

## TEFL WIRELESS ROOM SENSOR

### Description

TEFL is a wireless transmitter operating on the frequency range off 868.3MHz. It has been designed for reliable operation in wide range of environments. Totally 4 measurements and signals can be sent by one transmitter; temperature, set point, humidity and the state of a 5-position switch.

Communication between the transmitters and the FLTA base station is bidirectional, and the readings are updated at once when the measurement has changed enough, however at least once an hour.

Minimum changes causing immediate update message to FLTA:

-temperature: +/- 0,2 °C

-set point: +/- 0,2 °C

-humidity: +/- 0,5 %RH

The base station is monitoring also the transmitters for any malfunctions and for the low battery level. TEFL transmitters have a battery operating life time up to 6 years. Each FLTA base station may have up to 99 transmitters in its operation area and up to 63 FLTA base stations may operate in the same wireless area. In theory totally 6237 transmitters may be used in a single area. Each wireless transmitter, repeater and base station needs to have a unique address. Each transmitter address consists of two parts; SID (sensor ID) and MID (master / base station ID). These addresses will be configured wireless by using FLSER service tool.

The transmission area can be extended by using FLREP or FLREP-U repeaters (up to 8 pcs) between transmitters and the FLTA base station. As the communication is bi-directional all the time, is also the transmitter aware of the function of the network. By the lamp the transmitter is able to inform about the problems in the network and about the needed service. For example the transmitter is alarming when less than 5% of the battery capacity remains.

Function of the lamp during operation:

1 flash / 2 s battery - and network alarm

1 flash / 4 s battery alarm

1 flash / 8 s network alarm

FLTA base station receives the same information and transmits it forward to the monitoring system.



#### Technical data:

Supply	3V6 AA Lithium Battery 2Ah
Transmission Frequency	868.30 MHz, Class 1
Transmission Range	500m line in sight 20 ... 100m in buildings
Transmission power	+8 dBm
Reception sensitivity	-109 dBm
Modulation	FSK
Measurement accuracy	
temperature	+/- 0,5 °C, (25 °C)
humidity	+/- 3% RH, (25 °C)
Ambient temperature	0 ... 50°C
Ambient humidity	0...100% RH, non-condens
Measurement range	
Temperature	0... +50°C
humidity	0... 100%RH
-continuous use	5 ... 95 %RH
Set point range	18 ...24°C
Housing	ABS-plastics, IP20
Battery life	6 years
Battery life with FL-N	3 years
Battery life after low battery alarm	3 months

#### Ordering guide:

Model	Product nr	Description
TEFL-RH	500 502	TEFL-RH

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