



## LIGHT CONTROLLER XS



## LIGHT CONTROLLER XS

### For luminaire installation

The Light Controller XS was designed for space-saving installation in luminaires. For example, 8 ballasts and one MultiSensor can be integrated on the DALI bus or, alternatively, the unit can be used to control 10 ballasts without sensors. This makes it possible to set up island solutions with the greatest possible flexibility. The following functions can be selected using the dip switch on the Light Controller XS.

### Functions of Light Controller XS

- **PUSH FUNCTION (10 EBs SYNCHRONOUS)**
- **ON/OFF FUNCTION**
- **AUTOMATIC AND SEMI-AUTOMATIC MOTION DETECTION**
- **CONSTANT LIGHT SETTING**



## Overview of the LiCS Indoor System

Product matrix	Light Controller L / LS	Light Controller LW / LSW	Light Controller S	Light Controller XS
	 for integration into the distribution board	 for integration into the distribution board - EnOcean wireless version	 for independent operation	 for independent operation
MultiSensors	 MultiSensors (motion and brightness)			
High Bay Sensors	 HB Sensors (motion) or brightness (constant light control)			
Extender				
Accessories	max. 6 buttons (mains voltage-compatible)	antenna (magnetic-base or screw-base); max. 6 buttons (mains voltage-compatible); EnOcean wireless modules (max. 16 pcs.)	button (mains voltage-compatible)	button (mains voltage-compatible)

Functions	Light Controller		Light Controller		Light Controller	Light Controller
	L	LS	LW	LSW	S	XS
Control options	single and group	group	single and group	group	broadcast	broadcast
No. of groups	max. 16		max. 16		–	–
No. of operating devices (DALI-EBs, LiCS-Extender, HB sensors)	max. 64		max. 64		max. 64	max. 10
No. of MultiSensors	max. 36		max. 36		max. 36	max. 4
Motion detection (automatic and semi-automatic)		●		●	●	●
Constant light control		●		●	●	●
Scene settings	●	–	●	–	–	–
Push function (on/off, up and down)	●		●		●	●
Dimming (only up or only down)	●		●		–	–
ON/OFF function	●		●		●	●
Overriding central control	●		●		–	–
Stairwell function (timer)	●		●		–	–
With integrated timer clock	–	●	–	●	–	–
Discourage burglaries	–	●	–	●	–	–
System analysis software		●		●	–	–
Password protection		●		●	–	–
Minimising standby losses		●		●	–	–
Menu navigation in	German, English, French, Italian, Spanish		German, English, French, Italian, Spanish		–	–
Configuration using	rotary push key and screen		rotary push key and screen		dip switch	dip switch

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## Light Controller XS

### For luminaire installation

These light control devices are suitable for operation in luminaires.

### Technical notes

Configuration interface: dip switch (on the device)

Ambient temperature  $t_a$ : 5 to 50 °C

Max. casing temperature  $t_c$ : 60 °C

Lifetime: 50,000 h

Push-in terminals with lever opener: 0.5-1.5 mm<sup>2</sup>

Degree of protection: IP20

RFI-suppressed

For luminaires of protection class I and II

The MultiSensors are connected directly to the DALI bus.

No. of operating devices (DALI EBs, LiCS Extender, HB sensors): max. 10 pcs.

No. of MultiSensors: max. 4 pcs.

### Connections

Mains connection: 220-240 V AC/DC, 0/50-60 Hz,  
max. power consumption 0.8 W

1 DALI bus: max. current on DALI bus = 20 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.

1 configurable push button input

### Functions

Automatic and semi-automatic motion detection, constant light control, push function (10 EBs synchronously), ON/OFF function, control option (broadcast)

### LightController XS

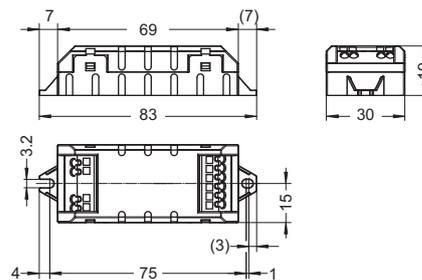
Dimensions (LxWxH): 83 x 30 x 19 mm

Weight: 30 g

Ref. No.: 186220



**LiCS**  
INDOOR





## 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 line be used to carry mains voltage or any other external voltage as this can destroy individual system components.

## Light Controller XS

### Installation

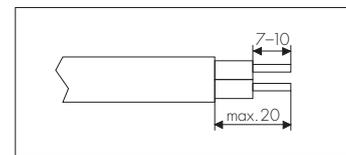
- Any installation location
- Suitable for installation only in dry rooms or in luminaires, cases, casings or similar. If destined for use in outdoor applications or spaces subject to higher degrees of moisture, the Light Controller XS must be installed in a casing with a suitable degree of protection.
- Fastening with 3 mm or 4 mm screw
- Take care to ensure a solid, flat surface.

### Application/Function

- Suitable only for installation in a luminaire; unsuitable for independent operation.
- For constant light control or motion detection, or a combination of both.
- In addition, a target value for constant light control can be set via manual dimming.

### Installation instructions

- Conductor cross-section for all terminals: 0,5-1.5 mm<sup>2</sup>
- Cable preparation (see right)
- A standard DALI bus only features basic insulation. All DALI cables must be rated for mains voltage.
- Operation without sensors:  
A max. of 10 DALI operating devices can be connected; no MultiSensors are allowed.
- Operation with sensors:  
If one VS MultiSensor is connected a max of 8 DALI ballasts can be connected in addition.
- Push button inputs: cables must be rated for mains power; maximum 15 m.
- Please observe the maximum lengths of the DALI bus during installation:  
The DALI line does not exceed a maximum length of 95 m, e.g. using NYM 5x1.5 mm<sup>2</sup>
- The power supply and the DALI line can be laid in a single cable provided the cable does not exceed a maximum length of 100 m, e.g. using 5x1.5 mm<sup>2</sup>.



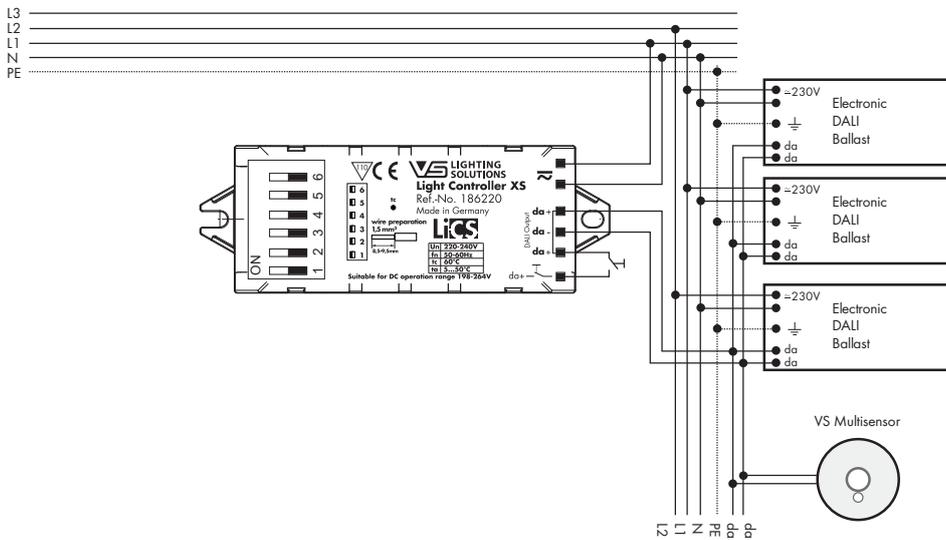
### Additional information

- The outputs of different Light Controllers XS must not be connected with each other.
- All control gear that is connected to the output of the DALI Extender is synchronously operated in "broadcast" mode; the output side is not addressed.
- To ensure safe operation of the Light Controller XS, the maximum casing temperature at the measuring point ( $t_c$ ) must not be exceeded.
- Please refer to the manual at [www.vossloh-schwabe.com/en/home/products/light-management-systems-for-indoor-applications.html](http://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.

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## Circuit diagram of Light Controller XS



## Technical details Light Controller XS

Light Controller	XS
Ref. No.	186220
Supply voltage	220-240 V AC/DC, 0/50-60 Hz
Power consumption	0.8 W
Ambient temperature ta	0 bis 50 °C
DALI output (da+-)	max. 20 mA current drain
No. of operating devices (DALI-EBs, LiCS-Extender, HB sensors)	max. 10 pcs. per Controller (without sensors)
No. of MultiSensors	max. 4 pcs.
RF input	-
Wireless module	-
No. of wireless modules	-
Relay (outputs a1, a2)	-
Push inputs	220-240 V AC/DC, 0/50-60 Hz
Degree of protection	IP20
Protection class	I and II
Weight	30 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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## Sales information – Light Controller XS

Developed for use in indoor applications, the XS Controller – in combination with the standard DALI protocol (DIN EN 62386) – enables control of dimmable electronic ballasts with a DALI interface. The individually configurable Controller performs all tasks associated with commissioning and managing a modern lighting system. Instead of needing additional equipment, such as a PC plus respective software, the Controller is configured using only the integrated dip switches. In addition, huge energy-saving potential can be harnessed by integrating motion, occupancy and brightness data loggers (sensors) (powered via the DALI bus) into the lighting system. The dip switches are also used to define various data logger (sensor) functions (motion detection and/or brightness control) as well as the different motion data logger (sensor) modes (automatic/semi-automatic).

The Controller is designed for operation only after installation in a luminaire.



## Text for invitations to tender – Light Controller XS

Light controller type:	Integration in a luminaire for self-sufficient installation with multi-sensors to deliver the DALI supply voltage for all DALI control gear devices that are connected to the communication interface within a permanently operating lighting system. The five integrated position switches are used to configure the system. System parameters are saved without an additional prompt and can be changed at will without requiring additional devices. One individually configurable low-voltage input is available as an operating element of the lighting system. The low-voltage input can be keyed in via the DALI bus (+). A maximum of 10 addresses can be used to control standardised DALI control gear devices without data loggers (sensors) in broadcast mode and a maximum of four addresses can be used for data loggers (sensors). However, data loggers (sensors) do not feature a standardised protocol. All DALI control gear devices and data loggers (sensors) can be operated and altered with the position switch. Possible functions of the low-voltage interface are manual dimming as well as call up or switching off of defined lighting values. All data loggers (sensors) integrated in the DALI bus are addressed in line with the position switch and deliver measured data with which to control DALI control gear devices that form part of the system. Adjustable delay of lighting system for movement detection: 1 min., 2 min., 5 min., 8 min., 10 min., 20 min., 30 min., 60 min. Once this light controller has been disconnected from the supply voltage, all functions of the 230 V interface and/or of the data logger (sensor) are saved and will be performed without alteration when the light controller is next switched on. Parameters are set using only the position switch.
Light Controller:	DALI master acc. to EN 62386
Supply voltage:	230 V L, N ( $\pm 10\%$ )
Communication interface:	DALI bus system (9.5–22.5 V) to 1 pair of terminals
Parameter setting:	Dip switches
Data logger:	MultiSensor type: Surface mounting / Luminaire installation / Ceiling installation MovementSensor type: Surface mounting for high installation heights for movement detection
Ambient temperature:	0°C...50°C
Dimensions [LxWxH]:	83 x 30 x 19 mm
Casing material:	PC, white
Casing temperature:	max. 60 °C at $t_c$ point
Supply voltage for DALI bus	acc. to EN 62386: 9.5–22.5 V
Short-circuit protection:	Yes
Power consumption:	0.8 W
Connection terminals:	Push-in terminals, max. 1.5 mm <sup>2</sup>
Protection class:	I
Degree of protection:	IP20

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