

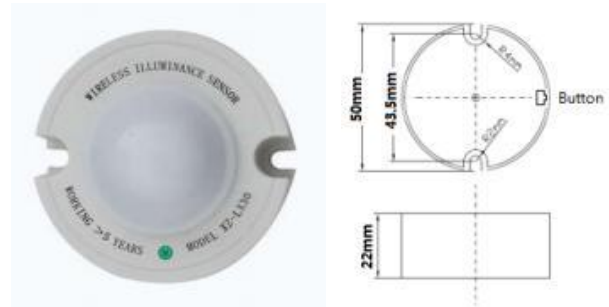


# Low Power Consumption Wireless Illuminance Sensor

## 1. Product Overview

### 1.1 Features

- Install and work, starting by pressing a key;
- Built-in battery with 5-year lifespan;
- Wireless router to expand transmission distance
- ASCII code output, clear and convenience.



**XZ-LX30-4 (433MHz) XZ-LX30-8 (868MHz) XZ-LX30-9 (915MHz)**

### 1.2 Application

It is used in various fields such as environmental monitoring, greenhouse, agricultural planting, energy and chemical industry, production workshop, and smart identification.

### 1.3 Description

XZ-LX30 is a wireless ultra-low power illumination sensor terminal. Using digital sensors, battery power supply, periodically detect the temperature of on-site environment, and actively report the detection data. It has the functions of active energy consumption control, battery voltage detection, wireless frequency hopping, detection transmission cycle can be set.

## 2. Using Manual

### 2.1 XZ-LX10 Working Process

XZ-LX30 can switch to different working modes according to the mode of use. The mode is as follows:

**1. Sleep mode:** sensor does not work, no wireless transmission, completely dormant and low power consumption.

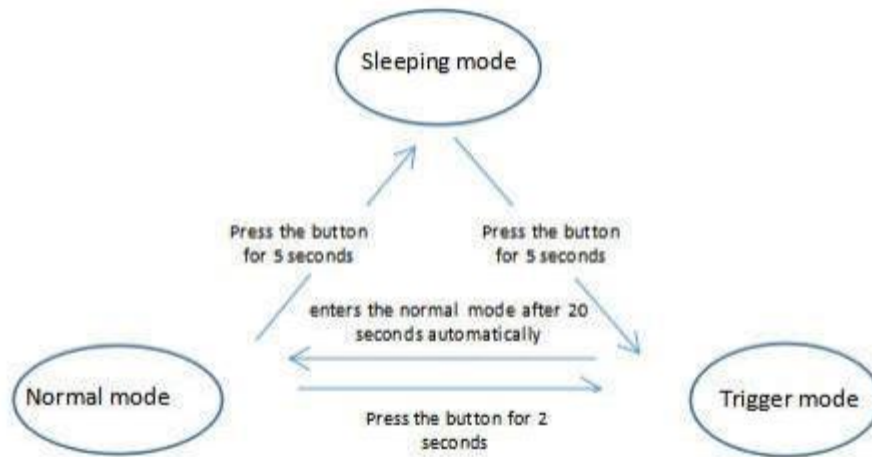
**2. Trigger mode:** detect the sensor every second and transmit the signal, the LED flickers; the ID of the wireless

sensor can be set wirelessly through the PC software or serial port input command; only keep working for 20 seconds.

**3. Normal mode:** The sensor is detected every 5mins and the signal is transmitted, and the LED flickers.

**4. mode switch:** Mode switching: Three modes can be switched by "button", the switching time sequence is as follows: a. Sleep mode keeps pressing the button for 5 seconds to enter the trigger mode b. The trigger mode automatically enters to working mode after 20 seconds;

- c. Working mode press the button for 2 seconds to enter to trigger mode;
- d. Working mode press the button for 5 seconds to enter to trigger mode.



## 2.2 Data Protocol

XZ-LX30 sensor data is encrypted and transmitted, and then the XZ-TAG series gateway resolves the output data protocol.:

ID=xxxxxxx, Lumen=xxxxxxLX, S=0xxxxxxx, V=x.xxV, SN=xxx, RSSI=-xxdBm

ID=xxxxxxx, Lumen=xxxxxxLX, S=1xxxxxxx, V=x.xxV, SN=xxx, RSSI=-xxdBm, RPRI=-xxdBm

ID: The address data is 0 to 9 digits of 8-bit ASCII code.

Lumen: Illumination data is 6-bit ASCII characters in LX (lux);

S: The status word is 0~1 digit of 8-bit ASCII code;

Flag bit	Explanation
Bit7	0, Receiving host receives data directly; 1 Forward data via repeater
Bit6~bit1	Reserve
Bit0	0 Normally report data; 1 button triggers reporting data

V: The voltage data is the actual voltage value, the unit is "V";

SN: The serial number of the transmitted data, the data has jitter, and the frequency hopping

transmitting serial number increases;

RSSI: The received signal strength value, the smaller the value is, the weaker the signal is.

RPRI: Signal strength of repeater transmitting data.

Example: ID=12345678, Lumen=000138LX, S=00000000, V=3.60V, SN=120, RSSI=-070dBm

ID=34562345, Lumen=100000LX, S=10000001, V=3.30V, SN=214, RSSI=-080dBm,  
RPRI=-78dBm

Reference value of illumination environment:

Burning sun:100000Lx; Cloudy day:8000Lx; office/classroom 300Lx; Street lamp:5Lx; Full moon:0.2Lx.

## 2.3Parameter

Working Frequency	433MHzdefault, 868mhz/915mhz customized
Transmitting Power	<10dBm
Sensitivity	<-112dBm
Transmitting Current	<60mA
Receiving Current	<40mA
Working Voltage	2.5~3.6V
Transmission Distance	>500meters(Line of Sight)
Lumen Range	0~200000LUX
Acquisition Interval	5mins @normal mode; 2 seconds @triggering mode
Average Power Consumption	<15uA
Working Temperature	-40℃~+80℃
Working Lifespan	>5years @ 1000mAH