kerberos

KET-AIR-200

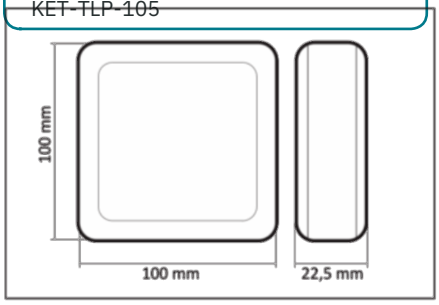
Applications

Versius

KET-AIR-210

KET-THL-305

KET-TLP-105



IP40 | X- MONITOR | 2xAA | 5-12 VDC

Wireless ambient sensor of indirect CO2 and volatile organic compounds

- **Innovative e-ink display always visible**
- **Perfect integration into BMS / BEMS systems**
- **Integrated thermostat function**
- **Internal memory**

Considering that people spend up to **90% of their time indoors**, the presence of **gaseous pollutants**, particularly **Volatile Organic Compounds (VOCs)**, is significantly higher compared to open spaces. In high-density environments such as offices, schools, hospitals, and other **public premises**, especially in modern buildings characterized by **poor air exchange**, there is an increase in the concentration of **carbon dioxide (CO2)** produced by human activity. These negative indoor environmental conditions can significantly impact **people's well-being**, contributing to health problems, **decreased concentration**, and reduced **productivity**. The **KET-AIR-200** device uses an indirect method of measuring **CO2** based on a **MOX technology sensor**, which estimates the amount of carbon dioxide by detecting the hydrogen concentration. Combined with a sensor dedicated to measuring **Volatile Organic Compounds (VOCs)**, the KET-AIR-200 allows for the implementation of effective measures to increase and improve **ventilation efficiency** and **air purification**, creating healthier and more comfortable indoor environments. The **KET-AIR-200** also integrates high-precision sensors for measuring **Temperature**, **Relative Humidity**, and **Ambient Light**, providing comprehensive environmental monitoring. Thanks to the high sensitivity of its amplified radio module, the device reaches distances of over **600 meters in open air**, ensuring a reliable connection with other products in the **X-Monitor** network, leveraging the benefits of **IEEE 802.15.4 wireless technology** for efficient and flexible communication. The **KET-AIR-200.DY version** is equipped with a **zero-power e-ink display** that provides users with detailed information on the level of **thermal comfort** present in the environment, ensuring **optimal and continuous reading** of the

Technical Features

General specifications	**Protection Range**: IP40 **Operative Temperature**: -10 ÷ +60 °C **Storage Temperature**: -15 ÷ +60 °C **Relative Humidity**: MAX 80% not condensing
Case	**Dimensions**: 100 x 100 x 22.5 mm (W x H x D) **Mounting**: Panel mounting with supplied supports **Material**: ABS, self extinguishing: UL 94 V-O
Power supply	**Supply Voltage**: 12 VDC or via USB **Connectors types**: Removable spring clamps
Datalogger function	**Memory Type**: Internal Flash (only for .DL version) **Data Storage Capacity**: Retention of more than 60,000 data with date and hour even if there is no connection
Digital inputs	**Channels**: 1 for dry contact with detection time at contact variation of about 50ms. (optional)
Radio module	**Supported Protocols**: X-Monitor Protocol (X-MP) / IEEE 802.15.4 **Radio Frequency**: 2.4 GHz ISM Band **Output Power**: +3 ÷ +20 dBm **Sensitivity**: -101 dBm **Antenna Type**: 1 internal **Max Distance (Free Air)**: Over 600 m
Functionality	**Radio Signal Indicator**: Integrated (LinkQuality) **Output Power Adjustment**: From local keyboard and remotely **Firmware Upgrade**: Over The Air and via USB C connector **User menu**: Thermostat function with temperature summer / winter mode, comfort / saving / off mode, air speed setting, (only .TS version) **Support for public environment**: Anti-removal support, keyboard lock and active function limitation
Temperature sensor	**Sensor Type**: Digital **Measure Range**: -40 ÷ +123.8 °C **Precision**: ±0.4 ÷ 25 °C **Repeatability**: ±0.1 °C **Resolution**: ±0.01 °C

Technical Features	
Humidity sensor	**Measure Range**: 0 ÷ 100%RH **Precision**: ±3%RH from 20 to 80%RH **Repeatability**: ±0.1%RH **Resolution**: ±0.03%RH **Hysteresis**: ±1%RH **Long Period Stability**: <0.5%RH/year
Light sensor	**Number of sensors**: 2, on front and on top **Measure Range**: 10 ÷ 1000 Lux **Response Curve**: Similar to that of the human eye
Volatile organics compounds sensor	**Measure Range**: 0 ÷ 60000 ppb **Accuracy**: ±15% ppb **Resolution**: ±0.2% ppb
Co2 sensor	**Principle of Operation**: Indirect **Measure Range**: 400 ÷ 60000 ppm **Accuracy**: ±10% ppm **Resolution**: ±0.2% ppm
Display	**Display Type**: zero consumption e-ink (only .DY and .TS versions) **Resolution**: 122 x 250 pixel **Contrast Ratio**: High contrast, high reflectance **Viewing Angle**: 160°