



INDOOR AIR QUALITY

SSA indoor air quality sensor monitors the ambient building environment for:-

- > Compliance against recognised standards such as Well Building.
- > Demand side gains through open protocol BMS building controls.
- > Historical building & operational analytics, a digital shadow.

The sensor communicates via the Thorlux Lighting SmartScan network independently without intrusion to additional site networks. The sensors are supplied either stand-alone or integral to the emergency exit signs.

The air quality sensor has three visual LED settings, based on the usage of the space, that can be selected as part of the commissioning process (i.e. no red flashing lights).

Air Quality Sensor



SUB-METRICS

SSA portal enables notification setting parameters with LIVE customisable limits.

- > Carbon Dioxide [CO₂] level (ppm).
- > Relative Humidity (%).
- > Ambient Temperature (°C).

Lexi fitted with Air Quality Sensor



SMARTSCAN ANALYTICS

SmartScan Analytics (SSA) is an online portal that utilises the lighting network to transmit data from either stand-alone or integral sensors & meters.

SSA is a complete digital twin with defined limit notifications, alerts & trend regression, for demand side gains through open-protocol sensors and meters.

SSA records the simultaneous daily conditions & correlates previously known unknown data & metrics, i.e. power, people, movement, air quality etc, as a complete digital shadow.

A digital shadow provides evidential data of everything that happened in the space & adjoining space.





TEMPERATURE

Temperature greatly influences an individual's comfort level, affecting mood, performance and work-place productivity. Comfortable temperature ranges will depend upon the usage of the space.

A room temperature & productivity in office workplaces university study found that offices too hot suffer a 6% drop in performance whilst conversely too cold incurs a 4% drop in performance, with the highest productivity levels found between 21 and 22°C.



HUMIDITY

Humidity needs to be within a range of values for the environment to be comfortable and to promote good health. If the humidity levels are too low, individuals may experience dryness and irritation to the skin, eyes, throat and nasal passages. Conversely, high humidity levels promote the growth and accumulation of mould spores, bacteria and dust mites, potentially leading to allergies and respiratory inflammation. Humidity is also linked to temperature, so that at lower temperatures, higher humidity levels can be tolerated.



CARBON DIOXIDE

CO₂ levels over 1000ppm create a "stuffy" atmosphere, causing individuals to feel lethargic and sleepy, lowering concentration levels and reducing work-place performance. The cause of CO₂ build-up is often inadequate ventilation and/or air circulation within a space. Increasing the ventilation will bring in fresh air and dispel accumulations of CO₂.

If it counts,
count it...

Linear metrics can be used to monitor trends, when combined with quantitative or qualitative metrics for cross analytics, further insights can be realised. SSA can measure anything digital or physical, please contact your Thorlux Lighting representative to discuss custom metrics for your business.

