DRAGINO S31-LB LoRaWAN Temperature and Humidity Sensor User Manual

LoRaWAN Temperature & Humidity Sensor
S31-LB
User Manual

Contents

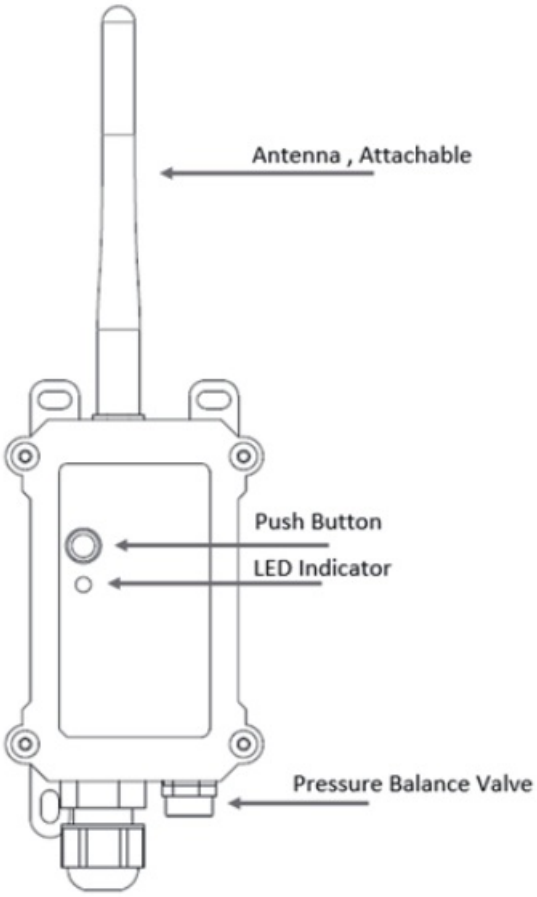
OVERVIEW

The Dragoon S31-LB is a Lora WAN Temperature and Humidity Sensor for Internet of Things solution. It is used to measure the surrounding environment temperature and relative air humidity precisely, and then upload to IoT server via LoRaWAN wireless protocol.
The temperature & humidity sensor used in S31-LB is SHT31, which is fully calibrated, linearized, and temperature compensated digital output from Sensation, it provides a strong reliability and long-term stability. The SHT31 is xed in a waterproof anti-condensation casing for long term use.
The Lora wireless technology used in S31-LB allows device to send data and reach extremely long ranges at low data-rates. It provides ultra-long range spread spectrum communication and high interference immunity whilst minimizing current consumption.
S31-LB supports Temperature & Humidity alarm feature, user can set temperature alarm for instant notice.
S31-LB supports Data log feature, it can save the data when there is no Lora WAN network and uplink when network recover.
S31-LB supports BLE configure and wireless OTA update which make user easy to use.
S31-LB is powered by 8500mAh Li-SOCI2 battery, it is designed for long term use up to 5 years.
Each S31-LB is pre-load with a set of unique keys for Lora WAN registrations, register these keys to local Lora WAN server and it will auto connect after power on.

Features

- Lora WAN v1.0.3 Class A
- Ultra-low power consumption
- Measure range: -55°C ~ 125°C
- Temperature & Humidity alarm
- Bands: CN470/EU433/KR920/US915/EU868/AS923/AU915/IN865
- Support Bluetooth v5.1 and Lora WAN remote configure
- Support wireless OTA update firmware
- Uplink on periodically
- Downlink to change configure
- 8500mAh Battery for long term use
- IP66 Waterproof Enclosure

Button & LEDs



Specifications

Common DC Characteristics:

- Supply Voltage: 2.5v ~ 3.6v
- Operating Temperature: -40 ~ 85°C

Temperature Sensor:

- Range: -40 ~ 80 °C
- Accuracy : ±0.2 @ 0-90 °C
- Resolution: 0.1°C
- Long Term Shift: < 0.03 °C/yr

Humidity Sensor:

- Range: 0 ~ 99.9 % RH
- Accuracy: ± 2%RH (0 ~ 100% RH)
- Resolution: 0.01% RH
- Long Term Shift: <0.25 % RH/yr

LoRa Spec:

- Frequency Range, Band 1 (HF): 862 ~ 1020 Mhz

- Max +22 dBm constant RF output vs.
- RX sensitivity: down to -139 dBm.
- Excellent blocking immunity.

Battery:

- Li/SOCI2 un-chargeable battery
- Capacity: 8500mAh
- Self-Discharge: <1% / Year @ 25°C
- Max continuously current: 130mA
- Max boost current: 2A, 1 second

Power Consumption:

- Sleep Mode: 5uA @ 3.3v
- LoRa Transmit Mode: 125mA @ 20dBm, 82mA @ 14dBm

Applications

- Wireless Alarm and Security Systems
- Home and Building Automation
- Automated Meter Reading
- Industrial Monitoring and Control
- Long range Irrigation Systems,etc.

Order Info: S31-LB-XXX
XXX: The default frequency band

- XXX: Frequency Bands, options:
  EU433,CN470,EU868,IN865,KR920
  AS923,AU915,US915

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Documents / Resources

	**DRAGINO S31-LB LoRaWAN Temperature and Humidity Sensor** [pdf] User Manual S31-LB, S31-LB LoRaWAN Temperature and Humidity Sensor, S31-LB LoRaWAN Temperature Sensor, Temperature Sensor, Humidity Sensor, S31-LB Sensor, LoRaWAN Sensor, Sensor

References

- **Dragino :: Open Source WiFi, Linux Appliance**