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# 58014

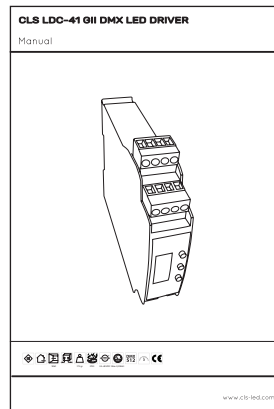
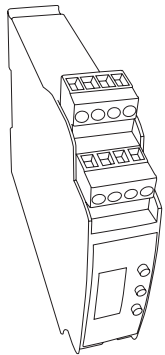


Wall 170 gr IP20 24-48 VDC Max. 0.5 Watt

# SAFETY INFORMATION

|  |  |  |  |  |  |
|--|--|--|--|--|--|
|  |  |  |  |  |  |
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## CONTENT



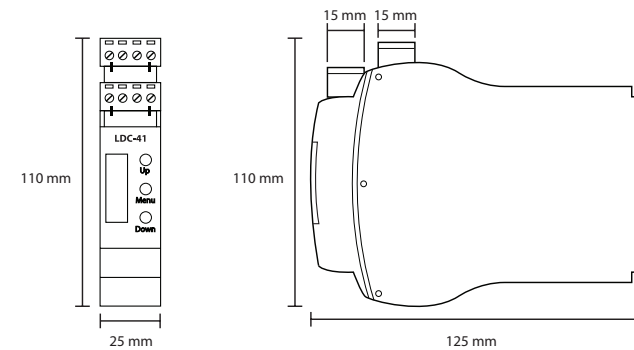
### Optional accessories

|        |  |
|--------|--|
| 911465 | CLS LD serie GII adapter cable XLR3 male to RJ45         |
| 911468 | CLS LD serie GII adapter cable RJ45 to XLR3 female       |
| 911366 | CLS LDC adaptercable LDC to XLR7 including terminator    |
| 911367 | CLS LDC adaptercable LDC to SmartConnect system          |
| 911368 | CLS LD serie adapter cable RJ45 to XLR3 female           |
| 113100 | CLS LDC-41 connection cable to XLR7 including terminator |
| 113110 | CLS LDC-41 connection cable to Luxo 3 RGB                |
| 707028 | CLS Zense DMX controller + built in 4 amp RGB dimmer     |
| 707030 | CLS ACX60 DMX controller for max. 60 channels            |
| 706995 | CLS BT20.24 LED power supply 24VDC 2-VA 85-264VAC        |
| 707011 | CLS BT45.24 LED power supply 24VDC 45VA 85-264VAC        |
| 707012 | CLS BT75.24 LED power supply 24VDC 75VA 85-264VAC        |
| 707013 | CLS BT120.24 LED power supply 24VDC 120VA 85-264VAC      |
| 707014 | CLS BT240.24 LED power supply 24VDC 240VA 85-264VAC      |
| 707018 | CLS BT75.48 LED power supply 48VDC 75VA 85-264VAC        |
| 707019 | CLS BT120.48 LED power supply 48VDC 120VA 85-264VAC      |
| 707020 | CLS BT240.48 LED power supply 48VDC 240VA 85-264VAC      |

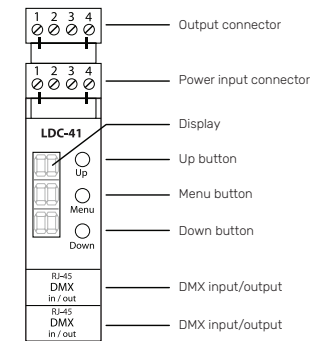
# INTRODUCTION

The CLS LDC-41 is a DMX controllable LED dimmer, which has 4 current controlled DC outputs. The current can be adjusted in steps of 50mA from 350 to 1000mA per channel. Each channel can drive 2 to 12 LEDs in series. Equipped with 4 channels the LDC-41 is suitable for controlling the newest generation of LED fixtures, RGBW or RGBA. This makes it possible to connect 2 to 12 RGB or even RGB(A/W) fixtures on one driver. Unique is the DIN-rail mounting possibility of the new and small housing. The LDC-41 is equipped with a user friendly menu structure, which offers some smart solutions for installers to test and set up an installation.

## MEASUREMENTS

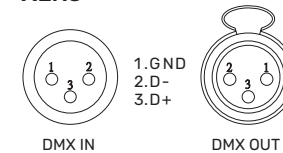


## LAY-OUT DESCRIPTION

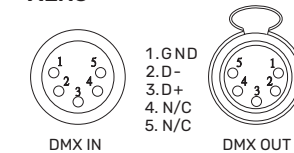


## PINNING DMX OUTPUT

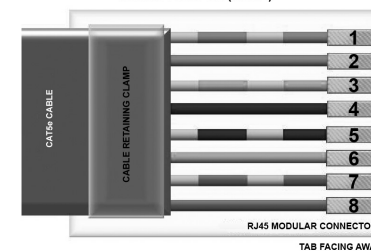
### XLR3



### XLR5



## WIRING PATTERN (T568B)



| PIN | COLOUR       | FUNCTION      |
|-----|--------------|---------------|
| 1   | Orange/white | DMX data +    |
| 2   | Orange       | DMX data -    |
| 3   | Green/White  | Not connected |
| 4   | Blue         | Not connected |
| 5   | Blue/White   | Not connected |
| 6   | Green        | Not connected |
| 7   | Brown/White  | DMX Common    |
| 8   | Brown        | DMX Common    |

# INSTALLATION

# CONNECT POWER SUPPLY

This section describes in general terms how to install the LDC-41. How to setup the menu, data link and how to connect it to a fixture.

## Mounting

The LDC-41 has a unique feature, it is designed to be installed on a DIN-rail. Now it is possible to install the LDC-41 directly next to the power supplies which are also suitable for DIN-rail mounting. This helps to keep your installation work modular and fault proof.

## Choosing power supply

Use a power supply with an output voltage which is compatible with the LED fixtures you are using. To choose the correct power supply use the two tables below.

Keep in mind that the table is determined with an equal load on all 4 outputs. For example 6 LEDs means 6 LEDs on all 4 outputs.

| Overview current controlled drivers |              |                       |         |         |         |          |          |         |          |          |
|-------------------------------------|--------------|-----------------------|---------|---------|---------|----------|----------|---------|----------|----------|
| Fixture                             | Max. Current | Number *              | LDC-41  | LDC-41  | LDC-41  | LDC-41   | LDC-41   | LDC-41  | LDC-41   | LDC-41   |
|                                     |              | Channels              | 4       | 4       | 4       | 4        | 4        | 4       | 4        | 4        |
|                                     |              | Dimmable              | √       | √       | √       | √        | √        | √       | √        | √        |
|                                     |              | External power supply | BT20.24 | BT45.24 | BT75.24 | BT120.24 | BT240.24 | BT75.48 | BT120.48 | BT240.48 |
| Luxo 6 Basic / Basic White          | 700mA        | Total                 | 1       | 2       | 4       | 4        | 4        | 4       | 6        | 8        |
|                                     |              | Minimum               | 1       | 1       | 1       | 1        | 1        | 2       | 2        | 2        |
|                                     |              | Maximum               | 1       | 1       | 1       | 1        | 1        | 2       | 2        | 2        |
| Florence GII / GIII                 | 700mA        | Total                 | 6       | 15      | 24      | 24       | 24       | 30      | 48       | 48       |
|                                     |              | Minimum               | 2       | 2       | 2       | 2        | 2        | 7       | 7        | 7        |
|                                     |              | Maximum               | 6       | 6       | 6       | 6        | 6        | 12      | 12       | 12       |
| Luxo 3 series                       | 700mA        | Total                 | 2       | 5       | 8       | 8        | 8        | 8       | 16       | 16       |
|                                     |              | Minimum               | 1       | 1       | 1       | 1        | 1        | 3       | 3        | 3        |
|                                     |              | Maximum               | 2       | 2       | 2       | 2        | 2        | 4       | 4        | 4        |
| Luxo 6 series                       | 700mA        | Total                 | 1       | 2       | 4       | 4        | 4        | 4       | 6        | 8        |
|                                     |              | Minimum               | 1       | 1       | 1       | 1        | 1        | 2       | 2        | 2        |
|                                     |              | Maximum               | 1       | 1       | 1       | 1        | 1        | 2       | 2        | 2        |
| Ultima Basic / T                    | 700mA        | Total                 | -       | -       | -       | -        | -        | 4       | 4        | 4        |
|                                     |              | Minimum               | -       | -       | -       | -        | -        | 1       | 1        | 1        |
|                                     |              | Maximum               | -       | -       | -       | -        | -        | 1       | 1        | 1        |
| Focus/Compact                       | 700mA        | Total                 | 6       | 15      | 24      | 24       | 24       | 30      | 48       | 48       |
|                                     |              | Minimum               | 2       | 2       | 2       | 2        | 2        | 7       | 7        | 7        |
|                                     |              | Maximum               | 6       | 6       | 6       | 6        | 6        | 12      | 12       | 12       |
| Focus HP                            | 700mA        | Total                 | 2       | 7       | 12      | 12       | 12       | 15      | 24       | 24       |
|                                     |              | Minimum               | 1       | 1       | 1       | 1        | 1        | 3       | 3        | 3        |
|                                     |              | Maximum               | 3       | 3       | 3       | 3        | 3        | 6       | 6        | 6        |
| Luxo-3 RGB                          | 700mA        | Total                 | -       | -       | -       | -        | -        | -       | -        | -        |
|                                     |              | Minimum               | 2       | 2       | 2       | 2        | 2        | 7       | 7        | 7        |
|                                     |              | Maximum               | 2       | 5       | 6       | 6        | 6        | 9       | 12       | 12       |
| REVO RGBW/A                         | 700mA        | Total                 | -       | -       | -       | -        | -        | -       | -        | -        |
|                                     |              | Minimum               | 1       | 1       | 1       | 1        | 1        | 4       | 4        | 4        |
|                                     |              | Maximum               | 1       | 2       | 3       | 3        | 3        | 4       | 6        | 6        |

\* The number of fixtures is divided in 3 categories, total = total amount of fixtures on the driver, minimum = minimum amount of fixtures per channel, maximum = maximum amount of fixtures per channel. With RGB (A/W) fixtures total is not used because per fixture all channels are used.



## ATTENTION!

**Make sure that none of the products you are working on, are powered!**

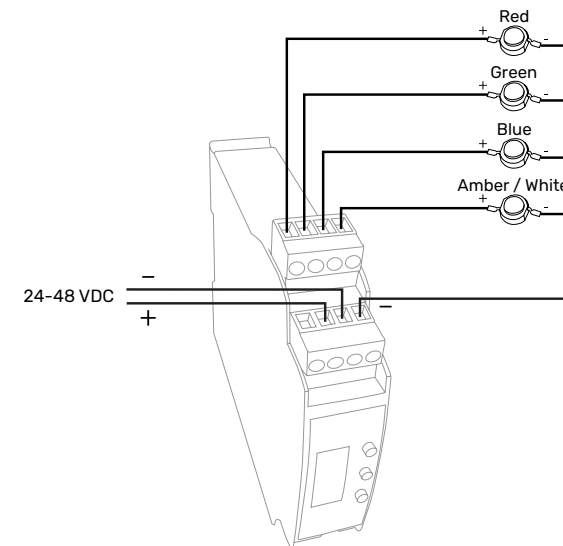
Locate the "INPUT" connection block at the top of the LDC-41, check information sticker on the side of the LDC-41. Connect the positive (+) output of the power supply to positive (+) power input of the LDC-41. Connect the negative (-) output of the power supply to the negative (-) power input of the LDC-41.

## Connect LED fixture

Locate the "OUTPUT" connection block at the top of the LDC-41, check information sticker on the side of the LDC-41. Connect the fixture's RED positive (+ or anode) to Channel 1 (R) of the LDC-41. Repeat this step for the Green, Blue and/or White/Amber colour.

If all colours have separate negative (- or cathode) wires then tie them together and connect to negative (-) power input of the LDC-41. If all colours have a combined negative (- or cathode) wire, connect to negative (-) power input of the LDC-41.

The LDC-41 can also control single colour LED fixture's. You can use the 4 output to create different zone's that can be controlled separately or simultaneously.

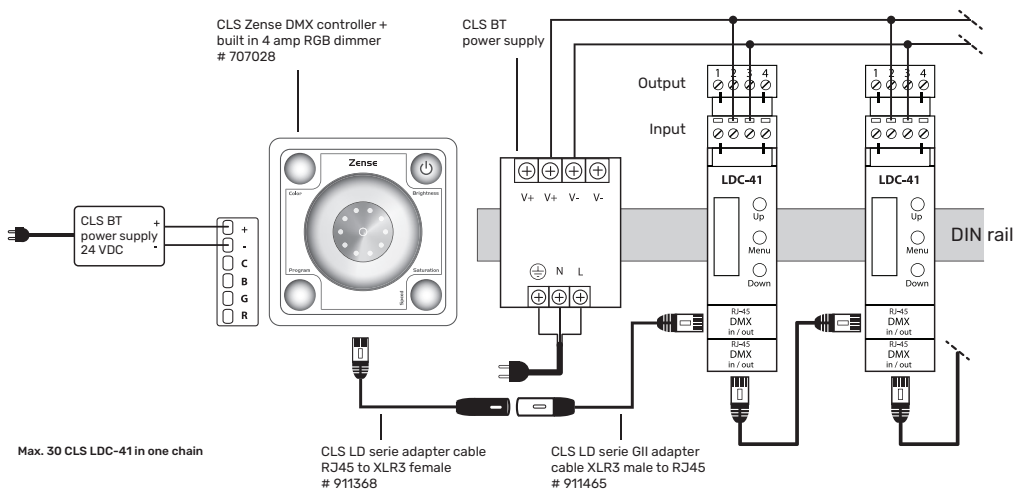


### Connect to DMX

The LDC-41 has two connections for DMX. Both DMX connections are input/output.

When using the LDC-41 in combination with the CLS Zense DMX controller, you can simply connect the two devices with a standard RJ45 (UTP) cable. There is no need for an external power supply for the Zense, the LDC-41 supplies the Zense with power through the RJ45 connection.

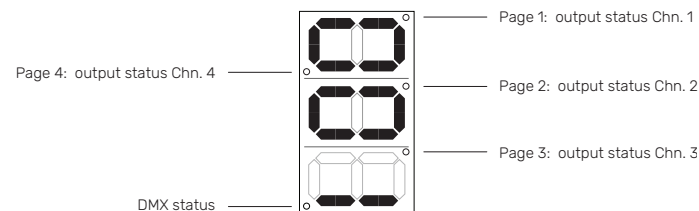
When using the LDC-41 with a DMX controller, other than the CLS Zense you can find the connection method on the side of the LDC-41. When no UTP cable is used it is advised to use the LD-serie gender changer cable (art. 911465).



### Status display

The LDC-41 has a display which is used to interface with the user. When the LDC-41 is powered the DMX address is shown. When DMX is active the DMX status dot is on.

By pressing the menu button you can scroll through the different status pages. The status pages dots will indicate which page is displayed. The status pages will show the output value of the outputs 1-4 from 0 (min) to 255 (max).

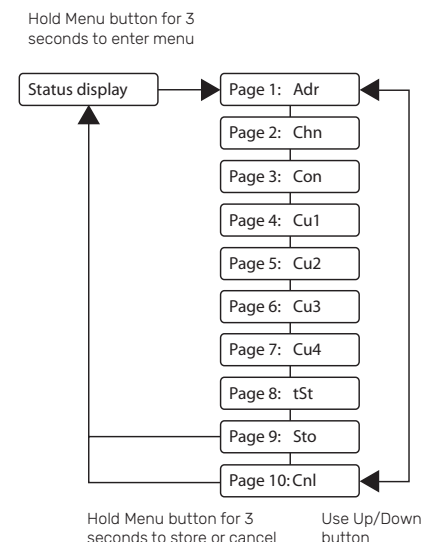


## CONFIGURATION

The LDC-41 must be configured to fit the application it is used for. To make configuration easy the LDC-41 has a user friendly menu interface.

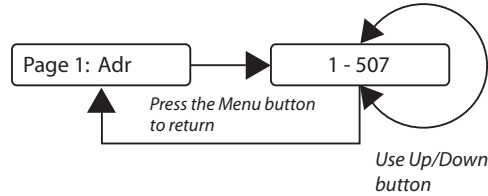
### Menu description

When the LDC-41 is powered the status display is shown with the DMX address. To enter the menu press and hold the menu button for 3 seconds. The LDC-41 will enter menu interface on page 1. The menu interface holds different pages. Use the up and down button to scroll through the pages. To select the page press the menu button. In each page the settings can be adjusted. To leave a page press the menu button again.



### Page 1: DMX addressing

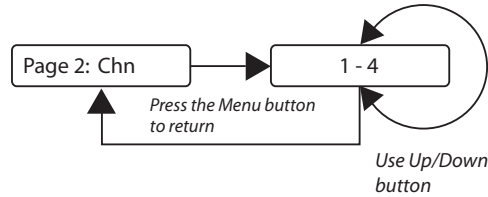
In this page you can adjust the DMX address of the LDC-41. Use the up and down button to adjust the value. Hold down the up or down button to scroll fast. When DMX address is selected press the menu button to return to the main menu.



**Default DMX address: 1**

### Page 2: Channel configuration

In this page you can adjust the Channel configuration of the LDC-41. With the channel configuration you can configure how the outputs respond to the DMX channels. Use the up and down button to adjust the value. When Channel configuration is selected press the menu button to return to the main menu. DMX channel n is the DMX address of the LDC-41.



Option 1: All 4 outputs respond to DMX channel n. This option can be used for single colour applications.

| Output | DMX channels |     |     |     |
|--------|--------------|-----|-----|-----|
|        | n            | n+1 | n+2 | n+3 |
| 1      | √            | -   | -   | -   |
| 2      | √            | -   | -   | -   |
| 3      | √            | -   | -   | -   |
| 4      | √            | -   | -   | -   |

Option 2: The first 2 channels respond to DMX channel n and last 2 channels respond to DMX channel n+1. This can be used for 2 zones single colour applications.

| Output | DMX channels |     |     |     |
|--------|--------------|-----|-----|-----|
|        | n            | n+1 | n+2 | n+3 |
| 1      | √            | -   | -   | -   |
| 2      | √            | -   | -   | -   |
| 3      | -            | √   | -   | -   |
| 4      | -            | √   | -   | -   |

Option 3: The first 3 channels respond to separate DMX channels n and last 2 channels respond to DMX channel n+1. This can be used for 3 zones single colour applications.

| Output | DMX channels |     |     |     |
|--------|--------------|-----|-----|-----|
|        | n            | n+1 | n+2 | n+3 |
| 1      | √            | -   | -   | -   |
| 2      | -            | √   | -   | -   |
| 3      | -            | -   | √   | -   |
| 4      | -            | -   | √   | -   |

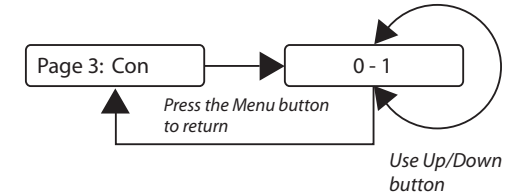
Option 4: All 4 outputs respond to separate DMX channels. This option can be used for RGB(A/W) applications.

| Output | DMX channels |     |     |     |
|--------|--------------|-----|-----|-----|
|        | n            | n+1 | n+2 | n+3 |
| 1      | √            | -   | -   | -   |
| 2      | -            | √   | -   | -   |
| 3      | -            | -   | √   | -   |
| 4      | -            | -   | -   | √   |

**Default Channel option: 4**

### Page 3: Control configuration

In this page you can adjust the Control of the LDC-41. By enabling the Control configuration the LDC-41 will use a master dimmer channel. With the master dimmer channel the light can be dimmed without changing the colour channels. The master dimmer channel will be added after the last DMX channel used to control the outputs of the LDC-41. Use the up and down button to adjust the value. When Channel configuration is selected press the menu button to return to the main menu.

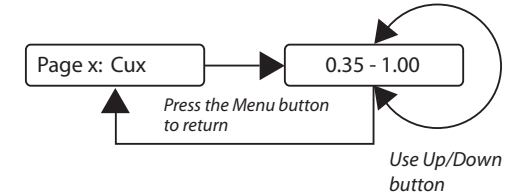


**Default Control configuration: Disabled (0)**

| Channel Option | Control configuration |                 |
|----------------|-----------------------|-----------------|
|                | Disabled (0)          | Enabled (1)     |
| 1              | -                     | DMX channel n+1 |
| 2              | -                     | DMX channel n+2 |
| 3              | -                     | DMX channel n+4 |

### Page 4-7: Current configuration

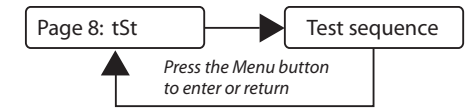
To adjust the current of an output channel enter the corresponding page and change the value. The current can be adjusted from 350 - 1000mA in steps of 50mA. To return to the main menu press the menu button.



**Default Current configuration: 700mA for each channel**

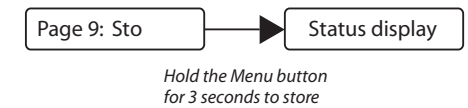
### Page 8: Test sequence

Entering this page will result in a test sequence on the outputs of the LDC-41. This enables the user to test the connections without the need of an DMX controller. To end the test sequence and return to the main menu press the menu button.



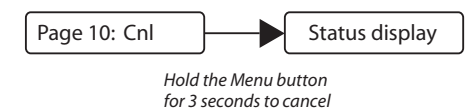
### Page 9: Store configuration

After all changes are made the setting need to be stored before they become active. To store the settings go to the store page and press and hold the menu button for 3 seconds. The settings are stored and you will return to the status display.



### Page 10: Cancel configuration

When you have made changes but you don't want to store them you can leave the configuration menu without storing them. To cancel the settings go to the cancel page and press and hold the menu button for 3 seconds. The settings are not stored and you will return to the status display.



| Specifications       |                               |
|----------------------|-------------------------------|
| Power Supply:        | 24-48VDC                      |
| Idle Power:          | Max. 0,5 Watt                 |
| Power consumption:   | Max. 185 Watt                 |
| LEDs in serie:       | 2-12 per channel              |
| Output:              | 4 channels                    |
| Output voltage:      | 22-46VDC                      |
| Output current:      | 350-1000 mA                   |
| Fuse:                | no fuse                       |
| DMX protocol:        | DMX512/1990                   |
| Data in/out:         | RJ45                          |
| Housing:             | Plastic                       |
| IP rating:           | IP40                          |
| Measurements:        | 110 x 25 x 125 mm (h x w x d) |
| Mounting:            | DIN-rail                      |
| Weight:              | 210 gr                        |
| Working temperature: | -10 °C to +60 °C              |

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|  |  |  |  |
|--|--|--|--|
|  | <b>Protection class</b><br>One, two or three   |  | <b>Retail &amp; Food LED modules</b><br>Clothing, furniture, kitchens, jewellery, shoes, bread, meat, fish & vegetables & fruit. |
|  | <b>Application area</b><br>Indoor or outdoor   |  | <b>Colour</b><br>Available colours:<br>Amber, blue, red or green   |
|  | <b>Application area</b><br>Floor, wall or ceiling  |  | <b>White colour temperature</b><br>In different Kelvin values:<br>Cold white, neutral white, warm white or extra warm white      |
|  | <b>Swivel</b><br>Fixture is horizontally rotatable, indicated in degrees   |  | <b>Curve</b><br>Minimal bending curve in centimeters   |
|  | <b>Swivel</b><br>Fixture is vertically rotatable, indicated in degrees   |  | <b>Cutting length</b><br>Indicated by the cutting marks  |
|  | <b>Multiple connection</b><br>Daisychain connectivity  |  | <b>LED pitch</b><br>Pitch between the LEDs in millimeters  |
|  | <b>Installation depth</b><br>In centimeters  |  | <b>Power supply</b><br>In VDC, VAC or milliAmpere  |
|  | <b>Installation size</b><br>In centimeters   |  | <b>Power consumption</b><br>In VA or Watt  |
|  | <b>Cable length</b><br>Maximum cable attached to the fixture in centimeters  |  | <b>Dimmable</b><br>1-10 Volt, Phase, individual, DMX dimmable or DALI  |
|  | <b>Driver</b><br>Inclusive or exclusive Internal or external   |  | <b>Bluetooth controlled</b><br>By Casambi  |
|  | <b>Weight</b><br>In grams/kilograms  |  | <b>Magno dimming</b><br>Accurate dimming from 100 - 1% by using a magnet   |
|  | <b>Pressure</b><br>Maximum pressure on the fixture in kg/cm <sup>2</sup>   |  | <b>Dynamic Control</b><br>Dynamic Power Control or Dynamic Temperature Control   |
|  | <b>Lifespan</b><br>Of the light source in hours  |  | <b>DMX input</b><br>Fixture works on DMX512 protocol   |
|  | <b>Lenses</b><br>Available lenses, indicated in degrees  |  | <b>Combined product</b><br>Compose your own fixture  |
|  | <b>LEDs</b><br>Kind of LED used in the fixture   |  | <b>Warranty</b><br>3 or 5 years warranty on the product  |
|  | <b>Plug &amp; play</b><br>Easy connection using the SmartConnect system  |  | <b>Conformité Européenne</b><br>CE marking for free marketability of industrial goods within the EU                              |
|  | <b>IP value</b><br>Ingress Protection classifies the degrees of protection provided against the intrusion of the product |  | <b>Energy label</b>  |
|  | <b>Colour changing</b><br>RGB, RGB-W, RGB-A, AWB or Tunable White  |  | <b>Lightsource</b><br>Equipped with a CLS, Citizen or a Xicato LED module  |