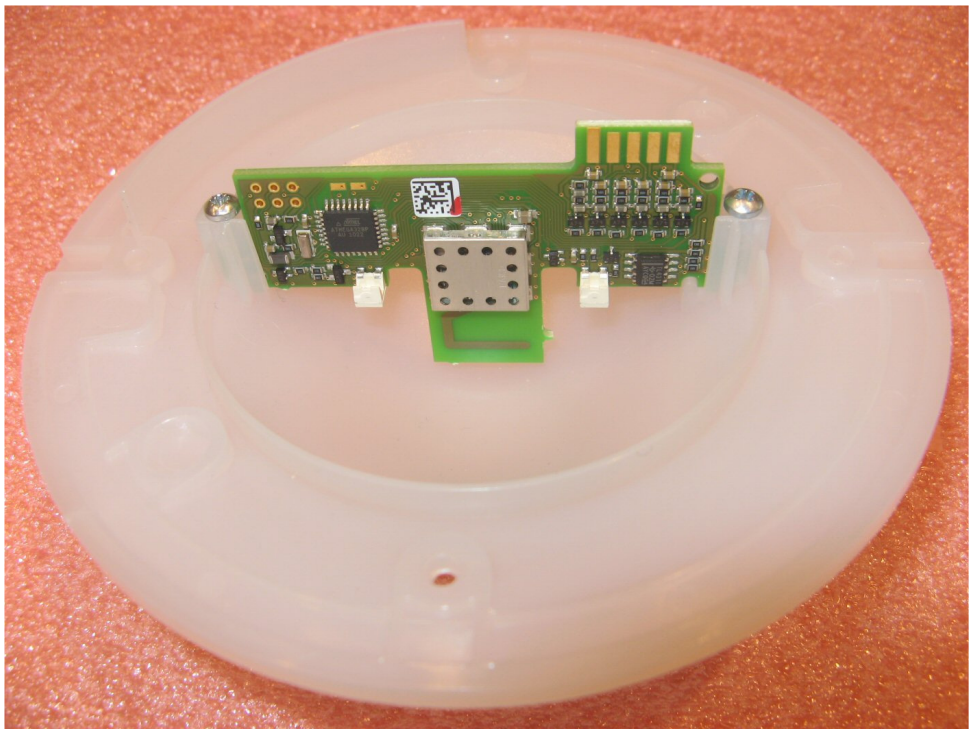
Installation Manual
PCB Sensor Bridge
for the application example:
Luxon Sensor Bridge



February 2011

1. Brief product description

With the Luxon Sensor Bridge commercially available sensors can be added to the Nedap Luxon light control system. During the installation process the Sensor Bridge will become part of the wireless Senzafil Mesh Network, over which data is transferred. The light controller now can control light levels using data from remote sensors for light, motion and occupancy detection and from switches and 0-10V controls like electronic potentiometers.

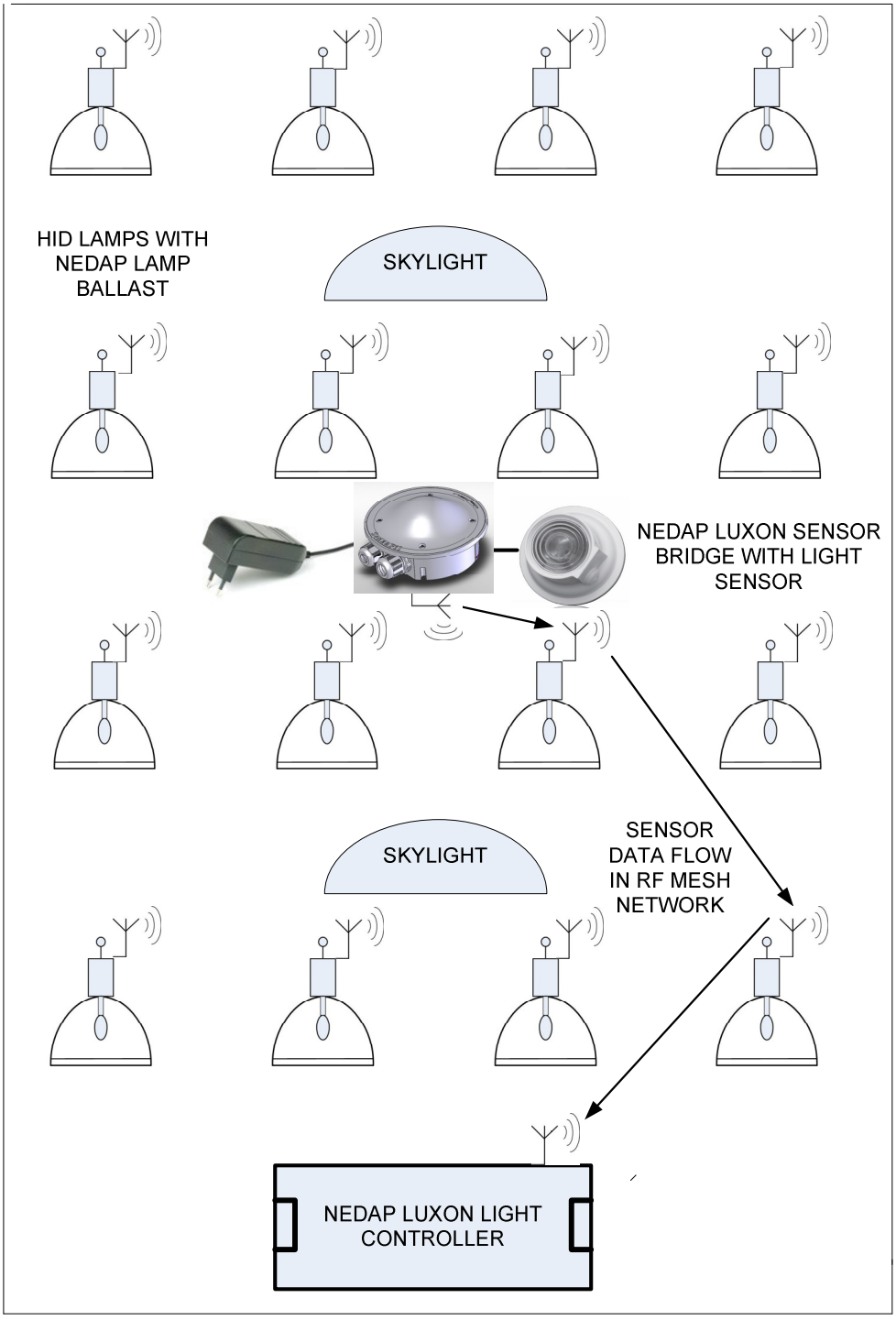


Figure 1. Installation example for the Luxon Sensor Bridge with HID lamps controlled via RF by a Mesh Network in a building with skylights

2. Assembly overview for the Luxon Sensor Bridge

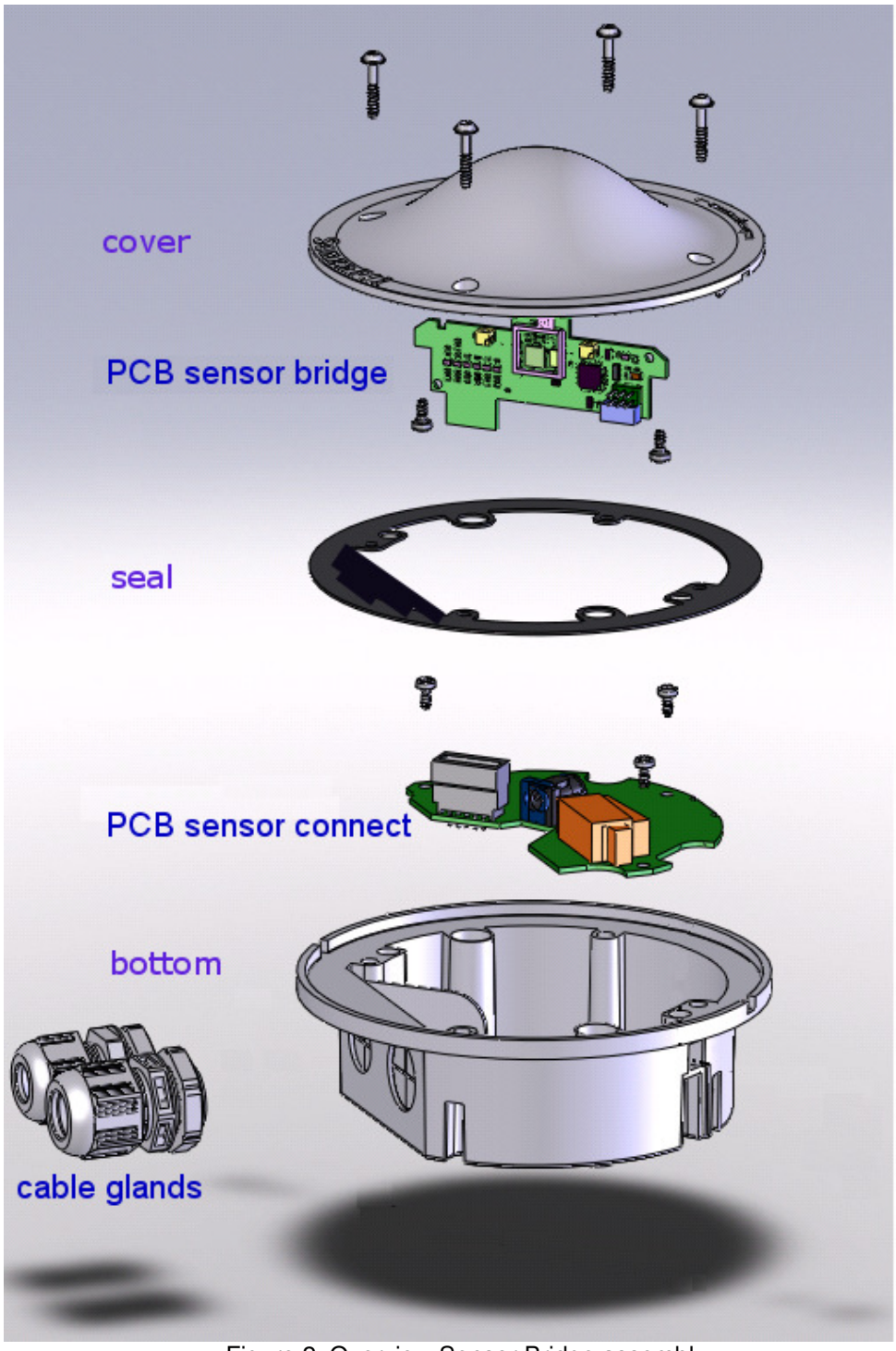


Figure 2. Overview Sensor Bridge assembly

The Sensor Bridge is fitted in a rugged plastic housing with a sealing to obtain IP67 protection for dust and moist, see Figure 2.
Cable glands shall be included, they must be mounted for IP67 protection.
The PCB sensor bridge has a small cutout that should fit the notch in the cover to prevent mounting the PCB the wrong way.

3. Positioning

The Sensor Bridge shall be placed at a maximum distance of 40 meters from the nearest node operating within the same group. Avoid using a long cable (>>20m) to the sensor.

Note: The Sensor Bridge shall never be installed inside a metal power cabinet. This would impede wireless communication.

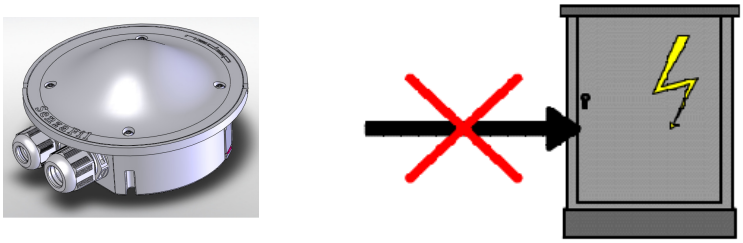


Fig 3 No installation of the Luxon Sensor Bridge inside a metal enclosure

4. Mounting instructions for the Luxon Sensor Bridge

Prior to fixation, assemble the two cable glands to the unit's enclosure. If only one gland is to be used, close the other opening with an appropriate plug to maintain IP 67 enclosure protection level if necessary.

The surface or wall mount Sensor Bridge shall be mounted using 2 ball or cylinder head screws with maximum head diameter of 9 mm, corresponding holes shall be (pre-)drilled 94 mm apart. See also figure 4.

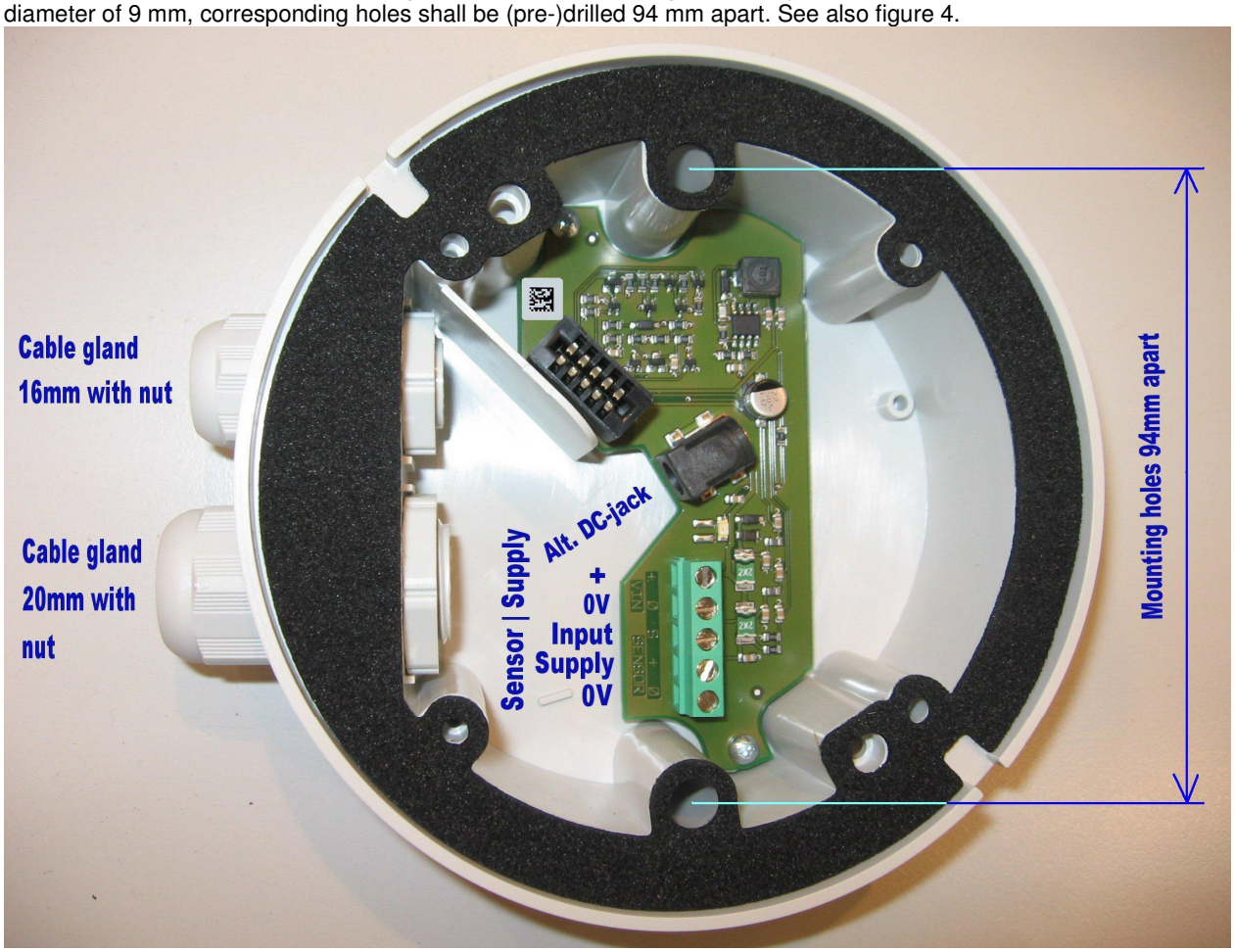


Figure 4. location and pinning of connectors in wall mount bottom part

Overview of inputs and outputs below, see also Fig.4 for locations.

Supply (*)	+	+12 to +24Vdc +/- 5% Note that the voltage to be used depends on the used sensor Input current: 0.3A max.
	0V	0V - Gnd
Supply		Alternative supply connection via DC-jack with 2mm centre pin, Centre pin is positive, shield is 0V - Gnd
Sensor	Supply	Supply for sensor, same level as Supply + Current 200mA max.
	0V	0V - Gnd
Sensor	Input	Connect to sensor output.

5. Powering the Sensor Bridge system

Fig 5 shows an installation example for the Luxon Sensor Bridge with sensor and mains adapter.

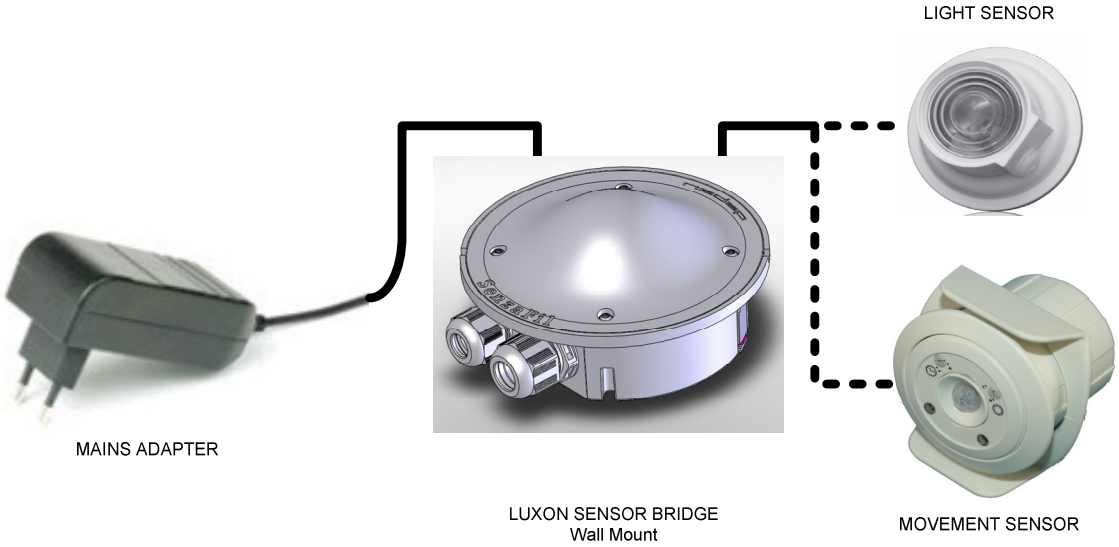


Figure 5. Wiring overview for the Luxon Sensor Bridge system

Powering:
The Sensor Bridge is powered from a mains adapter or similar DC-source supplying 12 to 24V. This voltage is also available for the sensor, so you can choose the supply voltage depending on the voltage needed for the sensor to be used.
Power connection via either a standard DC-plug or screw terminals.

Many sensor types can be used:

- Switches;
- 1 to 10V dimmers (resistive and electronic potentiometers);
- Light sensors;
- Sensors for detection of movement and / or room occupancy.

Safety notes: An isolated limited power supply shall be used. For USA/Canada use a UL-listed class 2 limited power supply (E.g. MEAN WELL type GS06U, GS12U)

If a separate supply will be used for the sensor, this supply shall also meet the requirements for a class 2 limited power supply.

6. Specifications for application Luxon Sensor Bridge

Input Supply	10.5 to 28 Vdc, max 300mA
Sensor Operating Voltage	10.5 to 28 Vdc , max 200mA
Sensor Input Voltage	0 to 28 Vdc
Operating temperature	-40 to +70°C
Safety	EN60950 , UL916
EMC/Telecom	EN301489-1, EN300328 V1.7.1 FCC47 part 15 and IC RSS210
Dimensions	Diameter 130mm, height 70mm
Enclosure protection degree	IP67 (with both cable glands assembled correctly)
Wire section range for the screw connector	Max 1.5sqmm or AWG15
Cable clamp range	ESKV 16mm gland: 4.5 to 10mm ESKV 20mm gland: 6 to 13mm

7. FCC and IC Declarations for Luxon Sensor Bridge

English:

This device contains PCB Sensor Bridge p/n 7834802 with FCC ID: CGDSFSB and IC: 1444A-SFSB

Compliance statement

This device complies with part 15 of the FCC Rules and to RSS210 of Industry Canada.
Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

Déclaration Conformité

Cet appareil se conforme aux normes RSS exemptés de license du Industry Canada.
L'opération est soumis aux deux conditions suivantes
(1) cet appareil ne doit causer aucune interférence, et
(2) cet appareil doit accepter n'importe quelle interférence, y inclus interférence qui peut causer une opération non pas voulu de cet appareil.

Warning

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

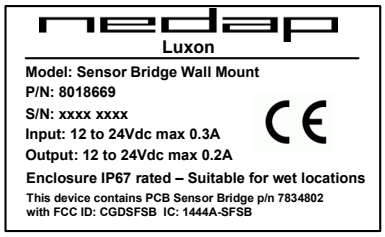
RF Exposure

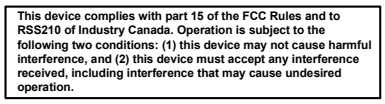
To comply with FCC RF exposure requirements for mobile transmitting devices, this transmitter should only be used or installed at locations where there is at least 20cm separation distance between the antenna and all persons.

8. Label artwork for application Luxon Sensor Bridge

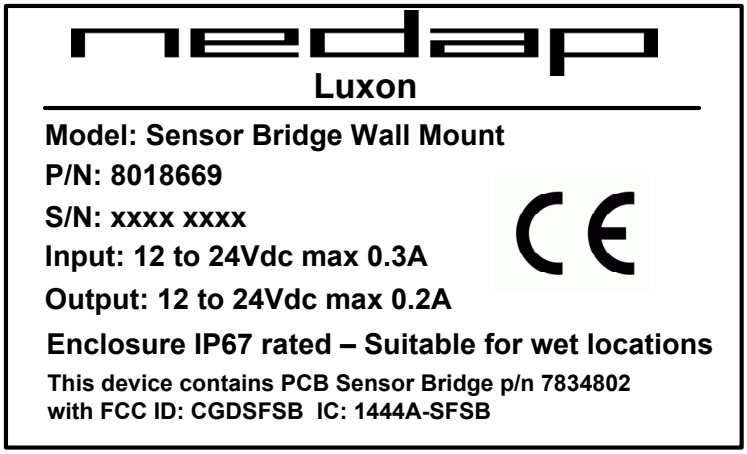
Label artwork for Sensor Bridge Wall Mount

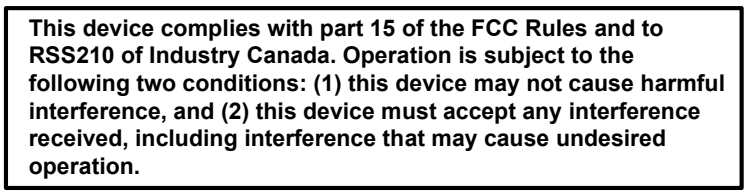
To scale:





Scale 200%





Upper Label 50x30mm
Lower Label 50x12.5mm.