

EUP12AD-1HMC-M

Summary

EUP12AD-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-2 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

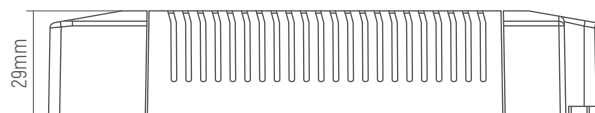


Application



Technical Paramaters

Model	EUP12AD-1HMC-M	
Input	Efficiency	85%@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)	0.09Amax@230VAC
	Standby power	0.5W
	Inrush Current(max)	Cold start, 60A@230VAC
Output	Current/Voltage/Power	120mA/9-45V/5.4W* 180mA/9-45V/8.1W 240mA/9-45V/10.8W 300mA/9-42V/12.6W 150mA/9-45V/6.75W* 200mA/9-45V/9W 270mA/9-45V/12.15W 350mA/9-36V/12.6W
	Ripple Current	<3%
	Channel	1
	Current Tolerance	±5% *[120mA ±7% 150mA ±7%]
	No-Load Voltage	54VDC
	Voltage Range	9-45VDC
	Turn on delay Time	<1s, at 230Vac
Function	Dimming Type	0/1-10V/DALI-2/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 after fault condition is removed.
	Over Voltage	Hiccup, recovers after fault condition is removed.
Safety & EMC	Surge	L-N:0.5KV;
	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 EUP12AD-1HMC-M module connected to a DALI Controller, a 220-240V AC input, a lamp, and a 0/1-10V signal input. The module has terminals for DA1, DA2, L, N, LED+, LED-, Dim+, and Dim-. The DALI Controller is connected to DA1 and DA2. The 220-240V AC input is connected to L and N. The lamp is connected to LED+ and LED-. The 0/1-10V signal input is connected to Dim+ and Dim-.

EUP12AD-1HMC-M is a multi-current dimming driver, output current level selectable by DIP S.W., as the following:

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Remark: Function default setting is: 120mA (@switch are all OFF state)

The graph illustrates the relationship between the DALI Dimming Level and the Output Current (%). The main graph shows a curve that starts at 0% current for DALI level 1 and rises to 100% current at DALI level 254. An inset graph provides a detailed view of the low-current region, showing the output current percentage for DALI levels 1 through 50. The inset graph shows that the output current is approximately 0.05% at DALI level 1 and increases to 0.4% at DALI level 50.

DALI Dimming Level	Output Current (%)
1	0.05
10	0.15
20	0.25
30	0.35
40	0.45
50	0.55
60	0.65
70	0.75
80	0.85
90	0.95
100	1.05
120	1.25
140	1.55
160	1.95
180	2.45
200	3.05
220	3.75
240	4.55
254	5.00

PWM signal (%)	Current (mA)
0	0
10	15
20	40
30	65
40	95
50	130
60	170
70	215
80	265
90	315
100	350

Ambient Temperature (°C)	Load (%)
-20	100
-10	100
0	100
10	100
20	100
30	100
40	100
50	100
55	85
60	70

The diagram illustrates a DALI lighting control system. A central DALI Controller is connected to three DALI Driver 1 units. The controller provides a common L (Live) line, a common N (Neutral) line, and a common ground line. Each DALI Driver 1 unit has four input terminals: DA, DA+, L, and N. The DA and DA+ terminals are connected to the controller's DA and DA+ lines, respectively. The L and N terminals are connected to the common L and N lines. Each driver also has two output terminals: LED+ and LED-, which are connected to an LED light fixture. The diagram shows three identical driver units, each driving its own LED light fixture.

The diagram shows a Push DIM Panel (Touch DIM) connected to three DALI Driver 1 units. The wiring is as follows:

- Power Supply:** L and N lines enter from the left.
- Panel Connections:**
 - Panel DA+ is connected to the first DALI Driver 1 DA+.
 - Panel DA- is connected to the first DALI Driver 1 DA-.
 - Panel L is connected to the first DALI Driver 1 L.
 - Panel N is connected to the first DALI Driver 1 N.
- Driver Connections:**
 - Each DALI Driver 1 has four terminals: DA+, DA-, L, and N.
 - Each DALI Driver 1 is connected to an LED light.

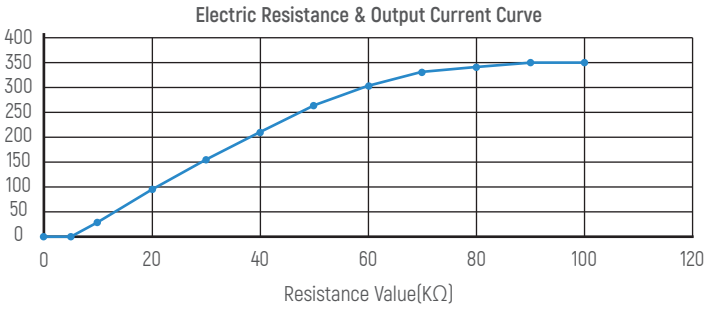
Remark: Only use open push button without indicator light. Maximum cable length between each Unit: 20 meters.

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.

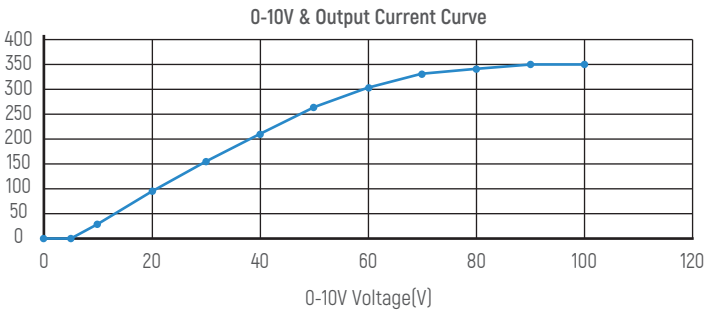
Electric Resistance & Output Current

Resistance value(KΩ):	0	5	10	20	30	40	50	60	70	80	90	100
Output Current(mA):	0	0	27	90	152	208	262	302	330	340	349	349



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	3	39	80	122	165	205	251	290	334	349



EUP12AD-1HMC-M

概述

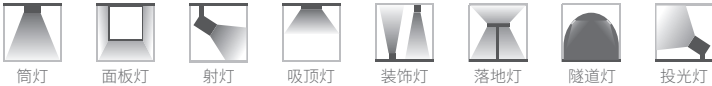
EUP12AD-1HMC-M是一款恒流输出模式LED驱动器。输出和调光电路完全符合新规定，隔离，确保用户和灯具系统在安装过程中使用。

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-2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
- 适用于室内LED照明应用，如筒灯、聚光灯、面板灯等



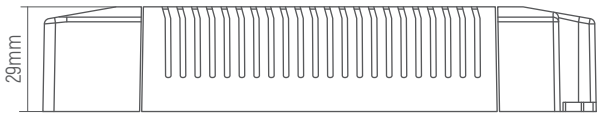
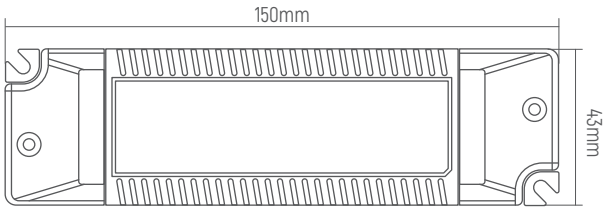
应用



技术参数

产品型号	EUP12AD-1HMC-M				
输入	效率	85%@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	0.09Amax@230VAC			
	待机功耗	<0.5W			
	浪涌电流	Cold start, 60A@230VAC			
输出	电流/电压/功率	120mA/9-45V/5.4W* 150mA/9-45V/6.75W*	180mA/9-45V/8.1W 200mA/9-45V/9W	240mA/9-45V/10.8W 270mA/9-45V/12.15W	300mA/9-42V/12.6W 350mA/9-36V/12.6W
	低频纹波电流(<120Hz)	<3%			
	通道	1			
	电流精度	±5% *[120mA ±7% 150mA ±7%]			
	空载电压	54VDC			
	电压范围	9-45VDC			
	启动延时	<1s, at 230Vac			
功能	调光方式	0/1-10V DIM/PWM/Rx/DALI-2/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	打嗝，故障排除后自恢复。			
安全与电磁兼容	浪涌	L-N:0.5KV;			
	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]			

尺寸(mm)



应用接线图



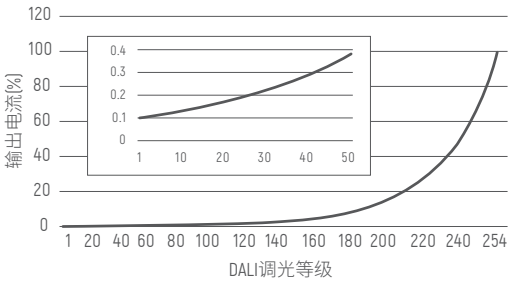
电流选择表

EUP12AD-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：

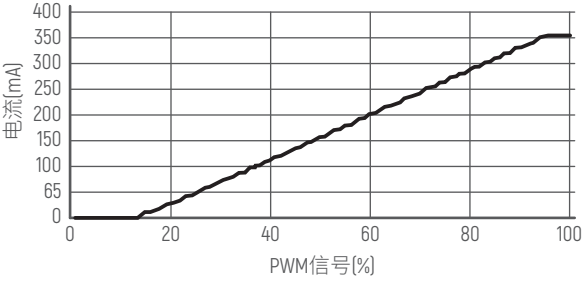
ON	OFF	1	2	3										
		120mA	150mA	180mA	200mA	240mA	270mA	300mA	350mA					
		9-45V	9-45V	9-45V	9-45V	9-45V	9-45V	9-45V	9-42V	9-36V				

备注：出厂默认设置电流为120mA (1,2,3在OFF状态)

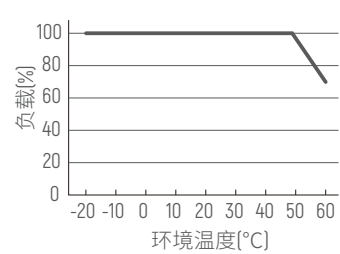
调光曲线



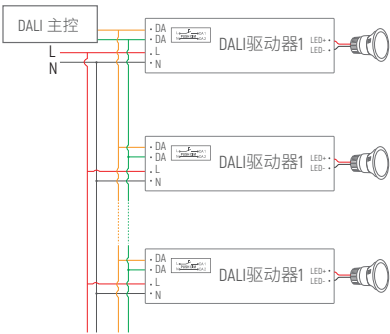
PWM曲线



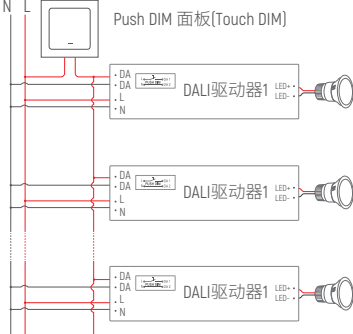
降额曲线



DALI接线图



Touch DIM(Push DIM) 接线图



备注: 只能使用开路的按压式开关(不带指示灯). 采用同步连线时每个设备和设备之间的线长不超过20米.

Push DIM 功能

- 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。

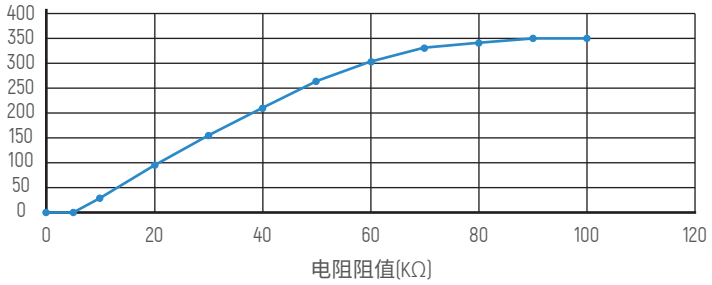
注意事项：

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0.75-1.5mm²PVC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；如果有疑问，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	27	90	152	208	262	302	330	340	349	349

电阻对应输出曲线



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	3	39	80	122	165	205	251	290	334	349

0-10V对应输出曲线

