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illuminating creativity

The AD-LC12 is a high power 12 channel LED driver. This versatile LED driver can be used for our RGB, single colour and tunable white LED modules as well as our LED spot range . The driver is controllable through DMX-512 but also offers stand-alone functions and is configurable with its internally selectable user modes. The refresh rate of this driver is adjustable up to 1800Hz which makes this driver suitable for studio applications.

This LED-driver is also available as a 6 channel version.

Features

High power
480 Watt

Multi channel
12 channels

Stand alone
User configurable options

Adjustable refresh rate
Up to 1800Hz

Technical specifications

Power

Input voltage:	12~24VDC*
Output voltage:	12~24VDC*
Output power:	240~480W*
Channels:	12
Current per channel:	1,66A

Control

Control in/out:	DMX-512 / S-Bus galvanically isolated
Refresh rate:	100~1800Hz user adjustable

Miscellaneous

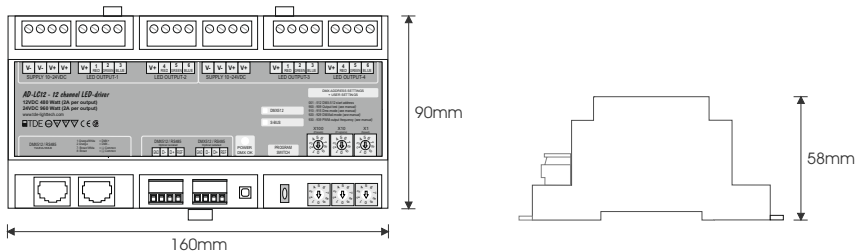|	
Housing:	DIN-rail (9 module width)
Input connector:	Print connector / 8 pin Rj45 (optional)
Screw terminal power inputs:	2,5mm²
Screw terminal power outputs:	2,5mm²
Mounting:	DIN-rail

*Dependent on input power

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Dimensions


90mm

58mm

160mm

Order Code

ADLC.12.24   - AD-LC12 LED driver; 12 channel; 480W; DMX512

Power input

The AD-LC12 LED driver has two blocks with two power inputs. When using a single connection please use the supplied jumpers. This is to prevent the connector from overheating.

Place the jumper between V- and V- and between V + and V + of the power input. See the illustration on the right.

12 ~ 24VDC
POWER SUPPLY INPUT

12 ~ 24VDC
POWER SUPPLY INPUT

V- V- V+ V+
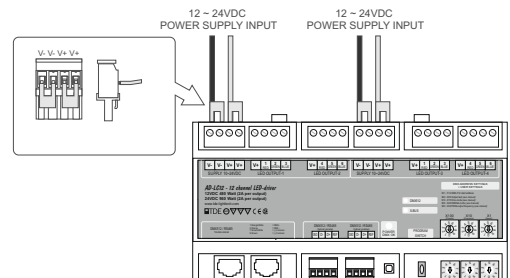
Output power

The output of the LED driver depends on the current flow and the ambient temperature. As seen in the graphic below the maximum amount of current that can flow through the LED driver decreases in higher temperatures.

CURRENT FLOW [A]

AMBIENT TEMPERATURE [°C]
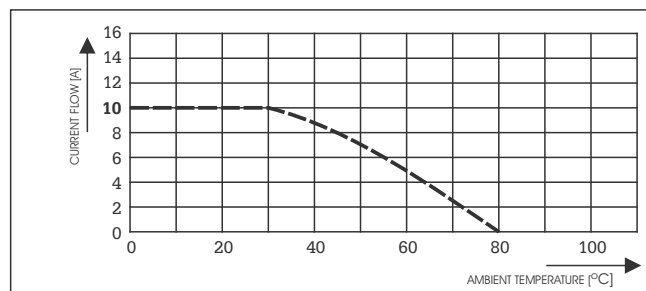
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Screw terminals

The screw terminals allow a maximum cable core of 2,5mm². When connecting the wiring of the LED product to the AD-LC12 LED driver make sure to use flexible cable with ferrules to ensure a proper connection. Also note when fastening the wires please make sure not to overtighten the screws.

DMX wiring

UTP / FTP (ANSI E1.27-2)
Orange:	(DMX-) Data 1
Orange/White:	(DMX+) Data 2
Brown:	(-) Common
Brown/White:	(-) Common

XLR-3P
Pin 1:	(-) Common
Pin 2:	(DMX-) Data 1
Pin 3:	(DMX+) Data 2

XLR-5P
Pin 1:	(-) Common
Pin 2:	(DMX-) Data 1
Pin 3:	(DMX+) Data 2
Pin 4:	Not used / (REF Supply
Pin 5:	Not used

Connection overview

⚠ USE DOUBLE POWER SUPPLY CONNECTIONS FOR CURRENTS > 10 AMP

LED indication:

| LED = OFF |
| No power |
| LED = RED |
| Power OK, No DMX |
| LED = ORANGE blinking |
| Power OK, DMX OK |
| LED = GREEN |
| Output channel testmode |
| LED = GREEN blinking |
| Selected usersetting |
| LED = RED blinking |
| Not selected usersetting |
| LED = ORANGE |
| Not a valid usersetting |

Stabilised Power supply IN

12~24VDC+ GROUND
12~24VDC+ GROUND
12~24VDC+ GROUND
12~24VDC+ GROUND

LED OUTPUT 1
LED OUTPUT 2
LED OUTPUT 3
LED OUTPUT 4
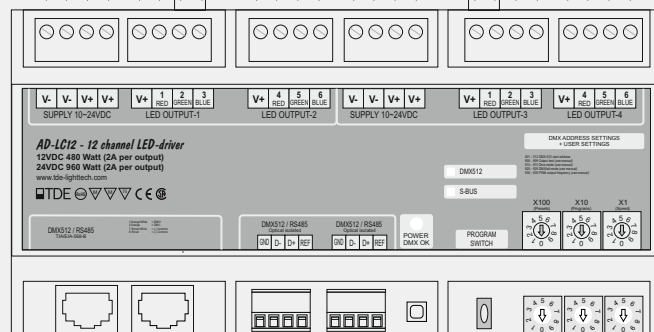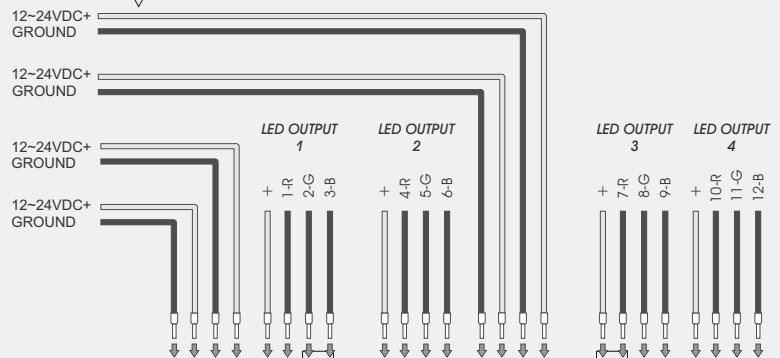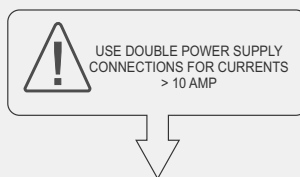
DMX-512 IN/OUTPUT
TDE-LIGHTTECH CONTROLLERS
/ DMX CONTROLLERS

0V
D-
D+
REF

DMX-512 INPUT

0V
D-
D+

0V
D-
D+

DMX output
Link to next driver
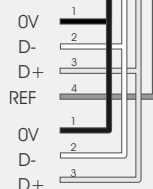
PROGRAM switch

DMX-512 Start-address, Preset & User settings switches
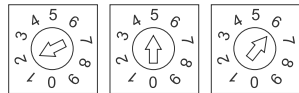
Configure DMX

To set a DMX startadres on the AD-LC12 LED driver turn the dipswitches on the LED driver to the desired adress.

Example start adres 256 :

In order to control multiple AD-LC12 LED drivers please make sure to set the DMX startadress on the LED driver. When the default usermode (910) is set, every additional LED driver has to add +12 to their start adress in order for individual control. See an example below:

The drivers have the default user mode 910 which is 12 channel mode every additional driver starts twelve channels further.
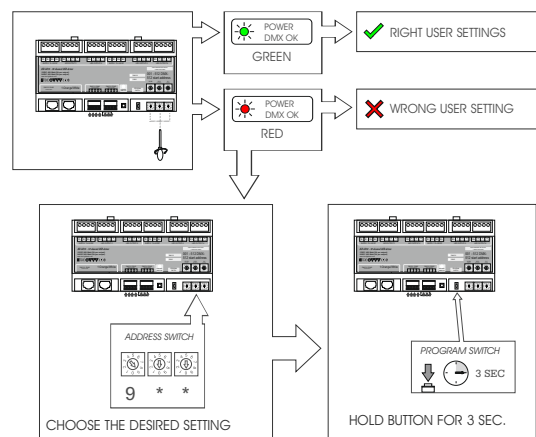

DMX CHANNEL
1

DMX CHANNEL
7

DMX CHANNEL
13
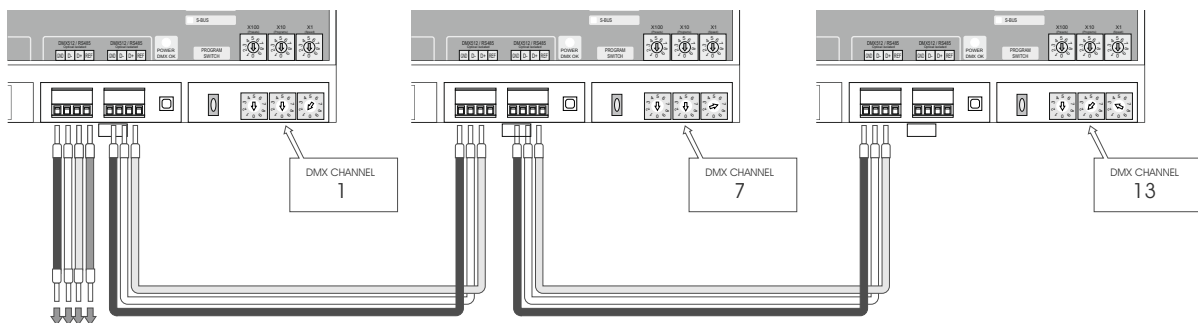
TDE lighttech controller / DMX Controller

Programming usermodes

The AD-LC12 LED driver has the unique feature to allow different configurations. The dipswitches on the driver allows the user to set a custom usermode. Please view the next page for the different usermode settings.

How to adjust the usermodes

- Set the desired usermode number with the dipswitches (see next page for usermodes).

- When set either a red or green LED will light up on the display.
(when green the desired usermode has been configured previously).

- When the LED is red you can set the usermode by holding the programming button, which can be found on the left of the dipswitches.

- Hold the programming button for 3 seconds or longer.

- The LED will now turn green and the right usermode has been set

POWER
DMX OK
GREEN

✔ RIGHT USER SETTINGS

POWER
DMX OK
RED

✖ WRONG USER SETTING

ADDRESS SWITCH

9 * *

CHOOSE THE DESIRED SETTING

PROGRAM SWITCH
3 SEC

HOLD BUTTON FOR 3 SEC.

User modes

[90#] Output test:
Select this option to test the output channels

900	All channels on	
901	Ch 1 + Ch 7	= 100%
902	Ch 2 + Ch 8	= 100%
903	Ch 3 + Ch 9	= 100%
904	Ch 4 + Ch 10	= 100%
905	Ch 5 + Ch 11	= 100%
906	Ch 6 + Ch 12	= 100%
907	RGB-loop Ch 1..3 + Ch 4..6	
908	RGB-loop Ch 7..9 + Ch 10..12	
909	RGB-testloop Ch1..12	

[91#] DMX-mode:
Set the required DMX-mode to one of the different output patch settings

910	**DMX [1..12]**	**= Ch [1..12]_____(Default)**
911	DMX [1..3],[4..6]	= Ch [1..3+4..6],[7..9+10..12]
912	DMX [1]	= Ch[1+2+3+4+5+6+7+8+9+10+11+12]
913	DMX [1],[2]	= Ch [1..3 + 4..6 + 7..9 + 10..12]
914	DMX [1],[2],[3],[4],[5],[6]	=Ch [1+2],[3+4],[5+6],[7+8],[9+10],[11+12]
915	DMX [1..4]	=Ch [1..4]+[5..8]+[9..12]
916	DMX [1,2]	=Ch [1+3+5+7+9+11],[2+4+6+8+10+12]

[92#] DMXfail-mode:
Set the required DMXfail-mode to set the output behaviour when DMX-signal fails

920	**All outputs unchanged_____ (Default)**
921	All outputs OFF (0%)
922	RGB-loop Ch 1..6
923	RGB-loop Ch 7..12
924	Ch1 = 10%
925	Ch2 = 20%
926	Ch3 = 30%
927	Ch4 = 40%
928	Ch5 = 60%
929	Ch6 = 80%

[93#] PWM-output frequency:
Select this option to adjust the PWM-frequency

930	137Hz
931	220Hz
932	**320Hz_____(Default)**
933	457Hz
934	582Hz
935	712Hz
936	916Hz
937	1282Hz
938	1603Hz
939	50...2000Hz, selectable with DMX channel-7

[94#] Output smooth settings:
In this setting the smoothing effect of the output brightness can be set. This can be used when using low DMX-framerate controllers or for super smooth architectural lightcontrols.

940	Off (No smoothing effect)
941	Minimum
942	**Standard_____(Default)**
943	Extra
944	Maximum

[95#] Output-curve selection:
Set the required Output-curve. In the constant output modes (with RGB-LED's) one colour has the same brightness as two or more colours.

Normal	= R+G+W = 300%____(Default)
Mode 953	= R+G+W = 200%
Mode 954	= R+G+W = 100%

950	**Standard curve_____(Default)**
951	Linear curve
952	Deep curve (TV-studio applications)
953	Constant output brightness (max. 200%)
954	Constant output brightness (max. 100%)

To ensure proper functioning of the LED driver with a third party product please contact us for information.

In the view of a constant development of our products, we reserve the right for changing technical data and features without prior notice.