AVC-ES102 Series Datasheet

Aiming to create better and safer working environments and life experiences through the products we deliver.

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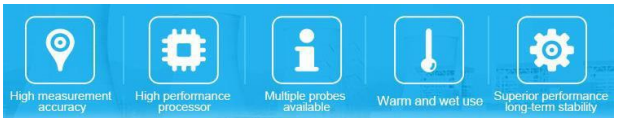
Outdoor Temperature and Humidity Sensor
AVC-ES102TH

Outdoor Protective Design

- Prevent direct ultraviolet radiation to the sensors
- Avoid rapid aging of sensors under harsh environmental conditions such as strong winds, rain, and snow
- The sensor parts are ventilated for truly sensing the changes in external detection parameters
- Small size, light weight and easy to install

Optional IoT Router and Cloud Platform - ATMS

- Support Modbus to connect optional Gateway AP222 for one or many sensors
- Real-time online monitoring, analysis, reporting
- Remote cloud security and visual management



Features & Benefits

Operating temperature:	-40~+60° C
Operating humidity:	0%~95%RH (non-condensing)
Signal output	RS485 (Modbus protocol)
Working voltage	10~30VDC
Maximum power consumption	0.1w（DC24V)
Resolution	Temperature: 0.1℃ Humidity: 0.1%RH
Long-term stability	Temperature: ≤0.1° C/year Humidity: ≤ 1%/year
Response time	Temperature: ≤25 sec (1m/s wind speed) Humidity: ≤8 sec (1m/s wind speed)
Temperature and humidity refresh time	1 sec

Register Address	PLC or Configuration Address	Content	Operation
0000 H	40001	Humidity	Read only
0001 H	40002	Temperature	Read only

Ordering Information

Model Name	Description
AVC-ES102TH	Outdoor Temperature and Humidity Sensor, -40~+60°C, 0~95%RH, RS485 Modbus,10~30V Power

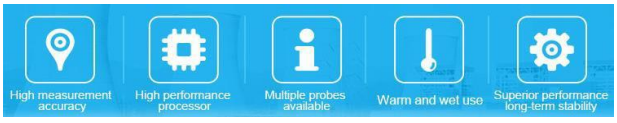
Outdoor Integrated Wind Speed、Wind Direction Sensor AVC-ES102WSWD

Outdoor Protective Design

- One-piece casting plug-in cable
- Prevent the sun in high temperature season
- There is no impact on the rainy season
- Anti-freezing in low temperature rain and snow weather
- The sensor uses four ultrasonic probes to send and receive ultrasonic waves cyclically in two-dimensional plane，measuring wind speed and direction by the time difference in which the ultrasonic waves travel through the air.

Optional IoT Router and Cloud Platform - ATMS

- Support Modbus to connect optional Gateway AP222 for one or many sensors
- Real-time online monitoring, analysis, reporting
- Remote cloud security and visual management



Features & Benefits

Power Input	10~30VDC
Power Consumption	0.4W
Measuring Range	Wind speed：0～60m/s；Wind direction：0~359°
Operation Temperature & Humidity	-40℃~+60℃，0%RH~95%RH
Accuracy	Wind speed：±(0.2m/s±0.02*v)(v=real wind speed)；Wind direction：±3°
Resolution	Wind speed：0.01 m/s；Wind direction：1°
Output	RS485 Modbus
Wind Load	75 m/s
Response time	1S

Register Address	PLC or Configuration Address	Content	Operation	Operation
0000 H	40001 (decimal)	Instantaneous wind speed	Read only	Real-time value of moisture content (extend 10 times)
0001 H	40002 (decimal)	Wind direction	Read only	Real-time value of wind direction (Integer, increase the degree clockwise when the true north direction is 0°, and the due east is 90°)
0002 H	40003 (decimal)	Max wind speed	Read only	Max wind speed when the device is powered on (extend 100 times)
0003H	40004 (decimal)	Wind scale	Read only	Wind scale corresponding to the current wind speed (Integer, 0~17 scale)
07D0 H	42001 (decimal)	Slave ID	Read only	1 ~ 254 (Factory Default 1)
07D1 H	42002 (decimal)	Baud rate	Read only	0=2400 1=4800 2=9600

Ordering Information

Model Name	Description
AVC-ES102WSWD	Outdoor Integrated Sensors- Wind Speed, Wind Direction, Output：RS485