



EP5000-L (LoRa) air quality probe Installation manual

Ver	Date	Modification / Update
V1	16/12/2019	Initial Version

Summary

1.	Security.....	3
2.	Positioning.....	3
3.	Flush mounting.....	4
4.	Wiring.....	4
5.	Installation.....	4
6.	Power on.....	4
7.	Indication of LEDs in normal operation.....	5
8.	Connections.....	6
8.1.	Power supply.....	6
8.2.	Remote control.....	6
9.	NFC.....	6

1. Security



WARNING

Danger of death, risk of electric shock and fire!

The installation should only be undertaken by a qualified electrician!

To apply for correct bus and power cables and to activate the device, comply with the state of the art and standards.

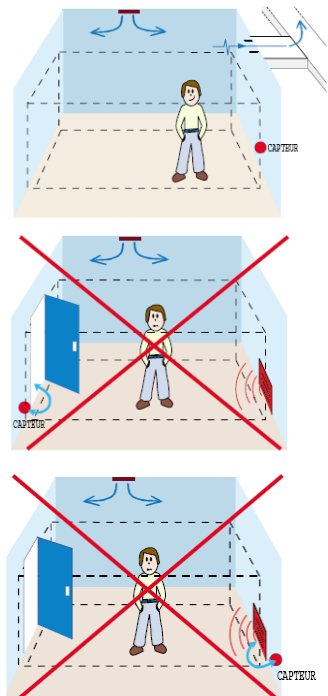
Any intervention or modification to the device will invalidate any warranty claim.

- Do not use this probe in environments with regular exposure to silicon vapors (HMDS) because this gradually alters the sensitivity of the VOC sensor.
- Do not use the sensors for measuring gas content relating to safety!
- Use the probe only with secured low voltages!

2. Positioning

The position of the probe is crucial vis-à-vis efficiency and energy savings for ventilation, heating and cooling.

- The probe is designed to ensure air quality; it must be placed in the area of occupancy of the premise served by outlet vents, on a wall at eyes level (breathing human level, between 1.5 and 1.8m).
 - Avoid drafts (near openings, blowing air, doors, outlet vents) and dead zones (niche, shelves and curtains).
 - Avoid orthogonal walls (corners of room in particular)
 - Avoid heat sources and the proximity of occupants (radius of 1 m from workstation).
 - Avoid direct exposure to sunlight. Consider all seasons sun positions
 - Position the probe vertically on a wall or partition.
- This device is not intended for installation in duct or ceilings.



Any work not in accordance with this documentation or changes to the device will invalidate all warranty claims.

3. Flush mounting

Use the backbox provided or an airtight insulated backbox with a waterproofing membrane through which the sheath passes. If the backbox passes through the sealing plane, seal between the backbox and the partition with a specific VOC free and silicone free sealant. Make sure that the backbox doesn't contain Silicone. The depth of the case must be at least 40mm.



4. Wiring

Be careful, wiring must be sealed. Incoming air, even slight, would seriously jam the temperature, humidity and air quality measures.

When the switchboard is located in the heated volume: caulk arrivals between cables and ducts at the switchboard level.

When the switchboard is out of the heated volume, caulk between cables and ducts before entering the heated volume. A sealing plug must also be placed between duct and cable reaching the probe to prevent air entry.

When the sealing of the duct is not possible, use a specific sealant without silicone and VOC.

In case of use of electrical backbox, select an airtight case with sealing membrane from which the duct passes through. If the case crosses through the sealing plane (plasterboard), seal between the casing and panel with a special sealant without silicone and VOC.



5. Installation

It is recommended to install the probe at the end of the work (after painting and using silicone-based products)

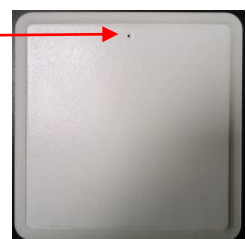
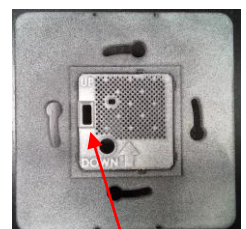
Connect the 24V power cable to the back of the probe. Just push the stripped ends (flexible or rigid) into the connector. In case of a multi-strand cable, make sure to well twist them before inserting them. In case of difficulty, push the release tab. Respect the polarity (non-destructive).

Make sure to respect the up and down directions indicated on the ventilation grid otherwise the temperature and humidity measurements will be jammed and the particles sensor will become dirty.

Screw the probe plate onto the wall box.

Clip the front panel, making sure to position the connector correctly.

If well mounted, the hole for the light sensor shall be on top middle



6. Power on

20 seconds after power-up, the blue status LED and the orange status LED flash together gradually 15 times, at the end of the cycle, the orange LED remains fixed for few seconds, the time to interrogate all sensors then, only the blue LED "breathes" if the air quality does not require ventilation. If the probe has

not been powered recently, the LEDs may stay orange "breathing" for several minutes until the VOC sensor stabilizes. The start-up cycle includes built in tests and preheating of the VOC sensor and visual checks of LEDs

The cycle lasts about **5 minutes** in total. During this time no message is sent.

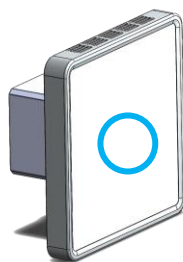
LEDs indicate faults as follows:

	Led
Sensor failure after startup	Red Fixed followed by blinking
End of Product Life (> 10 years)	Alternate Blue red
No power supply or reverse polarity.	Off

7. Indication of LEDs in normal operation

The LEDs show the overall synthesis of IAQ (physiological impacts on health cognitivity and quality of sleep which depend on the combined effects (cocktail effect) of CO₂, VOCs, particles, noise and light, The building health is also synthesized and takes into account: risk of condensation, deposit of particles on cold parts)

This synthesis is materialized by a continuous gradual rising and then descending gradation of the breathing type.



Sensor LED status	Description
Blue cyclic variation 5s works perfectly	The air quality is ideal. The probe works perfectly Health > 90% Or Cognitivity > 80% Or Building health > 90%
Blue cyclic variation 2s	The air quality is acceptable. The probe works perfectly. Health > 70% Or Cognitivity > 70% Or Building health > 70%
Orange cyclic variation 2s	The air quality is poor. The probe works perfectly. Health > 60% Or Cognitivity > 60% Or Building health > 60%

These thresholds can be adjustable by specific commands and the cognitive quality replaced by the quality of sleep for installation in a bedroom.

8. Connections

8.1. Power supply

The power supply must be continuous (DC) and between 12 and 32V (24V nominal).



8.2. Remote control

The probe can receive instructions from the smartphone application. It is thus possible to deviate from certain instructions and to recover certain information (status, physiological impact, concentrations, current mode, etc.).

See user manual for more details.

9. NFC

Used for commissioning (See commissioning manual)