

## GUIDE

# How to select and where to install indoor and outdoor sensors



### INSTRUCTIONAL GUIDE

This guide and content is for informational purposes only. Please read and follow all manufacturer installation, usage, and safety manuals and instructions.

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# 1. Selecting Sensor Installation Locations

## 1.1. Installation Locations

### 1.1.1. Indoor Sensors

For each school, please select five different representative spaces based on the following suggested factors:

- Occupancy schedule and density – prioritize the most populated or commonly used spaces
- Different functionalities, such as classrooms, offices, gyms, music rooms and cafeterias
- Locations where schools are considering implementing HVAC or other indoor air quality upgrades. Collecting baseline air quality measurements in those spaces can help assess the need and efficacy of indoor air quality interventions.

We typically recommend installing indoor air quality sensors in the following five types of spaces:

- Classroom #1: most common type of classroom at your school
- Classroom #2: music room or other high-risk classroom in terms of potential for infectious disease spread (e.g, rooms with high levels of student interaction, rooms where students sing in groups, or enclosed spaces with poor air circulation, which may be indicated by rooms with no windows, dedicated exhaust fans or portable air purifiers)
- Staff/Teachers'/Nurses' office space
- Cafeteria
- Locker room or weight room, gym, or other high-occupancy/high-risk room

### 1.1.2. Outdoor Sensors

We recommend finding a shaded area, usually a north-facing wall of the school, away from local sources of air pollution (e.g., furnaces and vents).

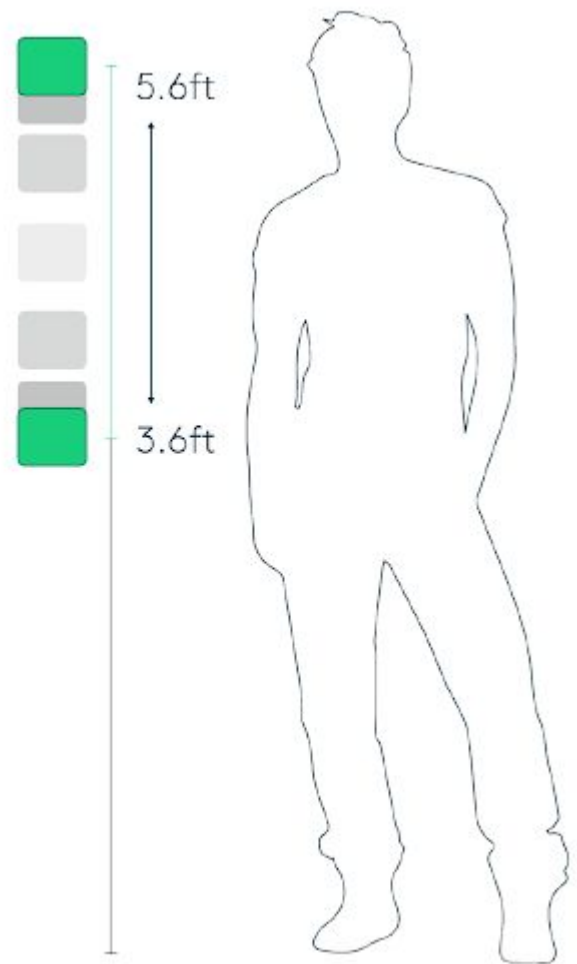
Ensure that the location is reasonably protected from the elements and lightning.

## 1.2. Where to place the sensors

### 1.2.1. Indoor Sensors

Once you have chosen the rooms for sensor placement, there are several factors to consider regarding where to place them in each room. The goal is to choose an area where the sensor can capture air pollutant concentrations associated with high occupancy levels for that space, while avoiding areas that might skew the sensor readings, such as near dry-erase or chalk boards, or other sources of air pollution.

- Each sensor should be installed at the typical breathing zone height – between 3.6 and 5.6 ft (1.1–1.7 m) above the floor to better represent exposure.
- Sensors should be placed at least 3 ft away from doors, windows, air purifiers, whiteboards, air vents and equipment with an exhaust function (e.g., printers).
- Sensor should have free air flow and not be placed behind furniture, artwork, drapery or tucked away in corners. Additionally, sensors should be where they are visible to school personnel to assist with monitoring sensor operation and helping prohibit tampering or theft.
- Sensor mounting location should be near a power source, preferably, or a power extension cord can be used if necessary.
- Sensor mounting location needs to have access to unencrypted WiFi (network without two-step authentication) or an ethernet port.



### 1.2.2. Outdoor Sensors

The sensors can be mounted at a height that is most convenient for the installation. Ensure that the sensor is high enough off the ground to allow for airflow, and make sure that water from the rain is not able to splash up into the underside of the sensor.

Please make sure that your desired mounting location is tamper resistant (where sensors cannot be easily disconnected), close to a nearby power outlet and has access to a reliable non-encrypted WiFi signal.

Additional Questions?  
email [support@delos.com](mailto:support@delos.com) to learn more



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