

DEVICE

The ambient temperature and humidity device from Lanssen is a plug-and-play room temperature and humidity transmitter. Much care has been taken to design a sleek, good looking device with high security and performance. The design allows for discrete integration when mounted in home environment.

PERFORMANCE

The device has a robust design with innovative optical tamper detection function that will alert if the device is opened. A bit in the status message is set if sabotage is detected or restored. The battery level is continuously monitored and a low level warning is issued when battery is nearing depletion. For maximum performance the device has a tuned internal antenna.

TEMPERATURE SENSOR

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

FIRMWARE

MODES	C*, T or S
INTERVAL	60s - 1 hour
ENCRYPTION	AES128 encryption OMS mode 5, Profile A. ON/OFF, and custom KEY
STANDARD	T1-mode, 150 seconds, Encryption ON, unique key.

SENSORS

TEMPERATURE	RANGE: -40°C to $+85^{\circ}\text{C}$ TYP ACC: $\pm 0,2$ at 0 to $+65^{\circ}$
HUMIDITY	TYP ACC: $\pm 2\%$ RH at 20-80% RH.

WARNINGS

TAMPER DETECTION	Product opened or removed from the wall
BATTERY	Low battery

POWER/LIFETIME

POWER SUPPLY	ER14505 3.6V Li-SOCI2 battery.
VOLTAGE	2.4 to 3.6V
LIFESPAN	14 years expected, standard configuration and operating temperature***.
RADIO	14 dBm output power to antenna.
BATTERY	Soldered or optional battery holder.

GENERAL INFORMATION

STANDARDS	2014/53/EU (RED) EN 13757-3/4:2013, OMS 4.0.2****
MATERIAL	White, ABS
SIZE (W x L x D)	32 x 88,5 x 25,5mm

OPERATING CONDITIONS

RADIO TRANSMITTER	$+0^{\circ}$ to $+55^{\circ}\text{C}$ **
RELATIVE HUMIDITY	None condensing

DEVICES

LAN-WMBUS-CX-TH	Ambient Sensor for temperature/humidity
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HUMIDITY SENSOR

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

MEASUREMENTS

Temperature and humidity is sent at a predefined interval and the data is sent using the Wireless MBUS protocol OMS compliant. This makes the sensor ideal for integration in data collecting systems or drive-by solutions.

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

CONFIGURATION

The device can be ordered with custom MBUS mode, transmission interval and encryption. An additional cost for this will typically be charged.

MOUNTING

The device is either mounted with adhesive tape or with screws. The device with soldered battery is started using any standard magnet.



* Both C mode and T mode use the same radio settings both compatible with T1 mode in EN13757. Except that C1 mode uses NRZ encoding and T1 3outof6 encoding. Deviation 50 khz, bitrate typ 98-102kbit.

** Temperature outside this range can affect the possibility to receive data from the device.

***The expected battery lifetime stated is based on simulations and true measurements at 25 gr 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.

****The pseudo random delay between each packet transmission is longer to make collision more unlikely compared to the OMS specification. Can in volume be ordered with standard delay.

Specifications in this document are subject to change without notice