

Smart Dupline® Light Intensity Sensor Type BSH-LUX-U

CARLO GAVAZZI



- Light intensity sensor for building automation applications
- Measuring range: 0 to 20 kLux
- Easily mountable
- Supplied by Bus Dupline®, no external supply required

Product Description

The BSH-LUX-U is a luxmeter sensor for indoor and outdoor installation which transmits the light level to the smart-house controller.

It is part of the smart-house concept and it can be used in all the functions where a light level is needed.

Ordering Key

BSH LUX-U

Decentral module

Luxmeter

Smart Dupline®

Type Selection

Housing

55 x 53 mm

Colour

White

Supply by Dupline®

BSH-LUX-U

Input Specifications

Luxmeter

Characteristic deviation -3% to + 3%

Connected to SH2WEB24

Response time
Sensor range
Accuracy over temperature

It depends on the number of variables in the system
0 to 20 kLux
0° to 40° ± 10%
-30° to 0° ± 15%
40° to 60° ± 20%

Connected to BH8-CTRLX-230

Response time
Sensor range
Fail safe - bit = 0
Fail safe - bit = 1

256 Dupline® frame
5 to 5000 lux
3000 - 300.000 lux

Dupline® Output Specifications

Voltage	8.2 V
Maximum Dupline® voltage	10 V
Minimum Dupline® voltage	5.5 V
Maximum Dupline® current	6.3 mA

Supply Specifications

Power supply

Supplied by bus

LEDs Indication

Yellow LED: if the Dupline® bus is working properly, it is always ON.
It is OFF if the bus is OFF or not connected.



General Specifications

Address assignments / channel programming	If it is used with the SH2WEB24 the address assignment is automatic: the controller recognises the module through the SIN (Specific Identification Number) that has to be inserted in the SH tool. If it used with the BH8-CTRLX-230, the channels have to be programmed by the BGP-COD-BAT.	Weight	110 g
Environment Degree of protection Operating temperature Storage temperature Humidity (non-condensing)	IP 44 -30° to +60°C (-22° to 140°F) -50° to +85°C (-58° to 185°F) 20 to 80%	Approvals	cULus, according to UL60950 UL notes: Max room temperature: 40°C
LED's indication Dupline® LED	1 yellow	CE Marking	Yes
Connection Screwless detachable D+ D-	0.2 to 1.5 mm ² Signal GND	EMC	Immunity - Electrostatic discharge - Radiated radiofrequency - Burst immunity - Surge - Conducted radio frequency - Power frequency magnetic fields - Voltage dips, variations, interruptions Emission - Conducted and radiated emissions - Conducted emissions - Radiated emissions
Housing Dimensions Material Housing Plug Color	55 x 53 x 36 mm ENSTO Cubo D 050504 Lexan (polycarbonate) Nylon Translucent / offwhite	EN 61000-6-2	EN 61000-4-2
		EN 61000-4-3	EN 61000-4-4
		EN 61000-4-5	EN 61000-4-6
		EN 61000-4-8	EN 61000-4-11
		EN 61000-6-3	CISPR 22 (EN55022), cl. B
			CISPR 16-2-1 (EN55016-2-1)
			CISPR 16-2-3 (EN55016-2-3)

Mode of Operation

Sunlight protection

As a rule, the BSH-LUX-U sensor should be mounted where the outdoor light comes into the room to be monitored, e.g. on the wall where the windows are to be darkened by roller blinds. If the sensor is overshadowed by an overhang of the roof or similar, this will increase the darkness at the sensor, which in connection with a dimmer function will cause the dimmer to switch on prematurely and to switch off too late.

Twilight

In twilight mode the BSH-LUX-U must be mounted on the wall pointing northwards, so that the sun light cannot reach the luxmeter. If it is used to control a light

source, an optical feedback from the light must be avoided to the greatest extent, since the light level will affect the LUX sensor and that can cause unwanted on/off cycles. This can be avoided by placing the LUX sensor so that the light source will not affect the sensor. When selecting the place of monitoring, environmental effects (dust, dirt, snow) must also be taken into consideration, since in the long run they can influence the light sensitivity of the LUX.

BSH-LUX-U connected to the SH2WEB24 Coding/Addressing

If the sensor module is connected to the SH2WEB24 controller, no addressing is

needed since the module is provided with a specific identification number (SIN): the user has only to insert the SIN number in the SH tool when creating the system configuration.

BSH-LUX-U connected to the BH8-CTRLX-230 Coding/Addressing

If the input module is connected to the BH8-CTRLX-230 controller, the user has to program the channels using the BGP-COD-BAT: this module has 1 analink output channel.

Smart-house channel allocation

The LUX sensor transmits the light value using the Analink principle, i.e. the sensor transmits the value

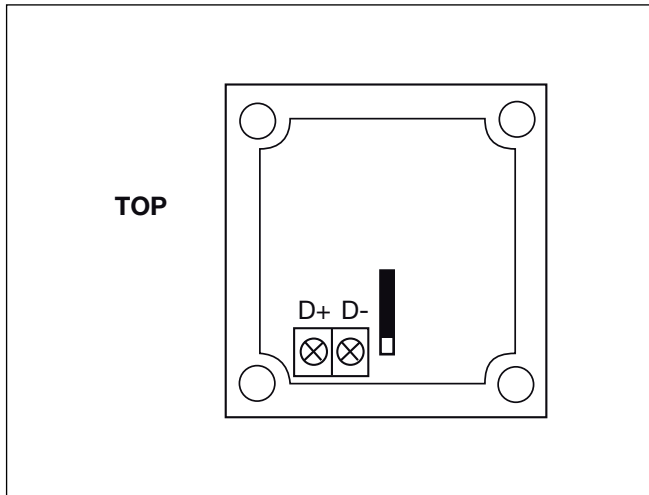
serially on one channel. The LUX sensor transmits its Analink value logarithmically. If the LUX value is transferred to an external unit, this unit must support the following logarithmic function:

$$\text{Range A: } \left(\frac{3 \cdot \text{Analink}}{255} \right) \text{ and } \text{LUX} = 5 \cdot 10$$

$$\text{Range B: } \left(\frac{2 \cdot \text{Analink}}{255} \right) \text{ and } \text{LUX} = 3000 \cdot 10$$

The two ranges can be selected programming the fail safe bit:
 0 = range A; 1 = range B.

Wiring Diagram



Dimensions

