User Guide

EN

Guide for the correct installation
and use of L&S light fixtures and
power supply / control systems

L&S

User Guide

EN

Guide for the correct installation
and use of L&S light fixtures and
power supply / control systems

L&S

L&S

This guide shows how L&S lighting systems operate, as well as the LED technologies used and the relative control and power systems. Please visit the “Support Service” section on the company website if you have any questions regarding faults or installation problems with L&S products.

ls-light.com

Visit the L&S YouTube channel, using the QR code below to watch tutorials on how to correctly install and use L&S lighting systems.

Indice

GLOSSARY p.06

1 - POWER SUPPLY OF LED FIXTURES
1.1 - Operating Voltage p.08
1.2 - Power cable p.09
1.3 - Warnings and troubleshooting p.10

2 - COLOR TEMPERATURE
2.1 - Overview p.12
2.2 - EDC Jumper p.13

3 - INTEGRATED CONTROL SYSTEMS
3.1 - Overview p.14
3.2.1 - IRS - Infrared Switch p.15
3.2.2 - TCS - Touch Switch p.16
3.2.3 - PIR - Motion Sensor p.17
3.2.4 - IRD - Infrared Door p.18
3.3 - Troubleshooting p.19

4 - EXTERNAL CONTROL SYSTEMS
4.1 - Overview p.20
4.2 - Warnings and troubleshooting
4.2.1 - Laser Door Back p.22
4.2.2 - IR Door Tube p.23
4.2.3 - Mini IR p.24
4.2.4 - Pucky p.25

5 - MOOVE FREECUT
5.1 - DIY lamps p.26
5.2 - Power supply and control temperature p.28
5.3 - Plug&play switching systems p.30
5.4 - Warnings and troubleshooting p.32

6 - LED REELS AND PROFILES
6.1 - Solderless LED reels p.34
6.2 - Integrated switching systems p.35
6.3 - Profiles for MEC PRO DIY lamps p.36

7 - MEC LITE PLATFORM
7.1 - Overview p.38
7.2 - Usage scenario
7.2.1 - Power supply only p.40
7.2.2 - Power supply and control p.41
7.3 - Control modules
7.3.1 - Lite MT p.42
7.3.2 - Lite BT p.44
7.3.3 - Zigbee Module 1 channel p.46
7.3.4 - Zigbee Module 4 channels p.48
7.3.5 - Sensor Module p.50
7.3.6 - Lite CS p.54
7.3.7 - Lite DL p.55
7.3.8 - Wired C p.56
7.4 - 2,4GHz Radio transmitters
7.4.1 - Lite Remote p.58
7.4.2 - Lite Sensor p.60
7.4.3 - 4 Channel Remote p.62
7.4 - MEC LITE slim p.64
7.5 - Troubleshooting p.66

8 - COMMON MISTAKES - MEC LITE p.70

9 - FIXTURES WITH ORIENTED LIGHT BEAM
9.1 - Standard p.76
9.2 - Mini Noor p.77

Glossary

TERM	DEFINITION
Lighting fixture	Lamp / Spotlight integrated into a piece of furniture, complete with power cable
ConnectorPower supply	Connector located at the end of the lighting fixture's power cable
Power (W)	Amount of energy/current consumed/absorbed by the lighting fixture. Watt (W) is the unit of measurement for power
Electrical grid / electrical system	System of devices and wiring designed to distribute electrical energy within a building
Dimming	Variation of the light intensity of the lighting fixture
Color Temperature	Tone of light emitted by the lighting fixture: e.g. 3000K = warm light (light color tending towards yellow), 4000K = natural light (light color tending towards white). Degrees Kelvin [K] is the unit of measurement for color temperature
MONO	Monochromatic: lamp / spotlight with LED source with a single pre-set color temperature that cannot be changed
EDC / WDC / EMOTION Dual Color	Acronyms that identify lighting fixtures with adjustable color temperature LEDs, generally identified as "Dual Color" or "Dual": EDC (3000K-4000K) WDC (2700K-4000K) EMOTION (2700K-6500K). The acronym "EDC" is generally used in all L&S control systems to identify models compatible with adjustable color temperature LEDs.
EDC Jumper	5cm cable complete with double male-female connection that allows the color temperature change in Dual Color lighting fixtures: it is applied to the end of the power extension of the fixture WITHOUT an integrated control system
Integrated control system	Electronic component integrated into the lighting fixture. It allows for switching it on and off. Some integrated control systems (marked EDC) also allow for changing the color temperature or dimming the fixture
External control system	Electronic component external to the lighting fixture. It allows for switching it on and off. Some external control systems (marked EDC) also allow for changing the color temperature or dimming the fixture.

Glossary

TERM	DEFINITION
IRS	Infrared Switch: proximity infrared control system integrated into the lighting fixture. Without touching the fixture, the IRS recognizes hand movement and enables the switching on and off functions (MONO and Dual Color LED) and color temperature change (Dual Color LED only)
IRD	Infrared Door: proximity infrared control system. The IRD recognizes the obstacle created by doors / drawers and, during closing / opening, enables the switching on and off functions (MONO and Dual Color LED) and color temperature change (Dual Color LED only)
TOUCH	Touch switch: control system that involves a short or long press with a finger on the LED point of the TOUCH switch and enables the switching on and off functions (MONO and Dual Color LED), dimming (MONO LED), and color temperature change (Dual Color LED only)
PIR	Presence sensor: control system that recognizes the presence of a person / object. By approaching the PIR sensor, it detects movement and enables the lighting fixture to switch on. After a period where the PIR sensor no longer detects any movement, the fixture will switch off. Some models (marked EDC) also allow for changing the color temperature of the connected Dual Color fixtures.
Power supply / Driver MEC LITE	Power supply device required to operate lighting fixtures at very low voltage (12V DC, 24V DC). MEC LITE is the 24V DC modular power supply system developed and patented by L&S.
Power distributor	Component that allows for the connection of multiple lighting fixtures to a single power supply: in the MEC LITE Driver, this component is integrated into the power supply housing
Control Module	Component of the MEC LITE modular system: it allows for the control of various functions of the lighting fixtures connected to it (switching on, dimming, color temperature, ...) via radio frequency transmitters or external control systems (e.g., cabled sensors)
Receiver Module	Control module complete with an internal control unit designed to receive Radio Frequency, Bluetooth, or Wi-Fi signals.
Transmitter	Radio frequency control system that sends signals to a receiver module (e.g., LITE Remote / LITE Sensor)
Association	Connection / linking procedure between receiver and transmitter module

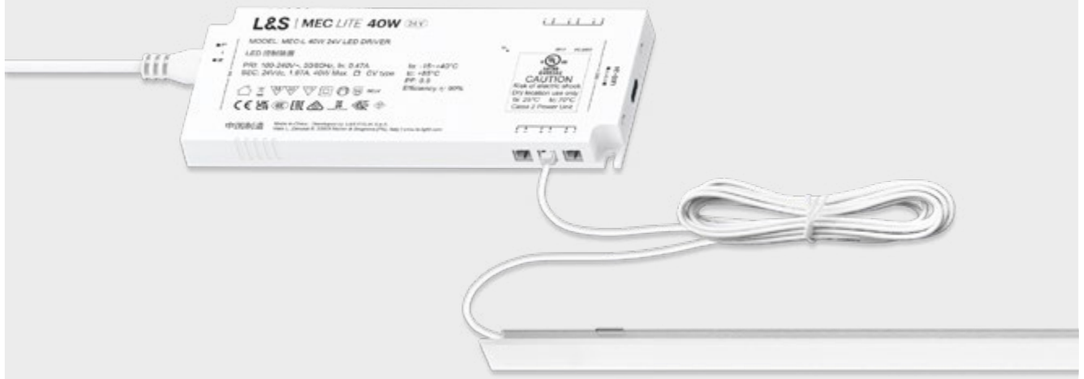
1. Power supply of LED fixtures

1.1 - Operating voltage

L&S LED lighting fixtures are powered by very low (24 V) DC safety voltage: each fixture therefore requires a Power Supply (also called Driver, available in different power ratings) to convert the mains voltage of the electrical socket (220-240V AC in Europe and 110-120V AC in the USA) into very low voltage for the correct operation of the connected fixtures.

MEC LITE Platform

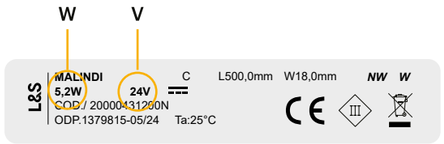
Patented modular system by L&S



Please refer to the dedicated sections (**§ 5**) for detailed information on the available models, their correct operation and troubleshooting.

ATTENTION

The power supply voltage of L&S lightin fixtures is always shown on the labels attached to the body of the lamps (label data) or on the power cord (eg. spotlights), along with the power absorbed (W) by the light fixture.





Always calculate the total absorbed power (W) of any light fixtures to be connected so you can select the right power supply unit: the power of the Driver must always be higher (**§ 6.1**) than the total absorbed power (we recommend choosing a Driver with a power output that is at least 10% greater than the total absorbed power).

1. Power supply of LED fixtures

1.2 - Power cable

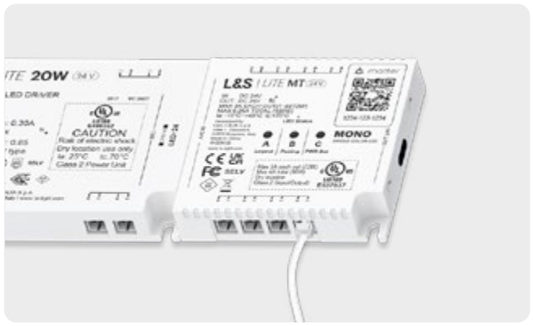
Each L&S LED lighting fixture is fitted with a power cable complete with TWIN connector mounted at the end for connection to the Driver; the color of the power connector clearly identifies the lighting fixture's power voltage (White (24 V)).



The color of the TWIN connector matches that of the inputs/outputs on the Power Distributors or Control Modules to which the lighting fixtures are connected.



MEC LITE - Integrated power distributor (**§ 7.2.1**)

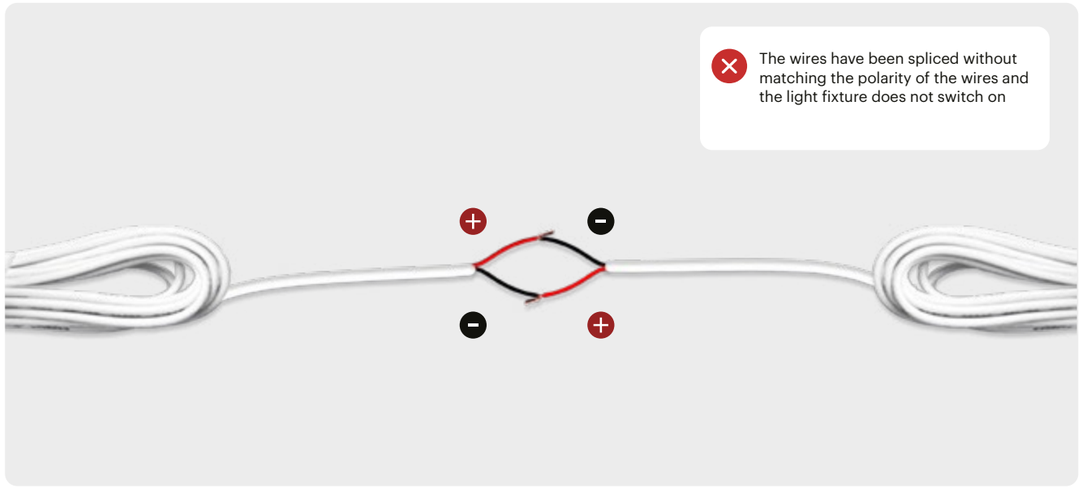


MEC LITE - Control Module (**§ 7.2.2**)

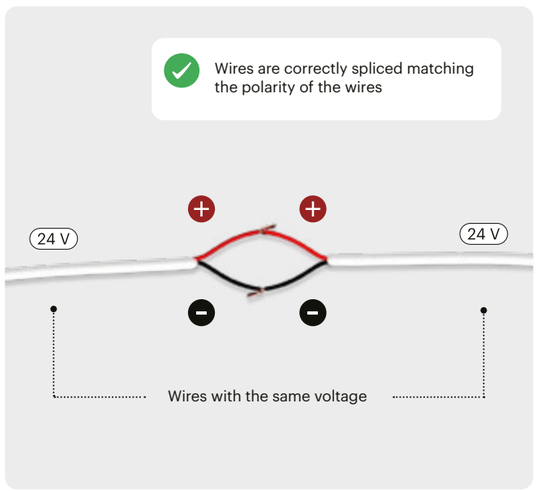
1. Power supply of LED fixtures

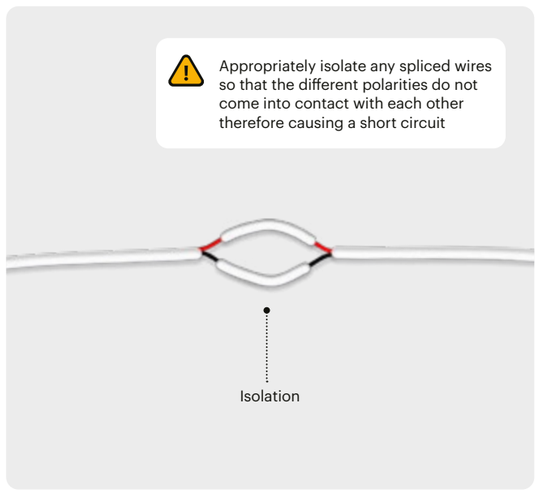
1.3 - Warnings and troubleshooting

If, due to assembly requirements, you need to manually splice low DC voltage power cords on light fixtures, pay careful attention that the polarity is always matched for the cords: red wire (+ pole) / black wire (− pole).



Also make sure to follow the power supply voltage (do not splice a 12 V wire with a 24 V wire) and to appropriately isolate any spliced wires not to cause so any short circuits. Manual wire splicing is not generally recommend, especially if this procedure is carried out by unqualified technical staff. In this case, it is best to use appropriate cable extensions complete with connectors.





1. Power supply of LED fixtures

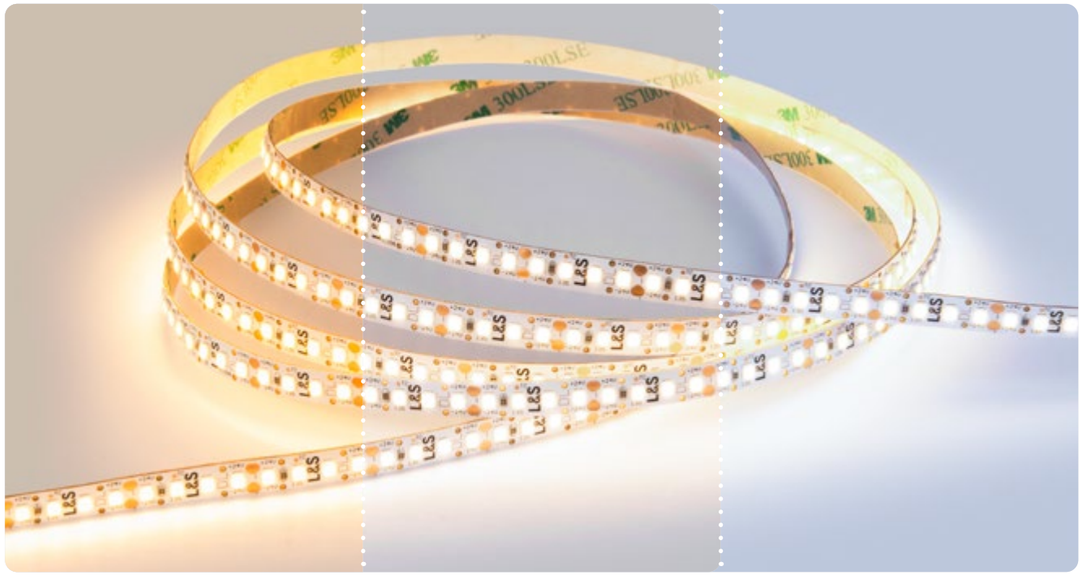
1.3 - Warnings and troubleshooting

SYMPTOM	POSSIBLE CAUSE	SOLUTION
The light fixture does not switch on	Connection	Check that the power connector is inserted correctly into the appropriate slot and connected to the power supply
The light fixture overheats or does not work	Wrong power supply	Check that the power supply voltage (Driver) matches the voltage of the light fixture (12 V or 24 V DC). If they are not the same, disconnect the light fixture immediately
The light fixture blinks or does not work	Connection to the mains electrical system	Check that the connection to the mains electrical system meets applicable regulations. If the problem continues, remove the general power supply unit for a couple of minutes and then plug it back in
	Generic power supply	We recommend using original L&S power supply units to prevent the risk of any connected light fixtures malfunctioning
	Undersized power supply	Make sure that the power (W) of any connected light fixtures (LED load) is always less than the power supplied by the connected power supply unit.
	Power Supply Positioning	Do not put several power supply units on top of or next to each other in order to prevent the risk of any connected light fixtures overheating or malfunctioning
	Connecting wires	Do not use tangled wires to prevent the risk of any connected light fixtures overheating or malfunctioning

2. Color Temperature

2.1 - Overview

The Color Temperature of an LED light source is measured in Kelvin (K) and indicates the color tone emitted by the luminaire. The lower the Kelvin value, the warmer (yellow) the light. The higher the Kelvin value, the cooler (bluer) the light. Based on the color temperature (Single or Dual), L&S light sources can be divided into MONO and Dual Color.



3000K (Warm White - WW) **4000K** (Natural White - NW) **6500K** (Cool White - CW)

MONO - LED light sources with a single, non-modifiable preset Color Temperature

WW WW NW CW

2700K 3000K 4000K 6500K

On-Off / Dimmer control via:

- Integrated "MONO" control systems (**§ 3**)
- External "MONO" control systems (**§ 4**)
- MEC LITE Control Modules "MONO" (**§ 7.3**)

DUAL COLOR - LED light sources with adjustable Color Temperature

EDC **EDC** Dual Color
Adjustable between 3000K and 4000K

WDC **WDC** Dual Color
Adjustable between 2700K and 4000K

EMOTION Dual Color
Adjustable between 2700K and 6500K

On-Off / Dimmer and Color Temperature control via:

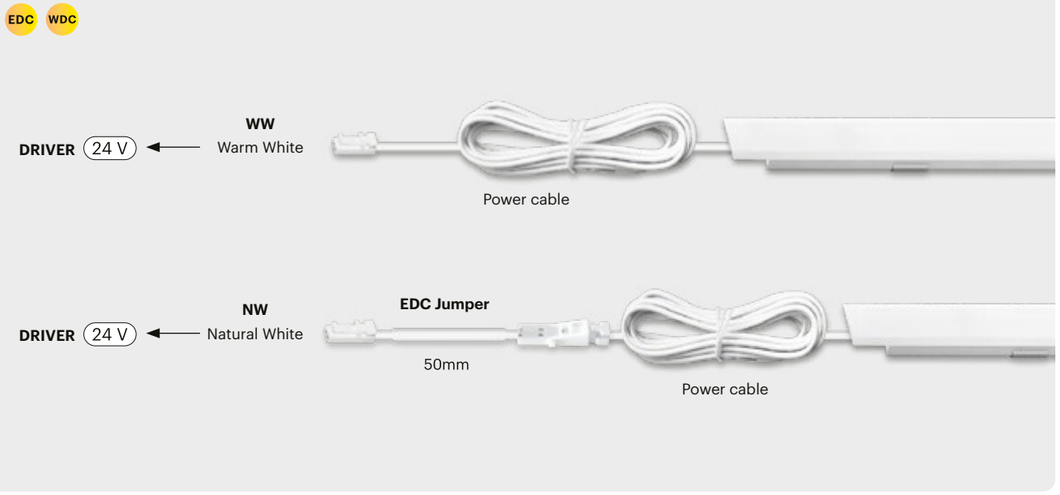
- Integrated "EDC" control systems (**§ 3**)
- External "EDC" control systems (**§ 4**)
- MEC LITE Control Modules "EDC" (**§ 7.3**)
- EDC Jumper cable (**§ 2.2** - for color temperature control only)

By default (without setting), Dual Color light fixtures switch On at the warmest color temperature.

2. Color Temperature

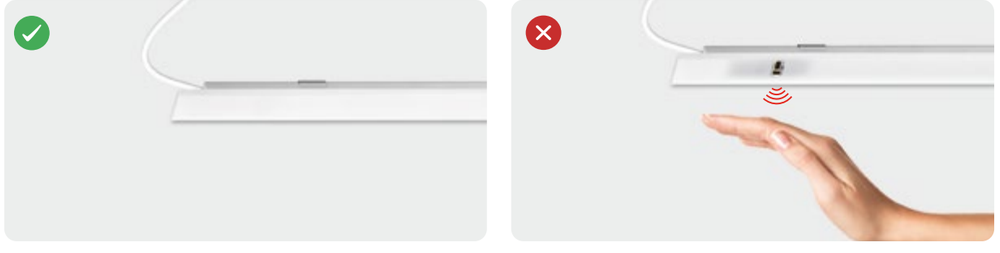
2.2 - EDC Jumper

EDC Jumper is a 50mm cable that allows the colour temperature of Dual colour EDC/WDC fixtures to be set during installation: it is mounted at the end of the fixture's power cable and inverts the polarity of the LED, thus changing the colour temperature from "Warm Light WW" (default value: 3000K EDC / 2700K WDC) to "Natural Light NW" (4000K).



ATTENTION

- Only use it with Dual Color light fixtures (EDC / WDC or EMOTION - **§ 2.1**)
  If used with EMOTION light fixtures, the cable will change the colour temperature from Warm "WW" (Warm White - the default setting) to Cool "CW" (Cool White).
- The EDC Jumper cable reverses the polarity of the low voltage supplied by the Driver: do not use the cable with light fixtures fitted with a built-in switching system (**§ 3** - **§ 8.3**) otherwise it might interfere with the operation of the system (the colour temperature setting is managed through the switch/sensor on the light fixture).



- Do not use the EDC Jumper cable with MEC LITE Control Modules (**§ 7.2.2** - the colour temperature is managed by the Module through compatible control systems).
- To keep a consistent colour temperature in any light fixtures connected to the driver, always make sure that all light fixtures are fitted with an EDC Jumper or not (**§ 8.2**).

3. Integrated control systems

3.1 - Overview

Lighting fixtures with an integrated control system have a specific built-in electronic component (e.g. a switch) for On-Off switching control. Depending on the model and version, these devices can also control other lighting functions, such as dimming or color temperature adjustments (only with Dual Color fixtures). This section of the guide illustrates the functions and main issues of the following integrated systems.









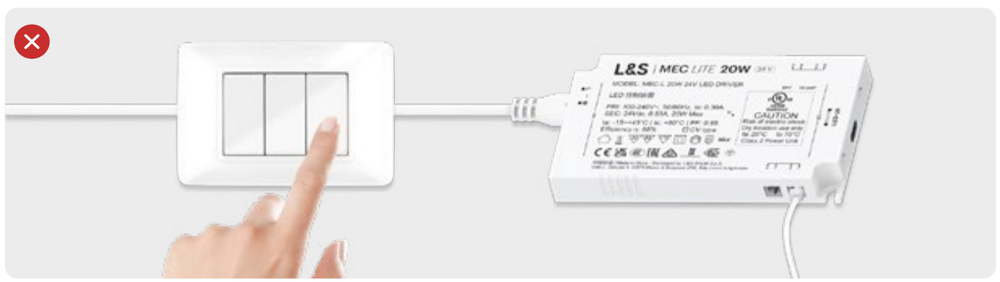
ATTENTION

- Devices with integrated control are not compatible for use with Smart Home solutions, transmitters or wired switching systems: do not connect to MEC LITE via Control Modules (**§ 7.2.2**) but use exclusively the integrated Power Distributor (**§ 7.2.1**).





- If the Power Supply is connected to a switch controlled outlet (**§ 7.2.1**) it is not possible to use lighting fixtures fitted with integrated control systems.



- Do not use the EDC Jumper cable (**§ 2.2**) with light fixtures fitted with a built-in switching system (**§ 3** - **§ 8.3**) otherwise it might interfere with the operation of the system (the colour temperature setting is managed through the switch/sensor on the light fixture).

3. Integrated control systems

3.2.1 - IRS (Infrared Switch)

Infrared switch integrated into lighting fixtures: the device is switched On and Off by moving your hand near the switch (within 6 cm) without touching it. To change the color temperature (Dual Color fixtures - **§ 2.1**), the hand must be hold near the IRS switch for approximately 3 seconds (this operation must be performed with the device already switched On).

- **ON-OFF**
  Move your hand near the switch without touching it
- **Color Temperature change**
  Dual Color devices only
  With the device switched On, hold your hand near the switch for about 3 seconds.



ATTENTION

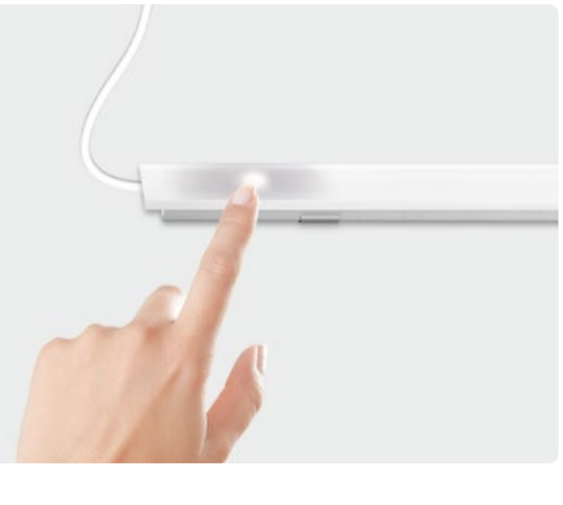
- If the light fixture is left switched On, the IRS will automatically turn the light fixture Off after 18 hours of stand-by.
- Light fixtures with a built-in IRS must not be connected to the Power Supply via external control systems (**§ 4.1**) or Control Modules (**§ 7.2.2**): only use the integrated Power Distributor of the MEC LITE (**§ 8.4**).
- If the Power Supply is connected to a switch controlled outlet (**§ 7.2.1**) it is not possible to use lighting fixtures fitted with integrated IRS switch.
- Do not use the EDC Jumper cable (**§ 2.2**) with light fixtures fitted with integrated IRS switch.
- To prevent any temporary faults, do not expose the IRS to excessive direct light sources (eg. sunlight or light from other light fixtures). Furthermore, avoid any reflective surfaces within the switch's operating range.
  Excessive sources of steam directly on the IRS could cause the light fixture to switch On and/or Off without touching it
- Always refer to the instruction manual included with the light fixture for complete information on the features of the integrated IRS control system.

3. Integrated control systems

3.2.2 - TCS (Touch Switch)

Touch switch integrated into lighting fixtures: the fixture is controlled by touching the diffuser at the switch always-visible locator light dot (white LED). Depending on the model and the type of touch on the switch (short or long), it is possible to control On/Off switching, light dimming (MONO fixtures), and Color Temperature adjustment (Dual Color fixtures).

- **ON-OFF**
  Single touch of the LED indicator on the fixture
- **DIMMER**
  MONO version only
  Long touch of the switch locator light dot on the fixture already switched On
- **Color Temperature change**
  EDC version only - for Dual Color fixtures:
  long touch of the switch locator light dot on the fixture already switched On



ATTENTION

- Light fixtures with a built-in TCS switch must not be connected to the Power Supply via external control systems (**§ 4.1**) or Control Modules (**§ 7.2.2**): only use the integrated Power Distributor of the MEC LITE (**§ 8.4**).
- If the Power Supply is connected to a switch controlled outlet (**§ 7.2.1**) it is not possible to use lighting fixtures fitted with integrated TCS switch.
- Do not use the EDC Jumper cable (**§ 2.2**) with light fixtures fitted with integrated TCS switch.
- To prevent any temporary faults, do not expose the IRS to excessive direct light sources (eg. sunlight or light from other light fixtures).
- In some specific Dual Color (**§ 2.1**) fixtures fitted with integrated TCS switch, a long touch on the locator light dot can control both the Dimming function (long touch with the lamp **swithed On**) and the Color Temperature change (long touch with the lamp **switched Off**). Always refer to the instruction manual included with the fixture for complete information on the features of the integrated TCS control system.

3. Integrated control systems

3.2.3 - PIR (Motion Sensor)

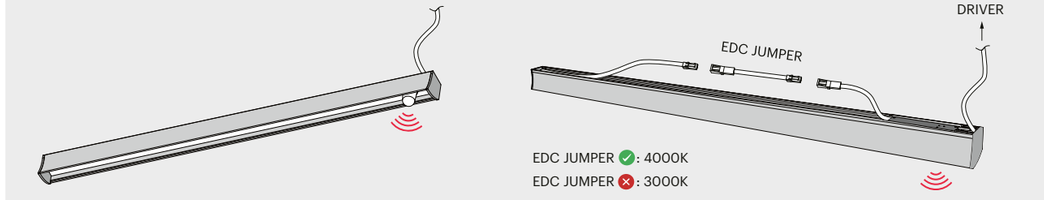
Motion sensor integrated into lighting fixtures: control occurs by entering the sensor's detection range or by opening the cabinet door.To change the color temperature of Dual Color fixtures (**§ 2.1**), the supplied EDC JUMPER cable (**§ 2.2**) must be installed inside the fixture. Always refer to the instruction manual included with the fixture for complete information on the functions of the integrated PIR sensor.

- **ON/OFF**
  The fixture turns On when motion or cabinet door opening is detected by the PIR sensor. The fixture automatically turns Off after a specified time has elapsed since the last PIR sensor detection or after the furniture door is closed.
- **Color Temperature change**
  EDC version only - for Dual Color fixtures:
  Install the EDC JUMPER cable inside the fixture



ATTENTION

- Light fixtures with a built-in PIR sensor must not be connected to the Power Supply via external control systems (**§ 4.1**) or Control Modules (**§ 7.2.2**): only use the integrated Power Distributor of the MEC LITE (**§ 8.4**)
- If the Power Supply is connected to a switch controlled outlet (**§ 5.2.1**) it is not possible to use lighting fixtures fitted with integrated PIR sensor
- To prevent any temporary faults, do not expose the PIR sensor to excessive direct light sources (eg. sunlight or light from other light fixtures)
- To avoid compromising the functionality of the integrated PIR sensor in Dual Color fixtures (**§ 2.1**), use the included EDC JUMPER cable (**§ 2.2**) exclusively inside the lamp, as indicated in the instruction manual: do not mount the EDC JUMPER at the end of the power cable to change the color temperature.

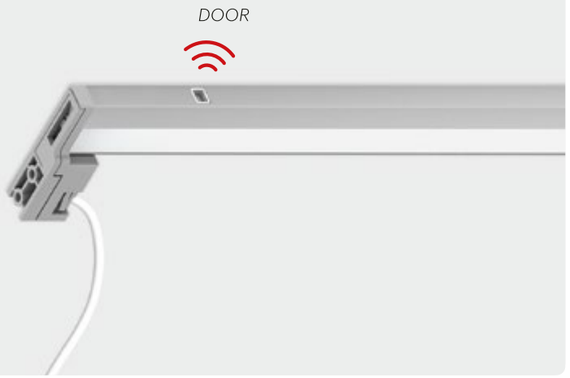


3. Integrated control systems

3.2.4 - IRD (Infrared Door)

Door switch integrated into lighting fixtures, allowing On/Off switching when cabinet's doors or drawers are opened/closed. To change the color temperature (Dual Color fixtures - **§ 2.1**), the cabinet's drawer/door must be opened and closed very quickly, three times in a row.

- **ON-OFF**
  Open/close the cabinet's door or drawer
- **Color Temperature change**
  EDC version only - for Dual Color fixtures:
  open and close the cabinet's door or drawer very quickly 3 times in a row



⚠ ATTENTION

- The reading distance varies depending on the colour of the door: for dark surfaces it is 3 cm max, while for light surfaces it is 5 cm max. The IRD switch does not work with glass doors.
- When first switched On, the EDC IRD performs a set-up process of about 15 seconds (the light fixture blinks). Brightness will be reduced to 50%. At the end of this process, check that the switch is properly calibrated by opening and closing the door or drawer.
- In the event of a mains power failure, the light fixture will switch back On when power is restored.
  By opening and closing the door again, the lamp will start working again normally.
- If the light fixture with IRD switch is left switched On, the switch will automatically turn the light fixture off after 18 hours of stand-by.
- Light fixtures with a built-in IRD switch must not be connected to the Power Supply via external control systems (**§ 4.1**) or Control Modules (**§ 7.2.2**): only use the integrated Power Distributor of the MEC LITE (**§ 8.4**).
- If the Power Supply is connected to a switch controlled outlet (**§ 7.2.1**) it is not possible to use lighting fixtures fitted with integrated IRD switch.
- Do not use the EDC Jumper cable (**§ 2.2**) with light fixtures fitted with integrated IRD switch.
- To prevent any temporary faults, do not expose the IRD to excessive direct light sources (eg. sunlight or light from other light fixtures). Excessive sources of steam directly on the IRS could cause the light fixture to switch On and/or Off by itself.
- Always refer to the instruction manual included with the light fixture for complete information on the features of the integrated IRD control system.

3. Integrated control systems

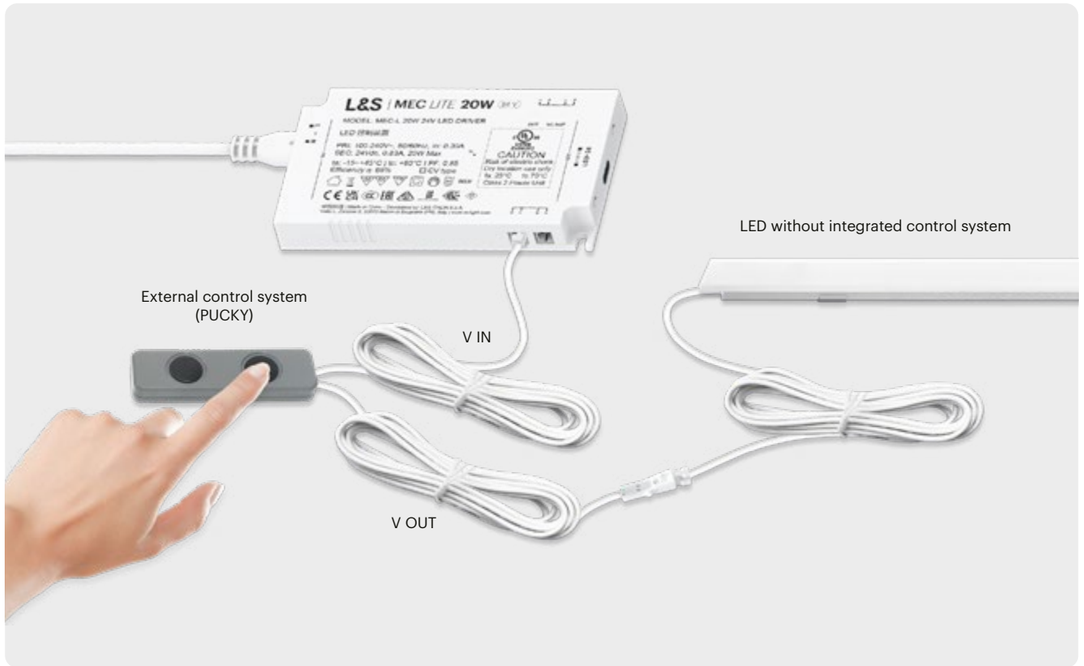
3.3 - Troubleshooting

SYMPTOM	POSSIBLE CAUSE	SOLUTION
A light fixture with a built-in control system switches on or off on its own	Steam	Avoid any excessive sources of steam around the built-in control system
	Direct or reflected light	Avoid any excessive direct or reflected light on the built-in control system
A light fixture with a built-in control system does not work or blinks	Wall switch	You should not use wall switches connected to the Driver for light fixtures fitted with a built-in control system. If this option is necessary, before setting up light fixtures with a wall switch control, check that all these light fixtures have been switched on through the built-in control system. Wait at least 10 seconds between switching on and off with the wall switch
	Power supply connection	Light fixtures with a built-in control system should only be connected to the Power Supply via power distributor (do not use external control systems or Control Modules)
	EDC Jumper	Do not use the EDC Jumper cable with Dual Color light fixtures fitted with a built-in switching system (color temperature change is managed by the switching system). In fixtures with an integrated PIR sensor, the supplied EDC Jumper cable must be installed exclusively inside the fixture, as indicated in the instruction manual.
	DALI	Do not use the DALI system with light fixtures fitted with a built-in control system
A light fixture with a built-in IRS control system does not work or blinks	Lens	Check that the IRS lens is properly fitted on the light fixture screen
	Obstacle or reflection on the lens	Check that there are no reflective surfaces or obstacles within the IRS operating range. Remove the obstacle.
A light fixture with a built-in IRD control system does not work or blinks	Door finish	Check the finish on the door where the built-in IRD control system operates. The reading distance varies depending on the surface: 3cm max for dark surfaces, 5cm max for light surfaces. If necessary, attach the grey sticker provided onto the door near the IRD switch.

4. External control systems

4.1 - Overview

Lighting fixtures without an integrated control system (**§ 3**) can be controlled using various "external" systems for On/Off switching, dimming or adjusting color temperature (Dual Color fixtures - **§ 2.1**). These devices (touch switches, door sensors, control units with wired transmitters or sensors, etc.) are powered at very low (24 V) DC voltage via the Power Supply (V IN cable) and have an output cable (V OUT) for connecting the lighting fixtures.



This section of the guide illustrates the main problems of some of the most commonly used external control systems, divided by model: carefully follow the instructions in the instruction manual of each external ignition system for correct connection to the Driver and lighting fixtures.

4. External control systems

4.1 - Overview

⚠ ATTENTION

- External control systems can be available in MONO or EDC versions (for dual-color fixtures) depending on the type of compatible fixtures (**§ 2.1**).
- Do not connect external control systems to MEC LITE via Control Modules (**§ 7.2.2**) but use exclusively the integrated Power Distributor (**§ 7.2.1**).



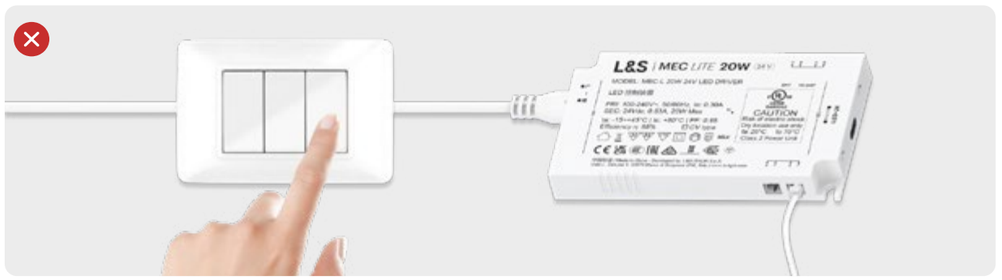


- Use external control systems only with lighting fixtures without integrated switching system.





- If the Power Supply is connected to a switch controlled outlet (**§ 7.2.1**) it is not possible to use lighting fixtures via external control systems.



- Do not use the EDC Jumper cable (**§ 2.2**) with Dual Color lighting fixtures (**§ 2.1**) connected to an external control system (unless otherwise indicated in the relevant instruction manual): the colour temperature adjustment is managed via the external control system.

4. External control systems

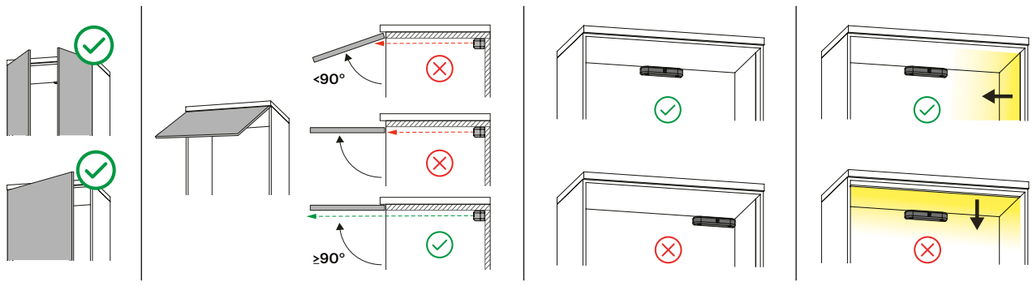
4.2.1 - Warnings and troubleshooting | LASER DOOR BACK

- **ON-OFF**
  Open/close the cabinet's door
- **AUTO OFF (Stand-BY)**:
  After 12 hours, when the cabinet's door is left open
- **Color Temperature change**
  EDC version only - For Dual Color fixtures:
  Open and close the cabinet's door very quickly 3 times in a row



ATTENTION

- Automatic sensor calibration: once installation is complete, connect the system to the power supply unit with the cabinet door closed, wait 10 seconds, then open and close the cabinet door to confirm.
- Strictly follow the installation instructions depicted in the sensor's manual. Laser Door Back works with any door material (including clear glass), type (single, double, flap) finish, or color: the reading distance is between 150 and 1500 mm. The sensor's detection field must always be clear of any objects that would prevent proper operation. Laser Door Back must always be installed aligned at the center of the cabinet. Lighting fixtures connected to the sensor must only be installed on the sides of the cabinet: lamps installed in the top could interfere with the sensor's detection range.



SYMPTOM	POSSIBLE CAUSE	SOLUTION
A light fixture connected to the LASER DOOR BACK stays On even with the door closed	Sensor reading	Open and close the door again to restart the sensor reading. If the problem persists, unplug the power supply unit from the mains for a couple of minutes and then plug it back in
A light fixture connected to the LASER DOOR BACK stays On for a long time with the door open	Stand-by	LASER BACK is set to 11 hours of stand-by, after which the light fixture will switch off automatically

4. External control systems

4.2.2 - Warnings and troubleshooting | IR DOOR TUBE

- **ON-OFF**
  Open/close the cabinet's door
- **AUTO OFF (Stand-BY)**:
  After 18 hours, when the cabinet's door is left open
- **Color Temperature change**
  EDC version only - For Dual Color fixtures:
  Open and close the cabinet's door very quickly 4 times in a row



ATTENTION

- To ensure the coorect operation of IR DOOR TUBE, check that the sensor lens is always clean and free of dust.
- The reading distance varies depending on the colour of the door: for dark surfaces it is 2 cm max, while for light surfaces it is 7 cm max.
- This system is available with a Single Sensor (for wardrobes with single door) or with a Master+Slave Dual Sensor (for wardrobes with double doors). A double IR DOOR TUBE cannot be used to make two single ones and vice versa: two single tubes cannot be used to make a double.

SYMPTOM	POSSIBLE CAUSE	SOLUTION
A light fixture connected to the IR DOOR TUBE stays On even with the door closed	Door finish	Attach the grey sticker provided onto the door, in line with the IR DOOR TUBE
	Sensor reading	Open and close the door again to restart the sensor reading. If the problem persists, remove the general power supply unit for a couple of minutes and then plug it back in
A light fixture connected to the IR DOOR TUBE stays On for a long time with the door open	Stand-by	IR DOOR TUBE is set to 18 hours of stand-by, after which the light fixture will switch off automatically
Dual Color light fixtures connected to EDC IR DOOR TUBES in different compartments have different colour temperatures	External control system	Open and close the door quickly 4 times in a row to change the colour temperature of the light fixtures
Dual Color light fixtures connected to EDC IR DOOR TUBES in the same compartment have different colour temperatures	Emotion Jumper	Check that all the light fixtures connected are fitted with an EMOTION Jumper or not.

4. External control systems

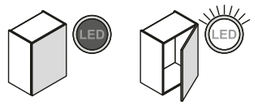
4.2.3 - Warnings and troubleshooting | MINI IR

- **ON-OFF (IR proximity sensor)**
  Move the hand within the sensor's detection range.
- **DIMMER (IR proximity sensor)**
  With fixtures switched On, hold the hand close to the sensor for more than 3 seconds, without touching it
- **ON-OFF (IR Door sensor)**
  Open/close the cabinet's door

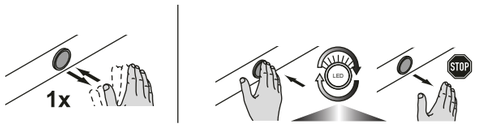


ATTENTION

- To ensure the coorect operation of MINI IR, check that the sensor lens is always clean and free of dust.
- Dual operating modes (selection via button on the control unit):
  - Door sensor: On-Off function (Auto Off with door open: 10 min.)



- Proximity sensor: On-Off / Dimmer functions (detects hand movement within 5cm of the sensor).



- Up to two recessed-mounted wired sensors can be connected to the control unit: each sensor controls all connected devices. Sensors can be surface-mounted using a special mounting bracket, sold separately.
- To connect multiple devices to MINI IR, a power distributor must purchase separately.

SYMPTOM	POSSIBLE CAUSE	SOLUTION
I cannot adjust the light intensity of the lighting fixtures connected to MINI IR	Control system	To adjust the light intensity, the connected fixtures must be turned On and the control unit must be set to "Proximity Sensor" mode. Then hold the hand within the sensor's detection range (5cm) for more than 3 seconds.
The Dual Color lighting fixture connected to MINI IR does not change the color temperature	Control system	MINI IR is not compatible with Dual Color (adjustable color temperature) fixtures. Use only MONO fixtures.

4. External control systems

4.2.4 - Warnings and troubleshooting | PUCKY

- **ON-OFF**
  Single press of the "ON" button
- **DIMMER**
  Long press of the "ON" button with device turned on
- **Color temperature change**
  Only with Dual Color fixtures: single or long touch with device turned on of the "color change" button



ATTENTION

- The “ON” button allows you to control power on / off (single press) or the regulation of light intensity (long press)The color temperature change (Dual Color lighting fixtures) occurs in two ways: - In steps: by pressing and releasing the “Color change” button. - With dynamic fluctuation: by holding down the “Color change” button.

SYMPTOM	POSSIBLE CAUSE	SOLUTION
I cannot adjust the light intensity of the lighting fixtures connected to PUCKY	Control system	To adjust the light intensity of the connected fixtures, it is necessary to press and hold the “ON” button when the fixtures are on
I cannot adjust the color temperature of the Dual Color fixtures connected to PUCKY	Control system	To adjust the color temperature of the connected fixtures, it is necessary to press and hold the dedicated “Color change” button when the fixtures are on

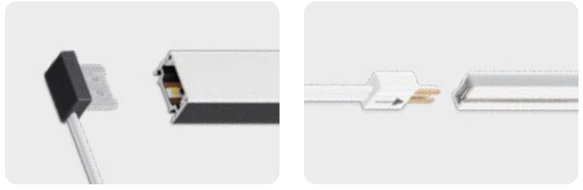
5. Moove FreeCut

5.1 - DIY lamps

The Moove collection includes various aluminum profiles (supplied complete with opal diffuser) and a flexible silicone strip all cuttable to size: each profile integrates a new latest-generation “FreeCut” LED strip, which can be cut along with the profile at any point without pitch constraints or loss of functionality. Each cut section can be used, through practical “plug&play” power connectors, to create lamps customized to the millimeter with a “full light” effect without shadows.

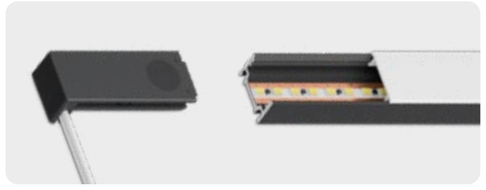


PLUG & PLAY POWER SUPPLY



All Moove profiles and strips are equipped with a plug&play electrical connection system: when inserting the Moove 4 power connector, make sure to align the marked black arrow with the gray line on the strip.

PLUG & PLAY SWITCHING SYSTEMS

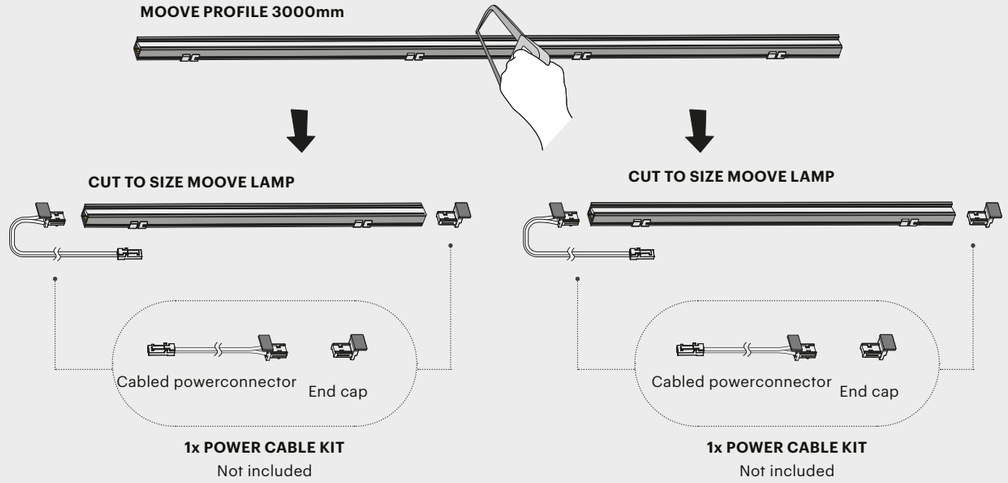


Each Moove aluminum profile is compatible with dedicated plug&play switching systems (IRS / PIR / TOUCH): to adapt the wired sensor to the profile, cut the diffuser shorter than the profile (36 or 22 mm depending on the model).

5. Moove FreeCut

5.1 - DIY lamps

EXAMPLE OF USE



ATTENTION

- Moove aluminum profiles can be cut on site using a standard carbon blade. Both the profile and the opal diffuser can be cut together. During cutting, make a clean and straight cut, being careful to remove any burrs, dust, debris or aluminum shavings before connecting the power cable. The Moove 4 flexible strip can instead be cut with normal scissors.
- Plug&play power cable kits and connection accessories are always sold separately.
- Always complete Moove fixtures with end caps to prevent dust accumulation inside the profile.
- Once cut and wired, Moove lighting fixtures can be connected directly to the power distributor integrated in the MEC LITE driver (**§ 7.2.1**) or via the control modules (**§ 7.2.2**): do not connect fixtures complete with integrated switching to the control modules.

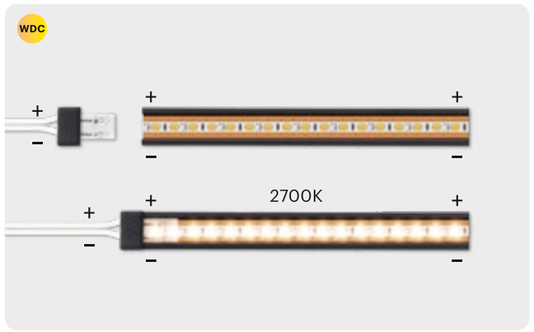
INSTALLATION MANUALS

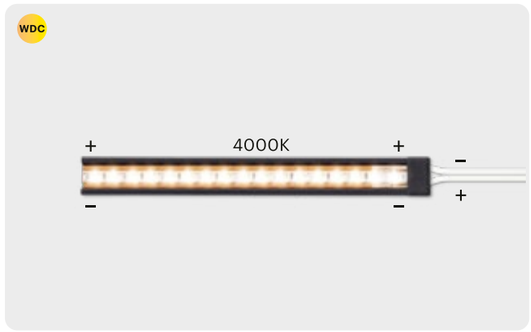
MOOVE 1 MOOVE 2 MOOVE 3 MOOVE 4 MOOVE 5

5. Moove FreeCut

5.2 - Power Supply and Color Temperature

Moove 1/2/3 and 5 aluminum profiles are equipped with an integrated WDC Dual Color LED strip (**§ 2.1**): color temperature varies from 2700K to 4000K by reversing the insertion side of the plug&play power connector or the optional switching system chosen. Check the components (strip / connector / switching system) for polarity indications (+/-) and refer to the cable color (white: +) to correctly set the color temperature.

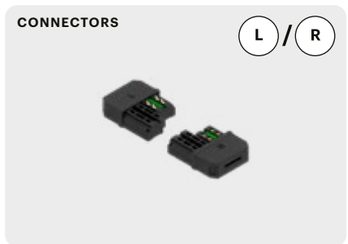




Moove 4 flexible strip integrates EDC Dual Color LED (**§ 2.1**): the color temperature varies from 3000K to 4000K by using the EDC Jumper cable (**§ 2.2**), mounted on the connector at the end of the power cable. The EDC Jumper cable is included in the Moove 4 power cable KIT.



Moove 5 is powered by an electrification connector KIT "Ⓛ / Ⓡ" combined with wired "Ⓛ" or "Ⓡ" IRD Door Sensors: it can operate with one or two sensors mounted at the ends (with a dual sensor, it will not be necessary to use the end terminal). Each IRD Sensor can be mounted on the right or left of the Moove 5 profile: follow the instructions on the opposite page to correctly set the orientation of the light beam and the color temperature of the assembled lamp.







5. Moove FreeCut

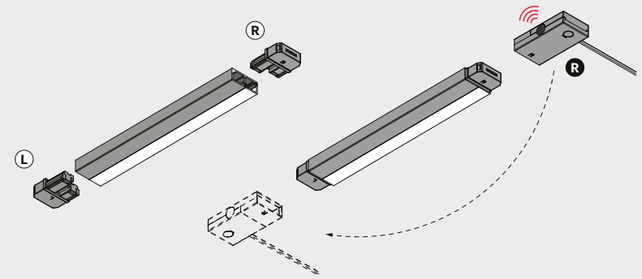
5.2 - Power Supply and Color Temperature

MOOVE 5

The electrification connectors (Ⓛ/Ⓡ) must always be inserted into the Moove 5 profile as shown in the figure.

Wired IRD Sensors can be mounted on each side of the profile in order to change the orientation of the light beam, the direction of the sensor and cable outlet, or the color temperature.

Refer to the diagram below with all the options, for single or double sensors.

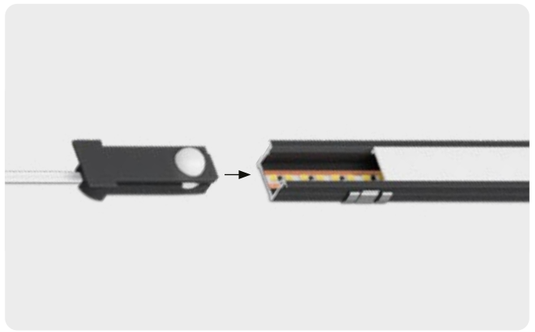


INSTALLATION - SIDE VIEW	CCT	ELECTRIFICATION OPTIONS - FRONT VIEW
Wall unit interior lighting	2700K	
	4000K	
	2700K	
	4000K	
Drawer lighting	2700K	
	4000K	

5. Moove FreeCut

5.3 - Plug&play switching systems

Moove DIY lighting fixtures are compatible with **plug&play switching systems** complete with power cable, for On-Off control and, depending on the type, adjustment of the fixture's light intensity. Color temperature management (all Moove fixtures are equipped with Dual Color LEDs) can always be set by reversing the insertion side of the chosen control system (Moove 1/2/3/5).





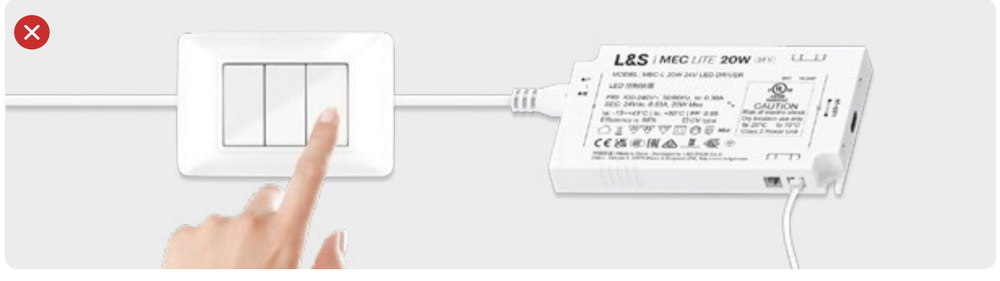
ATTENTION

- Moove devices with integrated control are not compatible for use with Smart Home solutions, transmitters or wired switching systems: do not connect to MEC LITE via Control Modules (**§ 7.2.2**) but use exclusively the integrated Power Distributor (**§ 7.2.1**).





- If the Power Supply is connected to a switch controlled outlet (**§ 7.2.1**) it is not possible to use Moove lighting fixtures fitted with integrated control systems.



- Do not use the EDC Jumper cable (**§ 2.2**) with Moove light fixtures fitted with a built-in switching system (**§ 3** - **§ 8.3**) otherwise it might interfere with the operation of the system (the colour temperature setting is managed through the switch/sensor on the light fixture).

5. Moove FreeCut

5.3 - Plug&play switching systems

IR SENSOR
Moove 1/2/3

Integrated infrared sensor that detects hand movement (within 6 cm) without touch.

Functions:

- On/Off (soft start)
- Color temperature change: with lamp On, hold your hand near the switch for about 3 seconds.



TOUCH SWITCH
Moove 1/3

Control is performed by touching the diffuser at the point indicated by the TCS signal LED.

Functions:

- Single Touch: On/Off (soft start).
- Long Touch (lamp On): Dimming



PIR MOTION SENSOR
Moove 1/3

Control achieved by entering the sensor's detection range or by opening the cabinet door:

Functions:

- On/Off (soft start): the lamp switches off when the door is closed or after a set time has elapsed since the last detection.



IR DOOR SENSOR
Moove 5

Integrated infrared sensor for cabinet door opening detection.

Functions:

- On/Off (soft start): open/close the door of the cabinet / drawer

For color temperature control, refer to the specific section (**§ 5.2**)

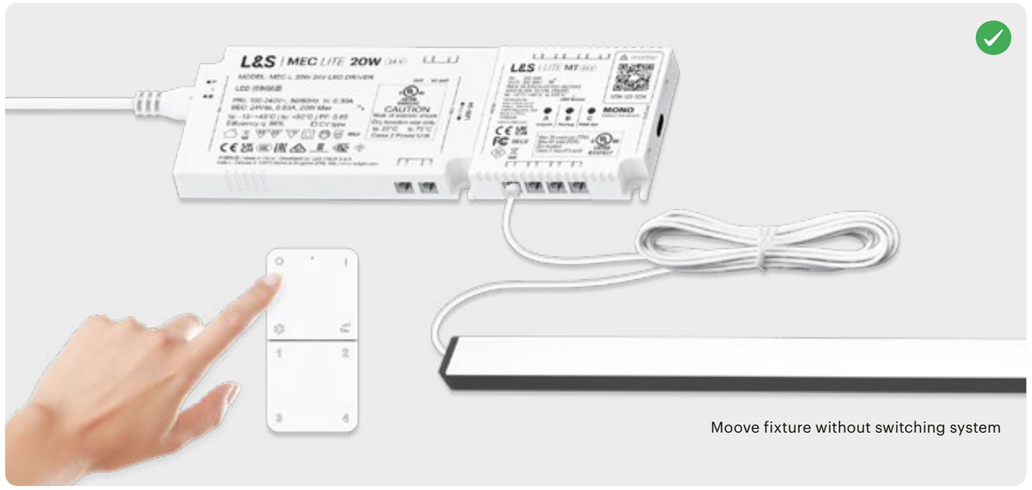


5. Moove FreeCut

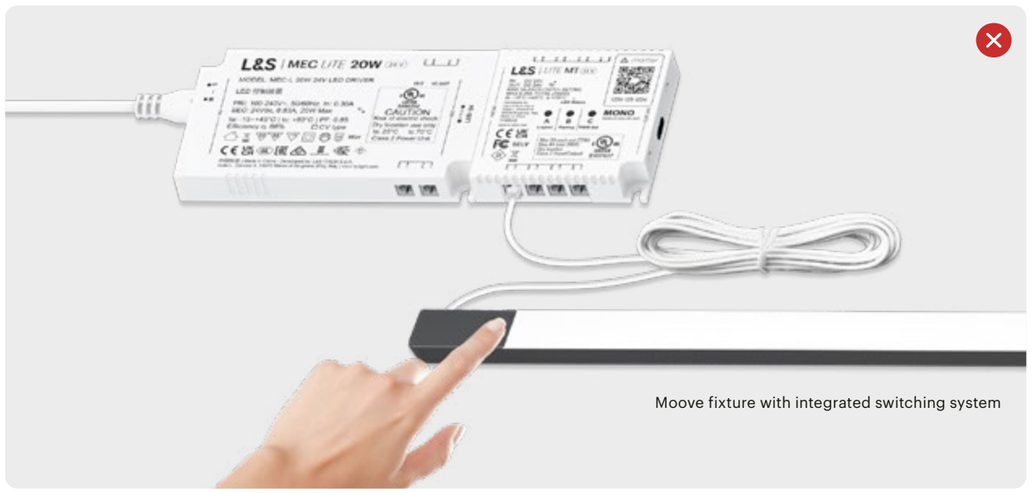
5.4 - Warnings and troubleshooting

ATTENTION

- The color temperature of Moove 1/2/3 without integrated switching and of Moove 4 lighting fixtures can be adjusted via Control Modules (**§ 7.3**) with the relative accessories (transmitters, sensors, smartphones, Voice Assistants, etc...). Moove 5, always equipped with IRD Sensor, and Moove 1/2/3 with integrated switching are not compatible for use withSmart Home solutions: do not connect to MEC LITE via control Modules (**§ 7.2.2**) but use exclusively the integrated Power Distributor (**§ 7.2.1**).



Moove fixture without switching system



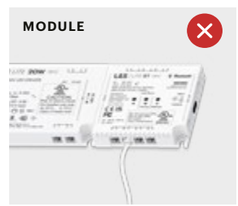
Moove fixture with integrated switching system

5. Moove FreeCut

5.4 - Warnings and troubleshooting

SYMPTOM	POSSIBLE CAUSE	SOLUTION
The plug & play power connector does not fit into the aluminum profile	Profile cut	When cutting aluminum profiles, make a clean and straight cut, taking care to remove any burrs, dust, debris, or aluminum shavings before connecting the power cable.
Two Moove aluminum profiles connected with a Bridge connector light up at different color temperatures	Polarity	When connecting Moove aluminum profiles via connection accessories (Bridge, Soft Link, corner connector), the polarity (+/-) of all components must be strictly respected and matched. Reverse the polarity (insertion side) of the power connector / switching system only to change the color temperature of the fixture.
A Moove lighting fixture assembled with an integrated control system turns on or off autonomously	Steam	Avoid excessive sources of steam around the integrated control system
	Direct or reflected light	Avoid any excessive direct or reflected light on the integrated control system
A Moove lighting fixture assembled with an integrated control system does not work or flashes	Wall switch	Do not use wall switches connected to the Driver for lighting fixtures equipped with an integrated control system.
	Connection to the Driver	Lighting fixtures with an integrated control system must be connected to the driver only via the power distributor (do not use control modules)
	DALI	Do not use the DALI system with lighting fixtures equipped with an integrated control system

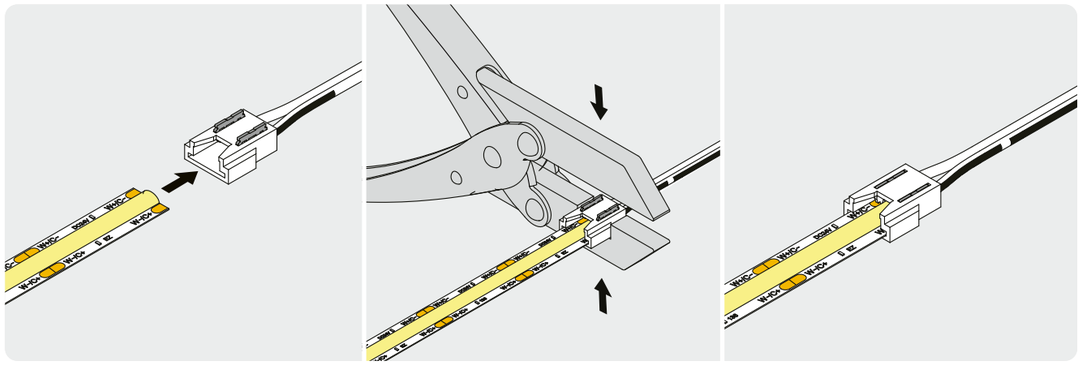




6. LED Reels and Profiles

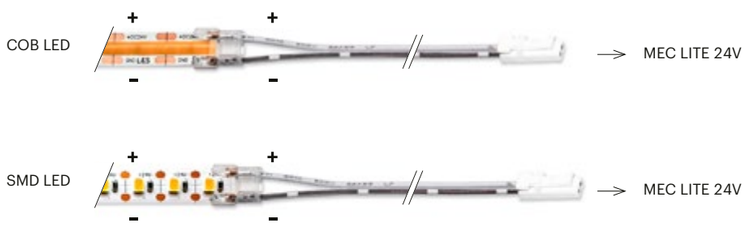
6.1 - Solderless LED reels

L&S Group 24V LED strips are versatile and easy-to-use solutions, integrable within L&S MEC PRO series aluminum profiles (**§ 6.3**) to create customized lighting systems: they are compatible with practical solderless reel-to-reel connection cables (crimp connector) and also support direct interaction via switching systems (**§ 6.2**). The strips, cuttable to size and with widths of 5 or 8mm, are available in MONO or Dual Color versions (**§ 2.1**) in the **SMD FreeCut** (minimum cutting pitch, can be cut at every single LED) or **COB** (fixed cutting pitch) models.



ATTENTION

- When connecting the Strips using solderless crimp connection accessories, it is necessary to strictly observe and match the polarity (**+/-**): check the markings (24V +/ 24V-) and the cable color (White /+) to correctly connect the Strips.



- Once wired, the Strips can be connected directly to the power distributor integrated in the MEC LITE Power Supply unit (**§ 7.2.1**- ON/OFF function only) or via Control Modules (**§ 7.2.2**- ON/OFF/Dimmer functions). Choose the module according to the type of strip used (MONO or Dual Color - **§ 2.1**). Do not connect fixtures equipped with integrated switching systems (**§ 6.3**) to the Control Modules.
- The Strips are equipped with pressure-sensitive adhesive backing: install only on clean surfaces.
- When cutting the Strips, use sharp scissors to make a clean, straight cut at the solder pads on the strip.
  Note: 5mm COB Strips have the pads on the back.



6. LED Reels and Profiles

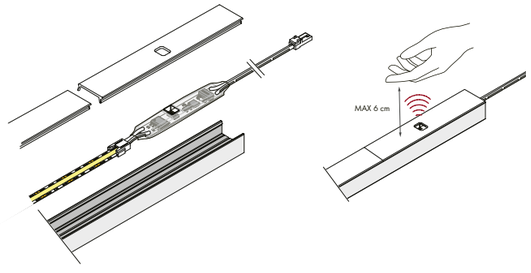
6.2 - Integrated switching systems

Both SMD FreeCut and COB strips support integrated switching systems, all equipped with a solderless crimp connection to the strip and complete with power cable. IRS and PIR sensors require a pre-cut diffuser section as a cover (or in any case, processing of the diffuser if used inside profiles not supplied by L&S) while the TOUCH switch can be installed directly under the fixture's diffuser.

IRS SENSOR

Activated by a hand gesture at a distance of 3-6 cm.
Available in MONO or EDC versions (for Dual Color lamps).
ON/OFF functions and Color Temperature Change
(EDC version only, by holding your hand near the sensor for more than 5 seconds with the device turned on.



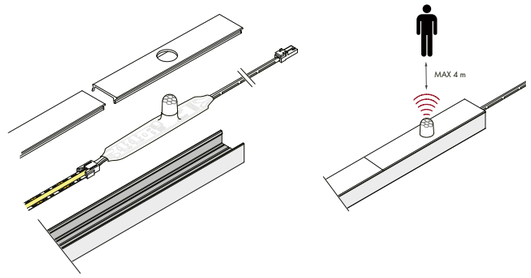


PIR SENSOR

Motion sensor with a detection range of 4 meters, it turns On when movement or door opening is detected; it turns Off 15 seconds after the last detection.

Exclusively for MONO LEDs.



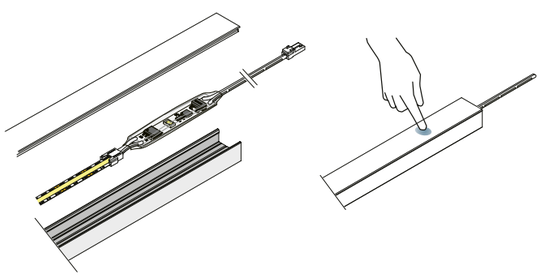


TOUCH SWITCH

Capacitive switch activated by touching the fixture's diffuser at the switch locator light dot.
ON/OFF (single touch) and Dimmer (long touch) functions.

Exclusively for MONO LEDs.





6. LED Reels and Profiles

6.3 - Profiles for MEC PRO DIY lamps

The MEC Pro series is an advanced modular system for the assembly of DIY lighting fixtures: the systems are composed of various high-quality aluminum profiles, which can be cut to size, all complete with opaline diffusers, optional end caps, and fixing accessories. The profiles are designed to integrate L&S solderless LED strips (**§ 6.2**) and the related power, connection, and control accessories.



ATTENTION

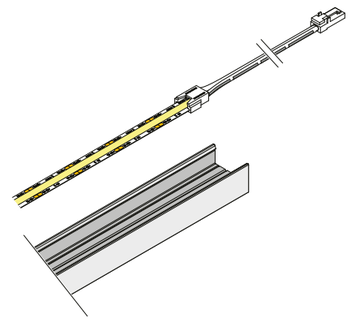
- Both the aluminum profiles and the diffusers can be cut on-site using a standard carbon blade. When cutting, make a clean and straight cut, taking care to remove any burrs, dust, debris, or aluminum shavings.
- Do not install the adhesive LED strip on dirty, greasy, or dusty aluminum surfaces.
- All end caps are equipped with a cable clamp: use it to prevent damage to the LED strip caused by cable pulling.
- Always complete the aluminum profile with the opaline diffuser.
- L&S Group SMD FreeCut and COB LED strips support solderless wired integrated switching systems such as IRS / PIR or TOUCH sensors. IRS and PIR sensors require a pre-cut diffuser section cover, different for each profile (or in any case, processing of the diffuser if used inside profiles not supplied by L&S); the TOUCH switch can be installed directly under the fixture's opaline diffuser.
- Once assembled and wired, the lighting fixtures can be connected directly to the integrated power distributor of the MEC LITE power supply unit (**§ 7.2.1**) or via the control modules (**§ 7.2.2**): do not connect fixtures complete with integrated switching to the control modules.

6. LED Reels and Profiles

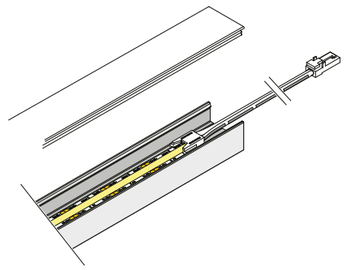
6.3 - Profiles for MEC PRO DIY lamps

LAMPS WITHOUT SWITCH

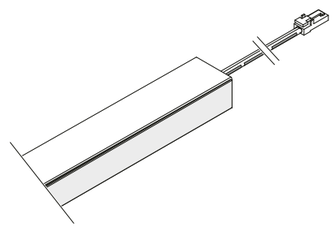
1. Install the adhesive LED strip, complete with power cable.



2. Mount the diffuser on the aluminum profile

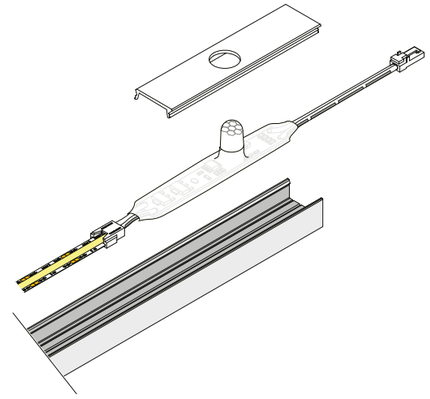


3. Connect to the MEC LITE power supply unit via integrated distributor (power supply only**§ 7.2.1**) or control modules (power supply and remote control -**§ 7.2.2**)

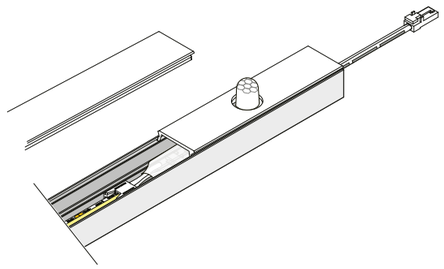


LAMPS WITH INTEGRATED SWITCHING SYSTEM

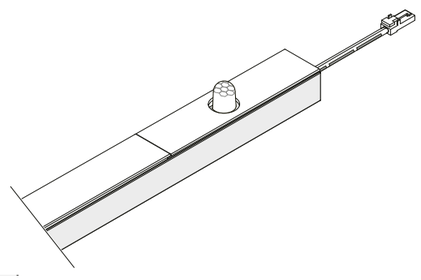
1. Install the adhesive LED strip, complete with cabled switching system, and mount the sensor cover (sold separately based on the chosen profile).



2. Mount the diffuser on the aluminum profile



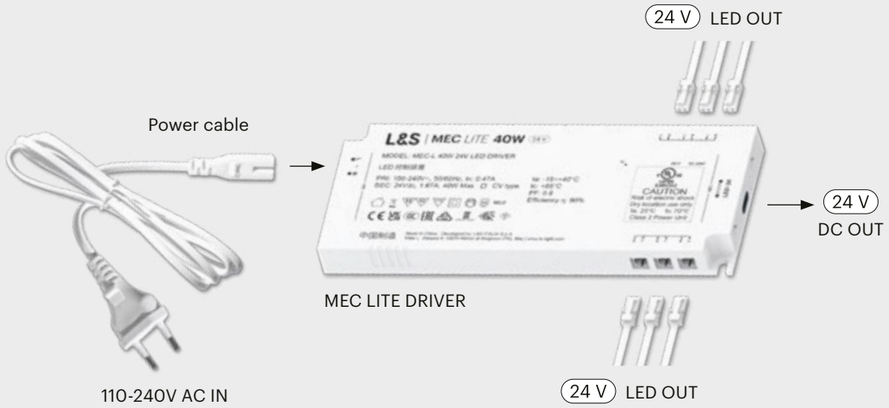
3. Connect to the MEC LITE power supply unit **exclusively** via integrated distributor (power supply only**§ 7.2.1**)



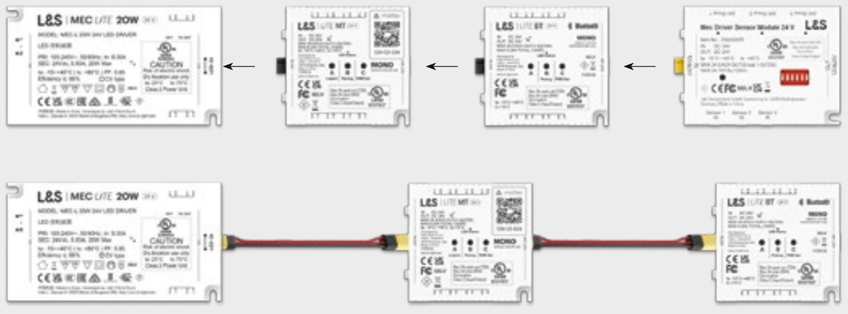
7. MEC LITE Platform

7.1 - Overview

MEC LITE is a modular and configurable power supply system for managing LED fixtures. It converts the AC mains voltage (220-240V AC in Europe and 110-120V AC in USA) into a constant extra-low (24 V) DC voltage, allowing the correct operation of all connected lighting devices. Available in 20W, 40W, 60W, 75W, 96W and 150W models, each complete with an integrated power distributor for direct connection of LED devices (the number of outputs is optimized based on the power output).



MEC LITE is a modular, simple, and intuitive power supply and control platform: it is possible to connect various (24 V) DC Control Modules (**§ 7.2.2**-**§ 7.3**) to control any adjustable lighting feature (On/Off, Dimmer, Color Temperature) via remote control, wireless sensors, cabled sensors, smartphone, or voice control. The Control Modules can be connected directly to the Driver or via a 500 mm Module connection cable.



Up to 5 Control Modules can be connected to a single Driver: regardless of the order of connection to the power supply, each module maintains the same functions and the same number of inputs/outputs.

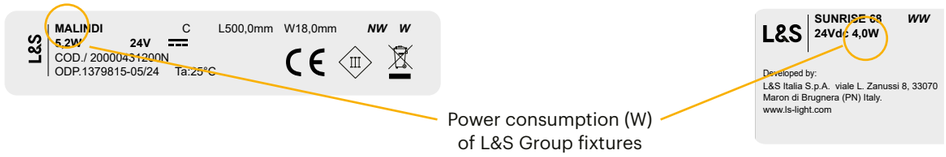
7. MEC LITE Platform

7.1 - Overview



ATTENTION

- All components of the MEC LITE system are sold separately. The power cable is available in various models with different plugs based on the type of electrical outlet used: choose the cable suitable for your reference market.
- Always calculate the total absorbed power (W) of the lighting fixtures to be connected to select the correct power supply rating: the power of the MEC LITE Driver must always be greater than (**§ 8.1**) the total absorbed power (it is recommended to choose a power supply module with a power rating at least 10% higher than the total absorbed power). The power of L&S lighting fixtures is clearly indicated on the labels (see below) located on the lamp body (rating plate data) or on the power cable (e.g. Spotlights).

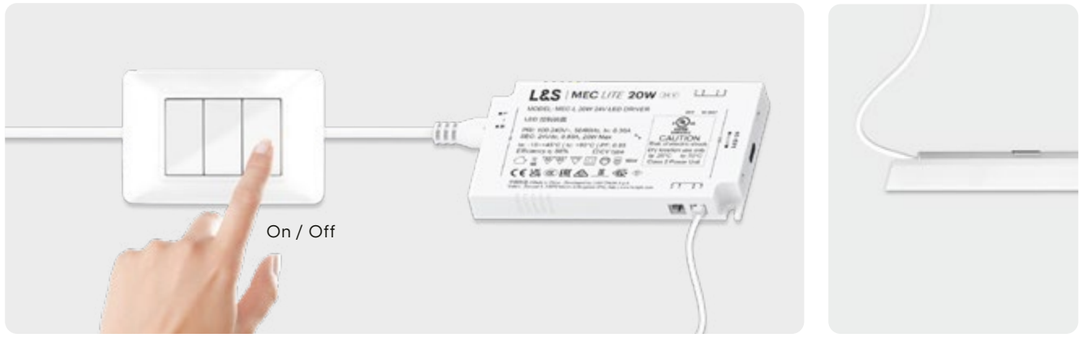


7. MEC LITE Platform

7.2.1 - Usage scenario: power supply only

By using the power distributor integrated in the MEC LITE Driver, it is possible to connect lighting fixtures with or without an integrated switching system. In the case of fixtures without a switch, MEC LITE must be connected to the power supply via a switch controlled wall socket for On/Off functions, thus preventing light intensity adjustment or remote control via transmitters, sensors, or voice assistants. In the case of fixtures with an integrated switching system, MEC LITE must be connected directly to the power supply: all lighting functions are managed via the switch/sensor on the fixture.

Lamps without switching system



Lamps with integrated switching system



⚠ ATTENTION

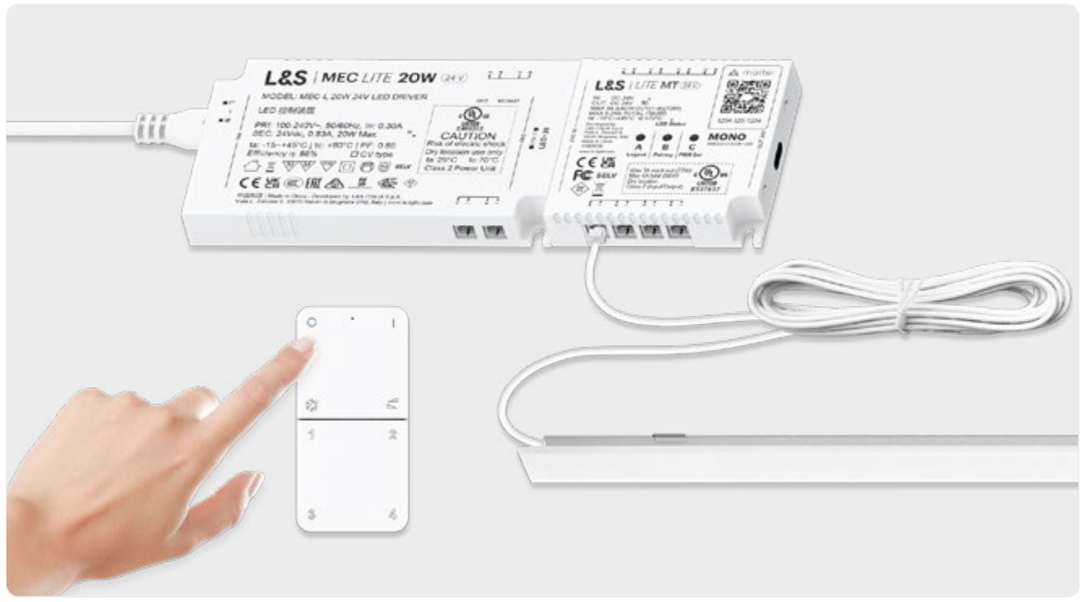
- **MEC LITE is not dimmable**, do not connect to the mains via dimmable wall switches. Adjusting the light intensity of lighting fixtures without an integrated switch is not permitted if these are connected to the Driver via the power distributor: use a Control Module (**§ 7.2.2**-**§ 7.3**) to manage all adjustable lighting functions.
- Dual Color lighting fixtures (**§ 2.1**) can be connected to the Driver's power distributor using the EDC Jumper cable (**§ 2.2**) to choose the color temperature during installation. Do not use the cable with Dual Color lighting fixtures equipped with an integrated switching system: the color temperature is adjusted via the switch/sensor integrated into the fixture.

7. MEC LITE Platform

7.2.2 - Usage scenario: power supply and control

This is the configuration of the MEC LITE Driver with Control Modules (**§ 7.3**), ideal for controlling any adjustable lighting function (On/Off, Dimmer, Color Temperature, etc.) via radio transmitters (remote control and wireless sensors), cabled sensors, smartphones or voice control. If connected to a Control Module, MEC LITE must be connected directly to the mains via a standard non switch-controlled socket.

Only for lamps without switching system



⚠ ATTENTION

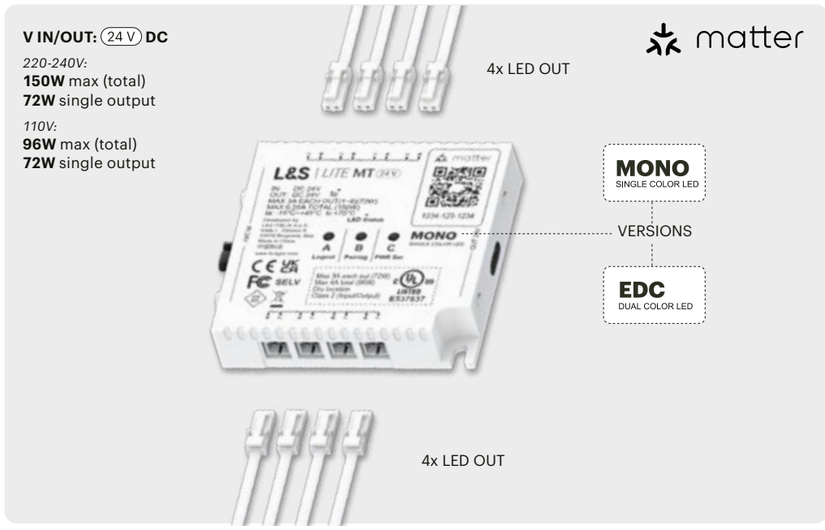
- Control Modules can only be used to connect lighting fixtures<u>without</u>integrated switching system (**§ 8.4**).
- Do not use Control Modules if the MEC LITE Driver is connected to the mains supply via a wall socket controlled by a switch.
- Control Modules are usually available in two versions, <u>MONO</u> or <u>EDC</u> (for Dual Color fixtures), based on the type of compatible fixture (**§ 2.1**): pay attention to the marking on the Module's housing.
- Dual Color lighting fixtures can only be connected to compatible Control Modules (marked EDC): the color temperature is adjusted by the Module via the relative remote controls or control accessories. Do not use the EDC Jumper cable (**§ 2.2**) to connect Dual Color lighting fixtures to Control Modules.
- Control Modules always turn back On at the last setting before switching Off (whether they were switched off via transmitter/remote control or due to a power supply interruption). Lighting fixtures connected to the Control Modules switch on and off gradually with a 0.5-second delay (Fade ON/OFF).

7. MEC LITE Platform

7.3.1 - Control modules | LITE MT

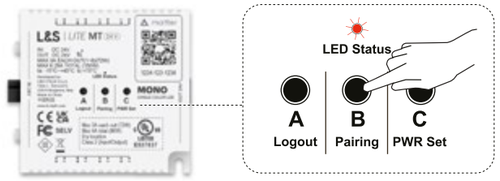
MANUAL

2.4 GHz radio frequency receiver (1 channel) with MATTER protocol
Simultaneous control of up to 8 devices via compatible transmitters (**§ 7.4.1 / § 7.4.2**) and, via Wi-Fi, through a voice assistant or smartphone.
Available in MONO or EDC versions (Dual Color fixtures - **§ 2.1**).



ATTENTION

- Available in MONO or EDC versions (Dual Color fixtures -**§ 2.1**): choose the module based on the type of lighting fixtures used.
- Do not use the EDC Jumper cable (**§ 2.2**) to connect Dual Color lighting fixtures to the LITE MT module: the color temperature is adjusted by the module (EDC) via app or compatible transmitters.
- Use only with lighting fixtures without an integrated switching system (**§ 7.2.2**).
- Functions: On-Off, Dimmer and color temperature adjustment (the latter only for Dual Color lighting fixtures - **§ 2.1**).
- Depending on the settings to be programmed (see below), the programming keys (A/B/C) can be pressed once or long-pressed. To pair a compatible transmitter, refer to the section dedicated to the transmitter (**§ 7.4**).



	SINGLE PRESS	LONG PRESS
A		MATTER settings reset
B	Pairing with 2.4 GHz transmitter	Unpairing of all transmitters in memory
C	LED Power 100%	LED Power 50% ~ 100%

7. MEC LITE Platform

7.3.1 - Control modules | LITE MT

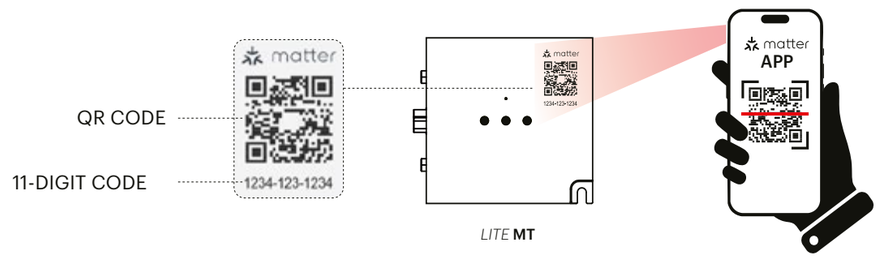
The LITE MT module allows control via voice assistant and smartphone (via Wi-Fi): follow the procedure to configure the LITE MT module via the MATTER protocol and to connect it to the native app of the Smart Home device used (for example Amazon Alexa, Smart Things, Apple Home Kit).

MATTER CONFIGURATION

1. Scan the QR code of the Smart Home system used for more information on each specific requirement and the pairing procedure (or search within the system for "Matter device pairing" or other similar entries). Ensure that the LITE MT module is not already connected to Matter and available on the Wi-Fi network: otherwise, to proceed with a new device pairing, long-press the programming button "A" to reset the device.

Apple Home | Google Home | Amazon Alexa

2. Add the LITE MT module using the smartphone application of the Smart Home system used: scan the QR code printed on the module (or manually enter the 11-digit numeric code). The app will show the icon of the new paired device. In case of error or failed pairing, repeat the procedure from the beginning, resetting the device.



ATTENTION

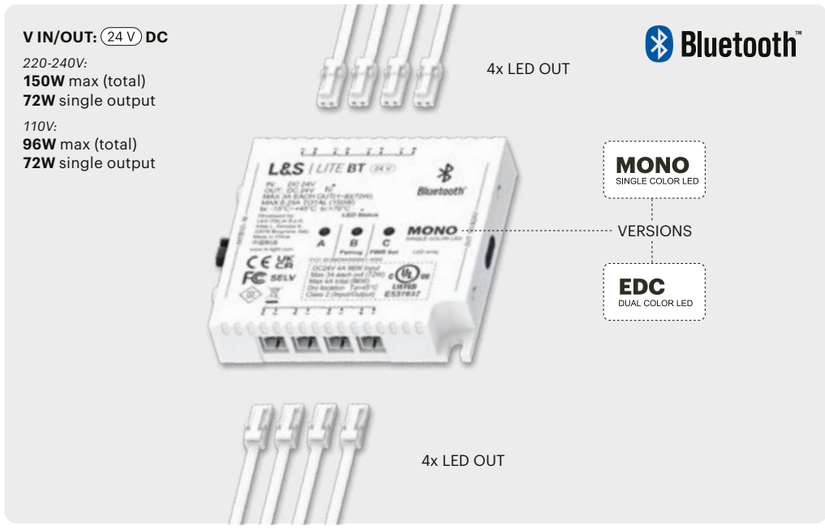
- Before starting the pairing procedure, ensure that the MEC LITE Driver is correctly working/powered and that the module is firmly connected to the power supply. The pairing procedure must be repeated for each module (**§ 8.6**) connected in a continuous line to MEC LITE.
- To reset the LITE MT module memory, long-press the programming button "**A**".
- For more detailed information, refer to the instruction manual included with the purchased module.

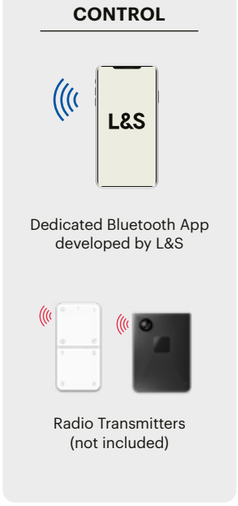
7. MEC LITE Platform

7.3.2 - Control modules | LITE BT

MANUAL

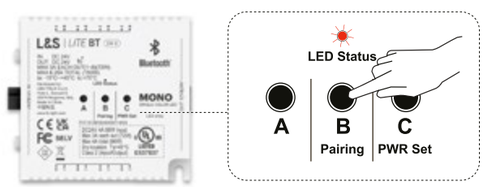
2.4 GHz radio frequency receiver (1 channel) with BLUETOOTH protocol
Simultaneous control of up to 8 devices via compatible transmitters (**§ 7.4.1 / § 7.4.2**) and, via Bluetooth, via smartphone with a dedicated App developed by L&S.
Available in MONO or EDC versions (Dual Color fixtures - **§ 2.1**).





⚠ ATTENTION

- Available in MONO or EDC versions (Dual Color fixtures - **§ 2.1**): choose the module based on the type of lighting fixtures used.
- Do not use the EDC Jumper cable (**§ 2.2**) to connect Dual Color lighting fixtures to the LITE BT module: the color temperature is adjusted by the module (EDC) via app or compatible transmitters.
- Use only with lighting fixtures without an integrated switching system (**§ 7.2.2**).
- Functions: On-Off, Dimmer and color temperature adjustment (the latter only for Dual Color lighting fixtures - **§ 2.1**).
- Depending on the settings to be programmed (see below), the programming buttons (A/B/C) can be pressed once or long-pressed. To pair a compatible transmitter, refer to the section dedicated to the transmitter (**§ 7.4**).



	SINGLE PRESS	LONG PRESS
A		BLUETOOTH Reset
B	Pairing with 2.4GHz transmitter	Unpairing of all transmitters in memory
C	Power LED 100%	Power LED 50% ~ 100%

7. MEC LITE Platform

7.3.2 - Control modules | LITE BT

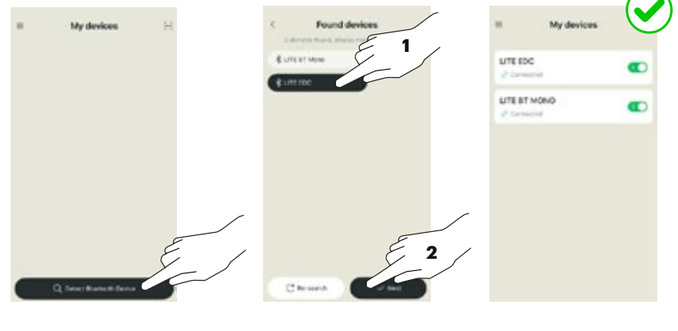
DEDICATED BLUETOOTH APP

LITE BT
Free download from App Store or Google Play. Follow the configuration procedures indicated in the user manual and below. Refer to the "Tutorial" section of the app menu for advanced settings.

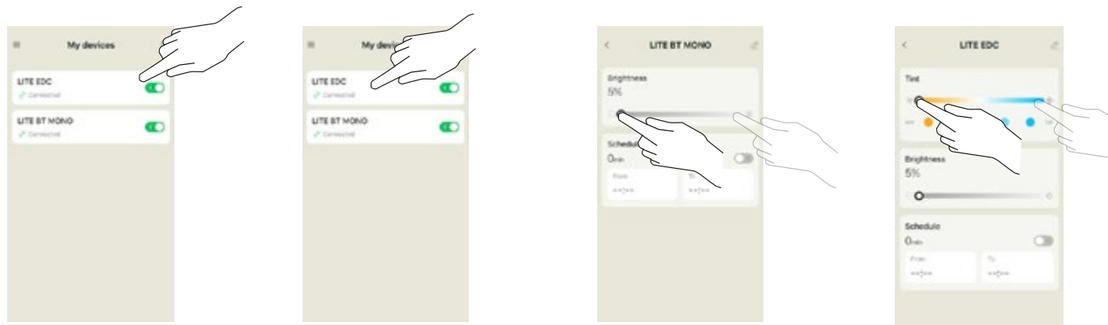
Download on the App Store
GET IT ON Google Play

ADD A DEVICE

- Download and install the app **LITE BT** on your smartphone.
- Search for "Bluetooth Device".
- Select the desired device from the list (1) and click "Next" (2) to confirm.
- **WARNING:** Repeat the procedure for each LITE BT module connected in a continuous line to the power supply.



FUNCTIONS



On / Off | Device Selection | Dimmer | Color Temperature (EDC)

⚠ ATTENTION

- Before starting the pairing procedure, ensure that the MEC LITE Driver is correctly working/powered and that the module is firmly connected to the power supply. The pairing procedure must be repeated for each module (**§ 8.6**) connected in a continuous line to MEC LITE.
- To reset the memory of the LITE BT module, long-press the programming button "**A**".
- For more detailed information, refer to the instruction manual included with the purchased module.

7. MEC LITE Platform

7.3.3 - Control modules | ZIGBEE MODULE 1 CHANNEL

MANUAL

2.4 GHz radio frequency receiver (1 channel) with ZIGBEE 3.0 protocol
Simultaneous control of up to 4 devices via compatible transmitter (**§ 7.4.3**) and, via pre-installed Bridge (e.g., Philips Hue / Tuya), via voice assistant or smartphone. Compatible with MONO or Dual Color fixtures (**§ 2.1**).

V IN/OUT: (24 V) **DC**

220-240V:
120W max (total)
72W single output

110V:
96W max (total)
72W single output



4x LED OUT

CONTROL



Smartphone or voice assistant via Bridge



Compatible ZIGBEE transmitter (not included)



ATTENTION

- The setting of the module's operating mode (MONO or Dual Color) is done via DIP switch on the side of the module: operation to be carried out with the module disconnected from the mains power supply.
- Do not use the EDC Jumper cable (**§ 2.2**) to connect Dual Color lighting fixtures to the module: the color temperature is adjusted by the module (EDC) via smartphone or compatible transmitters.
- Use only with lighting fixtures without an integrated switching system (**§ 7.2.2**).
- Functions: On-Off, Dimmer and color temperature adjustment (the latter only for Dual Color lighting fixtures - **§ 2.1**).
- The module can be paired with a compatible 4-channel transmitter by following a simple procedure (**§ 7.4.3**): ensure you place the transmitter and module close to each other at a distance of less than 15 cm during the pairing process.

7. MEC LITE Platform

7.3.3 - Control modules | ZIGBEE MODULE 1 CHANNEL

The Zigbee module allows control via a pre-installed Bridge (e.g., Philips Hue / Tuya) with a smartphone or voice assistants compatible with the ZigBee 3.0 protocol. The module can also operate on a Zigbee network via 2.4 GHz radio frequency, controlled exclusively by a compatible 4-channel transmitter (**§ 7.4.3**). Follow the procedure below to configure the module via the Zigbee protocol and connect it to the Bridge's native app.

ZIGBEE PAIRING

This procedure includes the steps for connecting the compatible 4-channel transmitter to the Zigbee network (the graphic example shows the procedure for pairing CHANNEL no. 1 of the transmitter). **Transmitter use is optional**, as the Module is controlled via smartphone once recognized in the Bridge's native app. Skip steps 2/4/5 if no transmitter use is required.

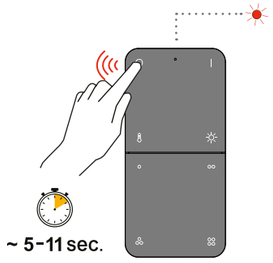
❶

Press and hold the programming button for approximately 5 seconds to reset the module.



All connected lighting fixtures will flash.

❷



Set the transmitter to programming mode. Press and hold the "OFF" button for approximately 5-11 seconds until the status LED on the transmitter starts flashing RED (programming mode will last 60 seconds).

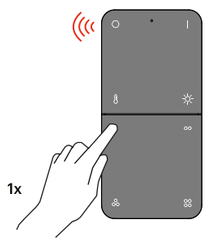
❸

Open the Zigbee app used and follow the instructions to search for lamps.

zigbee >>> ADD LIGHT >>> SEARCH

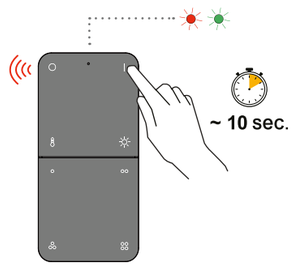
Wait for both the module and the transmitter to be recognized (the transmitter status LED will flash GREEN once). The module will be recognized in the app

❹



Select the desired channel for module pairing on the transmitter (single press)

❺



Press and hold the "ON" button for ~ 10 seconds: the status LED on the transmitter will flash RED 9 times, then GREEN 1 time to confirm successful pairing

ATTENTION

- Before starting the pairing procedure, ensure that the MEC LITE Driver is correctly working/powered and that the module is securely connected to the power supply. The pairing procedure must be repeated for each module (**§ 8.6**) connected in a continuous line to MEC LITE.
- For more detailed information, refer to the instruction manual included with the purchased module.

7. MEC LITE Platform

7.3.4 - Control modules | ZIGBEE MODULE 4 CHANNELS

MANUAL

2.4 GHz radio frequency receiver (4 channels) with ZIGBEE 3.0 protocol
Individual control of up to 4 devices via compatible transmitter (**§ 7.4.3**) and,
via pre-installed Bridge (e.g. Philips Hue / Tuya), via voice assistant or smartphone.
Compatible with MONO or Dual Color fixtures (**§ 2.1**).

V IN/OUT: (24 V) **DC**

220-240V:
120W max (total)
72W single output

110V:
96W max (total)
72W single output



4x LED OUT

CONTROL



Smartphone or voice assistant via Bridge



Compatible ZIGBEE transmitter (not included)



ATTENTION

- The setting of the module's operating mode (MONO or Dual Color) is done via DIP switch on the side of the module: operation to be carried out with the module disconnected from the mains power supply.
- Do not use the EDC Jumper cable (**§ 2.2**) to connect Dual Color lighting fixtures to the module: the color temperature is adjusted by the module (EDC) via smartphone or compatible transmitters.
- Use only with lighting fixtures without an integrated switching system (**§ 7.2.2**).
- Functions: On-Off, Dimmer and color temperature adjustment (the latter only for Dual Color lighting fixtures - **§ 2.1**).
- The module can be paired with a compatible 4-channel transmitter by following a simple procedure (**§ 7.4.3**): ensure you place the transmitter and module close to each other at a distance of less than 15 cm during the pairing process.

7. MEC LITE Platform

7.3.4 - Control modules | ZIGBEE MODULE 4 CHANNELS

The Zigbee module allows control via a pre-installed Bridge (e.g., Philips Hue / Tuya) with a smartphone or voice assistants compatible with the ZigBee 3.0 protocol. The module can also operate on a Zigbee network via 2.4 GHz radio frequency, controlled exclusively by a compatible 4-channel transmitter (**§ 7.4.3**). Follow the procedure below to configure the module via the Zigbee protocol and connect it to the Bridge's native app.

ZIGBEE PAIRING

This procedure includes the steps to connect the compatible 4-channel transmitter to the Zigbee network (the graphic example shows the procedure for pairing CHANNEL no. 1 of the transmitter). **The use of the transmitter is optional**, as the Module is controlled via smartphone once recognized in the Bridge's native app. Skip steps 2/4/5/6 if it is not necessary to use any transmitter.

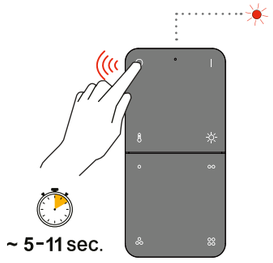
❶

Press and hold the programming key for approximately 5 seconds to reset the module.



All connected lighting fixtures will flash.

❷



Set the transmitter to programming mode. Press and hold the "OFF" button for approximately 5-11 seconds until the status LED on the transmitter begins flashing RED (the programming mode will last 60 seconds).

❸

Open the Zigbee app used and follow the instructions to search for lamps.

zigbee >>> ADD LIGHT >>> SEARCH

Wait for both the module and the transmitter to be recognized (the transmitter status LED will flash GREEN once).The module will be recognized in the app and 4 lamps will be displayed.

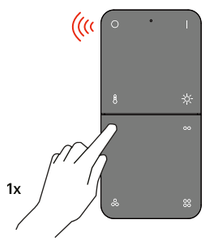
❹

Select the channel to be paired with the transmitter on the ZIGBEE module
CH 1: press 2 times
CH 2: press 3 times
CH 3: press 4 times
CH 4: press 5 times



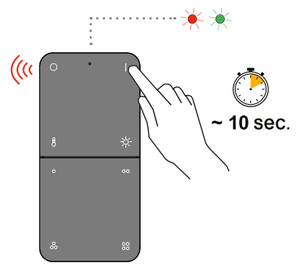
1 2 3 4

❺



Select the desired channel on the transmitter (single press)

❻



Press and hold the "ON" button for ~ 10 seconds: the status LED on the transmitter will flash RED 9 times, then GREEN 1 time to confirm successful pairing

ATTENTION

- Before starting the pairing procedure, ensure that the MEC LITE Driver is correctly working/powered and that the module is firmly connected to the power supply. The pairing procedure must be repeated for each module (**§ 8.6**) connected in a continuous line to MEC LITE.
- For more detailed information, refer to the instruction manual included with the purchased module.

7. MEC LITE Platform

7.3.5 - Control modules | SENSOR MODULE

MANUAL

2.4 GHz radio frequency receiver (3 channels)
Individual control of 3x2 groups of 3x2 fixtures via dedicated cabled or wireless sensors.
Compatible with MONO or Dual Color fixtures (**§ 2.1**).

V IN/OUT: (24 V) **DC**

220-240V:
120W max (total)
72W single output

110V:
96W max (total)
72W single output



3x2 LED OUT GROUPS

3x Cabled sensors

CONTROL



Cabled sensors
(not included)



Wireless sensors
(not included)

ATTENTION

- Follow the **DIP SWITCH settings** (see following page) to configure the Module: it is possible to set the Switching Mode (Switches **1/2**), the color temperature of the connected devices (Switches **3/4**, only with Dual Color fixtures -**§ 2.1**) and the off-timer for PIR and Door sensors (Switches **5/6**).
- Each group of 2 LED outputs (3 groups in total) is **associated with a specific wireless channel and a specific input for cabled sensors**. To pair a compatible transmitter to the Module, follow the procedure illustrated on the following pages. To use a cabled sensor, simply insert it into the module.
- Cabled and wireless sensors can be used simultaneously and can only control switching on/off and light intensity adjustment (IR Sensors).
- Do not use the EDC Jumper cable (**§ 2.2**) to connect Dual Color lighting fixtures to the SENSOR MODULE: the color temperature is adjusted by the module (EDC) via app or compatible transmitters.
- Use only with lighting fixtures without an integrated switching system (**§ 7.2.2**).

7. MEC LITE Platform

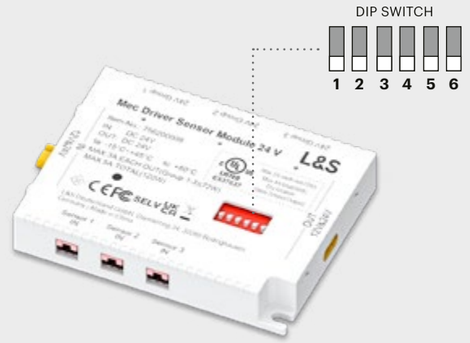
7.3.5 - Control modules | SENSOR MODULE

SWITCHING TYPES

GROUP SWITCHING (GROUP)
Each group of LED outputs is controlled via the corresponding sensor / switch.

OR SWITCHING
For PIR or Door IR sensors: all LED outputs are switched together, regardless of the sensor activated. If more than one sensor is activated, the connected LED fixtures will remain on: all sensors must be deactivated to turn off the connected fixtures.

CROSS SWITCHING
Each sensor / switch controls all connected LED fixtures simultaneously.



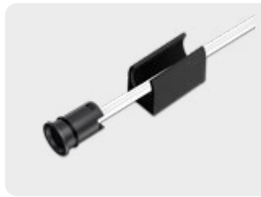
DIP SWITCH SETTINGS

	GROUP	GROUP	OR	CROSS
SWITCHING TYPE SELECTION	1 2 DOOR Sensor PIR Sensor CAP Sensor Rocker switch	1 2 IR Sensor	1 2 DOOR Sensor PIR Sensor CAP Sensor Rocker switch	1 2 IR Sensor CAP Sensor Rocker switch
COLOR TEMPERATURE OF CONNECTED LAMPS Can be used exclusively with Dual Color LEDs.	**2700K** 3 4	**3000K** 3 4	**4000K** 3 4	**6500K** 3 4
PIR SENSOR: AUTOMATIC SHUT-OFF TIME The time is calculated from the last detection of the sensor.	**10 sec.** 5 6	**60 sec.** 5 6	**3 min.** 5 6	**10 min.** 5 6
DOOR SENSOR: AUTOMATIC SHUT-OFF TIME The time is calculated from the last opening of the door.	**10 min.** 5 6	**60 min.** 5 6	**24 h** 5 6	**NO TIME** 5 6

7. MEC LITE Platform

7.3.5 - Control modules | SENSOR MODULE

CABLED SENSORS



IR / DOOR SENSOR

Cabled sensor for recessed installation. Surface installation with spacer sold separately.
Can be used as:

- Door IR sensor (ON-OFF)
- IR proximity touch switch (ON-OFF/Dimmer)

Recess hole: Ø10mm
Range: 50mm max.



PIR SENSOR

Cabled ON-OFF motion sensor for recessed installation. Surface installation with adjustable spacer sold separately

Recess hole: Ø13mm
Detection distance: max. 3000mm
Detection angle: 70°



CAP SENSOR

Cabled touch pad for hidden surface installation behind wood, glass or ceramic surfaces (e.g. under kitchen counter).
Installation via screws or double-sided tape (included)

Dimensions: 35.2 x 35.2 x 7.5 mm
Surface thickness: 30 mm max.



ROCKER SWITCH

Cabled ON / OFF rocker switch for recessed installation

Recess hole: Ø14mm

WIRELESS SENSORS (2.4 GHz RADIO FREQUENCY TRANSMITTERS)



IR SENSOR
Battery-powered wireless IR sensor.
Functions: ON-OFF / Dimmer

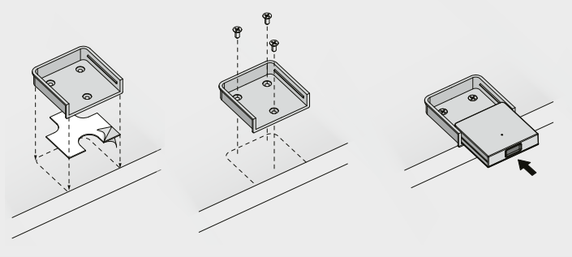


IR DOOR
Battery-powered wireless door sensor.
Functions: ON-OFF

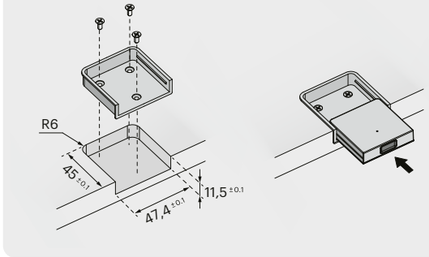


PIR SENSOR
Battery-powered wireless motion sensor.
Functions: ON-OFF

Surface installation (screws or double-sided tape included)



Recessed installation (screws included)



7. MEC LITE Platform

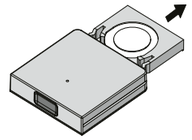
7.3.5 - Control modules | SENSOR MODULE

WIRELESS TRANSMITTERS - PAIRING PROCEDURE

Follow this procedure to pair compatible radio transmitters (see opposite page) with the SENSOR MODULE:

1. Remove the battery from the transmitter to be paired.
2. Press the programming button on the module to select the desired Light Group (check the LED indicator).
3. Access pairing mode by holding down the programming button for at least 4 seconds: the LED indicator will flash (pairing mode will last approximately 20 seconds).
4. Place the transmitter to be paired close to the Module and reinsert the battery to send a signal.
5. The LED indicator will turn GREEN and then turn off to confirm successful pairing.

❶

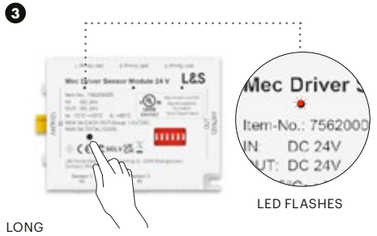


❷



SINGLE PRESS

❸



LONG PRESS

LED FLASHES

❹



❺



GREEN LED

⚠ ATTENTION

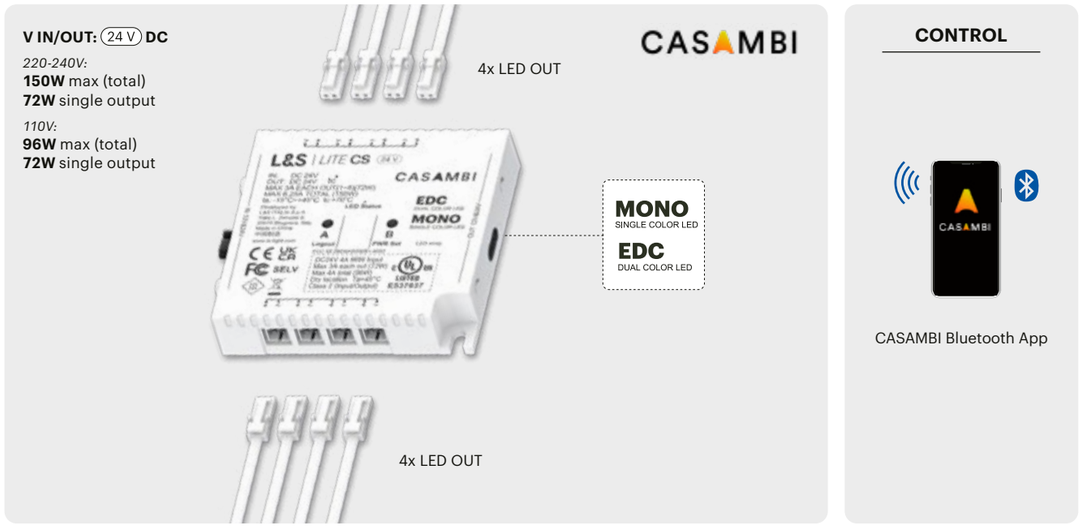
- By default, the SENSOR MODULE has no paired transmitters saved in memory: before starting the pairing procedure, make sure that the MEC LITE Driver is correctly working/powered and that the module is firmly connected to the power supply.
- The pairing procedure must be repeated for each module (**§ 8.6**) connected in a continuous line to MEC LITE.
- Multiple transmitters can be associated with the receiver Module (even multiple transmitters on the same Lighting Group). A single transmitter can be associated with multiple receiver modules.
- To delete (unpair) a transmitter from the SENSOR MODULE memory, select the desired channel on the Module and then press and hold the programming key for 7 seconds.
- For more detailed information on association procedures, always refer to the instruction manual included with the purchased Module.

7. MEC LITE Platform

7.3.6 - Control modules | LITE CS

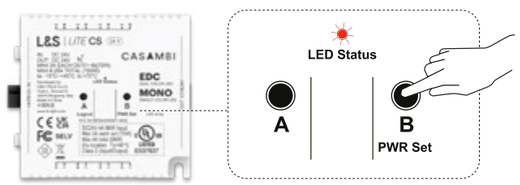
MANUAL

Control module with CASAMBI protocol
Simultaneous control of up to 8 fixtures via Bluetooth, using a smartphone with the dedicated CASAMBI App. Compatible with MONO or Dual Color fixtures (**§ 2.1**).



ATTENTION

- Download and install the"CASAMBI application"from your device's App Store to control the LITE CS module. Ensure that the MEC LITE Driver is correctly working/powered and that the module is firmly connected to the power supply. Each module connected in continuous line to MEC LITE must be added within the App.Use only with lighting fixtures without an integrated switching system (**§ 7.2.2**).
- Available in MONO or EDC versions (Dual Color fixtures - **§ 2.1**): choose the module based on the type of lighting fixtures used.
- Functions: On-Off, Dimmer and color temperature adjustment (the latter only for Dual Color lighting fixtures -**§ 2.1**).
- Do not use the EDC Jumper cable (**§ 2.2**) to connect Dual Color lighting fixtures to the LITE CS module: the color temperature is adjusted by the module (EDC) via the app.
- Depending on the settings to be programmed (see below), the programming keys (A/B) can be pressed once or long-pressed.



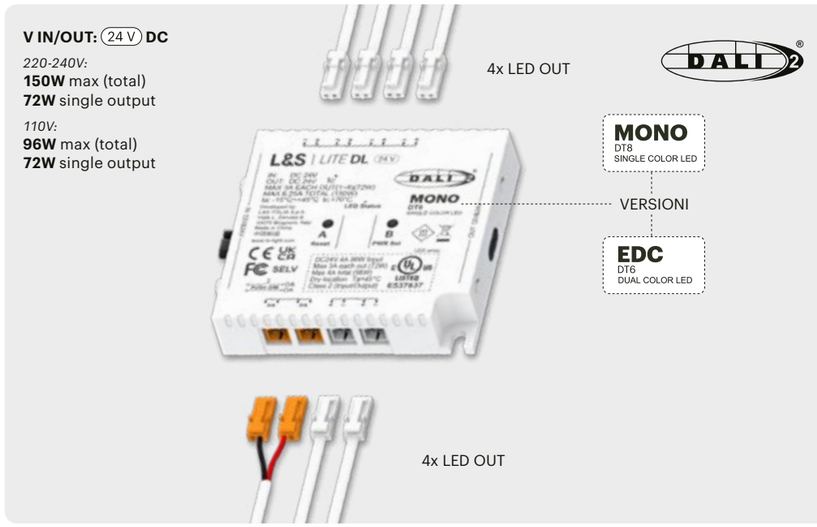
	SINGLE PRESS	LONG PRESS
A		Reset CASAMBI
B	LED Power 100%	LED Power 50% ~ 100%

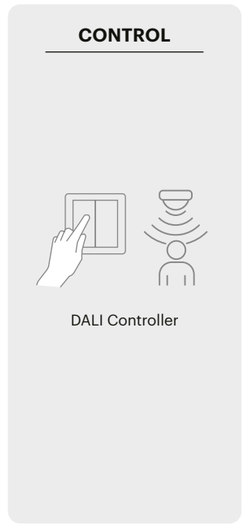
7. MEC LITE Platform

7.3.7 - Control modules | LITE DL

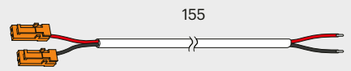
MANUAL

Control module with DALI-2 Wired protocol
Simultaneous control of up to 6 luminaires via DALI protocol, available in versions for MONO (DALI DT6) and EDC (DALI DT8, for Dual Color luminaires - **§ 2.1**)



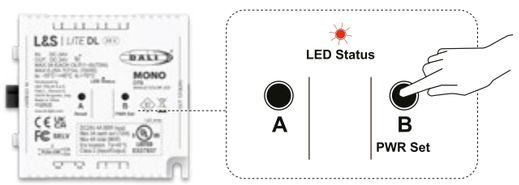


Connect the LITE DL module to the DALI BUS using the specific connection cable included.



ATTENTION

- Use only with lighting fixtures without an integrated switching system (**§ 7.2.2**).
- Available in MONO (DALI DT6) or EDC (DALI DT8 / for Dual Color fixtures - **§ 2.1**): choose the module based on the type of lighting fixtures used.
- Functions: On-Off, Dimmer, and color temperature adjustment (the latter only for Dual Color lighting fixtures -**§ 2.1**).
- Do not use the EDC Jumper cable (**§ 2.2**) to connect Dual Color lighting fixtures to the LITE DT module: the color temperature is adjusted by the module (EDC) via app or compatible transmitters.
- Depending on the settings to be programmed (see below), the programming keys (A/B) can be pressed once or for a long press.



	SINGLE PRESS	LONG PRESS
A		DALI Reset
B	LED Power 100%	LED Power 50% ~ 100%

7. MEC LITE Platform

7.3.8 - Control modules | WIRED C

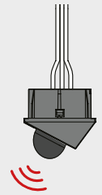
MANUAL

Control module for cabled sensors
Simultaneous control of up to 4 fixtures via dedicated cabled sensors (opposite page).
Compatible with MONO or Dual Color fixtures (**§ 2.1**).

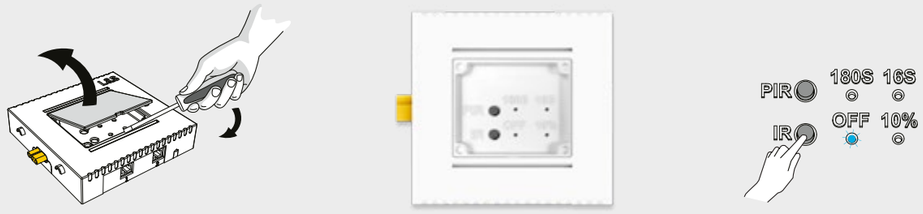
V IN/OUT: (24 V) **DC**
120W max (total)
72Wsingle output



CONTROL



Cabled sensors
(not included)



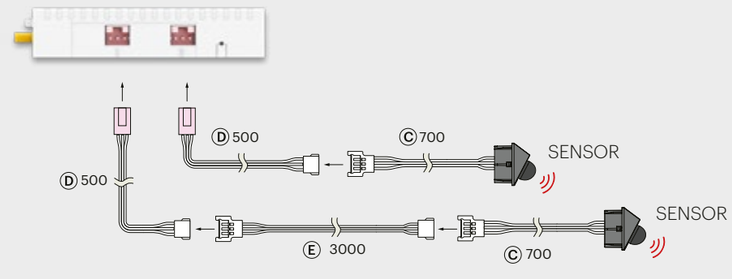
ATTENTION

- Any compatible sensor (not included - see the opposite page) allows simultaneous On/Off switching of all connected lighting fixtures. There are 2 sensor inputs for each module: both sensors control all connected lighting fixtures.
- Compatible with Dual Color fixtures (**§ 2.1**) via EDC Jumper cable (**§ 2.2** - for setting the color temperature during installation). It is not possible to change the color temperature using the sensors connected to the module
- Use only with lighting fixtures without an integrated switching system (**§ 7.2.2**).
- To access the module's programming keys, remove the cover using a paper clip or a flat-tipped tool. The programming keys (PIR/IR) can be pressed once or held down, depending on the settings to be programmed. During the module programming (see the included instruction manual), ensure that the MEC LITE Driver is correctly working/powered and that the module is firmly connected to the power supply.
- Close the cover once the programming procedure is complete.

7. MEC LITE Platform

7.3.8 - Control modules | WIRED C

Each compatible sensor has specific settings that can be set following the appropriate procedure indicated in the manual: the settings are maintained even in the event of a module restart after a power failure. The sensors are supplied with a standard 700+500mm cable assembly (C+D): if necessary, a 3000mm extension (E), sold separately, can be connected (only one extension can be connected for each sensor).





PIR SENSOR
Recessed motion sensor

To be installed at a height between 1 and 2.5 m. It is possible to set the auto-off time by choosing between 16 sec or 180 sec (from the last detection).

Recessed hole: Ø20mm.



TOUCH SWITCH
Recessed touch switch

ON/OFF function: short touch to turn the light on and off;
DIMMER function: long touch for continuous adjustment of light intensity (10%-100%).

Recessed hole: Ø20mm



IR DOOR WEDGE
Door Sensor

Double IR sensor, ideal for double-door cabinets.
Surface-mounted installation: it is possible to adjust the brightness of the connected lamps to 10% once the door is closed (to create decorative lighting in furniture with glass doors when closed).



DOUBLE IR SENSOR
Door Sensor

Double IR sensor, ideal for double-door cabinets. Recessed installation: it is possible to adjust the brightness of the connected lamps to 10% once the door is closed (to create decorative lighting in furniture with glass doors when closed).

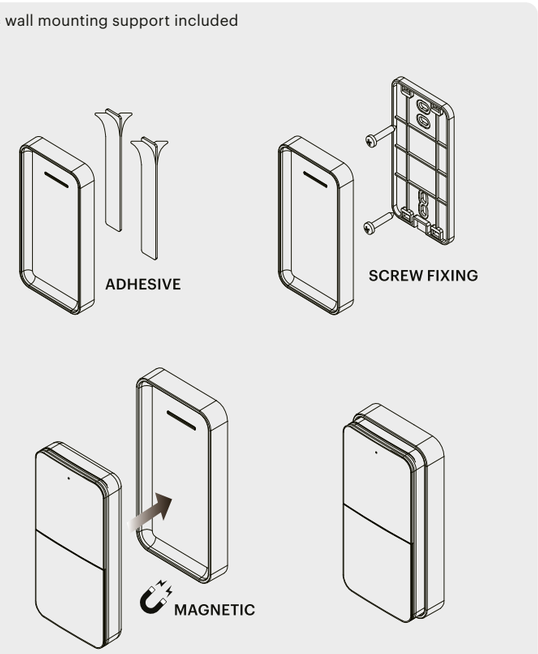
7. MEC LITE Platform

7.4.1 - 2.4GHz Radio Transmitters | LITE REMOTE

MANUAL VIDEO TUTORIAL

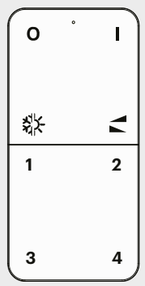
2.4 GHz radio frequency Transmitter - 4 Channels
Compatible with Control Modules: LITE MT (**§ 7.3.1**) and LITE BT (**§ 7.3.2**)
Range: 15m indoor

Magnetic wall mounting support included





BUTTON	SINGLE PRESS	LONG PRESS
I	**ON**	
O	**OFF**	
❄	**ONLY FOR DUAL COLOR LEDs** Color temperature adjustment (STEP)	**ONLY FOR DUAL COLOR LEDs** Color temperature adjustment (Gradual)
◢	Light intensity adjustment (Dimmer inSTEPS)	Light intensity adjustment (Gradual dimmer)
1/2/3/4	Channel Selection	Channel pairing with compatible receiver module
O+1/2/3/4		Channel unpairing from Receiver Module



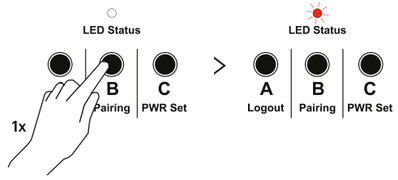
7. MEC LITE Platform

7.4.1 - 2.4GHz Radio Transmitters | LITE REMOTE

COMPATIBLE RECEIVER MODULE PAIRING PROCEDURE

Note: the graphic example shows the procedure for pairing transmitter CHANNEL no. 1

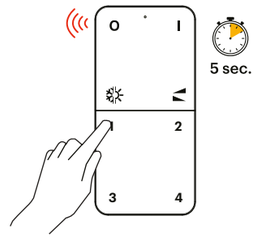
1 ENABLE PROGRAMMING MODE ON THE COMPATIBLE RECEIVER MODULE (LITE MT / LITE BT)



Press the "B" Button once

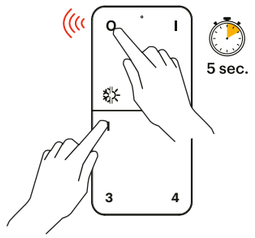
The status LED on the module lights up

2 PAIRING



Press and hold the key of the channel to be paired with the Module (1/2/3 or 4) for 5 seconds

2 UNPAIRING



Simultaneously press and hold the "0" key + the key of the channel to unpair (1/2/3 or 4) for 5 seconds

⚠ ATTENTION

- LITE MT (**§ 7.3.1**) and LITE BT (**§ 7.3.2**) Control Modules enter automatic pairing mode for 1 minute as soon as they are connected to the power supply (the red LED will remain on): within this time interval, it is possible to skip "step 1" of the Transmitter-Module pairing procedure.
- By default, the receiver modules do not have any paired transmitters saved in their memory: before pairing a radio-frequency Transmitter with a Receiver Module, ensure that the MEC LITE Driver is correctly working/powered and that the module is firmly connected to the power supply.
- It is possible to pair multiple radio Transmitters (up to 5) with a single compatible Receiver Module, and a single Transmitter with multiple compatible Receiver Modules (up to 6). Multiple Receiver Modules can be paired on the same transmitter channel.
- The pairing procedure must be repeated for each transmitter channel you wish to use and on each module (**§ 8.6**) connected in a continuous line to the MEC LITE driver.
- For more detailed information on pairing procedures, always refer to the instruction manual included with the purchased module.

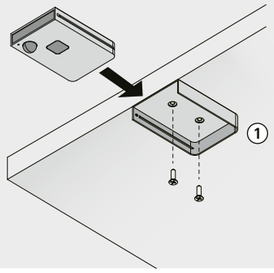
7. MEC LITE Platform

7.4.2 - 2.4GHz Radio Transmitters | LITE SENSOR

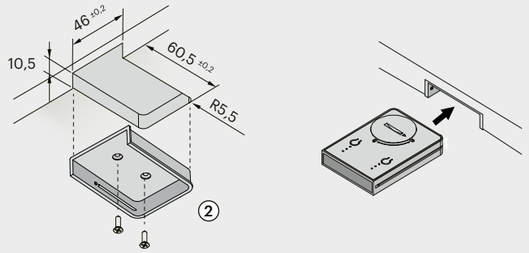
MANUAL VIDEO TUTORIAL

2.4 GHz Multi-function radio frequency transmitter - 1 Channel
Compatible with Control Modules: LITE MT (**§ 7.3.1**) and LITE BT (**§ 7.3.2**).
It can be configured for use as a Motion Sensor (PIR), Door sensor (IR) or Radio transmitter (TOUCH). Range: 15m indoor

1 - Surface mounting bracket (included)

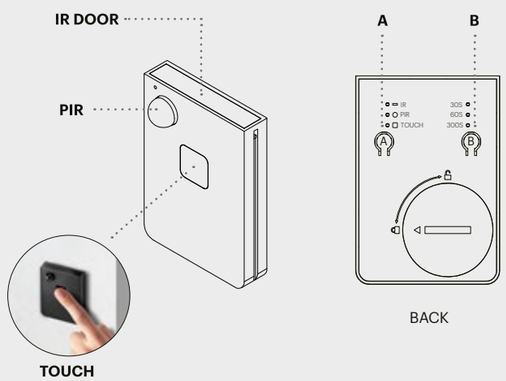


2 - Recessed mounting bracket (included)





TOUCH	**SINGLE PRESS** On/Off **LONG PRESS** Progressive dimmer
Button A	**SINGLE PRESS** Operating mode selection: IR (door) / PIR / Touch **LONG PRESS** Pairing with compatible Receiver.
Button B	**SINGLE PRESS** Automatic shut-off setting. IR/PIR: 30s / 60s / 300s. **LONG PRESS** Color Temperature change (Dual Color LED only).
A + B	**LONG PRESS** Unpairing from Receiver.



BACK

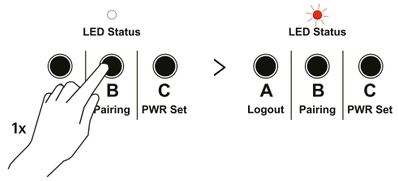
7. MEC LITE Platform

7.4.2 - 2.4GHz Radio Transmitters | LITE SENSOR

COMPATIBLE RECEIVER MODULE PAIRING PROCEDURE

Note: the graphic example shows the procedure for pairing CHANNEL no. 1 of the transmitter

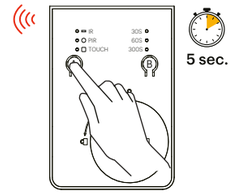
1 ENABLE PROGRAMMING MODE ON THE COMPATIBLE RECEIVER MODULE (LITE MT / LITE BT)



Press Button B (single press)

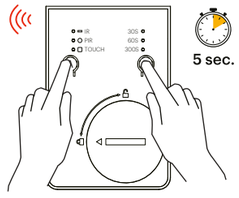
LED Status: Steady ON

2 PAIRING



Press and hold for 5 seconds Button A (back of the LITE Sensor)

2 UNPAIRING



Press and hold for 5 seconds Buttons A+B (back of the LITE Sensor)

⚠ ATTENTION

- LITE MT (**§ 7.3.1**) and LITE BT (**§ 7.3.2**) Control Modules enter automatic pairing mode for 1 minute as soon as they are connected to the power supply (the red LED will remain on): within this time interval, it is possible to skip "step 1" of the Transmitter-Module pairing procedure.
- By default, the receiver modules do not have any paired transmitters saved in their memory: before pairing a radio-frequency Transmitter with a Receiver Module, ensure that the MEC LITE Driver is correctly working/powered and that the module is firmly connected to the power supply.
- It is possible to pair multiple radio Transmitters (up to 5) with a single compatible Receiver Module, and a single Transmitter with multiple compatible Receiver Modules (up to 6). Multiple Receiver Modules can be paired on the same transmitter channel.
- The pairing procedure must be repeated for each transmitter channel you wish to use and on each module (**§ 8.6**) connected in a continuous line to the MEC LITE driver.
- For more detailed information on pairing procedures, always refer to the instruction manual included with the purchased module.

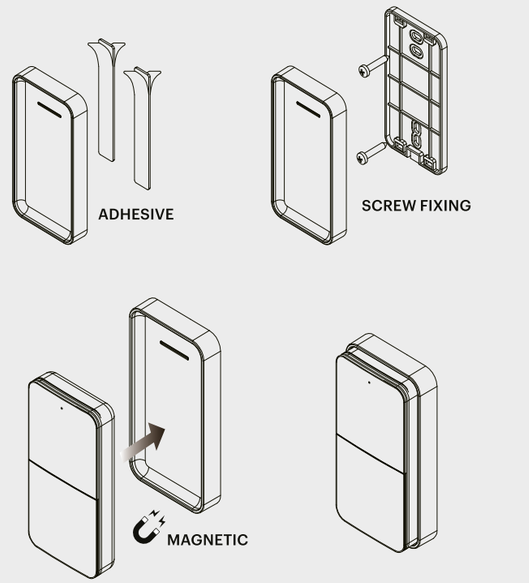
7. MEC LITE Platform

7.4.3 - 2.4GHz Radio Transmitters | 4 CHANNEL REMOTE

ZIGBEE 1 ZIGBEE 4

2.4 GHz Radio Frequency Transmitter - 4 Channels
Compatible with 1-channel (**§ 7.3.3**) and 4 channels (**§ 7.3.4**) ZIGBEE Control Modules
Dual communication protocol: it can operate at 2.4 GHz radio frequency or be paired via a Zigbee 3.0 bridge to work with Philips Hue, Tuya and other compatible ecosystems.
Range: 15m indoor

Magnetic wall mounting support included



zigbee



BUTTON	SINGLE PRESS	LONG PRESS
|	**ON**	Compatible Receiver Module pairing
○	**OFF**	Module Reset
	FOR DUAL COLOR LEDS ONLY Color temperature adjustment (STEP)	**FOR DUAL COLOR LEDS ONLY** Color temperature adjustment (Gradual)
	Brightness adjustment (Dimmer inSTEPS)	Brightness adjustment (Gradual dimmer)
○ ○○ ○○ ○○	Channel Selection	Channel unpairing from Receiver Module
○○ + ○○		Automatic pairing of transmitter channels with the corresponding LED Groups of the Receiver Module



7. MEC LITE Platform

7.4.3 - 2.4GHz Radio Transmitters | 4 CHANNEL REMOTE

COMPATIBLE RECEIVER MODULE PAIRING PROCEDURE

Follow this procedure to pair the transmitter with the Zigbee Control Module **without a Zigbee 3.0 Bridge** (radio frequency only). To connect the transmitter to the Zigbee network, it must be set to "programming mode" (**§ 7.3.3 - § 7.3.4**) to make it detectable via the Zigbee app before following the procedure described here. The graphic example shows the procedure for associating CHANNEL no. 1 of the transmitter.

❶ Set the Module to pairing mode by pressing the programming button

ZIGBEE Module 1



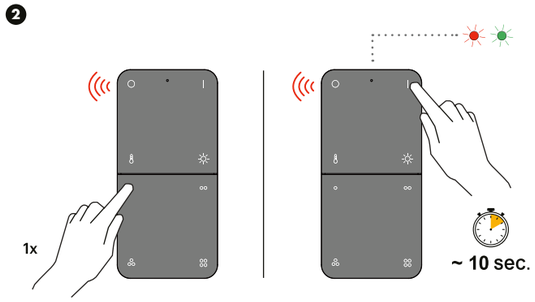
Press the button 1 time

ZIGBEE Module 4



Select the channel on the module to be paired with the transmitter
CH 1: press 2 times
CH 2: press 3 times
CH 3: press 4 times
CH 4: press 5 times

❷

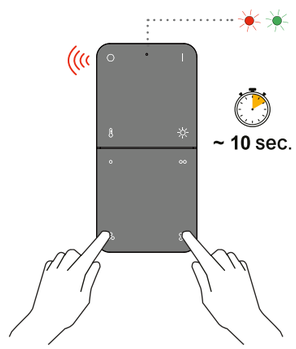


Select the desired channel on the transmitter (single press).
Then press and hold the "ON" button for ~ 10 seconds: the status LED on the transmitter will flash RED 9 times, then GREEN once to confirm successful pairing

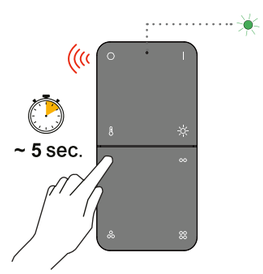
AUTOMATIC ASSOCIATION OF ALL CHANNELS

Hold buttons "3 and 4" of the transmitter for about 10 seconds: the status LED on the transmitter will flash RED 9 times, then GREEN once to confirm successful pairing, with the transmitter set as follows:

- CH 1 to Group 1 of the module
- CH 2 to Group 2 of the module
- CH 3 to Group 4 of the module
- CH 4 to Group 4 of the module



SINGLE CHANNEL DISASSOCIATION



Press the channel on the transmitter and hold it for about 5 seconds: the status LED will flash GREEN once to confirm the unpairing

ATTENTION

- By default, receiver modules do not have paired transmitters saved in memory: before pairing a radio frequency Transmitter with a Receiver Module, ensure that the MEC LITE Driver is correctly working/powered and that the module is firmly connected to the power supply.
- It is possible to associate multiple radio Transmitters (up to 5) with a single compatible Receiver Module and a single Transmitter with multiple compatible Receiver Modules (up to 6). Multiple Receiver Modules can be paired on the same transmitter channel.
- The pairing procedure must be repeated for each transmitter channel you wish to use and on each module (**§ 8.6**) connected in a continuous line to the MEC LITE driver.
- For more detailed information on association procedures, always refer to the instruction manual included with the purchased module.

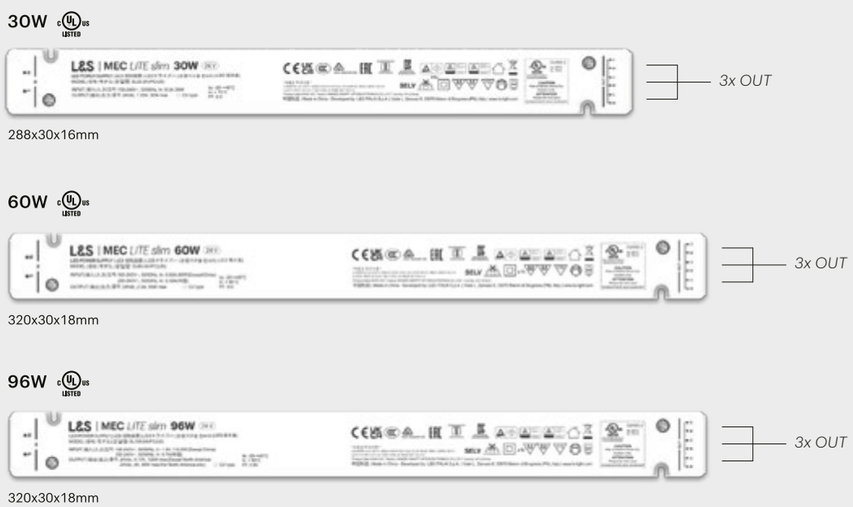
7. MEC LITE Platform

7.5 - MEC LITE slim

MEC LITE slim is the reduced-width version of the MEC LITE system (**§ 7.1**), the ideal solution for installation in small spaces. Like the standard model, it is a "Wide Input 100-240V AC" power supply and converts AC mains voltage (220-240V AC in Europe and 110-120V AC in the USA) into a very low (24 V) DC constant voltage , allowing all connected lighting fixtures to function correctly.

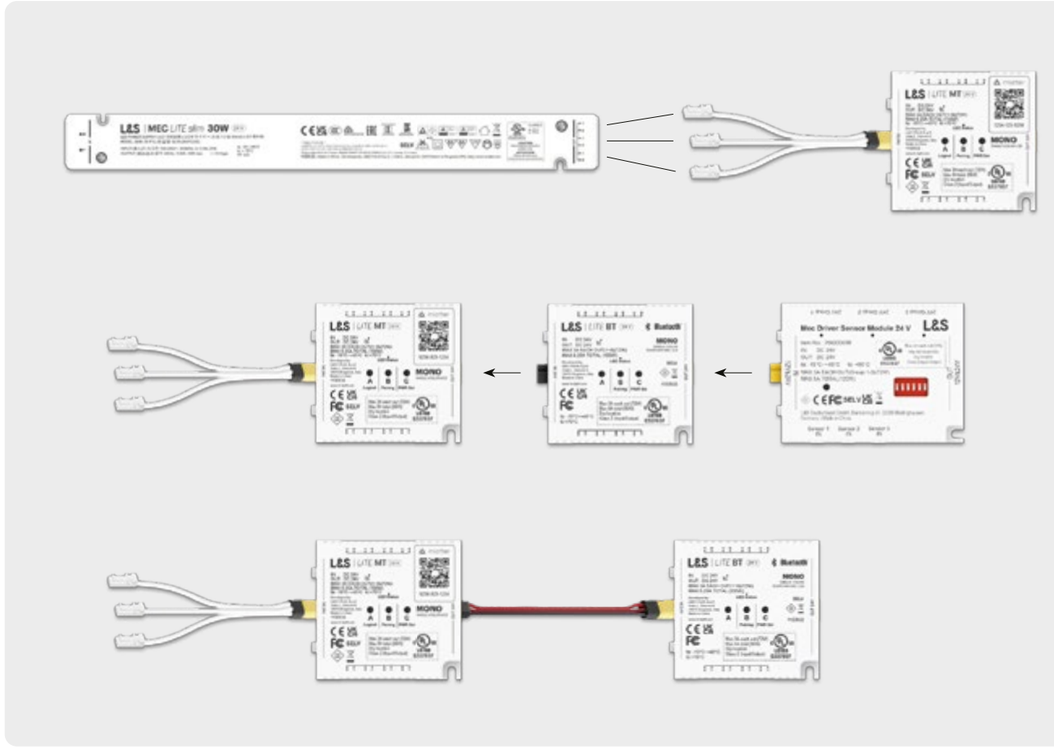


MEC LITE slim is available in 30W, 60W, and 96W models, each complete with an integrated 3-way power distributor for direct connection of LED fixtures.



7. MEC LITE Platform

7.5 - MEC LITE slim



ATTENTION

- All MEC LITE slim components are sold separately. The power cable is available in various models with different plugs based on the type of electrical outlet used: choose the cable suitable for your target market.
- Using a special adapter cable (optional, supplied separately) the same MEC LITE Control Modules (**§ 7.2.2** - **§ 7.3**) can be connecte to the MEC LITE slim power supply unit, to control any adjustable lighting function (On/Off, Dimmer, Color Temperature) via remote control, wireless or wired sensors, and Smart Home solutions.
- The Control Modules can then be connected to each other directly or via a 500 mm Module cable.
- All the instructions and warnings provided in this guide for the MEC LITE Driver apply to the MEC LITE slim model: in particular, the user scenarios (**§ 7.2.1** and § **7.2.2**), the recommendation to use a power supply with a power rating at least 10% greater than the total power consumption of the connected devices (**§ 7.1** and **§ 8.1**), and solutions to power supply-related problems or common usage errors (**§ 7.6** and **§ 8**).

7. MEC LITE Platform

7.6 - Troubleshooting: power supply and control

SYMPTOM	POSSIBLE CAUSE	SOLUTION
The MEC LITE power supply does not work	Connection	Check that the power supply's power cable or the receiver module are correctly connected.
The power distributor integrated into the MEC LITE power supply does not respond to the commands of a Radio Transmitter	Functionality	The integrated Power Distributor only provides power to the connected lighting fixtures: it does not have an internal radio frequency control unit for remote use via transmitters.
I have two Receiver Modules connected in line to MEC LITE but only one responds to the commands of a Radio Transmitter	Pairing	Check that the Transmitter pairing procedure has been correctly carried out on all Modules connected to the power supply.
The Radio Transmitter does not work	Pairing	Check that you have followed every step of the Transmitter pairing procedure with the Receiver Module.
	Battery	Replace the transmitter battery with one of the same model/voltage.
I cannot change the color temperature of the Dual Color fixtures connected to a control module	Control Module Version	Ensure that the module used is the EDC compatible version and not a MONO version.
I have a LITE MT module and I cannot connect it via Wi-Fi	Router	Verify that the Router is turned on and that the internet connection is working correctly with other devices. Additionally, it is recommended to move the Module closer to the router during the configuration phase.
	Password	Check the Wi-Fi network name and password, ensuring you enter the correct credentials.
	Router 2.4GHz Band	Make sure to use the 2.4 GHz band by consulting the modem/router manual.
I have a LITE MT module and I cannot complete the MATTER pairing procedure	Native App	Use the correct native app for the Smart Home device being used (for example Amazon Alexa, SmartThings, Apple Home Kit) and verify that the app or the Matter platform are updated to the latest version available.

7. MEC LITE Platform

7.6 - Troubleshooting: power supply and control

SYMPTOM	POSSIBLE CAUSE	SOLUTION
I have a LITE MT module and I cannot complete the MATTER pairing procedure	Pairing	Ensure that the LITE MT module is not already connected to MATTER and is not already present on the Wi-Fi network. Otherwise, to proceed with a new device pairing procedure, long-press the programming button "A" on the Module to reset the device.
I have a LITE MT module that does not respond to voice commands	Router	Verify that the Module is online by checking its status in the management app. Update the list of devices in the voice system app (e.g., “Discover devices” command on Alexa or “Update device list” on Google Home) and verify the name of the Module in the Matter / Main Ecosystem app (if necessary, repeat the synchronization or rename the device)
	Microphone	Check that the voice assistant's microphone is active and repeat the command.
	Wi-Fi Network	Ensure that the voice assistant is connected to the same account and the same Wi-Fi network as the module.
I have a LITE MT module and I cannot connect it to multiple Voice Assistants	Matter	Verify that both voice ecosystems (e.g., Alexa, Google Home, Apple Home, etc.) support Matter and are updated to the latest version.
	Pairing	Check that the Module is already integrated into the first ecosystem, then use the “Share Matter device” (Multi-admin) function available in the associated system's app to add it to a second voice system: alternatively, generate a new Matter configuration code from the first ecosystem and enter the code with the second voice system's app (Note: each platform may have slightly different steps for Matter sharing. Consult the voice assistant's official documentation for specific details)
	Wi-Fi Network	Ensure that all devices (Module, hub, and Voice Assistants) are connected to the same Wi-Fi network.

7. MEC LITE Platform

7.6 - Troubleshooting: power supply and control

SYMPTOM	POSSIBLE CAUSE	SOLUTION
I have a LITE BT module and I cannot control the connected devices	App	Ensure you have downloaded (App Store or Play Store) the correct App developed by L&S (LITE BT) and that it is updated to the latest version. If necessary, restart or proceed with a new installation.
	Pairing	Verify that you have correctly performed the Blueto-oth pairing procedure.
	Bluetooth	Verify that Bluetooth is correctly enabled on your smartphone
I have a LITE BT module and I cannot control the connected devices via voice assistant	Functionality	LITE BT modules can be controlled via Smartphone exclusively through the dedicated Bluetooth App.
I have a SENSOR MODULE and it is not working correctly	DIP SWITCH	Follow the DIP SWITCH settings (§ 7.3.4) to correctly configure the Module
	LED Groups	Each group consisting of 2 LED outputs (3 groups in total) is associated with a specific Wireless channel and a specific input for cabled sensors. Ensure that you have performed the wireless transmitter pai-ring procedure by selecting the correct LED Group Output; for cabled sensors, verify the correspon-dence between the sensor input and the LED Group Output: (IN 1 - OUT 1 / IN 2 - OUT 2, ...).
I have a ZIGBEE module and it is not working correctly	Various	For a detailed guide on any problems with ZIGBEE control modules, refer to the "Troubleshooting" section in the module manual.
I have a WIRED C module and I cannot associate the radio frequency transmitters	Association	The WIRED C module only works with dedicated wired control systems (IR DOOR WEDGE, DOUBLE IR SENSOR, PIR SENSOR or TOUCH SENSOR) and can-not be associated with any type of transmitter.

7. MEC LITE Platform

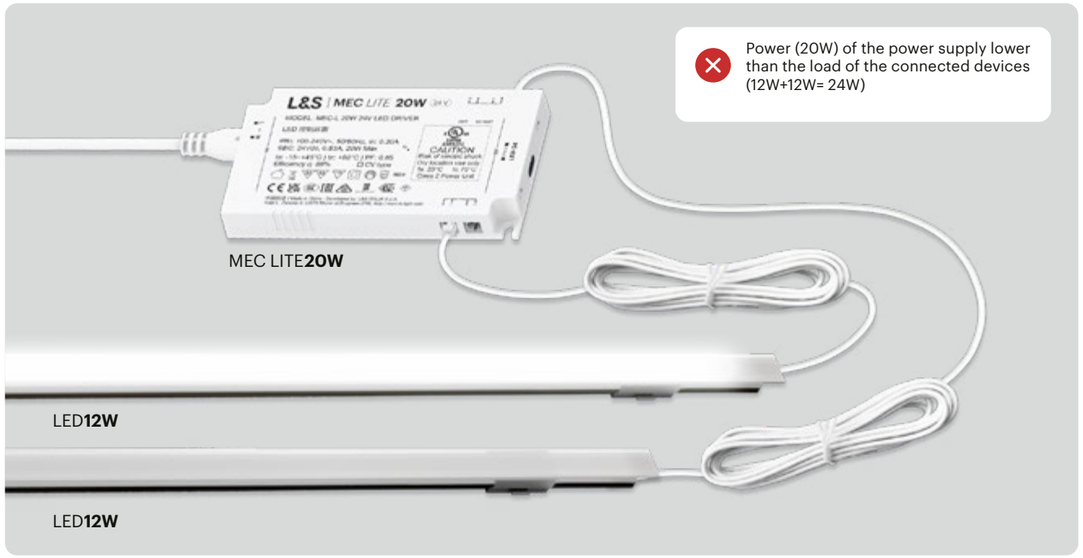
7.6 - Troubleshooting: power supply and control

SYMPTOM	POSSIBLE CAUSE	SOLUTION
I have a WIRED C module with an IR DOOR WEDGE / DOUBLE IR SENSOR door sensor and all connected lights remain on, but dimmer, even with the door closed	Settings	The module has been set to "10%". Lift the module cover to access the programming keypad (use a flat-head tool) and press the "IR" button: check that the button status LED is lit in the "OFF" position.
I have a WIRED C module with a PIR sensor and all connected lighting fixtures take a long time to turn off when I close the door	Settings	The module has been set to "180 s". Once door closure is detected, the wired PIR sensor turns off the lights connected to the module after 16 or 180 seconds: this time interval can be set on the WI-RED C module. Lift the module cover to access the programming keypad (use a flat-head tool) and press the "PIR" button: press the button and check that the button status LED is lit in the "16 s" position.

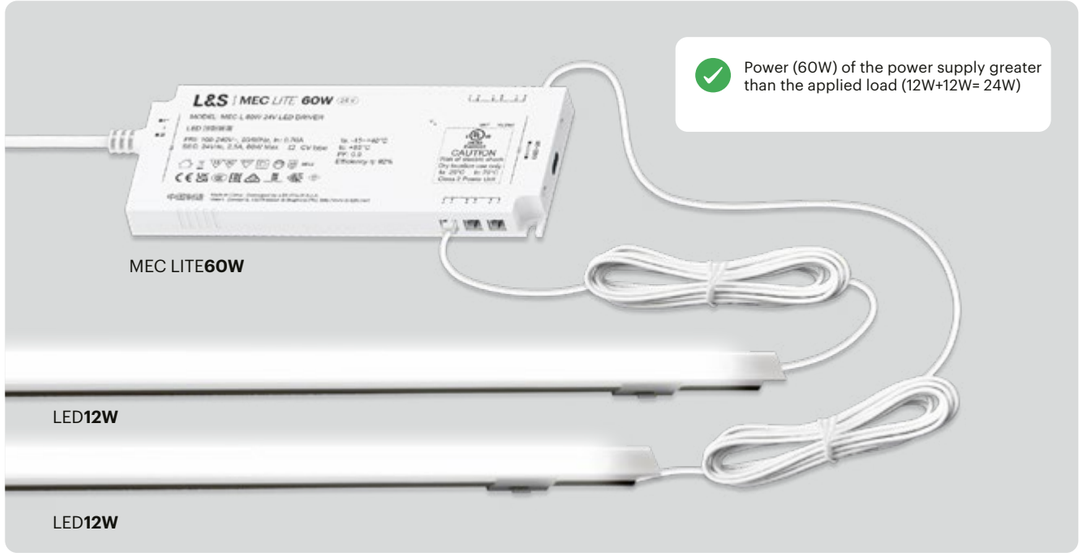
8. Common mistakes | MEC LITE Platform

8.1 - Undersized power supply

When the power supplied by the Driver (W) is lower than the total LED load (W) of the connected fixtures, these flash with a strobe effect. In the example below, the 20W MEC LITE power supply cannot support the total load of 24W of the connected fixtures.



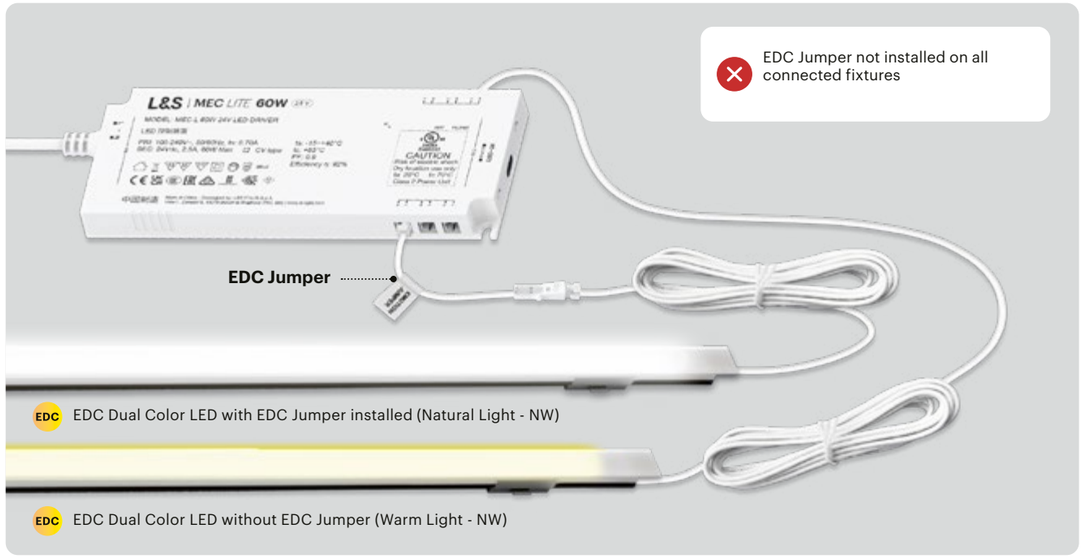
Use a power supply with a Power Higher than the total LED load of the connected fixtures: in the example below, the 60W MEC LITE is suitable to support the total load of 24W.



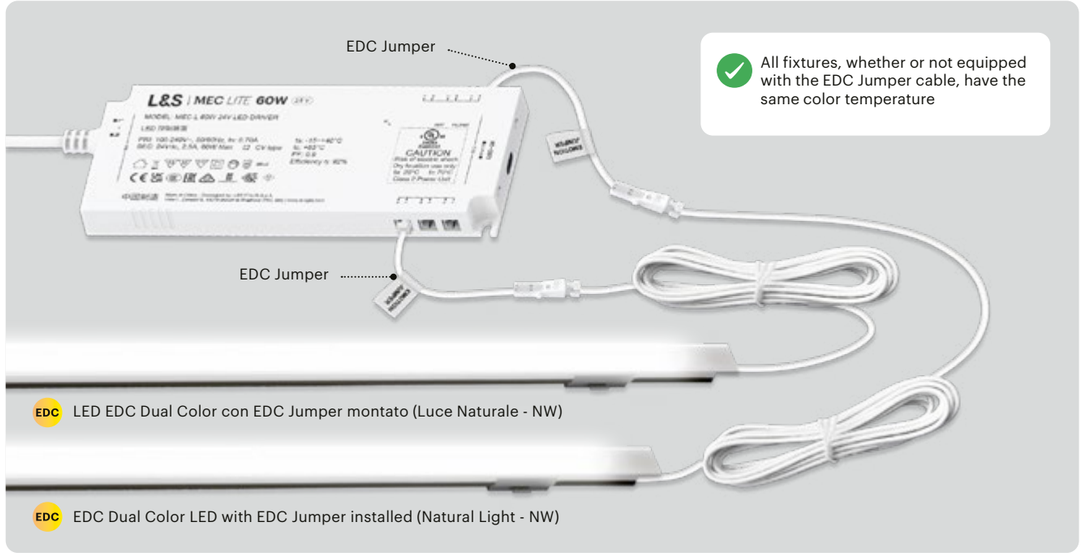
8. Common mistakes | MEC LITE Platform

8.2 - Different color temperatures

Dual Color lighting fixtures (**§ 2.1**) connected to the power supply turn on by defaul tat the warmest available color temperature (Warm White). If the EDC Jumper cable is connected (**§ 2.2**) the fixture changes its color temperature from warm to natural (Natural White).



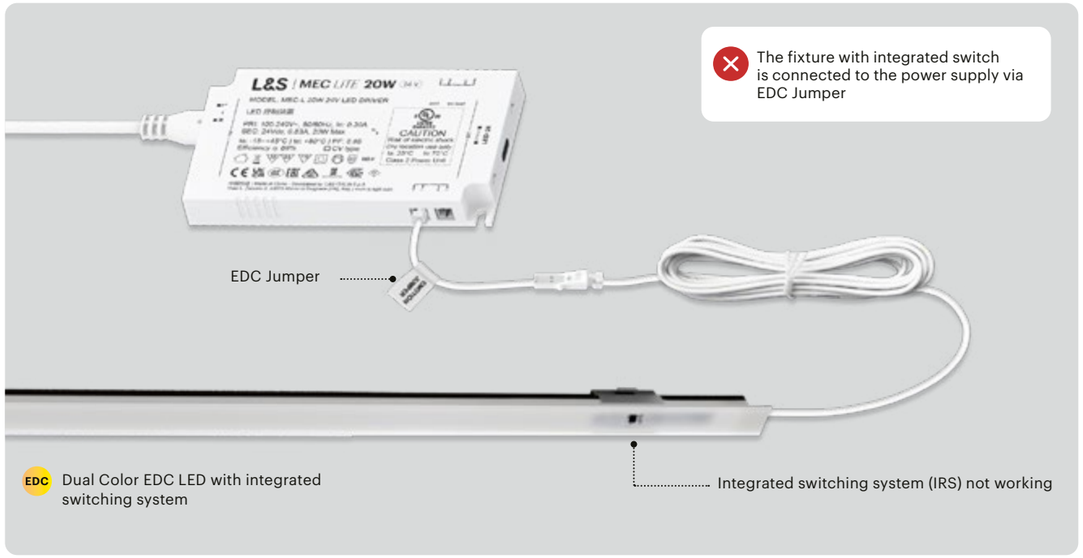
Always ensure that all fixtures are either equipped / not equipped with EDC Jumper to maintain uniformity in the color temperature of the lighting fixtures connected to the power supply



8. Errori comuni | Piattaforma MEC LITE

8.3 - Connection of fixtures with integrated switching

If the EDC Jumper cable (**§ 2.2**) is used with a Dual Color lighting fixture (**§ 2.1**)equipped with an integrated control system (**§ 3**) a malfunction will occur and the fixture will not turn On.



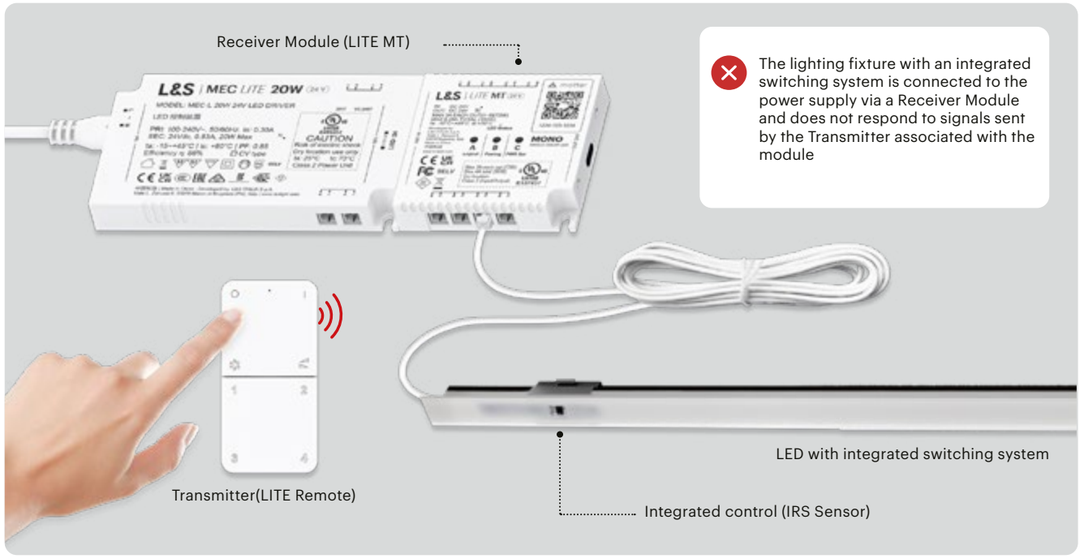
Ensure that Dual Color lighting fixtures equipped with an integrated switching system are connected directly to the power supply without the aid of the EDC Jumper cable.



8. Common mistakes | MEC LITE Platform

8.4 - Remote control of fixtures with integrated switching

Lighting fixtures equipped with an integrated control system (**§ 3**) cannot be connected to any Control Module, therefore it will not even be possible to use remote transmitters or cabled sensors compatible with the Module to turn On the connected lighting fixtures.



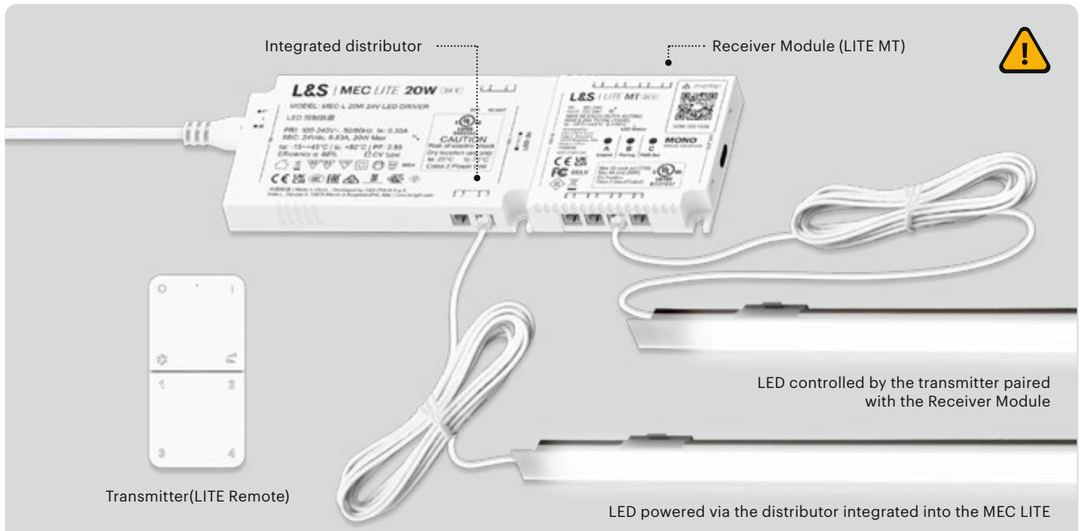
Ensure that all lighting fixtures equipped with an integrated switching system are connected to the power supply via the integrated power distributor in the MEC LITE driver (**§ 7.2.1**).



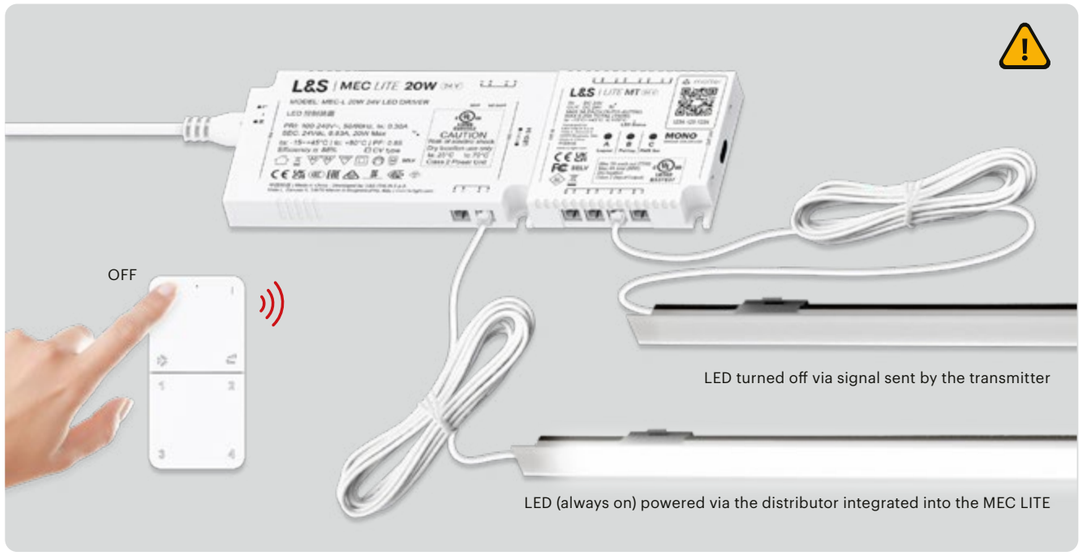
8. Common mistakes | MEC LITE Platform

8.5 - Mixed connection of LED fixtures

If the lighting fixtures are connected to both the Driver's integrated Power Distributor (**§ 7.2.1**) and to a Control Module (**§ 7.2.2**) only the fixtures connected to the latter can be controlled by a compatible transmitter / Sensor.



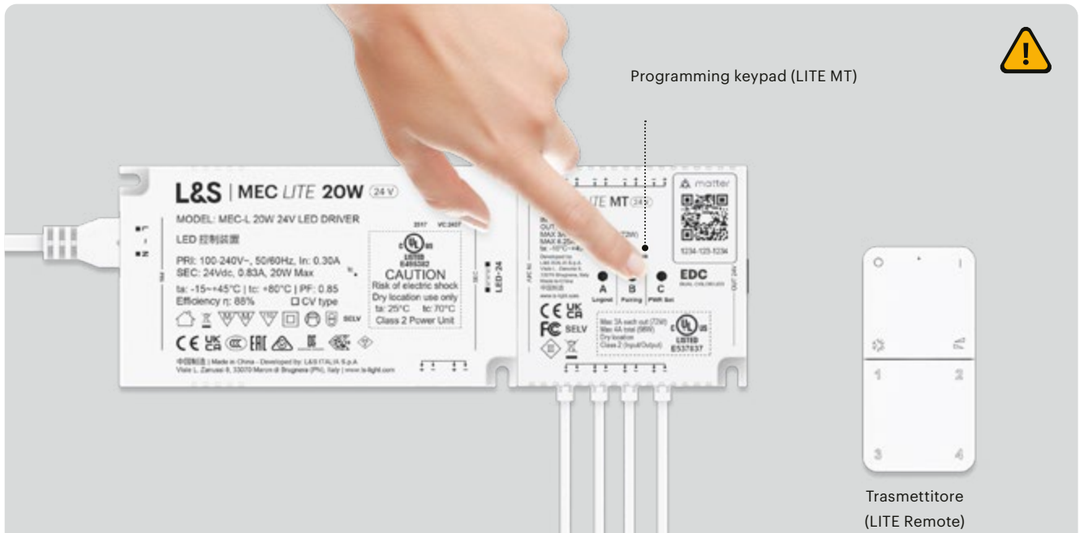
In the example below, the transmitter controls (turns Off) exclusively the fixtures connected to the paired Receiver Module: the devices connected directly to the Driver via the Integrated Distributor will always remain switched On**.**



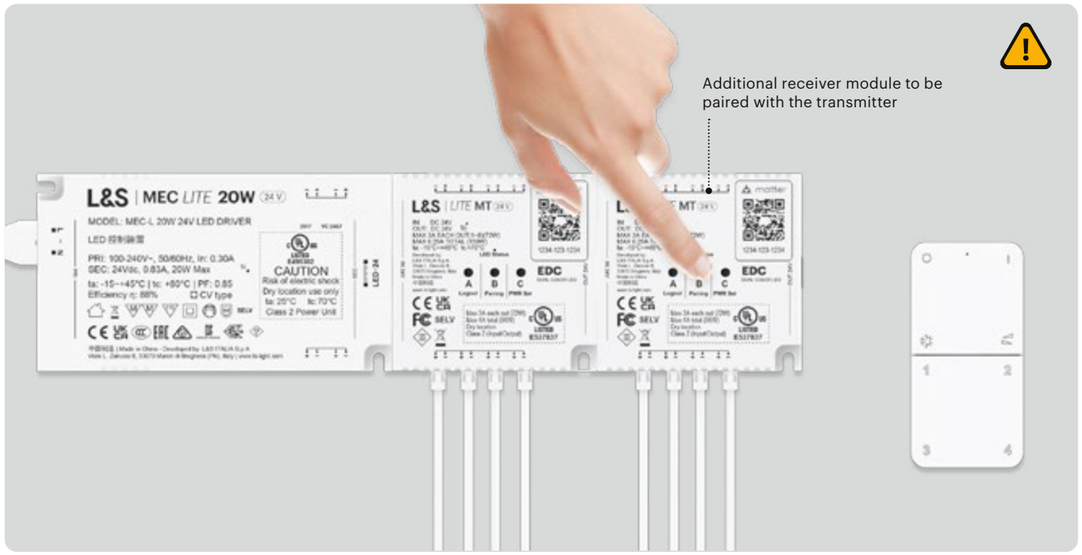
8. Common mistakes | MEC LITE Platform

8.6 - Pairing a transmitter with multiple in-line receiver modules

In order to use a transmitter (**§ 7.4**) with a compatible radio frequency Receiver Module (**§ 7.3**) it is necessary to carry out the relevant pairing procedure (refer to the Module's manual) by accessing the programming keypad of the Module used.



When multiple modules are connected in a line, it is always necessary to perform the transmitter pairing procedureon all connected modulesto be able to control them via the transmitter.



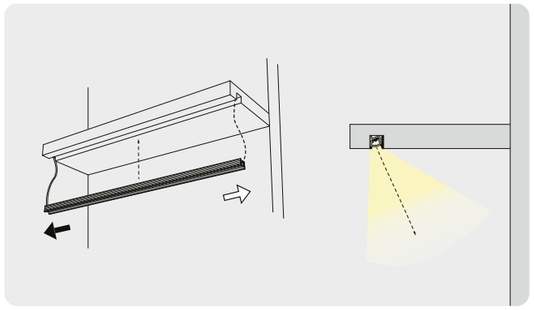
9. Fixtures with oriented light beam

9.1 - Installation diagram | STANDARD

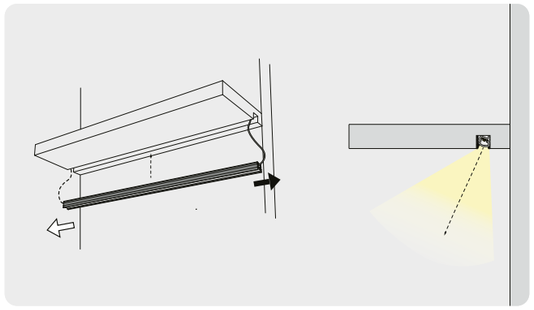
Fixtures with oriented light beam can be installed horizontally (e.g. shelves) or vertically (cabinet's side panels): changing the direction of the light beam (inward or outward of the cabinet) also affects the cable exit side.

⚠ ATTENTION

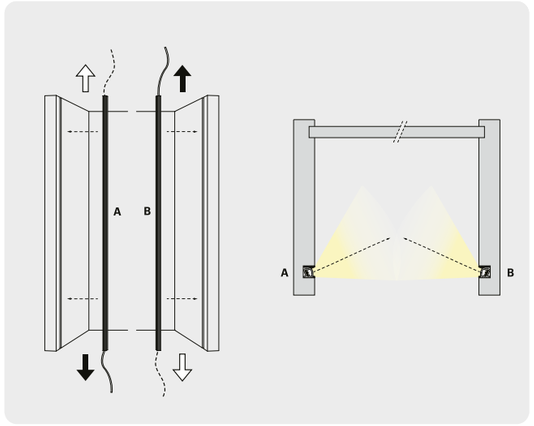
- When placing a lamp order, always consider the power cable exit side in relation to the direction of the fixture's light beam direction (inward or outward).
- The installation diagrams below illustrate the **standard configuration with the cable exit on the LEFT** (⇦) considering a lamp installed horizontally with the light beam directed toward the cabinet's interior.
  Upon request, the cable exit can be **configured on the RIGHT** (⇨) to optimize cable exit on the same side with a pair of lamps installed vertically in the cabinet's side panels.



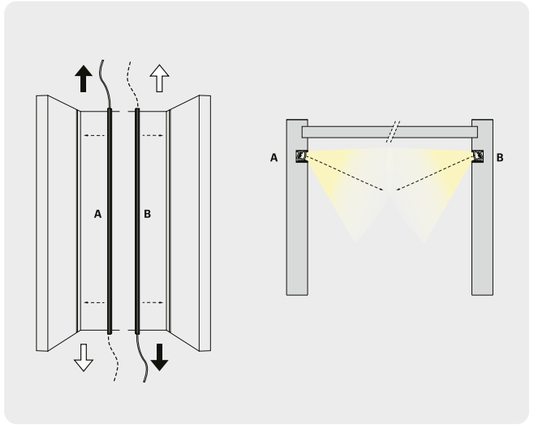
HORIZONTAL - Inward light beam orientation



HORIZONTAL - Outward light beam orientation



VERTICAL - Inward light beam orientation



VERTICAL - Outward light beam orientation

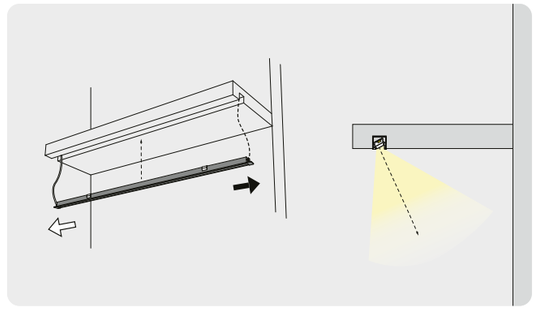
9. Fixtures with oriented light beam

9.2 - Installation diagram | MINI NOOR

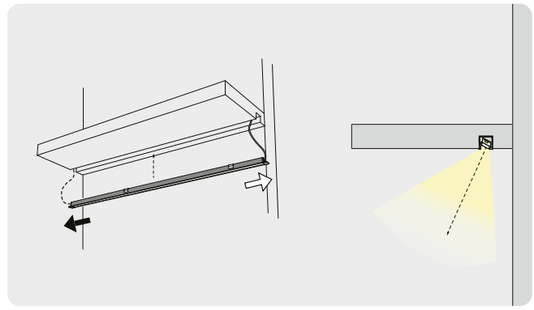
The MINI NOOR lighting fixture differs from all other lamps with oriented light beam in the catalog (see opposite page) in that it has the **standard cable outlet on the RIGHT** (⇨) considering a lamp installed horizontally with the light beam directed outwards from the cabinet).

⚠ ATTENTION

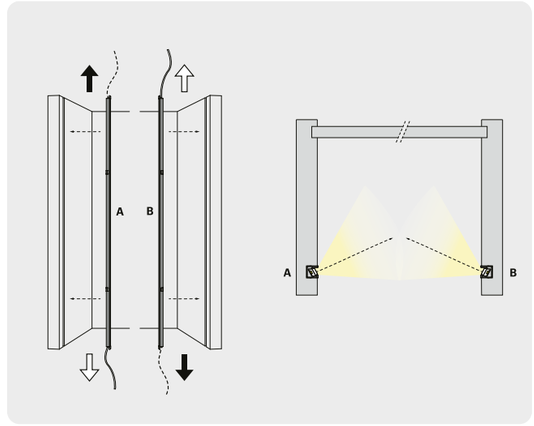
- When placing a lamp order, always consider the power cable exit side in relation to the direction of the fixture's light beam direction (inward or outward).
- Upon request, it is possible to configure the MINI NOOR **cable outlet on the LEFT** (⇦) to optimise the cable outlet on the same side with a pair of lamps installed vertically in the cabinet's side panels.



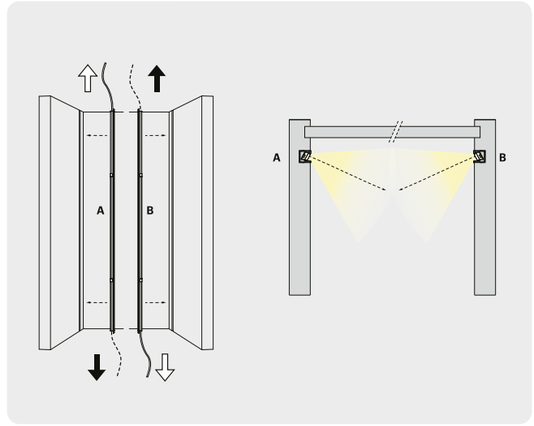
HORIZONTAL - Inward light beam orientation



HORIZONTAL - Outward light beam orientation



VERTICAL - Inward light beam orientation



VERTICAL - Outward light beam orientation

L&S ITALIA SPA

SUBSIDIARIES

ITALY

Headquarters
Via L. Zanussi, 8
Maron di Brugnera (PN)
+39 0434 616611
info@ls-light.com

Varese
Via Pacinotti, 64
Varese (VA)
+39 0332 491247

Tavullia
Via del Lavoro, 4
Tavullia (PU)
+39 0721 901123

GERMANY

L&S Deutschland GmbH
Daimlerring, 34
Rödinghausen
+49 5223 8790-0
info@ls-light.de

CHINA

LS Lighting
(Shanghai) Co., Ltd.
No. 255, LongPan Rd.,
Malu Town,
Jiading District, Shanghai
+86 021 6915 3825
info.china@ls-light.com

USA

L&S Lighting Corporation
1505 Pavilion Place, Suite A
Norcross, Georgia
+1 877 877 0757
info.us@ls-light.com

ls-light.com



2603