

# Guide

for a correct  
installation  
and functionality  
of L&S lights

Read this guide carefully  
and keep it for future reference

VER. 2022 - REV. 00

**L&S**



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# 1. Basic Information

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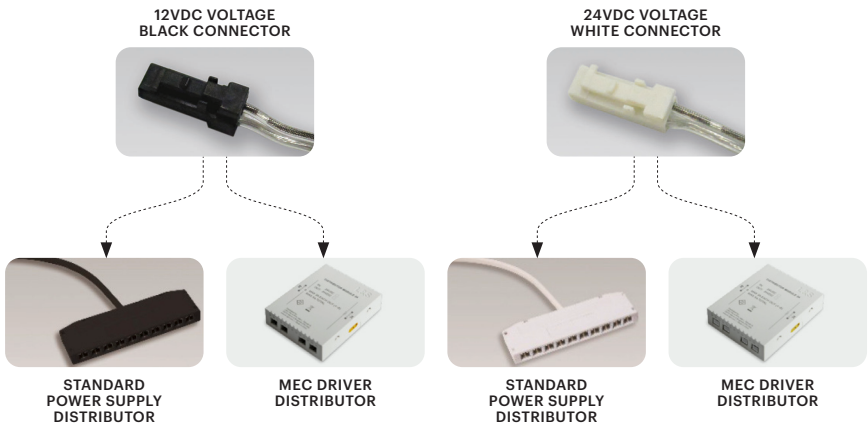
All L&S lights need a Power supply; for choosing the right power supply you need to:

**1. Pay attention to the main voltage in the building**

E.g. Europe: 220V-240Vac  
E.g. USA: 110-120Vac

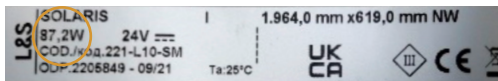
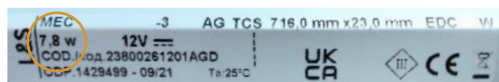
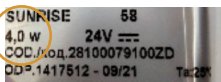
**2. Pay attention to the selected lamp Voltage**

To associate to the corresponding distributor of the power driver:



**3. Calculate the total power consumption of the selected lamps to choose the right driver with efficient power (wattage).**

**!** THIS DATA IS INDICATED ON THE PRODUCT LABEL INSTALLED ON THE BODY OF THE LAMP OR ON THE FEEDING CABLE (E.G. SPOTLIGHT)



# 2. Emotion Dual Color

EDC 3000-4000K

The Emotion Dual Color (EDC) technology, is the LED technology inside the light (e.g. linear, spot, or panel lighting). Manage the color temperature from warm white to natural white with one light fixture. L&S offers 4 ways options to control the light temperature (EDC):

## 1. Emotion Jumper

The appropriate converter cable which allows to invert the color temperature without using other devices.

 THIS CABLE WORKS WITH LINEAR LAMPS OR SPOTLIGHTS WITHOUT INTEGRATED SWITCH

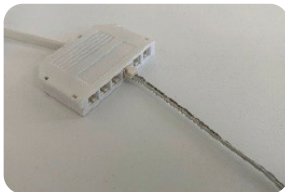


12VDC VOLTAGE  
BLACK CONNECTOR

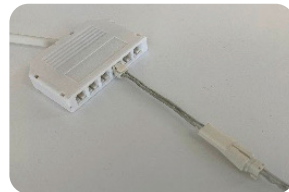


24VDC VOLTAGE  
WHITE CONNECTOR

Example of jumper's application in 24VDC:



STARTING COLOR  
WARM WHITE 3000K



NATURAL WHITE 4000K

 WATCH THE TUTORIAL VIDEO ABOUT THE USE OF EMOTION JUMPER (NUBE PRODUCTS)



## 2. Smart System + Mec Driver

The EDC products are all compatible to the MEC Drivers and the smart control systems, which allow you to easily control the light and change the color temperature gradually.

 [WATCH THE INTERACTIVE PRESENTATION OF SMART SYSTEM](#)

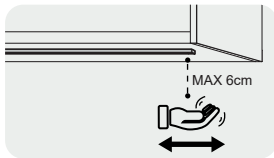


 THIS SYSTEM ONLY WORKS WITH LINEAR LAMPS AND SPOTLIGHTS WITHOUT INTEGRATED SWITCH

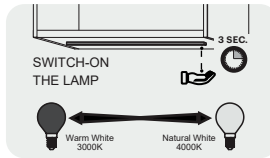
 DO NOT USE EMOTION JUMPER WITH THIS SYSTEM

## 3. Integrated IRS EDC

Infrared switch, the integrated infrared switch allows you to switch the light on/off and also to set the color temperature to 3000K or 4000K simply move your hand close to the switch and hold for 3 seconds.



ON-OFF



COLOR SETTING




INFRARED


 WHEN FIRST TURNED ON, THE SWITCH FLASHES BRIEFLY

 DO NOT EXPOSE THE INFRARED SWITCH TO EXCESSIVE DIRECT LIGHT SOURCES, AS THE DEVICE MAY TEMPORARILY MALFUNCTION

 NOT BEING TURNED OFF, THE LIGHT WILL GO INTO A 18HOURS STANDBY, AFTER THAT TIME THE LIGHT WILL AUTOMATICALLY TURN OFF

 DO NOT PLACE REFLECTIVE SURFACES UNDER THE ACTION RAY OF IRS EDC SWITCH AS IT COULD CAUSE A TEMPORARY MALFUNCTION OF THE DEVICE

 THE IRS EDC SWITCH IS AN OPTICAL SWITCH THAT ACTIVATES BY ITS SHIELDING. EXCESSIVE STEAM SOURCES DIRECTED TO THE SWITCH MAY CAUSE THE SWITCHING ON/OFF OF THE LIGHT

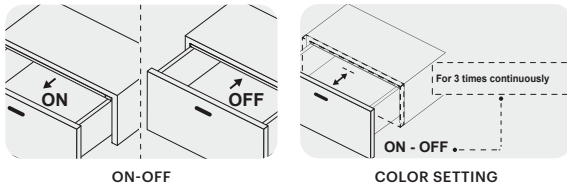
 IF THE LAMP IS CONNECTED TO A WALL SWITCH THAT CUTS OFF THE MAIN VOLTAGE (POWER SUPPLY INPUT SIDE), AFTER THE FIRST SWITCH-ON LEAVE THE LIGHT ON, CHOOSING THE DESIRED COLOR TEMPERATURE. AFTER WAITING AT LEAST 10 SECONDS, YOU CAN USE THE WALL SWITCH TO TURN IT OFF AND TURN IT ON AGAIN. FOR A CORRECT FUNCTIONALITY, PLEASE WAIT AT LEAST 10 SECONDS BEFORE TURNING THE LIGHT ON/OFF AGAIN

 [WATCH THE TUTORIAL VIDEO ABOUT THE USE OF THE MALINDI WITH INTEGRATED IRS EDC](#)



#### 4. Integrated IRD EDC

Infrared door, the integrated infrared switch that allows to switch on/off the light and also to set the color temperature to 3000K or 4000K by quickly opening and closing the doors/drawers 3 times consecutively.



- ⚠ DURING THE FIRST SWITCH-ON THE IRD EDC DOES A 15 SECONDS SET-UP, (THE LIGHT BLINKS). THE LUMINOSITY IS REDUCED TO 50%. AT THE END OF THE PROCESS PLEASE CHECK THE CORRECT FUNCTIONALITY BY OPENING AND CLOSING THE DOOR
- ⚠ THE READING DISTANCE VARIES ACCORDING TO THE COLOR OF THE DOOR: FOR DARK SURFACES MAX 3 CM, FOR LIGHT SURFACES MAX 5 CM. THIS SWITCH DOES NOT WORK WITH GLASS DOORS
- ⚠ THE IRD EDC SWITCH IS AN OPTICAL SWITCH THAT ACTIVATES BY ITS SHIELDING. EXCESSIVE STEAM SOURCES DIRECTED ON THE SWITCH MAY CAUSE THE SWITCHING ON/OFF OF THE LIGHT
- ⚠ DO NOT EXPOSE THE INFREARED SWITCH TO EXCESSIVE DIRECT LIGHT SOURCES, AS THE DEVICE MAY TEMPORARILY MALFUNCTION
- ⚠ NOT BEING TURNED OFF, THE LIGHT WILL GO INTO A 18HOURS STANDBY, AFTER THAT TIME THE LIGHT WILL AUTOMATICALLY TURN OFF
- ⚠ IN CASE OF POWER FAILURE, WHEN RESTORED, THE LAMP WILL TURN ON AGAIN. BY OPENING AND CLOSING THE DOOR/DRAWER, THE LAMP WILL WORK NORMALLY

▶ [WATCH THE TUTORIAL VIDEO ABOUT THE USE OF THE KITON WITH INTEGRATED IRD EDC](#)



# 3. Single Color

WARM WHITE 3000K - NATURAL WHITE 4000K

Lamps with Single Color technology (MONO) (linear, spotlight or light panel) can be produced in Warm White (3000K), or Natural White (4000K). The light can be switched on/off and dimmed (variation of the intensity of the light). L&S offers 4 ways to allow switching on/off and dimming the light:

## 1. Smart System + Mec Driver

The MONO products are all compatible with the drivers and the different L&S control systems, which allow to control the switch on/off of the light and change the intensity of the light gradually.

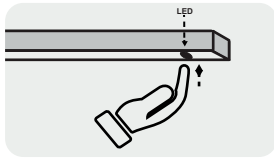


WATCH THE INTERACTIVE PRESENTATION OF SMART SYSTEM

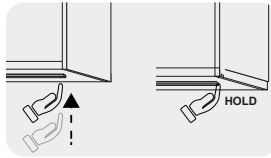


## 2. Touch

The integrated touch switch on the light allows to turn on/off the light with a short press and dim it with a long press.



ON-OFF



DIMMER



TOUCH

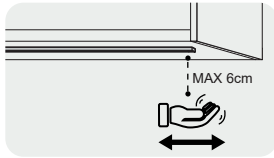


DO NOT EXPOSE THE TOUCH SWITCH TO EXCESSIVE DIRECT LIGHT SOURCES, AS THE DEVICE MAY TEMPORARILY MALFUNCTION



### 3. Integrated IRS

Infrared switch, the integrated infrared allows you to switch on/off the lamp with a simple hand gesture close to the switch. Dimming function is not available.



ON-OFF



INFRARED

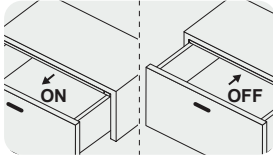
- ⚠ WHEN FIRST TURNED ON, THE SWITCH FLASHES BRIEFLY
- ⚠ DO NOT EXPOSE THE INFRARED SWITCH TO EXCESSIVE DIRECT LIGHT SOURCES, AS THE DEVICE MAY TEMPORARILY MALFUNCTION
- ⚠ NOT BEING TURNED OFF, THE LIGHT WILL GO INTO A 18HOURS STANDBY, AFTER THAT TIME THE LIGHT WILL AUTOMATICALLY TURN OFF
- ⚠ DO NOT PLACE REFLECTIVE SURFACES UNDER THE ACTION RAY OF IRS EDC SWITCH AS IT COULD CAUSE A TEMPORARY MALFUNCTION OF THE DEVICE
- ⚠ THE IRS EDC SWITCH IS AN OPTICAL SWITCH THAT ACTIVATES BY ITS SHIELDING. EXCESSIVE STEAM SOURCES DIRECTED TO THE SWITCH MAY CAUSE THE SWITCHING ON/OFF OF THE LIGHT
- ⚠ IF THE LAMP IS CONNECTED TO A WALL SWITCH THAT CUTS OFF THE MAIN VOLTAGE (POWER SUPPLY INPUT SIDE), AFTER THE FIRST SWITCH-ON LEAVE THE LIGHT ON, CHOOSING THE DESIRED COLOR TEMPERATURE. AFTER WAITING AT LEAST 10 SECONDS, YOU CAN USE THE WALL SWITCH TO TURN IT OFF AND TURN IT ON AGAIN. FOR A CORRECT FUNCTIONALITY, PLEASE WAIT AT LEAST 10 SECONDS BEFORE TURNING THE LIGHT ON/OFF AGAIN

▶ WATCH THE TUTORIAL VIDEO ABOUT THE USE OF THE MALINDI WITH INTEGRATED IRS



#### 4. Integrated IRD

Infrared door, the integrated infrared switch allows you to switch on/off the light by opening and closing the doors/drawers.



ON-OFF

- ⚠ DURING THE FIRST SWITCH-ON THE IRD EDC DOES A 15 SECONDS SET-UP, (THE LIGHT BLINKS). THE LUMINOSITY IS REDUCED TO 50%. AT THE END OF THE PROCESS PLEASE CHECK THE CORRECT FUNCTIONALITY BY OPENING AND CLOSING THE DOOR
- ⚠ THE READING DISTANCE VARIES ACCORDING TO THE COLOR OF THE DOOR: FOR DARK SURFACES MAX 3 CM, FOR LIGHT SURFACES MAX 5 CM. THIS SWITCH DOES NOT WORK WITH GLASS DOORS
- ⚠ THE IRD EDC SWITCH IS AN OPTICAL SWITCH THAT ACTIVATES BY ITS SHIELDING. EXCESSIVE STEAM SOURCES DIRECTED ON THE SWITCH MAY CAUSE THE SWITCHING ON/OFF OF THE LIGHT
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- ⚠ NOT BEING TURNED OFF, THE LIGHT WILL GO INTO A 18HOURS STANDBY, AFTER THAT TIME THE LIGHT WILL AUTOMATICALLY TURN OFF
- ⚠ IN CASE OF POWER FAILURE, WHEN RESTORED, THE LAMP WILL TURN ON AGAIN. BY OPENING AND CLOSING THE DOOR/DRAWER, THE LAMP WILL WORK NORMALLY

 [WATCH THE TUTORIAL VIDEO ABOUT THE USE OF THE KITON WITH INTEGRATED IRD](#)

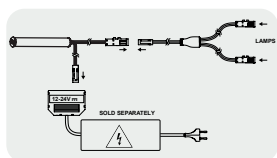


# 4. External switching systems

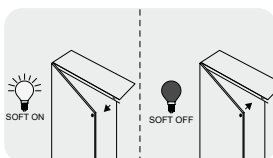
The lamps without integrated switches can also be controlled by using external automatic switching systems. See two examples below:

## 1. IR DOOR TUBE

Recessed infrared switch that allows you to turn on and off the lamp automatically by opening and closing the door. The IR door tube allows you also to change the color temperature of the light source from Warm White (3000K) to Natural White (4000K) (EDC version).



SINGLE SYSTEM FOR DOOR

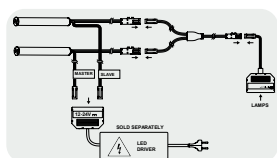


ON - OFF

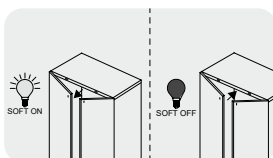


IR DOOR TUBE

- ⚠ THE READING DISTANCE VARIES ACCORDING TO THE COLOR OF THE DOOR: FOR DARK SURFACES MAX 2 CM, FOR LIGHT SURFACES MAX 7 CM
- ⚠ IN ORDER TO CHANGE THE COLOR TEMPERATURE FROM WARM WHITE TO NATURAL WHITE (EDC PRODUCTS), OPEN AND CLOSE THE DOOR 4 TIMES CONSECUTIVELY
- ⚠ IF NOT TURNED OFF, THE LIGHT WILL GO INTO A 18HOURS STANDBY, AFTER THAT TIME THE LIGHT WILL AUTOMATICALLY TURN OFF
- ⚠ THE DUAL VERSION OF THIS SWITCH CANNOT BE SEPARATED TO OBTAIN TWO SINGLE SENSORS



DOUBLE SYSTEM FOR DOORS



ON - OFF

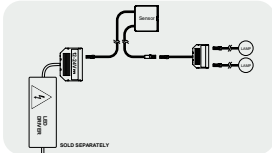


IR DOOR TUBE

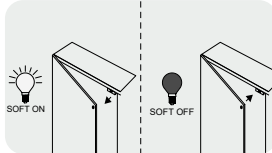
- ⚠ THE READING DISTANCE VARIES ACCORDING TO THE COLOR OF THE DOOR: FOR DARK SURFACES MAX 2 CM, FOR LIGHT SURFACES MAX 7 CM
- ⚠ IN ORDER TO CHANGE THE COLOR TEMPERATURE FROM WARM WHITE TO NATURAL WHITE (EDC PRODUCTS), OPEN AND CLOSE THE DOOR 4 TIMES CONSECUTIVELY. THE OPERATION CAN BE DONE USING ONE OF THE TWO IR SENSORS, WHETHER MASTER OR SLAVE
- ⚠ IF NOT TURNED OFF, THE LIGHT WILL GO INTO A 18HOURS STANDBY, AFTER THAT TIME THE LIGHT WILL AUTOMATICALLY TURN OFF
- ⚠ THE DUAL VERSION OF THIS SWITCH CANNOT BE SEPARATED TO OBTAIN TWO SINGLE SENSORS

## 2. IR DC/DC

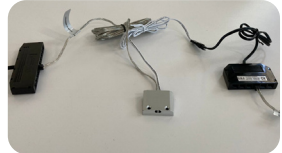
The surface mounted or recessed infrared switch allows you to turn on/off the light automatically by opening/closing the door.



SINGLE SYSTEM FOR DOOR

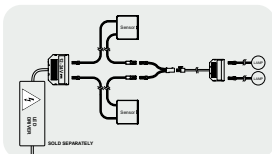


ON - OFF

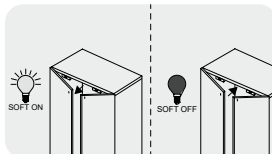


IR DC/DC

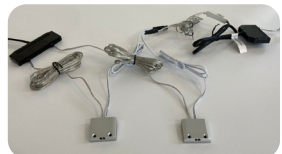
- ⚠ THE READING DISTANCE VARIES ACCORDING TO THE COLOR OF THE DOOR: FOR DARK SURFACES MAX 1,5/2 CM, FOR LIGHT SURFACES MAX 8/9 CM
- ⚠ AVAILABLE ONLY FOR SINGLE COLOR (MONO) LIGHTS
- ⚠ IN CASE THE INFRARED DOES NOT WORK (THE LIGHT REMAINS TURNED ON BY CLOSING THE DOOR), WE SUGGEST TO APPLY THE GREY LABEL INSIDE THE DOOR, ON THE POSITION CORRESPONDING TO THE ACTION RAY OF THE INFRARED SENSOR
- ⚠ DO NOT EXPOSE THE INFRARED SWITCH TO EXCESSIVE DIRECT LIGHT SOURCES, AS THE DEVICE MAY TEMPORARILY MALFUNCTION



DOUBLE SYTEM FOR DOORS



ON - OFF

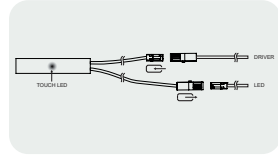
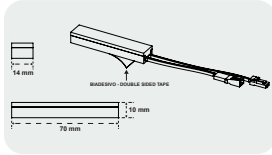


IR DC/DC

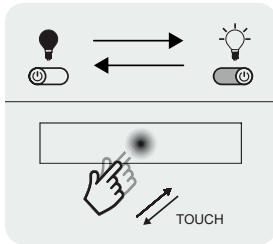
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- ⚠ IN CASE THE INFRARED DOES NOT WORK (THE LIGHT REMAINS TURNED ON BY CLOSING THE DOOR), WE SUGGEST TO APPLY THE GREY LABEL INSIDE THE DOOR, ON THE POSITION CORRESPONDING TO THE ACTION RAY OF THE INFRARED SENSOR
- ⚠ DO NOT EXPOSE THE INFRARED SWITCH TO EXCESSIVE DIRECT LIGHT SOURCES, AS THE DEVICE MAY TEMPORARILY MALFUNCTION

### 3. TOUCH SWITCH

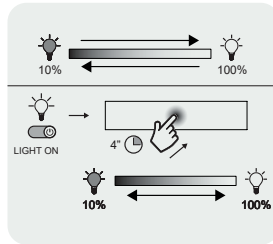
The surface mounted touch switch allows you to turn on/off the light to dim and change the color temperature (only for EDC lights) by pressing the touch button on the LED.



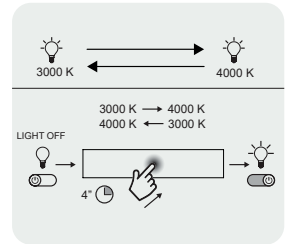
ON-OFF, dimming and changing color temperature functionality:



ON-OFF



DIMMER



COLOR SETTING

**!** THE COLOR CHANGE IS POSSIBLE BY TURNED OFF LIGHT, PRESSING THE TOUCH LED THE LIGHT WILL MOVE FROM 3000K TO 4000K AND BACK, LEAVING THE LED THE DESIRED LIGHT TEMPERATURE WILL BE SELECTED

# 5. Problems & Solutions

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SYMPTOM	POSSIBLE CAUSE	SOLUTION
The lamps gets too hot.	Incorrect Power Supply	Check whether the power supply is compatible (and not for example 24V for 12V LED lights).
The EDC light has a different color compared to the other installed lights.	Jumper	Add or remove the Emotion Jumper.
Light blinks or flashes.	Incorrect Power Supply Wattage	Make sure the total wattage for all lights is below or exact with the wattage of the power supply.
The light with integrated IRS doesn't work correctly.	Lens	Verify that the IRS lens is correctly placed on the lamp's diffuser.
The light with integrated IRS turns off without a specific reason.	Obstacle or reflection on the lens	Verify that there are no reflecting surfaces or obstacles on the corresponding action ray of IRS.
The light with integrated IRS turns off or changes the color without a specific reason.	Direct Light	Verify there is no excessive direct light directed onto the IRS lens.
The light with integrated IRS turns on and off or changes the color without a specific reason.	Steam	Verify that there is not a steam cloud on the IRS. Immediately after the steam disappears, move the hand close to the IRS and the light will turn on again.

SYMPTOM	POSSIBLE CAUSE	SOLUTION
Lamp connected to DALI platform.	Dali	Do not use DALI System with lights with an integrated IRS/IRD /touch or EDC lights.
Malfunction of the lamp.		Disconnect the lamp from the power supply for a couple minutes and then reconnect it; if the problems persists, check whether the system's setting is correct.
Kiton in corner applicatios.		Use the Kiton with only one integrated IRD.







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**L&S** Lighting  
Intelligence