LXU01

DMX512 INTERFACE

CONTENTS

PREFACE

The LXU01 is DMX512 to ASTEL protocol converter with 1 output to control a groups of RGB multi-color lights of METEOR series with built-in ASTEL protocol. The DMX512 control of single-color lights METEOR series is enabled by using the PWM dimmer LDU13 with built-in ASTEL protocol.
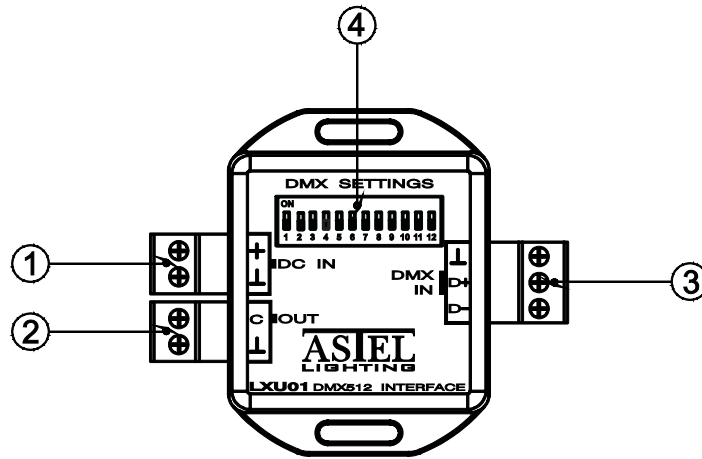
FEATURES

- 1 Control Output
- DIP-switch Programmable
- Multi - Speed Mode
- Wide Range Power Supply
- Low Power Consumption
- Polarity Protection
- Transient Protection
- Short Circuit Output Protection
- Simple Installation

PRECAUTIONS

- The DMX512 Interface LXU01 has to be installed and used in accordance with the instructions of this manual only.
- The power supply has to be disconnected before installation.
- Avoid installing the DMX512 Interface LXU01 in extremely hot places and near appliances generating strong magnetic fields.
- Do turn power off immediately and refer servicing to qualified service personnel if the DMX512 Interface LXU01 does not operate normally following the operating instructions.

CONTROLS AND CONNECTORS

DMX512 Interface LXU01

(1) DC IN
Terminal-block connector to connect 12-24Vdc power supply.

(2) OUT
Control output to connect the +Control (P) and GND Control (-) wires of multi-color RGB lights Meteor series or PWM dimmer LDU13.

(3) CONTROL
The 3-pole terminal block connector to connect DMX512 line.

(4) DMX SETTINGS
DIP-switch to set the DMX512 and ASTEL protocol commmunication parameters.

INSTALLATION

The DMX512 Interface LXU01 kit consists of the following components:
- DMX512 Interface LXU01
- 3 x terminal-block connectors
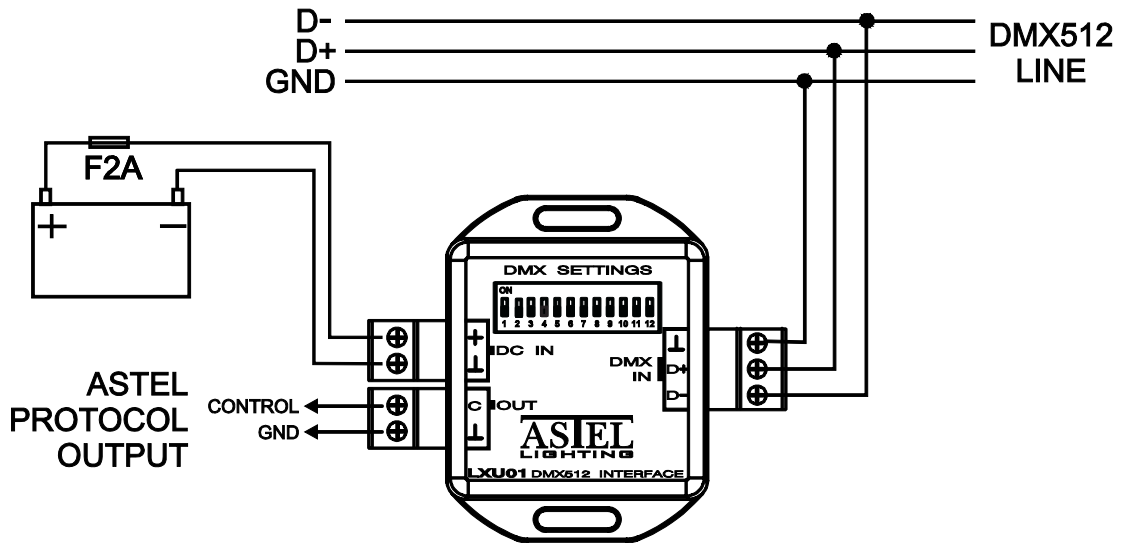- Operating Instructions with Declaration of Conformity and Warranty conditions

The LXU01 has to be installed on a suitable location.
Avoid the installation in extremely hot places and near appliances generating strong magnetic fields.
The installation has to be realized by a qualified personnel.

<u>Note:</u>
- ***The main DC power supply has to be switched off before installation.***

Power supply connection
The power supply has to be connected through the switch (not included) and protected by a fuse (not included) to the DC IN terminal-block connector with correct polarity. The power supply voltage has to be from 10 - 30Vdc.
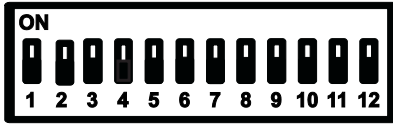
ASTEL protocol output connection
The 2 control wires of multi-color RGB lights Meteor series or PWM dimmer LDU13 for single-color lights control have to be connected to the OUT terminal-block connectors.

DMX512 line connection
The DMX512 control wires have to be connected to the DMX IN terminal-block connector.

SET-UP

The DMX512 Interface LXU01 set-up is enabled by adjusting the DIP-switch.

DIP-switch 1-2-3-4	VALUE
OFF-OFF-OFF-OFF	0
ON -OFF-OFF-OFF	1
-	-
OFF-ON -ON -ON	14
ON -ON -ON -ON	15

DIP-switch 1-2-3-4-5-6-7-8-9	VALUE
OFF-OFF-OFF-OFF-OFF-OFF-OFF-OFF-OFF	0
ON -OFF-OFF-OFF-OFF-OFF-OFF-OFF-OFF	1
-	-
ON -ON -OFF-OFF-ON -OFF-ON -ON -OFF	211
-	-
OFF-ON -ON -ON -ON -ON -ON -ON	510
ON -ON -ON -ON -ON -ON -ON -ON -ON	511

In normal operation the switches 1 - 9 define the DMX address!

Note:
- ***The switch 12 must be in OFF position for normal operation!***

The DIP-switch is used to set-up the mode of operation and programming

DIP-switch switches	FUNCTION
1 - 4	Parameter
5 - 8	Mode of operation
9 -10	Not used
11	Programming trigger
12	Programming mode

The set-up procedure:
1. Set the switch 12 to ON position
2. Set the programming mode with the switches 5 – 8 as described below
3. Set the parameter value as described below
4. Set the switch 11 to ON position
5. Wait for 5 seconds
6. Set the switch 11 to OFF position
7. Set the switch 12 to OFF position

DIP-switch 5-6-7-8	DIP-switch 1-2-3-4	SET-UP
OFF-OFF-OFF-OFF	0-2	Speed mode
ON -OFF-OFF-OFF	0-15	Number of addressable lights
OFF-ON -OFF-OFF	0-3	Data type
OFF-ON -ON -ON	not used	Set default
ON- ON -ON -ON	1-15	Programming the light address

Speed mode
Defines the ASTEL protocol communication baud rate.

Value	FUNCTION
0	LOW speed – 1200 bps
1	MID speed – 2400 bps
2	HIGH speed – 4800 bps

Number of addressable lights
This defines how the OUT is acting. There are two basic modes:

    -non addressable – all the lights on the control OUT light in the same way

    -addressable – there can be up to 15 address and each light connected to the OUT can have the address from 1 to 15 – each light with different address can light different. There can be more than one light with the same address – the number of the lights with the same address is not limited!

To set-up non addressable mode set the switches 1 - 4 to OFF.
To set-up addressable mode set the switches 1 - 4 to the number of the lights with different addresses on the control OUT.
Please pay attention the higher number results in lower refresh rate!

Data type
This defines the number of data bytes used for light / the number of DMX channels for each light on the control OUT.

Value	FUNCTION
0	1 byte - not used
1	2 bytes - not used
2	3 bytes - RGB lights
3	4 bytes – RGBW lights

Non addressable mode:
The number of used DMX channels is same as the defined.

Addressable mode:
The number of used DMX channels used for control OUT is as follows:

DATA TYPE number x number of ADDRESSABLE LIGHTS

Example:
DATA TYPE = 2 – 3 bytes
Number of ADDRESSABLE LIGHTS = 5
DMX channels used = 3 x 5 = 15

Set default
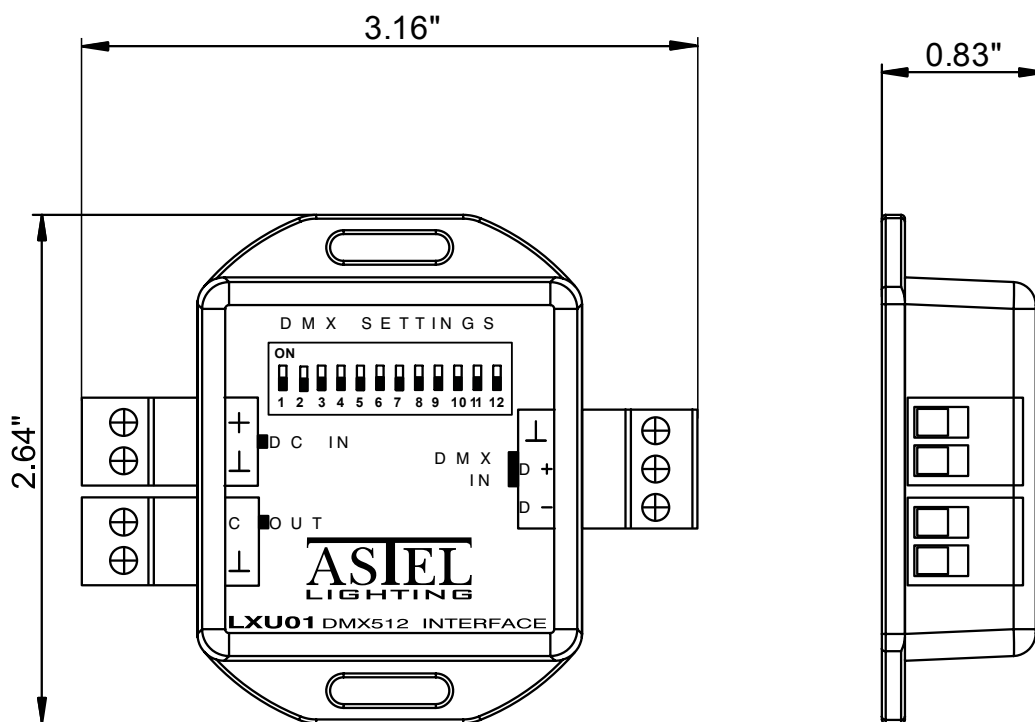Sets the parameters to their default values:

Parameter	Value
Speed mode	0
Number	0
Data type	2

Programming the light address

The set up procedure:

1. Connect the light to the DMX512 interface LXU01
2. Connect the light to the power supply
3. Switch-on the light – the light must light!
4. Switch-off the light – the light must NOT light!
5. Disconnect the light from power supply
6. Connect the DMX interface LXU03 to the power supply
7. Set the switch 12 to ON position
8. Set the programming mode – with the switches 5 – 8 to ON position
9. Set the light new address to 1-15 - with the switches 1 – 4
10. Connect the light to the power supply and IMMEDIATELY continue with step 11!
11. Set the switch 11 to ON position
12. Wait for 5 seconds
13. Set the switch 11 to OFF position
14. Set the switch 12 to OFF position

APPEARANCE

TECHNICAL SPECIFICATIONS

Input voltage	12-24 Vdc
Consumption	max. 50 mAdc
Operating temperature	14°F - +122°F
Casing	ABS
Dimensions	max. 2.64'' x 3.16'' x 0.83''
Weight	0.2 lbs

Design and specifications subject to change without notice.

WARRANTY

1. The equipment manufactured by ASTEL d.o.o. is warranted to be free from defects in workmanship and materials under normal use and service.
2. This Warranty is in effect for of two years from the date of purchase by the user. Proof of purchase must be included, to establish that it is inside the warranty period.
3. This Warranty is transferrable and covers the product for the specified time period.
4. In case any part od the equipment proves to be defective, other than those parts excluded in paragraph 5 below, the owner should do the following:
   (a) prepare a detailed written statement of the nature and circumstances of the defect, to the best of the Owner's knowledge, including the date of purchase, the place of purchase, the name and adress of the installer, and the Purchaser's name, adress and telephone number;
   (b) the Owner should return the defective part or unit along with the statement referenced in the preceding paragraph to the warrantor, ASTEL d.o.o., or an authorized distributor, postage/shipping prepaid and at the expense of the Purchaser;
   (c) if upon the Warrantor's or authorized distributor's examination, the defect is determined to result from defective material or workmanship, the equipment will be repaired or replaced at the Warrantor's option without charge, and returned to the Purchaser at the Warrantor's expense;
   (d) no refund of the purchase price will be granted to the Purchaser, unless the Warrantor is unable to remedy the defect after having a reasonable number of opportunities to do so. Prior to refund of the purchase price, Purchaser must submit a statement in writing from a professional boating equipment supplier that the installation instructions of the Operating Instructions manual have been complied with and that the defect remains;
   (e) warranty service shall be performed only by the Warrantor, or an authorized distributor, and any attempt to remedy the defect by anyone else shall render this warranty void.
5. There shall be no warranty for defects or damages coused by faulty installation or hook-up, abuse or misuse of the equipment including exposure to excessive heat, salt or fresh water spray, or water immersion except for equipment specially designed as waterproof.
6. There shall be no responsibility or liability whatsoever on the part of the Warrantor or its employees and representatives for injury to any person or persons, or damage to property, loss of income or profit, or any other consequential or resulting damage or cost which may be claimed to have been incurred through the use or sale of the equipment, including any possible failure or malfunction of the equipment, or part thereof.
7. The Warrantor assumes no liability for incidental or consequential damages of any kind including damages arising from collision with other vessels or objects.