## DMX2DALI+

#### Information for Use



Read the Information for Use and the Safety Instructions carefully. Subject to modification without prior notice.

Typographical and other errors do not justify any claim for damages. Modification of the product is prohibited.

This document is designed for electricians and system administrators of the product.

All product names and trademarks mentioned in this manual are trademarks of their respective owners.

Except for internal use, relinquishment of the instructions to a third party, duplication in any type or form - also extracts - as well as exploitation and / or communication of the contents is not permitted.

Downloads and more information at: www.ecue.com

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# 1 Safety instructions

Read the Information for Use and the safety instructions carefully. Make sure that the environmental, mounting, and installation prerequisites are met. This manual should be kept at a safe place and in reach of the device.

#### 1.1 Symbols



This icon warns about possible damage of the device itself, to connected devices, and to the user.



This icon warns about electrical voltage.



This icon gives general hints and informs about handling and procedures for use of the device.

#### 1.2 General safety instructions



The product must be installed, put into operation and dismounted by a qualified electrician only. No service person allowed. The applicable safety regulations and accident prevention regulations must be observed. Otherwise the unit may be damaged or injuries may happen.



The product may only be operated in the operating modes and environments described in the manual. Read and adhere to the Information for Use.



Danger of death

Electrical shock

- Do not use the device if power supply, power cables, or power wearing lines are damaged.
- Only work on the product when it is powered down. Connect/Disconnect cables and data only when the product is powered down.
- Wires must be inserted all the way into spring clamp terminals and firmly fastened.
- No user serviceable parts inside. Opening the device voids the warranty.
   Do not open or try to repair the device. Repairs must only be carried out by authorized Traxon e:cue specialists. Return it to your Traxon e:cue distributor for replacement or repair.
- The altitude for which the operation of the DMX2DALI+ is rated is 0 ... 2000 m above sea level.



Take care: Exposure to possible risk of electrical shock.

 Configuration of this product must be performed by qualified individuals who are knowledgeable about the procedures, precautions, and hazards associated with the product.



#### Notice

- Do not route network, DMX or any other communication line together with power lines
- Only operate it in well-ventilated environment.



If safety instructions are missing, please contact Traxon e:cue to receive a new copy.

# 2 General device description

A flexible converter from DMX signal to DALI, DMX2DALI+ is a simple solution for controlling electrical DALI ballasts and dimmers using a DMX controller. DMX2DALI+'s flexibility makes installations easy by using auto and manual DMX addressing modes. Eight addressable consecutive DMX channels control eight DALI outputs. Each output supports up to 64 DALI ballasts or dimmers (broadcast mode), while one DMX2DALI+ supports up to 512 electrical DALI ballasts and dimmers, typically used for control of fluorescent lighting.

#### Highlights

- · 8 outputs with 1200 Baud DALI transfer speed controlled by 8 DMX channels
- Up to 64 DALI ballasts per output (= 512 ballasts in total), all controlled by the same DMX channel (broadcast)
- · Single 100 to 240 V AC supply voltage
- · SYMPL dmx Node detachable connectors for loose wiring (In/Out)
- · Power and DMX status LEDs
- · Manual and auto DMX addressing modes
- · Configurable DALI output on DMX signal loss
- DIP switch for configuration and manual addressing mode (offset)
- · Supports brightness setting, no color temperature setting
- DIN rail mounting

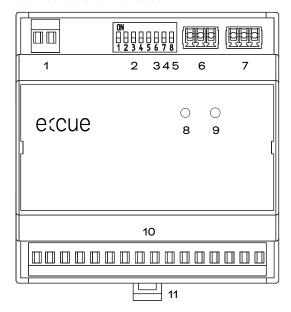
#### 2.1 Delivery Content

- · DMX2DALI+ (CL23100068435)
- · Safety instructions
- · Welcome note

#### 2.2 Optional accessories

SYMPL dmx Node - AB444180035

#### 2.3 Connectors and Interfaces



DIP switch settings take effect immediately.

1 Power supply (from left to right: N , L).

#### 2 DIP switches #1 ... #5 (left to right)

DMX start address: Defines which DMX start address is to be DALI channel 1 by binary values.

Examples:

All switches (#1 ... #5) 'Off'

Switches #1 , #3 and #5 'On', switches #2 and #4 'Off'

DMX start address 337

All switches (#1 ... #5) 'On'

DMX start address 496

A complete table of all possible DMX start addresses is listed at "5 DMX start addresses" on page 11.

#### 3 DIP switch #6

DMX Lost mode: Definition of DALI outputs when no DMX signal is present **a)** on device start-up. And **b)** during operation if no DMX signal has been present yes (see 4 - DIP switch #7 'DALI Hold mode').

'Off' = DALI outputs set to zero intensity.

'On' = DALI outputs set to maximum intensity.

For a summary see "6 Scenarios of DMX signal loss" on page 11.

#### 4 DIP switch #7

DALI Hold mode: Definition of DALI outputs when DMX signal is lost during operation.

'Off' = as defined by 'DMX Lost Mode' (DIP #6).

'On' = hold last frame. DALI outputs keep last values. If there has no DMX signal been present yet, the 'DMX Lost Mode' setting (DIP #6) takes effect.

For a summary see "6 Scenarios of DMX signal loss" on page 11.

#### 5 DIP switch #8

Addressing mode selection: Defines addressing mode.

'Off' = manual.

'On' = auto addressing.

Auto addressing converts the defined channels to DALI and sends a modified DMX signal via the DMX output to the next device. The new first DMX channel is the one after the last one used.

Manual addressing converts the defined channels to DALI and forwards the unmodified DMX signal (in = out).

- 6 DMX in (from left to right: GND, DMX -, DMX +).
- 7 DMX out (from left to right: GND, DMX -, DMX +). Max. 32 DMX2DALI+ in series connection.
- 8 DMX in LED: Indicates valid DMX input signal.
- 9 Power LED: Indicates operational device.
- 10 8 x DALI output (8 x from left to right: DALI -, DALI +). DALI direct power arc broadcast mode. Max. 64 DALI ballasts per output, max. 512 ballasts per device..
- 11 DIN rail handle.

#### 2.4 Product specifications

Dimensions (W x H x D)	88 x 90 x 63 mm /
	3.46 x 3.54 x 2.48 in
Weight	180 g / 0.4 lb
Power supply input	100 240 V AC, 2-pin terminal
	plug, solid cable cross-section
	up to 2 mm²
Power consumption	max. 18 W
Operating temperature	-20 50 °C / -4 122 °F
Storage temperature	-20 50 °C / -4 122 °F
Op. / Stor. humidity	0 80% RH, non-condensing
Ingress protection	IP20
Electrical protection	Protection class II (protective
	insulation)
Housing	Plastic
Mounting	On 35 mm DIN rail (EN 60715)
Certificates	CE, UKCA

#### Interface specifications

Input interfaces	1 x DMX512, 3-pin terminal plug		
Output interfaces	8 x DALI, 2-pin terminal plug, 64 ballasts,		
	max. 15 V, max. 128 mA		
	cable cross-section:		
	solid / stranded: 0.08 2.5 mm²		
	with ferrule: 0.25 1.5 mm <sup>2</sup> stripping length: 6 7 mm		
	1 x DMX512, 3-pin terminal plug		
User interfaces	es 2 x LED for device status, power;		
	8 x DIP switch, for offset and mode		
	configuration		

### 3 General remarks

#### 3.1 Transport

Only transport the device in its original packaging. This protects the device from damage.

#### 3.2 Unpacking

Only unpack the e:cue DMX2DALI+ at its installation location. To protect the device against condensation water, unpack it and wait until all moisture remaining in the device has evaporated. Condensation can occur when the device is moved from a cold to a warm location. Keep the packaging for use in case of further transport. Inspect all parts for completeness regarding chapter "2.1 Delivery Content" on page 4. If there is apparent damage to the device or parts are missing from the delivery scope, please contact the Traxon e:cue Support service.

#### 3.3 Warranty regulations

Depending on the product, warranty regulations are of different duration. The warranty time is usually noted in the quote and in the order confirmation. See <a href="https://www.traxon-ecue.com/terms-and-conditions">www.traxon-ecue.com/terms-and-conditions</a> for details. Legal warranty regulations apply in any case.

#### 3.4 Maintenance and Repair



Danger of death

Electrical shock

Connect cables and data only when the device is powered down.



- Before dismounting, appropriate measures must be taken to protect the respective components against damage caused by electrostatic discharge (ESD protection).
- Do not try to repair the device. Return it to your Traxon e:cue distributor for replacement or repair.

Only external cleaning might be necessary. This cleaning may only be carried out by skilled personnel. To clean the device, disconnect it from the line power supply. Disconnect all devices connected to the device. Do not use any cleaning agents containing solvents (e.g. acetone, alcohol, or thinner) or abrasives. The housing surface can be cleaned with a moist, lint-free cloth. Ensure that no water penetrates into the housing. Otherwise, this could damage the electronics.

#### 3.5 Disposal



Batteries and technical appliances must not be disposed of with domestic waste, but should be handed in at the appropriate collection and disposal points.

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The proper disposal of packing materials and of the device is the responsibility of the respective user and for his account; in all other matters, the retrieval obligation for packing materials and the device is subject to the statutory regulations.

#### 3.6 Support

In case of technical problems or questions regarding installation and repair please contact:

Traxon Technologies Europe GmbH

Customer Service

Karl-Schurz-Str. 38

33100 Paderborn, Germany

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## 4 Installation

The installation of the DMX2DALI+ consists of mounting the device, connections to DMX, to DALI, and to power supply. The sequence of cabling is not defined. Supply the device with power after all cabling is completed; it starts operating.



Danger of death: Electrical shock

Connect cables and data only when the device is powered down.

Only work on the product when it is powered down to prevent electrical shocks.

#### 4.1 Installation conditions

Installation position	Terminals on top and bottom
Horizontal spacing	No spacing necessary
Minimum vertical rail grid spacing	115 mm (90 + 25 mm) (excluding conduit)
Recommended vertical rail grid spacing	160 mm (with 40 mm conduit)

#### 4.2 Mounting process

The e:cue DMX2DALI+ is designed to mount onto a 35 mm DIN rail (EN 60715) in a vertical position.



- Clip the device to the rail from top.
- 2. Gentle pressure is then applied to the top front to snap it in place. The DMX2DALI+ has been mounted successfully.

You can also mount the e:cue DMX2DALI+ on any flat vertical surface. Use 3 to 3.5 mm screws for the hanger hole.



For mechanical stability, mounting on a rail is recommended.

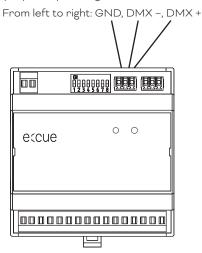
#### 4.3 DMX connection



Do not connect DMX sources to the DMX output.

The DMX2DALI+ has one DMX input port to receive DMX data and one DMX output port to loop through the DMX data. Use the 3-pin terminal plugs at the DMX interfaces of the DMX2DALI+.

The appropriate pin assignment is defined as follows:





It is recommended to shield the DMX cables.

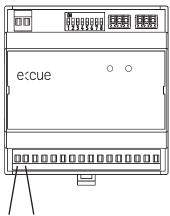
#### 4.4 DALI connection



- Do not short circuit DALI outputs.
- Do not share DALI terminals for several outputs.

The DMX2DALI+ offers  $8 \times 2$ -pin assigned terminals for the DALI output. Connect the wires according to the pin assignment on the label.

The appropriate pin assignment is defined as follows:



From left to right: DALI -, DALI +

#### 4.5 Power supply

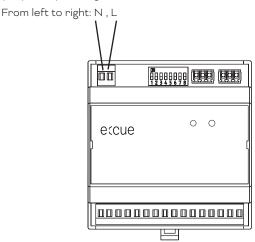


Wires must be inserted all the way into spring clamp terminals and firmly fastened.

Connect the DMX2DALI+ to a 100  $\dots$  240 V AC power supply unit that complies with the local regulations. Present power supply equates to the status "On" or running of the DMX2DALI+.

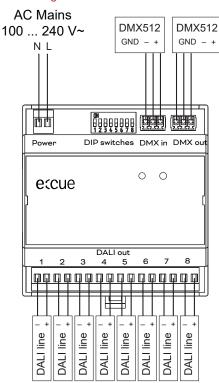
To connect the device to a power supply unit, use the 2-pin terminal and lay the wires as stated on the front label.

The appropriate pin assignment is defined as follows:



Turn the power on when all cables are connected to the DMX2DALI+. The device starts operating. The device is in operation when the Power LED is on.

#### 4.6 Wiring



## 5 DMX start addresses

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DIP switch settings take effect immediately.

Start Address	DIP switch # on ON	241	4+3+2+1
(all possibilities listed)		257	5
		273	5 + 1
1	- [1 5 OFF]	289	5 + 2
17	1	305	5 + 2 + 1
33	2	321	5+3
49	2 + 1	337	5 + 3 + 1
65	3	353	5+3+2
81	3 + 1	369	5 + 3 + 2 + 1
97	3 + 2	385	5 + 4
113	3 + 2 + 1	401	5 + 4 + 1
129	4	417	5 + 4 + 2
145	4 + 1	433	5 + 4 + 2 + 1
161	4+2	449	5 + 4 + 3
177	4 + 2 + 1	465	5 + 4 + 3 + 1
193	4+3	481	5 + 4 + 3 + 2
209	4+3+1	497	5 + 4 + 3 + 2 + 1
225	4+3+2		

# 6 Scenarios of DMX signal loss

DIP switch settings take effect immediately.

#### Scenario A : Device start-up without incoming DMX signal

DIP switch #	Setting	DALI output
6 (Lost mode)	ON	100%
	OFF	0%
7 (Hold mode)	ignored	no influence

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The Lost mode is executed on restart, regardless of whether the Hold mode is set to On.

#### Scenario B: DMX signal loss during operation

DIP switch #	Setting	DALI output
6 (Lost mode)	ON	when Hold mode = OFF, then 100%
	OFF	when Hold mode = OFF, then 0%
7 (Hold mode)	ON	last value;
		Lost mode ignored
	OFF	as defined in Lost mode

# 7 Dismounting



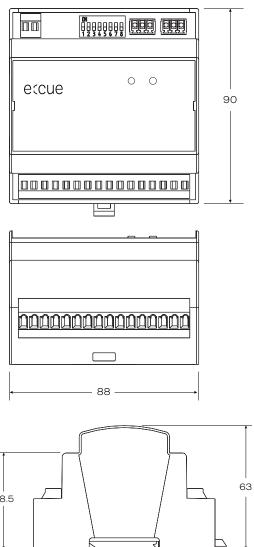
- Take care: Exposure to possible risk of electrical shock.
   Dismounting must be performed by a qualified electrician only.
- Attention: Failure
   Before dismounting, appropriate measures must be taken to protect the respective components against damage caused by electrostatic discharge (ESD protection).

Disconnect all attached cables. Dismount the e:cue DMX2DALI+ by unfastening the device. The dismounting is completed.

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## 8 Dimensions

All dimensions in mm



# 9 Certifications

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