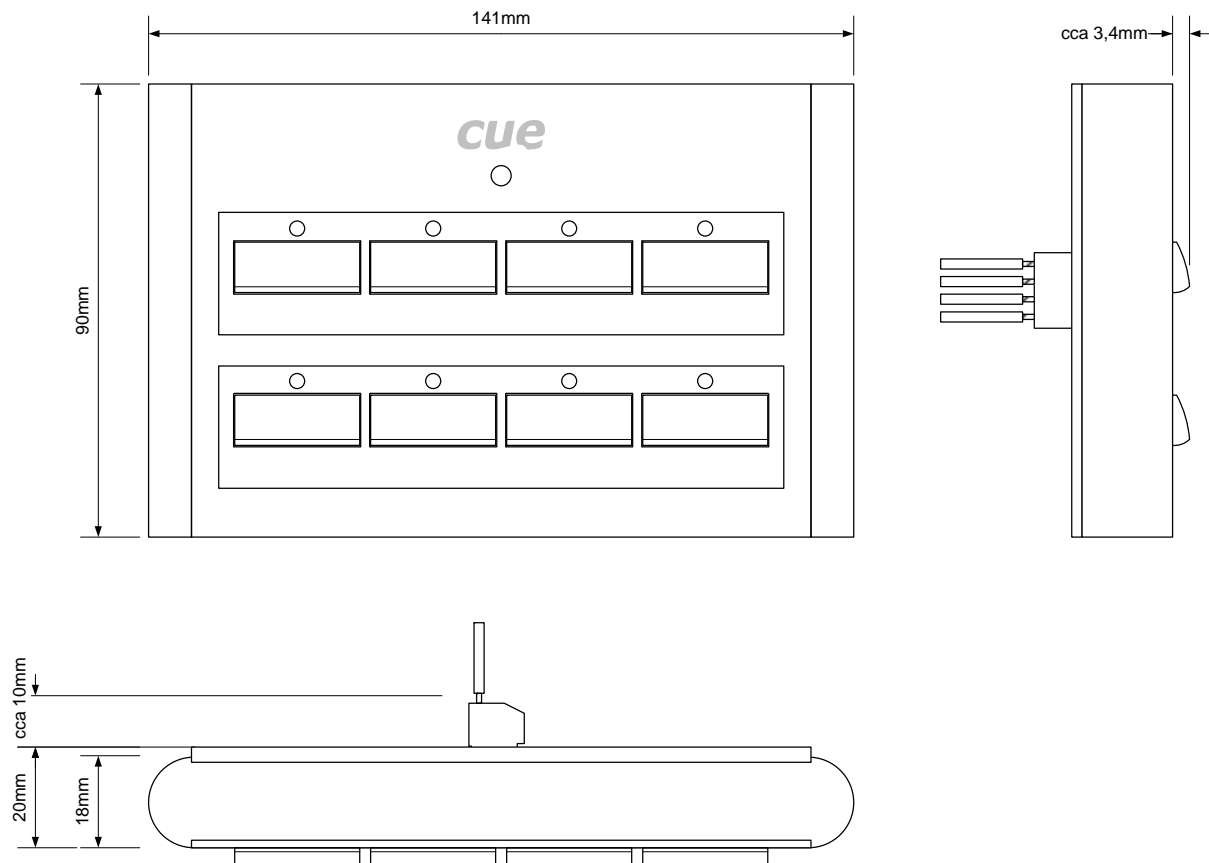
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