

## EUP30AD-1HMC-M (100100121101)

### Summary

EUP30AD-1HMC-M is a constant current output mode LED driver. Support DALI dimming function, Touch DIM (Push DIM) function, 0/1-10V Dimming function. The output and dimming circuit are also completely in accordance with the new regulations with isolation to ensure the users and luminaire system during installation.

### Product Features

- Single channel output, output current level selectable by DIP S.W.
- Support DALI dimming function, Touch DIM (Push DIM) function, 0/1-10V Dimming function
- Dimming range: 0.1-100% Dimming effect smooth, no flicker
- Protections: Short circuit, Over load, Over Voltage
- Suitable for indoor LED lighting application



### Application



Downlight



Panel Light



Spotlight



Ceiling Light



Decorative Light



Floor Light



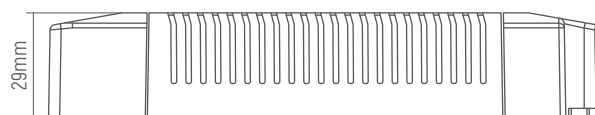
Track Light



Flood Light

### Technical Paramaters

| Model        | EUP30AD-1HMC-M          |                                                                                                                         |                                         |                                      |                                         |
|--------------|-------------------------|-------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|--------------------------------------|-----------------------------------------|
| Input        | Efficiency              | 87%@230VAC, Full load                                                                                                   |                                         |                                      |                                         |
|              | Voltage                 | 220VAC-240VAC                                                                                                           |                                         |                                      |                                         |
|              | Frequency Range(Hz)     | 50/60Hz                                                                                                                 |                                         |                                      |                                         |
|              | Power Factor            | 0.95@230VAC, Full load                                                                                                  |                                         |                                      |                                         |
|              | THD(full load)          | <15%@230VAC                                                                                                             |                                         |                                      |                                         |
|              | AC Current(max)         | 0.2Amax@230VAC                                                                                                          |                                         |                                      |                                         |
|              | Standby power           | 0.5W                                                                                                                    |                                         |                                      |                                         |
|              | Inrush Current(max)     | Cold start, 60A@230VAC                                                                                                  |                                         |                                      |                                         |
| Output       | Current/Voltage/Power   | 550mA/9-45V/24.75W<br>600mA/9-45V/27W                                                                                   | 650mA/9-45V/29.25W<br>700mA/9-42V/29.4W | 750mA/9-40V/30W<br>800mA/9-37V/29.6W | 850mA/9-35V/29.75W<br>900mA/9-33V/29.7W |
|              | Ripple Current          | <3%                                                                                                                     |                                         |                                      |                                         |
|              | Channel                 | 1                                                                                                                       |                                         |                                      |                                         |
|              | Current Tolerance       | ±5%                                                                                                                     |                                         |                                      |                                         |
|              | Voltage Range           | 9-45V                                                                                                                   |                                         |                                      |                                         |
|              | Turn on delay Time      | <1s, at 230Vac                                                                                                          |                                         |                                      |                                         |
| Function     | Dimming Type            | 0/1-10V/DALI/Touch DIM (Push DIM)/PWM/RX                                                                                |                                         |                                      |                                         |
|              | Dimming Range           | 0.1%-100% Dimming to off                                                                                                |                                         |                                      |                                         |
| Protection   | Short Circuit           | Close output, recovers automatically after fault removed                                                                |                                         |                                      |                                         |
|              | Over Load               | Hiccup, recovers automatically after fault removed                                                                      |                                         |                                      |                                         |
|              | Over Voltage            | When the output voltage is exceeded, the output current decreases and, recovers automatically when the load is reduced. |                                         |                                      |                                         |
| Safety & EMC | Surge                   | L-N:1KV                                                                                                                 |                                         |                                      |                                         |
|              | Withstand Voltage       | I/P-O/P: 3750VAC/1min/10mA; I/P-E: 1875VAC/1min/10mA                                                                    |                                         |                                      |                                         |
|              | DALI Standard           | IEC 62386-101: 2014; IEC 62386-102: 2014; IEC 62386-207: 2009, DALI 2.0                                                 |                                         |                                      |                                         |
|              | Safety Standards        | EN61347-1, EN61347-2-13                                                                                                 |                                         |                                      |                                         |
|              | EMC Emission            | EN55015, EN61000-3-2, EN61000-3-3, EN6154                                                                               |                                         |                                      |                                         |
|              | EMC Immunity            | EN61000-4-2,3,4,5,6,8,11; EN61547                                                                                       |                                         |                                      |                                         |
| Others       | Working Temp., Humidity | -20°C~+50°C, 20-50%RH                                                                                                   |                                         |                                      |                                         |
|              | Storage Temp., Humidity | -40°C~85°C, 5-70%RH                                                                                                     |                                         |                                      |                                         |
|              | Tc                      | 90°C                                                                                                                    |                                         |                                      |                                         |
|              | Material                | PC                                                                                                                      |                                         |                                      |                                         |
|              | IP Rating               | IP20                                                                                                                    |                                         |                                      |                                         |
|              | Lifetime                | 50,000h@tc:80°C                                                                                                         |                                         |                                      |                                         |
|              | Warranty Condition      | 5 Years                                                                                                                 |                                         |                                      |                                         |
|              | Switch Cycle            | >25,000 tims                                                                                                            |                                         |                                      |                                         |
|              | Packing(weight)         | Net weight: --g±5%/PCS; --PCS/Carton; --kg±5%/Carton; Carton Size: --mm(L*W*H)                                          |                                         |                                      |                                         |
|              | Dimension               | 150*43*29mm(L*W*H)                                                                                                      |                                         |                                      |                                         |



The diagram shows the EUP30AD-1HMC-M module with the following connections:

- Input:** L (Line) and N (Neutral) terminals connected to a 220-240V AC source.
- Control:**
  - DALI:** A DALI Controller is connected to the DA1 and DA2 terminals.
  - 0/1-10V:** A 0/1-10V signal input module is connected to the Dim+ and Dim- terminals.
- Output:** The LED+ and LED- terminals are connected to a Lamp. A 3W power rating is indicated near the lamp connection.

EUP30AD-1HMC-M is a multi-current dimming driver, output current level selectable by DIP S.W., as the following:

[illegible]

The graph illustrates the relationship between DALI Dimming Level and Output Current (%). The main graph shows a curve that remains at 0% current until approximately DALI level 140, after which it rises sharply to 100% current at DALI level 254. An inset graph provides a detailed view of the low-current region, showing a non-linear increase in current from about 0.1% at DALI level 1 to 0.4% at DALI level 50.

| DALI Dimming Level | Output Current (%) |
|--------------------|--------------------|
| 1                  | 0.1                |
| 10                 | 0.15               |
| 20                 | 0.2                |
| 30                 | 0.25               |
| 40                 | 0.3                |
| 50                 | 0.4                |
| 140                | 0                  |
| 200                | 10                 |
| 254                | 100                |

| PWM 信号 (%) | 电流 (mA) |
|------------|---------|
| 0          | 0       |
| 10         | 0       |
| 20         | 100     |
| 30         | 200     |
| 40         | 300     |
| 50         | 400     |
| 60         | 500     |
| 70         | 600     |
| 80         | 700     |
| 90         | 800     |
| 95         | 880     |
| 100        | 900     |

| Ambient Temperature (°C) | Load (%) |
|--------------------------|----------|
| -20                      | 100      |
| 0                        | 100      |
| 20                       | 100      |
| 40                       | 100      |
| 50                       | 100      |
| 60                       | 70       |

The diagram illustrates a DALI (Data Addressable Lighting Interface) system. A central DALI Controller is connected to three DALI Driver 1 units. The controller has two main power lines, L (Live) and N (Neutral), and a ground line. Each DALI Driver 1 unit has three input lines: DA (Data Addressable), L (Live), and N (Neutral). The DA lines are connected in a daisy-chain configuration, starting from the controller and passing through each driver in sequence. The L and N lines are connected directly to each driver. Each driver is connected to an LED light source.

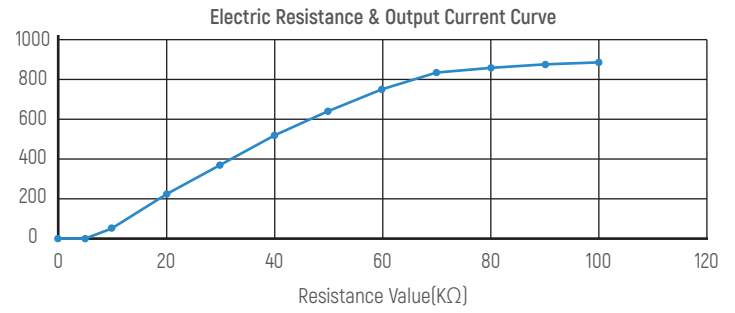
The diagram illustrates a DALI dimming system setup. On the left, a vertical busbar is connected to the main power supply (N and L). A 'Push DIM Panel (Touch DIM)' is connected to the busbar. The busbar also provides power to three 'DALI Driver 1' units. Each driver unit is connected to the busbar via its DA, L, and N terminals. The output of each driver (LED+ and LED-) is connected to an LED light fixture. The busbar is labeled with 'N' and 'L' at the top.

1. Press the Touch DIM (Push DIM) switch for 8s or more, the driver can be controlled via Push DIM switch.
2. Short press the Touch DIM (Push DIM) switch (<0.5s) to control the lamp on or off.
3. Long press the Touch DIM (Push DIM) switch (>0.5s) to dim the brightness of light. The dimming direction will change every time after pressing switch.
4. Double-click the Touch DIM (Push DIM) switch (<0.3s), then all lamps connected on the device will be set maximum brightness.
5. The brightness adjustment range is 0.2%-100%, and the light can be turned off through short pressing when doing the adjustment with long pressing Push DIM switch.
6. With the Power off memory function, the power-down state will be recovered when power on again.

- 1.This product should be installed by qualified personnel.
- 2.This product is non waterproof, need to avoid sun and rain.In case of outdoor use, please ensure it is mounted in a water proof enclosure.
- 3.Good heat dissipation conditions extend product life.Please install the product in a well-ventilated environment.
- 4.Please make sure LED power supply output voltage, current is used to meet the product requirements.
- 5.Please ensure that adequate sized cable is used from the controller to the LED lights to carry the current. Please also ensure that the cable is secured tightly in the connector.
- 6.Due to safety concerns, PVC or rubber cord of 0.75-2.5mm2 is recommended for input and output terminal(s) [excluding signal terminals]. Flat power cord is not suitable.Ensure all wire connections and polarities are correct before applying power to avoid any damages to the LED lights.
- 7.In case of malfunction, do not repair it yourself.

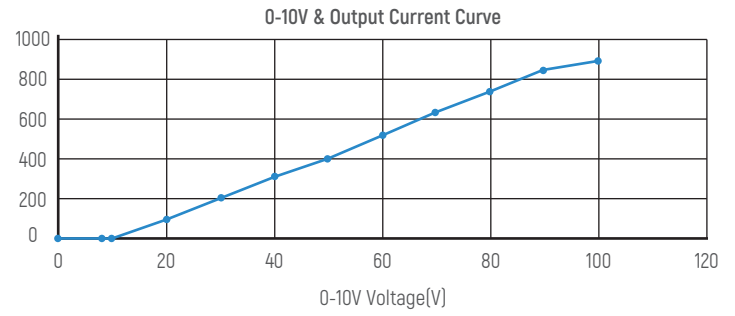
### Electric Resistance & Output Current

|                                |   |   |    |     |     |     |     |     |     |     |     |     |
|--------------------------------|---|---|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Resistance value(K $\Omega$ ): | 0 | 5 | 10 | 20  | 30  | 40  | 50  | 60  | 70  | 80  | 90  | 100 |
| Output Current(mA):            | 0 | 0 | 52 | 215 | 370 | 506 | 639 | 745 | 828 | 858 | 878 | 885 |



### 0-10V & Output Current

|                     |   |     |   |    |     |     |     |     |     |     |     |     |
|---------------------|---|-----|---|----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0-10V(V):           | 0 | 0.8 | 1 | 2  | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  |
| Output Current(mA): | 0 | 0   | 4 | 92 | 196 | 304 | 406 | 517 | 628 | 730 | 839 | 885 |



EUP30AD-1HMC-M (100100121101)

概述

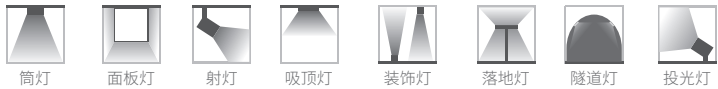
EUP30AD-1HMC-M是一款恒流输出模式LED驱动器。输出和调光电路完全符合新规定，隔离，确保用户和灯具系统在安装过程中使用。

产品特点

- 单通道输出，输出电流电平可通过DIP S.W.选择。
- 支持DALI调光功能, 触摸调光(按键调光)功能, 0/1-10V调光功能
- 调光范围：0.1-100%, 调光效果平滑，无闪烁
- 保护：短路、过载、过压
- 适用于室内LED照明应用，如筒灯、聚光灯、面板灯等

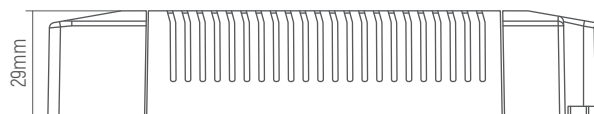


应用



技术参数

| 产品型号    | EUP30AD-1HMC-M |                                                                         |                                         |                                      |                                         |
|---------|----------------|-------------------------------------------------------------------------|-----------------------------------------|--------------------------------------|-----------------------------------------|
| 输入      | 效率             | 87%@230VAC, 满载                                                          |                                         |                                      |                                         |
|         | 电压             | 220VAC-240VAC                                                           |                                         |                                      |                                         |
|         | 频率             | 50/60Hz                                                                 |                                         |                                      |                                         |
|         | 功率因数           | 0.95@230VAC, 满载                                                         |                                         |                                      |                                         |
|         | THD            | <15%@230VAC                                                             |                                         |                                      |                                         |
|         | 电流             | 0.2Amax@230VAC                                                          |                                         |                                      |                                         |
|         | 待机功耗           | <0.5W                                                                   |                                         |                                      |                                         |
|         | 浪涌电流           | Cold start, 60A@230VAC                                                  |                                         |                                      |                                         |
| 输出      | 电流/电压/功率       | 550mA/9-45V/24.75W<br>600mA/9-45V/27W                                   | 650mA/9-45V/29.25W<br>700mA/9-42V/29.4W | 750mA/9-40V/30W<br>800mA/9-37V/29.6W | 850mA/9-35V/29.75W<br>900mA/9-33V/29.7W |
|         | 低频纹波电流(<120Hz) | <3%                                                                     |                                         |                                      |                                         |
|         | 通道             | 1                                                                       |                                         |                                      |                                         |
|         | 电流精度           | ±5%                                                                     |                                         |                                      |                                         |
|         | 电压范围           | 9-45V                                                                   |                                         |                                      |                                         |
|         | 启动延时           | <1s, at 230Vac                                                          |                                         |                                      |                                         |
| 功能      | 调光方式           | 0/1-10V DIM/PWM/Rx/DALI/Touch DIM (Push DIM)                            |                                         |                                      |                                         |
|         | 调光范围           | 0.1%-100% 可调灭                                                           |                                         |                                      |                                         |
| 保护      | 短路             | 关闭输出，故障排除后自动恢复                                                          |                                         |                                      |                                         |
|         | 过载             | 打嗝，故障排除后自恢复                                                             |                                         |                                      |                                         |
|         | 过压             | 当超过输出电压时，输出电流减小，负载减小时自动恢复。                                              |                                         |                                      |                                         |
| 安全与电磁兼容 | 浪涌             | L-N:1KV                                                                 |                                         |                                      |                                         |
|         | 耐受电压           | I/P-O/P: 3750VAC/1min/10mA; I/P-E: 1875VAC/1min/10mA                    |                                         |                                      |                                         |
|         | DALI标准         | IEC 62386-101: 2014, IEC 62386-102: 2014; IEC 62386-207: 2009, DALI 2.0 |                                         |                                      |                                         |
|         | 安全标准           | EN61347-1, EN61347-2-13                                                 |                                         |                                      |                                         |
|         | 电磁兼容           | EN55015, EN61000-3-2, EN61000-3-3, EN6154                               |                                         |                                      |                                         |
|         | EMC电磁抗扰度       | EN61000-4-2,3,4,5,6,8,11; EN61547                                       |                                         |                                      |                                         |
| 其它      | 工作温度           | -20°C~+50°C, 20-50%RH                                                   |                                         |                                      |                                         |
|         | 储存温度           | -40°C~85°C, 5-70%RH                                                     |                                         |                                      |                                         |
|         | Tc             | 90°C                                                                    |                                         |                                      |                                         |
|         | 材质             | PC                                                                      |                                         |                                      |                                         |
|         | 防水等级           | IP20                                                                    |                                         |                                      |                                         |
|         | 寿命             | 50,000小时@tc:80°C                                                        |                                         |                                      |                                         |
|         | 质保期            | 5年                                                                      |                                         |                                      |                                         |
|         | 开关机次数          | >25,000次                                                                |                                         |                                      |                                         |
|         | 装箱尺寸           | 净重: --g±5%/个; --个/箱; --kg±5%/箱; 外箱尺寸: --毫米(长*宽*高)                       |                                         |                                      |                                         |
|         | 产品尺寸           | 150*43*29毫米[长*宽*高]                                                      |                                         |                                      |                                         |



The diagram illustrates the wiring for the EUP30AD-1HMC-M device. On the left, a DALI master control is connected to the DALI+ and DALI- terminals. Below this, the power input is shown with L (Line) and N (Neutral) terminals, labeled '输入 220-240V~'. On the right, the device is connected to a light fixture (灯具) via LED+ and LED- terminals, and to a 0/1-10V signal input via Dim+ and Dim- terminals. A ground symbol is also present near the LED+ terminal.

EUP30AD-1HMC-M 是一个多电流调光驱动器，输出电流可通过DIP S.W.选择，如下所示：

|    |     |       |  |       |       |       |       |       |       |       |  |  |  |  |  |  |  |
|----|-----|-------|--|-------|-------|-------|-------|-------|-------|-------|--|--|--|--|--|--|--|
|    |     |       |  |       |       |       |       |       |       |       |  |  |  |  |  |  |  |
| ON | OFF |       |  |       |       |       |       |       |       |       |  |  |  |  |  |  |  |
|    |     | 550mA |  | 600mA | 650mA | 700mA | 750mA | 800mA | 850mA | 900mA |  |  |  |  |  |  |  |
|    |     | 9-45V |  | 9-45V | 9-45V | 9-42V | 9-40V | 9-37V | 9-35V | 9-33V |  |  |  |  |  |  |  |

Figure 1 is a line graph showing the DALI dimming curve. The x-axis represents the DALI dimming level (DALI调光等级) from 1 to 254. The y-axis represents the output current percentage (输出电流(%)) from 0 to 120. The curve shows that the output current remains near 0% until DALI level 120, then rises sharply to approximately 100% at level 254. An inset graph provides a detailed view of the curve for DALI levels 1 to 50, where the output current increases from 0% to approximately 0.4%.

| DALI调光等级 | 输出电流(%) |
|----------|---------|
| 1        | 0.0     |
| 10       | 0.0     |
| 20       | 0.0     |
| 30       | 0.0     |
| 40       | 0.0     |
| 50       | 0.0     |
| 120      | 0.0     |
| 140      | 0.0     |
| 160      | 0.0     |
| 180      | 0.0     |
| 200      | 0.0     |
| 220      | 0.0     |
| 240      | 0.0     |
| 254      | 100.0   |

| PWM 信号 [%] | 电流 [mA] |
|------------|---------|
| 0          | 0       |
| 10         | 0       |
| 20         | 100     |
| 30         | 180     |
| 40         | 280     |
| 50         | 380     |
| 60         | 480     |
| 70         | 580     |
| 80         | 680     |
| 90         | 800     |
| 100        | 900     |

| 环境温度 [°C] | 负载 [%] |
|-----------|--------|
| -20       | 100    |
| 0         | 100    |
| 20        | 100    |
| 40        | 100    |
| 50        | 100    |
| 60        | 70     |

The diagram illustrates the wiring for three DALI dimming drivers connected to a common DALI master control unit. The master unit has four output lines: L (blue), N (red), and two DALI lines (green and yellow). Each driver has four input terminals: DA (blue), DA (yellow), L (red), and N (blue). The wiring is as follows:
 

- Blue Line (L):** Connected to the DA terminal of the first driver, the DA terminal of the second driver, and the DA terminal of the third driver.
- Yellow Line (DA):** Connected to the DA terminal of the first driver, the DA terminal of the second driver, and the DA terminal of the third driver.
- Red Line (L):** Connected to the L terminal of the first driver, the L terminal of the second driver, and the L terminal of the third driver.
- Blue Line (N):** Connected to the N terminal of the first driver, the N terminal of the second driver, and the N terminal of the third driver.

 Each driver is connected to an LED light fixture, with the LED+ and LED- terminals of the fixture connected to the L and N terminals of the driver respectively.

The diagram illustrates a DALI system configuration. At the top left, a square panel labeled "Push DIM 面板(Touch DIM)" is connected to a power source with "N" and "L" lines. Below the panel, three identical DALI driver units are shown, each labeled "DALI 驱动器1". Each driver has four input terminals: "DA", "DA", "L", and "N". The "DA" terminals are connected to the "L" line from the panel, and the "L" terminals are connected to the "N" line. The "N" terminal of the first driver is also connected to the "L" line. Each driver has two output terminals labeled "LED" and "LED-", which are connected to an LED light fixture represented by a cone-shaped icon.

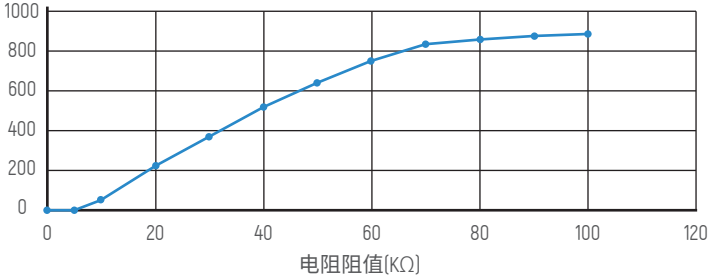
- 1.短按Push DIM (Touch DIM) 开关 [ $<0.5$ 秒] 进行灯的亮暗控制。
- 2.长按Push DIM (Touch DIM)开关 [ $>0.5$ 秒] 进行灯具的亮度调节，光是调亮还是调暗，随着每次按压的开关变化而变换。
- 3.双击Push DIM (Touch DIM)开关 [ $<0.3$ 秒]，连接的所有灯具将达到最亮状态。
- 4.亮度调节范围为0.2%-100%。
- 5.具有断电记忆功能，重新上电将恢复到上一次断电的状态。

1. 本产品请由具有专业资格的人员进行调试安装。
2. 本产品不能防水，需避免日晒雨淋，如安装在户外，请用防水箱。
3. 良好的散热条件会延长产品的使用寿命，请把产品安装在通风良好的环境。
4. 请检查使用的LED电源输出电压电流，是否符合产品要求。
5. 出于安全考虑，推荐输入和输出(信号端除外)用0.75-1.5mm<sup>2</sup>PVC或橡胶线缆，并确保接线牢固，以免电线过热或接触不良触发事故。扁平电源线不适用。
6. 通电调试前，应确保所有接线正确，以避免因接线错误而导致灯具损坏。
7. 如果发生故障，请勿私自维修；如有疑问，请联系供应商。

电阻对应输出电流

|            |   |   |    |     |     |     |     |     |     |     |     |     |
|------------|---|---|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 电阻阻值 (KΩ): | 0 | 5 | 10 | 20  | 30  | 40  | 50  | 60  | 70  | 80  | 90  | 100 |
| 输出电流 (mA): | 0 | 0 | 52 | 215 | 370 | 506 | 639 | 745 | 828 | 858 | 878 | 885 |

电阻对应输出电流曲线



0-10V对应输出电流

|            |   |     |   |    |     |     |     |     |     |     |     |     |
|------------|---|-----|---|----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0-10V(V):  | 0 | 0.8 | 1 | 2  | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  |
| 输出电流 (mA): | 0 | 0   | 4 | 92 | 196 | 304 | 406 | 517 | 628 | 730 | 839 | 885 |

0-10V对应输出电流曲线

