

PHILIPS

SR Transceiver WH

SC100B/02



Specification Sheet

SC100B/02

SR Transceiver WH

The Philips SC100B/02 is a SR transceiver, which is an ideal solution to control individual luminaire. Philips SC100B/02 is a single and compact device for easier installation with luminaire and supports task tuning function.

Philips SC100B/02 operates according to the established SR compatible devices standard. Philips SC100B/02 transceiver creates a two wire connection between sensor, driver, and other peripheral SR devices. The use of Philips SC100B/02 eliminates the need for multiple components and auxiliary devices to control the luminaire.

A luminaire with an integrated Philips SC100B/02 works with several Interact systems.

SC100B/02

Features

The following are the key features of SC100B/02:

- Simple two wire connection.
- Compact in size
- Operates with Philips SR devices and Interact ready switches.
- Supports Tunable White luminaires.
- Supports to remotely test the emergency function of the luminaire, if supported by the control system.

NOTE: SC100B/02 is a transceiver, not a sensor.

Benefits

The following are the benefits of SC100B/02:

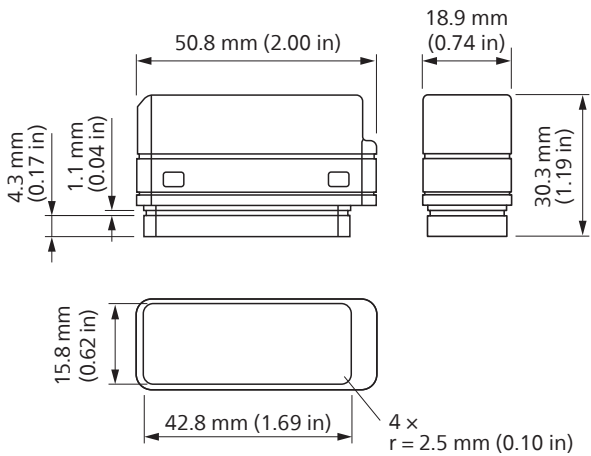
- One device to support various functions which eliminates the need for multiple components and auxiliary devices.
- Suitable to install in existing and as well as new luminaire designs.
- Cost-effective solution for energy-savings

Applications

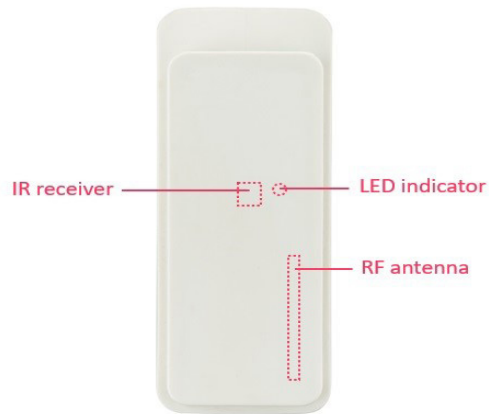
The following are the applications of SC100B/02:

- Individual office, open offices, and Conference rooms.
- Lobbies, Stairways, Restrooms, and Break rooms.
- Classrooms and any other indoor rooms

Dimensional drawing



Device Layout



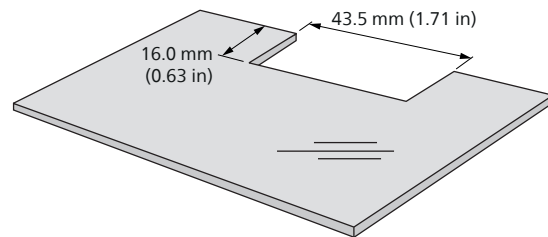
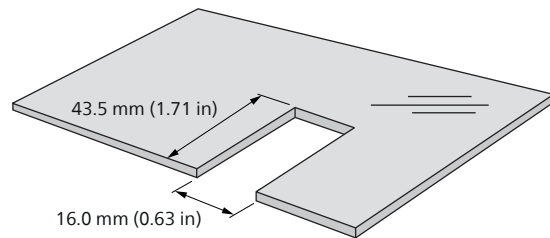
SC100

The IR receiver, LED indicator and RF antenna are hidden behind the plastic front cover

Mounting dimensions

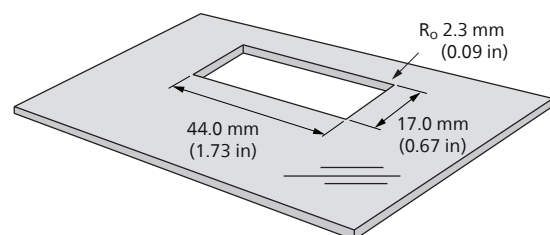
Mounting in U-shaped slot

In sheet metal (max. thickness 1 mm).



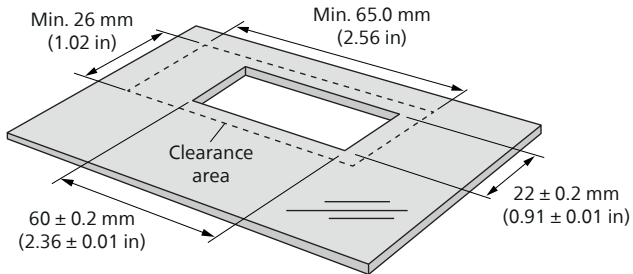
Mounting in cut-out

In sheet metal (thickness 0.7 mm to 1.2 mm).

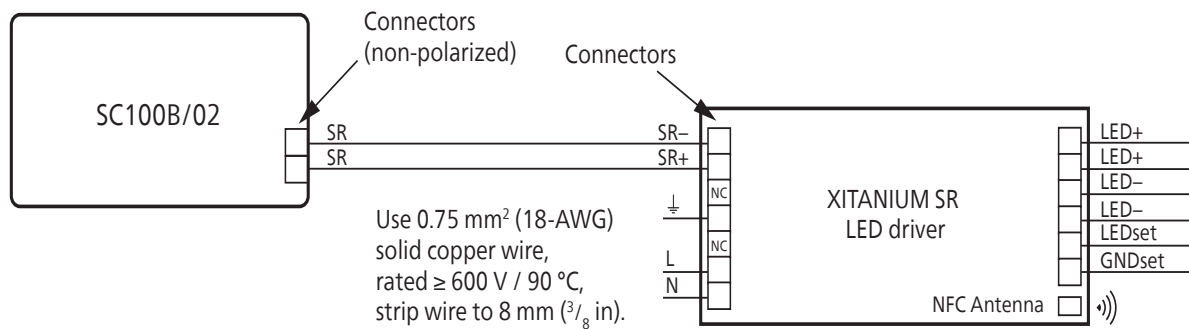


Mounting with a clip for upgradable sensor slot

The SC100B/02 can be mounted in a surface mounted bracket or in an SA0210/05 mounting clip for the upgradable sensor slot. See Accessories for details.



Wiring diagram



Zigbee

This device is compatible with the Zigbee standard IEEE 802.15.4. Firmware can be upgraded over the air.

Specifications

All specifications are typical and at $T_c = 25\text{ °C}$ unless otherwise specified.

Physical information

Overall dimensions	50.8 × 18.9 × 30.3 mm (2.00 × 0.74 × 1.19 in)
Housing F1 slot compatible luminaire hole (l × w)	44.0 × 17.0 mm (1.73 × 0.67 in)
Net weight per piece	18.5 g (0.653 oz)
Volume required inside luminaire (l × w × h)	(50.8 × 19.0 × 24.0 mm) (2.00 × 0.75 × 0.94 in)
Color	White
Connectors	WAGO 2060
Input wire cross-section (solid conductor wire)	0.25 to 0.75 mm ² 24 to 18 AWG
Input wire cross-section (stranded wire)	0.25 to 0.75 mm ² 24 to 18 AWG

Electrical information

Input voltage (V_{in})	12 to 22 V
Input current (I_{in-typ})	8 mA ($V_{in} = 12\text{ V}$, $P_{ZB-tx} = 7\text{ dBm}$)
Input current (I_{in-max})	20 mA ($V_{in} = 12\text{ V}$, $P_{ZB-tx} = 7\text{ dBm}$)
Maximum input current (I_{max})	48 mA (Maximum current drawn from bus)
Sink current (I_{sink})	250 mA (Capability of DALI transceiver)
Typical Input power (P_{in})	140 mW (rated input, $P_{ZB-tx} = 7\text{ dBm}$)
Frequency	2.4 GHz

IR receiver

Carrier frequency	36 kHz
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Zigbee and Bluetooth Low Energy (BLE)

Communication distance	Zigbee: 25 m (line of sight, package error rate <1%) BLE: 15 m (line of sight, package error rate <10%)
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*The RF-distance at luminaire level is different. It depends on design-in and results of TRP-loss tests.

Environment and approbation

Operating ambient temperature range*	-40 to +65 °C (-40 to +149 °F)
Operating humidity	20 to 85% non condensing
Storage temperature	-40 to +85 °C (-40 to +185 °F)
Storage humidity	0 to 95% non condensing
Ingress protection	IP20
Maximum case temperature (T_{c-max})	70 °C (158 °F)
Approbations	CE, UKCA, CB, UL, RED, FCC, IC
Digital interface	Xitanium SR

* Product is capable to working under this condition without component damage, but performance is not tested.

Other

Number of drivers per sensor	4 maximum
Lifetime	10% failure at 100 000 hours, max. T_c
Failure rate	≤ 300 ppm at max. T_c per 1000 hr
Insulation	No insulation between the SR bus and internal circuits.



Accessories

Mounting bezel



Order name	Color	MOQ	Order number
SA0100/05 Mnt Bez SC1xxx/SC2xxx 44x17	White	1	9137 136 20003

Mounting clip for upgradable sensor slot



Order name	Color	MOQ	Order number
SA0200/05 F Mnt Clip SC1xxx/SC2xxx 60x22	White	1	9137 136 20203

F1 slot cover



Order name	Color	MOQ	Order number
SA0300/05 Cover plate 60x22	White	1	9137 136 20403

Recessed mounting plate



Order name	Color	MOQ	Order number
SA0500/05 Ind. Rec SC1xxx/SC2xxx Mnt	White	1	9137 136 20603
SA0500/05 Ind. Rec SC1xxx/SC2xxx Mnt	White	1	9137 136 20613

Surface mount box



Order name	Color	MOQ	Order number
SA0600/05 Ind. Surf Mnt SCxxxx/SNSxxx	White	1	9137 136 20803
SA0600/05 Ind. Surf Mnt SCxxxx/SNSxxx	White	1	9137 136 20813

Mounting clip



Order name	Color	MOQ	Order number
SA0200/15 F Mnt Clip SC1xxx/SC2xxx 60x22	Black	1	9137 010 47703

Ordering information

Commercial product name	Color	MOQ	Order number
SC100B/02 SR Tranceiver WH	White	50	9137 010 69303



Warnings:

- Avoid touching live parts!
- Do not use drivers with damaged housing and/or connectors!
- Do not use drivers with damaged wiring!
- Class 1 luminaires must be connected to protective earth!
- Switchable function to make the open load on the driver output is abnormal condition, it is not an intended application that be allowed.

Safety warnings and installation instructions to be taken into account during design-in and manufacturing

- Do not use damaged or defective contacts or housings.
- Do not use damaged products.
- Do not service the driver when the mains voltage is connected; this includes connecting or disconnecting the LED load.

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