### MICROSENS



# **SMART SENSOR**

COLLECTING ENVIRONMENTAL DATA TO OPTIMISE ENERGY EFFICIENCY & WELLBEING IN THE BUILDING

## MEASUREMENT OF AIR QUALITY AND ENVIRONMENTAL CONDITIONS

#### Demand-based air handling:

Air quality measurement enables demand-based control of ventilation and air conditioning systems to save energy.

#### Adaptive temperature control:

Real-time air quality data enables adaptive temperature adjustments to optimise comfort and and reduce energy consumption.

#### **Efficient air purification:**

Measurements of particles and pollutants help, optimise the efficiency of air filtration systems.

#### Avoidance of over-ventilation:

By monitoring the air quality, unnecessary ventilation is avoided, which reduces energy consumption.

#### **Optimising air circulation:**

Air quality measurements help to identify areas with poor air quality and enable targeted management of ventilation systems.

## **DETECTION RANGE OF THE** SMART MATRIX SENSOR



| 21,64 | 21,72 | 21,88 | 22,59 | 23,64 | 22,00 | 22,12 | 21,64 |
|-------|-------|-------|-------|-------|-------|-------|-------|
| 21,74 | 22,51 | 22,42 | 22,60 | 23,91 | 23,18 | 21,88 | 21,97 |
| 23,06 | 23,27 | 22,96 | 23,97 | 25,91 | 24,43 | 21,63 | 21,43 |
| 23,48 | 24,12 | 23,41 | 23,81 | 26,82 | 25,45 | 22,10 | 21,84 |
| 23,27 | 25,65 | 27,68 | 25,59 | 27,51 | 25,93 | 21,78 | 22,64 |
| 23,82 | 26,17 | 30,52 | 26,04 | 26,74 | 26,81 | 22,46 | 24,04 |
| 23,44 | 24,40 | 25,93 | 24,64 | 25,90 | 26,06 | 22,13 | 22,88 |
| 22,68 | 22,86 | 23,29 | 23,46 | 22,89 | 24,60 | 22,18 | 22,06 |



## ENERGY TRANSITION FOR COMMERCIAL REAL ESTATE

#### **Energy consumption monitoring:**

Continuous monitoring and measurement of energy consumption enable a better understanding, identify consumption patterns and localise areas with high energy consumption.

#### HVAC system optimisation:

Temperature sensors can be used to optimise the heating, ventilation and air conditioning in commercial buildings to maximise comfort and minimise energy consumption.

#### **Demand-controlled lighting:**

Sensors regulate lighting based on demand, by using motion sensors to automatically switch the light on and off or dim the lights depending on presence in rooms.

#### Early fault detection and maintenance:

Use sensors for early detection of potential problems in order to reduce maintenance costs.

#### Information for consumers to change their behaviour:

Real-time data on energy consumption motivates consumers to act more energy-efficiently and reduce their energy consumption

### **SCHOOLS**



### **MICROSENS**

Networking and air quality optimisation in schools



Networking and lighting optimisation in office buildings



Climate optimisation and asset management in nursing homes & Hospitals

## **SMART SENSOR USER INTERFACE**





## **MICROSENS** STANDS FOR COMPETENCE IN ACTIVE NETWORK SOLUTIONS

For more than 30 years the manufacturer MICROSENS focuses on communication via fiber optic based enterprise, industry and access networks. The development and manufacturing "Made in Germany" contribute significantly to our success.



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