

## TECHNICAL DATASHEET: SenseCAP S-700



### 7-in-1 Compact Meteorological Sensor

#### SAMARTHGURU TECHNOLOGIES — PRECISION IN MONITORING

##### 1. Product Overview

The SenseCAP S-700 is a professional-grade, solid-state integrated meteorological station designed for high-reliability environmental monitoring in IoT applications. Utilizing ultrasonic technology for wind measurement, this industrial-grade sensor operates without moving parts, significantly reducing maintenance and ensuring long-term stability in the field.

It is specifically engineered for Smart Cities, Agriculture, Solar Resource Assessment, and Industrial Compliance monitoring.

##### 2. Parameter Measurement Specifications

This compact, all-in-one unit provides precise measurements for seven key parameters:

Parameter	Sensor Type	Range	Accuracy	Resolution
Wind Speed	Ultrasonic	0 to 60 m/s	±0.3 m/s or ±3%	0.1 m/s

Parameter	Sensor Type	Range	Accuracy	Resolution
Wind Direction	Ultrasonic	0 to 360°	±3°	0.1°
Air Temperature	MEMS	-40°C to +85°C	±0.3°C	0.01°C
Relative Humidity	MEMS	0 to 100% RH	±3% RH	0.01% RH
Barometric Pressure	MEMS	300 to 1250 hPa	±0.5 hPa	0.1 hPa
Light / Solar Radiation	Optical	0 to 2000 W/m <sup>2</sup>	±5%	1 W/m <sup>2</sup>
Optical Rainfall	Rain Gutter	0 to 200 mm/h	±5%	0.1 mm

### 3. Product Features & Environmental Capabilities

- **Rugged Engineering:** Solid-state design with no moving parts.
- **Wide Operating Temperature:** -40°C to +85°C, suitable for extreme environments.
- **Heated Ultrasonic Sensors:** Built-in heating prevents ice and snow accumulation.
- **UV Resistance:** Housed in durable, UV-stabilized material.
- **In-Stock & Custom R&D:** Available as standard or integrated into custom Samarthguru solutions.

### 4. Technical Specifications

- **Protocol:** RS-485 (Modbus-RTU) / SDI-12 (for versatile datalogger compatibility)
- **IP Rating:** IP66 (Outdoor, industrial rated)
- **Input Voltage:** 9V – 24V DC
- **Mounting:** Pole-mount compatible
- **Dimensions:** ~320mm x 160mm (Compact form factor)
- **Integrated Datalogger Compatible:** Fully integrates with Samarthguru telemetry solutions.

### 5. Typical Applications

- **Solar Power Plant PR (Performance Ratio) Tracking**
- **Smart City Air Quality & Met Networks**
- **Precision Agriculture and Hydrology**

- **Industrial Compliance and Emission Monitoring**
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### **Contact Information**

For customized quotes and technical support:

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