# AIR QUALITY SENSING

Research shows that air quality has an impact on health, and could potentially affect an individual's well-being, comfort and performance in the workplace. Issues with air quality may lead to symptoms such as headaches, fatigue and eye irritation.

## SMARTSCAN PLATFORM 2 - AIR QUALITY RECORDING

Each day air quality data is gathered by the SmartScan Gateway from every SmartScan Air Quality Sensor and included in the Gateway's status upload to the SmartScan website.

Authorised users can then view the air quality profiles as an annual, monthly, weekly or daily report. This data is available for groups and/or individual luminaires.

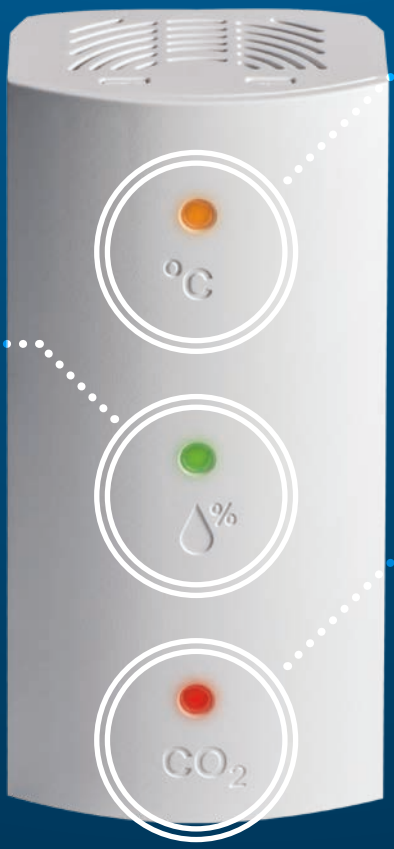
### KEY FEATURES

- No additional software is required
- Air quality records are stored off-site and can be viewed at any time by an authorised user
- Reports available for all groups and luminaires

## SMARTSCAN AIR QUALITY SENSOR

**The SmartScan Air Quality Sensor monitors three key parameters:** Temperature, $CO_2$ and Relative Humidity.
Coloured LED indicators within the sensor provide live status information for each parameter, enabling users to take remedial action if necessary. Summary air quality data is included in the daily status upload to the SmartScan web server. The Air Quality Sensor has three settings, based on the usage of the space, that can be selected as part of the commissioning process; inactive, semi-active or active.

# "THINK SMART ABOUT AIR QUALITY"




### °C 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.

### % 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.

### $CO_2$ CARBON DIOXIDE

$CO_2$ 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 $CO_2$ 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 $CO_2$.

## AIR QUALITY SENSOR SETTINGS

| SETTING | TEMPERATURE | HUMIDITY | $CO_2$ |
|---|---|---|---|
| **INACTIVE**<br>**Typical Applications:**<br>Care Homes, Offices | >26°C | >70% | >1000 ppm |
| | 24 -26°C | 51-70% | 800-1000 ppm |
| | 20 -24°C | 25-50% | <800 ppm |
| | <20°C | 20-25% | |
| | | <20% | |
| **SEMI-ACTIVE.**<br>**Typical Applications:**<br>Warehouses, Factories, Retail | >25°C | >70% | >1000 ppm |
| | 23 -25°C | 51-70% | 800-1000 ppm |
| | 20 -23°C | 25-50% | <800 ppm |
| | <20°C | 20-25% | |
| | | <20% | |
| **ACTIVE**<br>**Typical Applications:**<br>Sports Halls | >21°C | >70% | >1000 ppm |
| | 19 -21°C | 61-70% | 800-1000 ppm |
| | 16 -19°C | 25-60% | <800 ppm |
| | <16°C | 20-25% | |
| | | <20% | |