SenseCAP S500 5-in-1 Compact Weather Station

S500 5-in-1 Weather Sensor measures air temperature, relative humidity, barometric pressure, wind speed, and wind direction (ultrasonic). It is ideal for application in a rough environment like the outdoors, agriculture, or smart cities.

Feature

- **5 parameters measurement**: Measures air temperature, relative humidity, barometric pressure, wind speed, and wind direction in 1 single sensor
- **Industrial-level design**: -40°C to +85°C operating temperature, IP66 rated: waterproof, and dustproof, suitable for outdoor scenarios
- **Output interface**: RS485 (MODBUS-RTU) / SDI-12
- **Thermostatically-controlled heating system**: Independent heating power supply for use in extremely cold environments
- **Powerful Components Included**: A 3m cable for the pole mount; radiation shields are equipped to ensure accurate ambient measurement; ultrasonic wind speed & direction sensors without moving parts

Specification

General Parameters

Parameters Measured	air temperature, relative humidity, barometric pressure, wind speed and wind direction
Protocol	RS485 (MODBUS-RTU) / SDI-12
Power Supply	12V~24V 24V(Heating power supply)
Cable Length	3m
Operating Temperature & Humidity	-40 °C ~ + 85 °C, 0 ~ 100%RH
IP Rating	IP66
Device Weight	2kg

Air Temperature

Range	- 40 °C ~ + 85 °C
Accuracy	± 0.1℃
Resolution	0.01 ℃

Air Humidity

Range	0 ~ 100% RH
Accuracy	± 1.5% RH
Resolution	0.01% RH

Barometric Pressure

Range	300 ~ 1250 hPa
Accuracy	± 50 Pa
Resolution	10 Pa

Wind Speed (Ultrasonic)

Range	0~60 m/s standard range
	0~75m/s extended range
	Up to 80m/s withstand range
Accuracy	±0.3m/s(≤10m/s);
	±3% (10m/s ~ 50m/s)
	±5% (>50m/s)
Resolution	0.1 m/s

Wind Direction (Ultrasonic)

Range	0 ~ 360 °
Accuracy	± 3.0°
Resolution	0.1°

Part List

SenseCAP ONE All-in-one Compact Weather Sensor	x1
M12 8-pin communication cable (default length 3-meter hook-up wire and there is a waterproof aviation connector type to choose from when working with SenseCAP SensorHub datalogger. If the aviation connector is not needed, cut it off by yourself)	x1
USB Type-C cable, for configuring devices	x1
Screw	x6

| Flat washer (to open the configuration port) | x1 |