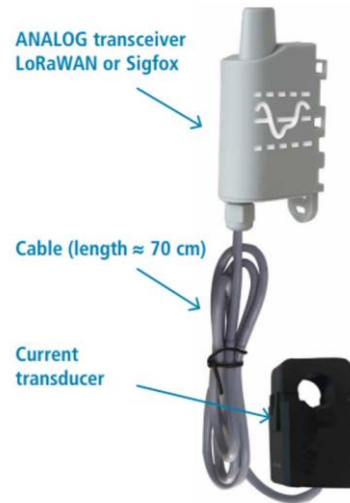
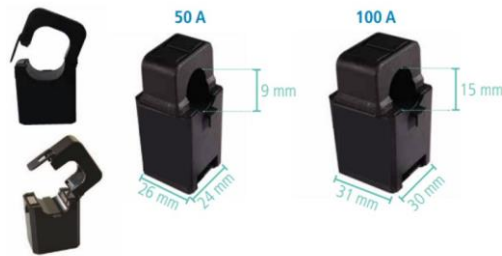


Quick Start Guide - Current Sensor - Sigfox

1. PRODUCT PRESENTATION

1.1. Product and assembly description

The Current-sensor is a ready-use product enabling to measure the current and so monitor intensity thresholds. The package is composed by an ANALOG transceiver and a current transducer (50 A or 100 A). Default settings have been established to simplify product installation by the user.



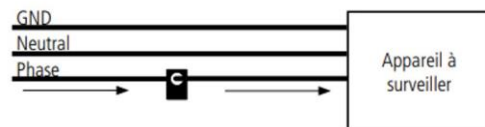
1.2. Package installation

To ensure the best operation of the package it is important to correctly position the different units.

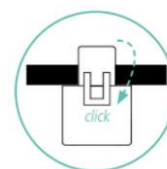
1.2.1 The current transducer

Pass the power supply wire (phase) of the monitored device into the clamp of the current transducer respecting current direction (see the arrow on current transducer).

Reminder: current goes from the plug to the device.



WARNING: Verify that the wire diameter fit with clamp diameter to ensure the proper closure of it. Be sure that you are monitoring a single phase with the clamp.



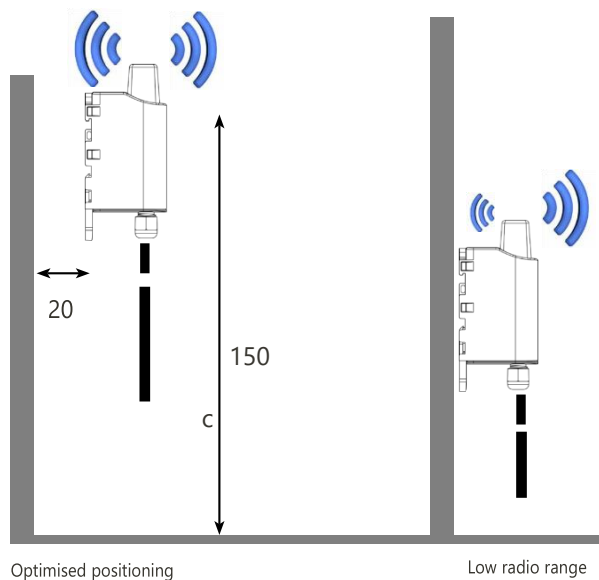
1.2.2 Correct positioning of the transceiver

There are two key rules to optimize radio ranges.

- The first one consists of positioning your product as high as possible.
- The second one consists of limiting the number of obstacles to avoid excessive attenuation of the radio wave.

Position: Insofar as possible, install the transmitter at a minimum height of 1.50 m and do not attach it to the wall.

Obstacles: Ideally, the product must be 20 cm away from any obstacle and, if possible, near an opening (the closer the obstacle is, the more the emitted power will be absorbed). All the materials encountered by a radio wave will attenuate it. Bear in mind that metal (metal cabinets, beams, etc.) and concrete (reinforced concrete, partitions, walls, etc.) are the most critical materials for the propagation of radio waves.



1.3 Starting up the product using a magnet

Attention! For Nollge customers, this part is not relevant.

Unless otherwise agreed, the sensor is preconfigured and started up according to the customer's needs and is immediately ready to use upon delivery.

Once the product has been configured and its assembly has been finalized, the product is ready to be started up.

The start-up is carried out using a magnet which you place on the upper part of the product (cf. the diagram below). The magnet must be held in position for at least 6 seconds to confirm the start-up of the product. When the magnet is well detected, the green LED lights up for 1 second (LED light visible under the product).

Once the sensor validates its start-up, it immediately transmits status frames followed by a data frame (according to the defined periodicity).

0x42	Cf Status	Sensor configuration	Values measured by the current transducer	Values measured by the current transducer	Values measured by the current transducer	Not used	Not used	Not used	Not used
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Frame description:

- Byte 2: sensor type on channel A (current transducer) Default = 0x01 meaning 0-10 V

- Bytes 3 to 5: measured value by the current transducer
By default, the value is mentioned in μV in Hexadecimal.

- Bytes 6 to 9: unused in this package

The ANALOG product reports current information in the form of a voltage from 0 to 10 V (hexadecimal). The data is a simple linear conversion of the power to current. Here the formula to interpret the data (to be converted in decimal) depending on the current transducer used: X (current value in μV) and Y (current transducer value: 50 or 100), the formula is « $(X \times Y) / 10\,000$ = value to interpret»

CurEnt (μV)	50A transducer (A)	100A transducer (A)
0	0	0
2 000 000	10	20
4 500 000	22.5	45
6 389 100	31.95	63.89
8 640 050	43.2	86.4
10 000 000	50	100

1.5. Change of settings

Warning! If uncomfortable with the procedure, contact Nollge for further assistance.

The package is proposed with defaults settings explained above. For any change on the transceiver configuration, refer to the ANALOG User Guide available on our website
<https://www.adeunis.com/en/produit/analog-2/>

1.6. Technical specification

1.6.1 ANALOG transceiver

For any information on the technical specifications of the ANALOG transceiver refer to the ANALOG User Guide available online: <https://www.adeunis.com/en/produit/analog-2/>

Parameters	Value
Supply voltage	Nominal 3.6V
Power supply	Removable battery version: SAFT LS14500
Maximum supply	90mA
Operating conditions: temperature	-25°C / +70°C
Operating conditions: humidity	0 to 85% RH (non-condensing)
Dimensions	105 x 50 x 27mm
Weight	70g (battery included)

Casing	IP 67
Mounting	DIN Rail, Tube, Wall, Collar
Radio standards	EN 300-220, EN 301-489, EN 60950
Sigfox zone	RC1 (Class 0)

1.6.2 Current transducer

Technical information on current transducer

Parameters	50 A	100 A	Unit
Nominal input	50	100	A
Max input detection	75 (1 min max)	150 (1 min max)	A
Nominal output	10	10	V DC
Precision	2	2	+ - %
Linearity	<0.2	≤0.2	%
Max sampling resistance	>10	>7	kΩ
Frequency of measured current	50 - 60	50 - 60	Hz
Operating temperature	-25 / +60	-25 / +60	°C
Storage temperature	-30 / +60	-30 / +60	°C
Fire resistance	ULV94-V0	ULV94-V0	ULV94-V0
Size of the current probe	26 x 34 x 50	33.5 x 38 x 55	mm

1.6.3 Autonomy

Operating conditions:

Product shelf life before use: Maximum 1 year.

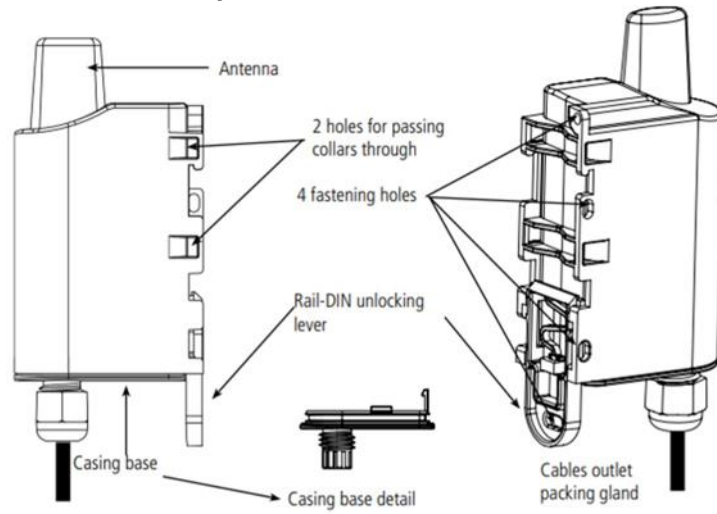
Calculations performed at a temperature of 20 C°

Sending periodicity	Autonomy
140 frames/day	4 months
100 frames/day	6 months
50 frames/day	11 months
20 frames/day	2.3 years
10 frames/day	4.2 years
2 frames/day	13.6 years

The above values are estimations based on certain conditions of use and environment. They do not represent a commitment on the part of Adeunis.

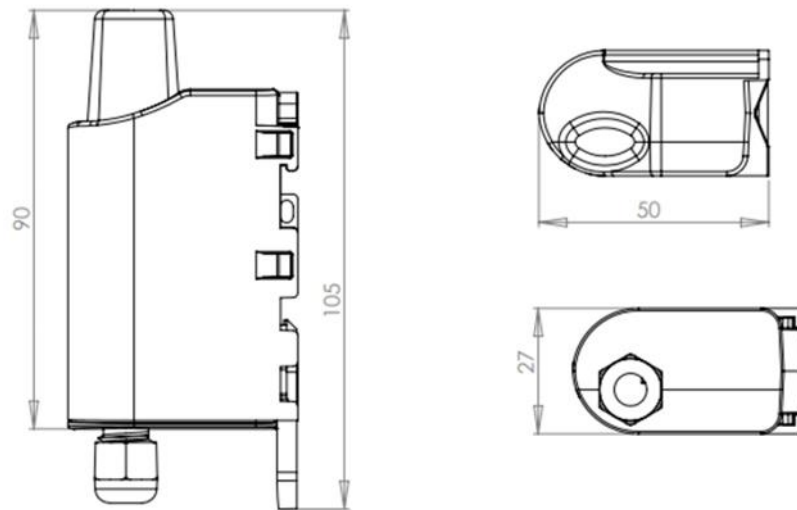
WARNING: the connection of the USB cable and the TEST mode can highly impact the device autonomy.

1.6.4 General description

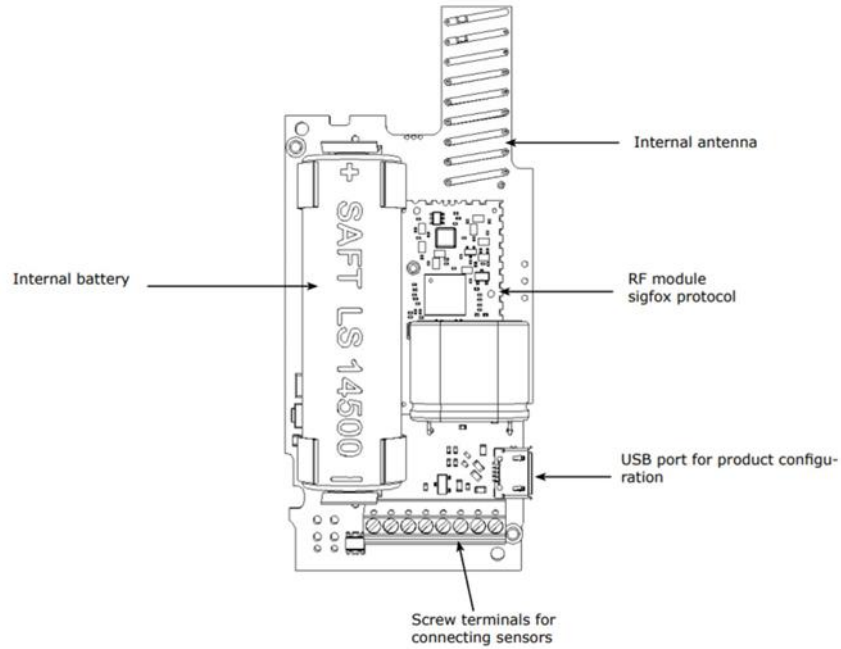


1.6.5 Dimensions

Values in millimetres



1.6.6 Electronic board



1.7. Replacing the battery

When the low battery indicator is activated (indicator in the frame or flashing of the red LED), it is possible to change the internal battery of the unit.

It is important to use a battery of the same reference, SAFT LS14500.

Warning! If uncomfortable with the procedure, contact Nollge for further assistance.

Procedure to change the battery:

1. Open the casing using the cable gland as a lever.
2. Remove the battery and replace it with the new one respecting the polarity as indicated on the circuit board.
3. Close the unit.
 - a Make sure that the seal is properly positioned on the base.
 - b Clip the electronic board onto the casing's Make sure that the fastening clip is properly locked into the board's fitting.
 - c Insert the upper part of the Inside this part there are guide rails for the board. Make sure that the board is properly positioned within these guides.
 - d Once the board is in position, lower the upper cover and lock it onto the casing's Strong pressure will enable both parts to be clipped together and will enable protection level IP67 to be ensured.
4. Restart the product with the magnet as for a first start.

After this procedure the product will behave as during a first start

