

# OPERATING MANUAL

## DSI / DALI Booster 7004A-H

combined DSI / DALI Version



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**Thank you for choosing a SOUNDLIGHT device.**

The SOUNDLIGHT DSI / DALI booster is a buffer amplifier for use with dimmable digital electronic ballasts. The unit consists of four independent amplifier sections, which may be used combined or individually. The special advantages of the 7004A-H include:

- **universal protocol handling**  
Recognizes DSI (Digital Serial Interface) as well as DALI Broadcast mode (DALI = Digital Adressable Lighting Interface)
- **future-proof**  
The unit is software controlled and can easily be adapted to any change in protocol definition.
- **high linearity**  
As the unit accepts and outputs data in digital format, excellent linearity characteristics result.
- **simple supply**  
The power supply is achieved by its own PSU, power supply is 230V AC.
- **simple mounting**  
The booster will clip onto a standard DIN mounting rail.
- **cost-effective**  
The SOUNDLIGHT 7004A-H is competitively priced.

## Applications

The Booster (signal amplifier) 7004A-H has been designed to drive fluorescent light tubes with variable intensity. Each output may drive up to 32 electronic ballasts. This signal amplifier is ideally suited for film, tv, theatre, show or architectural lighting applications.

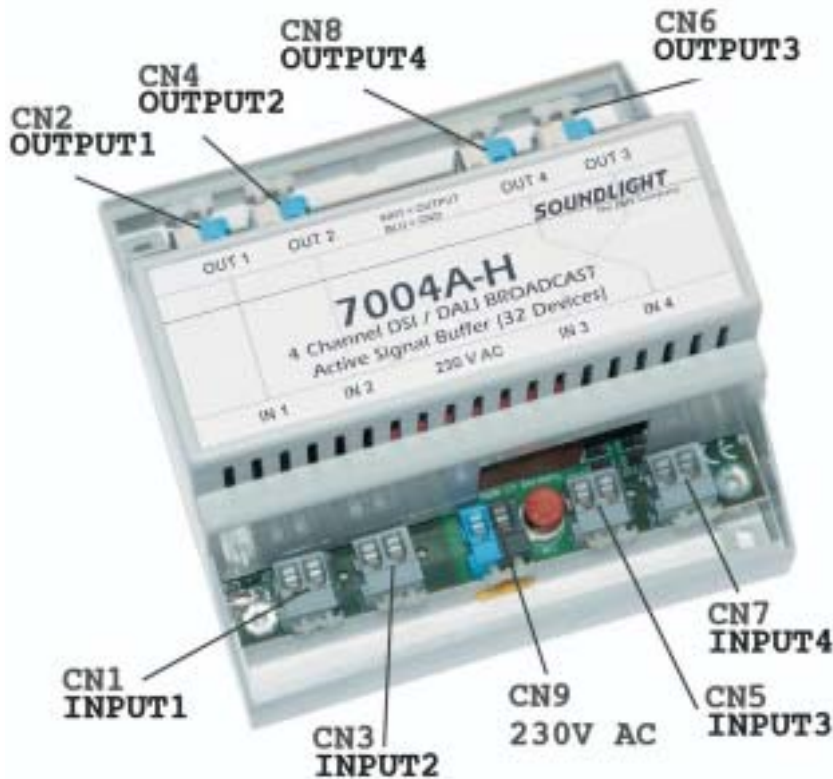
**WIRING:** Each output may be loaded with up to 32 ballasts in parallel.  
The total number of ballasts connected to outputs must not exceed 100 units.

## Drive Signals

The booster 7004A-H may be used with these signals:

- DSI : the data input is potential-free. The output is referenced to GND, all output GND terminals are interconnected.
- DALI: only DALI BROADCAST Mode signals may be processed (e.g. DALI outputs from our decoders 3014T, 3004B-H, or 3004D-EP). All data inputs of the 7004A-H are potential-free. All outputs are referenced to GND, all output GND terminals are interconnected.

This booster is **NOT SUITED** for DALI systems requiring feedback or reverse signalling. If this is required, the DALI booster 7014A-H (future product) must be specified.



The booster 7004A-H consists of these in and out connectors::

**CN9 POWER SUPPLY 230V AC (fused 100mA)**

- |   |       |           |
|---|-------|-----------|
| 1 | black | L 230V AC |
| 2 | blue  | N 230V AC |

**SAFETY NOTE** *Disconnect all mains supply leads when working on the 7004A-H. Hazardous voltages may be present. Refer all work to a qualified technician. Check wiring carefully before powering up the device.*

**CN1,3,5,7 Control input (DSI / DALI)**

- |   |       |                      |
|---|-------|----------------------|
| 1 | grey: | control signal Pin 1 |
| 2 | grey: | control signal Pin2  |
- all signal inputs are independent of polarity.

**CN2 Control output to electronic ballasts**

- |   |        |                    |
|---|--------|--------------------|
| 1 | blue:  | control signal GND |
| 2 | white: | control signal +   |

The positions and designations of the terminals are shown above.

## DSI / DALI

The booster / amplifier will process both, DSI or DALI signals. These names will identify the protocol, that is, the data contents of the transferred signal. The electrical parameters of both signals are mostly identical, pls refer to the appropriate standards document.

DALI commands can only be transferred in DALI broadcast mode. DALI back signalling is not possible with the 7004A-H.

Each input/output amplifier section can process its own protocol. Mixed mode is possible.

## Elektronic ballasts

The electronic ballasts are connected to connectors CN2 thru CN8. Each output has two terminals, blue (output reference, GND, -) and white (output drive signal, +). SOUNDLIGHT PCA electronic ballasts are insensitive to polarization of the drive signal, thus terminal connections may be interchanged. When using other brands, make sure to obey correct polarization of the drive signal.

Each output may drive up to 32 ballasts maximum. Overloading outputs may trigger the internal electronic fuse and shut down all outputs until the fault is removed.

Installation of electronic ballasts must only be carried out by trained and qualified technicians. Electronic ballasts must be connected to mains voltage; interchanging power supply and control lines will damage both, ballast and booster. Check your wiring thoroughly before powering up your system.



electronic ballasts for single and dual tube operation: available for flourescent tubes  
18W / 36W / 58W in T8 format 1nd 14W / 21W / 28W / 39W in T5 tube format

## Technical Data

Dimensions:	114 mm x 67 mm x 114 mm (BxHxT)
Mounting:	standard DIN rail mount
Power supply:	230V AC, max. 10VA
DSI / DALI IN:	1 Unit Load, polarity independent
Ballast Out:	typ. 16V pulse signal, >32 Unit Load
Order Code.:	7004A-H

## DISTURBANCES

If a trouble-free operation cannot be guaranteed, disconnect the decoder interface and secure it against unwanted operation. This is especially necessary, when

- the unit has visible damages;
- the unit does not operate;
- internal parts are loose;
- connection cables show visible damages.

## CE MARKING



The unit has been tested in our lab and has been marked to comply with CE requirements. This unit does not use or generate radio frequency. Any modifications not approved by the manufacturer may void CE compliance.

## LIMITED WARRANTY

This instrument is warranted against defects in materials and workmanship for a period of 12 months, beginning with the date of purchase. The warranty is limited to repair or exchange of the hardware product; no further liability is assumed. SOUNDLIGHT is not responsible for damages or for loss of data, sales or profit which arise from usage or breakdown of the hardware product. In Germany, SOUNDLIGHT will repair or replace established defects in hardware, provided that the defective part is sent in, freight paid, through the responsible dealer along with warranty card and/or sales receipt prior to expiration of warranty.

Warranty is void:

- when modifying or trying to repair the unit without authorisation;
- modification of the circuitry;
- damages by interference of other persons;
- operation which is not in accordance with the manual;
- connection to wrong voltage or current;
- misuse.

## END-OF-LIFETIME



If this device has reached the end of useful life it must be disposed of properly. Electronic must not be placed in domestic waste, but disposed of separately at an appropriate collection point. This will benefit the environment for all. SOUNDLIGHT has been registered with the WEEE recycling system.

## SERVICE

There are no parts within the DMX DSI / DALI decoder 3004B-H which require the user's attention. Should your unit require servicing, please send it to the factory, freight paid.

## INTERNET-HOTLINE

Please check our internet domain <http://www.soundlight.de> for new versions, updates etc. If you have any comments which may be worth considering, please send a message to [support@soundlight.de](mailto:support@soundlight.de). We will check your message and reply accordingly.