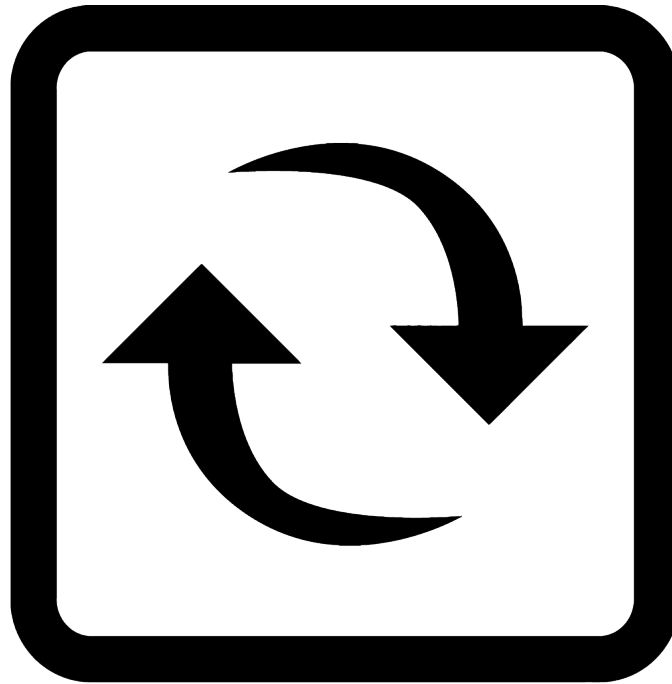# ENV-AIRPRESSURE

INFRASENSING

Sensor Application Guide

I.   Overview

Our ENV-AIRPRESSURE monitors differential air pressure & temperature in data centers, server rooms, healthcare facilities, and other critical facilities.

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

You may visit the sensor page through:
ENV-AIRPRESSURE https://infrasensing.com/sensors/sensor_airpressure.asp

II.   What you need

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

III.   Recommended sensor placement

For monitoring differential air pressure and temperature in a room, the following is recommended:
- Typical differential pressure between cold and hot aisles is 20Pa.
- Under the raised floor as cold air is supplied through the raised floor.
- Using a plastic tube on of the outlets, measurements through the tube will be taken from the hot aisle.

In clean rooms, one needs to maintain the right amount of differential air pressure to prevent contamination. The difference of between adjacent rooms or zones should be in the range of 5 to 20 Pa. Too much pressure may cause turbulences when opening doors and other unwanted side effects.
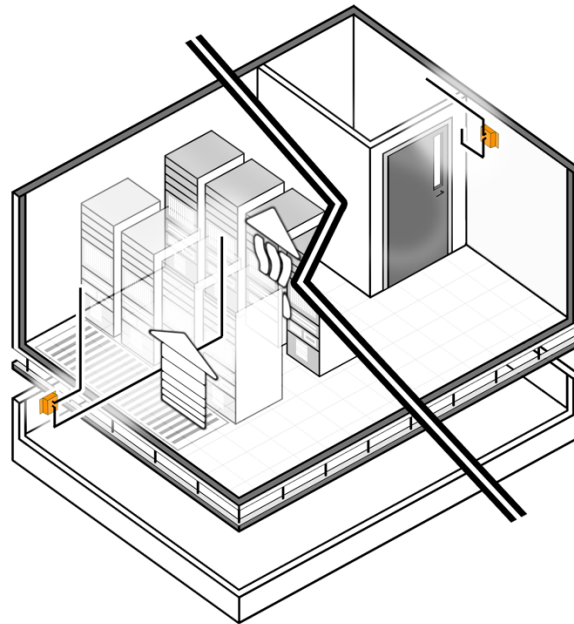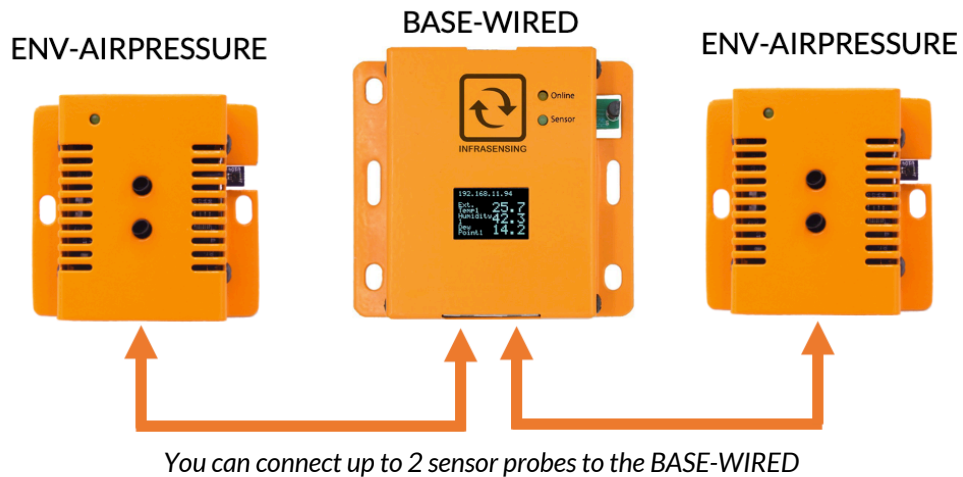
IV. Installation

1.1. 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, and ADDON-UPS.
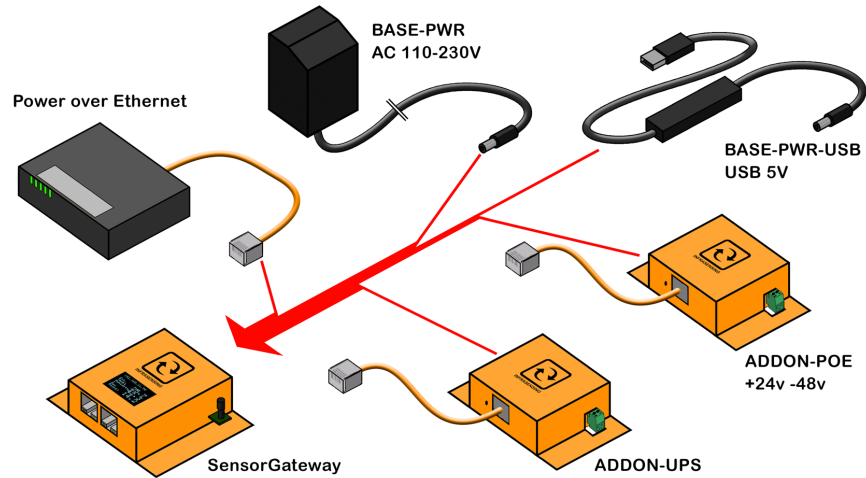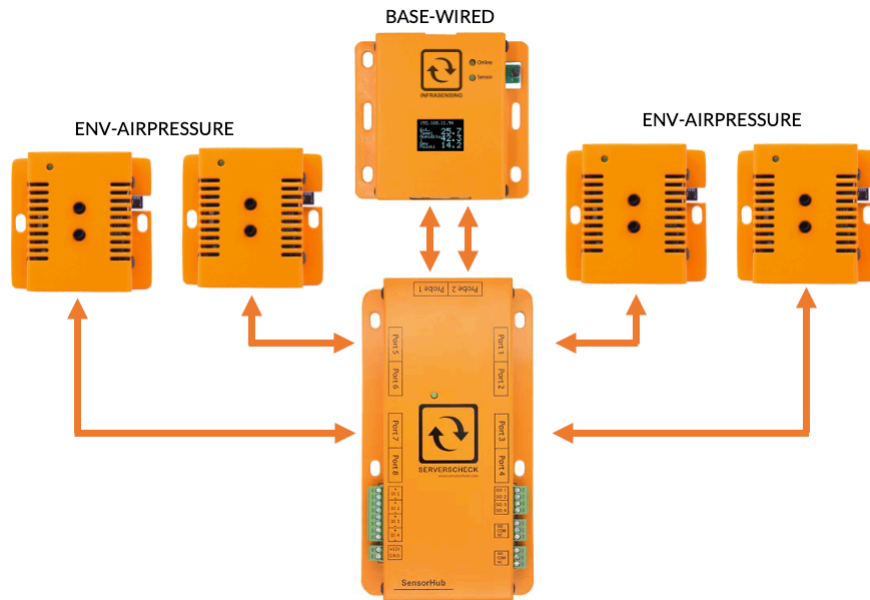

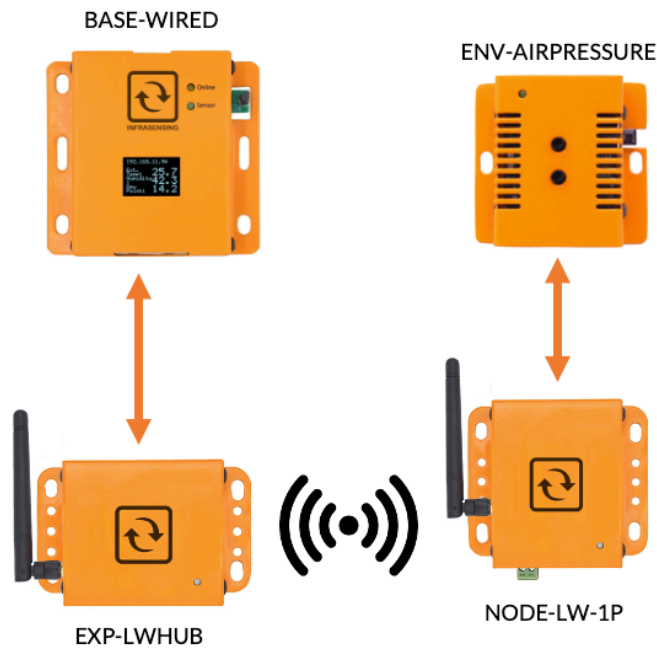1.2. Connect the BASE-WIRED to the sensor probe.

- 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.

V. Air filtration monitoring

You can use our ENV-AIRPRESSURE to monitor air filtration in ventilation systems.

5.1.   Connect a pneumatic hose to the tubes of our ENV-AIRPRESSURE.
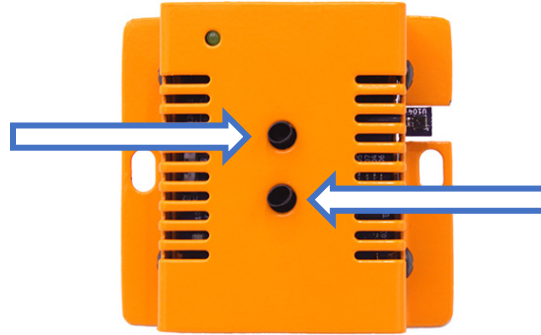
5.2.   Attach the end of the pneumatic hoses to the air vent: before and after the air filter.

Depending on the airflow inside the vent, the ENV-AIRPRESSURE sensor will have different readings:

5.2.1.   The configuration below will have a **positive** pressure reading on the sensor.
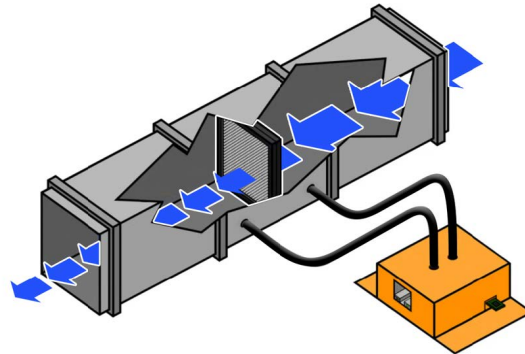
5.2.2.   The configuration below will have a **negative** pressure reading on the sensor.