SMART LIGHTING · A PRACTICAL GUIDE

How to choose a sensor that actually fits

Most people pick a sensor by comparing datasheets. That’s backwards.

Start with the room, not the product. Answer four questions first — and the product almost picks itself.

01 What are you actually detecting?

02 How big is the space, and what’s in it?

03 How does it need to talk to the system?

04 Where does it live?

01

What are you actually detecting?

Someone walking through a corridor is motion. Someone sitting at a desk for two hours is presence. Those are different jobs.

MOTION

People passing through

Corridors, entrances, stairwells, warehouse aisles. People are moving, so the sensor just needs to react quickly and let go when the space empties.

PRESENCE

People staying put

Offices, meeting rooms, classrooms. People sit still for long stretches — and a motion-only sensor will switch the lights off on them.

A sensor that is great at one job can be terrible at the other. Get this wrong, and no setting, sensitivity tweak or second sensor will really fix it.

Start here: **are people moving through this room, or staying in it?** That one answer narrows the choice more than any datasheet.

02

How big is the space, and what’s in it?

A small office and a warehouse don’t want the same range. And size is only half the story.

The space	Ceiling height, room size and layout decide how far the sensor needs to see — and where blind spots will hide.
Glass & metal	Partitions, shelving and machinery change how detection behaves. What works in an empty room can behave very differently once it is fitted out.
Fans & air-con	Moving air and moving objects can fool a sensor into thinking someone is there. A busy plant room is not a quiet office.

The environment matters **as much as the square metres**. Describe the room as it will actually be used — not as it looks on the plan.

03

How does it need to talk to the rest of the system?

Pick the sensor that speaks your system's language — not the one with the longest feature list.

On / off	Simple switching. Enough for corridors, storage areas and anywhere dimming adds cost but no real value.
0–10V dimming	The light level follows occupancy and daylight. A common step up for offices and commercial spaces.
DALI	Addressable control, grouping and feedback, for buildings that manage lighting as a system rather than room by room.
Wireless	For retrofits and spaces where running new control wiring is impractical, disruptive or simply too expensive.
LoRaWAN	Long-range wireless for larger sites and outdoor lighting, where one gateway needs to reach many fittings and running control wiring across the site is not practical.

Features you will never use do not make a sensor better. The right interface, matched to the system already in the building, does.

04

Where does it live?

Ceiling or wall, indoors or out. A sensor has to fit the place it will spend its life in — not just the spec sheet.

INDOORS

It should disappear

In an office or classroom, the best sensor is the one nobody notices. It sits in the ceiling, does its job, and never asks anyone to wave at it.

OUTDOORS

It needs real protection

Rain, dust and temperature swings are part of everyday life outside. Weather protection is not an optional extra — it decides whether the sensor lasts.

Mounting matters too. The same sensor behaves differently on a ceiling and on a wall, so decide where it will live before you decide which model to order.

If you would not install it there yourself, **do not specify it for someone else's building** either.

THE SHORT VERSION

Once you know those four things, the product almost picks itself.

Skip them, and even the best sensor will disappoint you — not because it is a bad sensor, but because it was chosen for the wrong room.

We build sensors across all of those choices, from 5.8GHz to 24GHz, for motion and for presence, wired, wireless and LoRaWAN. If you are stuck between two options, tell me about the room and I will tell you which one fits.

But I'm curious — **what's the trickiest room you've had to cover?**

A warehouse, a glass office, or something stranger? Tell me in the comments.

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