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Kombi-Sky-RHT-CO2-TVOC-DP

Indoor air quality transmitter

A good indoor climate increases comfort, maintains health and secures the value of the property. Clean and adequate indoor air increases the satisfaction of building users and the productivity of work. For this purpose we have designed Kombi-Sky-RHT-CO2-TVOC-DP, a wireless and economical multi-sensor indoor air quality transmitter.

Kombi-Sky measures temperature, humidity, carbon dioxide (CO2) concentration, total volatile organic compound (TVOC) concentration and differential pressure.
This LoRa based Sky radio device is not compatible with the LoRaWAN infrastructure. If LoRaWAN is needed, choose the Kombi-LWEU device instead of Kombi-Sky.

Applications

Industry

Buildings and Environment

Product highlights and features

Economical and effective multi-sensor transmitter

Kombi-Sky uses LoRa technology which enables very long-range radio coverage in wireless battery-operated device

Sky radio enables excellent indoor coverage with only one Cell2 base station in a building

Does not require attention after installation. No parameter configuration is normally required

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General Specifications

Enclosure	ABS+PC, white painted
Environmental Protection	IP20
Weight	~210 g, including batteries
External Dimensions	75 mm x 48 mm x 105 mm (WHD)
Rated Operating Conditions	-30...+60°C, non-condensing
Allowed Storage Conditions	-40...+80°C, without batteries, non-condensing

Power Supply

Internal Battery Type	3 pcs LR6 (AA 1.5 V alkaline). For the estimated battery life, high quality batteries should be used, e.g. Energizer EN91.
Typical Battery Life	3 years with 30 minutes transmission interval
External Power Supply	Micro USB type B, 5 ± 0.5 V, max 200 mA, no suspend function

Measuring and data transmission

Interval	Configurable: 5min / 10min / 15min /20min / 30min / 1h / 2h / 3h / 4h / 6h
Radio	Nokeval Sky radio technology
Antenna	Internal
Frequency Band	433.05 – 434.79 MHz
Transmission Power	Max +10 dBm E.R.P.
Range, Line-of-sight	Depends on installation location and environment, in good conditions 10 km
Range, Indoor	Typically 30...300 m, depending on materials and structures

Temperature measurement

Sensor	High-accuracy semiconductor sensor, Swiss
Measurement Range	-40...+125°C
Accuracy	Typically ±0.1°C (+20...+60 °C)

Humidity measurement

Sensor	High-accuracy semiconductor sensor, Swiss
Measurement Range	0...100 %RH
Accuracy	Typically ±2 %RH (+0...+80°C, 0...100 %RH)

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Carbon dioxide concentration

Sensor	NDIR sensor
Measurement Range	400...5000 ppm
Accuracy	Typically ±45 ppm + 3% rdg
Autocalibration	Must see fresh air (unoccupied room) once a week for some hours

Total volatile organic compound concentration

Sensor	Semiconductor sensor, Swiss
Measurement Range	0.3...30 ppm
Accuracy	Typically ±15%

Differential pressure measurement

Sensor	High-accuracy flow sensor, Swiss
Measurement Range	-125...+125 Pa
Accuracy	

Particulate matter measurement model -Dust13

Measurement range	0...1.2 million particles per litre (up to 10,000 particles per second)
Particle sizes	0.4...12.4 µm
Particle type	For max accuracy, assumed to be spherical, density 1.65 g/ml, refractive index 1.5
Values measured	PM1, PM2.5, PM4, PM10

Particulate matter measurement model -Dust40

Measurement range	0...2.8 million particles per litre (up to 10,000 particles per second)
Particle sizes	0.4...40 µm
Particle type	For max accuracy, assumed to be spherical, density 1.65 g/ml, refractive index 1.5
Values measured	PM1, PM2.5, PM4, PM10, non-standard “PM40”