

DEVICE

The combined VOC, ambient temperature and humidity device from Lansen is a plug-and-play transmitter. Great care has been taken to design a sleek, good looking device with high security and performance. The device has 2 antennas for maximum range in both vertical and horizontal directions.

PERFORMANCE

The battery level is continuously monitored and a low level warning is issued when battery is nearing depletion.

TEMPERATURE SENSOR

The on-board temperature sensor is highly accurate with typical accuracy $\pm 0,2^\circ$.

FIRMWARE

MODES	T-mode. Can be custom ordered with C-, T- or S-mode
INTERVAL	90s, both sampling and sending. Sending interval can be ordered with custom interval (60s - 1hr)
ENCRYPTION	AES128 encryption OMS mode 5. Profile A.
MBUS DATA	Instant, average hour, average 24 hours.
STANDARD	T1 Mode, 90 sec synchronous. Encryption ON

SENSORS

TEMPERATURE	RANGE: -40° to $+85^\circ$ ACC: $\pm 0,2$ at 5 to $+55$
HUMIDITY	ACC: ± 2 %RH at 10-90 % RH.
VOC	ACC typical $\pm (15$ to $25\%)$ of value at $25^\circ / 50$ % RH Range: 0 ppb to 60000 ppb.

WARNINGS

BATTERY	Low battery
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POWER/LIFETIME

POWER SUPPLY	2 x ER18505 3.6V Li-SOCI2 battery pack.
CAPACITY	8200 mA
VOLTAGE	2.6 to 3.6V
LIFESPAN	16 years typical, depending on configuration and operating temperature.
RADIO	14 dBm (25mW) output power to antenna
ANTENNAS	2 antennas for true differential transmission

GENERAL INFORMATION

STANDARDS	2014/53/EU (RED) EN 13757-3/4:2013, OMS 4.0.2
OP TEMPERATURE	-40° to $+85^\circ$ (Recommended 5° to $+55^\circ$)
RELATIVE HUMIDITY	Non condensing
MATERIAL	White, ABS
SIZE (W x H x D)	80 x 80 x 25 mm

DEVICES

LAN-WMBUS-E-VOC	Ambient Sensor for VOC/temperature/humidity
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HUMIDITY SENSOR

The on-board humidity sensor is highly accurate in the entire temperature range, with typical accuracy $\pm 2\%$ RH.

VOC SENSOR

The on-board VOC sensor is used for sensing VOC gases (air quality). The sensor is a high performance sensor with minimum drift and reliable performance also over long time. The VOC sensor uses a gliding average algorithm as well as a baseline compensation algorithm to be able to detect bad air quality. This technique captures changes in air quality but cannot typically be used to indicate a constant air quality problem that exist for really long periods.

Note that the first accurate reading can typically be expected after 24 hours.

MEASUREMENTS

The VOC, temperature and humidity is sampled every 90 seconds and sent synchronous using the Wireless MBUS protocol OMS compliant. This makes the sensor ideal for integration in data collecting systems, drive by solutions or for controlling ventilation.

The data from the device is also protected using the AES128 encryption compliant with OMS standard.

