

PST-xx11-40301G

Temperature+Humidity Smart Sensor Terminal with 4.2" LCD Display

Product introduction

PST-xx11-40301G It is a product with LCD screen, integrated design, battery power supply(rechargeable), data display support, real-time detection of temperature and humidity in the indoor environment, sensitive, beautiful appearance, convenient installation, suitable for indoor scenes.

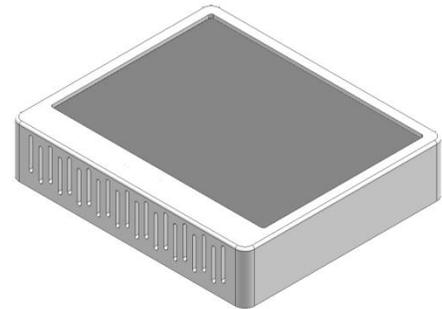
Detection principle

Temperature measurement principle: thermocouple method is adopted. The thermocouple is composed of two metal wires of different materials. One end of the two wires is welded together to form a working end, which is placed at the temperature to be measured; The other end is called the free end, which is connected with the measuring instrument to form a closed loop. When the temperature of the working end is different from that of the free end, the thermoelectric EMF will appear in the circuit. After the circuit conversion, the voltage change will be sent to the microcontroller and converted into a signal that can be recognized by the machine.

Humidity measurement principle: polyamine salt or cellulose acetate polymer film (a polymer compound) deposited on two conductive electrodes will change the dielectric constant between the two electrodes when the film absorbs water or loses water. Then, it will cause the change of capacitor capacity. The change of capacitor capacity can be captured and transformed by using external measuring circuit, and finally it will be displayed as a recognizable signal at the output

Product features

- ❖ Test items: ambient temperature and humidity
- ❖ 4.2 " LCD screen, real-time display of temperature and humidity data
- ❖ High sensitivity and precision
- ❖ Fast startup, fast measurement time, real-time data transmission
- ❖ Support battery power supply
- ❖ Equipped with Type-C charging port, supporting charging at the product end; The battery can also be removed for charging



Product parameters

Parameters	
Measuring range	Temperature: - 40 °C ~ 125 °C Humidity: 0~100% RH
Accuracy	Temperature: 0 ~ 65 °C, ± 0.2 °C ; Other, ± 0.6 °C Humidity: 10~90%, ± 2% RH; Other, ± 4% RH
Resolution	Temperature: 0.01 °C Humidity: 0.01%RH
Response time	Temperature:>2s (T63%) Humidity: 8 ^s
Long term drift	Temperature:<0.03 °C/yr Humidity:<0.25% RH/yr

Display screen LCD screen 4.2"

Interface

Output signal IIC

Mechanics

Size 98mm*84mm*28mm

Working temperature -40°C~+85°C

Power

Power 3.7V (full load voltage 4.2V)

Battery type 18650 rechargeable lithium battery

Charging mode Type-C charge, or take out the battery for charging

Application

It is widely used in indoor environment testing.

Ordering Guide

- ❖ PST-xx11-40301G is a sensor with a special shell appearance, it needs to be used together with WxS series communication boards (WxS88xx, WxS98xx and WxS99xx) to form intelligent IoT terminals with different communication modes;
- ❖ Example of products are as follows:
 - WxS8811-40301GLoRaWAN Series Temperature+Humidity Smart Sensor Terminal with 4.2" Ink Display
 - WxS9811-40301GNB-IoT (China) Series Temperature+Humidity Smart Sensor Terminal with 4.2" Ink Display
 - WxS9911-40301GNB-IoT (Global) Series Temperature+Humidity Smart Sensor Terminal with 4.2" Ink Display