

# X565LS-X520LS-X580LS-X590LS

## SIGN RISE FEEL MOVE Technical

### guide

30/01/2023

## 1. Presentation General product presentation

### 1.1 Main functions



- Connected
- CO2 measurement
- Temperature and relative humidity measurement
- Remotely accessible data\*.

Model	Name	T°/Hum	CO2	VOCS	PIR	Lum.	Mic.	USB	SD	Buzzer	Batteries
X580LR	FEEL	•									1
X520LR	RISE	•	•						•	•	2
X530LR	RISE+	•	•	•				•	•	•	2
X590LR	MOOV	•			•	•	•				2
X565LR	SIGN	•	•	•	•	•	•	•	•	•	2

This guide is common to all products. Depending on your product, the dedicated sections may not be applicable.

- > NDIR CO2 sensor with performance validated by an independent COFRAC laboratory
- > LED indicator to visualise the CO2 level
- > Lithium batteries with a life span of > 10 years: no need to change batteries repeatedly
- > Fully configurable locally via NFC or remotely via LoRaWAN downlink
- > Compact design to fit in any interior
- > Robust product, completely sealed and tamper-proof
- > Anti-theft fixing device
- > Quick and easy installation
- > No maintenance required

## 1.2 Diagram of product

Dimensions

87x87x24 mm



Weight

110 g including 2 batteries

## 1.3 Description of the kit

Indicate here what is supplied with the product:

- Product + Mounting bracket
- Number of batteries
- Screws and dowels
- Adhesive
- SD card

## 1.4 Operating environment and certifications

Conditions of use of the product

- > Indoor environment
- > Temperature: -20°C to +50°C
- > Relative humidity: 0% to 99% RH (non-condensing)
- > Product life span :  
10 years if VOC  
15 years if CO2

Certifications

The product is compatible with the following directives and standards:

Guidelines

- Radio Equipment Directive (RED) 2014/53/EU
- Directive 2011/65/EU (RoHS)

Standards :

- EN 62368-1
- EN 301 489-1 V2.2.0
- EN 301 489-3 V2.1.1
- EN 300 220-2 V3.2.1
- EN 62479 : 2010

## 1.5 Support and integration tools

The documentation and tools for this product can be found on our dedicated support site:  
[support.nexelec.co.uk](http://support.nexelec.co.uk)

You will find :

- CODEC: Javascript code for decoding LoRaWAN messages
- Payload decoder: Tool for online decoding of LoRaWAN messages
- Downlink calculator: Online calculator of LoraWAN messages allowing remote reconfiguration of the product
- Autonomy calculator: Online product autonomy calculator

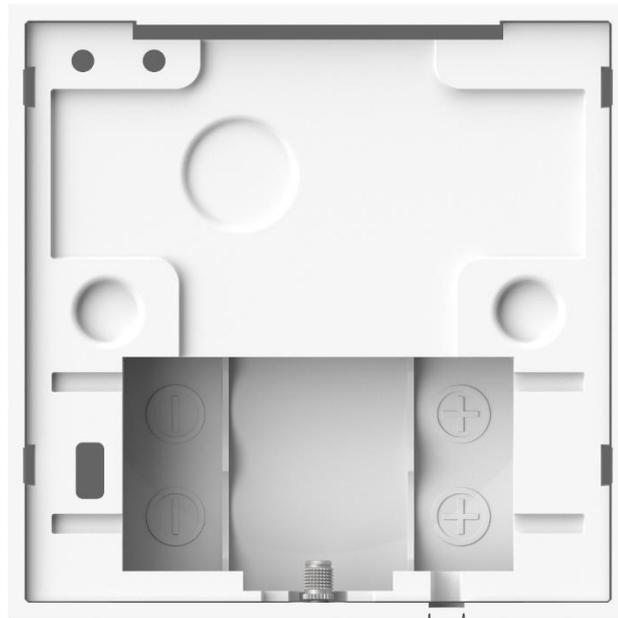
If you have any questions, our support team can be reached by e-mail at [support@nexelec.fr](mailto:support@nexelec.fr).

## 2. Product power supply

The product can be powered either by batteries or via the USB-C connector on the back of the product.

The product is compatible with 3.6V non-rechargeable AA batteries. The product can be powered by one or two batteries depending on the application and the desired battery life.

The batteries must be inserted in the direction indicated on the product:



In the case of a single battery supply, it can be positioned in any of the slots.

### 3. Installation of the product

#### 3.1 Installation sites

##### Recommended locations

The equipment should be placed in a location representative of average exposure. Ideally, the product should be placed in a central location in the room, between 50cm and 2m high. Try to place it away from draughty areas (doors, windows, etc.) and away from areas near heat sources (radiators, direct sunlight, etc.).

##### Places to avoid

Do not install the indoor air quality monitor :

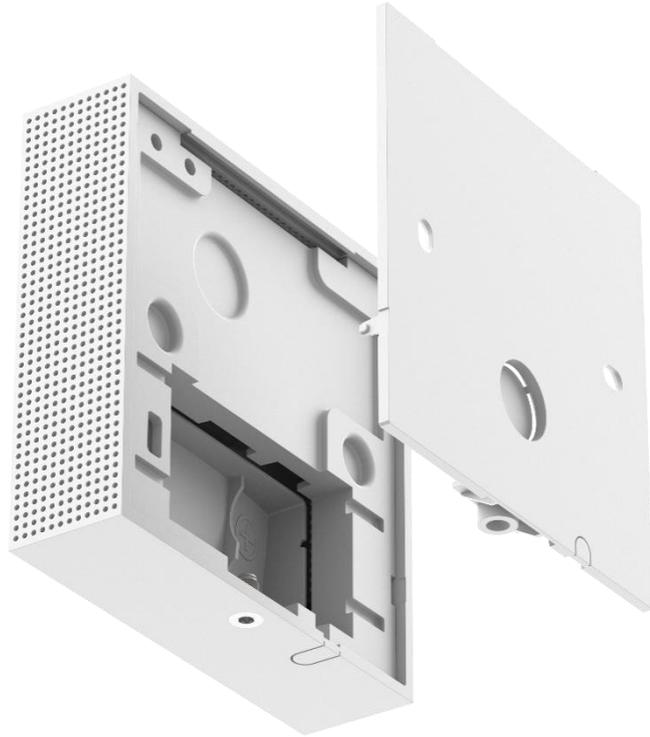
- less than 30 cm from the ceiling,
- in the open air,
- in a place where the temperature is below 0°C or above 50°C,
- in a place where the humidity level is higher than 95% (bathroom, kitchen, laundry room, etc.),
- in a dusty or dirty place (garage, workshop, etc.),
- in a narrow area where the detector could be damaged,
- in a confined area (for example, in a wardrobe or behind a curtain),
- in a place where the detector could be blocked (e.g. by furniture) .

## 3.2 Mounting the detector

Mounting the detector on a wall

The product can be wall mounted either :

- with screws and plugs, supplied with the product;
- by double-sided adhesive tape, supplied with the product.



Follow the procedure below:

- > Choose a suitable location to mount the sensor on the wall
- > Remove the mounting base from the detector
- > Mark the desired location of the screw holes on the wall with a pencil
- > Insert the supplied dowels and screw on the mounting base
- > Insert your product into the mounting base, and lock it in place with the screw on the bottom edge of the product.

Mounting on a standard electrical flush-mounted box (60 mm fixing spacing)

- > Break off the plastic insert to remove the power cable from your product.
- > Connect the usb cable through the hole left by the plastic pad
- > Screw the wall bracket to the flush-mounted box.
- > Mount and screw your product onto the wall bracket.



Note: a 220V to 5V USB transformer, which can be integrated in the flush-mounted boxes, is available in the Nexelec accessories list.

#### Free standing

Use the mobile mounting base supplied with the detector.

Follow the procedure below:

> Place the detector on a piece of furniture or a shelf, less than one metre from the floor, to limit damage if the product is accidentally dropped.

### 3.3 Anti-theft fastener

The product can be fixed to the wall bracket with an M3x8 torx screw. This means that the product cannot be removed from its base without a special tool.



### 3.4 Automatic detection of the presence of the product on its base

The product is equipped with a sensor to check whether or not the product is installed on its mounting base. This function ensures that the products have not been removed from their base.

### FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

This device complies with part 15 of the FCC Rules. 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.

### RF Exposure Information

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.