kerberos

IP40 RS485 ModBUS

KET-AIR-210

Applications

Building management system

Versius

KET-AIR-200

ModBUS sensor for indirect CO2 and air quality measurement

- **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-210**?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-210 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-210**?also integrates high-precision sensors for measuring?**Temperature**,?**Relative Humidity**, and?**Ambient Light**, and is equipped with an?**RS485 ModBUS RTU Slave**?interface, facilitating integration with control and data acquisition systems. The?**KET-AIR-210.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 detected parameters with?**minimal energy consumption**. The?**KET-AIR-210.TS version**?allows the user to?**set the desired comfort**

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**: 5 ÷ 12 vdc **Consumption**: **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
Rs485 interface	**Channels**: **Supported protocols**: modbus rtu slave **Communication rate**: 9.6, 19.2, 38.4 o 57.6 kpbs **Isolation**: **Connectors types**: removable spring clamps
Functionality	**Radio signal indicator**: **Output power adjustment**: **Firmware upgrade**: **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	**Version**: **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 **Nominal pressure**: **Resolution**: ±0.2% ppm