

LANSEN

Outdoor temperature and humidity sensor

LAN-WMBUS-O-TH

DEVICE

The outdoor ambient temperature and humidity device from Lansen is a plug-and-play transmitter. The device is made of highly durable PC plastic and the device includes a high accuracy on-board temperature and humidity sensor.

PERFORMANCE

The internal radio antennas are optimized for 868Mhz and are tuned for mounting on concrete, wood or plaster. Each device has two antennas, one in each direction to maximize the range between meters and collector. The battery level is continuously monitored and a low level warning is issued when battery is nearing depletion.

Note that this sensor is not designed for operating in constant freezing temperature. If this is required then a device ending with -H (harsh) is needed.

FIRMWARE

MODES	C-, T-, or S-mode (selectable on order)
SEND INTERVAL	60s - 1 hour (selectable on order)
SAMPLE INTERVAL	Same as send interval
ENCRYPTION	AES128 encryption OMS mode 5, Profile A. ON/OFF, and custom KEY
<u>STANDARD</u>	T1-Mode, 90 seconds. Encryption ON, unique key.

SENSORS

TEMPERATURE	RANGE: -40°C to +85°C
TYP ACC:	±0.2°C at 0°C to +85°C ±0.3°C at -40°C to +85°C
	Note: Even better accuracy possible on request.
HUMIDITY	TYP ACC: ±2 %RH
	Even better acc. on request.

WARNINGS

BATTERY	Low battery
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POWER/LIFETIME

POWER SUPPLY	ER17505 3.6V Li-SOCI2, battery
VOLTAGE	2.4 to 3.6V
LIFESPAN	14* years typical, depending on configuration and operating temperature.
RADIO	14 dBm (25 mW) output power to two differential antenn ERP typical: 12.4 dBm (17.38 mW)
BATTERY	Soldered (standard) or optional battery holder

GENERAL INFORMATION

STANDARDS	2014/53/EU (RED) EN 13757-3/4:2013, OMS 4.0.2
MATERIAL	Signal white PC UV stabilized plastic.
SIZE (W x H x D)	95 x 65 x 55 mm
IP	66

OPERATING CONDITIONS

RADIO TRANSMITTER	Max: -30°C to + 85°C. Recommended -20°C to +50°C
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DEVICES

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TEMPERATURE SENSOR

The on-board temperature sensor is highly accurate with typical accuracy $\pm 0.2^\circ\text{C}$.

HUMIDITY SENSOR

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

MEASUREMENTS

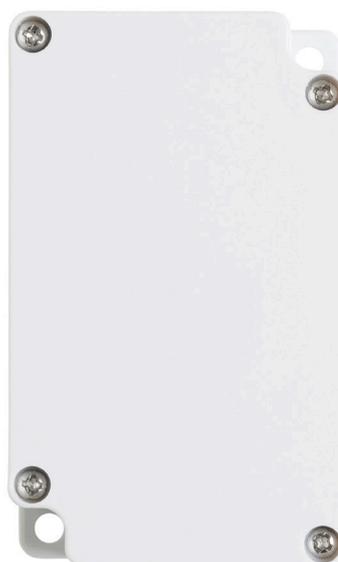
Temperature is sent at a preconfigured interval and the data is sent using the wireless M-Bus protocol OMS compliant. This makes the sensor ideal for integration in data collecting systems or drive by solutions. The M-Bus data contains current, average hour and average 24 hours.

The device complies with the OMS 4 synchronize message, sending the data pseudo random to avoid collisions.

INSTALLATION

The device is waterproof and resistant to raining water. The device should, if possible, still be mounted protected from rain and sunlight.

The device is started using a simple magnet so the enclosure does not need to be opened.



* The expected battery lifetime stated is based on simulations and true measurements at 25 C° and is valid to the best of our ability but not a guarantee. The calculations and measurements can be sent upon request for your reference.