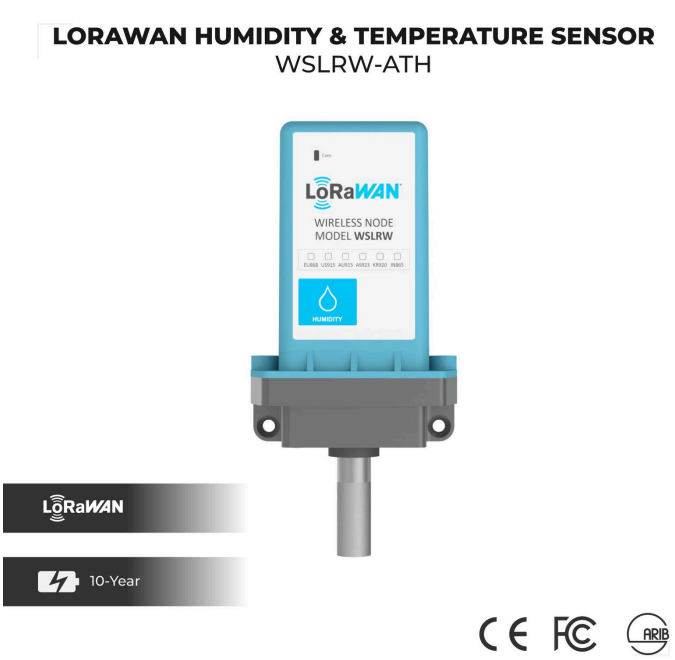
LoRaWAN Humidity & Temperature Sensor

Smart Agriculture, Smart Building, Smart Facility, Smart Farm, Smart Healthcare, Smart Retail, Smart Transportation

SKU: WSLRW-ATH



Safe Zone

Hazardous Zones

The WSLRW-ATH is a high-performance LoRaWAN-integrated ambient humidity and temperature sensor designed for reliable and precise environmental monitoring. It leverages a digital capacitance humidity sensor to ensure exceptional measurement accuracy and long-term stability. The sensor is available in two configurations: an integral type for standard installations and a remote type with a cable, ideal for applications requiring physical separation between the sensor probe and the wireless transmitter. Engineered with an ultra-low-power architecture and intelligent firmware, the device can operate for up to 10 years using just two AA batteries, depending on specific configuration settings. Additionally, an externally powered version is available to support deployment in high-humidity environments. The sensor transmits data over kilometer-scale distances to any LoRaWAN gateway, ensuring broad compatibility across the market. Typical application scenarios include environmental monitoring in offices, warehouses, data centers, hospitals, and agricultural facilities.

Applications

Automatic Ventilation System, Facility Monitoring, Indoor Air Quality Monitor, Warehouse Monitoring, Temperature Monitoring

Notes For Applications

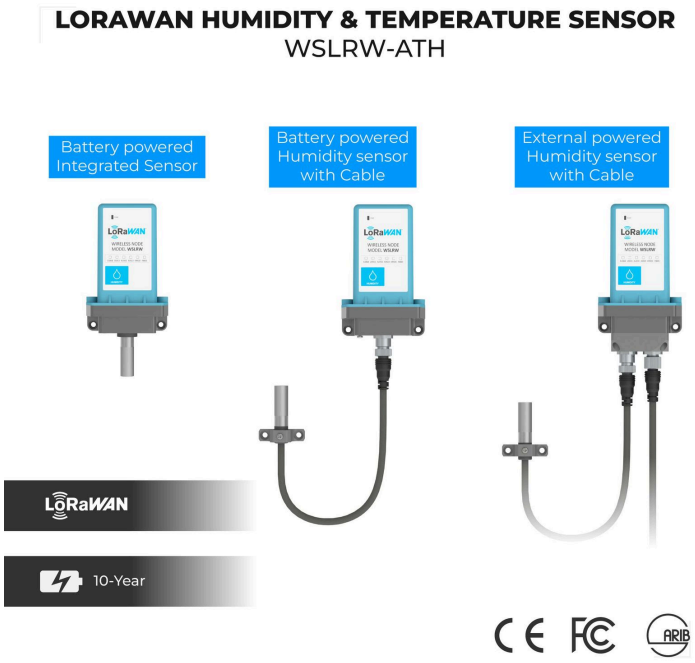
- Accuracy: Determine the required accuracy level.
- Operating Temperature Range: Ensure within your application's temperature range.
- Response Time: Select a sensor with an appropriate response time.
- Size and Power Consumption: Opt for small form factors and

LoRaWAN communication
LoRaWAN communication standard to allow sensor connect to any LoRaWAN Gateway on the market

10-Year battery
Ultra-low power sensing technology from Daviteq with Ultra-low power wireless technology allow the sensor can last up to 10 years with 02 x AA batteries

High Accuracy & Stable
Digital sensor with factory-calibration

Optional Rain Guard and Splash Guard
For outdoor installation or place with water jets

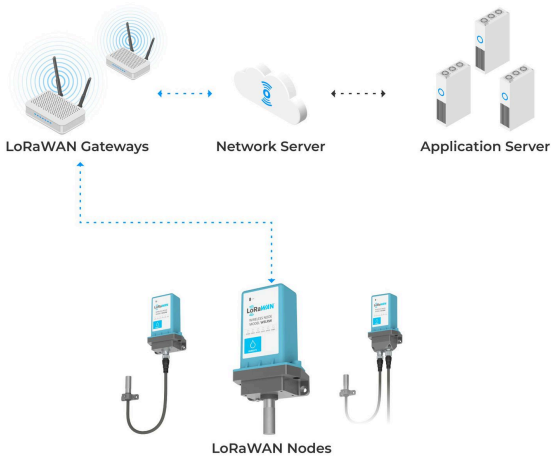


DAVITEQ TECHNOLOGIES INC
Ho Chi Minh City, VN | Koblenz, DE | Melbourne, AU | Zurich, CH
+84.28.6268.2523 / 6268.2524
info@daviteq.com **www.iot.daviteq.com**
Created date: Dec-21-2022 | Updated date: Jul-11-2025

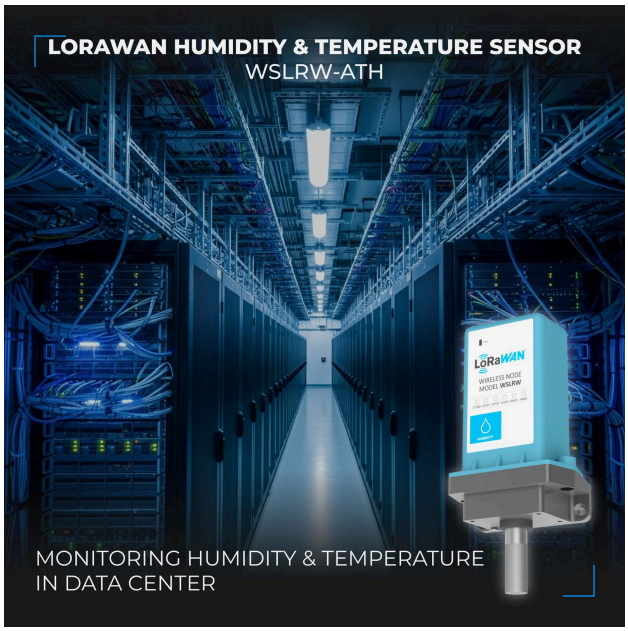
Specification

Sensor	Digital type, factory calibrated, output both Humidity & Temperature values
Sensor Type	Integral or Remote type with cable
Integral Heater	Yes, for high-humidity application (applicable for external power version only)
Humidity measuring range	0~100% RH
Humidity accuracy	Typical +/- 2.0% RH in 10..80%RH, otherwise +/- 3.0% RH (in 0 .. 60℃)
Humidity repeatability	+/- 0.1%RH
Humidity resolution	0.1%
Temperature measuring range & accuracy	-40~85℃
Temperature accuracy	Typical +/- 0.2 oC in range 5 oC to 60 oC
Temperature repeatability	+/-0.1℃
Temperature resolution	0.1℃
Sensor Filter	20µm Alloy sintered filter as standard (PTFE filter optional)
Solar radiation shield	optional accessory for outdoor installation
COMMUNICATION	
SF Factors	SF7~SF12
Antenna	Internal Antenna 2.0 dbi
Power	Battery powered version | 02 x AA size 1.5VDC, battery not included
	External powered version | 7..48VDC @ 200mA maximum, order M12-female 4-pin cable separately for power device.
RF Frequency and Power	860~930MHz, 14~20 dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AU915, US915
Protocol	LoRaWAN®, class A
Data sending modes	Interval time and when alarm occurred
Certification	CE, FCC
Electronics working temperature	-40~60℃ (with AA L91 Energizer®)
Dimensions	H152xW73xD42 for integrated version, please check drawings for other variants
Net-weigh	250g for integrated version
Housing	Anodized Aluminum, Polycarbonate & POM plastic, IP67
Ingress Protection: IP67 (for electronics only)	undefined

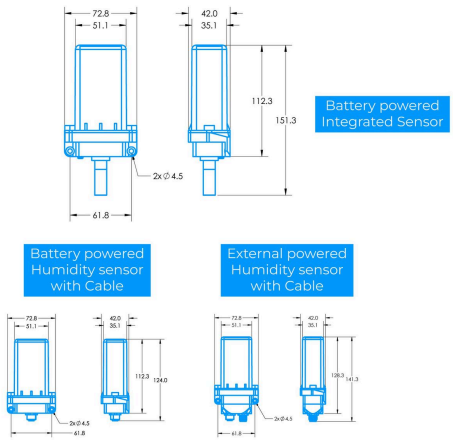
LORAWAN HUMIDITY & TEMPERATURE SENSOR
WSLRW-ATH



SYSTEM ARCHITECTURE



LORAWAN HUMIDITY & TEMPERATURE SENSOR
WSLRW-ATH



DIMENSION DRAWING OF
WIRELESS NODE (Unit: mm)

LORAWAN HUMIDITY & TEMPERATURE SENSOR
WSLRW-ATH

E91 AA
Alkaline battery

-18~60°C working temperature
10-year shelf life
3000 mAH capacity
Price: 1X

L91 AA
Lithium battery

-40~60°C working temperature
20-year shelf life
3500 mAH capacity
Price: 3.5X

RECOMMENDED BATTERIES
POWERED BY PRIMARY BATTERY

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Ordering Information

ITEM CODE	DESCRIPTIONS
WSLRW-ATH-11	Wireless LoRaWAN Integral Humidity & temperature sensor with sintered metal protection filter, Internal antenna, Type AA battery 1.5VDC, IP67, 860-930MHz
WSLRW-ATH-12-3000	Wireless LoRaWAN Humidity & temperature sensor with sintered metal protection filter, Remote type 3000 mm cable, Internal antenna, Type AA battery 1.5VDC, IP67, 860-930MHz
WSLRW-ATH-12-3000-DC	Wireless LoRaWAN Humidity & temperature sensor with sintered metal protection filter, for High humid applications, Remote type 3000 mm cable, Internal antenna, external power 7..48VDC, IP67, 860-930MHz
SRADSHIELD-ATH-01	solar radiation shield for ATH sensor in outdoor application

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