

# LPN CM-1

## Highlights

- LoRa® Class A
- Built in temperature and humidity Sensor
- Two Standard AAA Batteries
- USB for setup



## RF Performance

- 14 dBm TX-Power, -137 dBm RX-Sensitivity
- Approx. 10 km range

## Interfaces

- Built in temperature and humidity sensor
- Button to activate a measurement
- USB (for LoRa Setup)

## Environment

- Operating temperature -25°C to +60°C
- Storage temperature -40°C to 85°C
- Rel. humidity 0% to 95% (not condensing)

## General technical data

- 2 x AAA Battery
- Status LED
- Housing: Polyamide (PA 6-GB 30)
- Dimensions (L x B x H) 80 x 40 x 20mm

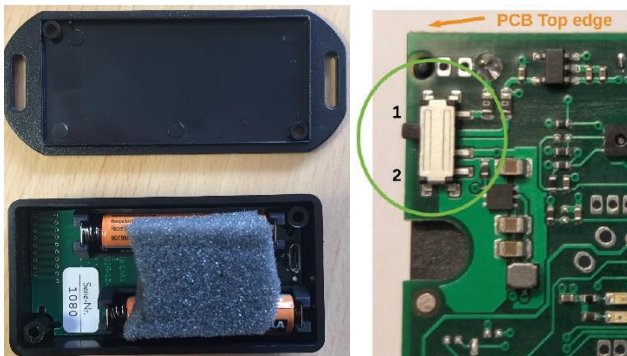
## Reference

- LoRa® CM-1 technical manual

## Norm & Safety

- EN 62368-1

## Supply, Communication & Indicators



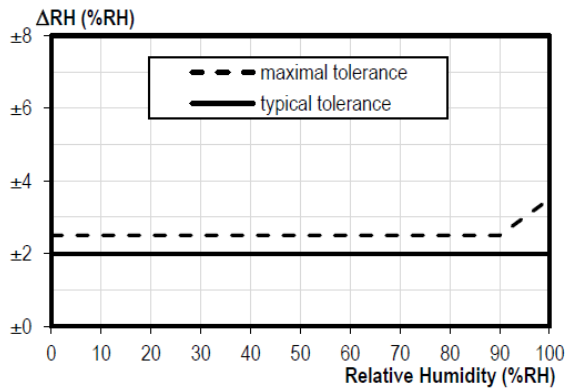
Name	Function	Interval
LED Blue	LoRa Uplink sent	Flash
LED Yellow	LoRa Downlink received	Flash
Switch	1 – Battery operation 2 – USB Supply operation	

## Estimated Battery lifetime

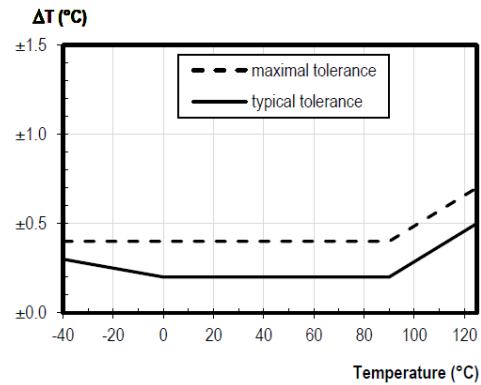
Alkaline AAA-Batteries with 1'100mAh, 25 degrees operating temperature, unconfirmed messages, 13 bytes payload. Values were estimated, the self-discharge and lifetime of the battery itself were not taken into account.

Spreading Factor	7	8	9	10	11	12
Send interval						
10 Minutes	5.56	4.34	3.09	1.76	1.07	0.57
15 Minutes	6.28	5.18	3.92	2.39	1.51	0.83
30 Minutes	7.21	6.43	5.36	3.73	2.56	1.50
60 Minutes	7.79	7.31	6.57	5.17	3.93	2.56
120 Minutes	8.11	7.84	7.40	6.42	5.36	3.93

## Accuracy of the internal temperature sensor



Tolerance of RH at 25° C



Temperature Sensor Performance Graph

## Several Extensions

### LPN CM-1-000

- Black housing, without mounting tab and orange Comtac sticker

### LPN CM-1-001

- Black housing including mounting tab and orange Comtac sticker

### LPN CM-1-003

- White housing without mounting tab and neutral sticker on the front

### LPN CM-1-004

- White housing with mounting tab housing and neutral sticker on the front.