

KLUFL WIRELESS HUMIDITY & TEMPERATURE TRANSMITTER

KLUFL 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. KLUFL 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



Technical data:		
Supply	3V6 AA Lithium batt. 2Ah	
Frequency	868.30 MHz, Class 1	
Range	500m line in sight 20 ... 100m in buildings	
Transmission power	+8 dBm	
Reception sensitivity	-109 dBm	
Modulation	FSK	
Accuracy:		
Temperatur	+/- 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	
Ambient humidity	0...100 % RH	
(non-condensing)		
Housing, protection class	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	
Model	Produkt number	Description
KLUFL	500 509	Hum/temp/light

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