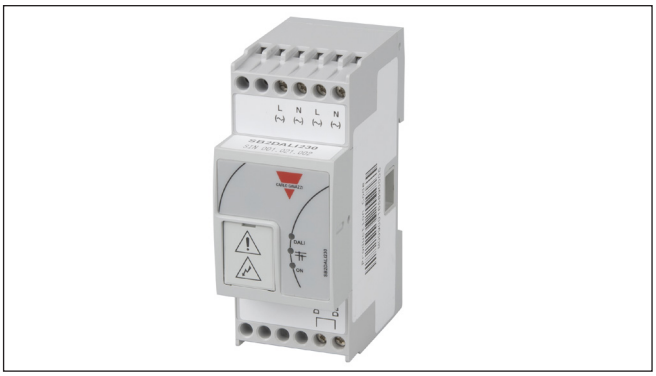
Smart Dupline®
DALI Master
Type SB2DALI230



- DALI Master for Smart Dupline®
- Integrated DALI power supply
- Allows control of DALI lighting actuators via Smart Dupline®
- Lighting control functions are performed by SBWEB/ SHWEB
- BACnet/IP link via SBWEB
- Can be installed at any point of the Dupline® network
- Up to 7 DALI masters on one Dupline® network
- Up to 64 lighting actuators on one DALI bus
- Up to 16 groups on one DALI bus
- IEC 60929 compliant
- 2-DIN housing
- 230 VAC power supply

Product Description

The SB2DALI230 is a DALI Master for Smart Dupline®. The unit can be connected to the Smart Dupline® bus at any point, and up to 64 lighting actuators can be connected to the DALI bus output. Up to 7 SB2DALI230 units can be connected to one Smart Dupline® bus. The SB2DALI230 is powered by 230 VAC and it has a built-in DALI power supply. The lighting control functions (such as the constant light zone control and the corridor lighting) are performed by the SBWEB controller. The SBWEB controller connects via Smart Dupline® to presence detectors, lux sensors and light switches. All the physical I/O points as well as the function parameters and control flags are made available as BACnet objects on BACnet/IP, hence allowing easy integration to any BMS system.

Ordering Key

SB 2 DALI 230

- **Smart Building**
- **2-DIN housing**
- **DALI**
- **Power supply**

Type Selection

Housing	Mounting	230 VAC
2 DIN	DIN-rail	SB2DALI230

Supply Specifications

Power supply Rated operational voltage	Overvoltage cat. III (IEC 60664-1, par. 4.3.3.2) 115-240 VAC
Operational voltage range	115-240 VAC +/-10%
Rated operational power	9 VA
Connection	2xL and 2xN (2 pairs of terminals internally connected)
Power on delay	typ. 5s
Power off delay	typ. less than 1s

Dupline® Specifications

Voltage	8.2 V
Maximum Dupline® voltage	10 V
Minimum Dupline® voltage	5.5 V
Maximum Dupline® current	1.1 mA

DALI Specifications

DALI compliance	This control device is designed for use with products compliant to the following standards: IEC 62386-101, 102, 201
DALI voltage	14 V
Max load	130 mA
Number of DALI devices	64
Number of groups	16

General Specifications

Installation category	Cat. II
Dielectric strength	
Power supply to Dupline®	4 kV AC for 1 minute
Dupline® to output	6 KV impulse 1.2/50 µs (IEC60664-1, TAB. A.1)
Environment	
Degree of protection	
Front	IP 50
Screw terminal	IP 20
Pollution degree	2 (IEC 60664-1, par. 4.6.2)
Operating temperature	-20° to +50°C (-4° to 122°F)
Storage temperature	-50° to +85°C (-58° to 185°F)
Humidity (non-condensing)	20 to 80% RH
LED indication	
Supply ON	1 green
Dupline® status	1 yellow
DALI status	1 yellow
Connection	
Terminal	6 Screw-type
Cable cross-section area	max. 1.5 mm^2, min. 0,25 mm^2
Tightening torque	0.8 Nm
Housing	
Dimensions	2 DIN module
Material	Noryl

Weight	150 g
Approvals	cULus according to UL60950
CE Marking	Yes
EMC	
Immunity	EN 61000-6-2
- Electrostatic discharge	EN 61000-4-2
- Radiated radiofrequency	EN 61000-4-3
- Burst immunity	EN 61000-4-4
- Surge	EN 61000-4-5
- Conducted radio frequency	EN 61000-4-6
- Power frequency magnetic fields	EN 61000-4-8
- Voltage dips, variations, interruptions	EN 61000-4-11
Emission	EN 61000-6-3
- Conducted and radiated emissions	CISPR 22 (EN55022), cl. B
- Conducted emissions	CISPR 16-2-1 (EN55016-2-1)
- Radiated emissions	CISPR 16-2-3 (EN55016-2-3)

Mode of Operation

The SB2DALI230 DALI Master is part of the SBWEB/ Smart Dupline® platform for building automation. The purpose of the unit is to provide the interface to the lighting actuators like e.g. ballasts and LED drivers in lighting control systems. The lighting control functions like e.g. constant light zone control and corridor lighting are performed by the SBWEB Controller, which is linked to the DALI Master via Smart Dupline®. The presence detectors, lux sensors and light switches needed for lighting control are connected directly to the Smart Dupline® 2-wire bus, which provides both power and communication for the connected devices.
The SB2DALI230 is powered from 230 VAC and features a built-in DALI power supply.

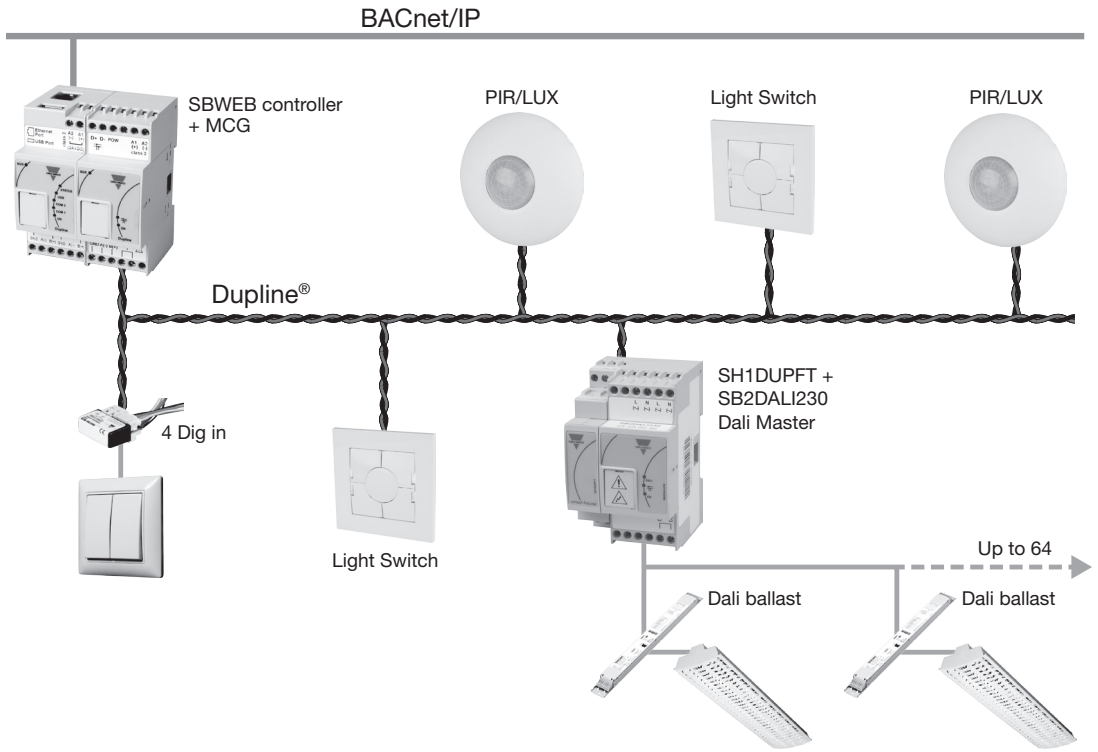
Network topology
Each DALI Master can have up to 64 DALI actuators connected to the DALI output, and up to 7 DALI Masters can be connected to one Dupline® bus. Since one SBWEB Controller can manage up to 7 Dupline® networks, the total amount of DALI actuators that one SBWEB can manage is: 64x7x7 = 3136. However, in many cases it may be preferable to have one SBWEB Controller per floor and then link them together via BACnet/IP. In this way the system is completely scaleable and can manage any amount of light fittings.

Addressing and programming
The addressing and grouping of the DALI actuators are performed via the PC-based SBWEB programming tool, thereby allowing the entire system to be programmed and commissioned from a single user interface. Up to 16 lighting groups can be created for each DALI Master.
When scanning the Dupline® network(s) via the SBWEB programming tool, the DALI Masters are automatically detected and can be uniquely identified via the SIN addresses. During the setup of the DALI Master, it is possible to scan the DALI network and automatically assign addresses to the DALI devices. In the setup menu, the lights can be individually switched ON/OFF. In this way, the DALI addresses that have been allocated to the actuator can easily be identified. If desired, it is subsequently possible to swap addresses between the DALI devices.

Functions
The lighting control functions are performed by the SBWEB Controller. There are a number of predefined functions available, such as constant light zone control, corridor lighting, presence and lux based control, scheduling, sequences, dimming, scenario control, timers etc. The SBWEB provides a BACnet/IP link which allows control of the lighting functions and parameter changes via BACnet objects. This considerably simplifies the BMS integration. For example each constant light function has a BACnet object which allows the lux set-point to be read and changed.

Mode of Operation (cont.)

Small system



Large system - completely scalable