

Humidity&Temperature Terminal

FST100

Low Power | Pass Through | Cloud Platform | Remote Management

Introduction

FST100 series temperature and humidity terminal is a wireless data transmission terminal based on LoRa spread spectrum technology. It uses LoRa network to provide wireless data transmission function for users. It adopts Four-Faith self-developed LoRa module, adopts ultra-low power design, built-in high-capacity lithium battery, which can be used for many years, adopts IP67 high protection grade, waterproof and dustproof. Designed for harsh environment monitoring applications. The sensor terminal supports the Four-Faith proprietary protocol and the standard LoRaWAN® protocol. The sensor is equipped with the Four-Faith sensor cloud platform and sensor cloud APP, which can view sensor data, data analysis, data alarm, device management and so on at any time.

Industrial-grade Design

- High-performance industrial-grade chip and wireless module
- Adopt high precision sensor chip
- Using ABS+PC, anti-UV, flame retardant materials
- Protection level up to IP67

High Performance

- Ultra-low power design, built-in 8200mA ultra-large capacity lithium battery
- Support Four-Faith proprietary protocol and standard LoRaWAN® protocol
- Quick NFC configuration and TYPE C interface configuration, easy to use
- Equipped with Four-Faith sensor cloud platform and sensor cloud APP
- Support NFC upgrade, local serial port upgrade, and remote upgrade
- Support wall mount installation

Humidity & Temperature Terminal FST100



Product Specification

Characteristics	
Items	**Contents**
Sensor Type	Digital Sensor
Sensor temperature Measuring Range	-40℃~125℃
Sensor Humidity Measuring Range	0 ~ 100% RH
Temperature Measurement Accuracy	±0.2℃ (Typical 0-65℃, minimum or maximum temperature accuracy range does not exceed ±0.8℃)
Humidity Measurement Accuracy	±1.8% RH (Typical 30-70RH, minimum or maximum humidity accuracy does not exceed ±7%RH)
Operating Temperature	-20℃~60℃
Frequency	Low frequency:410-510MHz High frequency:863-928MHz
Protocol	Private protocol, LoRaWAN® protocol
Indoor Communication Distance	Penetrates 6 floors
Outdoor Communication Distance	4.2 Km
Operating Voltage	Built-in 3.6V/8200mAh lithium battery (Disposable)
Transmitting Current	⩽86.2mA, duration less than 0.53second, (SF=9@20dBm)
Receiving Current	⩽11.3mA, (SF=9@20dBm)
Sleep Mode Current	≤15.3uA, (SF=9@20dBm)

Note: The smaller the SF (the higher the rate), the shorter the transmission distance, the shorter the launch time, and the less the function

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Battery Life

Item	Voltage/Current	Data Rate	Collection Interval (Time)
Deep Sleep	<15.3uA	Level 3 (Further transmission)	5 minutes: about 1400 days (4 years) 10 minutes: about 3000 days (8 years)
Receiving Data	<11.3mA		
Transmitting Data	<86.2mA		
Deep Sleep	<15.2uA	Level 4 (Closer transmission)	5 minutes: about 1600 days (4.5 years) 10 minutes: about 3200 days (9 years)
Receiving Data	<11.3mA		
Transmitting Data	<86.2mA		

Note: The battery working time is the theoretical day. The theoretical day is also affected by wireless signals and working temperature and humidity. The battery working time may be slightly shorter or longer.

Hardware

Item	Content
CPU	Industrial grade 32-bit communication processor
Flash	128KB
SRAM	16KB

Other

Item	Content
Shell	PC+ABS material, anti-exposure, anti UV, anti-aging, impact resistance, protection grade IP67
Dimension	90x65x34.5mm (Excluding antenna and mounting parts)
Installation	Wall mount
Flame Resistance	UL94V-0
Weight	365g
Operating Temperature	-20~+60℃ (-4~+140℉)
Storage Temperature	-20~+60℃ (-4~+140℉)
Humidity	95% (No condensation)

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Topology



Dimension (mm)



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Order Information

Products	Frequency	Description
FST100-00L	410-510 MHz	The sensor terminal supports only disposable lithium sub-battery power consumption and built-in temperature and humidity sensors，Support private protocol and LoRaWAN protocol, support LoRaWAN frequency band CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923, etc
FST100-00H	863-928 MHz	