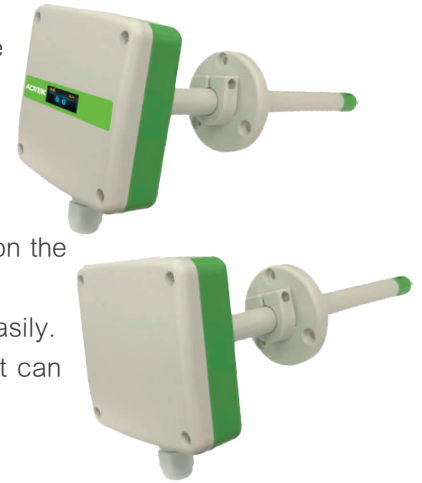


Description

Due to environmental quality management and energy management, we've developed WSA, wind speed sensors which can be applied on ventilation systems, air conditioning, and negative pressure rooms.

WSA is a high-accuracy duct type wind speed sensor which can quickly measure the small wind speed. It is stable, high-accurate, and with small drift only. Also, it can calculate the value of the current air volume depending on the measured cross-sectional area of the ducting.

Ducting installation and screwless terminals help the users work more easily. Besides, the sensor is equipped with EMC anti-interference devices so that it can withstand strong electromagnetic interferences.



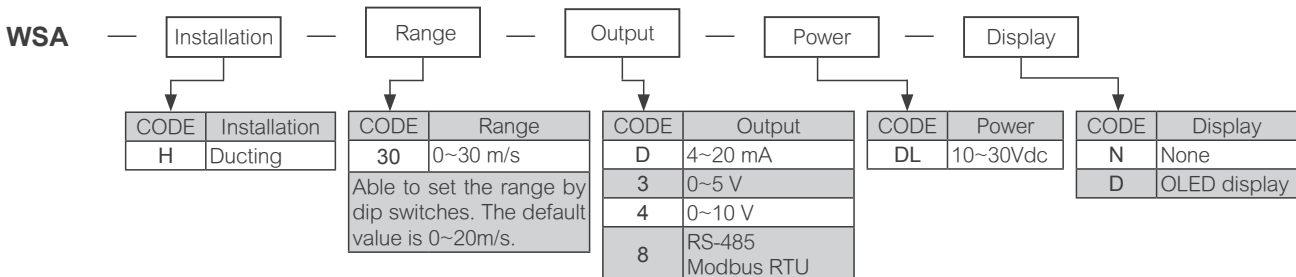
Feature

- High-precision wind speed measurement unit with low start-up wind speed and sensitive response that can be used in harsh environments with ventilation ducts and oil fume ducts.
- High accuracy full-scale secondary calibration method demonstrates good linearity.
- Open-hole flange construction using high-quality and durable silicone sealing ring to reduce air leakage.
- Calculate the value of the current air volume by setting measured cross-sectional area of the ducting.
- Using screw-free terminals. No tools are needed for the wiring terminals, just one press and one plug.
- Using special EMC anti-interference devices which can withstand strong electromagnetic interferences.
- Wind speed mark on the sensor for easy installation.
- Power supply with a wide voltage range of 10~30Vdc; long-distance centralized power supply
- Equipped with analog output for AI template; RS-485 outputs for the communication of new systems.
- 4 setting of measuring range: 0~10m/s, 0~15 m/s, 0~20 m/s(default setting), 0~30 m/s. Adjusted by dip switches.
- The accuracy of the setting range for 0~10m/s is $\pm(0.1+2\%FS)$; for 0~15m/s, 0~20m/s, 0~30m/s are $\pm(0.2+2\%FS)$ m/s
- Able to set the output signals (4~20mA, 0~5V, and 0~10V).
- Able to choose to go with/without OLED.

Applications

- New building construction with ventilation system
- Negative-pressure rooms in hospital
- Laboratory
- HVAC
- Vent discharge ducts

Ordering Information



Technical Specification

Measuring

Measuring range: 10m/s ; 15m/s ; 20m/s; 30m/s

Accuracy: range: 0~10m/s: $\pm(0.1+2\%FS)$;

range: 0~15m/s, 0~20m/s, 0~30m/s: $\pm(0.2+2\%FS)$

Response time: 2s

Resolution: 0.1m/s

Long-term stability: $\leq 0.1\text{m/s/year}$

Output signal: 4~20mA/ 0~5Vdc/ 0~10Vdc

Loading capacity: current output: $\leq 600\Omega$; voltage output: $\geq 250\Omega$



RS485 Communication

Protocol:	Modbus RTU mode
Address:	1~255 (set via dip switches: 1~15)
Baud rate:	2400/4800/9600
Parity:	None
Data bits:	8 bits
Stop bit:	1 bit
Distance:	1500M max
Terminate resistor:	120~300Ω/0.25W(typical: 150Ω)

Environmental Conditions

Measured medium:	air, nitrogen, exhaust
Operating temp:	-10~+50 °C

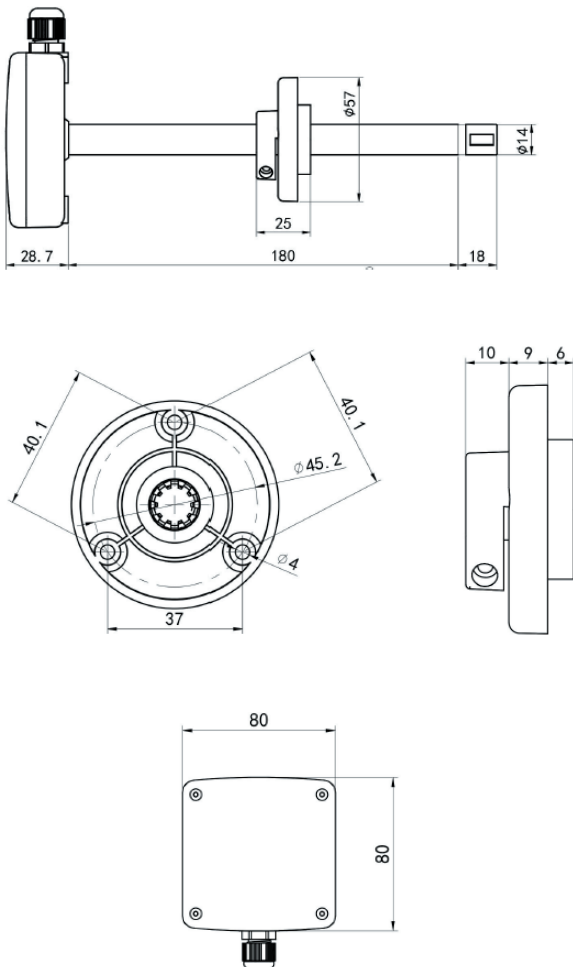
Power Supply

Power supply:	10~30Vdc
Power consumption:	RS485 output: 0.5W; analog output: 0.6W

Mechanical Characteristics

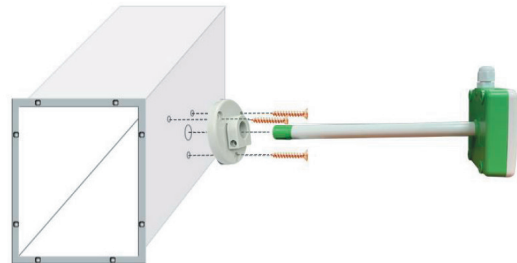
Dimensions:	80mm(W) x 80mm(H) x 226.7mm(D)
Case material:	PE
Weight:	250 g

Dimensions

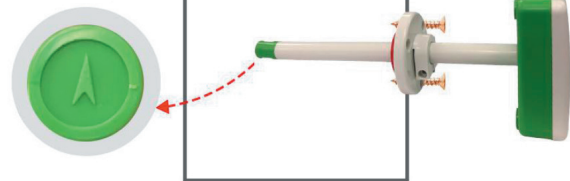


Installation

The sensor should be installed on sides or underneath the ducting instead of installing top down. Firstly, drill a hole (hole diameter: $\phi 20$ mm) on the ducting, put the air pipe in the hole, and adjust the arrow mark and wind direction in the same direction. Then place 3 screws on the plate flanges, adjust the height of the sensor with the plate flanges, and lock the screws (see the picture below).

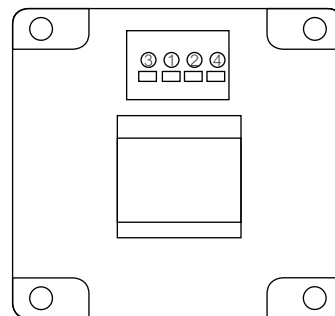


The arrow and the wind direction should be in the same direction.



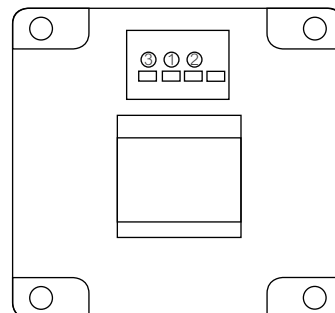
Pin Assignment

RS-485 signal output



- 1: Power +24 Vdc
- 2: Power GND
- 3: RS-485 A+
- 4: RS-485 B-

Analog signal output



- 1: Power +24 Vdc
- 2: Power GND
- 3: +Vout / +Iout