

Multi-meter with  Bluetooth® 5.0 SIG Mesh

HBLM01

Accurate Lux Measurement & Dynamic
Bluetooth Transmission & Air Temperature & Humidity

HYTRONIK®

Product Description



HBLM01 is a Bluetooth multi-meter, powered by both solar and battery, it detects illumination, temperature, and humidity, and transmitting data via Bluetooth. With NFC integrated, it is convenient for device configuration and commissioning. Moreover, HBLM01 is compact in size and freely be placed anywhere for needed. All simple device setup and commissioning can be done via the **Koolmesh®** app.









App Features

-  Quick setup mode & advanced setup mode
-  Floorplan feature to simplify project planning
-  Web app/platform for dedicated project management
-  Offline commissioning
-  Different permission levels via authority management
-  Network sharing via QR code or keycode
-  Remote control via gateway support HBGW01 or HBGW02
-  Interoperability with Hytronik Bluetooth product portfolio
-  Continuous development in progress...

Hardware Features



-  LUX measurement
-  Humidity measurement
-  Temperature measurement
-  LCD Screen
-  Freely placement
-  With solar battery
-  NFC integrated
-  Designed for Office Desks & Warehouse Flow
-  5-year warranty

 **Bluetooth® 5.0 SIG mesh**






for iOS for Android

Smartphone app for both iOS & Android platform



for iPad


Koolmesh Pro app for iPad



for Web

Web app/platform: www.iot.koolmesh.com

Technical Specifications & Dimensions

Bluetooth Transceiver	
Operation frequency	2.4 GHz - 2.483 GHz
Transmission power	4 dBm (MAX.)
Range (Typical indoor)	10~30m
Protocol	 Bluetooth® 5.0 SIG Mesh

Dimensions	
Sensor (ØxH)	51 mm x 13.2 mm
Overall Frame(LxWxH)	60mm x 60 mm x 14.9mm

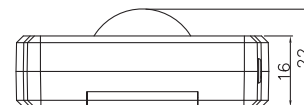
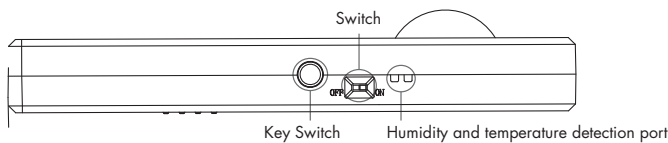
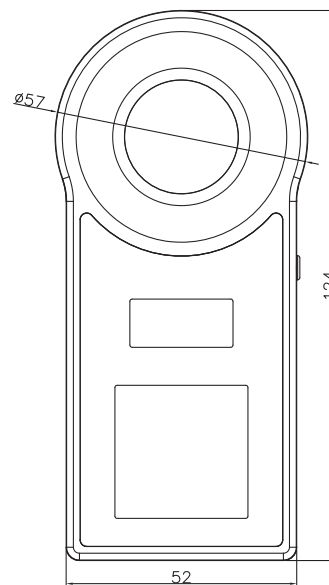
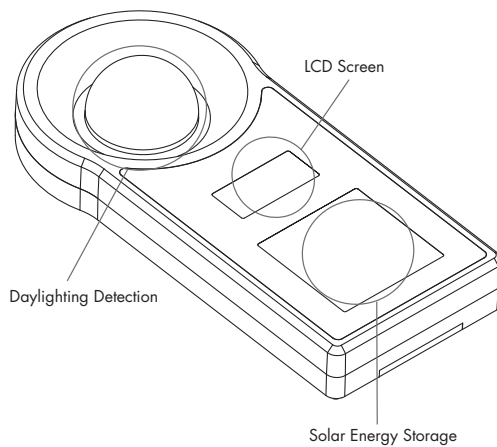
Measurement Range	
Temperature	Ta: -40°C ~ +85°C
Humidity	0% ~ 100%
Lux range	0 ~ 4000 Lux

Input & Output Characteristics	
Input voltage	3.0V
Standby current	10µA
NFC	13.56 (MHz)

Environment	
Operation temperature	Ta: -20°C ~ +60°C
Relative humidity	0% ~ 90%
Storage temperature	Ta: -40°C ~ +70°C
IP rating	IP20

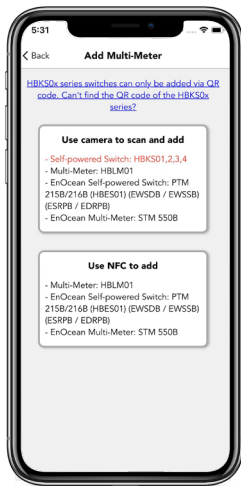
Safety & EMC	
EMC standard (EMC)	EN55032
RED	EN300328 EN301489-1/-17

Mechanical Structure



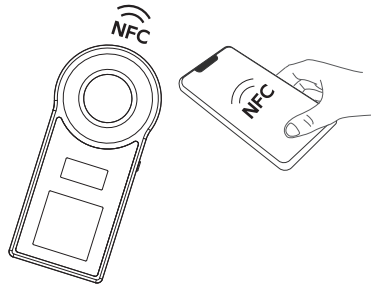
*Press the key switch, the LCD will display the lux level, temperature, humidity value. Each button press displays the latest real-time reading.

Setting Via **Koolmesh**® App



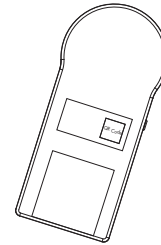
A. Use NFC to add

Turn on NFC on your phone and close to the top of HBLM01 to pair the device.



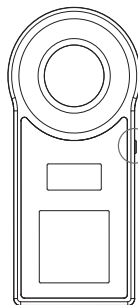
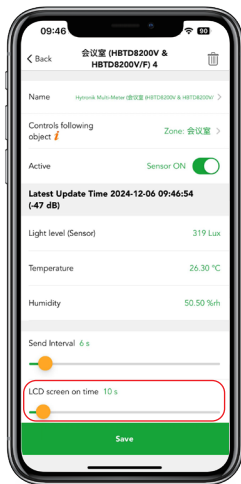
B. Use camera to scan and add

Scan the QR code on the back of HBLM01 to pair the device.



- Notes:
1. The version of the bound Bluetooth product must be greater than or equal to 4.1.
 2. The distance between Bluetooth products and HBLM01 cannot exceed the Bluetooth range.

LCD Screen Setting



Key Switch

To meet various needs, the product allows adjusting the LCD screen display time via the **Koolmesh**® APP or key switch. The key switch is set to off mode by default.

APP Settings

The screen on time can be adjusted by dragging the slider.

(After resetting the LCD screen on time, NFC sensing or QR code scanning is required to update the data.)

The key switch has two modes:

1. If the LCD screen on time is set to 10 seconds, pressing the key switch once will turn on the screen for 10 seconds. Pressing it again adds an additional 10 seconds.
2. If the LCD screen on time is set to the maximum, pressing the key switch once keeps the screen always on; pressing it again turns it off.

Practical Installation Suggestions

1. **Stable Installation:** The illuminance meter should be placed on a stable, vibration-free surface, ensuring that the instrument is directly facing the light source so that the light can directly reach the sensor. Avoid placing the instrument near reflective surfaces or obstructions to prevent affecting measurement accuracy.
2. **Lighting Position:** The device should be placed in a well-lit area, with the ideal installation position being horizontally placed, such as on a table, to ensure that the solar panel can effectively collect sunlight.
3. **Spare Battery:** The HBLM01 does not come with batteries. Please prepare and install two AAA LR03 1.5V batteries to ensure continuous normal operation. In environments with prolonged insufficient light, the solar charging function will stop when the battery discharges below 2.3V. After installing new batteries, the solar charging function will work normally. (Battery life reference: batteries need to be replaced approximately every 6 months.)
4. **Cleaning Method:** Use a soft, lint-free cloth to clean the surface of the device. Avoid using chemical cleaning agents to ensure that the sensor and solar panel are free from dust, maintaining measurement accuracy.
5. **Avoid Obstructions:** Ensure that the top of the illuminance meter is kept open and free from any coverings to prevent interference with the normal operation of the sensor.

Additional Information / Documents

1. To learn more about detailed product features/functions, please kindly refer to <https://hytronik.com/service/downloads> (System Level Components)
2. Regarding precautions for Bluetooth product installation and operation, please kindly refer to <https://hytronik.com/service/downloads> (Bluetooth Products Precautions for Product Installation and Operation)
3. Regarding Hytronik standard guarantee policy, please kindly refer to <https://hytronik.com/service/downloads> (Guarantee Conditions document)