

EUP12D-1HMC-200

Summary

EUP12D-1HMC-200 is a 12W AC/DC constant current mode output LED driver featuring the multiple levels selectable by DIP switch and complies with DALI standard protocol IEC 62386. EUP12D-1HMC-200 can be connected to DALI main controller or Touch DIM(PushDIM) to achieve a smooth dimming effect.

Product Feature

- Single channel output, output current level selectable by DIP S.W.
- Meet DALI Protocol IEC 62386-207 Ed2.0
- Support Touch DIM (Push DIM)function
- Built-in active PFC function
- Dimming effect smooth, no flicker
- Protections: Short circuit, over load, no load
- Suitable for indoor LED lighting application, such as down light, spot light, and so on

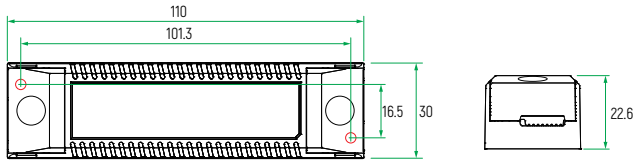


Application

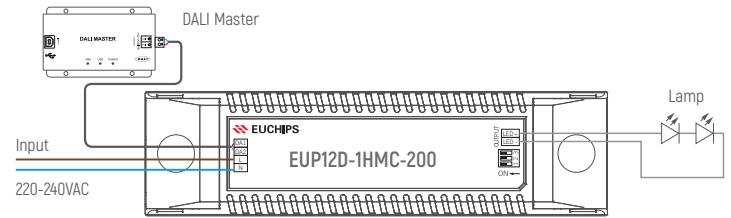
Technical Parameters

Model	EUP12D-1HMC-200																																																	
Input	Efficiency	>82%@230VAC, Full load																																																
	Voltage	220VAC-240VAC																																																
	Frequency	50/60Hz																																																
	Power Factor	0.95@230VAC, Full load																																																
	THD	<10%@230VAC, Full load																																																
	Current	0.1Amax@230VAC, Full load																																																
	Inrush Current	cold start,8A{twidth=10us measured at 50% Ipeak@230VACC																																																
Output	Current/voltage/power	200mA/9-45VDC/9W 220mA/9-45VDC/9.9W		240mA/9-45VDC/10.80W 260mA/9-45VDC/11.7W		280mA/9-43VDC/12.4W 300mA/9-40VDC/12W		320mA/9-37VDC/11.84W 350mA/9-34VDC/11.9W																																										
	Channel	1		Current Selection Table <table><tr><td>☐</td><td>☐</td><td>☒</td><td>☒</td><td>☒</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td></tr><tr><td>ON</td><td>OFF</td><td>200mA</td><td>220mA</td><td>240mA</td><td>260mA</td><td>280mA</td><td>300mA</td><td>320mA</td><td>350mA</td><td colspan="3"></td></tr><tr><td></td><td></td><td>9-45VDC</td><td>9-45VDC</td><td>9-45VDC</td><td>9-45VDC</td><td>9-43VDC</td><td>9-40VDC</td><td>9-37VDC</td><td>9-34VDC</td><td colspan="3"></td></tr></table>								☐	☐	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐	ON	OFF	200mA	220mA	240mA	260mA	280mA	300mA	320mA	350mA						9-45VDC	9-45VDC	9-45VDC	9-45VDC	9-43VDC	9-40VDC	9-37VDC	9-34VDC			
	☐	☐	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐																																					
	ON	OFF	200mA	220mA	240mA	260mA	280mA	300mA	320mA	350mA																																								
			9-45VDC	9-45VDC	9-45VDC	9-45VDC	9-43VDC	9-40VDC	9-37VDC	9-34VDC																																								
	Current Tolerance	±5%																																																
	Standby Power	<1W																																																
No Load Output Voltage	60V Max		Remark: Function default setting is: 200mA (@switch are all OFF state)																																															
Turn On Delay Time	<0.75s, at 230Vac (When the light begins to shine)																																																	
Function	Dimming Mode	DALI 2.0																																																
	Dimming Range	0.1%-100%																																																
	Dimming curve	Logarithm																																																
	Flicker	Flicker free																																																
Protection	Short Circuit	Short circuit without output, troubleshooting results in normal output																																																
	Over Load	Current drops, troubleshooting output is normal																																																
Safety	Surge	L-N 0.5KV																																																
	Withstand Voltage	I/P-O/P: 1000Vac/1min/<5mA O/P-DALI(Signal port):500Vac/1min/<5mA I/P-DALI(Signal port):500Vac/1min/<5mA																																																
	Safety standards	EN61347-1,EN61347-2-13																																																
Others	Working Temp.	-20°C~50°C																																																
	Storage Temp.; Humidity	-40°C~85°C, 20-90%RH																																																
	Tc	70°C																																																
	Material	PC																																																
	IP Rating	IP20																																																
	Lifetime	50,000h@tc:70°C																																																
	Warranty Condition	5 years																																																
	Switch Cycle	>25,000 times																																																
	Packing Size	515*235*140mm(L*W*H), 9.5Kg/Carton/100PCS																																																
	Dimension	110*30*22.5mm(L*W*H)																																																
	G.W	90g																																																

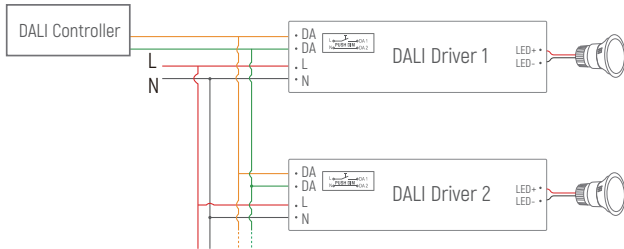
Dimension(mm)



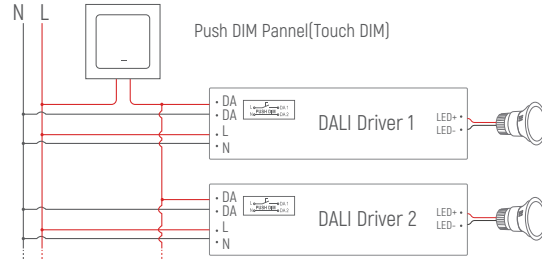
Wiring Diagram



DALI Wiring Diagram



Push DIM(Touch DIM) Diagram

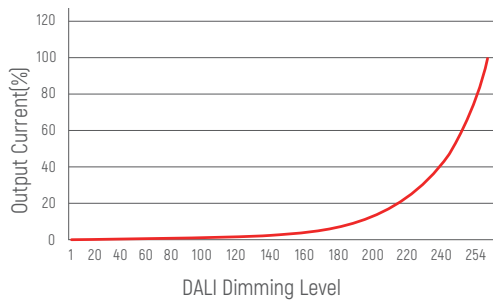


Remarks: use only open push switch (without indicator light). When using synchronous connection, the line length between each device and equipment shall not exceed 20 meters.

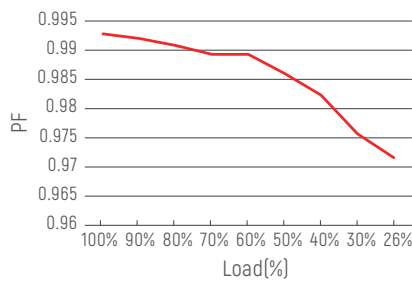
Push DIM Function

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

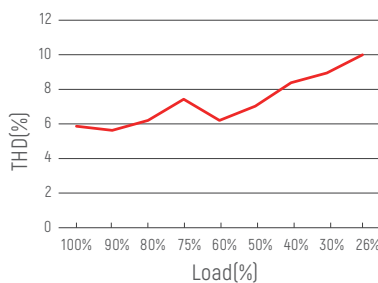
Dimming Curve



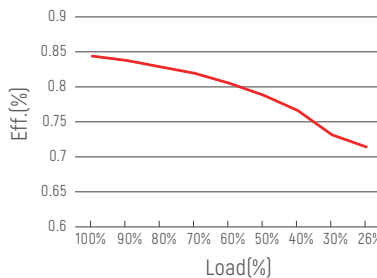
PF vs Load



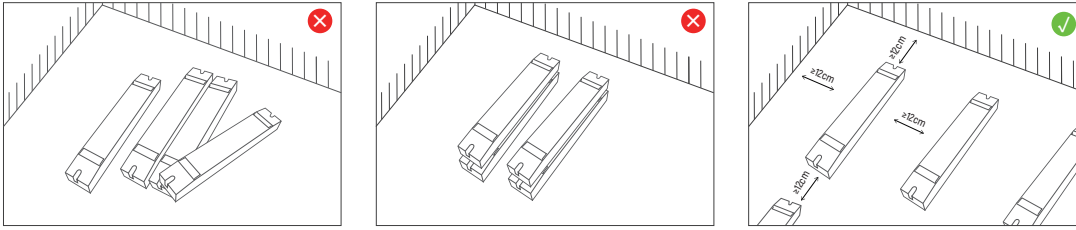
THD vs Load



Eff. vs Load



Installation Precautions



Please do not stack the products. The distance between two products should be $\geq 12\text{cm}$ so as not to affect heat dissipation and the lifespan of the products.

Max. quantity of drivers per miniature circuit breaker

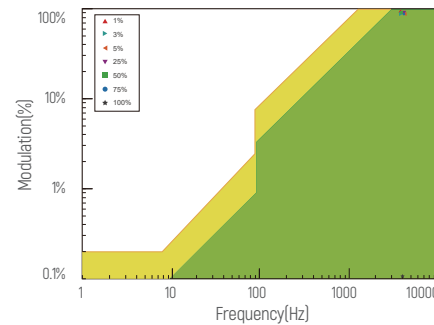
MCB	Input Voltage 230V Drivers	MCB	Input Voltage 230V Drivers
B10	100pcs	C10	100pcs
B13	130pcs	C13	130pcs
B16	160pcs	C16	160pcs
B20	200pcs	C20	300pcs
		D16	160pcs

Typical flicker performance

Typical flicker percent as a function of frequency, measured across the dimming range. The results are overlaid with the low-risk (yellow) and no observable effect (green) levels as defined in IEEE P1789.

Risk levels verdict :

- Below 90 Hz, Modulation (%) is less than $0.025 \times \text{frequency}$.
- Between 90 Hz and 1250 Hz, Modulation (%) is below $0.08 \times \text{frequency}$.
- Above 1250 Hz, there is no restriction on Modulation (%).



Cautions

- This product must be installed and adjusted by a qualified professional.
- 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.
- Good heat dissipation conditions extend product life. Please install the product in a well-ventilated environment.
- Please make sure LED power supply output voltage, current is used to meet the product requirements.
- 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.
- Due to safety concerns, PVC or rubber cord of $0.75\text{--}2.5\text{mm}^2$ 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.
- In case of malfunction, do not repair it yourself.

※ The contents of this manual are updated without prior notice. If the function of the product you are using is inconsistent with the instructions, the function of the product shall prevail. Please contact us if you have any questions .

Warranty Agreement

- Warranty periods from the date of delivery : 5 years.
- Free repair or replacement services for quality problems are provided within warranty periods.

Warranty exclusions below:

- Beyond warranty periods.
- Any artificial damage caused by high voltage, overload, or improper operations
- Products with severe physical damage.
- Damage caused by natural disasters and force majeure.
- Warranty labels and barcodes have been damaged.
- No any contract signed by EUCHIPS.

- Repair or replacement provided is the only remedy for customers. EUCHIPS is not liable for any incidental or consequential damage unless it is within the law.
- EUCHIPS has the right to amend or adjust the terms of this warranty, and release in written form shall prevail.

EUP12D-1HMC-200

概述

EUP12D-1HMC-200是一款可以提200/220/240/260/280/300/320/350mA 8档电流的LED驱动器。输出电流可以过DIP拨码开关简易设置, 符合DALI标准协议IEC62386. 用DALI主控/Touch DIM(Push DIM)开关调光, 曲线平滑、无闪烁。

产品特点

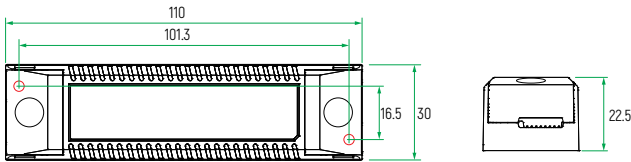
- 单通道输出, 输出电流可通过DIP拨码开关选择
- 遵循DALI协议标准 IEC 62386-207 Ed2.0
- 支持Touch DIM(Push DIM)功能
- 内建主动式PFC功能
- 调光效果平滑, 无闪烁
- 保护: 短路保护, 过载保护, 空载保护
- 适用于LED室内灯具,比如筒灯, 射灯等

技术参数

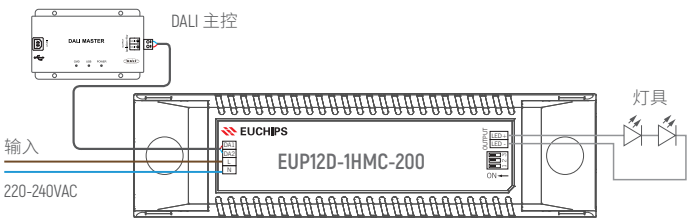
型号	EUP12D-1HMC-200																																						
输入	效率	>82%@230VAC, 满载																																					
	电压	220VAC-240VAC																																					
	频率	50/60Hz																																					
	功率因素	0.95@230VAC, 满载																																					
	THD	<10%@230VAC, 满载																																					
	电流	0.1Amax@230VAC, 满载																																					
	浪涌电流	冷启动,8A[在 50%Ipeak下测twidth=10us)@230VACC																																					
输出	电流/电压/功率	200mA/9-45VDC/9W 220mA/9-45VDC/9.9W	240mA/9-45VDC/10.80W 260mA/9-45VDC/11.7W	280mA/9-43VDC/12.4W 300mA/9-40VDC/12W	320mA/9-37VDC/11.84W 350mA/9-34VDC/11.9W																																		
	通道	1	电流选择表																																				
	电流公差	±5%	<table><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>ON</td><td>OFF</td><td>200mA</td><td>220mA</td><td>240mA</td><td>260mA</td><td>280mA</td><td>300mA</td><td>320mA</td><td>350mA</td><td></td></tr><tr><td></td><td></td><td>9-45VDC</td><td>9-45VDC</td><td>9-45VDC</td><td>9-45VDC</td><td>9-43VDC</td><td>9-40VDC</td><td>9-37VDC</td><td>9-34VDC</td><td></td></tr></table>															ON	OFF	200mA	220mA	240mA	260mA	280mA	300mA	320mA	350mA				9-45VDC	9-45VDC	9-45VDC	9-45VDC	9-43VDC	9-40VDC	9-37VDC	9-34VDC	
	ON	OFF	200mA	220mA	240mA	260mA	280mA	300mA	320mA	350mA																													
			9-45VDC	9-45VDC	9-45VDC	9-45VDC	9-43VDC	9-40VDC	9-37VDC	9-34VDC																													
	待机功耗	<1W																																					
空载输出电压	60V Max	备注：出厂默认设置电流为200mA(1,2,3在OFF状态)																																					
启动延时	<0.75s, at230Vac(灯光开始亮起)																																						
功能	调光方式	DALI 2.0																																					
	调光范围	0.1%-100%																																					
	调光曲线	对数曲线																																					
	频闪	无频闪																																					
保护	短路	短路无输出，排除故障输出正常																																					
	过载	电流下降，排除故障输出正常																																					
安全	浪涌	L-N:0.5KV																																					
	耐压标准	I/P-O/P: 1000Vac/1min/<5mA O/P-DALI[Signal port]:500Vac/1min/<5mA I/P-DALI[Signal port]:500Vac/1min/<5mA																																					
	安全标准	EN61347-1,EN61347-2-13																																					
其它	工作温度	-20°C~50°C																																					
	储存温度、湿度	-40°C~85°C, 20-90%RH																																					
	tc	70°C																																					
	材质	PC																																					
	防水等级	IP20																																					
	寿命	50,000小时@tc:70°C																																					
	质保	5年																																					
	开关周期	>25,000次																																					
	包装尺寸	515*235*140mm(长*宽*高), 9.5Kg/箱/100PCS																																					
尺寸	110*30*22.5mm (长*宽*高)																																						
毛重	90克																																						



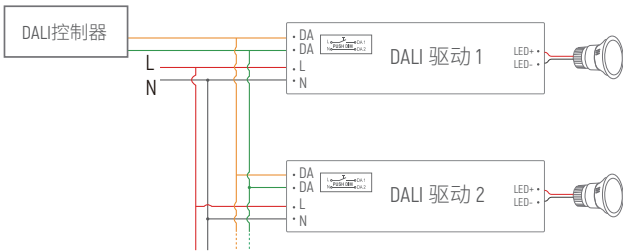
产品尺寸(mm)



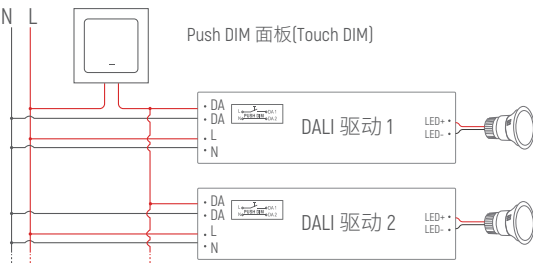
应用接线图



DALI应用接线图



Push DIM(Touch DIM) 接线图

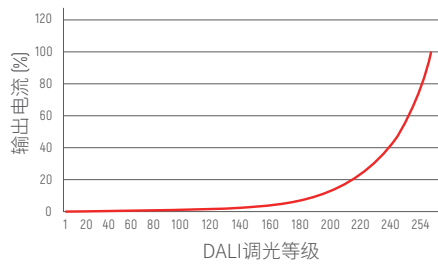


备注: 只能使用开路的按压式开关(不带指示灯)。采用同步连线时每个设备和设备之间的线长不超过20米。

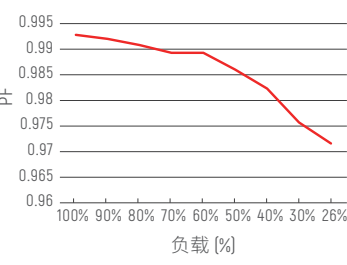
Push DIM 功能

1. 长按8s进入Touch DIM模式。
2. 短按Touch DIM 开关 (<0.5秒) 进行灯的亮暗控制。
3. 长按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。
4. 双击Touch DIM 开关 (<0.3秒)，连接的所有灯具将达到最亮状态。
5. 亮度调节范围为1%-100%。
6. 具有断电记忆功能，重新上电将恢复到上一次断电的状态。

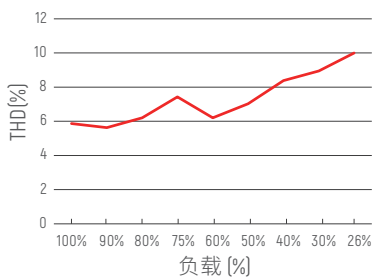
调光曲线



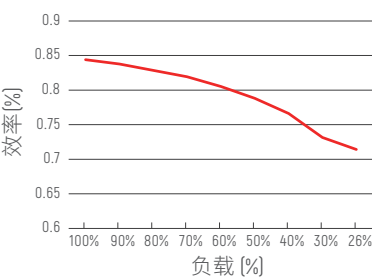
PF vs 负载



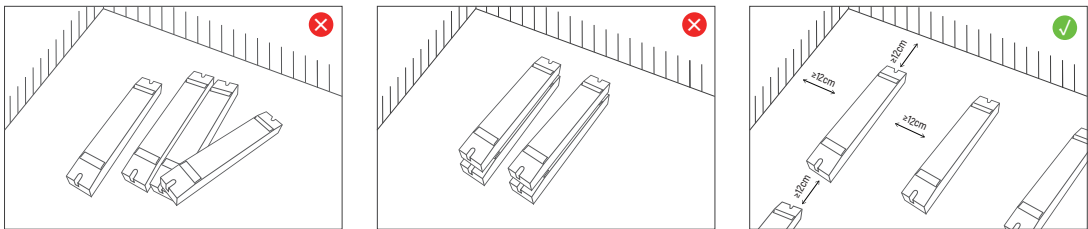
THD vs 负载



Eff. vs 负载



安装规范要求



请勿将产品堆叠摆放，产品与产品间隔距离应 $\geq 12\text{cm}$ ，避免影响产品散热和使用寿命。

断路器带载说明

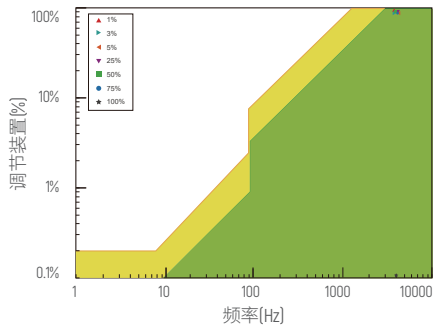
MCB	输入电压230V 驱动器数量	MCB	输入电压230V 驱动器数量
B10	100pcs	C10	100pcs
B13	130pcs	C13	130pcs
B16	160pcs	C16	160pcs
B20	200pcs	C20	200pcs
		D16	160pcs

典型的频闪性能

参考IEEE1789标准定义的频闪百分比和驱动电流频率的函数关系，黄色区域为低风险区域，绿色为无明显影响区域。

风险等级判定参考：

- (1)输出电流频率在90赫兹以下: $< 0.025 \times \text{频率}$ 。
- (2)90赫兹和1250赫兹之间: $< 0.08 \times \text{频率}$ 。
- (3)高于1250赫兹时, 无限制。



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 $0.75\text{-}2.5\text{mm}^2$ 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。
- ※ 本说明书内容如有更新，恕不另行通知。若您使用的产品功能与说明书不一致时，请以产品为准。如有疑问请与我们联系。

保修条例

- 1、自出厂之日起保修服务期为5年。
- 2、在保修服务期内出现产品质量问题欧切斯将给予免费修理或更换服务。

非保修条例:

属下列情况不在免费保修或更换服务范围之内:

- 1、已经超出保修服务期;
- 2、过高电压、超负载、操作不当等人为造成的损坏;
- 3、产品外形严重损坏或变形;
- 4、自然灾害以及人力不可抗拒原因造成的损坏;
- 5、产品保修标签和产品唯一条形码损坏;
- 6、无欧切斯签订的合同或发票凭证。

·修理或更换是欧切斯对客户的一补救措施。欧切斯不承担任何附带引起的损害赔偿，除非在适用法律范围之内。
·欧切斯享有修正或调整本保修条款的权利，并以书面形式发布为准。