LDT-MULTI-AC-DIM-6A-OLED

OLED Multi-Protocol AC Phase-Cut Dimmer

An OLED-equipped AC dimmer combining local controls and selectable DALI, DMX/RDM, analogue, RF and push-switch modes. Its output remains a single mains phase-cut channel in every control mode.

Model specifications

Supply voltage	100-240 VAC
Output type	1-channel AC phase-cut dimming
Maximum output current	6 A
Nominal output power	600-1440 W; load-type limits apply
Dimmable LED load	500 W at 110 V / 1000 W at 220 V
Control inputs	Local knob/buttons, DALI, DMX512/RDM, 0/1-10V, RF 2.4 GHz or AC Push-Dim
User interface	OLED display + rotary/push knob + four keys
Dimming	0-100%; 256 levels; manual rotary range 5-100%
Minimum brightness	5-40%
Phase-cut selection	Leading edge or trailing edge
Published RF distance	Up to 15 m, unobstructed
Protection	Overheat and overload; automatic recovery
Operating temperature	-30 to +55 °C
Maximum case temperature	+85 °C
IP rating	IP20
Body dimensions	168 x 93.5 x 63 mm

Selectable control modes do not make this a multi-channel LED strip driver. Stay within 6 A and the lower LED-specific wattages and inrush limits. Use only the documented signal wiring; keep protective-earth and mains requirements intact.

The following technical-reference pages retain the complete diagrams, dimensions, settings and installation instructions. Select the lighting variant stated on this cover; family diagrams may also illustrate other variants.

Triac

OLED AC Triac Dimmer

Features

- AC phase-cut mosfet dimmer, one channel output, Max. 6A.
- To dim and switch single color dimmable LED lamps, traditional incandescent and halog
- 256 levels 0-100% dimming smoothly without any flash.
- Six dimming mode: Knob, DALI, DMX512, 1-10V, RF 2.4GHz, AC Push-Dim.
- Rotate knob to change brightness, support push, push twice and long push operation.
- In accordance with DALI standard protocol IEC 62386-102, IEC 62386-205 and in compliance with DALI products from other international incorporation.
- DMX512 decoder with RDM function.
- Compatible with active or passive 0-10V, 1-10V dimmer.
- Compatibility with RF 2.4G single zone or multiple zone dimming remote control, 15m remote distance.
- Connect with external AC push switch to achieve on/off and dimming function.
- Stand-alone dynamic change mode, speed and brightness adjustable.
- Trailing edge dimming or leading edge dimming selectable.
- Minimum brightness set from 5% to 40%.
- Over-heat / Over-load protection, recover automatically.



DALI 2 CE RoHS

Technical Parameters

Input and Output	
Input voltage	100-240VAC
Output voltage	100-240VAC
Output current	1CH, 6A
Output power	600-1440W
Environment	
Operation temperature	Ta: -30°C ~ +55°C
Case temperature (Max.)	Tc: +85°C
IP rating	IP20

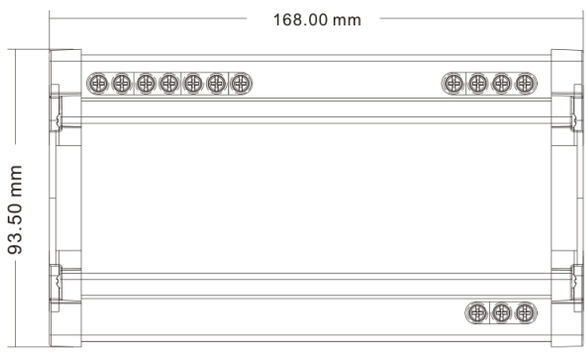
Dimming data	
Input signal	Knob/DMX512/1-10V/DALI/RF/Push-Dim
Dimming level	256 levels
Dimming range	0-100%
Warranty and Protection	
Warranty	5 years
Protection	Over-heat, Over-load protection, recover automatically.

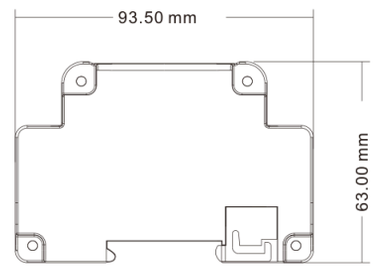
Safety and EMC	
EMC standard	EN 61347-1/-2
Safety standard	EN IEC 55015/EN IEC 61547 ETSI EN 301 489-1/-3
Radio Equipment	ETSI EN 300 440
Certification	CE RoHS DALI-2
Package	
Size	L170 x W98 x H80mm
Gross weight	0.58kg

Compatible Load Types

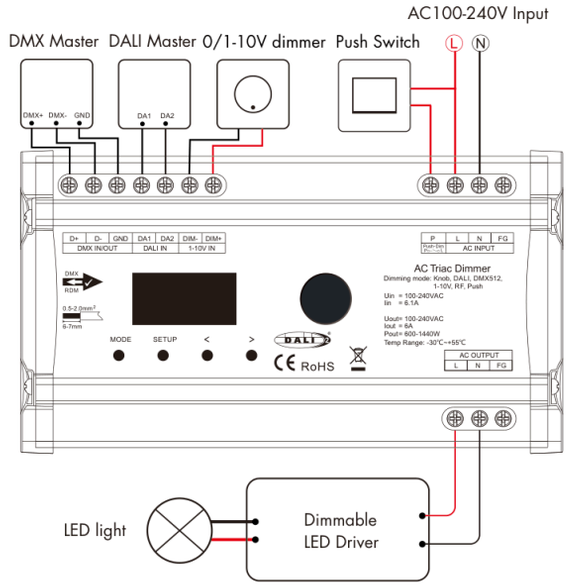
Load Type	Maximum Load	Remarks
Dimmable LED lamps	1000W @ 220V 500W @ 110V	Due to variety of LED lamp designs, maximum number of LED lamps is further dependent on power factor result when connected to dimmer.
Triac Dimmable LED drivers	1000W @ 220V 500W @ 110V	Maximum permitted number of drivers is 1000W divided by driver rated input power, and make sure the surge current is no more than 2 times 65A.
Incandescent lighting, HV Halogen lamps	1500W @ 220V 750W @ 110V	

Mechanical Structures and Installations





Wiring Diagram



Note:

1. When calculating the maximum number of load lamps or drivers, the input power or input current parameters of a single lamp or driver must be used, the output power parameters can not be used.
   In addition, the maximum surge current of the dimmer is 65A, the sum of surge current of multiple dimmable LED drivers should not exceed 2 times. otherwise, the product will be overloaded and damaged.
2. An DMX signal amplifier is needed when more than 32 decoders are connected, or use overlong signal line, signal amplification should not be more than 5 times continuously.
3. If the recoil effect occurs because of longer signal line or bad line quality, please try to connect 0.25W 90-120Ω terminal resistor at the end of each DMX signal line.
4. 1-10V dimming compliant with 0-10V, 1-10V, 10V PWM, RX (4 in 1).

Operation

Short press MODE key, switch between Manual dimmer mode, DALI dimmer mode, DMX decoder mode, 1-10V dimmer mode and dynamic light change mode.
Short press SETUP key, enter parameter setting state, and switch between multiple parameter item.
press < or > key for parameter adjustment.
long press SETUP key or wait 30s to quit parameter setting state.
Long press < & > key for 2s, restore factory default parameter.
The 4 key operation have the same function as the knob.

System parameter setting



Double click or long press 2s the knob, enter parameter setting state.
Short press the knob to switch between work mode, phase-cut, minimum brightness setting and exit item.
Rotate the knob for parameter value adjustment of each item.
Select leading edge dimmer or trailing edge dimmer according to dimmable LED light or driver.
Set suitable minimum brightness to avoid flick.

Work mode:

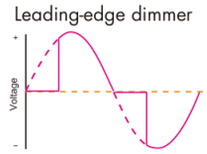
Knob	Manual dimmer
DALI	DALI dimming
DMX	DMX512 decoder
1-10V	1-10V dimmer
Auto	Dynamic light change mode

Phase-cut mode:

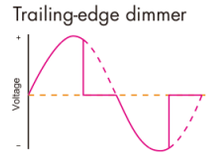
Lead	Leading edge dimmer
Trail	Trailing edge dimmer

Min output brightness:
Range: 5~40%

Leading-edge dimmer



Trailing-edge dimmer



Manual dimmer mode



Short press the knob to turn on or turn off the light.
Rotate the knob for brightness adjustment.

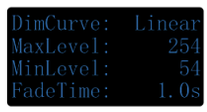
light switch:

ON	light is on
OFF	light is off

Output brightness:
Range: 5~100%

DALI dimmer mode



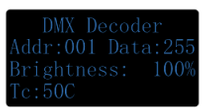




Short press the knob to enter the DALI dimmer mode setting state, switch DALI address or DALI dimming parameter setting.
Rotate the knob to adjust DALI address or enter DALI dimming parameter setting sub interface.
Under DALI dimming parameter setting sub interface, short press the knob to switch each parameter, rotate the knob to adjust the parameter value.

DALI Address:
Range:00~63, no. "no" indicates an unallocated address.
DALI address can also be assigned by DALI Master controller automatically.
DALI Dimming Data:
Range: 0~254
Output Brightness:
Range: 0~100%
Dim Curve:
Linear/Logarithmic
MaxLevel:
Range: 1~254, recommend 60~254
MinLevel:
Range: 1~254, recommend 1~60
FadeTime:
Sets the fade time when the light or scene change, 16 levels in total.
(0s, 0.7s, 1s, 1.4s, 2s, 2.8s, 4s, 5.7s, 8s, 11.3s, 16s, 22.6s, 32s, 45.3s, 64s, 90.5s)
FadeRate:
Sets the fade rate when the light or scene switch, 15 levels in total.
(358/s, 253/s, 179/s, 127/s, 89.4/s, 63.3/s, 44.7/s, 31.6/s, 22.4/s, 15.8/s, 11.2/s, 7.9/s, 5.6/s, 4/s, 2.8/s)
PowerOnLeverl:
Range: 0-254
SysFailLevel:
Range: 0-254
ON/OFF Open-Circuit Detection Function:
ON: Enable open-circuit detection
OFF: Disable open-circuit detection

DMX decoder mode



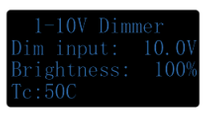
Short press the knob to enter or quit DMX start address setting state.
Rotate the knob for DMX start address adjustment.

DMX decode start address:
Range: 001~512

DMX decode data:
Range: 000~255

Output brightness:
Range: 0~100%

1-10V dimmer mode



0/1-10V dimming input:
Range: 0.0V~10.0V
Output brightness:
Range: 0~100%

Dynamic light change mode



Short press the knob to enter dynamic light change mode setting state,
or change between mode no, speed and brightness item.
Rotate the knob for value adjustment of each item.

Dynamic light change mode no:

1 Fade
2 Jump
3 Flash

Mode speed:
Range: 1-8 level

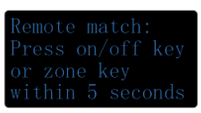
Mode brightness:
Range: 10~100%

RF dimmer mode



If the RF remote is matched and RF signal is received,
will enter RF dimmer mode automatically.

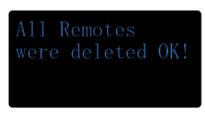
Match: Long press the knob or M key for 10s, OLED display (1), within 5s, press on/off key or zone key of the remote, display (2) , match is successful,
Delete: Long press the knob or M key for 15s, until OLED display (3), delete all matched RF remote.



(1)



(2)



(3)

AC Push-Dim Function

- **Short press:** Turn on or off light.
- **Long press (1-6s):**
  Press and hold to step-less dimming, With every other long press, the light level goes to the opposite direction.
- **Dimming memory:**
  Light returns to the previous dimming level when switched off and on again, even at power failure.
- **Synchronization:**
  If more than one controller are connected to the same push switch, do a long press for more than 10s,
  then the system is synchronized and all lights in the group dim up to 100%.
  This means there is no need for any additional synchrony wire in larger installations.
  We recommend the number of controllers connected to a push switch does not exceed 25 pieces,
  The maximum length of the wires from push to controller should be no more than 20 meters.

Safety & Warnings

- DO NOT install with power applied to device.
- DO NOT expose the device to moisture.