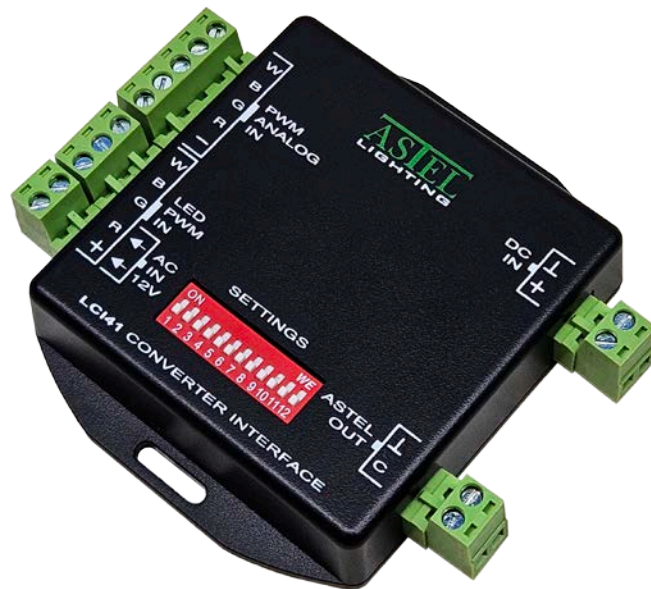


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# LCI41

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## CONVERTER INTERFACE



Operating Instructions

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**ASTEL**  
LIGHTING

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## PREFACE

The LCI41 is J, P, H series light control, PWM light control and analog light control converter to ASTEL protocol with 1 output to control a groups of RGB/RGBW multi-color lights of METEOR and METEOR XP series with built-in ASTEL protocol.

## FEATURES

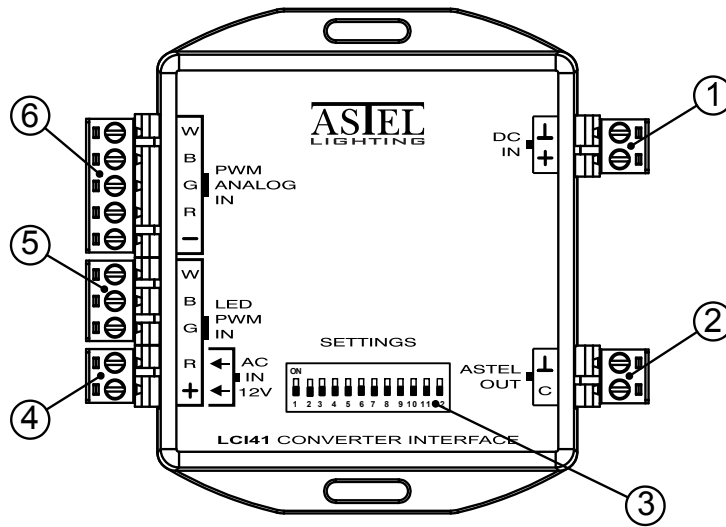
- 1 Control Output
- Astel protocol
- DIP-switch Programmable
- J, P, H series light control compatible
- Opto-isolated interface
- PWM light control
- Analog light control
- Common cathode " + " interface
- Common anode " - " interface
- Wide Range Power Supply
- Low Power Consumption
- Polarity Protection
- Transient Protection
- Short Circuit Output Protection
- Simple Installation

## PRECAUTIONS

- The Converter Interface LCI41 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 Converter Interface LCI41 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 Converter Interface LCI41 does not operate normally following the operating instructions.

# CONTROLS AND CONNECTORS

## Converter Interface LCI41



### (1) DC IN

Terminal-block connector to connect 12-24Vdc power supply.

### (2) OUT

Control output (Astel protocol) to connect the +Control (P) and GND Control (-) wires of multi-color RGB/RGBW lights Meteor and Meteor XP series or PWM dimmer LDU13.

### (3) SETTINGS

DIP-switch to set the Converter and ASTEL protocol communication parameters.

### (4) JPH mode - JPH Control Input / PWM mode - Red, common anode "+" input

The 2-pole terminal block connector to connect JPH light control in JPH mode.

The 2-pole terminal block connector to connect to common anode "+" and RED control signals.

### (5) PWM mode - GREEN, BLUE, WHITE input

The 3-pole terminal block connector to connect to common anode GREEN, BLUE, WHITE control signals.

### (6) PWM mode common cathode "-" digital inputs / Analog inputs

The 5-pole terminal block connector to connect to PWM Red, Green, Blue, White signals with common cathode "-" when in PWM mode

The 5-pole terminal block connector to connect to analog signals Red, Green, Blue, White with different analog modes (1-10V, 0-10V, 0-30V, 0-5V, 0-24V, 0-12V)

# INSTALLATION

The Converter Interface LCI41 kit consists of the following components:

- Converter Interface LCI41
- 5 x terminal-block connectors
- Operating Instructions with Declaration of Conformity and Warranty conditions

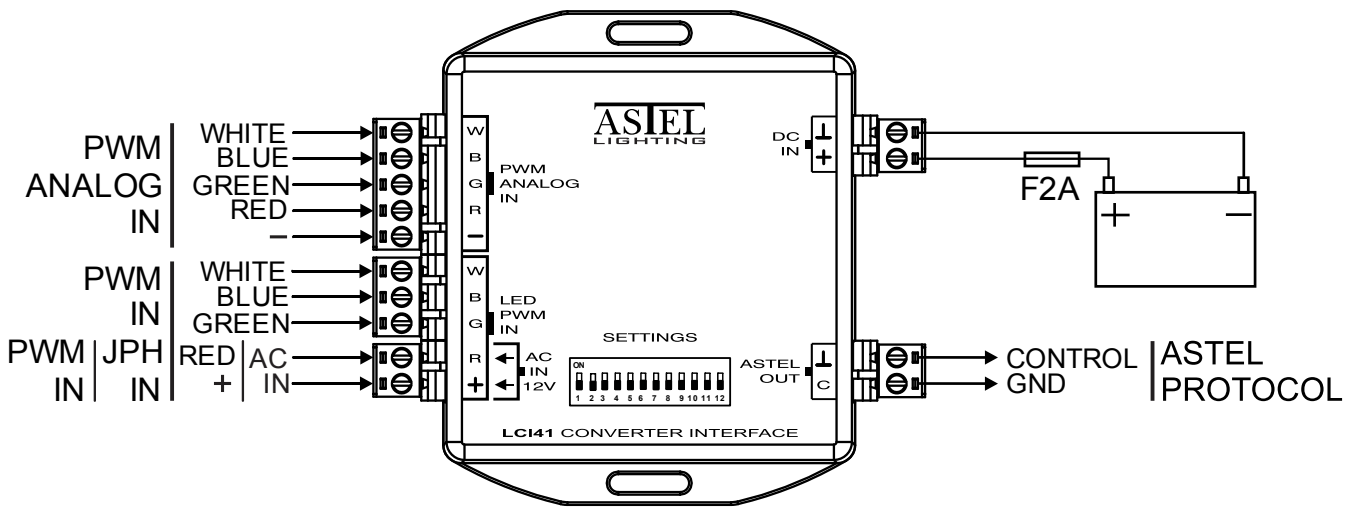
The LCI41 has to be installed on a suitable location.

Avoid the installation in extremely hot places and near appliances generating strong magnetic fields.

The installation has to be realized by a qualified personnel.

## Note:

- **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

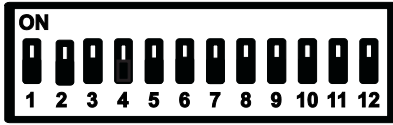
The 2 control wires of multi-color RGB/RGBW lights Meteor and Meteor XP series.

## Converter line connection

The Converter control wires have to be connected as per dedicated operating mode

# SET-UP

The Converter Interface LCI41 set-up is enabled by adjusting the DIP-switches.



## Mode selection

DIP-switch 11 -12	Mode	Description
OFF-OFF	JPH mode	J, P, H series compatible light controller mode
OFF-ON	PWM mode	PWM input mode
ON -OFF	PWM analog mode	PWM input to analog mode - for low PWM frequencies
ON -ON	Analog mode	Analog input mode

## Astel protocol light type selection

DIP-switch 3	Ligth type
OFF	RGBW
ON	RGB

## JPH mode – Light series selection

DIP-switch 1-2	Ligth series
OFF-OFF	J series
ON -OFF	P series
OFF-ON	H series

## JPH mode – White color behavior on RGBW

DIP-switch 4	White color behavior on RGBW
OFF	W channel ON only when scene fixed color = White (same as J, P, H series) (applies on RGBW lights only – DIP switch 3 OFF)
ON	W channel ON when all three RGB channels more than 0, value from the lowest channel

### JPH mode – White color always ON on RGBW

DIP-switch 5-6	White color always ON on RGBW
OFF-OFF	J series White depends on program (default)
ON -OFF	White always 100%
OFF-ON	White always 50%
ON -ON	White always 25%

### PWM mode - Frequency selection

DIP-switch 1-2	PWM frequency
OFF-OFF	High frequency
ON -OFF	Medium-High frequency
OFF-ON	Medium-Low frequency
ON -ON	Low frequency

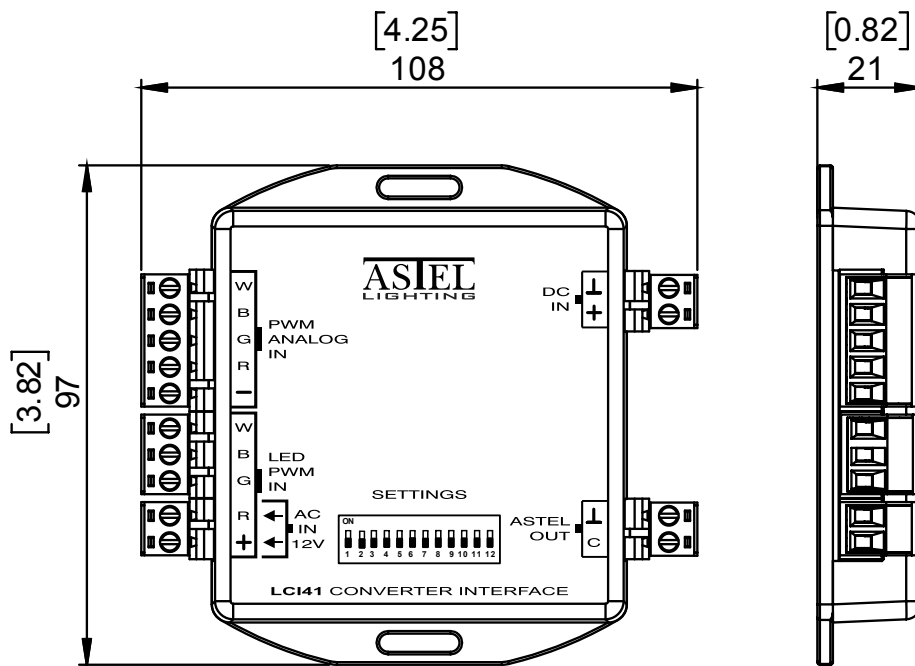
### PWM mode / PWM analog mode – Input polarity

DIP-switch 4	Ligth type
OFF	Non-inverted
ON	Inverted

### PWM analog mode – Analog conversion mode

DIP-switch 6-7-8	Conversion mode
OFF-OFF-OFF	1-10V
ON -OFF-OFF	0-10V
OFF-ON -OFF	0-30V
ON -ON -OFF	0-5V
OFF-OFF-ON	0-24V
OFF-ON -OFF	0-12V

## APPEARANCE



## TECHNICAL SPECIFICATIONS

Input voltage	12-24 Vdc
Consumption	max. 100 mAdc
Operating temperature	-10°C - +50°C / 14°F - +122°F
Casing	ABS
Dimensions	max. 108x96x21mm / 4,25" x 3.82" x 0.82"
Weight	0.1 kg / 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 of 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 address of the installer, and the Purchaser's name, address 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 caused 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.

# DECLARATION OF CONFORMITY

according to IEC Guide 22 and EN 45014

*Manufacturer's Name:* ASTEL, Podjetje za projektiranje, proizvodnjo in trgovino, d.o.o.

*Manufacturer's Address:* Dutovlje 138  
6221 Dutovlje  
Slovenija

declares that the products

*Item, Product Name and Model Number:* 1. Converter Interface LCI41

conform to the following Product Specifications:

*EMC:* EN 55103-1:2009+A1:2012

*Safety:* EN 62368-1:2014

Supplementary Information:

The products herewith comply with the requirements of the following Directives and carry the CE-marking accordingly:

- the Low Voltage Directive 2014/35/EU
- the EMC Directive 2014/30/EU
- the RoHS Directive (EU)2015/863

ASTEL d.o.o.  
Dutovlje 138  
6221 Dutovlje  
Slovenija

Dutovlje, 23<sup>th</sup> January 2025



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