LiCS INDOOR

Light Controller IP

The Connected Light Management System

The Light Controllers of the LiCS System Network series were developed to link multiple Light Controllers together. They are networked via TCP/IP and controlled by a central server. Communication between the Light Controller and luminaires is based on the standardised DALI protocol. The Light Controllers comply with the standard IEC 62386:2008.

The LiCS System network control devices are intended for large properties and have ultra-flexible features to enable a time-saving commissioning. A browser-based user interface is used both as a configuration interface and for controlling the system by means of interactive "Touch4Light". The great advantage is the almost unlimited integration of control devices. All PC's, laptops, tablets or smartphones can easily be integrated to configure or control the luminaires.

Automated documentation and system failure analysis increase the comfort of the light management system. Remote access enables maintenance service through the benefits of the system architecture.

Product video LiCS Indoor
DALI-based Light Management System

Click here

Advantages of the Light Controller IP

- **NETWORK-COMPATIBLE DALI SYSTEM**
- **TIME-SAVING COMMISSIONING**
- **SMART CONTROL VIA TOUCH4LIGHT**
- **USER MANAGEMENT**
- **AUTOMATED DOCUMENTATION AND FAILURE ANALYSIS**
- **ENERGY MONITORING**

VS LIGHTING SOLUTIONS

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Overview of the LiCS Indoor System Network

Product matrix	Light Controller IP/DALI	Light Controller IP/DALI W
		
MultiSensors	 MultiSensors (movement and brightness)	
High Bay Sensors	 Industrial Sensors (movement or constant light control)	
Extender*		
Input devices	8 buttons (mains voltage-compatible) DALI buttons (4 channel)	8 buttons (mains voltage-compatible) EnOcean wireless modules DALI buttons (4 channel)

* Functionality limitations of the system possible; please observe the notes in the controller operation manuals.

SYSTEM INFORMATION

Server (Win 7) or LightBox
Optional: Access Point for operating elements

FUNCTIONS LIGHT CONTROLLER IP/DALI

- Network-compliant
  - Intelligent networking of DALI devices

  Lighting control:
  - 3 level Motion detection (automatic and semi-automatic)
  - Constant light control
  - Intelligent day- and time-dependent switching functions
  - Astro function
  - Scene settings
  - Push function (on/off, up and down)
  - Dimming (only up or only down)
  - ON/OFF function, ON function, OFF function
  - Light value
  - Stairwell function (timer)
  - Retrieval of various sensor-gauged values
  - Logic functions
- Push-key and operating element:
  - Classic push buttons
  - Touch4Light
  - Tablet
  - EnOcean
  - DALI buttons
- Documentation
  - Device documentation
  - Save/Load
  - Automated error detection (email report)
  - User accounts (password protection)
- Language:
  - German
  - English
  - Further language on request
- Further functions
  - Minimising standby losses
- Intelligent device exchange

The values detailed in this data sheet can change due to technical innovations; such changes will be made without separate notification.
Further detailed information can be found at www.vossloh-schwabe.com.

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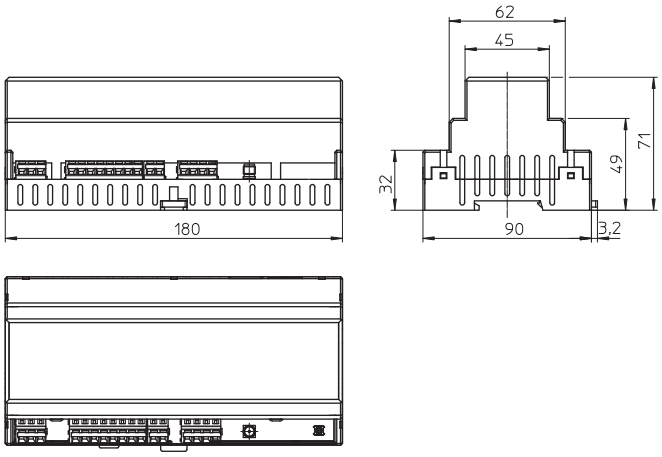
Light Controller IP/DALI

For installation in a distribution board
This light control gear (gateways) is designed for installation in a distribution board.

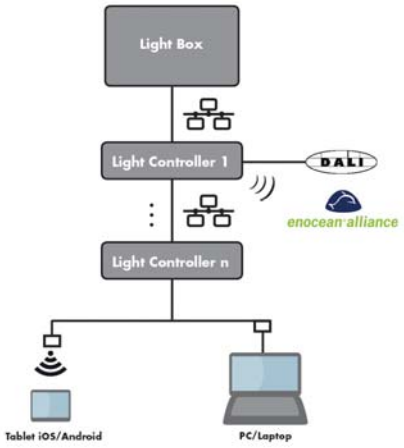
Technical notes
Configuration interface: via browser via tablet/PC
Ambient temperature t_a: 5 to 50 °C
(186484, 186485 t_a: 5 to 45 °C)
Push-in terminals with lever opener: 0.5–2.5 mm²
Degree of protection: IP20, Protection class I
RFI-suppressed
The MultiSensors and DALI push-button interfaces are connected directly to the DALI bus.

Connections
- Mains connection: 220–240 V AC, 50–60 Hz
- Max. power consumption 12 W
- 2xRJ45 (Ethernet TCP/IP) 10/100MBit/s, Daisy Chain
- 1 DALI bus: max. current on DALI bus = 200 mA (see the respective data sheet for current consumption of individual components)
- As a standard DALI bus is not SELV-compliant, the DALI cable must be rated for mains voltage.
- The DALI bus features reversible electronic overload and short-circuit protection.
- 8 independently configurable push button inputs, cables must be rated for mains voltage
- Minimising standby losses
- For Light Controllers with RF operation Antenna jack: radio signal with a frequency of 868 MHz

Software download
www.vossloh-schwabe.com/en/home/products/light-management-systems-for-indoor-applications/light-controller.html



System architecture



Light Controller	**Ref. No.**	Max. No. of operating devices pcs./controller	No. of MultiSensors or DALI push-butten interfaces (pcs./controller)	EnOcean	Dimensions mm (LxWxH)	Horizontal pitches (hp)	Weight g
IP/DALI 2CH	**186484**	2x64	2x36	no	180x90x71	10	340
IP/DALI	**186339**	64	36	no	180x90x71	10	340
IP/DALI W 2CH	**186485**	2x64	2x36	yes	180x90x71	10	340
IP/DALI W	**186340**	64	36	yes	180x90x71	10	340

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LightBox

For operating Light Controllers of the IP/DALI series

The LightBox serves to manage the tasks performed by the Light Controller IP and is pre-configured for plug-and-play operation.

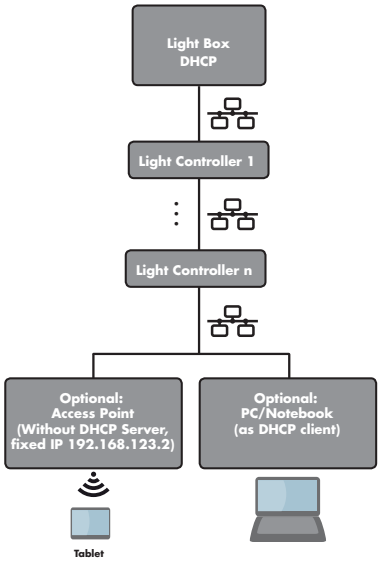
Technical notes

- Mains switch for powering up the LightBox (activates automatically once mains power is restored following a power cut).
- Indicator: green status LED at the front
- As an alternative to client-based configuration (e.g. using a tablet, etc.), a monitor or input device can be connected during operation for configuration purposes.
- Optional wake-on LAN
- The Windows 8.1N operating system merely needs to be personalised and activated by telephone.

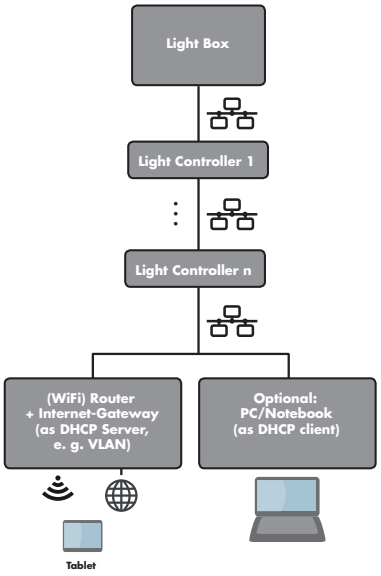
Connections

- Mains switch
- Mains connection with power supply unit
- RJ45 connection (Ethernet)
- 6 x USB
- HDMI output
- Display port
- Wi-Fi antenna

System architecture LightBox with DHCP



System architecture LightBox without DHCP



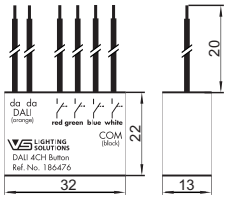
Type	Suitable for	**Ref. No.**	Max. No. of Light Controller per LightBox (pcs.)	Dimensions (LxWxH) mm	Weight g
LightBox	network- and internet-based operation (as a DHCP client)	**186512**	5	127x127x45	600
LightBox DHCP	stand-alone light management (as a DHCP server)	**186513**	5	127x127x45	600

DALI Push-button Interface

For connecting up to 4 push buttons to a Light Controller IP/DALI

DALI push-button interfaces make it possible to install push-buttons at any point along the DALI bus without needing to connect an additional power supply source.
Designed for flush-mounted installation.
For built-in into flushtype boxes
Control input: DALI acc. to IEC 62386:2008
DALI current consumption: 4 mA
With built-in LED (red) for configuration
Dimensions (LxWxH): 32x22x13 mm, weight: 30 g
Connection leads: 0,5 mm², ferrules on bare end of core
Protection class II

Ref. No.: 186476



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General safety information

- LiCS products may only be installed and commissioned by authorised and fully qualified staff.
- These instructions must be carefully read before installing and commissioning the system, as this is the only way to ensure safe and correct handling.
- Before any work is carried out on the equipment, it must be disconnected from the mains.
- All valid safety and accident-prevention regulations must be observed.
- The products should never be inexpertly opened as this poses lethal danger due to electrical shock. Repairs may only be undertaken by the manufacturer.
- On no account may the DALI control lead be used to carry mains voltage or any other external voltage as this can destroy individual system components.

Light Controller IP/DALI

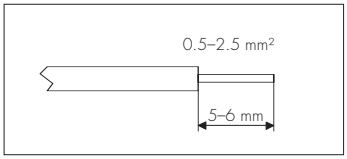
Installation

- In a distribution board on a 35-mm mounting rail in acc. with DIN 43880; required installation space: 10 hp (horizontal pitches) (180 mm)
- Hook the light controller over the upper edge of the rail using the two mounting notches. Then carefully press the controller onto the lower part of the rail until the mounting spring on the controller snaps into place over the rail. If required, use a screwdriver to help you with the spring.

Removal

To remove the controller from the mounting rail, use a screwdriver to loosen the spring and ease the controller over the rail flange from the bottom.

Installation instructions



- Conductor cross-section for all terminals: 0.5–2.5 mm² for rigid or flexible conductors
- Cable preparation (see right)
- To protect the equipment, a 10 A or 16 A, Type B automatic circuit breaker must be fitted.
- Push button inputs 1–8: cables must be rated for mains voltage; max. cable length = 100 m.
- As a standard DALI bus is not SELV-compliant, the DALI lead must be rated for mains voltage.
- A max. of 64 DALI operating devices in aggregate can be connected as well as up to 36 MultiSensors or DALI push-button interfaces, which in total must not exceed 200 mA. The exact number of components can be found in the manual.
- The power supply and the DALI lead can be laid in a single cable provided the cable does not exceed a maximum length of 100 m, e.g. using 5 x 1.5 mm².
- Please observe the maximum lengths of the DALI lead during installation:

	2.5 mm²	1.5 mm²	1 mm²	0.75 mm²	0.5 mm²
6.2 Ω max.	300 m	300 m	180 m	130 m	80 m

- The relay contact is a potential-free closing contact. The current load of the relay contact must not exceed an Ohmic load of $I_{max.}$ = 3 A. When using the standby contact, an additional external power relay should be used.
- Connection to the LightBox (e.g.) is effected via RJ45 (Ethernet TCP/IP) 10/100 Mbit/s.
- The two RJ45 ports can be used as a (daisy chain) switch.
- It is not recommended to connect atypical network components of a light management system (e.g. printers) directly to the Light Controller.

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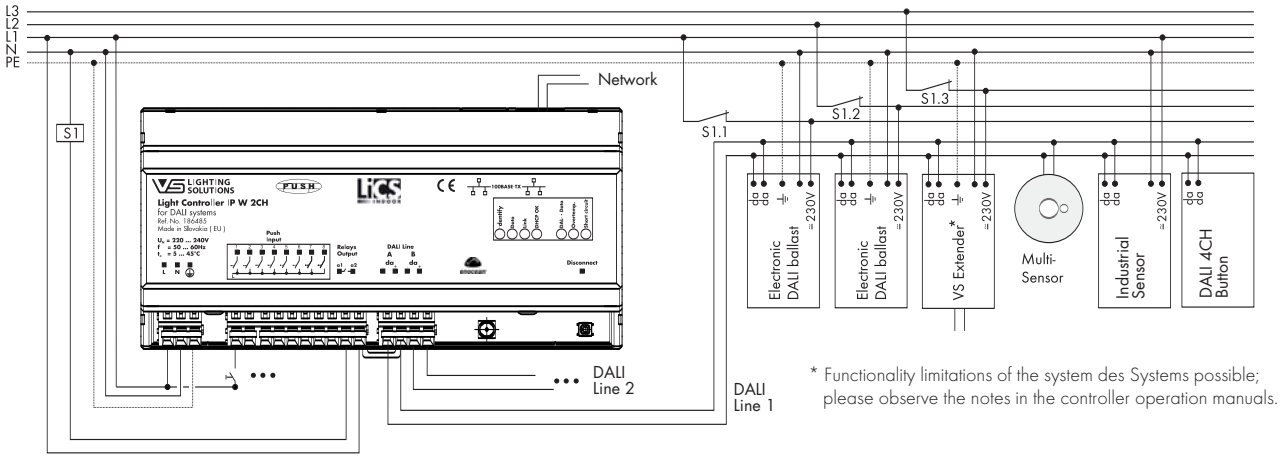
Additional information

- To ensure faultless wireless operation, an antenna must be connected that is set to the respective frequency. This antenna is not included in the scope of delivery.
- Please refer to the manual at **www.vossloh-schwabe.com/en/home/products/light-management-systems-for-indoor-applications.html** for exact instructions on how to configure the system using the controller.
- The outputs of different controllers must not be connected with each other.
- To ensure safe operation of the controller, the maximum ambient temperature must not be exceeded.
- Integration of VS Extenders limits the whole system to its basic funcitions for control. Please observe the notes in the appendix of the controller operation manuals.

Circuit diagram of Light Controller IP/DALI



* Functionality limitations of the system des Systems possible; please observe the notes in the controller operation manuals.

Technical details Light Controller PI/DALI

Light Controller	IP/DALI	IP/DALI W	IP/DALI 2 CH	IP/DALI W 2 CH
Ref. No.	186339	186340	186484	186485
Supply voltage	220–240 V AC, 50–60 Hz			
Power consumption	12 W			
Ambient temperature t_a	5 to 50 °C		5 to 45 °C	
DALI output (da+–)	max. 200 mA current drain		2 x max. 200 mA current drain	
No. of operating devices (DALI-EBs, LiCS-Extender, HB sensors)	max. 64 pcs. per Controller (expandable with the Extender)		max. 2 x 64 pcs. per Controller (expandable with the Extender)	
No. of MultiSensors or DALI push-button interfaces	max. 36 pcs.		max. 2 x 36 pcs.	
RF input	–	Antenna for a reception range of 868 MHz	–	Antenna for a reception range of 868 MHz
Wireless modules	–	All radio buttons with PT radio sensors by EnOcean with 868 MHz	–	All radio buttons with PT radio sensors by EnOcean with 868 MHz
No. of wireless modules	–	max. 16 pcs. with up to 4 buttons	–	max. 16 pcs. with up to 4 buttons
Relais (Output a1, a2)	250 V, max. 3 A ohmic load			
Push inputs 1–8	220–240 V AC, 50–60 Hz			
Degree of protection	IP20			
Protection class	I			
Weight	340 g			
CE requirements	EMC in acc. with EN 61547, RFI in acc. with EN 55015, Safety in acc. with EN 61347-2-11			

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