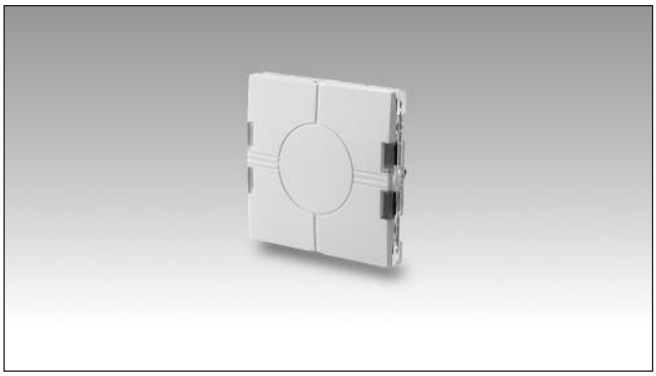
Eunica line
Wireless Light Switch
Type SHE5XWLS4



- **Wireless light switch for building automation application**
- **No additional wiring required**
- **Developed to fit into wall socket and frames from Elko, Gira and Jung**
- **Temperature range: -20 to +50°C**
- **4 individually programmable pushbutton inputs**
- **Battery supplied with a lifetime up to 5 years**
- **Delivered with 2 white and 1 black pushbutton covers**
- **Standby mode to save battery**
- **Wireless transmission based on IEEE 802.15.4, at 2.4 GHz**
- **LED indication for battery low and field strength**
- **Integrated antenna**

Product Description

The SHE5XWLS4 is a wireless light switch with 4 buttons and 4 LED outputs. It is developed to be mounted into a 55 x 55 wall socket from Elko, Gira and Jung. The light-switch has LEDs of two colours, red and blue, indicating the battery and wireless signal level.

The light switch is part of the smart-house concept for building automation applications and can be used to control lights, roller blinds and all other functions supported by the smart-house controller. It is fully programmable via the SH tool and must always be coupled to a SH2WBU230 module.

Ordering Key

SH E 5X W LS4

- **SH** — **smart-house**
- **E** — **Eunica**
- **5X** — **Housing 55 x 55 mm**
- **W** — **Wireless**
- **LS4** — **Switch number**

Type Selection

Housing	Colour	LEDs	Battery supplied
55 x 55 mm	White/Black*	4 red / 4 blue	**SHE5XWLS4**

*Delivered with white and black pushbutton covers

Input Specifications

Key Pad	4 pushbuttons

Output Specifications

LED	4 red / 4 blue

Supply Specifications

Power supply	Supplied by battery, type Lithium button 2450 3V
Average battery lifetime	5 years

General Specifications

Address assignments / channel programming	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.
Environment	
Degree of protection	IP 20
Pollution degree	3 (IEC 60664)
Operating temperature	-20° to +50°C (-4° to 140°F)
Storage temperature	-30° to +60°C (-22° to 158°F)
Humidity (non-condensing)	20 to 80% RH
Housing	
Back part dimensions	55 x 55 x 16.1 mm
Back part + front dimensions	55 x 55 x 20.6 mm
Back part material	Plastic, transparent
Push button covers	Plastic white (RAL 9010) Plastic clear white (RAL 9016) Plastic black

Weight	50 g
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)

WiDup Specifications

Bus	Wireless dupline
Frequency	IEEE 802.15.4, @ 2.4 Ghz
Diagnostics	1. Field strength 2. Network activites 3. Devices' presence
Network Topology	Star with max one wireless repeater

Antenna	Internal
Transmission power	According to IEEE 802.15.4
Sensitivity	According to IEEE 802.15.4
Number of slave nodes	Up to 250
Transmission range	<100 m in the open air

Mode of Operation

The SHE5XWLS4 is fully programmable via the SH tool. Each push-button can be individually associated to one or more of the functions supported by the smart-house system.

Coding/Addressing
No addressing or association is needed since the module is provided with a specific identification number (SIN): the user has only to insert the SIN in the SH tool when creating the system configuration.

Wall Socket and frame compatible with the Eunica line
The Eunica 55 x 55 light switch can fit into the frame and wall socket listed below:

for any other model not included here below, Carlo Gavazzi does not grant any compatibility.
- ELKO
- GIRA
- JUNG.

Transmission range

The main factors that influence the transmission range of the SHE5XWLS4 are the antenna location of the receivers and transmitters, the building structure and the number of obstacles in the connection path.
Other factors are noise sources (wi-fi routers, micro oven, blue tooth devices,…) that affect the receiver and dead spots caused by signal reflection from nearby conductive objects.
Since the anticipated transmission range depends on these system conditions, range tests should be performed before a specific range is determined for an application.
The following transmission ranges are to be viewed as general guidelines:

Device Position	Operating Distance
In the open air	Approx. 100m
Plaster-board/wood	Approx. 30 m Max. 5 walls
Tile and cellular concrete	Approx. 20 m Max. 3 walls
Reinforced concrete walls/ceilings	Approx. 10 m Max. 1 ceiling/wall

Transmission range is limited by:
- insulation material with metal foil
- intermediate ceilings with metal or carbon fibre panels
- lead glass or metal-coated glass
- mounting wall transmitters on metal walls

For more information about how to install a wireless network, please read here (link).

LEDs Indication

Red LED:
If the battery level is good, the red LED is OFF.
It flashes when the relevant button is pressed and to advise about the following happenings:
Short blink: Sending data when associated to a SH2WBU230
Long blink: Sending data when not associated to any SH2WBU230
Fast blinking: When receiving a network configuration

Blue LED:
If the battery level is low, the blue LED is off.
It flashes if the battery level is good when the relevant push-button is pressed and to advise about the following happenings:
Short blink: Sending data when associated to a SH2WBU230
Long blink: Sending data when not associated to any SH2WBU230
Fast blinking: When receiving a network configuration

Dimensions