

## KLUF L WIRELESS HUMIDITY & TEMPERATURE TRANSMITTER

KLUF L is a wireless battery operated transmitter using 868.30 MHz frequency and FSK modulation. Totally three signals can be sent to the base station; humidity, temperature and light level. Sensor elements for humidity and temperature are built-in but for the light level detecting is needed external LUX 11 sensor.

KLUF L transmits the signals to the FLTA at the set intervals (from every 6s to every 30min.). Setting is made by a trimmer on the pcb inside the device. Battery life-time depends on the set transmission interval and varies between 1 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:

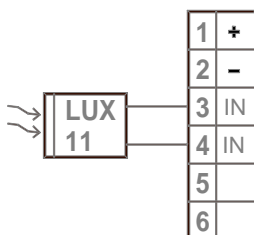
1 flash / 2 s	battery - and network alarm
1 flash / 4 s	battery alarm
1 flash / 8 s	network alarm

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

Function of the lamp during the setting of the transmission interval:

6 s	1 flash
1 min	2 flashes
5 min	3 flashes
15 min	4 flashes
30 min	5 flashes

Wiring:



### Technical data:

Supply	3V6 AA Lithium batt. 2Ah
Frequency	868.30 MHz Class1
Range	500m line in sight 20 ... 100m in buildings
Transmission power	+8 dBm
Reception sensitivity	-109 dBm
Modulation	FSK
Accuracy:	
temperature	+/- 0,5 °C
humidity	+/- 3 % RH, (25 °C)
Measurement ranges:	
temperature	-50 ... +150°C
humidity	0...100 % RH
(continuously)	5...95 % RH
light level	0..1000 lux
Ambient:	
temperature	-40 ... 50°C
humidity	0...100 % RH (non-condensing)
Housing, protection class	PC plastics, IP54
Battery life for different transmission intervals:	
6 s	1 year
1...5min	3 years
15...30 min	6 years
Battery life after start of alarm	3 months

### Ordering guide:

Model	Product nr	Description
KLUF L	1191110	wireless transmitter
LUX 11	1133350	light level sensor
A04491	A04491	lithium battery