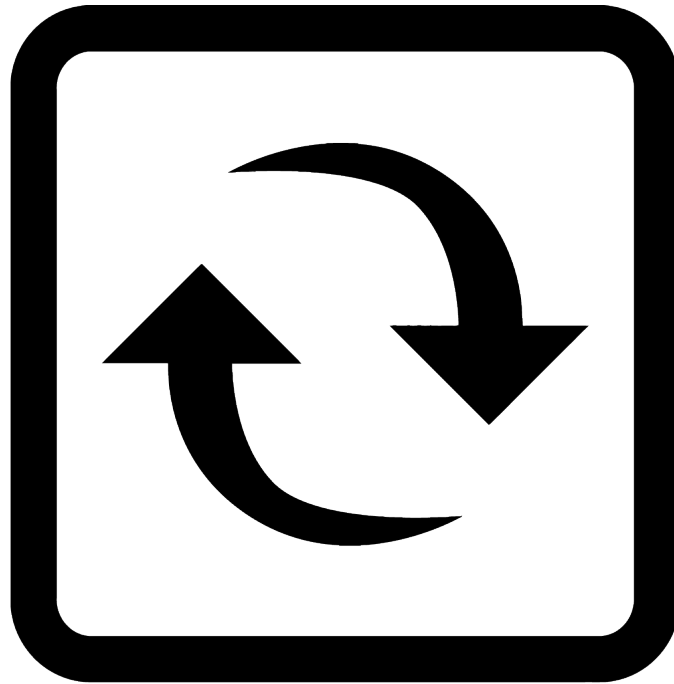


ENV-PARTICLE



INFRASENSING

Sensor Application Guide

I. Overview

The Particle Sensor (ENV-PARTICLE) is used in detecting particle concentration in HVAC and air quality applications.

This document aims to guide the user in installing our ENV-PARTICLE in your facilities and also to provide recommendations for sensor placement.

You may visit our Particle sensor page at: https://infrasensing.com/sensors/sensor_particle.asp

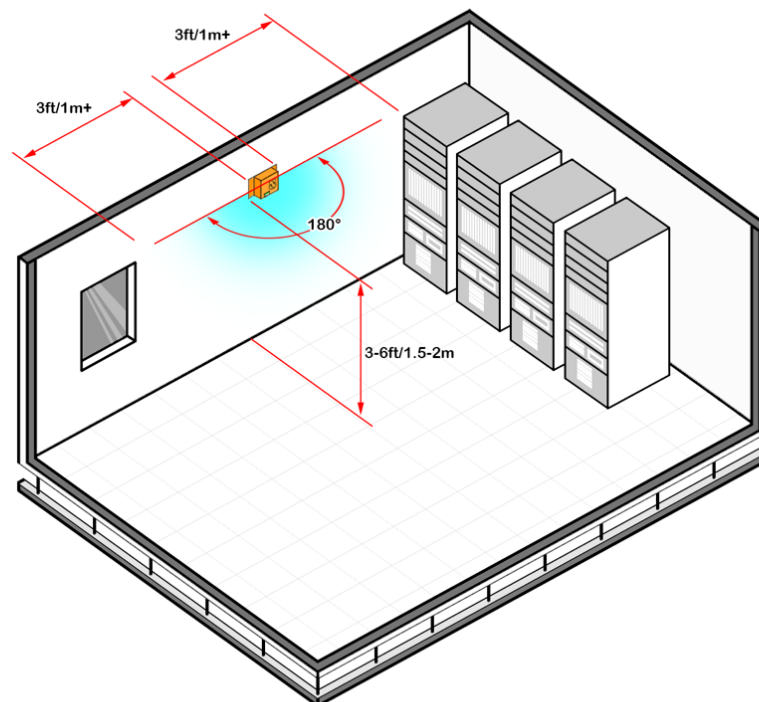
II. What you need

- Power source (PoE or 12V DC)
- BASE-WIRED
- LAN cable
- ENV-PARTICLE

III. Recommended placements

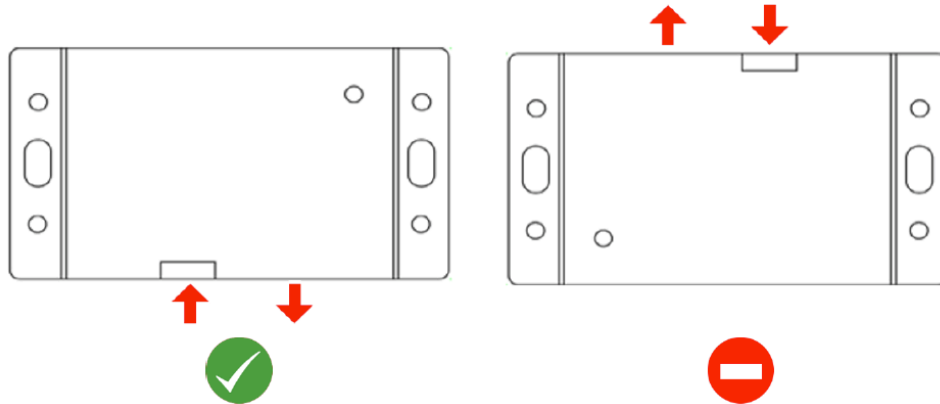
3.1. For air quality monitoring, the sensor should be placed:

- Within the breathing level in the room, this is between 3-6ft or 1.5-2m from the floor.
- At least 3ft/1m away from any obstacles, openings, and ventilations.
- At 180° free of any obstruction.
- Not being close to any pollutants that may impact its result.

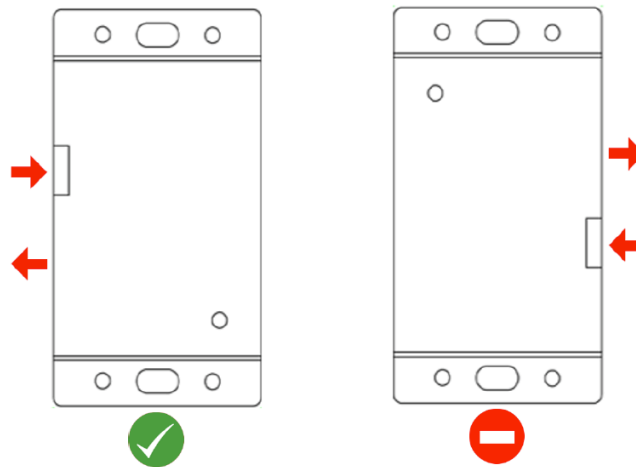


3.2. For particle air inlet and outlet:

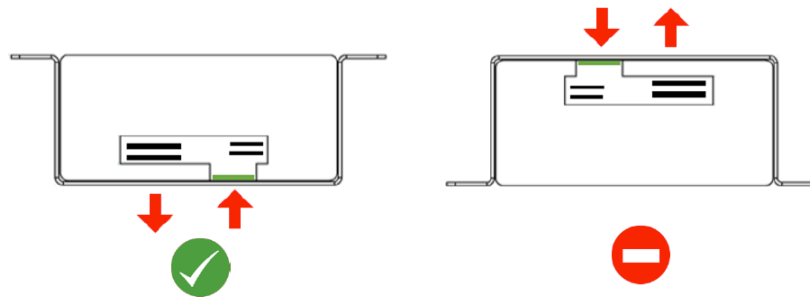
- The ENV-PARTICLE is housed in a metal frame that has 2 air inlets and 1 air outlet that should remain unobstructed at all times.
- In *vertical orientation*, the inlets/outlets should be facing down to avoid dust accumulation.



- In *lateral placement*, the inlets should be above the outlet to avoid returning of particles to the inlets.

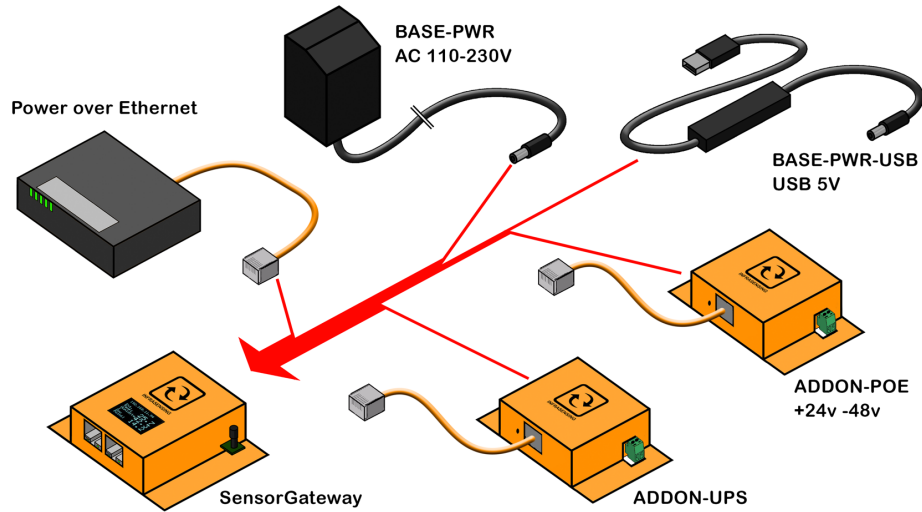


- In *horizontal placement*, the green marked inlet should be facing the ground.



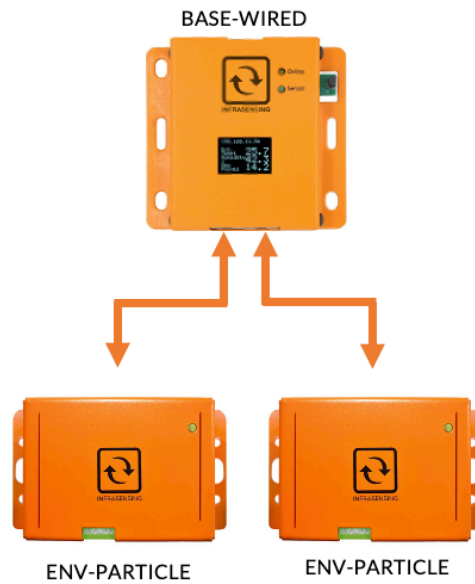
IV. Installation

4.1. Supply power to the BASE-WIRED via PoE(power over ethernet or 12V DC adapter/BASE-PWR)
Other power options include BASE-PWR-USB, ADDON-POE, ADDON-UPS.



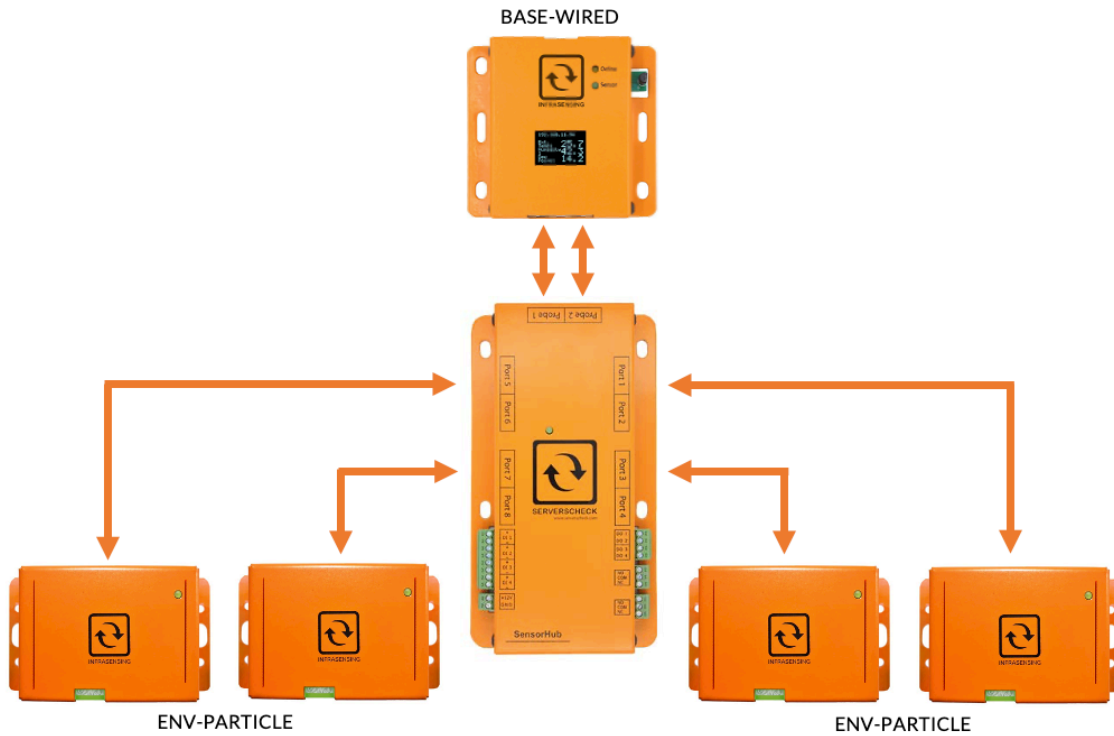
4.2. Connecting the BASE-WIRED to the ENV-PARTICLE

- Via direct LAN connection



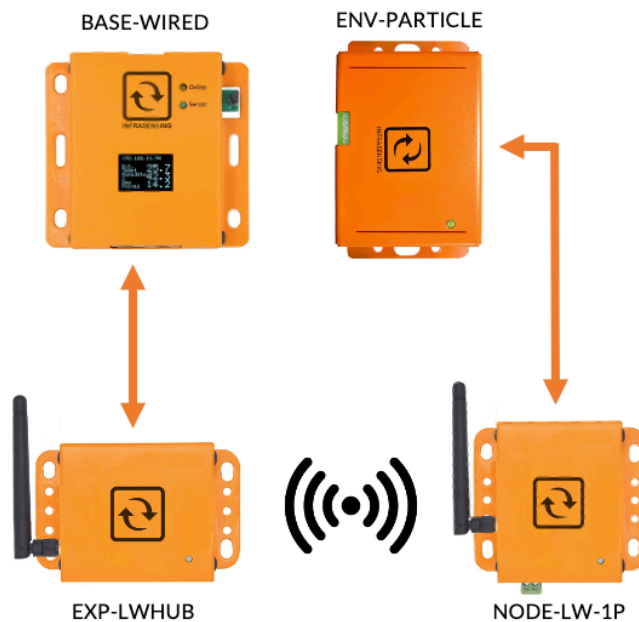
You can connect up to 2 sensor probes to the BASE-WIRED

- Via SensorHub(EXP-8HUB)



You can connect up to 8 sensor probes to the BASE-WIRED using the EXP-8HUB

- Via LoRa (EXP-LWHUB and NODE-LW-1P)



You can wirelessly connect your sensor probe to the BASE-WIRED, each LoRa Hub can support up to 20 LoRa Node. The LoRa Hub's power is supplied by the BASE-WIRED while the LoRa Node's power can be supplied by 12/24V DC or a USB-C type.