ZUMTOBEL

DIMLITE

product handbook



english

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Safety instructions

The instructions in this chapter have been compiled to ensure that operators and users of the Zumtobel DIMLITE lighting control are able to detect potential risks in good time and take the necessary preventative measures.
The operator must ensure that all users fully understand these instructions and adhere to them. This device may be installed and configured only by suitably qualified personnel.

Use of system

Proper use
Control of indoor lighting systems.
The device may only be used for this intended purpose.

Improper use
Outdoor use.
Extensions and modifications to the product.
Use of third-party components and accessories that have not been specifically approved by Zumtobel.

⚠ Warning
Improper use could result in injury, malfunction or damage to property. The operator must inform all users of the potential risks associated with the use of the equipment and about protective countermeasures.

Surroundings
Not to be used in corrosive or explosive surroundings.

⚠ Dangers associated with the operation of the system

Danger of death from power.
Countermeasures
Disconnect the power to the entire lighting system before working on the lighting system.

Risk of damage caused by condensation.
Countermeasures
Prior to commissioning the system, wait until the control device is at room temperature and completely dry.

Risk of damage from humidity.
Countermeasures
Only use the control device in dry rooms and protect it against humidity.

Electromagnetic compatibility (EMC)
Although the Zumtobel control device meets the stringent requirements of the appropriate directives and standards on electromagnetic compatibility, it could potentially interfere with other devices under certain circumstances.

Introduction

DIMLITE is an ideal introduction to the world of intelligent lighting control. The basic model provides a number of convenient features to which extra functions can easily be added using supplementary components. It's as easy as putting together a jigsaw: just choose the pieces that are right for you.

DIMLITE overview

DIMLITE multifunction 2ch

- Two outputs for two separate luminaire groups
- One output for mains disconnection of operating devices (energy-saving operation)
- Two inputs for direct connection of conventional 230/240 V, 50/60 Hz momentary-action switches for individual dimming of the two luminaire groups
- One input for direct connection of a conventional 230/240 V, 50/60 Hz momentary-action switch for recalling lighting scenes
- One input for connecting a conventional presence detector for 230/240 V, 50/60 Hz
- A universal, digital interface for connecting up to 8 devices with digital interfaces (CIRCLE control unit, light sensor, input device for conventional momentary-action switches, multi-sensor for registering the presence/absence of people and infrared signals from remote controls)
- Presence-linked control designed to meet individual requirements with three operating modes and ten adjustable run-on times

DIMLITE multifunction 4ch

Differences to DIMLITE multifunction 2ch:

- Four outputs for four separate luminaire groups
- Four inputs for direct connection of conventional 230/240 V, 50/60 Hz momentary-action switches for individual dimming of the four luminaire groups
- One input for connection of a conventional 230/240 V, 50/60 Hz momentary-action switch for simultaneous dimming of all luminaire groups
- One input for direct connection of a conventional 230/240 V, 50/60 Hz momentary-action switch for recalling lighting scenes
- One input for connecting a conventional presence detector for 230/240 V, 50/60 Hz
- A universal, digital interface for connecting up to 8 devices with digital interfaces (CIRCLE control unit, light sensor, input device for conventional momentary-action switches, multi-sensor for registering the presence/absence of people and infrared signals from remote controls)
- Presence-linked control designed to meet individual requirements with three operating modes and ten adjustable run-on times

Basic functions

Outputs for luminaire groups
DALI or DSI operating devices can be connected to the outputs. It is not possible to operate DALI and DSI operating devices on the same output simultaneously.

Output (Rel.)
The relay contact is used for the mains disconnection of operating devices (energy-saving operation).

Inputs on the control device (T↑, T↓)
A separate input (Tx) is provided for dimming each luminaire group.
One connection (T↑ or T↓) is provided on each input for dimming up and down (holding down the momentary-action switch). This connection can optionally be used for single momentary-action switch control. If the lighting is switched off manually, briefly pressing the momentary-action switch recalls the last value set for the luminaire group in question. Multiple conventional 230/240 V, 50/60 Hz momentary-action switches can be connected to the inputs in parallel.

Input on the control device (T all)
This input is intended for dimming all luminaire groups up or down simultaneously. If the lighting is switched off manually, briefly pressing the key calls up the last value set for all luminaire groups. Multiple conventional 230/240 V, 50/60 Hz momentary-action switches can be connected to the input in parallel.

Input on the control device (Sc1)
This input is designed to recall lighting scene 1 or switch off the lighting. Multiple conventional 230/240 V, 50/60 Hz momentary-action switches can be connected to the input in parallel.

Input on the control device (PD/T)
Multiple conventional 230/240 V, 50/60 Hz motion sensors can be connected to the input in parallel. The motion sensors act on all outputs simultaneously.

Universal, digital interface (Contr.IN)
Up to 8 devices (ED-Cxx, ED-SxED, ED-SENS, ED-EYE, ED-IR) can be connected to the interface. In principle, multiple devices of the same type may be connected. The only exception is the ED-EYE light sensor: it may only be connected once.

Presence-linked control
The DIMLITE control device enables lighting to be controlled by the presence/absence of people. Presence detectors/motion sensors are required in addition to the DIMLITE control device.

Stairwell function
The DIMLITE control device enables the lighting to be automatically switched off after a run-on time has expired. A momentary-action switch is required in addition to the DIMLITE control device.

Daylight-linked control
The DIMLITE control device enables lighting to be controlled by the level of daylight entering the room. A light sensor is required in addition to the DIMLITE control device. Each output can be controlled individually.

Description of functions

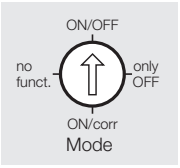
Dimming/lighting scene

Dimming is the variable adjustment of the level of brightness provided by the lighting. The DIMLITE control device enables the user to dim the lighting manually at any time. The luminaire groups can be dimmed individually or jointly.

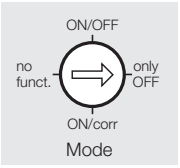
A lighting scene is a configurable brightness setting for a specific activity or task. A lighting scene can be recalled manually (e.g. by pressing a momentary-action switch) or automatically (e.g. using presence-linked control).
Two rotary selector switches (Mode, Run-On) can be used to set the switching behaviour and run-on time for the DIMLITE control device.

Presence-linked control

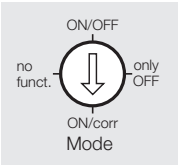
The most expensive light is a light that is left on in unused rooms and working areas. The DIMLITE control device enables lighting to operated in an energy-saving way by turning lights off when nobody is present.
A further advantage of presence-linked control is that the lighting is immediately switched on again as soon as someone enters the detection range of the presence detector/motion sensor.



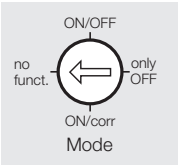
Mode ON/OFF (recall lighting scene and switch off lighting)
If a person enters the detection range of the presence detector, the most recently activated lighting scene will be recalled. If no one is located in the detection range, the lighting is switched off once the run-on time has expired and the fade time (64 s) has passed.
If multiple presence detectors are used: The lighting is only switched off once all presence detectors register that the area is empty, and the last run-on time has expired and the fade time has passed.



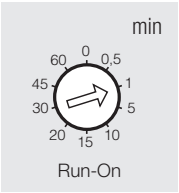
Mode only OFF (switch off lighting)
A lighting scene is recalled manually. If no one is located in the detection range of the presence detector, the lighting is switched off once the run-on time has expired and the fade time (64 s) has passed.
If multiple presence detectors are used: The lighting is only switched off once all presence detectors register that the area is empty, and the last run-on time has expired and the fade time has passed.



Mode ON/corr (recall lighting scene and change to corridor lighting scene)
A lighting scene is recalled when a person enters the detection range of the presence detector. If no one is located in the detection range, a corridor lighting scene is recalled once the run-on time has expired. The brightness for the corridor lighting scene is fixed at 10% (for all luminaire groups).
If multiple presence detectors are used: The corridor lighting scene is only recalled once all presence detectors register that the area is empty, and the last run-on time has expired and the fade time has passed.



Mode no funct.
Presence-linked control is not operational.



Run-On
Run-on time for the modes ON/OFF, only OFF und ON/corr Available settings: 0 min, 0.5 min, 1 min, 5 min, 10 min, 15 min, 20 min, 30 min, 45 min and 60 min.

Note:

! If at least one ED-SENS multi-sensor is connected to the universal, digital Contr.IN interface, the PD/T input is not active.

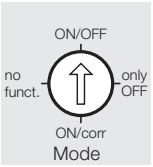
! All presence detectors/motion sensors connected to the PD/T input or the universal, digital Contr.IN interface use the settings (Mode, Run-On) made on the DIMLITE control device.

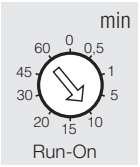
! The presence detectors connected to the universal digital Contr.IN interface can be assigned to individual luminaire groups (see the section "Assigning an ED-SENS multi-sensor to one or more luminaire groups", page 31).

! If no ED-SENS multi-sensor is connected to the universal digital Contr.IN interface, and no motion sensor for presence-linked control or no momentary-action switch for stairwell function is connected to the PD/T input, the rotary selector switch mode must be set to "no funct."

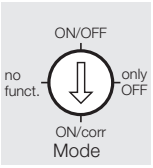
Stairwell function

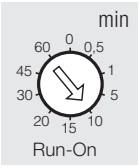
The DIMLITE control device allows for optimal energy-saving operation of lighting, in that the lighting (e.g. in a stairwell) is switched on by pressing a momentary-action switch and automatically switched off after a set run-on time has expired. This stairwell function is implemented by momentary-action switches connected to the PD/T input.





Mode ON/OFF (switch on lighting and delay switch-off of lighting)
Briefly pressing the momentary-action switch recalls the last active lighting scene. Once the run-on time has expired, the lighting switches off with a fade time of 64 seconds. If the momentary-action switch is pressed again before the run-on time has expired, the run-on time starts again.





Mode ON/corr (switch on lighting and delay change to corridor lighting scene)
Briefly pressing the momentary-action switch recalls the last active lighting scene. Once the run-on time has expired the corridor lighting scene is recalled. If the momentary-action switch is pressed again before the run-on time has expired, the run-on time starts again.

Mode no funct., Mode only OFF
Corridor function is disabled.

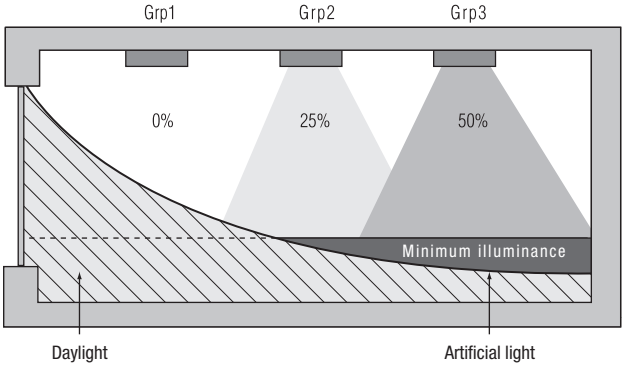
Note:
! If at least one ED-SENS multi-sensor is connected to the universal digital Contr.IN interface, the PD/T input is not active.
! If no ED-SENS multi-sensor is connected to the universal digital Contr.IN interface, and no motion sensor for presence-linked control or no momentary-action switch for stairwell function is connected to the PD/T input, the rotary selector switch mode must be set to "no funct."

Daylight-linked control

Optimal lighting conditions promote a feeling of wellbeing and boost motivation. And the best light of all is natural daylight. However, if daylight is not available in sufficient quantity or quality, it is necessary to supplement it with artificial light. Throughout the day, the DIMLITE control device automatically balances the level of artificial light in a room against the amount of daylight.

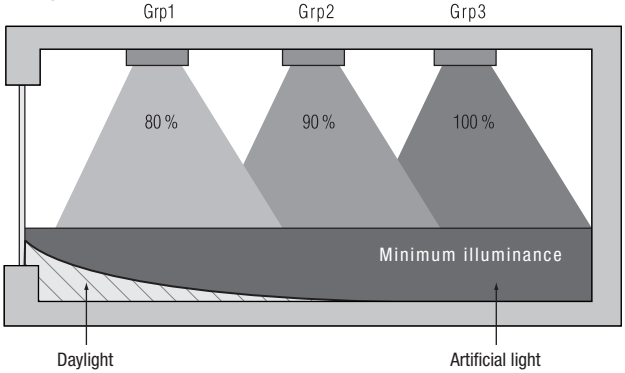
Example of daylight-linked control

Day



If a large amount of daylight is entering the room, the first luminaire group (Grp1) next to the window is dimmed down. The luminaires in the luminaire groups (Grp1, Grp2, Grp3) are dimmed up to provide the required minimum illuminance.

Twilight

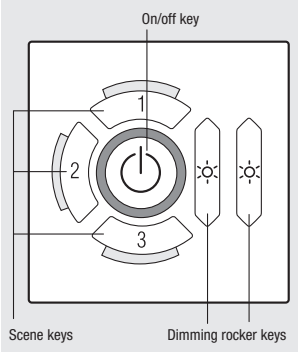


If the level of daylight in the room falls, the luminaires in the other groups (Grp2, Grp3) are dimmed up accordingly to provide the required minimum illuminance.

Note:
! All luminaire groups are designed for daylight-linked control.
! For information on project design, see the section "Planning daylight-linked control", page 19.
! For information on configuration, see the section "Configuring daylight-linked control", page 33".

Operation

CIRCLE control unit (ED-Cxx)

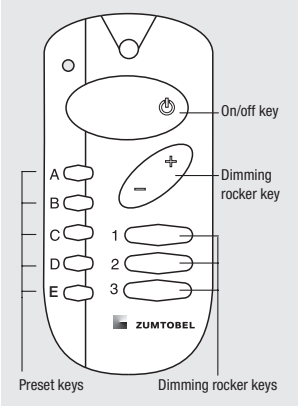


On/off key:
The on/off key is used to recall the last active lighting scene. If the lighting is switched off, the ring of light around the on-off key turns red to enable the control unit to be found in the dark.

Scene keys:
The scene keys are used to recall lighting scenes. Scene key 1 recalls lighting scene 1 (daylight-linked control, if required), scene key 2 recalls lighting scene 2 and scene key 3 recalls lighting scene 3. The active lighting scene is identified by an illuminated green circle section next to the relevant scene key. The scene keys are also used to save the lighting scene settings and the day and twilight points for daylight-linked control.

Dimming rocker keys:
The dimming rocker keys are used to manually dim the luminaires from luminaire group 1 or 2. Briefly pressing the upper area of the dimming rocker key recalls the last value set for the luminaire group in question. Briefly pressing the lower area of the dimming rocker key switches off the lighting for the luminaire group in question. Holding a finger down on the upper or lower area of the dimming rocker key dims the associated luminaire group between 1% and 100%.

Remote control (IRTOUCH)



On/off key:
The on/off key is used to recall the last active lighting scene or switch off the lighting.

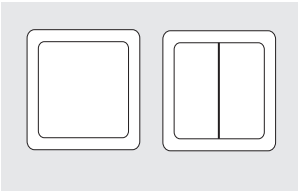
Scene keys:
The scene keys are used to recall lighting scenes.
Scene key 1 recalls lighting scene 1, scene key 2 recalls lighting scene 2 and scene key 3 recalls lighting scene 3. The scene keys are also used to save the lighting scene settings and the day and twilight points for daylight-linked control.

Preset key:
The preset keys are used to select a luminaire group which is then dimmed using the dimming rocker key or switched on/off using the on/off key. The preset keys A-D correspond to luminaire groups Grp1–Grp4.

Dimming rocker key:
The dimming rocker keys are used to dim the luminaires. If a luminaire group has not been selected with the preset keys A-D, all luminaires are dimmed simultaneously. If a luminaire group has been selected, only the luminaires in this group are dimmed.

Conventional momentary-action switches

Momentary-action switches can be connected directly to the inputs on the DIMLITE control device and on the ED-SxED input device connected to the control device at input Contr.IN.



Connected directly to the DIMLITE control device:
Lighting scenes are called up and the lighting is switched off using conventional 230/240 V, 50/60 Hz momentary-action switches (short press). Luminaire groups can also be dimmed (long press). If the lighting has been switched off manually, a short press calls up the last value set for the luminaire group in question.

Inputs T1, T2, T3, T4 and T all
Single momentary-action switch control:
Briefly pressing the momentary-action switch alternates between recalling the last value set for the luminaire group in question and switching off the lighting. Holding down the momentary-action switch dims the associated luminaire group up or down alternately between 1% and 100%.

Double momentary-action switch control:
Briefly pressing the momentary-action switch connected to Tx ↑ recalls the last value set for the luminaire group in question. Briefly pressing the momentary-action switch connected to Tx ↓ switches off the lighting for the luminaire group in question. Holding down the appropriate momentary-action switch dims the associated luminaire group between 1% and 100%.

Connected to ED-SxED
Rotary selector switch on ED-SxED set to 0:
Briefly pressing the momentary-action switch alternates between recalling the last value set for the luminaire group in question and switching off the lighting. Holding down the momentary-action switch smoothly adjusts the associated luminaire group up or down alternately between 1% and 100%.

Rotary selector switch on ED-SxED set to 1:
Lighting scenes 1-3 are recalled or the lighting is switched off.

Daylight-linked control

Daylight linking can only be used to control the lighting when an ED-EYE light sensor is connected at input Contr.IN.

Starting daylight-linked control
Daylight-linked control only starts when lighting scene 1 is recalled.
Lighting scene 1 can be directly recalled by pressing the keys on the ED-Cxx and IRTOUCH or by pressing momentary-action switches on the ED-SxED and input Sc1. Lighting scene 1 can also be recalled by motion sensors and momentary-action switches on input T all or PD/T if it was the last lighting scene active. If lighting scene 1 was active before the lighting was switched off, lighting scene 1 is recalled when individual luminaire groups are switched on and thus daylight-linked control is started for these luminaire groups.
If daylight-linked control has been stopped for a luminaire group by smooth adjustment, it is restarted when the luminaire group is switched on or after 4 hours of non-operation.

Stopping daylight-linked control
Daylight-linked control is stopped by recalling lighting scene 2 or 3 or by switching off the lighting. If lighting scene 1 is active and the luminaire groups are brightened or dimmed, daylight-linked control is only stopped for these luminaire groups.

Note:
! The circle section illuminating green for the scene key on the CIRCLE control unit ED-Cxx indicates which lighting scene is active.

Type of operating devices

The DIMLITE control device can be used to control DALI-compliant operating devices and DSI operating devices. The type of operating device configured for the outputs can be preset or automatically detected and set by the control device. All outputs Grp1 – Grp4 are set to control only DALI-compliant operating devices as standard..

Note:
! It is not possible to control DALI-compliant and DSI operating devices on the same output simultaneously. However, it is possible to control DALI-compliant operating devices on one output (e.g. Grp1) and DSI operating devices on a different output (e.g. Grp2).
! If an operating device has both a DALI and DSI interface,, the outputs are automatically set to DALI-compliant operating devices. However, this setting can be changed using the test key (see the section "Setting the type of operating device", page 28). The set type of operating device is retained even if the voltage supply is interrupted.

Mains disconnection

This function helps to lower energy costs and increase energy efficiency. For this function to work, the phase for the power supply of the operating devices must be passed through the relay contact (Rel.) If all connected luminaires are switched off, the relay contact (Rel.) switches off power to the operating devices after 30 minutes.

Project design

Recommended procedure

1. Ascertain the customer's needs and requirements
2. Select a suitable control device (DIMLITE multifunction 2ch or DIMLITE multifunction 4ch)
3. Planning luminaire groups and mains disconnection
4. Plan the operation
5. Arrange presence detectors/motion sensors
6. Planning the stairwell function
7. Plan daylight-linked control

Planning luminaire groups

DIMLITE multifunction 2ch or DIMLITE multifunction 4ch:

The outputs are used to control two or four luminaire groups individually.
Luminaires within a luminaire group cannot be controlled individually.

Number of operating devices that can be connected:

Outputs	Grp1	Grp2	Grp3	Grp4
DALI operating devices only	25	25	25	25
DSI operating devices only	50	50	50	50
DALI and DSI operating devices	25 DALI or 25 DSI operating devices	25 DALI or 25 DSI operating devices	25 DALI or 25 DSI operating devices	25 DALI or 25 DSI operating devices

Note:

! DALI and DSI operating devices may not be connected to the same output simultaneously.

! A luminaire is allocated to a luminaire group by connecting the DALI/DSI control line to an output. Therefore you must first determine which luminaires are to be located in which luminaire groups and plan the associated cabling.

! If you are planning daylight-linked control, you must take into account that each luminaire group will be controlled individually. When planning the luminaire groups, consider the different directions in which daylight enters the room see the section "Example of daylight-linked control", page 8. Plan the cabling accordingly.

! If planning presence-linked control, take into account that, in principle, all luminaire groups will be controlled together. However, separate luminaire groups can be controlled individually using the ED-SENS multi-sensor. The IRTOUCH remote control is required for this configuration.

! If you are planning a mains disconnection (energy-saving mode), pass the phase for supplying power to the operating devices through the relay contact (Rel.) In doing so, observe the maximum switching current (max. 16 A ohmic load) of the relay contact. If the maximum switching current is exceeded by the connected operating devices, incorporate a sufficiently designed contactor.

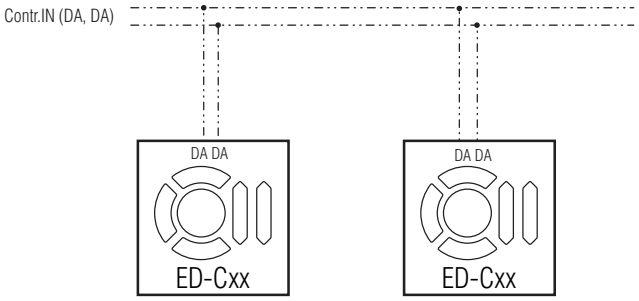
! For details about cabling options (DALI/DSI control lines) and installation materials, see the section "DALI/DSI, Contr.IN control lines", page 20.

Planning operation

A total of three lighting scenes can be set with the DIMLITE control device. They can be called up individually by the relevant control units.

CIRCLE control unit (ED-Cxx)

CIRCLE control unit ED-Cxx is a wall-mounted control unit that can be used to call up three different lighting scenes. It also includes two dimming rocker keys that can be used to dim luminaire groups 1 and 2 temporarily while a lighting scene is active.



Note:

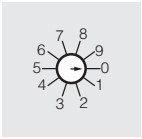
! The ED-Cxx control unit is available in different models (different covers, colours, etc.).
! The power for the ED-Cxx control unit is supplied via the Contr.IN control line.
! Up to 8 devices (ED-Cxx, ED-SxED, ED-SENS, ED-EYE, ED-IR) can be connected to the Contr.IN control line.
! The ED-Cxx control unit is installed in a single recessed European socket, DIN 0606 (ø 60 mm, depth 42 mm) or a UK metal backbox (not included in supply).
! The values associated with lighting scenes 1 to 3 are managed in the DIMLITE control device. Irrespective of the control unit (ED-Cxx, ED-SxED, momentary-action switch connected to input Sc1) used to call up one of the lighting scenes, the value that has been specified for the particular lighting scene is always activated.
! The two dimming rocker keys on CIRCLE control unit ED-Cxx cannot be allocated to luminaire groups 3 and 4.

Input device ED-SxED

The ED-SxED input device has 4 separate inputs (T1–T4) to which conventional momentary-action switches can be connected. The momentary-action switches are used to recall lighting scenes or dim luminaire groups.

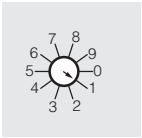
The momentary-action switch inputs are configured as follows:

Rotary selector switch position 0:

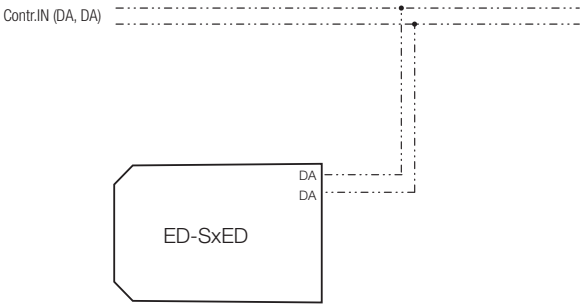


Momentary-action switch input	Effect
T1	Luminaire group 1: Recall last set value; brighten and dim lighting; switch off lighting
T2	Luminaire group 2: Recall last set value; brighten and dim lighting; switch off lighting
T3	Luminaire group 3: Recall last set value; brighten and dim lighting; switch off lighting
T4	Luminaire group 4: Recall last set value; brighten and dim lighting; switch off lighting

Rotary selector switch position 1:



Momentary-action switch input	Effect
T1	Switch off all lighting
T2	Recall lighting scene 1
T3	Recall lighting scene 2
T4	Recall lighting scene 3

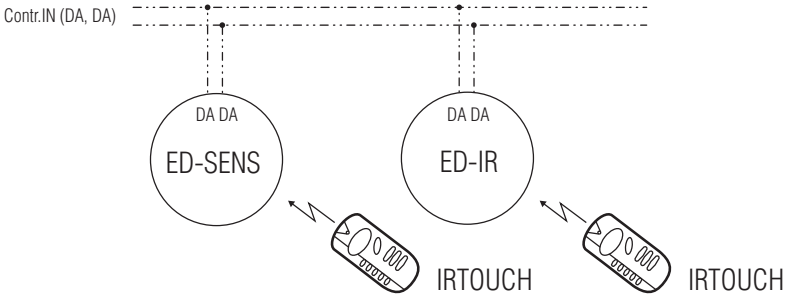


Single momentary-action switch control

Note:
! Do not use momentary-action switches fitted with integrated glow lamps, RC elements or switching thyristors because they are not recognised by the ED-SxED input device.
! The lines between the ED-SxED input device and the momentary-action switches must not exceed 30 cm.
! The voltage supply for the ED-SxED input device is provided via the Contr.IN control line.
! Up to 8 devices (ED-Cxx, ED-SxED, ED-SENS, ED-EYE, ED-IR) can be connected to the Contr.IN control line.
! The ED-SxED input device is installed in a single recessed European socket, DIN 0606 (ø 60 mm, depth 61 mm) or a UK metal backbox (not included in supply).

Remote control (IRTOUCH)

The IRTOUCH remote control can be used to recall three lighting scenes or switch off the lighting. It also enables up to 4 luminaire groups to be dimmed individually. The infrared signal is received by either the ED-SENS multi-sensor or the ED-IR infrared receiver.



Note:
! The range of the IRTOUCH remote control depends on the conditions in the room: the infrared signal is influenced by surfaces that are reflective (e.g. light walls, furnishings and floors) or absorbent (e.g. dark walls).
! Devices that emit infrared light (such as laptops, PDAs or mobile phones with active infrared interfaces, as well as plasma screens) can also influence the infrared signal emitted by the IRTOUCH remote control.
! Only one infrared emission code from the IRTOUCH remote control can be effective for each DIMLITE system. If you u se more than one DIMLITE system, you can operate each system separately by assigning a dedicated infrared emission code (up to a maximum of three different infrared emission codes can be allocated for each ED-SENS multi-sensor or ER-IR infrared receiver). To set the IRTOUCH infrared emission code, use the multi-switch (0-2) in the battery compartment see the section "Assigning an IRTOUCH remote control", page 30 .

Momentary-action switches on the DIMLITE control device

The DIMLITE control device has 2 or 4 inputs to which conventional momentary-action switches can be connected. Briefly pressing the momentary-action switches connected to inputs T1 – T4 and T all recalls the last value set for the luminaire groups in question or switches off the lighting. Holding down the momentary-action switches dims or brightens the luminaire groups in question. A momentary-action switch connected to the Sc1 input recalls lighting scene 1 or switches off the lighting. For a description of operating options, see the section "Conventional momentary-action switches", page 10.

Note:

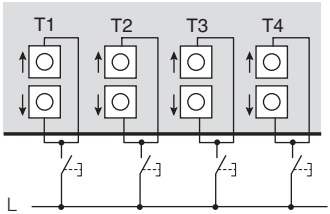
! Any number of momentary-action switches can be connected to an input (T1, T2, T3, T4, T all, Sc1) in parallel.

! The phase (L) adjacent to the inputs must be the same as the phase used to supply power to the DIMLITE control device.

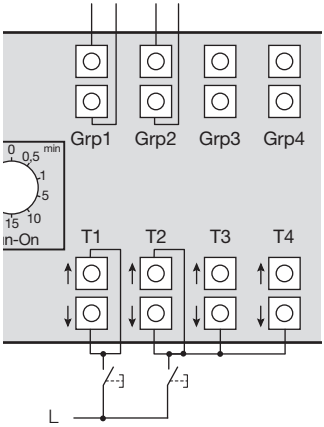
! Loop-through wiring of the momentary-action switches to other DIMLITE control devices is not permitted.

Inputs T1, T2, T3, T4

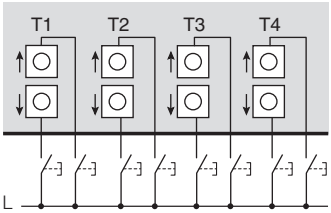
Example: single momentary-action switch control



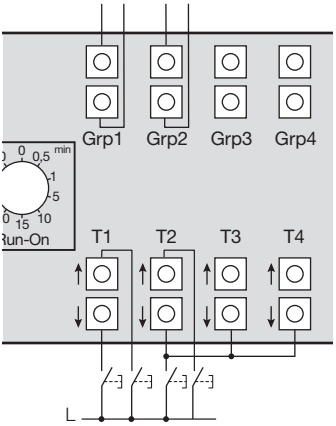
Example: single momentary-action switch control
Outputs Grp3 and Grp4 are not used.



Example: double momentary-action switch control



Example: double momentary-action switch control
Outputs Grp3 and Grp4 are not used.

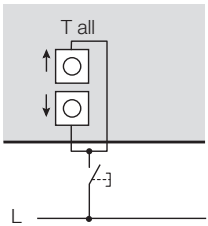


Note:

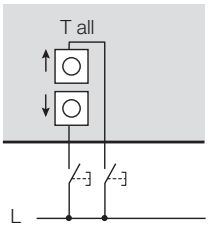
! If an output is not used, the associated input (e.g. T3↓) must be electrically connected to another input (e.g. T2↓) to which a momentary-action switch is connected. This connection method makes the switched-off state of the unused outputs clear, which is necessary for mains disconnection, for example. In this case, the relay contact (Rel.) only opens when all outputs are switched off.

Input T all

Example: single momentary-action switch control

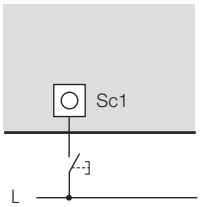


Example: double momentary-action switch control



Input Sc1

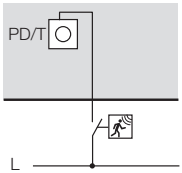
Only single momentary-action switch control possible



Arranging presence detectors/motion sensors

Input PD/T

One or more motion sensors are required in addition to the DIMLITE control device. Multiple conventional 230/240 V, 50/60 Hz motion sensors can be connected to the input in parallel.



Note:

! If an ED-SENS multi-sensor is connected to the universal, digital Contr.IN interface, the PD/T input is not active.

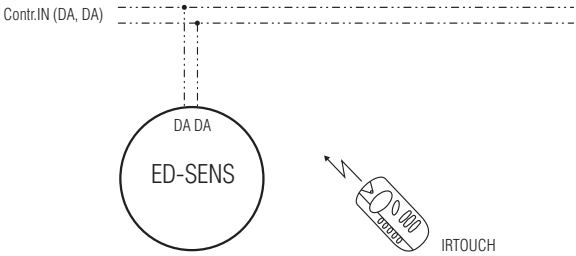
! Any number of motion sensors (switching contact) can be connected to the PD/T input in parallel.

! The phase (L) adjacent to the PD/T input must be the same as the phase used to supply power to the DIMLITE control device.

! Loop-through wiring of the motion sensors to other DIMLITE control devices is not permitted.

ED-SENS multi-sensor

At least one ED-SENS multi-sensor is required in addition to the DIMLITE control device. The ED-SENS multi-sensor detects the presence/absence of people in the room, as well as the infrared signal emitted by the IRTOUCH remote control.



Note:

! Plan the positioning of the ED-SENS multi-sensor so that it is located above the working area.

! Reception characteristics are changed by reflections from light walls, furniture or floors.

! The detection ranges of several ED-SENS multi-sensors installed close to each other may overlap.

! Avoid sources of heat within the sensors' range (e.g. printers, copiers, fax machines).

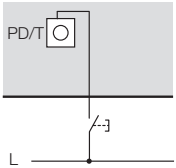
! Up to 8 devices (ED-Cxx, ED-SxED, ED-SENS, ED-EYE, ED-IR) can be connected to the Contr.IN control line.

! If an ED-SENS multi-sensor is connected to the universal, digital Contr.IN interface, the PD/T input is not active.

Planning the stairwell function

Input PD/T

Multiple conventional 230/240 V, 50/60 Hz momentary-action switches can be connected to the PD/T input in parallel.



Note:

! If an ED-SENS multi-sensor is connected to the universal digital Contr.IN interface, the PD/T input is not active.

! Any number of momentary-action switches can be connected to the PD/T input in parallel.

! The phase (L) adjacent to the PD/T input must be the same as the phase used to supply power to the DIMLITE control device.

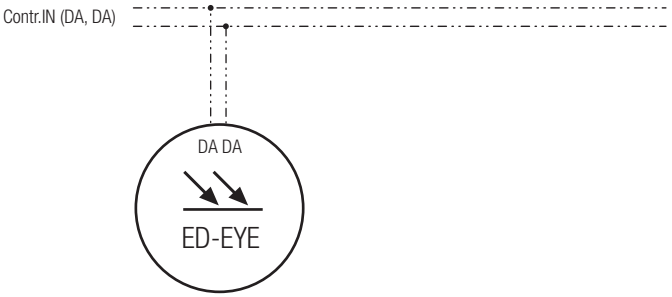
! Loop-through wiring of the momentary-action switches to other DIMLITE control devices is not permitted.

! No motion sensors can be connected to the PD/T input when stairwell function is active.

Planning daylight-linked control

ED-EYE light sensor

An ED-EYE light sensor is required in addition to the DIMLITE control device. The ED-EYE light sensor detects the amount of daylight entering the room.-



Note:

! For information relating to project design and positioning and mounting the ED-EYE light sensor, see the installation instructions for the ED-EYE light sensor.

! Up to 8 devices (ED-Cxx, ED-SxED, ED-SENS, ED-EYE, ED-IR) can be connected to the Contr.IN control line. The only exception is the ED-EYE light sensor: it may only be connected once.

Installation

DALI/DSI, Contr.IN control lines

The DALI/DSI or Contr.IN control lines can be laid together with a 230/240 V AC power supply line, provided that it is sufficiently insulated (2 x basic insulation). The control lines can consist of conventional installation material and do not have to be braided or shielded. When selecting the control line, ensure that the maximum resistance is 8 ohm per 300 m length of control line.
The installation material must be approved for low-voltage installation (DIN VDE 0472/part 508).
E.g.: H05V V-U 2 x 0.75 mm²
H05V V-U 2 x 1.50 mm²

Insulation of DALI/DSI, Contr.IN interfaces
The insulation of the digital interfaces meets basic insulation requirements. Tested to EN 60 928, no guarantee of compliance with SELV standards.

Line cross-sections and lengths

DALI and Contr.IN control lines:

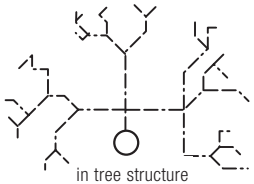
Line cross-section	Maximum line length
2 x 0.50 mm²	100 m
2 x 0.75 mm²	150 m
2 x 1.50 mm²	300 m

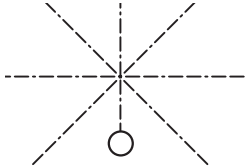
DSI control line:

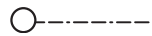
Line cross-section	Maximum line length
2 x 0.50 mm²	125 m
2 x 0.75 mm²	125 m
2 x 1.00 mm²	125 m
2 x 1.50 mm²	250 m

Wiring

There are the following options for DALI/DSI and Contr.IN wiring:


in tree structure

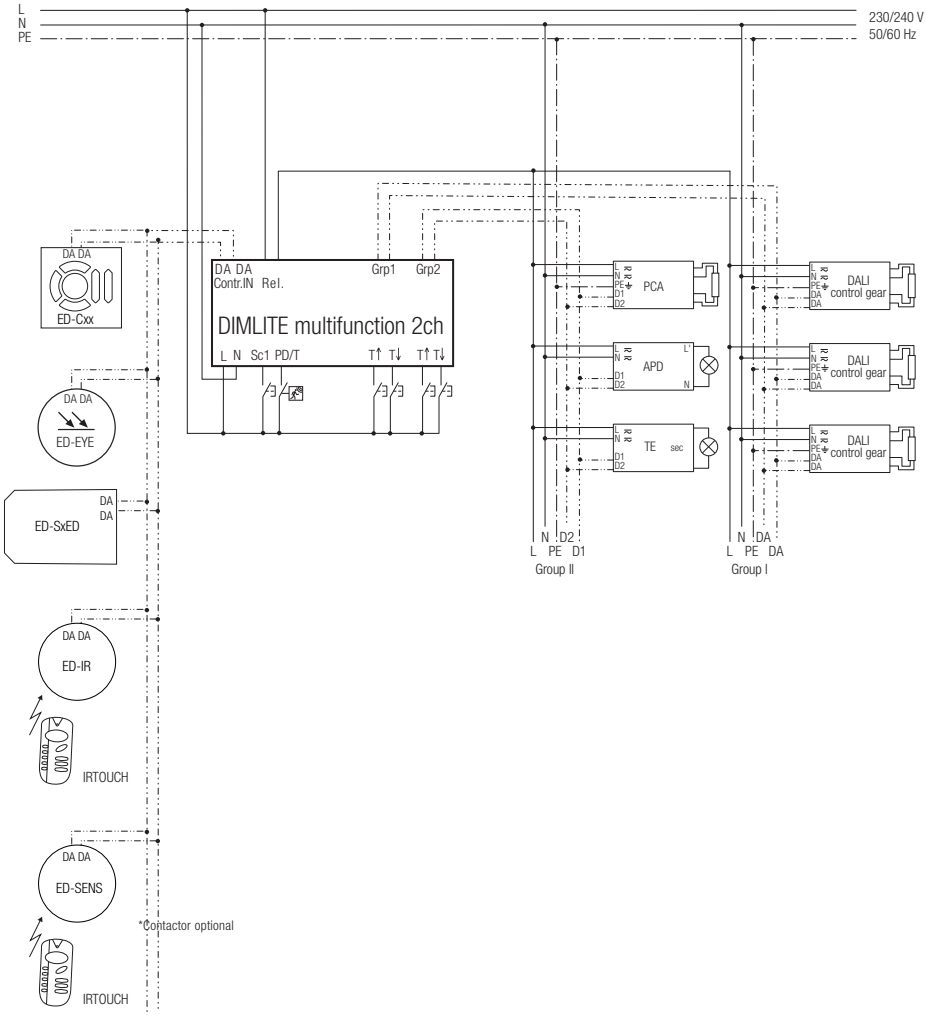

in star structure


in line structure

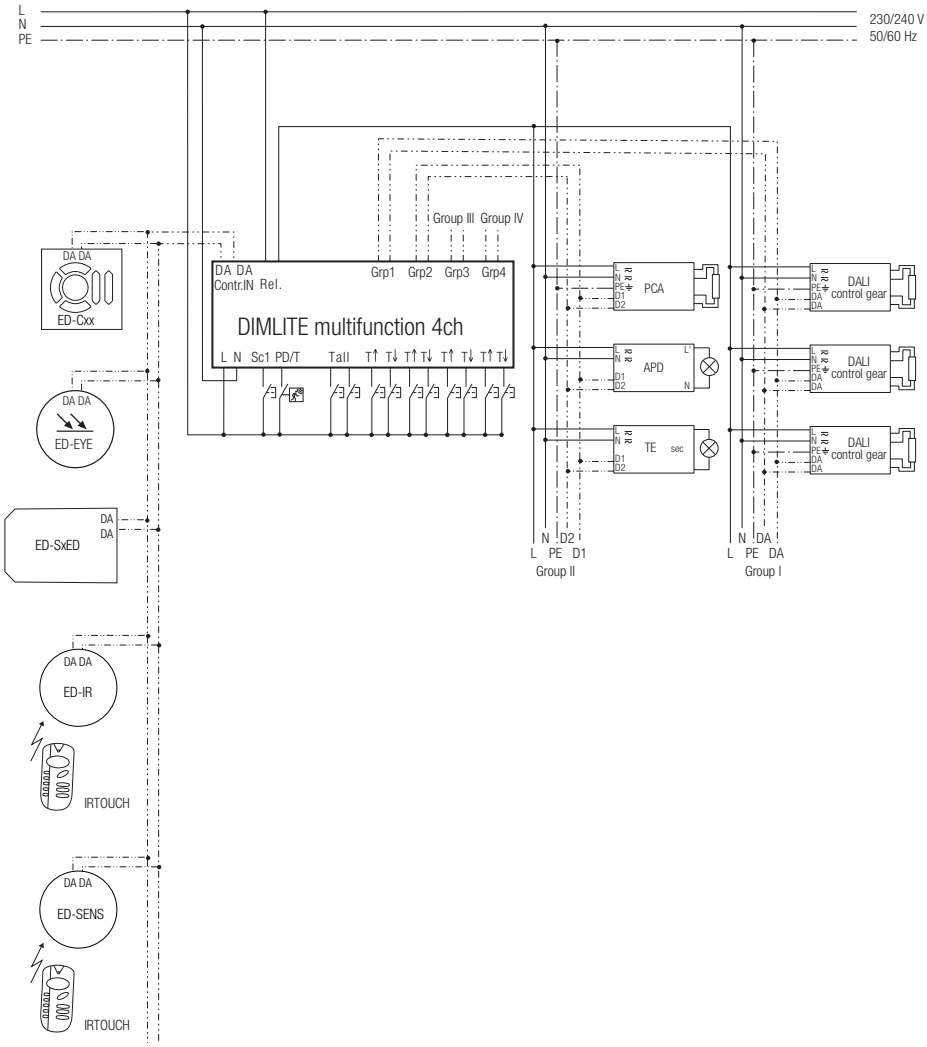
Note:
! Each output (Grp1–Grp4) must be laid separately. The outputs may not be connected to each other electrically. The universal, digital Contr.IN interface must also be laid separately.
! Ring topologies are not permitted.

Wiring diagram

DIMLITE multifunction 2ch

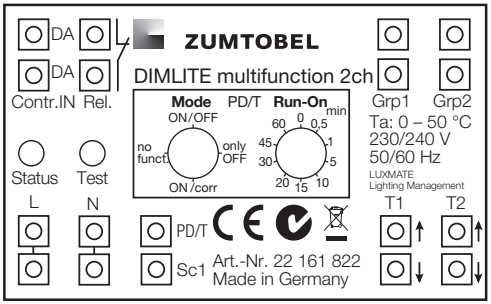


DIMLITE multifunction 4ch

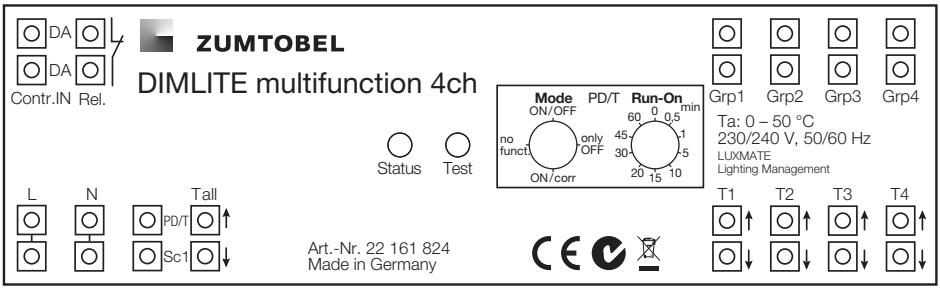


Housing label

DIMLITE multifunction 2ch



DIMLITE multifunction 4ch



Commissioning

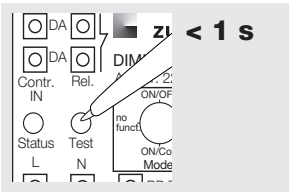
When the voltage supply is established for the first time, the DIMLITE control device starts the initialisation (status LED flashes orange). This can take up to two minutes, depending on the type and number of devices connected to the Contr.IN interface. Outputs Grp1 – Grp4 are set to control DALI-compliant operating devices. The DIMLITE system cannot be operated during initialisation. The status LED illuminates or flashes green when initialisation is complete.

Test key/Status LED

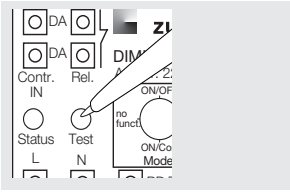
The status LED and test key on the DIMLITE control device enable you to test that the outputs are wired up and function correctly.

Test key

The test key can be used to trigger tests as well as certain functions.

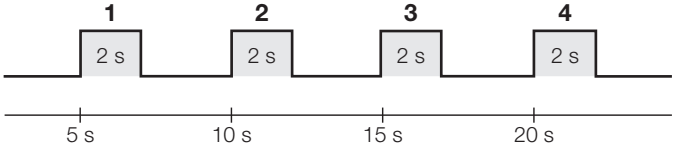


Installation test
Briefly press the test key.
Every time the key is pressed, all luminaires alternate between switching on and off.



Triggering a function
1. Press the test key.
2. Release the test key in the desired orange phase.
Function is triggered.

Orange phases



Orange phase	Function
1	Set all outputs to control DALI-compliant operating devices.
2	Set all outputs to control DSI operating devices.
3	Automatically detect the type of operating device at each output.
4	Restore factory settings.

Status LED

off	device or power failure
green	fault-free operation, configuration options enabled
green, flashing on/off every 1 s	fault-free operation, configuration options disabled
orange, flashing on/off every 1 s	initialisation, takes up to 2 minutes
red	more than 8 ED devices connected or more than 1 ED-EYE light sensor connected
red, flashing on/off every 1 s	too many operating devices connected to one output

Carrying out an installation test

Carry out the installation test once electrical installation has been completed in full and tested.

Overview

What is tested?	How is it tested?	What happens if the installation is OK?
Outputs **Grp1, Grp2, Grp3, Grp 4**	Press the test key on the DIMLITE control device (<1 s).	All luminaire groups alternate between switching on and off every time the test key is pressed.
Inputs **T1, T2, T3, T4**	Hold down the momentary-action switches connected to inputs T1, T2, T3, T4 of the DIMLITE control device in sequence.	The corresponding luminaire groups dim up or down.
Input T all	Hold down the momentary-action switch connected to the T all input of the DIMLITE control device.	All luminaire groups dim up or down.
Input Sc1	Briefly press momentary-action switch several times.	All luminaire groups switch off in turn or lighting scene 1 is recalled.
Input PD/T	Set the mode rotary selector switch on the DIMLITE control device to ON/OFF and the run-on rotary selector switch to 0.5 min. Then, briefly enter the detection range of the motion sensor and leave the area again. **Note:** The PD/T input is only active if no ED-SENS multi-sensor has been connected to the Contr.IN control line.	All luminaire groups switch on. After you leave the detection range of the motion sensor, it will turn all luminaires off again after approx. 0.5 minutes. **Note:** The run-on time of 230/240 V, 50/60 Hz motion sensors is added to the run-on time and fade time (64 s) that have been set.
ED-Cxx control unit	Briefly press on/off key several times.	All luminaire groups switch on or off.
ED-SxED control unit	Rotary selector switch position 0: briefly press all connected momentary-action switches T1 – T4 in sequence.	The corresponding luminaire groups switch on or off.
	Rotary selector switch position 0: hold down and release all connected momentary-action switches T1 – T4 in sequence.	The corresponding luminaire groups brighten or dim.
	Rotary selector switch position 1: briefly press all connected momentary-action switches T1 – T4 in sequence.	All luminaire groups switch off, or lighting scene 1, 2 or 3 is recalled.

What is tested?	How is it tested?	What happens if the installation is OK?
ED-SENS multi-sensor	Set the mode rotary selector switch on the DIMLITE control device to ON/OFF and the run-on rotary selector switch to 0.5 min. Then, briefly enter the detection range of the ED-SENS multi-sensor and leave the area again.	All luminaire groups switch on. After you leave the detection range of the ED-SENS multi-sensor, it will turn all luminaires off again after approx. 0.5 minutes and once the fade time (64 s) of all luminaires has passed.
ED-EYE light sensor	Before starting the installation test, set the mode rotary selector switch to "no funct." This prevents the lighting from being accidentally switched on or off by motion sensors/presence detectors while you are testing the installation. When delivered from the factory, control characteristics are already defined for all luminaire groups. If there is a large amount of daylight in the room: shade the sensor opening on the ED-EYE light sensor. If there is little or no daylight in the room: illuminate the sensor opening on the ED-EYE light sensor (e.g. with a torch). Recall lighting scene 1 for this installation test.	When shading the ED-EYE light sensor: the luminaire groups slowly dim up. When illuminating the ED-EYE light sensor: the luminaire groups slowly dim down. **Note:** Daylight-based dimming may take several minutes.

Note:
! Factory setting: lighting scene 1 is set to 100% brightness, lighting scene 2 is set to 80% brightness and lighting scene 3 is set to 60% brightness.

Interruptions to the voltage supply at the DIMLITE control device

- If the voltage supply to the DIMLITE control device is interrupted while the supply line remains connected to the operating devices, all lighting will switch to 100%.
- When the voltage supply to the DIMLITE control device is restored, the lighting scene that was active before the power supply was interrupted is recalled.

Configuration

Before starting to configure the system, first carry out the installation test (see the section "Carrying out an installation test", page 26).

Setting the type of operating device

The test key and orange phases can be used to define the type of operating devices controlled at the outputs (see the section "Orange phases", page 24).

Setting to DALI-compliant operating devices

1. Press the test key.
2. Release the test key in the 1st orange phase.
   All outputs Grp1 – Grp4 are set to control DALI-compliant operating devices.

Setting to DSI operating devices

1. Press the test key.
2. Release the test key in the 2nd orange phase.
   All outputs Grp1 – Grp4 are set to control DSI operating devices.

Automatically detecting the type of operating device

1. Press the test key.
2. Release the test key in the 3rd orange phase.
   The type of operating device is automatically detected at each output (Grp1 – Grp4).

Hinweise:

! The status LED flashes orange while the DIMLITE control device sets the type of operating device. If the status LED illuminates or flashes green, the lighting system is ready for operation again.

! If the type of operating device is being automatically detected and operating devices with both a DALI and DSI interface are connected to an output (Grp x), the output is set to control DALI-compliant operating devices.

Setting/saving/changing lighting scenes

Different activities require different levels of minimum illuminance see the section "Extract from minimum illuminance according to EN 12464", page 43. A suitable lighting scene can be recalled for the activity to be carried out. When using the DIMLITE control device, up to three lighting scenes can be recalled and individually configured. If you wish to configure daylight-linked control, bear in mind that this is only possible for lighting scene 1.

Scenes can be saved using the scene keys on the following devices:

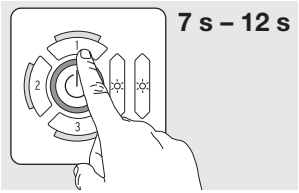
- ED-Cxx control unit
- IRTOUCH remote control
- ED-SxED input device (rotary selector switch position 1)
- Momentary-action switch connected to input Sc1

Setting a lighting scene

You can dim the individual outputs to the required illuminance (lx) using the corresponding keys.

1. First, set the mode rotary selector switch on the DIMLITE control device to "no funct." This prevents the lighting from being accidentally switched on or off by motion sensors/presence detectors while you are setting the lighting scene (see the section "Presence-linked control", page 5).
2. Determine the activity to be performed and the required level of minimum illuminance see the section "Extract from minimum illuminance according to EN 12464", page 43.
3. Place a luxmeter on the workspace (e.g. desk) located underneath the desired luminaire group.
4. Dim each output until the required illuminance has been achieved on each workspace according to the reading on the luxmeter. You can now save the lighting scene.
5. Set the rotary selector switch on the DIMLITE control device back to the desired mode, if necessary.

Saving a lighting scene



Example: Saving lighting scene 1 using the CIRCLE ED-Cxx control unit
Hold down the scene key to which you wish to save the setting for between 7 and 12 seconds. The associated luminaires will blink briefly when the scene has been saved successfully.

Note:
! The green LED on the IRTOUCH remote control blinks to indicate the period of time in which the setting can be saved (7-12 s).
! The green LED on corresponding scene key of the ED-Cxx control unit blinks to indicate the period of time in which the setting can be saved (7-12 s).

Changing a lighting scene

1. Recall the lighting scene that you want to change.
2. Change the lighting scene see the section "Setting a lighting scene", page 29.
3. Save the lighting scene see the section "Saving a lighting scene", page 29.

Assigning an IRTOUCH remote control

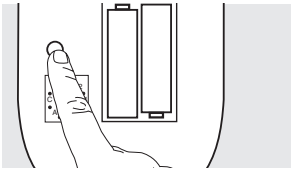
Assigning the IRTOUCH remote control to a DIMLITE system

The IRTOUCH remote control is configured for immediate use. Note that all IRTOUCH remote controls have the same preset infrared emission code on the multi-switch in the battery compartment.

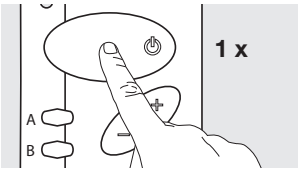
Assigning the IRTOUCH remote control for multiple adjoining DIMLITE systems

To prevent IRTOUCH remote controls from influencing other DIMLITE systems in close proximity, they can be set to different infrared emission codes.

1. Make sure that only the DIMLITE control device to which the IRTOUCH remote control will be allocated is supplied with voltage. All other DIMLITE control devices must be disconnected from the voltage supply.
2. Use the multi-switch (0, 1 or 2) in the battery compartment of the IRTOUCH remote control to set the required infrared emission code.
3. Ensure that there is visual connection to at least one ED-SENS multi-sensor or ED-IR infrared receiver. Press the programming key in the battery compartment of the IRTOUCH remote control. The green LED on the IRTOUCH remote control starts to blink.



4. Point the IRTOUCH remote control towards the ED-SENS multi-sensor or the ED-IR infrared receiver. The green LED illuminates in the ED-SENS multi-sensor or ED-IR infrared receiver. The DIMLITE system can now be linked with the IRTOUCH remote control using the infrared emission code that has been set.
5. Press preset key "E" on the IRTOUCH remote control.
6. Briefly press the on/off key once on the IRTOUCH remote control.



7. To complete the assignment, press one of the 3 scene keys on the IRTOUCH remote control. The green LED of the selected ED-SENS multi-sensor or ED-IR infrared receiver goes out.

The remote control is now assigned.

Note:

! Only one infrared emission code from the IRTOUCH remote control can be effective for each DIMLITE system. If you use more than one DIMLITE system, you can operate each system separately by assigning dedicated infrared emission codes (up to a maximum of three different infrared emission codes can be allocated for each ED-SENS multi-sensor or ED-IR infrared receiver). To set the IRTOUCH infrared emission code, use the multi-switch (0-2) in the battery compartment.

Configure presence-linked control

1. Set the desired function (Mode) and run-on time (Run-On) on the rotary selector switch of the DIMLITE control device (see the section "Presence-linked control", page 5).
2. Check the settings that have been made (Mode, Run-On) for presence-linked control by entering and then leaving the detection range of the presence detector.

Note:

! All presence detectors/motion sensors connected to the PD/T input or the universal, digital Contr.IN interface use the settings (Mode, Run-On) made on the DIMLITE control device.

! Standard motion sensors connected to the PD/T input can have a separate setting, which can be used to define a run-on time. Set the run-on time to 0 s or add this time to the run-on time set on the DIMLITE control device.

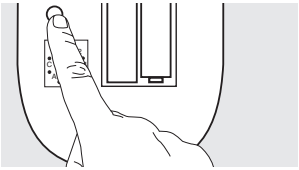
! If multiple presence detectors are used: the lighting is only switched off once all presence detectors register that the area is empty and the last run-on time has expired.

! All connected presence detectors affect all luminaire groups simultaneously. Exception: The ED-SENS multi-sensor can be assigned to one or more luminaire groups see the section "Assigning an ED-SENS multi-sensor to one or more luminaire groups", page 31.

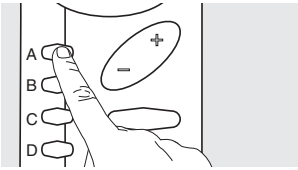
Assigning an ED-SENS multi-sensor to one or more luminaire groups

The IRTOUCH remote control can be used to assign an ED-SENS multi-sensor to one or more luminaire groups. The multi-sensor will then control only the assigned luminaire groups.

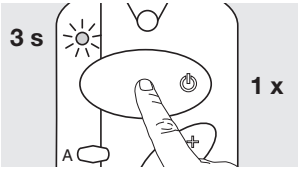
1. Determine which luminaire groups are to be assigned to which ED-SENS multi-sensor.
2. Check the infrared emission code that has been set using the multi-switch (0, 1 or 2) in the battery compartment of the IRTOUCH remote control see the section "Assigning an IRTOUCH remote control", page 30.
3. Ensure that there is visual connection to at least one ED-SENS multi-sensor. Press the programming key in the battery compartment of the IRTOUCH remote control. The green LED on the IRTOUCH remote control starts to blink. The green LED on the first ED-SENS multi-sensor begins to illuminate continuously. It is now ready to be assigned to one or more luminaire groups.



4. Upon delivery, the ED-SENS multi-sensor is assigned to all luminaire groups. To enable assignment to individual luminaire groups, you must first delete the assignment to all luminaire groups.
   To do this, briefly press the on/off key on the IRTOUCH remote control. As soon as the assignment of the ED-SENS multi-sensor to all luminaire groups has been deleted successfully, the green LED on the ED-SENS flashes briefly.
5. Press the preset key on the IRTOUCH remote control which corresponds to the luminaire group to which you wish to assign the ED-SENS multi-sensor.
   The green LED on the IRTOUCH remote control begins flashing for three seconds.



6. Press the on/off key on the IRTOUCH remote control within this time.
   The selected luminaire group is assigned to the ED-SENS multi-sensor.



   CAUTION: If a preset key is not pressed or the on/off key is not pressed within the three-second time frame, the ED-SENS multi-sensor assignment is deleted for all luminaire groups (see step 4).
7. If you want to assign additional luminaire groups to the selected ED-SENS multi-sensor, repeat steps 5 and 6 using the relevant preset keys.
8. To select the next ED-SENS multi-sensor, press the dimming rocker key ("+" or "-") on the IRTOUCH remote control. The green LED on the next ED-SENS multi-sensor begins to illuminate continuously. Repeat steps 5 to 6 to assign luminaire groups to the selected ED-SENS multi-sensor.
9. To complete the assignment, press one of the 3 scene keys on the IRTOUCH remote control. The green LED on the selected ED-SENS multi-sensor goes out.

Note:

! The following luminaire groups are assigned to the following preset keys on the remote control:
Preset key A – luminaire group 1
Preset key B – luminaire group 2
Preset key C – luminaire group 3
Preset key D – luminaire group 4

! If more than one ED-SENS multi-sensor are assigned to a luminaire group, please note the following: all assigned ED-SENS multi-sensors are active for the presence-linked control of this luminaire group. The order of assignment does not affect presence-linked control.

Configuring stairwell function

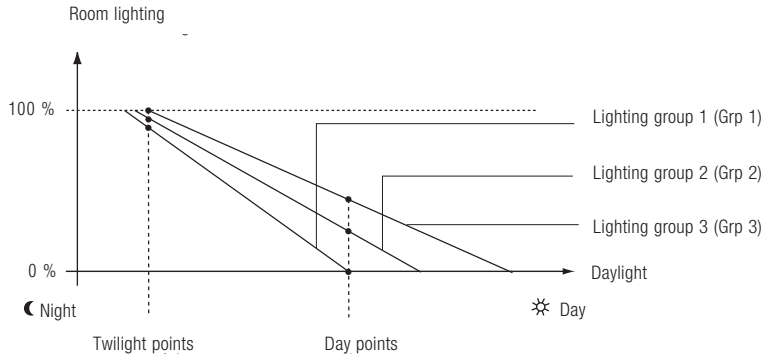
This stairwell function is implemented by momentary-action switches connected to the PD/T input.

1. Set the desired function (Mode) and run-on time (Run-On) on the rotary selector switches of the DIMLITE control device (see the section "Stairwell function", page 7).
2. Check the settings that have been made (Mode, Run-On) for stairwell function by operating one of the momentary-action switches connected to the PD/T input.

Configuring daylight-linked control

If you wish to configure daylight-linked control, bear in mind that this is only possible for lighting scene 1.
Daylight-linked control is implemented using the control characteristics. The artificial light is controlled depending on the amount of daylight in the room using the control characteristic. A separate control characteristic can be configured for each luminaire group.
Each control characteristic is based on two system points: a day and a twilight point. If daylight-linked control is not to be used for a luminaire group, save the same value for the day and twilight points.

Example: Control characteristics for 3 outputs (Grp1, Grp2, Grp3)
The control characteristics refer to the example in Section "Daylight-linked control" (see the section "Daylight-linked control", page 8).



Defining system points

Daylight during consistently bright weather is required for the day points (e.g. little to medium cloud cover). Low levels of daylight are required in the room for the twilight points (e.g. evening or night-time hours, or shaded room, alternatively). The DIMLITE control device uses the intensity of the daylight in the room to automatically detect whether day points or twilight points are being saved. For this reason it is important to save day and twilight points in significantly different lighting conditions.

1. If presence-linked control is enabled: first, set the mode rotary selector switch on the DIMLITE control device to "no funct.".
   This prevents the lighting from being accidentally switched on or off by motion sensors while you are setting the system points.

2. Switch the lighting off or recall lighting scene 2 or 3.
   This will provide a stable starting point for setting the system points.
3. Place a luxmeter on the workspace (e.g. desk) located underneath the desired luminaire group.
4. Smoothly adjust each luminaire group until the required illuminance has been achieved on each workspace according to the reading on the luxmeter.
5. Wait approx. 30 seconds once the illuminance has been set. Check whether the illuminance has remained constant according to the reading on the luxmeter. If the illuminance has changed, smoothly adjust each luminaire group until the required illuminance has been achieved once again. Repeat this step until the illuminance remains constant.
6. Save the day points or twilight points (see the section "Saving system points", page 34).
7. Recall lighting scene 1. Check whether the illuminance reaches the desired value. If the illuminance does not match, repeat the process from step 4 onwards.
8. If the mode rotary selector switch has first been set to "no funct.": reset the mode rotary selector switch on the DIMLITE control device to the previous rotary selector switch position.

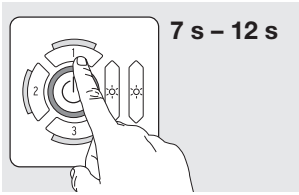
Note:
! Note that you cannot save a system point for an individual luminaire group. Saving applies the current settings to all luminaire groups.

Saving system points

The following devices can be used to save system points:

Device	Key/momentary-action switch	Action
CIRCLE control unit ED-Cxx	Scene key 1 (green LED flashes after 7–12 s)	Hold down between 7 and 12 seconds
ED-EYE light sensor	Momentary-action switch in housing (accessed via small opening)	Briefly press
D-SxED input device (rotary selector switch position 1)	Single momentary-action switch at input T2	Hold down between 7 and 12 seconds
IRTOUCH remote control	Scene key 1 (green LED flashes after 7–12 s)	Hold down between 7 and 12 seconds
DIMLITE control device	Single momentary-action switch at input Sc1	Hold down between 7 and 12 seconds

Example: ED-Cxx



System points are saved for all luminaire groups together.
Saving is complete when the connected luminaires flash.

Daylight-linked dimming out

If there is a lot of daylight in the room and lighting scene 1 is recalled, the artificial light is dimmed off after a short time. The lighting must be dimmed by the daylight-linked control to below 5% for longer than 5 minutes in order for this to occur. The luminaire groups are dimmed off at different levels of daylight for different control characteristics.

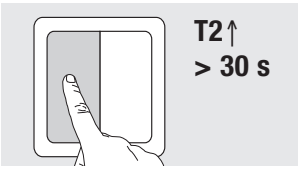
Daylight-linked dimming on

If the daylight reduces, artificial light is required from a certain point based on the control characteristic. The lighting is not switched on immediately, however. The lighting is first dimmed on when at least 10% of the artificial light is required and presence is also detected. The luminaire groups are dimmed on at different levels of daylight for different control characteristics.

Setting the fade time

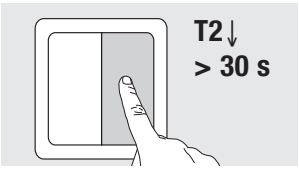
The fade time is time it takes for the system to change to another lighting scene. With the DIMLITE control device, you can choose between two fade times (1 s or 0 s). The fade time that is set applies to all lighting scenes.

Fade time 1 s



Hold down the momentary-action switch on input T2 ↑ for longer than 30 seconds.
A fade time of 1 s is applied.
Saving is complete when the connected luminaires flash.

Fade time 0 s



Hold down the momentary-action switch on input T2 ↓ for longer than 30 seconds.
A fade time of 0 s is applied.
Saving is complete when the connected luminaires flash.

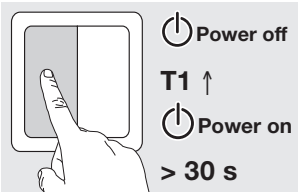
Note:
! Single momentary-action switch control at input T2: hold down the momentary-action switch for longer than 30 s. The system alternates between applying a fade time of 1 s and a fade time of 0 s.
! A fade time of 0 s is set as a default.

Locking and releasing configuration options

You can prevent unauthorised individuals changing the settings made for the DIMLITE control device.
Please note that all configuration options can only be locked or released together.

The following configuration options can be locked or released:
- Saving lighting scenes
- Assigning an ED-SENS multi-sensor to one or more luminaire groups
- Configuring daylight-linked control
- Configuring the fade time

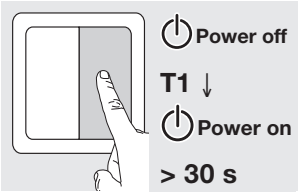
Locking configuration options



1. Disconnect the DIMLITE control device from the voltage supply.
2. Hold down the momentary-action switch on input T1 ↑ and connect the voltage supply to the DIMLITE control device.
3. Continue holding down the momentary-action switch on input T1 ↑ for longer than 30 seconds.

The configuration options are locked. Locking is complete when the connected luminaires flash.

Releasing configuration options



1. Disconnect the DIMLITE control device from the voltage supply.
2. Hold down the momentary-action switch on input T1 ↓ and connect the voltage supply to the DIMLITE control device.
3. Continue holding down the momentary-action switch on input T1 ↓ for longer than 30 seconds.

The configuration options are released. Locking is complete when the connected luminaires flash.

Note:
! Single momentary-action switch control at input T1: hold down the momentary-action switch for longer than 30 s. The configuration options alternate between being locked and released.
! The status LED flashes green when the configuration options are locked.

Restoring factory settings

The test key and orange phases can be used to restore the factory settings (see the section "Orange phases", page 24).

1. Press the test key.
2. Release the test key in the 4th orange phase.

The DIMLITE control device has the following factory settings:

Setting	Default
Brightness when switching on	100%
Brightness of lighting scene 1	100%
Brightness of lighting scene 2	80%
Brightness of lighting scene 3	60%
IRTOUCH, infrared transmission code	All infrared transmission codes (0, 1 and 2) detected
ED-SENS multi-sensor	Assigned to all luminaire groups
All day points	0% artificial light when approx. 2000 lx daylight detected by light sensor
All twilight points	100% artificial light when approx. 200 lx daylight detected by light sensor
Fade time	0 s
Type of operating device	DALI-compliant (all outputs)
Configuration options	Released

Removing/adding/replacing devices

Removing operating devices and/or ED devices

1. Disconnect the lighting system from the voltage supply.
2. Remove the desired devices.
3. Restore the voltage supply.

The DIMLITE control device initialises the lighting system automatically. The status LED flashes orange during the initialisation process. If the status LED illuminates or flashes green, the lighting system is ready for operation.

Adding/replacing operating devices and/or ED devices

1. Ensure that the new operating device and/or ED device can be integrated in the lighting system (see the section "Planning luminaire groups", page 12 and/or see the section "Planning operation", page 13).
2. Disconnect the lighting system from the voltage supply.
3. If devices are replaced: remove old devices.
4. Connect the new operating devices and/or ED devices.
5. Restore the voltage supply.
   The DIMLITE control device initialises the lighting system automatically. The status LED flashes orange during the initialisation process. If the status LED illuminates or flashes green, the lighting system is ready for operation.
6. If an ED-SENS multi-sensor has been added/replaced: assign the ED-SENS multi-sensor to individual luminaire groups (see the section "Assigning an ED-SENS multi-sensor to one or more luminaire groups", page 31).
7. Carry out an installation test with the new devices (see the section "Carrying out an installation test", page 26).

Replacing the DIMLITE control device

1. Disconnect the lighting system from the voltage supply.
2. Replace the DIMLITE control device.
3. Restore the voltage supply.
   The DIMLITE control device initialises the lighting system automatically. The status LED flashes orange during the initialisation process. If the status LED illuminates or flashes green, the lighting system is ready for operation.
4. If the replaced DIMLITE control device has already been used in a lighting system: restore the DIMLITE control device factory settings (see the section "Restoring factory settings", page 37).
5. Reconfigure the DIMLITE control device (see the section "Configuration", page 28).
6. Carry out an installation test (see the section "Carrying out an installation test", page 26).

Technical data

DIMLITE multifunction 2ch

Nominal voltage	230/240 V, 50/60 Hz
Permissible input voltage	207–264 V, 50–60 Hz
Power dissipation	< 3 W
Inputs	2 momentary-action switch inputs (T1, T2): single or double momentary-action switch (230/240 V, 50/60 Hz) 1 momentary-action switch input (Sc1): single momentary-action switch (230/240 V, 50/60 Hz) 1 input (PD/T): motion sensor or single momentary-action switch (230/240 V, 50/60 Hz) 1 input (Contr.IN): maximum 8 ED devices (ED-Cxx, ED-SxED, ED-SENS, ED-EYE, ED-IR), of which maximum 1 ED-EYE light sensor
Outputs	2 outputs (Grp1, Grp2): 2x DALI: maximum 25 DALI-compliant operating devices per output 2x DSI: maximum 50 DSI operating devices per output (PCA, APD, TE, etc.) 1x DALI and 1x DSI: maximum 25 DALI-compliant operating devices or maximum 25 DSI operating devices per output (PCA, APD, TE, etc.) 1 output (Rel.): relay contact 230/240 V, 50/60 Hz, maximum 16 A ohmic load
Terminals	0.75 – 2.5 mm² (solid or fine-stranded)
Degree of protection	IP20
Housing material	polycarbonate (PC), flame-retardant, halogen-free
Installation	on top-hat rail, 35 mm in accordance with EN 50022
Dimensions	70 x 90 x 59 (W x H x D, in mm), 4 HP every 17.5 mm
Permissible ambient temperature	0–50°C
Weight	approx. 350 g

DIMLITE multifunction 4ch

Nominal voltage	230/240 V, 50/60 Hz
Permissible input voltage	207–264 V, 50–60 Hz
Power dissipation	< 4 W
Inputs	4 momentary-action switch inputs (T1, T2, T3. T4): single or double momentary-action switch (230/240 V, 50/60 Hz) 1 momentary-action switch input (Sc1): single momentary-action switch (230/240 V, 50/60 Hz) 1 input (PD/T): motion sensor or single momentary-action switch (230/240 V, 50/60 Hz) 1 input (T all): single momentary-action switch or double momentary-action switch (230/240 V, 50/60 Hz) 1 input (Contr.IN): maximum 8 ED devices (ED-Cxx, ED-SxED, ED-SENS, ED-EYE, ED-IR), of which maximum 1 ED-EYE light sensor
Outputs	4 outputs (Grp1, Grp2, Grp3, Grp4): 4x DALI: maximum 25 DALI-compliant operating devices per output 4x DSI: maximum 50 DSI operating devices per output (PCA, APD, TE, etc.) 3x DALI and 1x DSI / 2x DALI and 2x DSI / 1x DALI and 3x DSI: maximum 25 DALI-compliant operating devices or maximum 25 DSI operating devices per output (PCA, APD, TE, etc.) 1 output (Rel.): relay contact 230/240 V, 50/60 Hz, maximum 16 A ohmic load
Terminals	0.75 – 2.5 mm² (solid or fine-stranded)
Degree of protection	IP20
Housing material	polycarbonate (PC), flame-retardant, halogen-free
Installation	on top-hat rail, 35 mm in accordance with EN 50022
Dimensions	140 x 90 x 59 (W x H x D, in mm), 8 HP every 17.5 mm
Permissible ambient temperature	0–50°C
Weight	approx. 650 g

Questions and answers

How many luminaires (operating devices) can I connect to one output?

Outputs	Grp1	Grp2	Grp3	Grp4
DALI operating devices only	25	25	25	25
DSI operating devices only	50	50	50	50
DALI and DSI operating devices	25 DALI or 25 DSI operating devices	25 DALI or 25 DSI operating devices	25 DALI or 25 DSI operating devices	25 DALI or 25 DSI operating devices

How can I connect more than 50 DSI loads to one output?

- You can use the the DSI-V amplifier (art no. 20975705) to connect up to 50 additional operating devices.

I have luminaires with both DALI and DSI operating devices. Can I run both operating device types from one DIMLITE control device?

- Yes. However, this is only on the condition that DALI and DSI operating devices are not connected to the same output simultaneously. For example, you can only connect DALI operating devices to output Grp1 and DSI operating devices to output Grp2, or vice versa. Bear in mind the maximum number of operating devices that are allowed be connected.

Do I have to address DALI operating devices?

- No. Addressing is not required.

Call all DALI loads (e.g. ED-4RUKS, APDX-500, APDS-5000) be connected to the outputs?

- Yes.

How many ED-EYE light sensors can be connected to the universal, digital Contr.IN interface?

- Only one ED-EYE light sensor may be connected. This provides current daylight values to the DIMLITE control device for daylight-linked control.

How many ED-SENS multi-sensors can be connected to the universal, digital Contr.IN interface?

- A maximum of 8 ED-SENS multi-sensors may be connected. Please note that the maximum number of 8 devices (ED-Cxx, ED-SxED, ED-SENS, ED-EYE, ED-IR) may not be exceeded for the Contr.IN interface.

Can all three lighting scenes be operated in daylight-linked mode?

- No, daylight-linked control can only be configured for lighting scene 1.

Can I assign a presence detector to one particular luminaire group only?

- Yes, but only if you use the ED-SENS multi-sensor. The IRTOUCH remote control can be used to allocate an ED-SENS multi-sensor to one or more luminaire groups. The multi-sensor will then control only the assigned luminaire group(s).

Can I assign different run-on times to different motion sensors?

- No. All presence detectors/motion sensors connected to the PD/T input or the universal, digital Contr.IN interface use the same run-on time that has been set for the DIMLITE control device.

Can I assign different modes (ON/OFF, only OFF, ON/corr) to different motion sensors?
- No. All presence detectors/motion sensors connected to the PD/T input and the universal, digital Contr.IN interface use the same mode that has been set for the DIMLITE control device.

The ED-SENS multi-sensor is not responding. What may be causing this?
- The on/off key of the IRTOUCH remote control may have accidentally been pressed when the ED-SENS multi-sensor was being assigned, causing its assignment to be invalidated.
- Check that the desired mode is set for the presence-linked control on the DIMLITE control device.

Why does the system switch on automatically several minutes after the lighting has been manually switched off?
- Check whether presence-linked control MODE ON/corr is set. With this presence-linked control mode, the corridor lighting scene (all luminaire groups set to 10% brightness) is recalled if no one is present in the detection range of the presence detector and once the run-on time and fade time have expired (64 s). This will also occur if the lighting has been switched off manually and no motion sensor or ED-SENS multi-sensors are connected to the DIMLITE control device. If presence-linked control is set to MODE ON/corr the lighting cannot be permanently switched off.

Why does the system switch off automatically several minutes after the lighting has been manually switched on, even though no presence detectors/motion sensors are connected?
- Presence-linked control is enabled. If no presence-linked control is desired, set the mode rotary selector switch on the DIMLITE control device to "no funct.".

What happens if I connect too many devices to the universal, digital Contr.IN interface
- It is no longer possible to guarantee that the DIMLITE system will function correctly because the Contr.IN interface is overloaded. Reduce the number of devices (ED-Cxx, ED-SxED, ED-SENS, ED-EYE, ED-IR) to 8 units. The status LED glows permanently red when there is an overload on the universal, digital Contr.IN interface.

Can one dimming rocker key on the CIRCLE ED-Cxx control unit be used to dim all luminaire groups simultaneously?
- No.

Can multiple DIMLITE control devices be networked?
- No.

What do I have to reconfigure when replacing a DIMLITE control device?
- See the section "Replacing the DIMLITE control device", page 38.

Are the current user settings saved if the power is interrupted?
- Yes. When the voltage suppy is restored, the lighting scene that was active before the voltage supply was interrupted is recalled.

Extract from minimum illuminance according to EN 12464

Type of room	Tasks or activities	Maintained illuminance [$\bar{E}_m$] in the task area [lx]
Office work	Filing, copying	300
	Circulation areas in work rooms	300
	Writing	500
	Reading, data processing	500
	CAD workstations	500
	Conference and meeting rooms	500
	Reception desks	300
	Archives	200
Public areas service counter areas	Entrance halls	100
	Cloakrooms	200
	Waiting rooms	200
	Cash desks and counters	300
Design and drawing rooms	Drawing rooms	500
	Drawing rooms in art colleges	750
	Technical drawing rooms	750
Side rooms	Stairwells, escalators, moving walkways	150
	Canteens	200
	Buffet areas	300
	Staffrooms	100
	Gymnasiums	300
	Kitchenettes	200
	Catering kitchens	500
	Changing rooms, wash rooms and restrooms	200
	First-aid rooms	500

Disposal



For disposal in accordance with the WEEE Directive:

- Return the device to Zumtobel or dispose of the device in accordance with national regulations.
- Do not dispose of the device in non-recyclable waste.
- Do not burn the device.

CE conformity

Zumtobel declares that the products DIMLITE multifunction 2ch and DIMLITE multifunction 4ch comply with the relevant EU Directives.

Glossary

Illuminance in lux [$\bar{E}_m$]
Illuminance describes the amount of luminous flux falling on a surface.

DALI
Digital Addressable Lighting Interface. Standardised interface for digitally controlling operating devices. DALI-compatible operating devices are addressable.

DALI load
A DALI load is a DALI-compatible lamp operating device such as an electronic ballast or electronic transformer. Usually, lamp operating devices count as a DALI load. See the technical data for further information.

DSI
Digital Serial Interface. Standardised interface for digitally controlling operating devices.

DSI load
A DSI load is a DSI-compatible lamp operating device such as an electronic ballast or electronic transformer. Usually, lamp operating devices count as a DSI load. See the technical data for further information.

Wiring
Types and options for laying the DALI control line (star, linear and/or tree topologies).

Line length
Length of the DALI control line from a DALI power supply point to the most remote consumer (control unit, actuator, etc.), taking into account the line cross-section.

Luminaire group
Group of luminaires that can be jointly controlled.

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ZUMTOBEL

DIMLITE

product handbook

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