



ETAP Easydim2 Installation manual



ENGLISH

General instructions

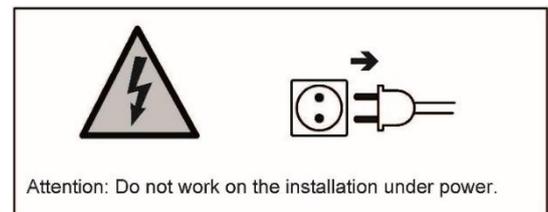
Easydim2 must only be installed and put into operation by a qualified electrician.
The applicable safety regulations and accident prevention regulations must be observed.

Safety instructions

- Use DALI wires that are isolated for mains voltage for all DALI wiring.
- Do not connect the DALI wiring with external voltage, especially not with 230 V mains voltage.

CAUTION!

- Incorrect connection can destroy the controller and other devices.
- Danger of electric shock if not used according to the specifications and instructions.



Steps for successful installation and a happy customer

- 1. Check and adhere to the system limits**
- 2. Install and wire the system according to the chosen application and the mounting and wiring instructions**
- 3. Use the Easydim2 smartphone app to setup the right application mode for the user**

1. System limits

An Easydim2 system can have:

- **One (1) controller** which has:
 - A movement sensor
 - A light sensor
 - Three (3) DALI lines and the power supply for these DALI lines
 - A bicolor user interface LED
 - A Bluetooth 4.2 interface via which the App can connect
- **Each DALI-line** can be loaded with:
 - Max. 120mA
 - Max. 3 movement extension sensors
 - Max. 3 Push Button Interfaces
 - Max. 15 luminaires
 - Max. 100m cable length (min. 1,5mm²)
- **An Easydim2 system** can therefore have the following total number of components:
 - Max. 10 movement sensors (1 in the controller, 9 extension sensors)
 - Max. 9 Push Button Interfaces (= max. 36 buttons)
 - Max. 45 luminaires
 - Max. 300m cable length (min. 1,5mm²)

Note: more luminaires can be controlled by using DALI repeaters.

2. Predefined applications

The following applications are predefined:

1. Classroom (other possible uses are as Meeting room, Training room)
2. Auditorium (other possible uses are as Meeting room, Training room)
3. Small Office
 - Direct Lighting with Desk/Meeting zones
 - Direct Lighting with Window/Corridor zones
 - Direct/Indirect Lighting
4. Large Office
 - With 3 work zones
 - With Window/Corridor zones + Corridor
5. Corridor/Storage
6. Cantina/Coffee corner
7. Washrooms/Toilets/Douches

These applications and how to install and wire them are described in detail in the following pages.

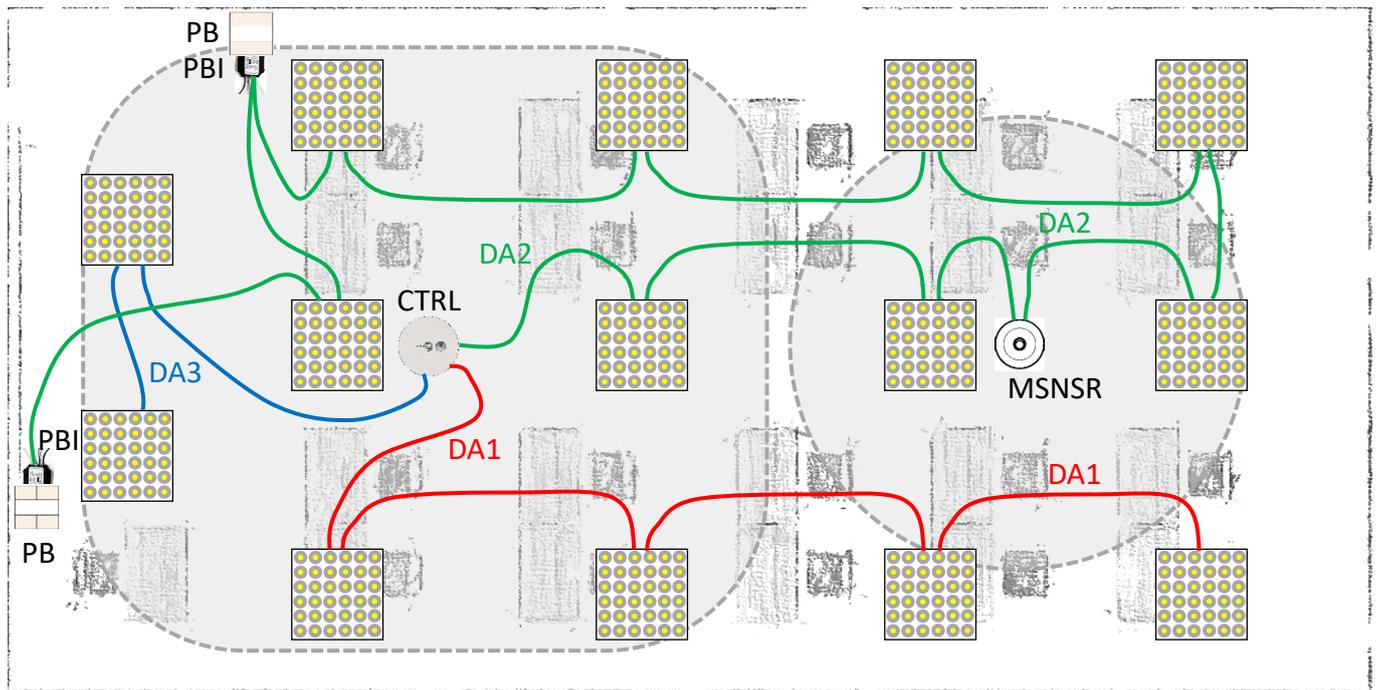
In case you have a different application choose the one that matches yours best and use the smartphone App to customise for your specific needs.

For details of the individual components, check the pages following the applications.

Application: Classroom

Example Layout (not to scale)

DA1 = Window Area, DA2 = Inner Area, DA3 = Whiteboard



CTRL = Easydim2 Controller, mains powered, 3 DALI output lines, DALI power is provided by Controller

PB = Push Button(s), the pushbuttons are wired to the PBI, which is mounted behind the pushbuttons

PBI = Push Button Interface, max. 3 per DALI line

MSNSR = Movement Sensor, max. 3 per DALI line

DA# = DALI lines, the DALI lines can either run in one 5 core cable with the mains or as a separate cabling. In both cases it needs to be min. 1,5mm² and isolated for mains voltage. Max. 100m of cabling per DALI line.

Predefined Working Principle:

- Every DALI line works as a Zone as specified above (**Window**, **Inner**, **Whiteboard**).
- All extra movement sensors work globally to enlarge the detection field.
- Upon movement detection, the **Window** and **Inner** lights will go on automatically. If there is plenty of daylight detected by the light sensor, then only the **Inner** lights will go on. In the App you can select “Manual ON / Auto OFF” as might be required by local regulations.
- The light sensor will dim the **Window** lights and the **Inner** lights (the latter with a default offset of 30%). If plenty of daylight is available, the **Window** lights will even switch off completely.
- After the last movement sensor detection there is a delay time of 10 minutes before all lights switch off automatically.
- The pushbuttons work as zone controllers because they are connected to DA2: Button 1 (A) controls the **Window** lights, Button 2 (B) controls the **Inner** lights, Button 3 (D) controls the **Whiteboard** lights and Button 4 (C) controls all lights together. A short push switches the lights on or off (toggle function) and a long push dims the lights (dimming direction is reversed after each long push).
 - Note 1: the pushbuttons act as defined in the table below: Classroom pushbutton functions, so you can opt for other functions as desired. Remember you have to respect the limits per DALI line as mentioned above.
 - Note 2: in case no pushbuttons are installed, the only way to switch on the **Whiteboard** luminaires in the predefined working principle is via the App.
- Scenes can be recalled by the Smartphone App or by using pushbuttons on DA1

Classroom pushbutton functions:

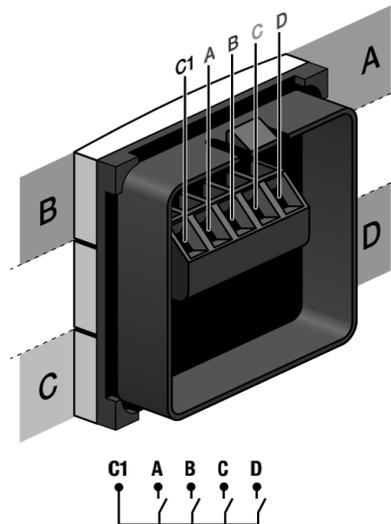
PBI connected to	Button 1 (A) (White)	Button 2 (B) (Grey)	Button 3 (D) (Violet)	Button 4 (C) (Red)
DA 1 (Scenes)	CLASSROOM ON	ALL ON	ALL OFF	PROJECTION
DA 2 (Toggle)	Window Area	Inner Area	Whiteboard	All Areas
DA 3 (Global)	CLASSROOM ON	All DIM UP	ALL OFF	All DIM DOWN

Notes:

- The ALL OFF command indicates to the system the current user(s) is (are) no longer using the room. Therefore the system will use a short, fixed movement sensor timeout of 60 seconds (to allow users to leave the room) and then automatically revert to the default Scene (the one recalled by the white wire) but lights will only go on after a movement trigger for “auto on” zones or in case of “manual on” zones after a pushbutton or App action.
- After a power cycle of the controller the scene that was active before power down will be reactivated.

Example connection diagram of ETAP C4RP4

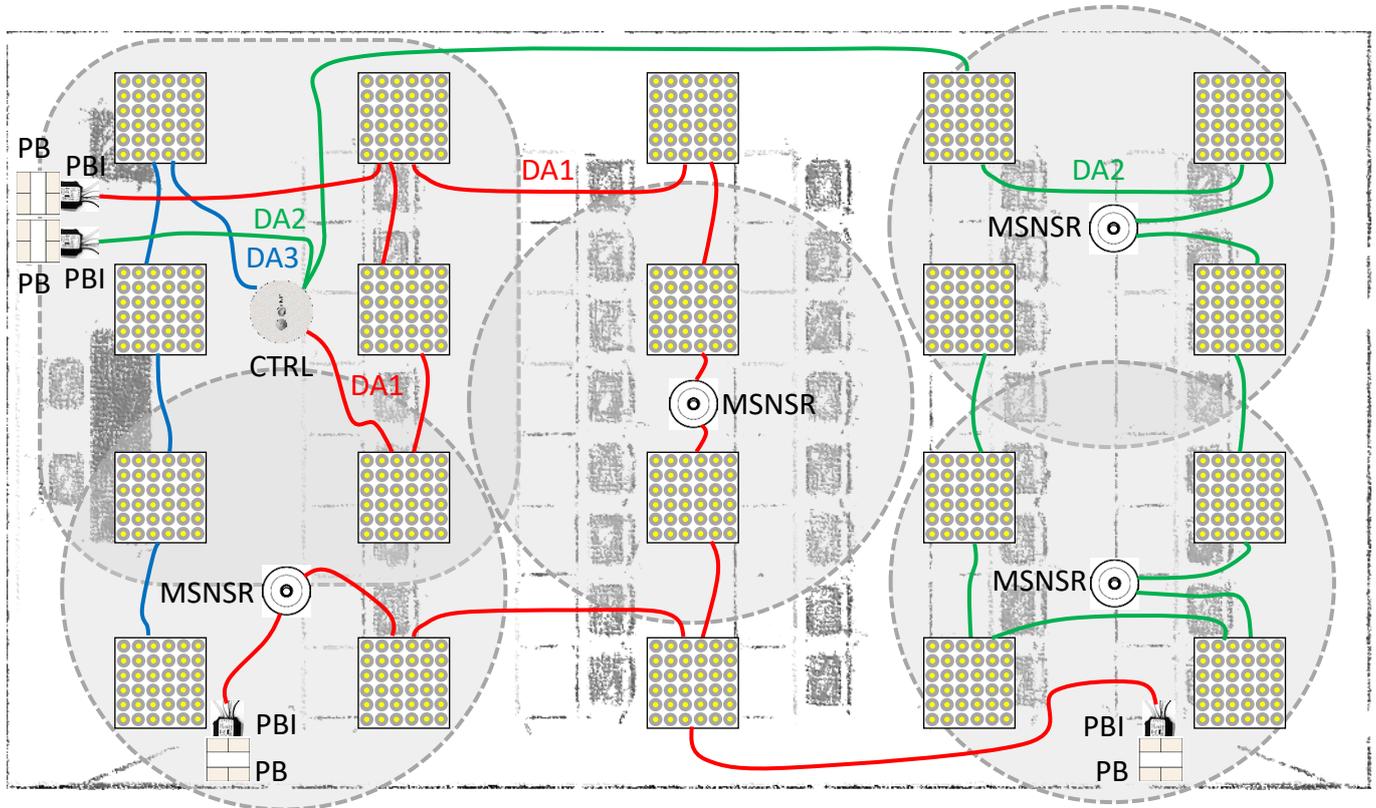
Button 1 (A) White	Button 2 (B) Grey
Button 3 (D) Violet	Button 4 (C) Red



Application: Auditorium

Example Layout (not to scale)

DA1 = Front Rows, DA2 = Back Rows, DA3 = Stage



CTRL = Easydim2 Controller, mains powered, 3 DALI output lines, DALI power is provided by Controller

PB = Push Button(s), the pushbuttons are wired to the PBI, which is mounted behind the pushbuttons

PBI = Push Button Interface, max. 3 per DALI line

MSNSR = Movement Sensor, max. 3 per DALI line

DA# = DALI lines, the DALI lines can either run in one 5 core cable with the mains or as a separate cabling. In both cases it needs to be min. 1,5mm² and isolated for mains voltage. Max. 100m of cabling per DALI line.

Predefined Working Principle:

- Every DALI line works as a Zone as specified above (Front Rows, Back Rows, Stage).
- All extra movement sensors work globally to enlarge the detection field.
- Upon movement detection, the Front Rows and Back Rows lights will go on automatically.
- The light sensor will dim the Front Rows lights and the Back Rows lights in the same way. Lights will not switch off completely as a function of daylight.
- After the last movement sensor detection there is a delay time of 10 minutes before ALL lights switch off automatically.
- The pushbuttons act as defined in the table below: Auditorium pushbutton functions, so you can opt for other functions as desired. Remember you have to respect the limits per DALI line as mentioned above.
- Via the Smartphone App (eg on the Auditorium tablet) one can also recall Scenes or control the lights per Zone.

Auditorium pushbutton functions:

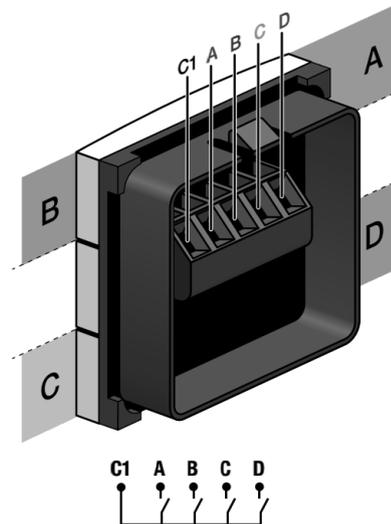
PBI connected to	Button 1 (A) (White)	Button 2 (B) (Grey)	Button 3 (D) (Violet)	Button 4 (C) (Red)
DA 1 (Scenes)	ALL ON	PROJECTION	ALL OFF	ALL DIMMED
DA 2 (Toggle)	Front Rows	Back Rows	Stage	All Areas
DA 3 (Global)	ALL ON	All DIM UP	ALL OFF	All DIM DOWN

Notes:

- The ALL OFF command indicates to the system the current user(s) is (are) no longer using the room. Therefore the system will use a short, fixed movement sensor timeout of 60 seconds (to allow users to leave the room) and then automatically revert to the default Scene (the one recalled by the white wire) but lights will only go on after a movement trigger for “auto on” zones or in case of “manual on” zones after a pushbutton or App action.
- After a power cycle of the controller the scene that was active before power down will be reactivated.

Example connection diagram of ETAP C4RP4

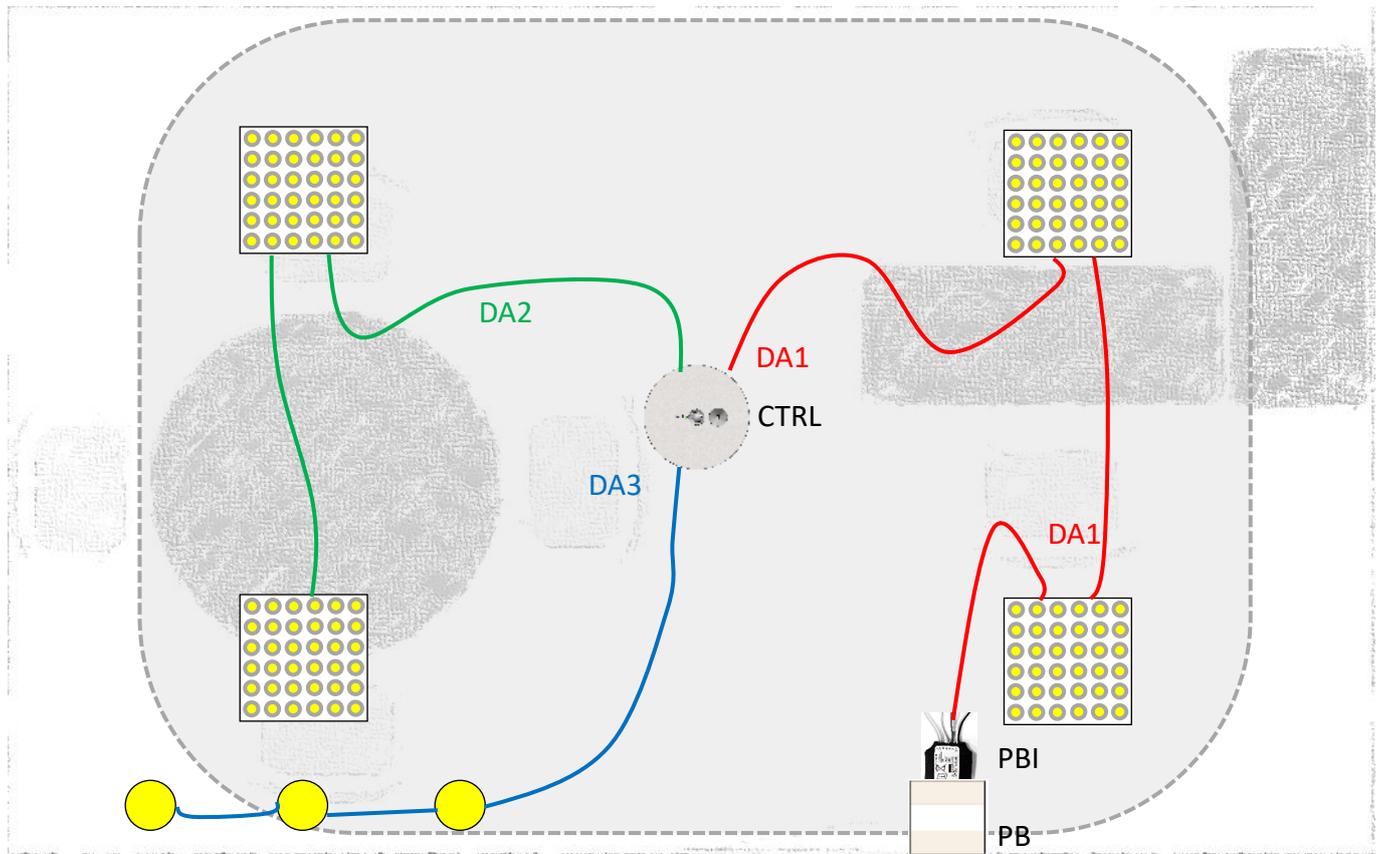
Button 1 (A) White	Button 2 (B) Grey
Button 3 (D) Violet	Button 4 (C) Red



Application: Small Office – Direct Lighting with Desk/Meeting zones

Example Layout (not to scale)

DA1 = Desk Area, DA2 = Meeting Area, DA3 = Accent Lighting



CTRL = Easydim2 Controller, mains powered, 3 DALI output lines, DALI power is provided by Controller

PB = Push Button(s), the pushbuttons are wired to the PBI, which is mounted behind the pushbuttons

PBI = Push Button Interface, max. 3 per DALI line

MSNSR = Movement Sensor, max. 3 per DALI line

DA# = DALI lines, the DALI lines can either run in one 5 core cable with the mains or as a separate cabling. In both cases it needs to be min. 1,5mm² and isolated for mains voltage. Max. 100m of cabling per DALI line.

Predefined Working Principle:

- Every DALI line works as a Zone as specified above (Desk, Meeting, Accent).
- All extra movement sensors work globally to enlarge the detection field.
- Upon movement detection, all lights will go on automatically. However, if there is plenty of daylight detected by the light sensor, then the lights will stay off.
- The light sensor will dim the Desk lights and the Meeting lights the same amount. The accent lights will only start to dim when there are high daylight levels. If plenty of daylight is available, all the lights will even switch off completely.
- After the last movement sensor detection there is a delay time of 15 minutes before all lights switch off automatically.
- The pushbuttons in the example are connected to DA1 so they act as Scene buttons. For other functions, see the table below: Small Office with Desk/Meeting zones pushbutton functions
- Scenes can also be recalled by the Smartphone App. The App offers individual channel control as well.

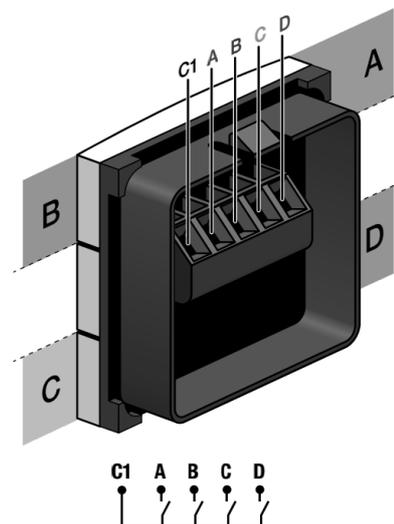
Small Office with Desk/Meeting zones pushbutton functions:

PBI connected to	Button 1 (A) (White)	Button 2 (B) (Grey)	Button 3 (D) (Violet)	Button 4 (C) (Red)
DA 1 (Scenes)	DESK WORK	MEETING	ALL OFF	ALL ON
DA 2 (Toggle)	Desk Area	Meeting Area	Accent Lighting	All Areas
DA 3 (Global)	DESK WORK	All DIM UP	ALL OFF	All DIM DOWN

Notes:

- The ALL OFF command indicates to the system the current user(s) is (are) no longer using the room. Therefore the system will use a short, fixed movement sensor timeout of 60 seconds (to allow users to leave the room) and then automatically revert to the default Scene (the one recalled by the white wire) but lights will only go on after a movement trigger for “auto on” zones or in case of “manual on” zones after a pushbutton or App action.
- After a power cycle of the controller the scene that was active before power down will be reactivated.

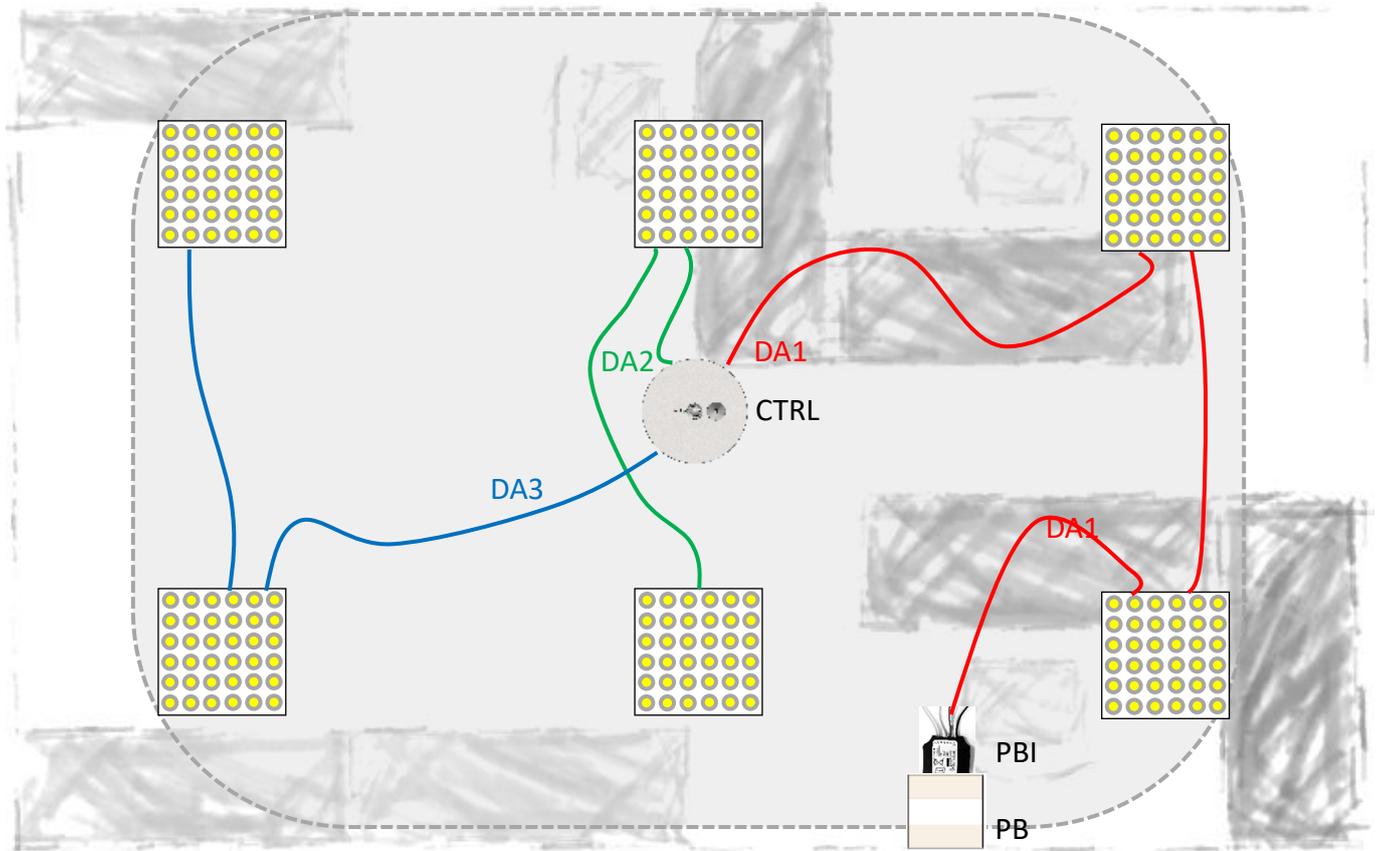
Example connection diagram of ETAP C4RP4



Application: Small Office – Direct Lighting with Window/Middle area and Corridor

Example Layout (not to scale)

DA1 = Window Area, DA2 = Middle Area, DA3 = Corridor



CTRL = Easydim2 Controller, mains powered, 3 DALI output lines, DALI power is provided by Controller

PB = Push Button(s), the pushbuttons are wired to the PBI, which is mounted behind the pushbuttons

PBI = Push Button Interface, max. 3 per DALI line

MSNSR = Movement Sensor, max. 3 per DALI line

DA# = DALI lines, the DALI lines can either run in one 5 core cable with the mains or as a separate cabling. In both cases it needs to be min. 1,5mm² and isolated for mains voltage. Max. 100m of cabling per DALI line.

Predefined Working Principle:

- Every DALI line works as a Zone as specified above (Window Area, Middle Area, Corridor).
- All extra movement sensors work globally to enlarge the detection field.
- Upon movement detection, all lights will go on automatically. However, if there is plenty of daylight detected by the light sensor, then the lights will stay off.
- The light sensor will dim the Window lights and the Middle lights, but the latter with a 30% offset. The Corridor lights will not dim as a function of daylight. If plenty of daylight is available, all the Window lights will even switch off completely.
- After the last movement sensor detection there is a delay time of 15 minutes before all lights switch off automatically.
- The pushbuttons in the example are connected to DA1 so they act as Scene buttons. For other functions, see the table below: Small Office with Window/Middle/Corridor area pushbutton functions
- Scenes can also be recalled by the Smartphone App. The App offers individual channel control as well.

Small Office with Window/Middle/Corridor areas pushbutton functions:

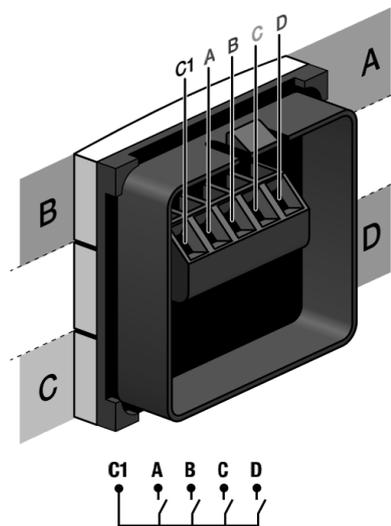
PBI connected to	Button 1 (A) (White)	Button 2 (B) (Grey)	Button 3 (D) (Violet)	Button 4 (C) (Red)
DA 1 (Scenes)	ALL ON	ALL MAX	ALL OFF	ECONOMY
DA 2 (Toggle)	Window Area	Middle Area	Corridor Area	All Areas
DA 3 (Global)	ALL ON	All DIM UP	ALL OFF	All DIM DOWN

Notes:

- The ALL OFF command indicates to the system the current user(s) is (are) no longer using the room. Therefore the system will use a short, fixed movement sensor timeout of 60 seconds (to allow users to leave the room) and then automatically revert to the default Scene (the one recalled by the white wire) but lights will only go on after a movement trigger for “auto on” zones or in case of “manual on” zones after a pushbutton or App action.
- After a power cycle of the controller the scene that was active before power down will be reactivated.

Example connection diagram of ETAP C4RP4

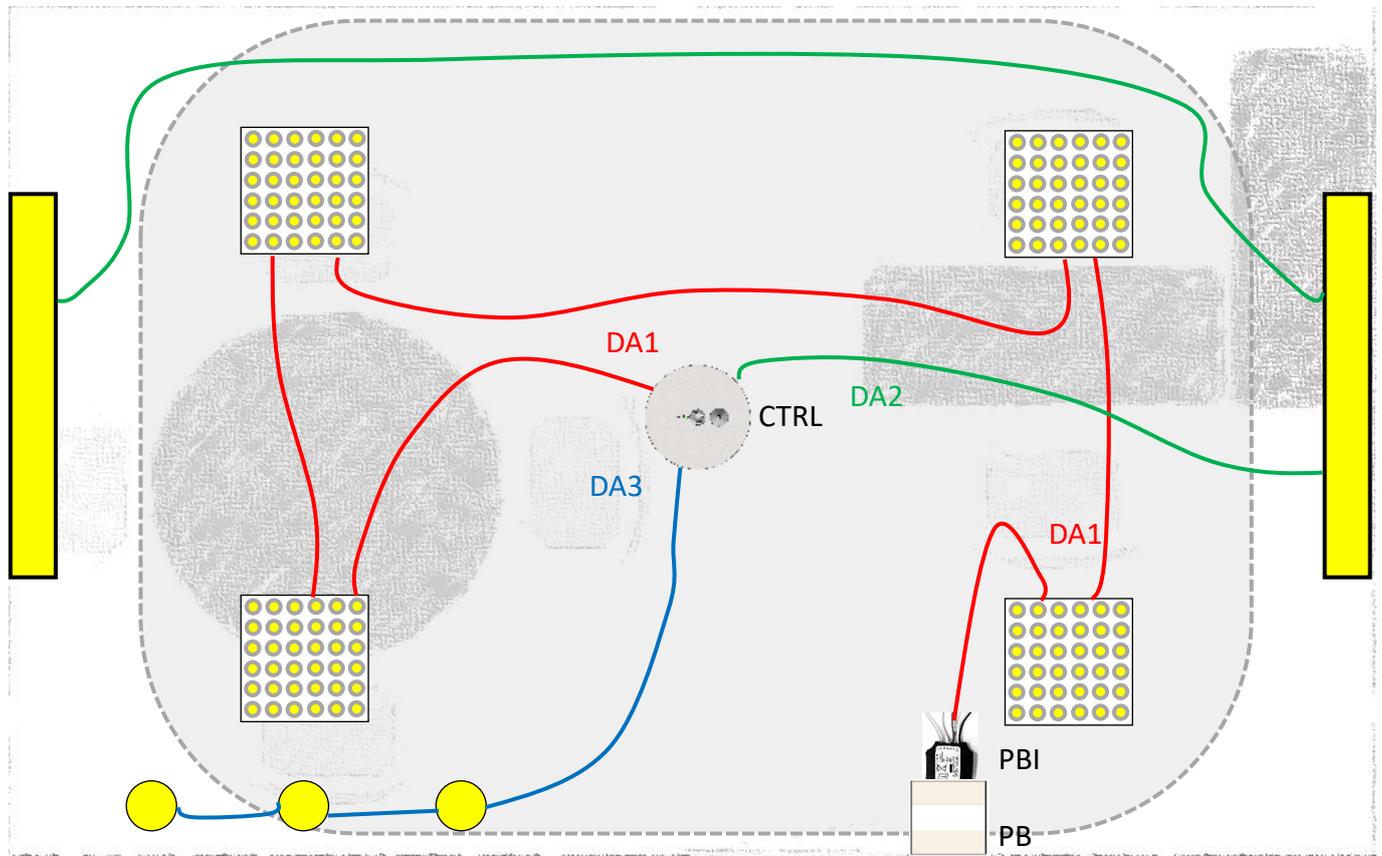
Button 1 (A) White	Button 2 (B) Grey
Button 3 (D) Violet	Button 4 (C) Red



Application: Small Office – Direct/Indirect Lighting with optional Accent Lighting

Example Layout (not to scale)

DA1 = Direct Lighting, DA2 = Indirect Lighting, DA3 = Accent Lighting



CTRL = Easydim2 Controller, mains powered, 3 DALI output lines, DALI power is provided by Controller

PB = Push Button(s), the pushbuttons are wired to the PBI, which is mounted behind the pushbuttons

PBI = Push Button Interface, max. 3 per DALI line

MSNSR = Movement Sensor, max. 3 per DALI line

DA# = DALI lines, the DALI lines can either run in one 5 core cable with the mains or as a separate cabling. In both cases it needs to be min. 1,5mm² and isolated for mains voltage. Max. 100m of cabling per DALI line.

Predefined Working Principle:

- Every DALI line works as a Group as specified above (Direct, Indirect, Accent).
- All extra movement sensors work globally to enlarge the detection field.
- Upon movement detection, all lights will go on automatically.
- The light sensor is disabled in this application.
- After the last movement sensor detection there is a delay time of 15 minutes before all lights switch off automatically.
- The pushbuttons in the example are connected to DA1 so they act as Scene buttons. For other functions, see the table below: Small Office with Direct/Indirect Lighting pushbutton functions
- Scenes can also be recalled by the Smartphone App. The App offers individual channel control as well.

Small Office with Direct/Indirect Lighting pushbutton functions:

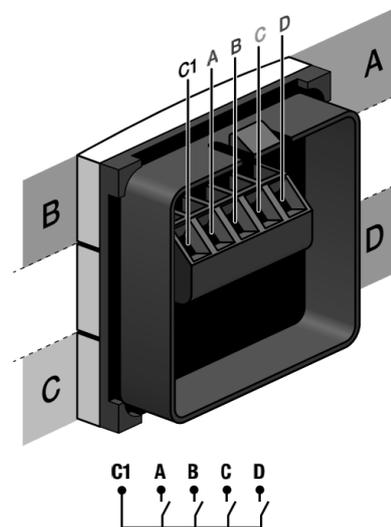
PBI connected to	Button 1 (A) (White)	Button 2 (B) (Grey)	Button 3 (D) (Violet)	Button 4 (C) (Red)
DA 1 (Scenes)	ALL ON	DIRECT LIGHTING	ALL OFF	INDIRECT LIGHT
DA 2 (Toggle)	Direct Lighting	Indirect Lighting	Accent Lighting	All Areas
DA 3 (Global)	ALL ON	All DIM UP	ALL OFF	All DIM DOWN

Notes:

- The ALL OFF command indicates to the system the current user(s) is (are) no longer using the room. Therefore the system will use a short, fixed movement sensor timeout of 60 seconds (to allow users to leave the room) and then automatically revert to the default Scene (the one recalled by the white wire) but lights will only go on after a movement trigger for “auto on” zones or in case of “manual on” zones after a pushbutton or App action.
- After a power cycle of the controller the scene that was active before power down will be reactivated.

Example connection diagram of ETAP C4RP4

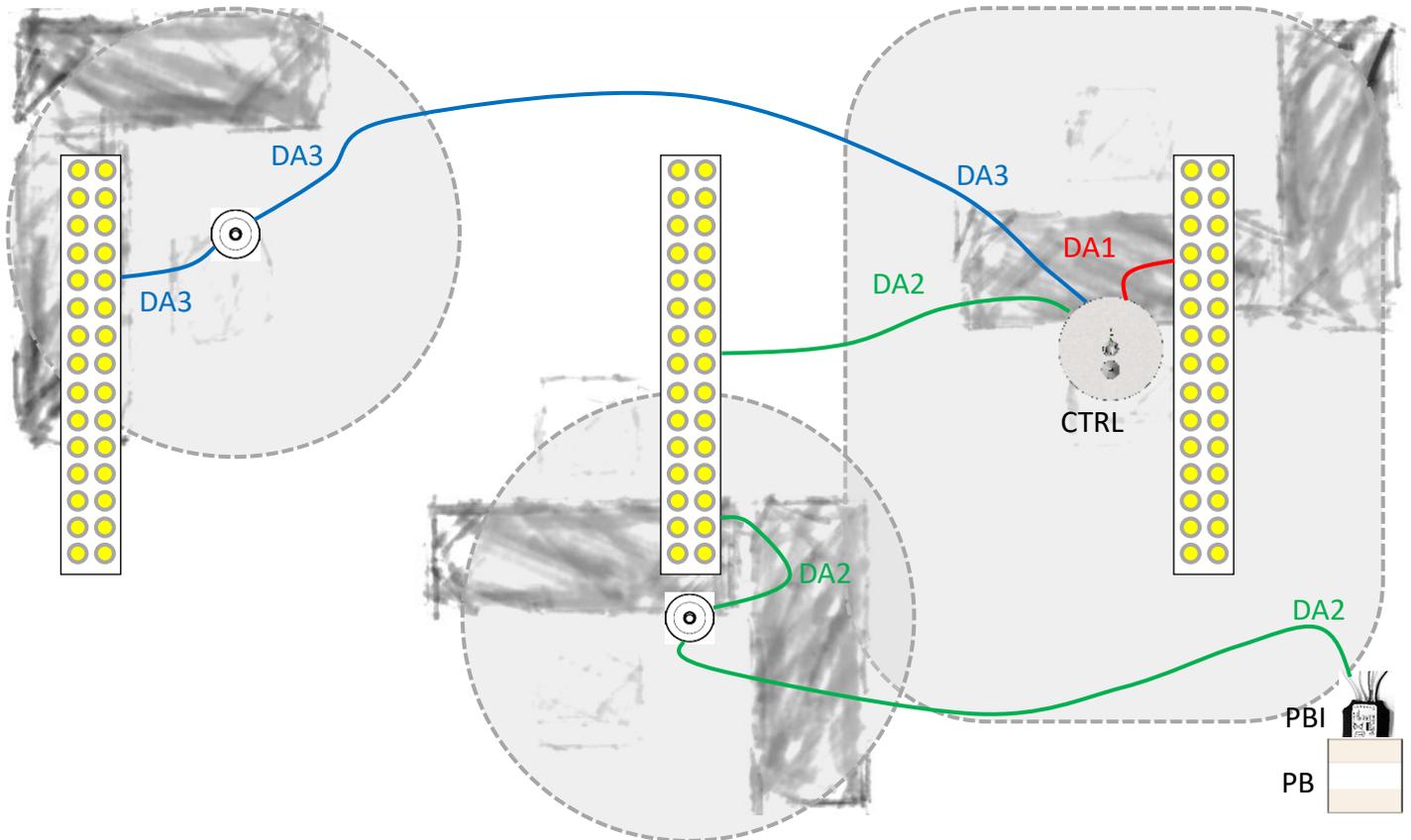
Button 1 (A) White	Button 2 (B) Grey
Button 3 (D) Violet	Button 4 (C) Red



Application: Open Plan Office – 3 Work Zones

Example Layout (not to scale)

DA1 = Zone 1, DA2 = Zone 2, DA3 = Zone 3



CTRL = Easydim2 Controller, mains powered, 3 DALI output lines, DALI power is provided by Controller

PB = Push Button(s), the pushbuttons are wired to the PBI, which is mounted behind the pushbuttons

PBI = Push Button Interface, max. 3 per DALI line

MSNSR = Movement Sensor, max. 3 per DALI line

DA# = DALI lines, the DALI lines can either run in one 5 core cable with the mains or as a separate cabling. In both cases it needs to be min. 1,5mm² and isolated for mains voltage. Max. 100m of cabling per DALI line.

Predefined Working Principle:

- Every DALI line works as a Zone as specified above (Zone 1, Zone 2, Zone 3).
- All extra movement sensors work locally on their own Zone (own DALI line).
- Upon movement detection, lights of that zone will go on automatically. The lights will not switch off as a function of daylight, the minimum daylight dimming is 3%.
- The light sensor will dim all lights the same, so locate the controller near the desk with the lowest daylight levels to assure enough light is present at all desks at all times.
- After the last movement sensor detection there is a delay time of 30 minutes before the lights in a zone dim to 10% and another delay of 30 minutes before they switch off automatically. This is a comfort feature for users in a big office to avoid ending up in a totally dark surrounding without warning.
- The pushbuttons in the example are connected to DA2 so they act as Zone control buttons. For other functions, see the table below: Open Plan Office with 3 Work Zones pushbutton functions
- Scenes can always be recalled by the Smartphone App. The App offers individual channel control as well.

Open Plan Office with 3 Work Zones pushbutton functions:

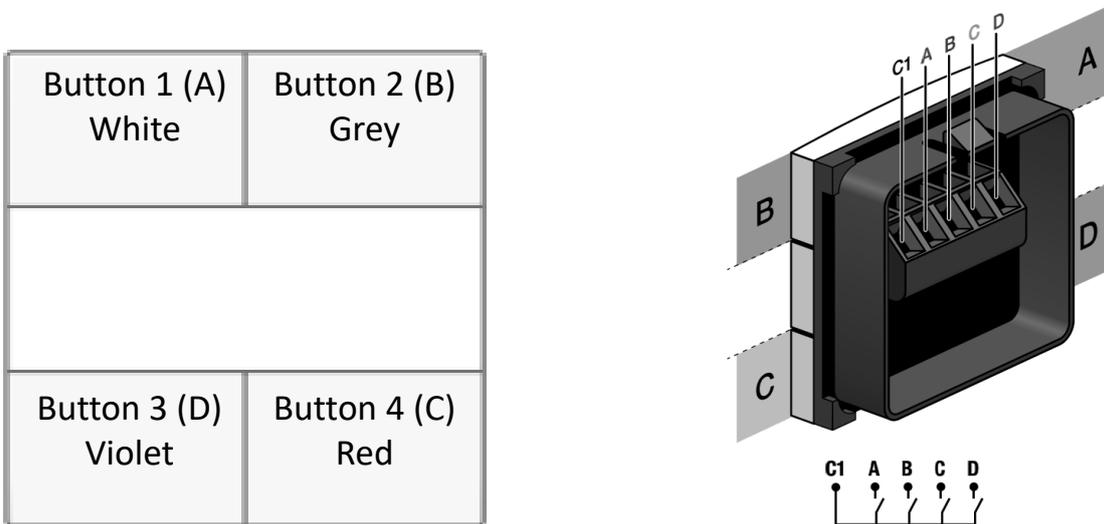
PBI connected to	Button 1 (A) (White)	Button 2 (B) (Grey)	Button 3 (D) (Violet)	Button 4 (C) (Red)
DA 1 (Scenes)	ALL ON	ZONE 1 ON	ZONE 3 ON	ZONE 2 ON
DA 2 (Toggle)	Zone 1	Zone 2	Zone 3	All Zones
DA 3 (Global)	ALL ON	All DIM UP	Do Not Use*	All DIM DOWN

* The violet wire will recall the “ZONE 3 ON” Scene which isn’t a logical user interface in this application. It is advised to only use DALI 2 connected pushbuttons (Zone control) in this application.

Notes:

- The ALL OFF command indicates to the system the current user(s) is (are) no longer using the room. Therefore the system will use a short, fixed movement sensor timeout of 60 seconds (to allow users to leave the room) and then automatically revert to the default Scene (the one recalled by the white wire) but lights will only go on after a movement trigger for “auto on” zones or in case of “manual on” zones after a pushbutton or App action.
- After a power cycle of the controller the scene that was active before power down will be reactivated.

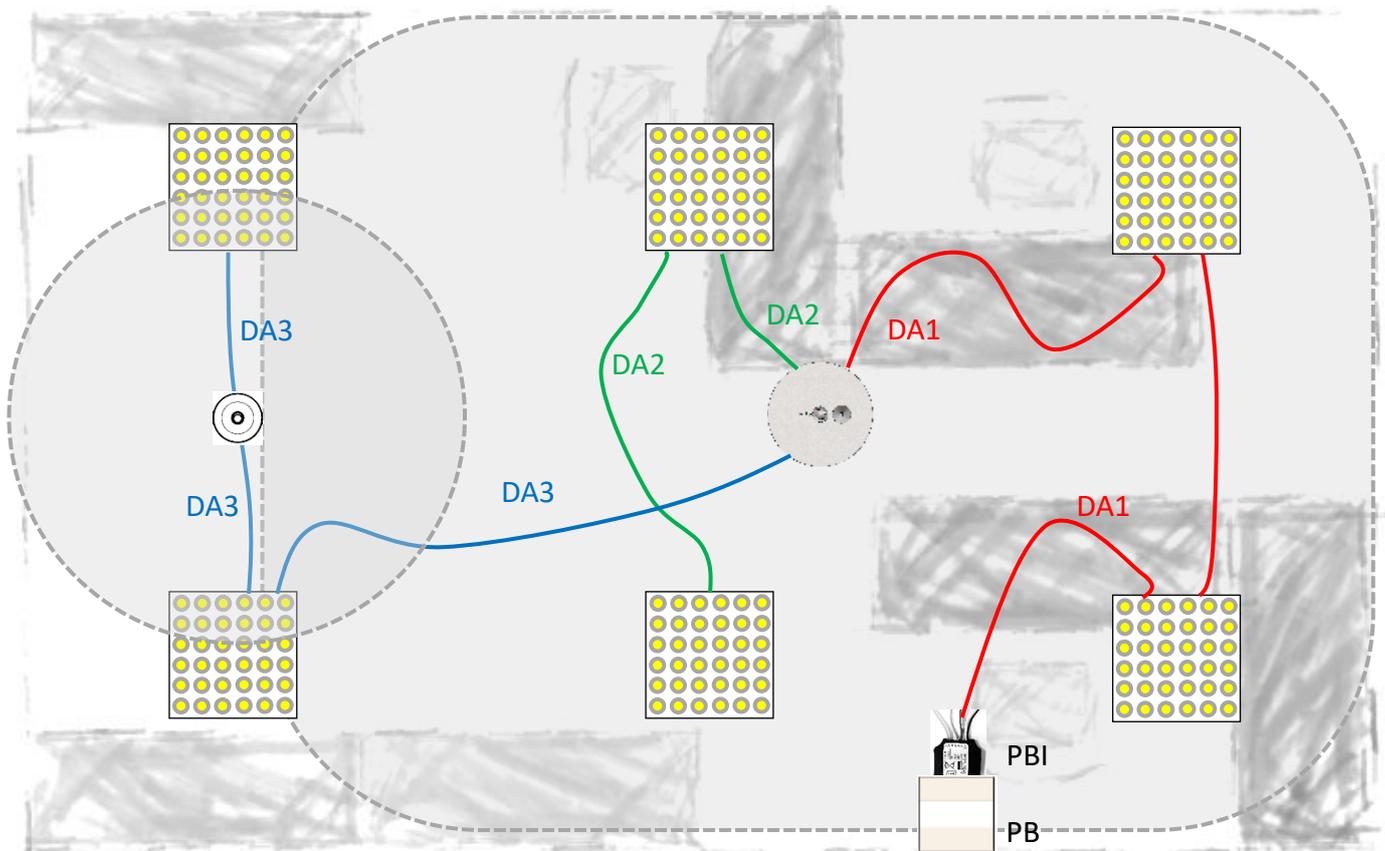
Example connection diagram of ETAP C4RP4



Application: Open Plan Office – with Window/Middle zones and Corridor (area)

Example Layout (not to scale)

DA1 = Window Area, DA2 = Middle Area, DA3 = Corridor



CTRL = Easydim2 Controller, mains powered, 3 DALI output lines, DALI power is provided by Controller

PB = Push Button(s), the pushbuttons are wired to the PBI, which is mounted behind the pushbuttons

PBI = Push Button Interface, max. 3 per DALI line

MSNSR = Movement Sensor, max. 3 per DALI line

DA# = DALI lines, the DALI lines can either run in one 5 core cable with the mains or as a separate cabling. In both cases it needs to be min. 1,5mm² and isolated for mains voltage. Max. 100m of cabling per DALI line.

Predefined Working Principle:

- Every DALI line works as a Zone as specified above (**Window Area**, **Middle Area**, **Corridor**).
- All extra movement sensors work globally to enlarge the detection field.
- Upon movement detection, lights of that zone will go on automatically. The lights will not switch off as a function of daylight, the minimum daylight dimming is 3%.
- The light sensor will dim the **Window** lights and the **Middle** lights, but the latter with a 30% offset. The **Corridor** lights will not dim as a function of daylight. The minimum dim level as a function of daylight is 3% for the **Window** lights and 33% for the **Middle** lights
- After the last movement sensor detection there is a delay time of 30 minutes before the **Window** and **Middle** lights dim to 10% and another delay of 30 minutes before they switch off automatically. This is a comfort feature for users in a big office to avoid ending up in a totally dark surrounding without warning. For the **Corridor** lights the delay time is reduced to only 10 minutes before dimming to 10% and another 10 minutes before switch off.
- The pushbuttons in the example are connected to DA1 so they act as Scene buttons. For other functions, see the table below: Open Plan Office with Window/Middle/Corridor area pushbutton functions
- Scenes can also be recalled by the Smartphone App. The App offers individual channel control as well.

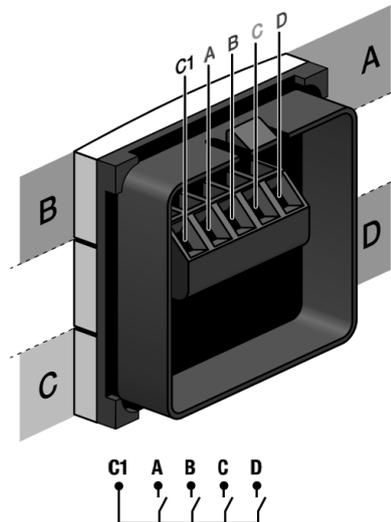
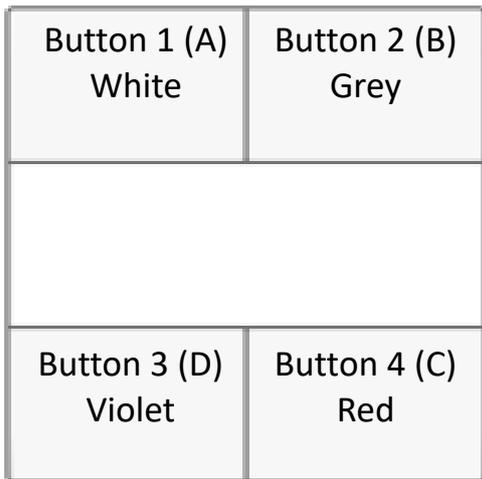
Open Plan Office with Window/Middle/Corridor area pushbutton functions:

PBI connected to	Button 1 (A) (White)	Button 2 (B) (Grey)	Button 3 (D) (Violet)	Button 4 (C) (Red)
DA 1 (Scenes)	ALL ON	ALL MAX	ALL OFF	ECONOMY
DA 2 (Toggle)	Window Area	Middle Area	Corridor Area	All Areas
DA 3 (Global)	ALL ON	All DIM UP	ALL OFF	All DIM DOWN

Notes:

- The ALL OFF command indicates to the system the current user(s) is (are) no longer using the room. Therefore the system will use a short, fixed movement sensor timeout of 60 seconds (to allow users to leave the room) and then automatically revert to the default Scene (the one recalled by the white wire) but lights will only go on after a movement trigger for “auto on” zones or in case of “manual on” zones after a pushbutton or App action.
- After a power cycle of the controller the scene that was active before power down will be reactivated.

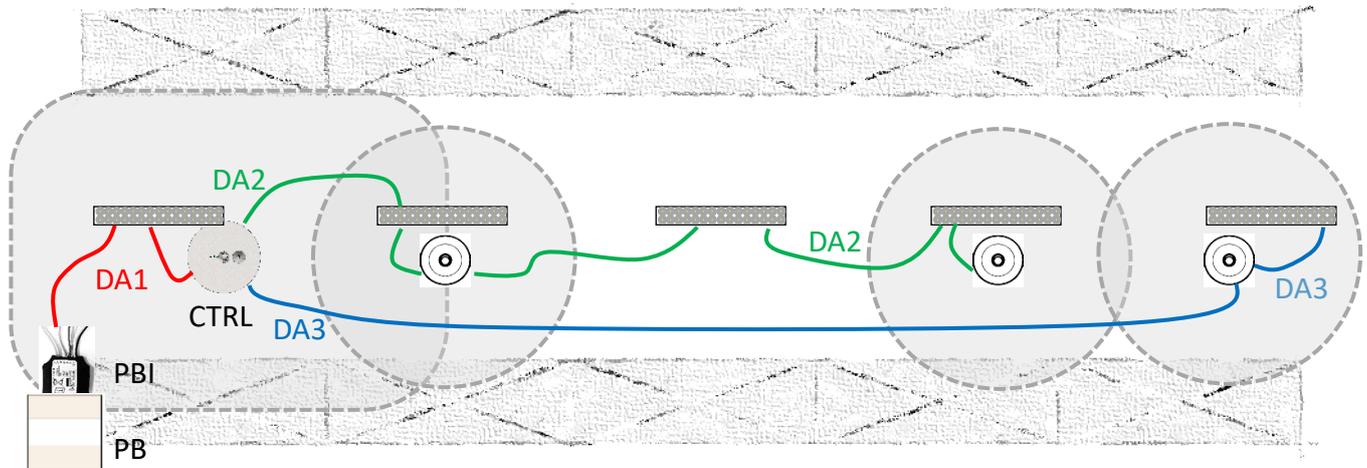
Example connection diagram of ETAP C4RP4



Application: Corridors/Storage

Example Layout (not to scale)

DA1 = Entrance A, DA2 = Middle Area, DA3 = Entrance B



CTRL = Easydim2 Controller, mains powered, 3 DALI output lines, DALI power is provided by Controller

PB = Push Button(s), the pushbuttons are wired to the PBI, which is mounted behind the pushbuttons

PBI = Push Button Interface, max. 3 per DALI line

MSNSR = Movement Sensor, max. 3 per DALI line

DA# = DALI lines, the DALI lines can either run in one 5 core cable with the mains or as a separate cabling. In both cases it needs to be min. 1,5mm² and isolated for mains voltage. Max. 100m of cabling per DALI line.

Predefined Working Principle:

- Every DALI line works as a Zone as specified above (Entrance A, Middle Area, Entrance B).
- All movement sensors work locally on the DALI line they are connected to.
- Upon movement detection, lights of that zone will go on automatically.
- The light sensor will dim all lights the same without offset. The lights will not switch off as a function of daylight, the minimum daylight dimming is 10%.
- After the last movement sensor detection there is a delay time of 10 minutes before the Entrance A and Entrance B lights dim down to 10% and another delay of 10 minutes before they switch off automatically. This is a comfort feature for users in corridors not completely covered by sensor range to avoid ending up in a totally dark surrounding without warning. For the Middle Area lights the delay time is reduced to only 5 minutes before dimming to 10% and another 5 minutes before switch off.
- The pushbuttons in the example are connected to DA1 so they act as Scene buttons. For other functions, see the table below: Corridors/Storage pushbutton functions
- Scenes can also be recalled by the Smartphone App. The App offers individual channel control as well.

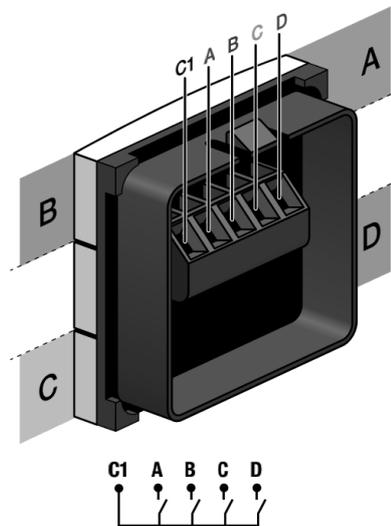
Corridors/Storage pushbutton functions:

PBI connected to	Button 1 (A) (White)	Button 2 (B) (Grey)	Button 3 (D) (Violet)	Button 4 (C) (Red)
DA 1 (Scenes)	ALL ON	MIDDLE ECO	ALL OFF	ALL ECO
DA 2 (Toggle)	Entrance A	Middle Area	Entrance B	All Areas
DA 3 (Global)	ALL ON	All DIM UP	ALL OFF	All DIM DOWN

Notes:

- The ALL OFF command indicates to the system the current user(s) is (are) no longer using the room. Therefore the system will use a short, fixed movement sensor timeout of 60 seconds (to allow users to leave the room) and then automatically revert to the default Scene (the one recalled by the white wire) but lights will only go on after a movement trigger for “auto on” zones or in case of “manual on” zones after a pushbutton or App action.
- After a power cycle of the controller the scene that was active before power down will be reactivated.

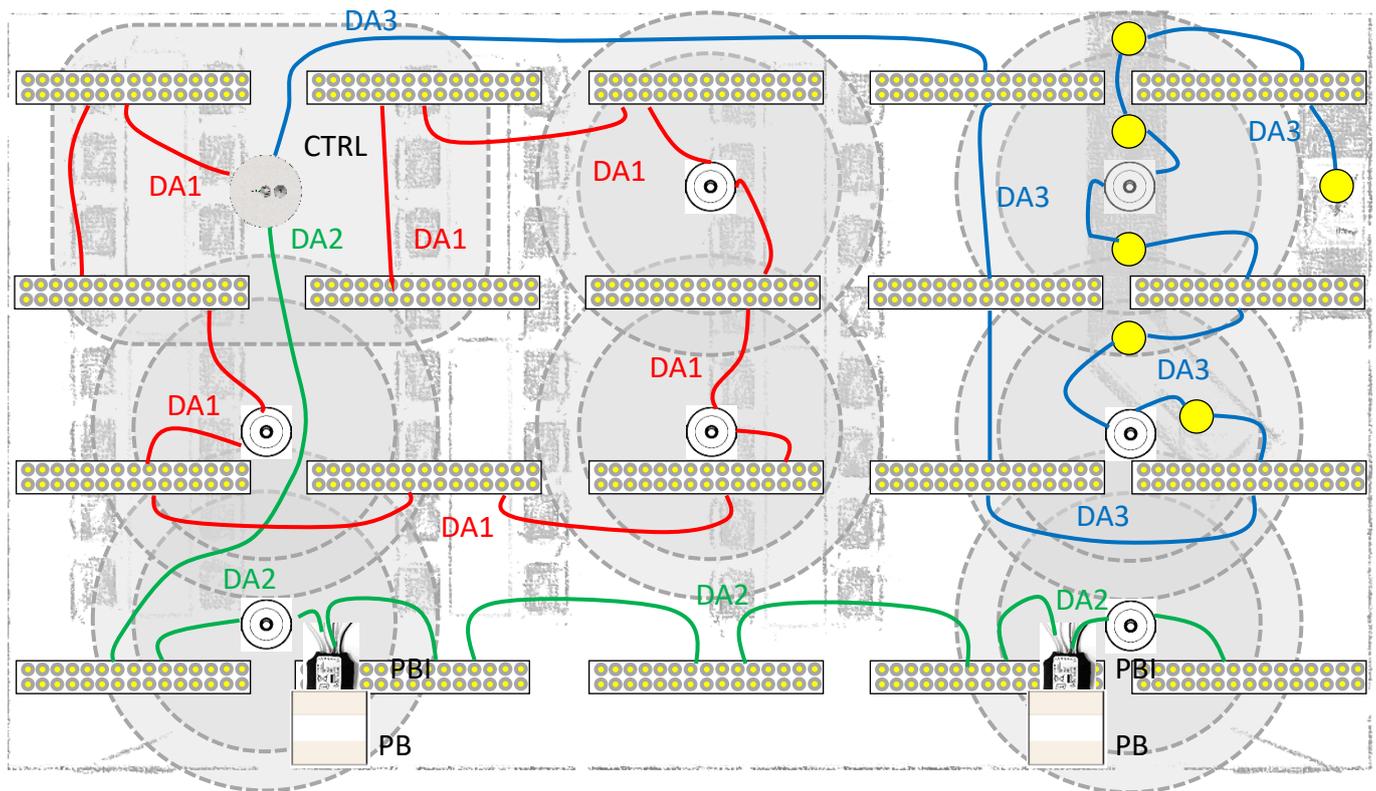
Example connection diagram of ETAP C4RP4



Application: Cantina/Coffee corner

Example Layout (not to scale)

DA1 = Main Area, DA2 = Entrance, DA3 = Kitchen



CTRL = Easydim2 Controller, mains powered, 3 DALI output lines, DALI power is provided by Controller

PB = Push Button(s), the pushbuttons are wired to the PBI, which is mounted behind the pushbuttons

PBI = Push Button Interface, max. 3 per DALI line

MSNSR = Movement Sensor, max. 3 per DALI line

DA# = DALI lines, the DALI lines can either run in one 5 core cable with the mains or as a separate cabling. In both cases it needs to be min. 1,5mm² and isolated for mains voltage. Max. 100m of cabling per DALI line.

Predefined Working Principle:

- Every DALI line works as a Zone as specified above (Main Area, Entrance, Kitchen).
- All movement sensors work locally on the DALI line they are connected to.
- Upon movement detection, lights of the Entrance and of the Kitchen will go on automatically, lights of the Main Area need a Manual ON action (pushbutton or App) to go on.
- The light sensor will dim only the Main Area. The lights will not switch off as a function of daylight, the minimum daylight dimming is 10%.
- After the last movement sensor detection there is a delay time of 20 minutes before the Main Area lights dim down to 10% and another delay of 20 minutes before they switch off automatically. This is a comfort feature for users in a cantina not completely covered by sensor range to avoid ending up in a totally dark surrounding without warning. For the Entrance and Kitchen lights the delay time is reduced to only 5 minutes before dimming to 10% and another 5 minutes before switch off.
- The pushbuttons in the example are connected to DA1 to DA2 so they act as Zone buttons. For other functions, see the table below: Cantina/Coffee corner pushbutton functions
- Scenes can also be recalled by the Smartphone App. The App offers individual channel control as well.

Cantina/Coffee corner pushbutton functions:

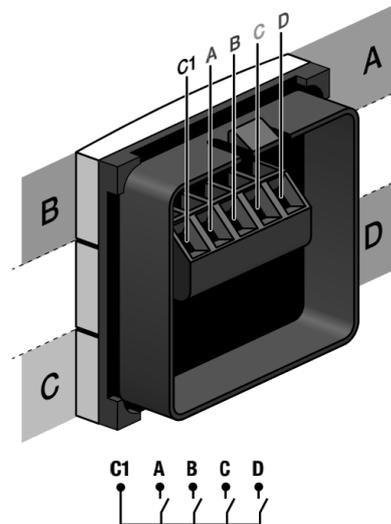
PBI connected to	Button 1 (A) (White)	Button 2 (B) (Grey)	Button 3 (D) (Violet)	Button 4 (C) (Red)
DA 1 (Scenes)	ALL ON	MAIN AREA	ALL OFF	KITCHEN
DA 2 (Toggle)	Main Area	Entrance	Kitchen	All Areas
DA 3 (Global)	ALL ON	All DIM UP	ALL OFF	All DIM DOWN

Notes:

- The ALL OFF command indicates to the system the current user(s) is (are) no longer using the room. Therefore the system will use a short, fixed movement sensor timeout of 60 seconds (to allow users to leave the room) and then automatically revert to the default Scene (the one recalled by the white wire) but lights will only go on after a movement trigger for “auto on” zones or in case of “manual on” zones after a pushbutton or App action.
- After a power cycle of the controller the scene that was active before power down will be reactivated.

Example connection diagram of ETAP C4RP4

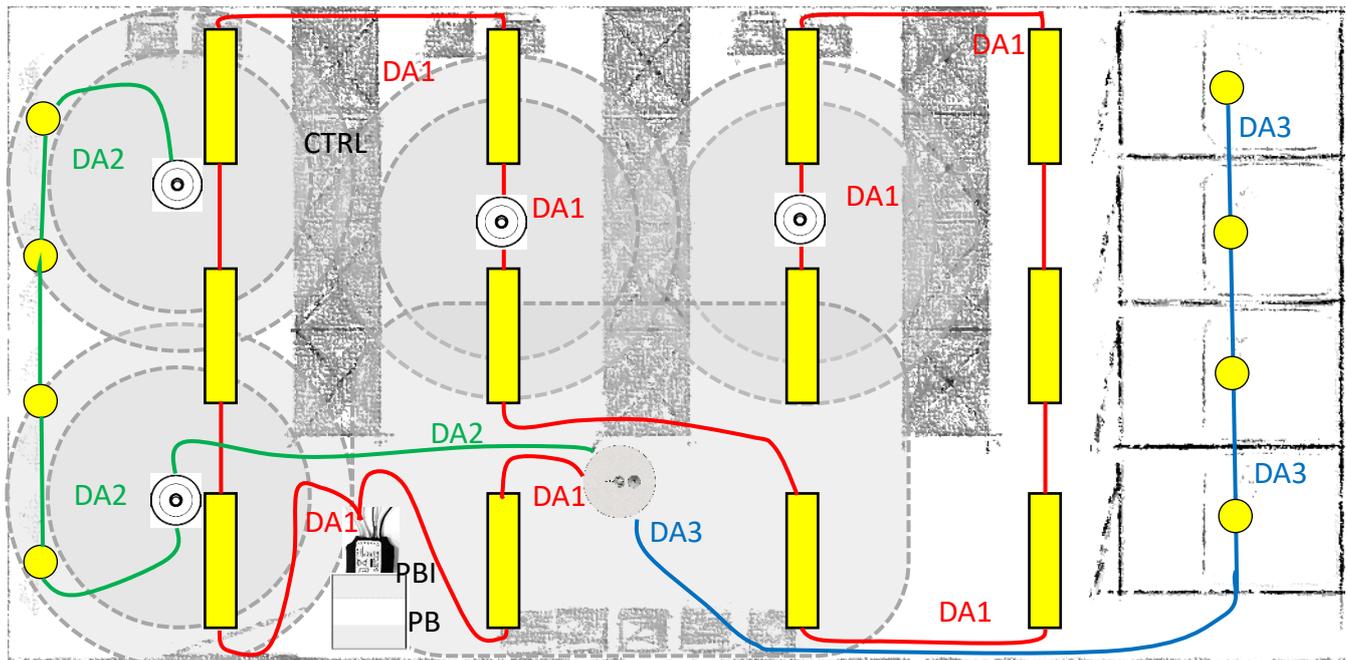
Button 1 (A) White	Button 2 (B) Grey
Button 3 (D) Violet	Button 4 (C) Red



Application: Washrooms

Example Layout (not to scale)

DA1 = Changing Area, DA2 = Washbowls, DA3 = Cubicles



CTRL = Easydim2 Controller, mains powered, 3 DALI output lines, DALI power is provided by Controller

PB = Push Button(s), the pushbuttons are wired to the PBI, which is mounted behind the pushbuttons

PBI = Push Button Interface, max. 3 per DALI line

MSNSR = Movement Sensor, max. 3 per DALI line

DA# = DALI lines, the DALI lines can either run in one 5 core cable with the mains or as a separate cabling. In both cases it needs to be min. 1,5mm² and isolated for mains voltage. Max. 100m of cabling per DALI line.

WARNING: Easydim2 Controllers and PushButtonInterfaces are not suited for damp locations. Always locate the controller in a dry place without risk of condensation. Equipment like extension sensors and luminaires suitable for the applicable environmental conditions must be used if they are required in damp/humid areas. Mount PushButtonInterfaces in properly selected IP-rated mounting boxes with dito moisture protected PushButtons.

Predefined Working Principle:

- Every DALI line works as a Zone as specified above (Changing Area, Washbowls, Cubicles).
- All movement sensors work globally.
- Upon movement detection, all lights will go on automatically.
- The light sensor is disabled.
- After the last movement sensor detection there is a delay time of 5 minutes before the Changing Area lights dim down to 10% and another delay of 5 minutes before they switch off automatically. The delay is only 2 minutes for the Washbowls before dimming to 10% and another 2 minutes before off. For the Cubicles the delay time is 10 minutes before dimming down to 30% and another 10 minutes before off. This is a comfort feature for users not completely covered by sensor range to avoid ending up in a totally dark surrounding without warning.
- The pushbuttons in the example are connected to DA1 so they act as Scene buttons. For other functions, see the table below: Washrooms pushbutton functions
- Scenes can also be recalled by the Smartphone App. The App offers individual channel control as well.

Washrooms pushbutton functions:

PBI connected to	Button 1 (White)	Button 2 (Grey)	Button 3 (Violet)	Button 4 (Red)
DA 1 (Scenes)	ALL ON	CHANGING ON	ALL OFF	CUBICLES ON
DA 2 (Toggle)	Changing Area	Washbowls	Cubicles	All Areas
DA 3 (Global)	ALL ON	All DIM UP	ALL OFF	All DIM DOWN

Notes:

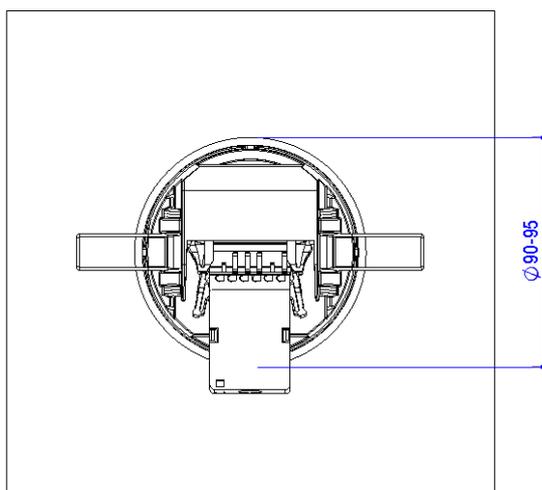
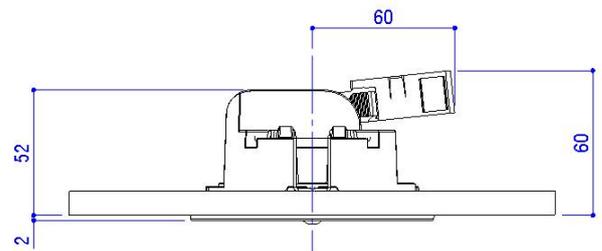
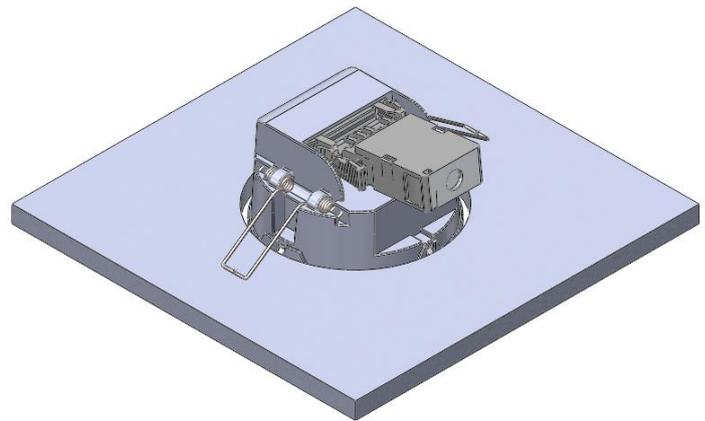
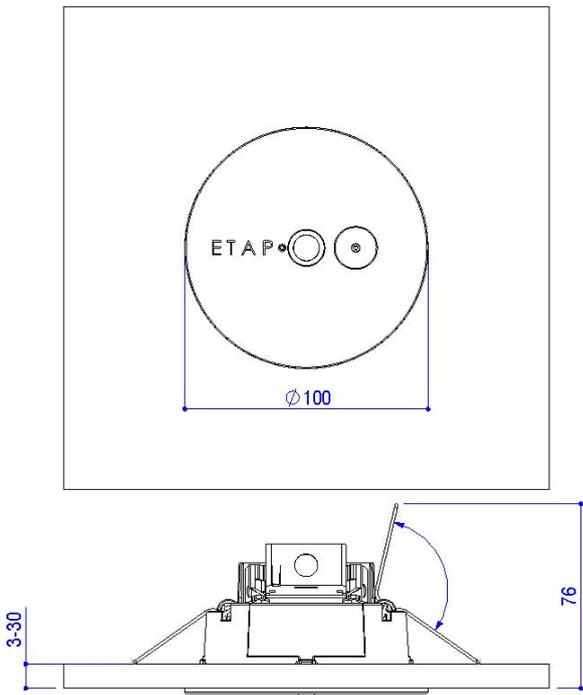
- The ALL OFF command indicates to the system the current user(s) is (are) no longer using the room. Therefore the system will use a short, fixed movement sensor timeout of 60 seconds (to allow users to leave the room) and then automatically revert to the default Scene (the one recalled by the white wire) but lights will only go on after a movement trigger for “auto on” zones or in case of “manual on” zones after a pushbutton or App action.
- After a power cycle of the controller the scene that was active before power down will be reactivated.

Mounting and Wiring Instructions

Controller Recessed C1C20-B

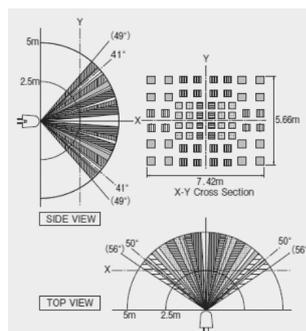
Mechanical

The controller for recessed mounting can be mounted in a cut-out of diameter 90-95mm. The ceiling thickness can vary from 3-30mm. For thin metal or other soft ceilings, a sturdy plate (e.g. wood) or the like has to be added to prevent the springs from damaging the ceiling. The free height above the ceiling needs to be minimum 60mm (measured from the bottom of the ceiling plate) to allow room for the connector.



For expansion sensors and related accessories please consult www.etaplighting.com

The movement detection area is rectangular with the widest view aligned with the springs and the axis along the ETAP logo and sensor openings. The sensor should be mounted in an area with much daylight (if present) and since it is the Bluetooth connection point also near the area where it is most likely someone will be sited to control the lights via the smartphone App.



The movement detection area for small movements at a mounting height of 2.8m is about 4x6m, for large movements it is about 6x8m. Max. height for small movement detection is 3,5m.

Technical data C1C20-B

Operating voltage	230V AC 50Hz
Isolation of wires	All wiring needs to be isolated for mains voltage since DALI is NOT SELV!
Current supply to DALI line	See above "1. System limits"
Controller Housing Material	ASA 
Wiring schemes	See above "Applications"
Working temperature	0 °C ... +50 °C (for reliable PIR movement detection, the temperature difference between moving objects and background should be at least 5°C)
Wire diameter and termination	<p>A counter plug is supplied that accepts the following wire types:</p> <p>Solid conductor : 0.08 ... 2.5 mm² / 28 ... 12 AWG Fine-stranded conductor : 0.08 ... 2.5 mm² / 28 ... 12 AWG Fine-stranded conductor with ferrule with plastic collar : 0.25 ... 1.5 mm² Fine-stranded conductor with ferrule without plastic collar : 0.25 ... 2.5 mm²</p>  <p>For Easydim2 it is advised to use 1.5mm²</p> <p>Connector material: PA 66 Grey, CrNi clamping spring, Electrolytic copper Ecu contacts tin plated</p>
Default operation	At startup, the operation mode needs to be set by the App.
Dimensions (D x H)	Diam. 100x52mm (excl. counter plug). See dimensional sketch above for details.

Connections:

The connections on the controller are marked as follows:

3 = DALI LINE 3

2 = DALI LINE 2

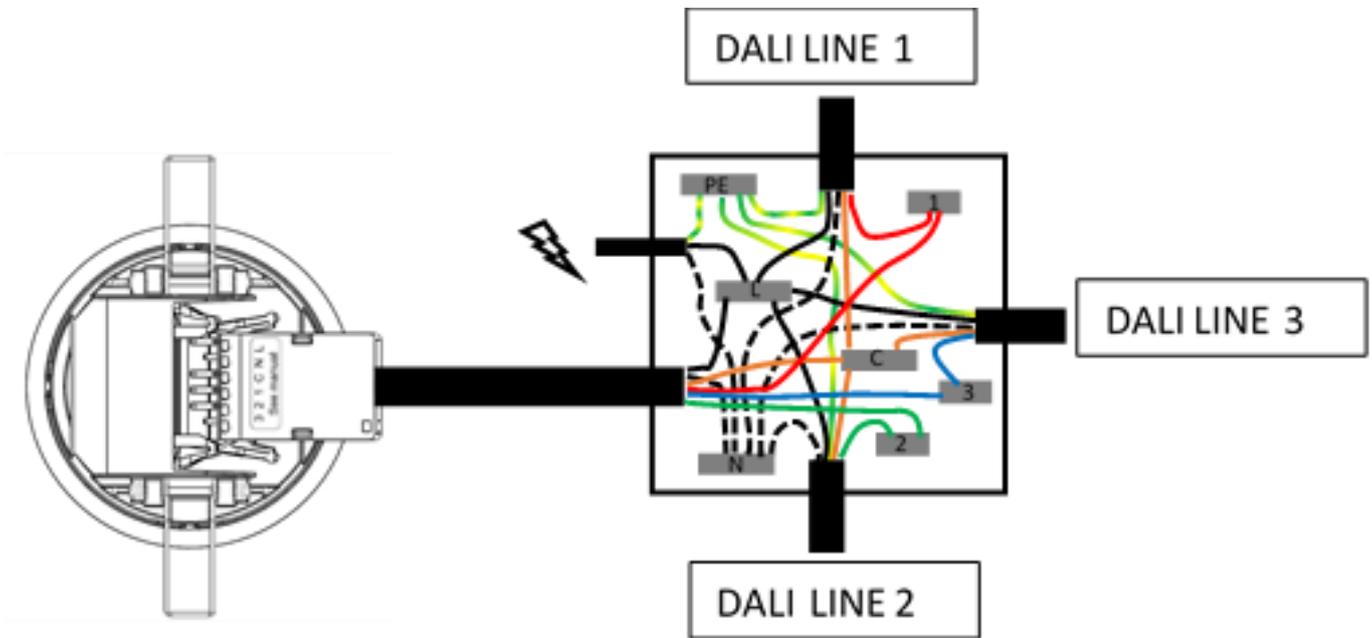
1 = DALI LINE 1

C = DALI LINE COMMON FOR LINES 1, 2 and 3

N, L = MAINS 230V AC 50Hz

3 2 1 C N L

The connections are made to the counter plug which provides strain relief for the cable after which it can be connected to the controller.

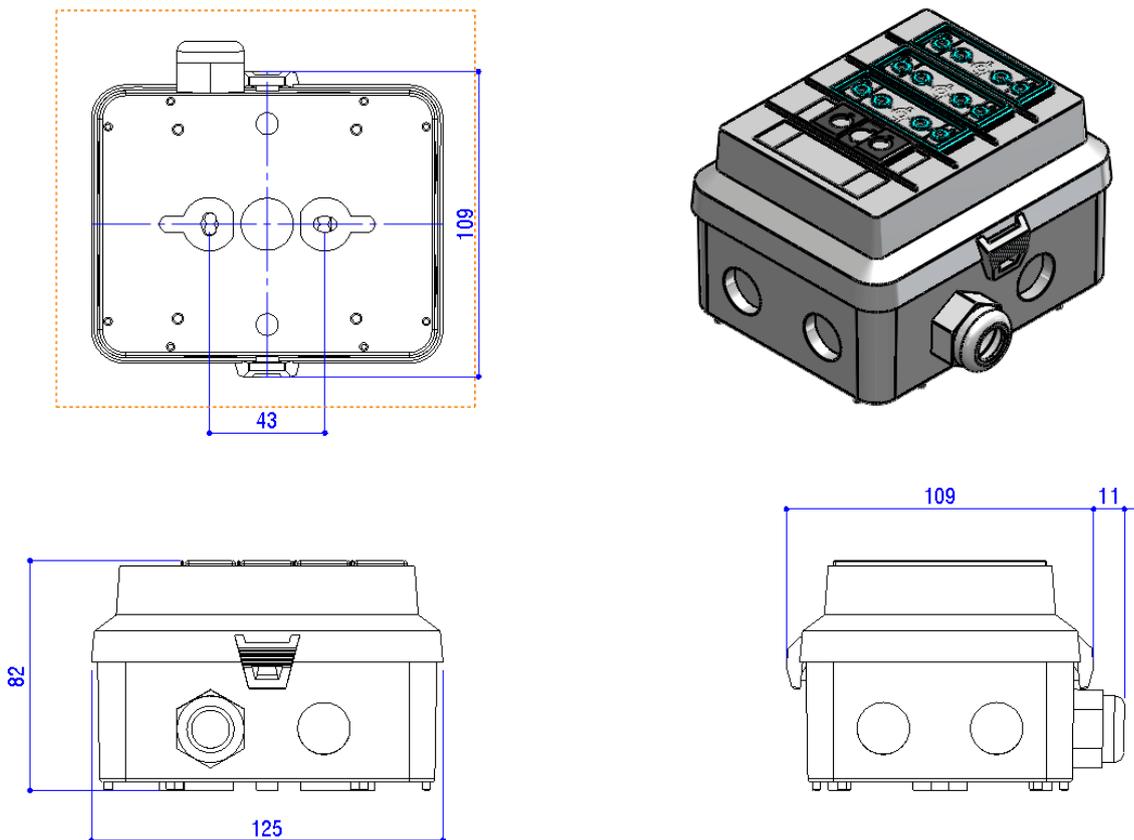


Typical connection via a junction box illustrated above (colours only for clarity schematic).

Controller & Box Recessed C1C20/01-200

Mechanical

See above for the controller part. The Box has the following dimensions:



The prewired cable on the connection box has a length of approximately 2m.



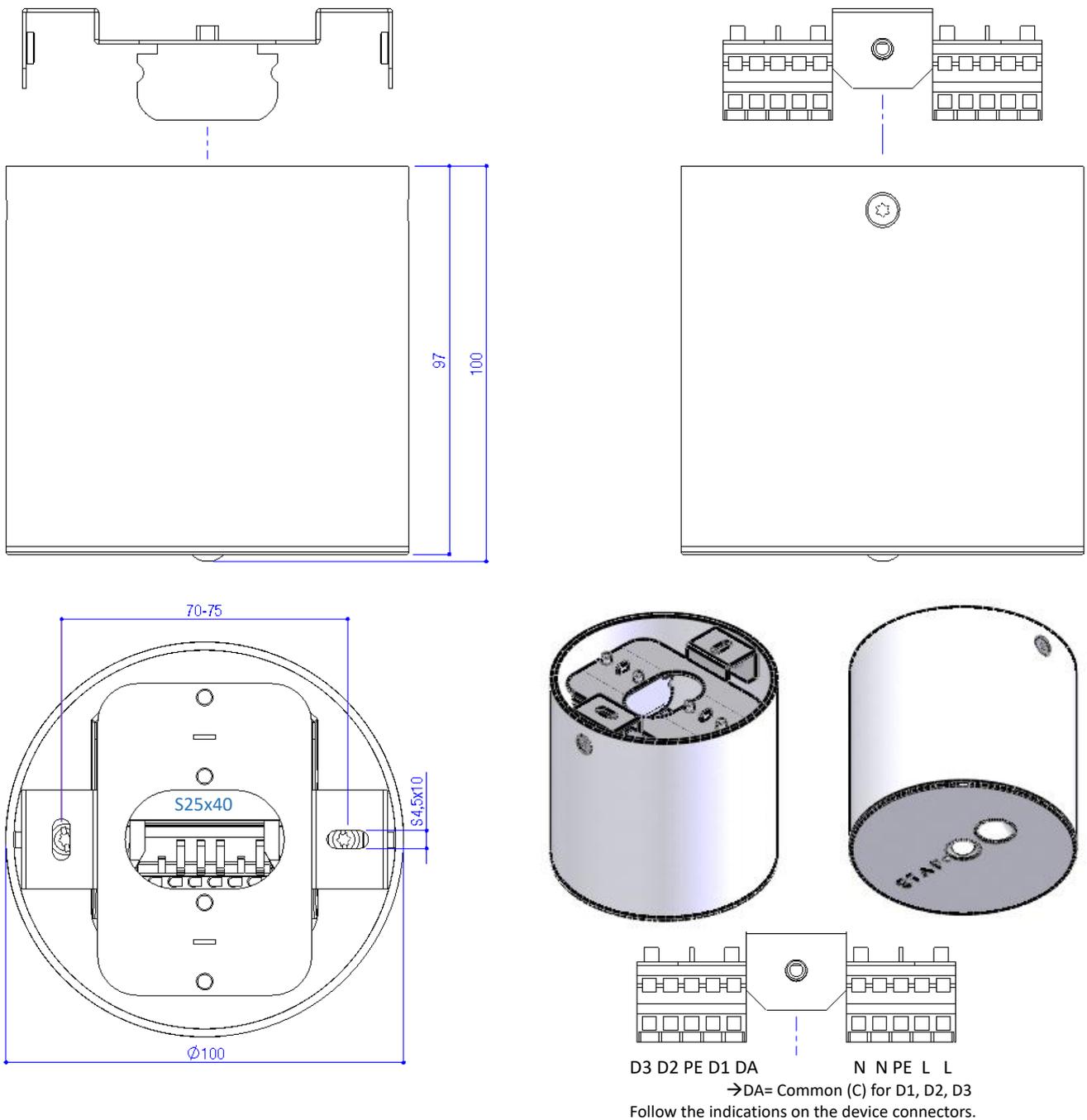
Technical data C1C20/01-200

Operating voltage	230V AC 50Hz
Isolation of wires	All wiring needs to be isolated for mains voltage since DALI is NOT SELV!
Current supply to DALI line	See above "1. System limits"
Wiring schemes	See above "Applications"
Box material	PP 
Working temperature	0 °C ... +50 °C (for reliable PIR movement detection, the temperature difference between moving objects and background should be at least 5°C)
Wiring	The connection lead to the controller is prewired (Cable type LIHH). Connection of the MAINS input and the MAINS+DALI outputs via Wieland GST18 connections. On the box, the MAINS input connector is MALE (plug) and the MAINS+DALI output connectors are FEMALE (socket). For wiring accessories please consult www.etaplighting.com or your local Wieland distributor. All leads used must have a minimum wire cross section of 1,5mm ² or more depending on your local regulations.
Default operation	At startup, the operation mode needs to be set by the App.
Dimensions (L x W x H)	Controller: Diam. 100x52mm (excl. counter plug). Box: 125x120x82mm. See dimensional sketches above for details.

Controller Surface Mounted C1C30

Mechanical

The controller for surface mounting has the following dimensions:



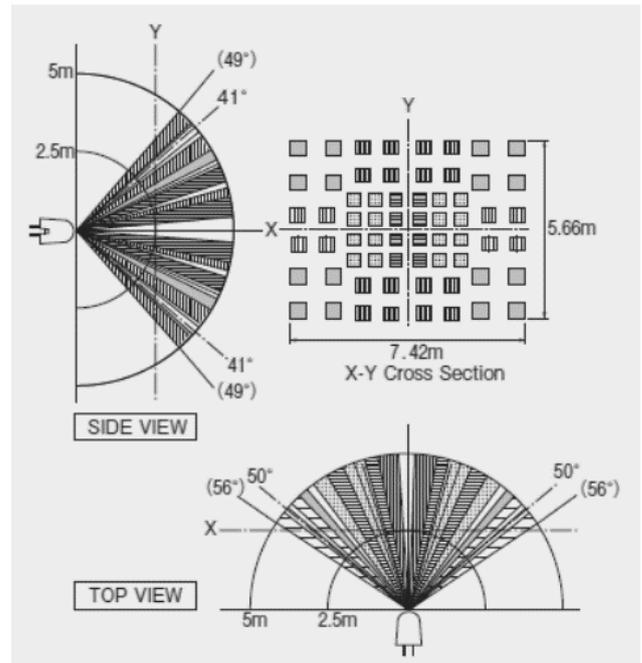
Cable entry can be done from above. Although enough connections are provided for through wiring, it is advised to use a separate connection box in case of through wiring (especially if 2,5mm² is used) or where side entry is the only option. In these cases use a rigid surface mount connection box or cable trunk system to mount the C1C30 to.

In case all connections are used with 2x3x1,5mm² mains loop through and 3x5x1,5mm² mains+DALI circuits connections, a ceiling cut-out for the cables of diameter 30mm is needed based on XVB-F2 cable type)

The movement detection area is rectangular with the widest view aligned with the springs and the axis along the ETAP logo and sensor openings. The sensor should be mounted in an area with much daylight (if present) and since it is the Bluetooth connection point also near the area where it is most likely someone will be sited to control the lights via the smartphone App.

The movement detection area for small movements at a mounting height of 2.8m is about 4x6m, for large movements it is about 6x8m. Max. height for small movement detection is 3,5m.

For expansion sensors and related accessories please consult www.etaplighting.com



Technical data C1C30

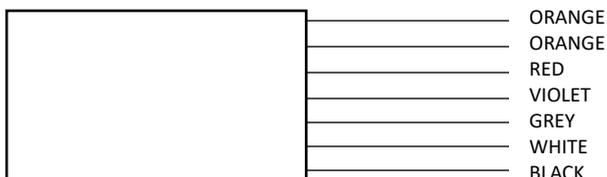
Operating voltage	230V AC 50Hz
Isolation of wires	All wiring needs to be isolated for mains voltage since DALI is NOT SELV!
Current supply to DALI line	See above "1. System limits"
Controller Housing Material	ASA  OTHER in a powder coated Aluminium cylinder mounted on a Zinc plated iron bracket.
Wiring schemes	See above "Applications"
Working temperature	0 °C ... +50 °C (for reliable PIR movement detection, the temperature difference between moving objects and background should be at least 5°C)
Wire diameter and termination	Connectors accept the following wire types: Solid conductor : 0.5 ... 2.5 mm ² Fine-stranded conductor : 0.5 ... 2.5 mm ² Rigid-stranded conductor : 1.5 ... 2.5 mm ²  For Easydim2 it is advised to use 1.5mm ² Connector housing material: PC White, Inserts: Stainless Steel & Tinned Copper
Default operation	At startup, the operation mode needs to be set by the App.
Dimensions (D x H)	Diam. 100x100mm See dimensional sketch above for details.

Push Button Interface C4N60

The Push Button Interface can be used as a 4 channel input device for 1 to 4 volt free contacts. The Push Button Interface is designed to be mounted directly behind the pushbuttons in the wall box. Keep the distance to the main DALI branch as short as possible, all DALI wiring adds to the maximum allowable length of 100m per Easydim2 DALI-line. Lengthening the wires for the PushButton connection is prohibited. Isolate any non-used leads !

Wiring connections:

ORANGE : DALI LINE
 ORANGE : DALI LINE
 RED : INPUT # 4
 VIOLET : INPUT # 3
 GREY : INPUT # 2
 WHITE : INPUT # 1
 BLACK : COMMON CONNECTION FOR THE 4 PUSH BUTTON INPUTS



Technical data C4N60

Operation voltage	DALI supplied (Typically 16V DC)
Isolation of wires	600V RMS, Halogen free
Current consumption from DALI line	4 mA
Input Mode Always isolate any non-used leads !	Only volt free (floating) contacts are allowed. Contacts must be suitable for low voltage low current operation (eg gold flashed).
Working temperature	0 °C ... +50 °C
Wire diameter and termination	24 AWG (0,25mm ²) Terminated with wire end ferrules \varnothing 1,25mm 
Default operation	Auto commissioned as part of the start-up process via the Easydim2 App
Dimensions (L x W x H) - Wires stretched - Needed space in wall box	130x30x7mm 50x30x10mm (excluding the connectors to connect the DALI wires)



Conformity with applicable EU directives is confirmed by the CE symbol. Specifications subject to change without notice

ETAP Export Departement – Antwerpsesteenweg 130 - 2390 Malle - Belgium
 Tel. +32 (0)3 310 02 11 – info.be@etaplighting.com
 www.etaplighting.com

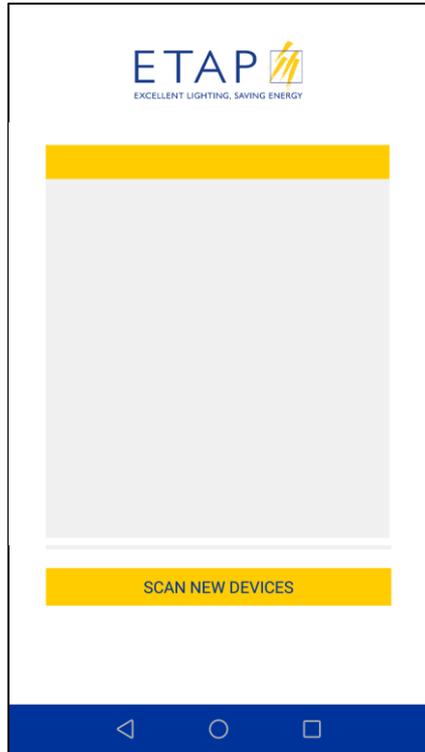
ETAP Easydim2 Smartphone App

The App is available from the Google Play store or at www.etaplighting.com

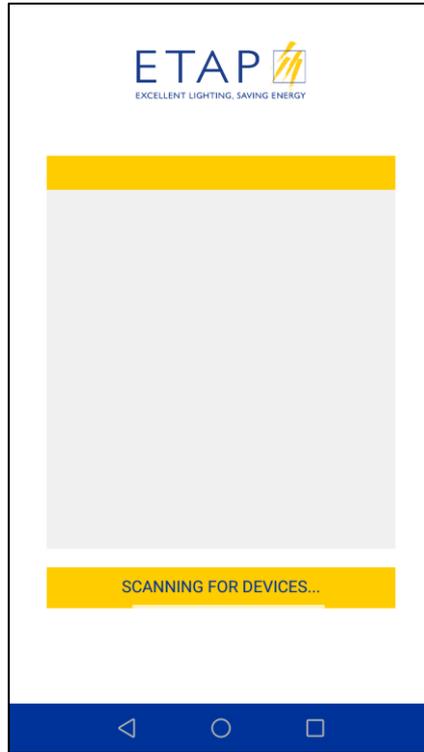
INITIAL SETUP to complete the installation (for the “USER MANUAL” with daily use instructions and a complete “SETTINGS OVERVIEW”, see further)

Start the App, Screen1 appears, please press “SCAN NEW DEVICES” to start searching for devices (Screen2) and as soon as the device appears in the list (Screen3), select the device to connect to it.

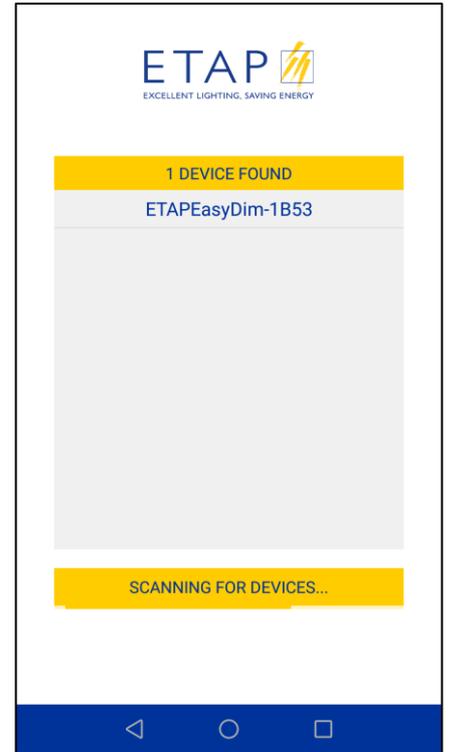
PS: at power on the controller will show a green LED to indicate mains power and as soon as it is ready for App connections a yellow LED will blink once every three seconds.



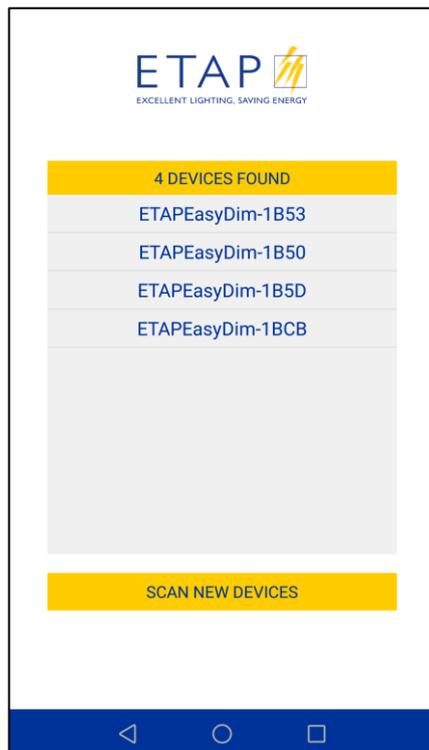
Screen1



Screen2



Screen3



Screen 4

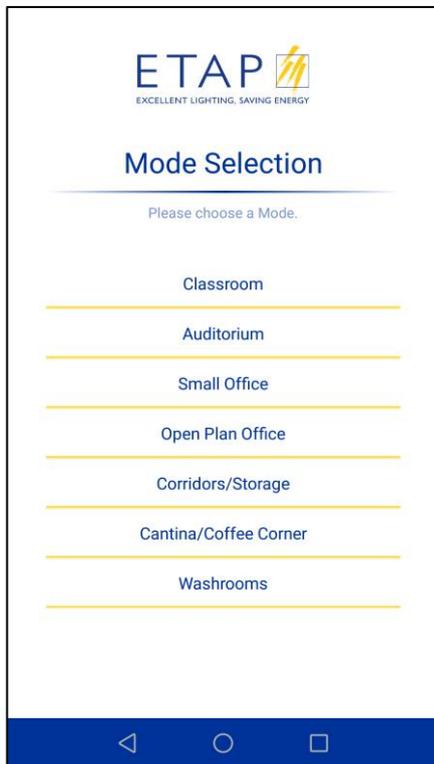
If you have used the App earlier, you will see the list of already known devices at start-up (Screen4)

As soon as the device you want to connect to appears, you can select it, you don't have to wait until the scan finishes.

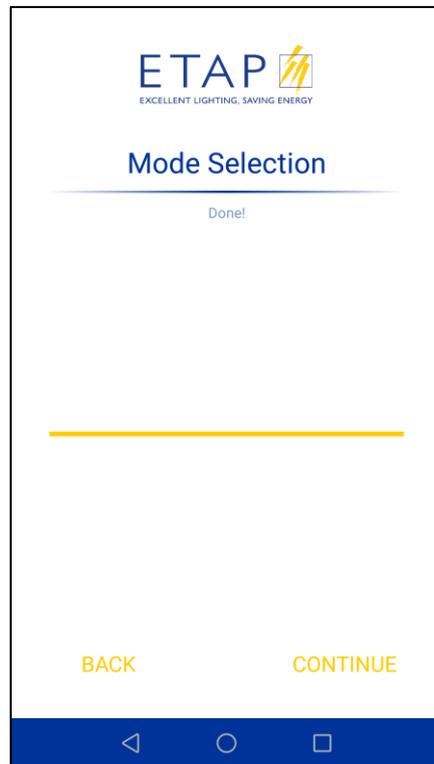
When the connection is established, the yellow LED will blink twice every second to indicate connection to the App.

Note: if during the process a login screen appears, log in as “manager” which has as default password also “manager”

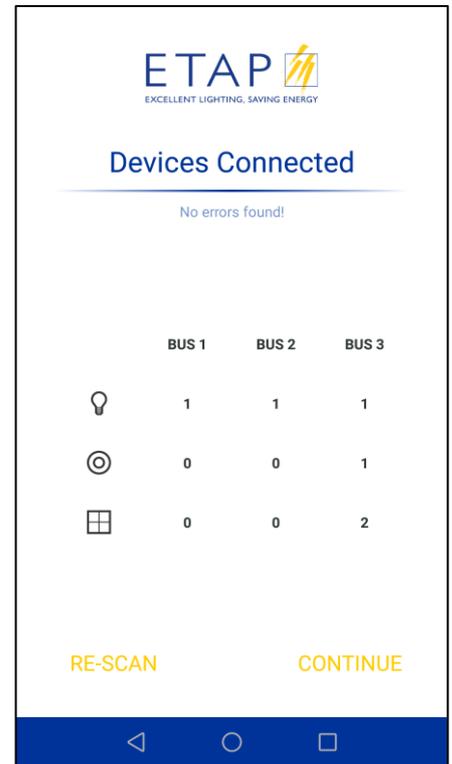
After selecting the Easydim device to use, you will be presented with the mode selection (Screen5).The App will send the configuration for the selected Mode to the controller and confirm when ready (Screen6). After pressing “CONTINUE”, you will land on the “Devices Connected” screen (Screen7). Please press RE-SCAN on this screen to scan the DALI lines for the actual components in the installation.



Screen5

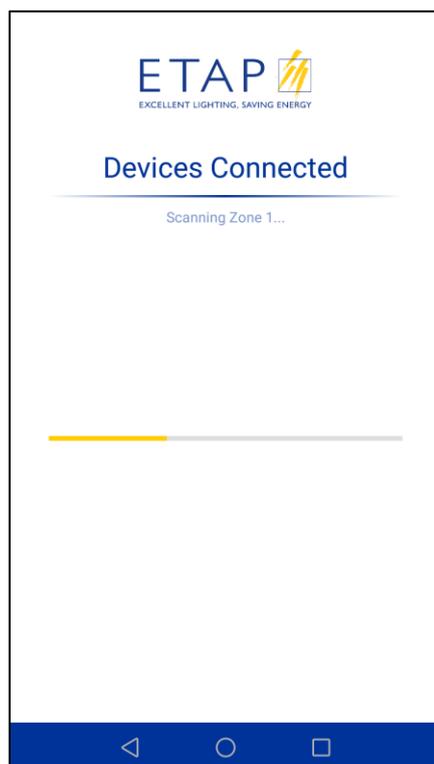


Screen6

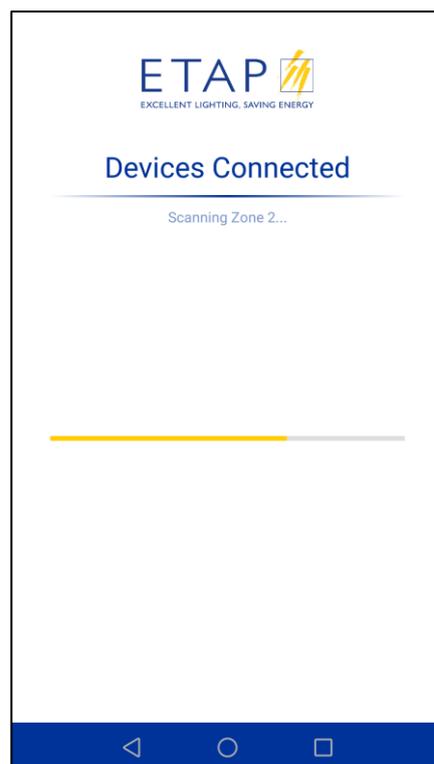


Screen7

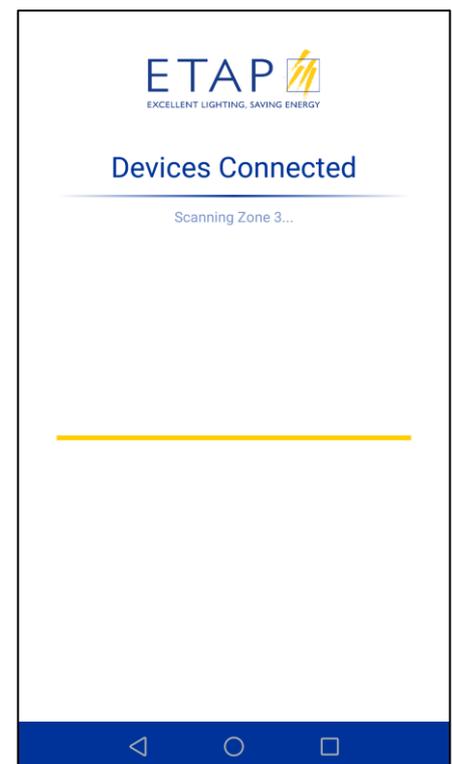
The scanning process can take up to several minutes to complete, depending on how many components are connected to the controller. As the Scan progresses from one DALI line to the next, the screen will update to reflect the current line that is scanned (Screen8, Screen9, Screen10).



Screen8

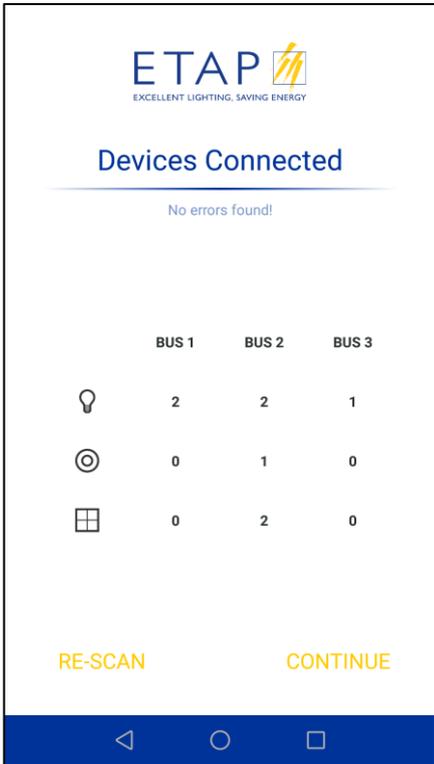


Screen9

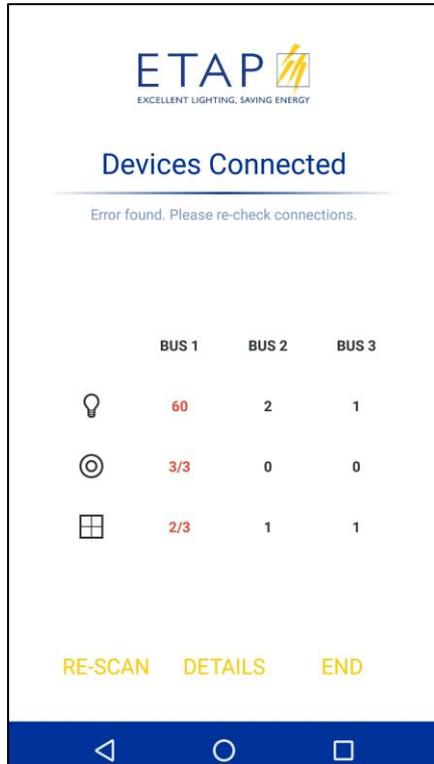


Screen10

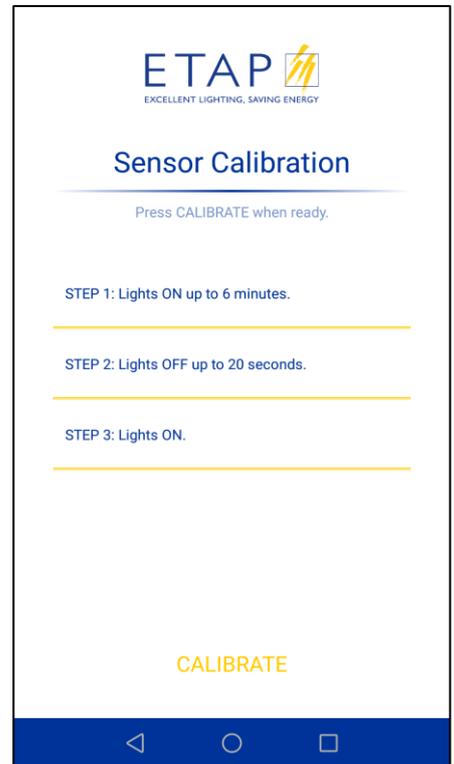
After the scan is completed Screen7 will re-appear with an update of the configuration found (Screen11). Please verify all the installed lamps, sensors and pushbutton panels are found on the right DALI lines as you intended the installation. If errors are found (e.g. too many devices on a certain line), this will be reported “Error found. Please re-check connections” (Screen12).



Screen11



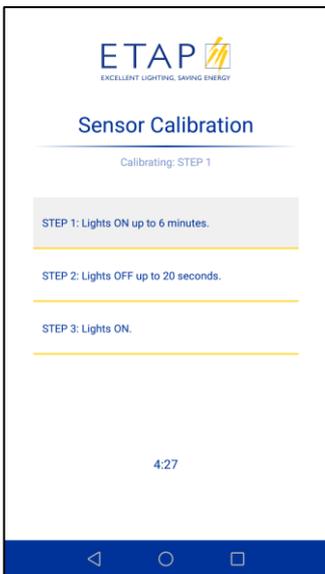
Screen12



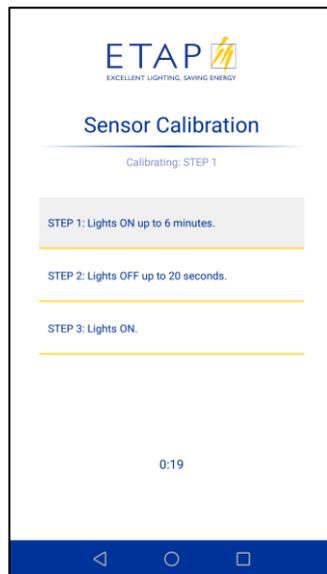
Screen13

When all devices are found correctly, press “CONTINUE” (Screen11) and the Sensor Calibration Screen will appear (Screen13). Press “CALIBRATE” to start the calibration process. As explained on the screen, the different steps in the process can take some time. To have the shortest time possible, step away two to three meter from the sensor during the calibration process of the sensor readings are stable, but not too far so the App stays connected. If the readings are stable, the first step will take less than a minute.

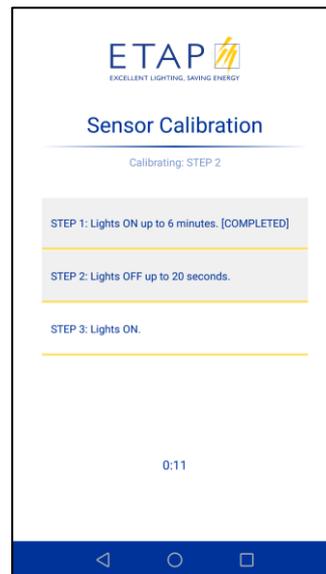
The progress is shown on the screen as illustrated below (Screen14-17)



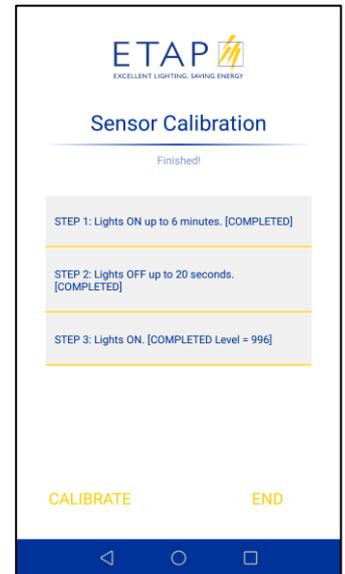
Screen14



Screen15



Screen16



Screen17

After the calibration process finishes, the calibration level is shown (996 in Screen17). If the automatic calibration (which is based on the installed light level) is not what you desire, you can restart the calibration process by pressing “CALIBRATE” or it can be changed manually as explained in the SETTINGS OVERVIEW section below.

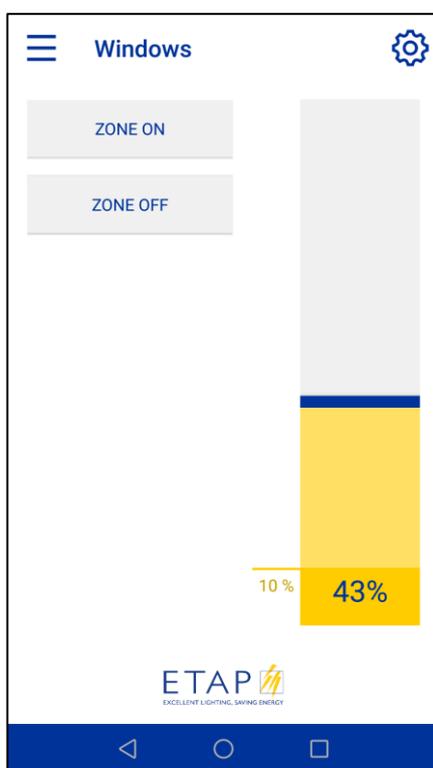
Press “END” to end the calibration process and the setup process will be complete as well. You will now see the Main Screen of the selected mode will appear (Screen18). You can now recall the Scenes belonging to the Mode with the seven buttons on the left, or adjust the overall light levels with the Main slider to the right.

To control an individual zone, press the menu icon on the top left or alternatively touch or swipe on the Zone Name (Classroom in our example). This way you can cycle between the Main Zone and the three subzones and control the lighting to your liking (Screen19).

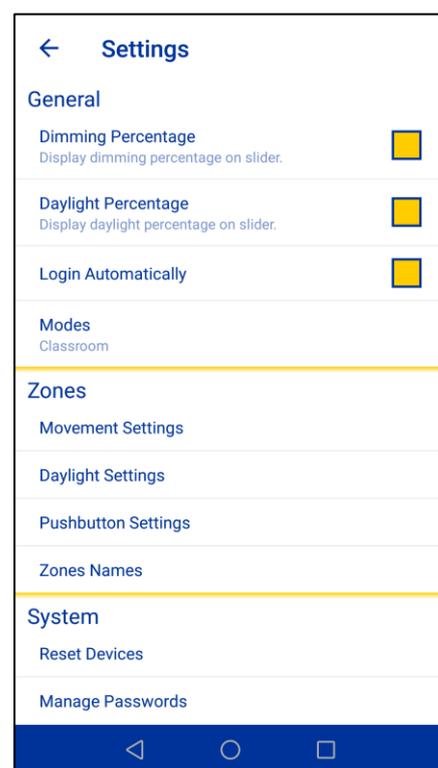
If daylight dimming is active, the sliders will show both the setpoint level (thick blue line at the top of the yellow bar) and the daylight compensated level (thin yellow line, dark yellow bar). Depending on the settings these levels are or are not displayed as a percentage as well. The settings screen (Screen20) can be accessed via the Gear icon on the top right of any Zone Screen.



Screen18



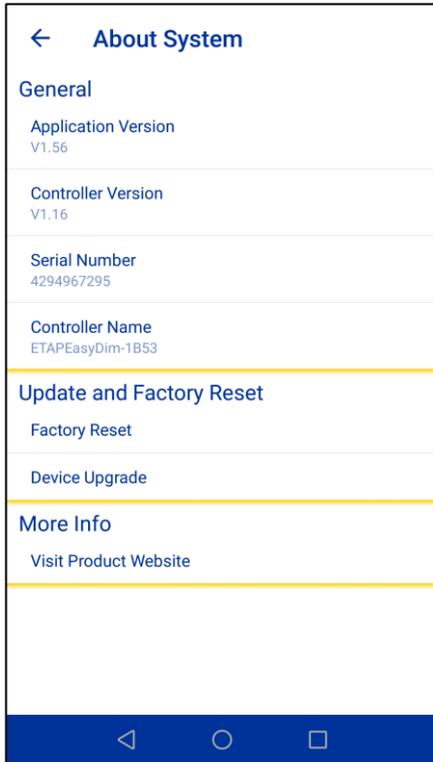
Screen19



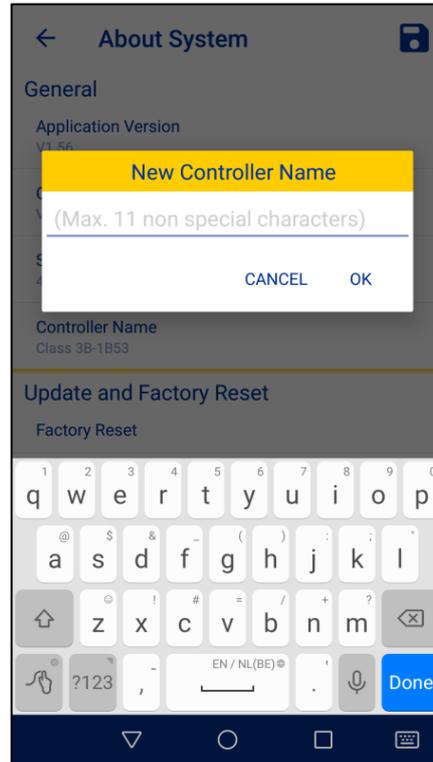
Screen20

WARNING: ETAP has, based on decades of experience with lighting control systems, predefined the settings. We strongly advice not to change these settings before handover to the user unless absolutely necessary. If you want to experiment yourself see the section “SETTINGS OVERVIEW” below and please do a Factory Reset afterwards. The Factory Reset is available by scrolling down the Settings screen (Screen20) and under the section System, select “About System” which shows Screen21.

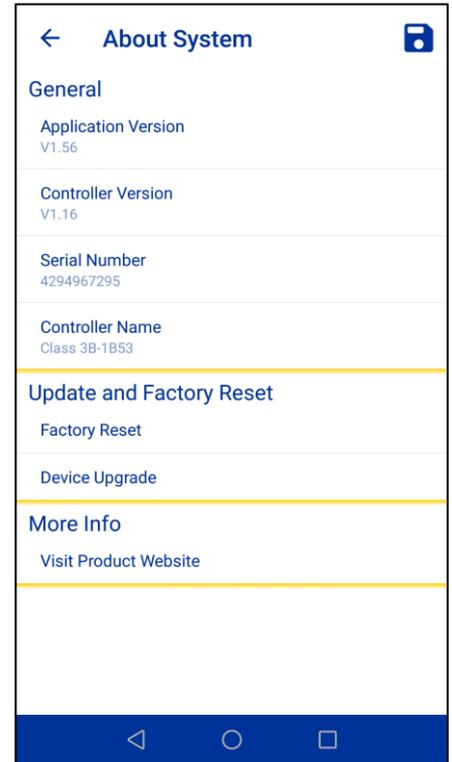
We DO encourage however to change the default Controller Name (by clicking on it and specifying a new name as shown in Screen22) to a more logical name for the user like the room name/number. The Controller Name will always be suffixed by a four character ID needed for service reasons. Click the Save icon in the top left corner (Screen23) to save the changes to the controller.



Screen21



Screen22



Screen23

FINISHING UP BEFORE HANDOVER:

We advise to do the following before handover:

- Although the system might have found all pushbutton interfaces, this is not a guarantee they work as intended (wires to the buttons may have been swapped) ... please check all pushbuttons react as intended. As a service to you customer you can cut out the labels from Annex 4 and place them behind the pushbutton window or handover these pages to you customer.
- If you will be the party responsible for maintenance of the system, you might want to change the default manager password. Please be advised in case you change the password and loose it, only a service visit of ETAP can restore the system to its defaults.
- In the settings, disable "Login Automatically".
- Keep a copy of this manual for future reference.
- Please leave at least the User Manual of the App in the room (e.g. attached to a pushbutton or door).

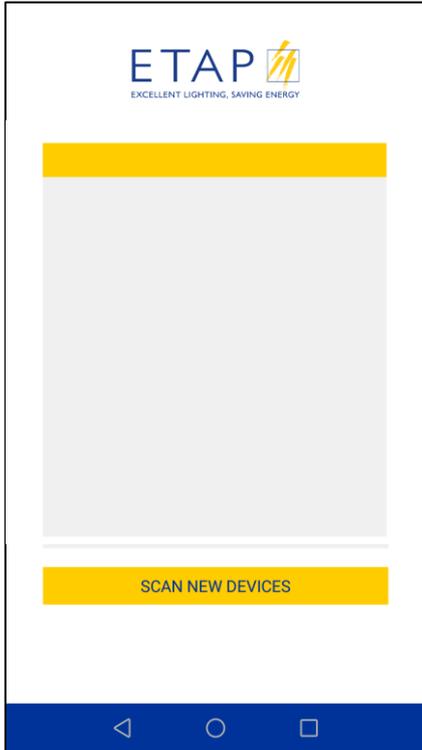
USER MANUAL

After installing the ETAP Easydim2 App from the Google Play Store or the ETAP Website, start the App by tapping on the Easydim2 App icon.

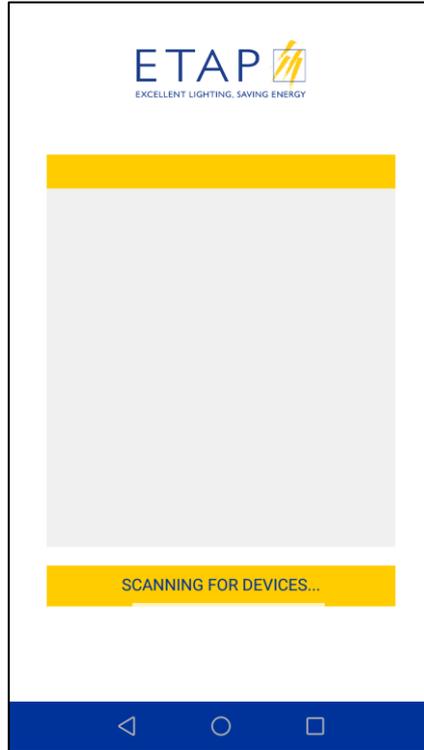


The App will open and Screen1 appears, please press “SCAN NEW DEVICES” to start searching for devices (Screen2) and as soon as the device appears in the list (Screen3), select the device to connect to it.

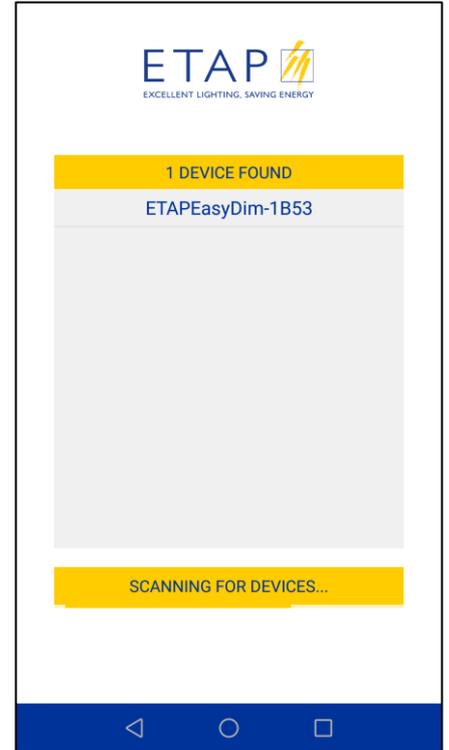
PS: at power on the controller will show a green LED to indicate mains power and as soon as it is ready for App connections a yellow LED will blink once every three seconds.



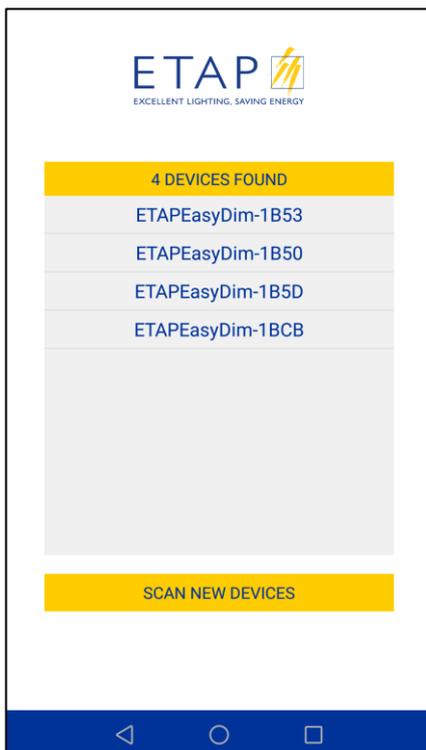
Screen1



Screen2



Screen3



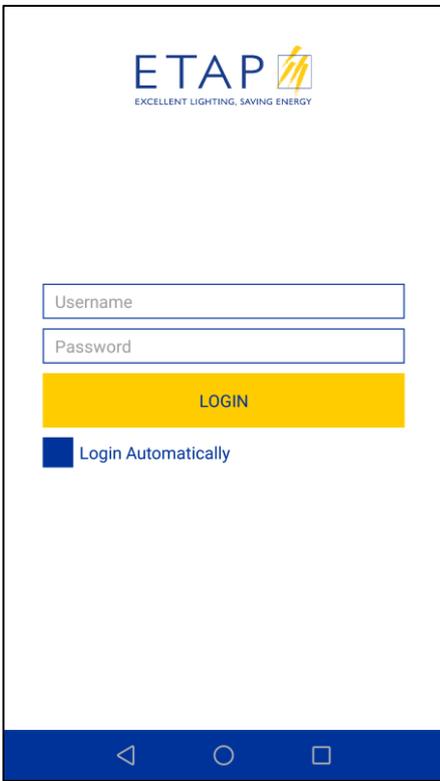
Screen 4

If you have used the App earlier, you will see the list of already known devices at start-up (Screen4)

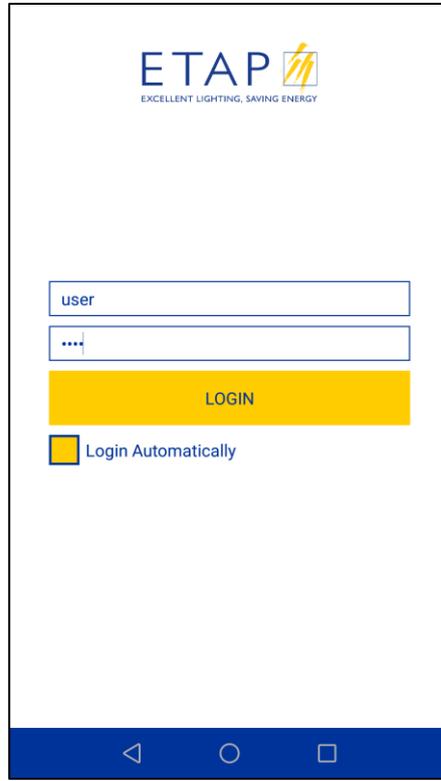
As soon as the device you want to connect to appears, you can select it, you don't have to wait until the scan finishes.

When the connection is established, the yellow LED will blink twice every second to indicate connection to the App.

Note: if during the process a login screen (Screen5) appears, log in as “user” which has as default password also “user” and enable “Login Automatically” (Screen6). If these credentials do not work please consult your facility manager.



Screen5



Screen6

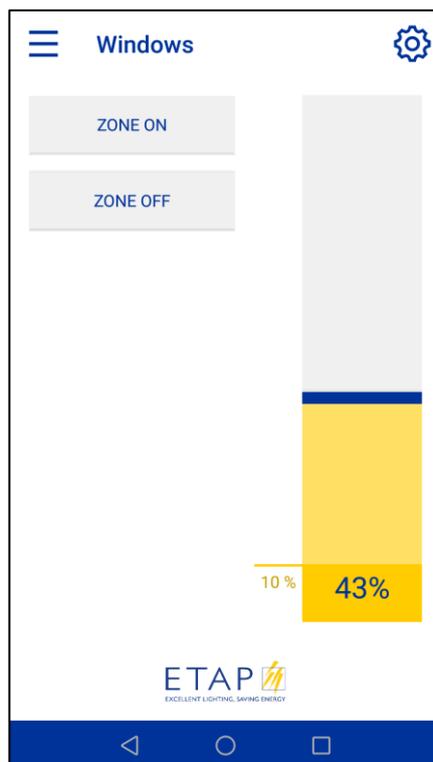
You will now see the Main Screen of the selected mode will appear (Screen7). You can now recall the Scenes belonging to the Mode with the seven buttons on the left, or adjust the overall light levels with the Main slider to the right.

To control an individual zone, press the menu icon on the top left or alternatively touch or swipe on the Zone Name (Classroom in our example). This way you can cycle between the Main Zone and the three subzones and control the lighting to your liking (Screen8).

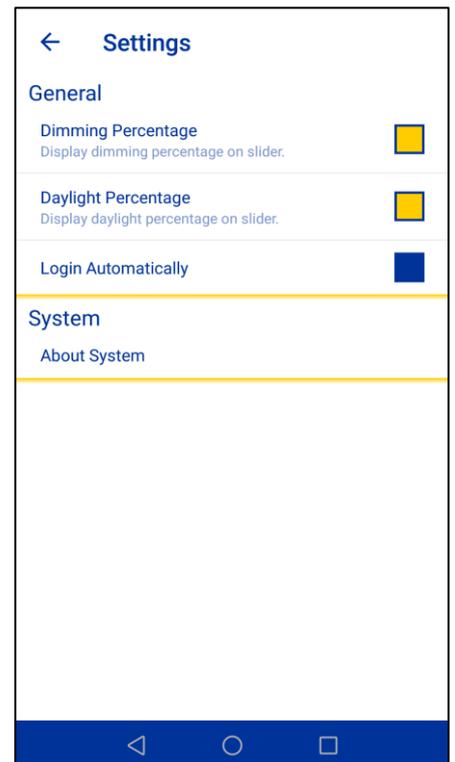
If daylight dimming is active, the sliders will show both the setpoint level (thick blue line at the top of the yellow bar) and the daylight compensated level (thin yellow line, dark yellow bar). Depending on the settings these levels are or are not displayed as a percentage as well. The settings screen (Screen9) can be accessed via the Gear icon on the top right of any Zone Screen.



Screen7

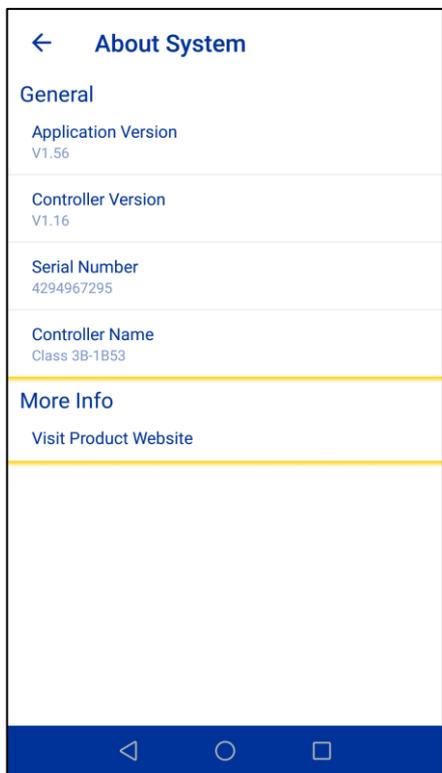


Screen8

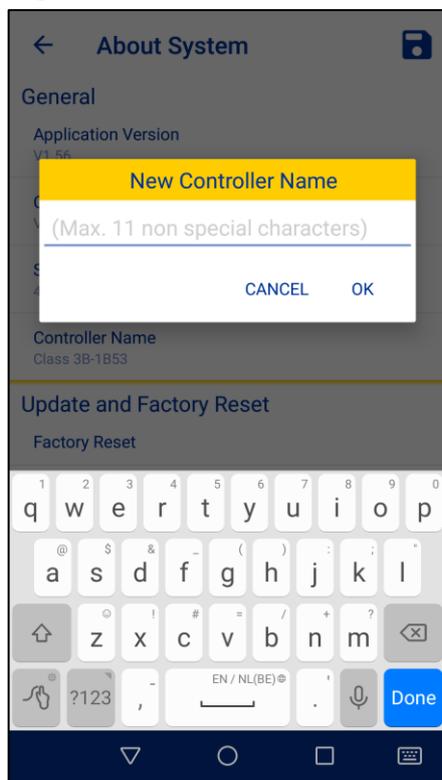


Screen9

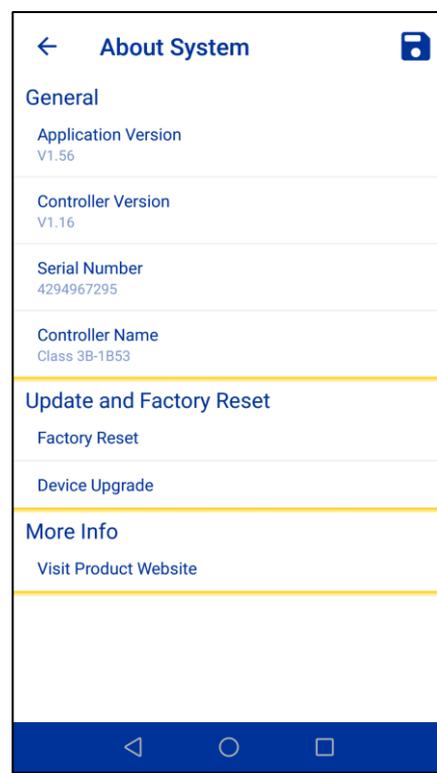
We encourage to change the default Controller Name (by tapping on “About System” after which Screen10 appears) and specifying a new name as shown in Screen11 which appears when the Controller Name is tapped. to a more logical name for the user like the room name/number. The Controller Name will always be suffixed by a four character ID needed for service reasons. Click the Save icon in the top left corner (Screen12) to save the changes to the controller.



Screen10

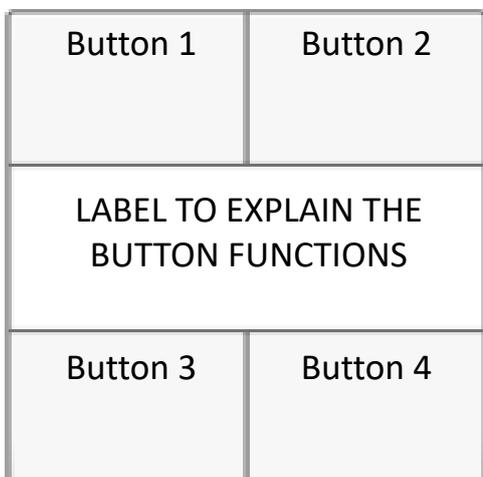


Screen11



Screen12

Aside the App, there might be pushbuttons installed as well in your room. The pushbutton behaviour has been defined by your installer or facility manager. If the ETAP pushbuttons are used, there will be a transparent window to allow for the function of the buttons to be explained. If the installer has left the documentation, you can find pre-printed labels in Annex 4 or you can alternatively download the manual from the ETAP website or write/design you own labels. The label dimensions are 41x12mm.



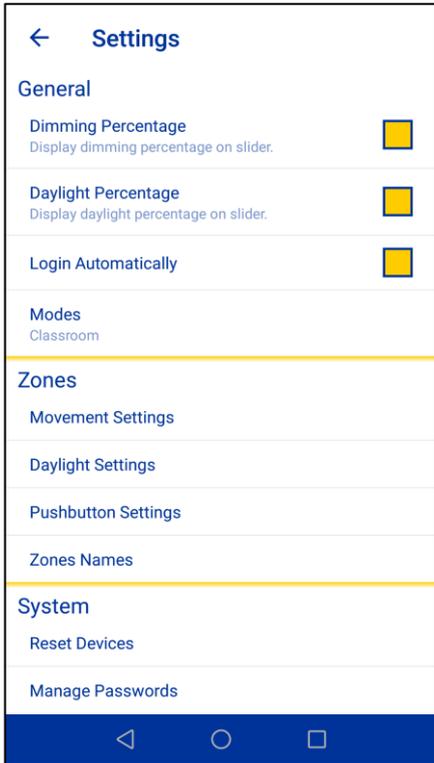
Note: In Annexes you can find a FAQ and a troubleshoot guide.

If the setup of the system is not according to expectations, please ask your installer or facility manager for advice.

In case you have remarks about the system, there is a feedback form in Annex 5.

SETTINGS OVERVIEW

This section explains all settings as available via the Manager login. The first group of settings are the **General Settings**.



Main Settings Screen

This is the main settings screen accessible via the GEAR-icon on the operating screens. Three general settings that are also available via the User-login are displayed on top:

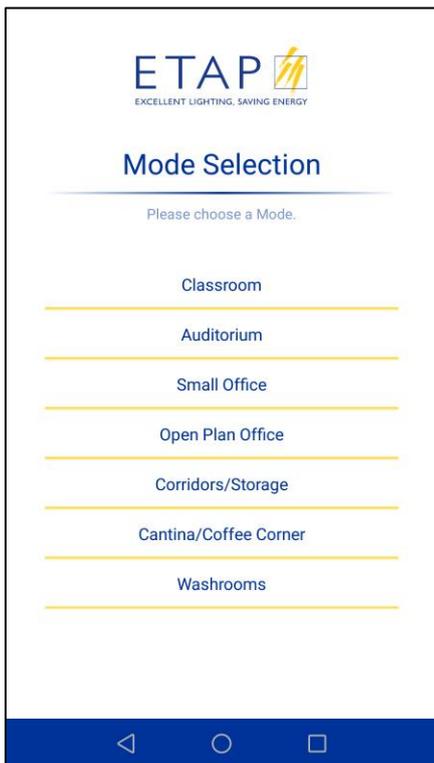
- Dimming percentage: when enabled (yellow) the dimming percentage will be displayed on the sliders (a)
- Daylight percentage: when enabled (yellow), the dimming level as a result of the daylight harvesting is displayed as well (b)
- Login Automatically: if you are a regular user of a certain system you can automatically supply you credentials to login automatically. Also handy at installation time and before changing the default passwords.



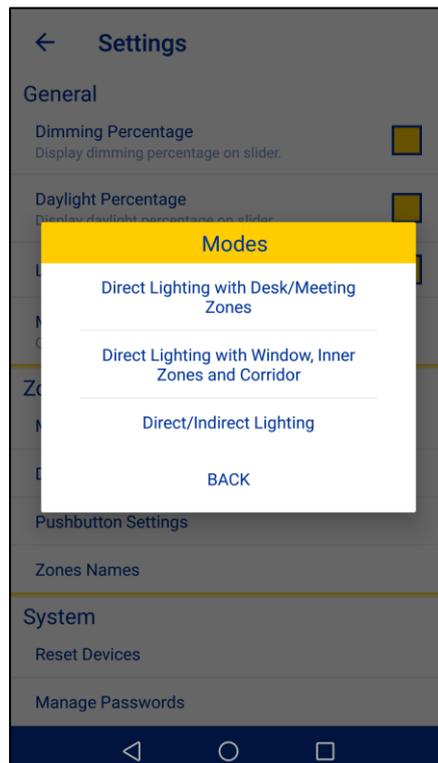
The only other setting available to the User is to change the name of the controller which is explained above under "USER MANUAL"

The last General Setting is the Mode. Since it is tied to the wiring of the system, this setting is not accessible to the User account to avoid unintended behaviour.

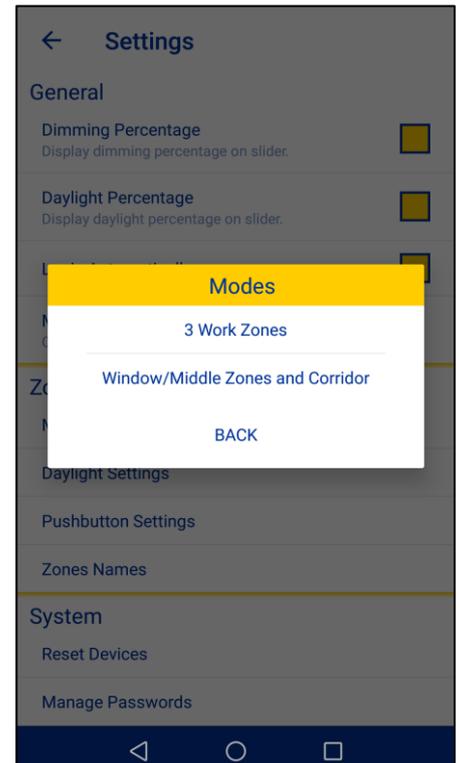
The procedure to set the Mode is discussed at length above under "INITIAL SETUP", so we suffice here with showing the Mode Selection Screen and the sub-selections for offices.



Mode Selection Screen

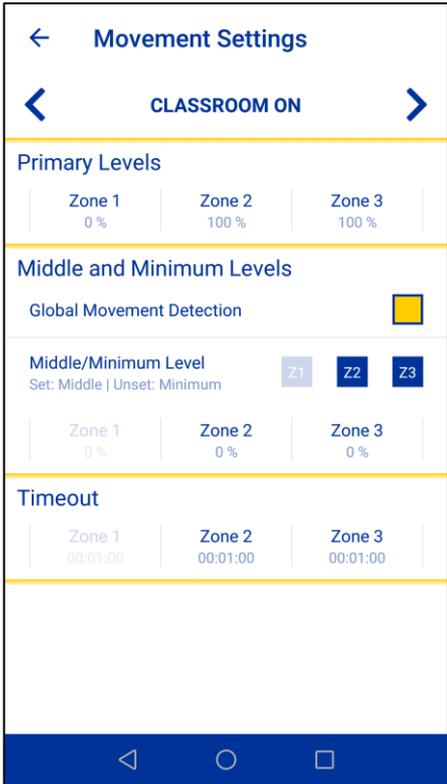


Sub-selection for Small Offices



Sub-selection for Open Offices

Next section of settings applies to one or more of the Zones.
 The following group of settings here are the **Movement Settings**.



Movement Settings Screen

In the Zone settings the tremendous flexibility of the Easydim2 system becomes visible. Notice that the settings can even be set independently for every Scene. ETAP recommends however to use deviating settings over scenes with great caution as it might confuse the uninformed user when things react differently depending on the Scene used.

To navigate to another Scene, use the arrows to the left and right of the Scene Name (“CLASSROOM ON” in the screenshot aside).

Primary Levels: these are the light levels (setpoints) of every Zone for this Scene. Levels can be any value between 0 and 100%, but take care to use values that match the Scene Name so the setting matches user expectations.

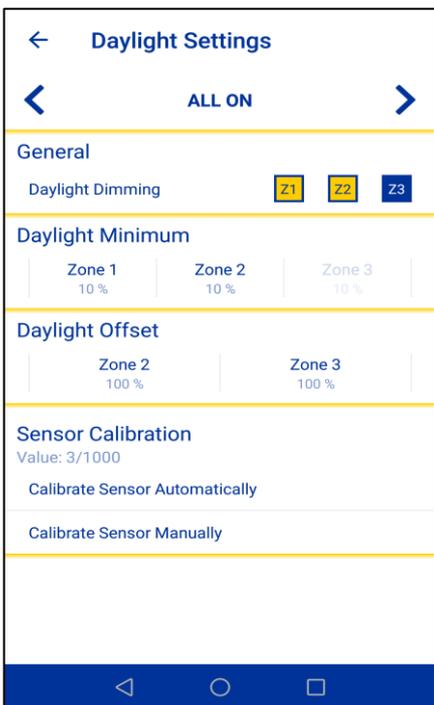
Global Movement Detection: when enabled (yellow), all movement detectors will retrigger the timeout timer of all zones. If disabled (blue), the movement sensors will only retrigger the zone they are connected to. The sensor integrated in the controller will retrigger Zone 1 in this case.

Middle/Minimum Level: this setting determines whether after the timeout the Zone will be dimmed or switched off (settable via the values below this setting) or alternatively will after a first timeout dim to an intermediate level and after a second timeout switch off (when enabled, yellow). Be aware in the case a Minimum Level is

set which is different from 0%, the lights will NEVER switch OFF automatically. Note in case a Primary Level of 0% is set, the Middle/Minimum Level and Timeout settings become disabled.

Timeout: this is the timeout after which the system goes to the Middle or Minimum Level and in case of Middle Level enabled, after the same timeout again, it will go to 0%. The Timeout is settable per Zone (and per Scene) but again take care the behaviour remains logical from a User point of view. In most cases the same setting per Zone and Scene will be the most logical. In the last 4 Applications you can find examples where a different timeout is set per Zone.

The following group of settings applies to the Daylight Settings.



In the Zone settings the tremendous flexibility of the Easydim2 system becomes visible. Notice that the settings can even be set independently for every Scene. ETAP recommends however to use deviating settings over scenes with great caution as it might confuse the uninformed user when things react differently depending on the Scene used.

To navigate to another Scene, use the arrows to the left and right of the Scene Name (“ALL ON” in the screenshot aside).

Daylight Dimming: this setting enables (yellow) or disables (blue) daylight dimming for the Zones. Typically lights that are not aimed at the floor are excluded from automatic daylight dimming (examples are Whiteboard or Accent Lights for paintings or the like).

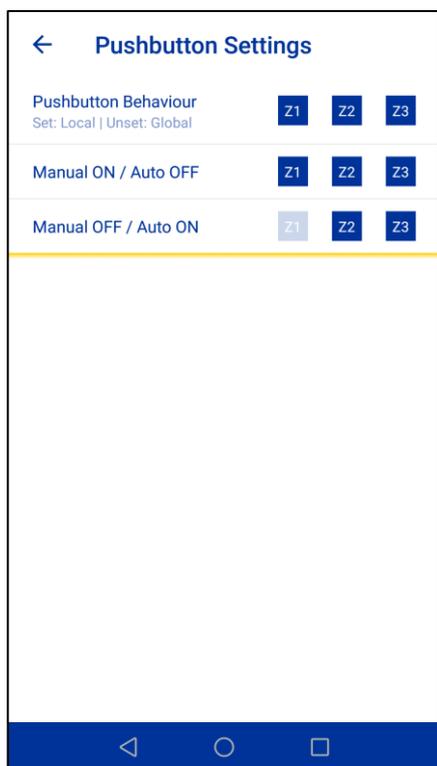
Daylight Minimum: the minimum level the daylight regulation will dim to.

Daylight Offset: the amount (in %) the Zones 2 and 3 will dim less than Zone 1. Example: If all zones start from 100% and Zone 1 is dimmed down 55% (from 100% to 45%), and the offset of Zone2 is

30%, than Zone2 will be dimmed 30% less so only 55%-30% = 25% dimmed versus start level so the actual level will be 100%-25% = 75%. This function compensates for the fact that Zones further away from the window area receive less daylight hence should dim less. Please note a Zone with an offset will not dim lower than the specified offset so a Daylight Minimum that is less than the offset will never be reached.

Sensor Calibration: in most cases the automatic calibration based on the installed level should suffice for most applications. In case you want to change the calibration manually we recommend to do an automatic calibration first, measure the resulting lux level and then scale the calibration factor up or down by the amount desired. For example if the automatic calibration gives you 431 lux and the calibration value is 57 but you want to have 500 lux, than multiply 57 by $500/431 = 57 * 1.16 = 66$. The automatic calibration process is described above under INITIAL SETUP

The next group of settings are the Pushbutton Settings.



Pushbutton Behaviour: Standard the setting is always Global which yields the Pushbutton Functions tables as described in the Applications and Modes described above (functionality depends on which DALI line the buttons are connected to). It is however also possible to set the PushButton Behaviour to “Local” in which case the pushbuttons operate locally on the DALI line they are connected to as local zone buttons:

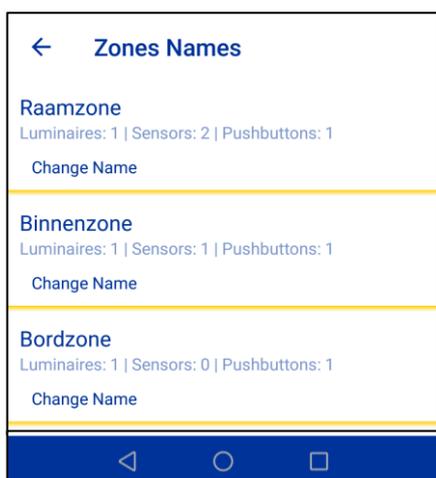
PBI connected to	Button 1 (A) (White)	Button 2 (B) (Grey)	Button 3 (D) (Violet)	Button 4 (C) (Red)
DA 1	ZONE 1 ON	ZONE 1 DIM UP	ZONE 1 OFF	ZONE 1 DIM DOWN
DA 2	ZONE 2 ON	ZONE 2 DIM UP	ZONE 2 OFF	ZONE 2 DIM DOWN
DA 3	ZONE 3 ON	ZONE 3 DIM UP	ZONE 3 OFF	ZONE 3 DIM DOWN

Manual ON / Auto OFF: this setting is sometimes required by local regulations to avoid the lights switch on automatically. When enabled (yellow), this zone will only switch on after a PushButton action or an App action so by a Manual action from the User. Enabling this setting is mutually exclusive with Manual OFF / Auto ON.

Manual OFF / Auto ON: This setting will prevent lights that are switched on to switch off automatically. Could be useful e.g. for corridors, stairs or other situations where movement sensor typically do not cover the complete application area. Enabling this setting is

mutually exclusive with Manual ON / Auto OFF. Enabling this feature will also disable the possibility to set a timeout for the movement detection (see further).

The names of the Zones follow automatically the Easydim2 Application mode and Phone OS Language selections. You can however change the name of the Zones if you want to in the Zones Names Settings screen. This way you can for example change the names of the zones to another language then the language settings of the Phone used to do the commissioning.



ANNEX 1: FAQ

Q1: Can I change the settings of the ETAP Easydim2 system?

A1: The settings of the system are based on decades of field experience with control systems. These settings are optimised to balance between energy savings, visual comfort and user friendliness. For this reason the settings are not accessible in the standard “user” account. If however you wish to change or experiment, you can log in with the “manager” account to change the settings.

Q2: Can I recall the factory settings of the ETAP Easydilm2 system?

A2: When logged in as “manager”, you can revert to the factory settings. Be aware this will restart the commissioning process and you will have to choose the desired application mode again as well as perform a recalibration of the light sensor.

Q3: Can multiple smartphones connect via Bluetooth?

A3: No, only one Bluetooth connection can be made at a given time.

Q4: Does the App has priority over the automated sensor actions or pushbutton operations?

A4: There are no priorities, the last event will be honoured, regardless if it comes from the App, the sensors or the pushbuttons.

Q5: Does a manual change of light levels disable the daylight regulation?

A5: The daylight regulation (if activated) remains active at all times since the Easydim2 system is conceived as a lighting automation and energy saving system so it regulates the light levels for the user regardless of the source (artificial or daylight) and not the brightness (appearance) of the luminaires.

Q6: How is the main slider percentage calculated?

A6: The main slider counts the contribution of every luminaire equally. If for example 10 luminaires are connected to Zones 1 and 2 and 5 luminaires to Zone 3, there are 25 luminaires and every luminaire contributes for 0-4% of the total of the main slider. Example: Zone 1 is on 50%, Zone 2 is on 80% and Zone 3 is on 100%. The main slider will be $10 \cdot (0.5 \cdot 4) + 10 \cdot (0.8 \cdot 4) + 5 \cdot (1.0 \cdot 4) = 10 \cdot 2 + 10 \cdot 3.2 + 5 \cdot 4 = 20 + 32 + 20 = 72\%$.

Q7: I can not move the main slider above a certain percentage, what is happening?

A7: If you activated a Scene where one or more of the Zones Primary Levels are zero, the main slider will exclude this Zone from dimming up. You can however go to the operating screen of this zone, switch it on with the buttons or slider of that zone, and then the main slider can further control these luminaires too and go up to 100%.

ANNEX 2: TROUBLE SHOOT GUIDE FOR THE INSTALLER

Everything is connected right but still the controller does not do anything ...

It might be you have not configured the unit yet. You need to configure the unit via your Smartphone ETAP EasyDim2 App. The App can be downloaded from the Play-store or from the ETAP Website.

If you cannot get connection, check the following:

Check the controller shows a green or yellow LED aside the movement sensor.

- If no LED visible at all:
 - Measure there is mains voltage on the connector and it is 230V
 - Check the L and N are on the right connectors
 - If still no LED at all → unit is defective, replace and return defective one to ETAP
- If LED (steady or blinking) visible :
 - Green LED should be permanently on while the unit is powered, if not unit is defective
 - As soon as the start-up process has finished and the Bluetooth module is ready to accept connections, the yellow LED will blink once every three seconds
 - If after a “scan devices” in the App, no devices are found, try moving your phone closer to the unit (within 1 meter) and retry. If still no devices can be found check no one else is connected (the yellow LED blinks twice every seconds), force breaking all connections by cycling the power and wait until it flashes yellow again once every three seconds.
 - If the device is found and you are connected, the LED will flash yellow twice every second
 - Now you can follow the initial setup procedure after which the controller will start to work (see section about the App).
- If still no success, try closing the App and turn off Bluetooth. Cycle power to the controller then re-open the App and confirm it may turn on Bluetooth and repeat the procedure.
- If after the above steps, still no connection can be made, check the minimal requirements of the used smartphone/OS and if possible try with another smartphone to exclude problems or incompatibility with the smartphone.
- If all of the above fails, please replace the unit and return it to ETAP with a note specifying the brand and type number of the phone used and the OS version and any other info that you think might be useful.

If you can connect but the App does not find devices ...

- Check the luminaries are powered
- If no devices are found at all, check the common wire (marked “C” on the controller) is well connected (measure with ohm meter from controller to first luminaire, or alternatively, measure DALI voltage luminaire terminals farthest away from the controller, should be 16Vdc-20Vdc
 - If voltages are OK, check the right section of wire (min 1,5mm²) is used and the length per DALI line does not exceed 100m
 - If voltages are not OK, remove all DALI line connections to the controller and measure the DALI line voltages on the controller,
 - If not OK, unit is defective, please return to ETAP for analysis
 - If OK, connect only one DALI line at a time and recheck
 - IF NOK: segment the DALI line and recheck until the cause of error is found, replace the defective component and return the defective one to ETAP for analysis

ANNEX 3: TROUBLE SHOOT GUIDE FOR THE USER

If you cannot get connection, check the following:

Check the controller shows a green or yellow LED aside the movement sensor.

- If no LED visible at all:
 - Check the mains is switched on for the installation, do not work on an electrical installation yourself but consult the buildings electrician if in doubt (hint: if all luminaires are off and no LED visible on the controller, then there is most probably no electricity on the installation as the DALI system has a fail safe if the controllers DALI voltage fails, the luminaires will all go on)
 - If mains is on but still no LED at all → installation or unit is defective, get assistance from your electrician or facility department
- If LED (steady or blinking) visible :
 - Green LED should be permanently on while the unit is powered, if not → unit is defective
 - As soon as the startup process has finished and the Bluetooth module is ready to accept connections, the yellow LED will blink once every three seconds. If it blinks twice every second this means you or someone else is already connected.
 - If after a “scan devices” in the App, no devices are found, try moving your phone closer to the unit (within 1 meter) and retry. If still no devices can be found check no one else is connected (the yellow LED blinks twice every seconds)
 - If still no connection can be made, check the minimal requirements of the used smartphone/OS and if possible try with another smartphone to exclude problems or incompatibility with the smartphone.
 - If possible ask you electrician or facility service to force breaking all connections by cycling the power and wait until it flashes yellow again once every three seconds. Close the App and turn off Bluetooth, then re-open the App and confirm it may turn on Bluetooth and repeat the procedure.
 - If the device is found and you (or someone else) are connected, the LED will flash yellow twice every second, now you can operate the system with the App

ANNEX 4: PUSHBUTTON LABELS

The below PushButton labels can be cut out and inserted behind the transparent window as a service to your customer.

Classroom mode

Pushbuttons Global Setting

Connected to DA1

Scene Control

CLASSROOM ON	ALL ON
ALL OFF	PROJECTION

Connected to DA2

Zone Control

WINDOW AREA	INNER AREA
WHITEBOARD	ALL

Connected to DA3

Global Control

CLASSROOM ON	DIM UP
ALL OFF	DIM DOWN

Pushbuttons Local Setting

Connected to DA1

Window Area Control

ON	DIM UP
WINDOW AREA	
OFF	DIM DOWN

Connected to DA2

Inner Area Control

ON	DIM UP
INNER AREA	
OFF	DIM DOWN

Connected to DA3

Whiteboard Control

ON	DIM UP
WHITEBOARD	
OFF	DIM DOWN

Auditorium mode

Pushbuttons Global Setting

Connected to DA1

Scene Control

CLASSROOM ON	ALL ON
ALL OFF	PROJECTION

Connected to DA2

Zone Control

WINDOW AREA	INNER AREA
WHITEBOARD	ALL

Connected to DA3

Global Control

CLASSROOM ON	DIM UP
ALL OFF	DIM DOWN

Pushbuttons Local Setting

Connected to DA1

Window Area Control

ON	DIM UP
WINDOW AREA	
OFF	DIM DOWN

Connected to DA2

Inner Area Control

ON	DIM UP
INNER AREA	
OFF	DIM DOWN

Connected to DA3

Whiteboard Control

ON	DIM UP
WHITEBOARD	
OFF	DIM DOWN

ANNEX 5: FEEDBACK FORM

Dear customer or user of ETAP,

we value very much any feedback, either good or bad. Also anonymous feedback is most welcome (Only for RMA we need to know your contact details). You can use this form and hand it over, scan&email or mail it. Any feedback about ETAP, its products, systems, services or other are also welcome via info@etaplighting.com

Feedback Reason: Suggestion for improvement RMA (Return Defective Item) Other

Feedback Topic:

Details:

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For RMA:

Contact Details: (Name, Address, preferred way of contact and details):

.....

.....

Product(s) to return and failure description (please specify codes + quantities):

.....
.....

In case of App problems: Brand and typenumber of smartphone and OSversion:

.....
.....