

# **Poly-Carbon 5V Wind direction transmitter (Analog type)**

**SN-3000-FXJT05-V\***

**Ver 2.0**

## **Table of contents**

1.1 Product Overview.....	3
1.2 Features .....	3
1.3 Main parameters.....	3
1.4 System Framework Diagram.....	5
1.5 Product Selection.....	6
Chapter 2 Hardware Connection.....	8
2.1 Equipment inspection before installation.....	8
2.2 Interface Description .....	8
2.2.1 Sensor Wiring.....	8
2.3 Installation.....	8
2.4 Notes.....	10
Chapter 3 Wiring Instructions.....	10
Chapter 4 Meaning of Analog Parameters .....	12

## 1.1Product Overview

SN-FXJT05-V\* wind direction transmitter is small and light, easy to carry and assemble. The new design concept can effectively obtain wind direction information. The shell is made of polycarbonate composite material, which has good anti-corrosion and anti-erosion characteristics, anti-exposure, high impact strength, and with the smooth internal bearing system, it ensures the accuracy of information collection and outputs data with voltage signals (0-5V, 0-3V, 0-2.5V, 1-5V). It is widely used in wind direction measurement in greenhouses, environmental protection, weather stations, ships, docks, breeding and other environments.

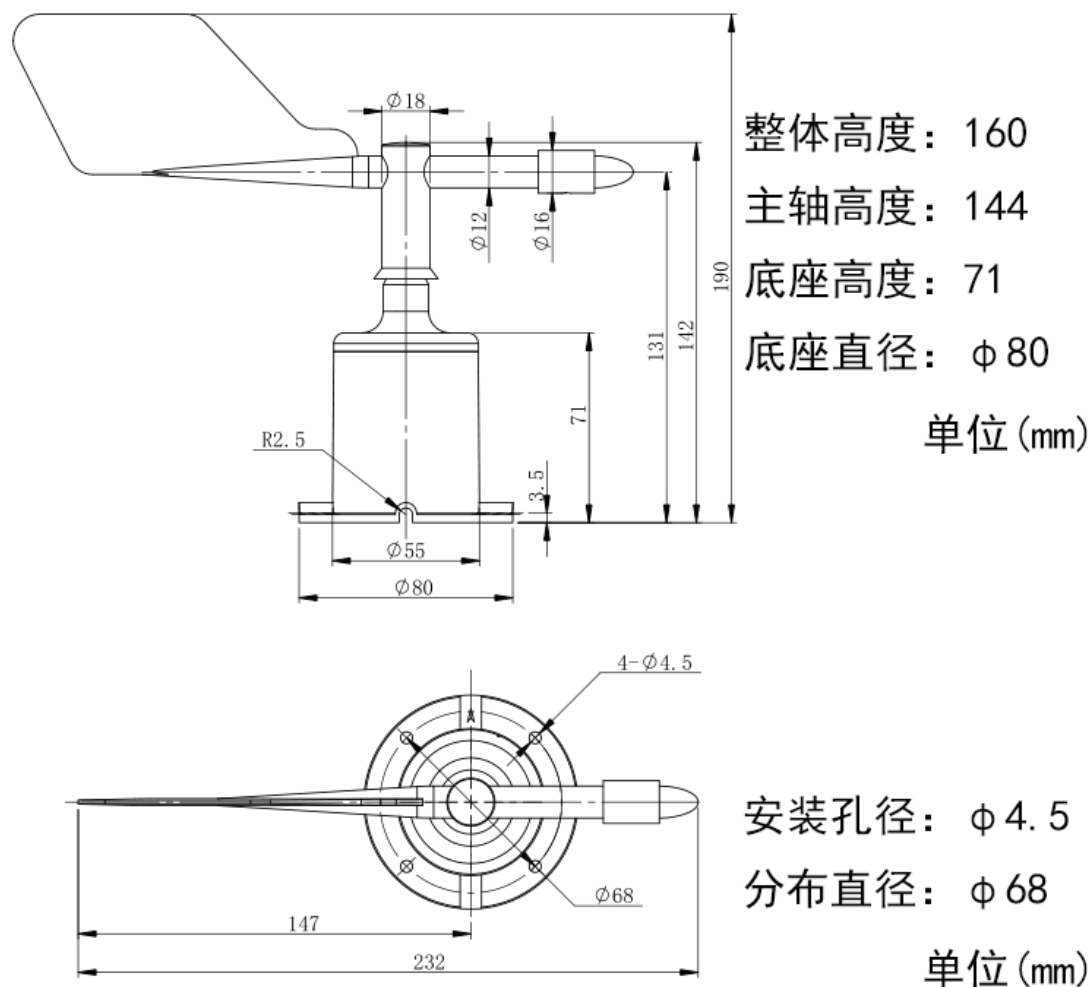
## 1.2Features

- Range:8/16Directions
- 5VPower supply, reverse connection protection, overvoltage protection function
- Anti-electromagnetic interference processing
- Adopt high-performance imported bearings, small rotation resistance and accurate measurement
- Polycarbonate shell, strong mechanical strength, high hardness, corrosion resistance, no rust, can be used outdoors for a long time
- The structure and weight of the equipment are carefully designed and distributed, with small moment of inertia and sensitive response.
- It is applicable to both four-wire and three-wire connection methods.

## 1.3Main parameters

DC power supply (default)	5V DC	
Maximum power consumption	0.12W	
Transmitter circuit operating temperature	-40℃~+60℃,0%RH~80%RH	
Measuring range	8/16Directions	
Dynamic response time	≤0.5s	
Output signal	Voltage output	0-5V,0-3V,0-2.5V,1-5VOptional
Load Capacity	Output resistance ≤250Ω	

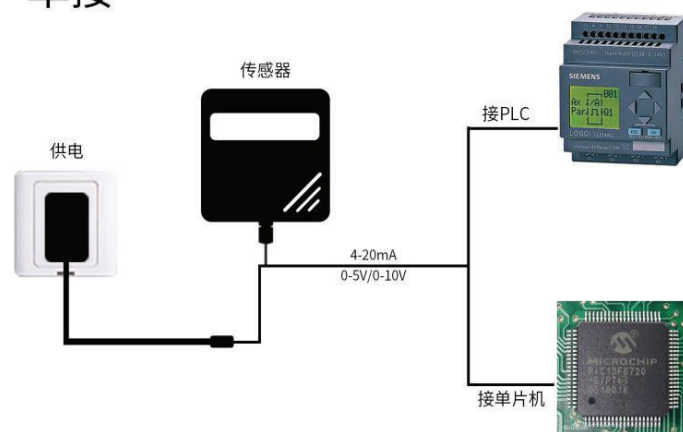
## Product size:



## 1.4 System framework diagram

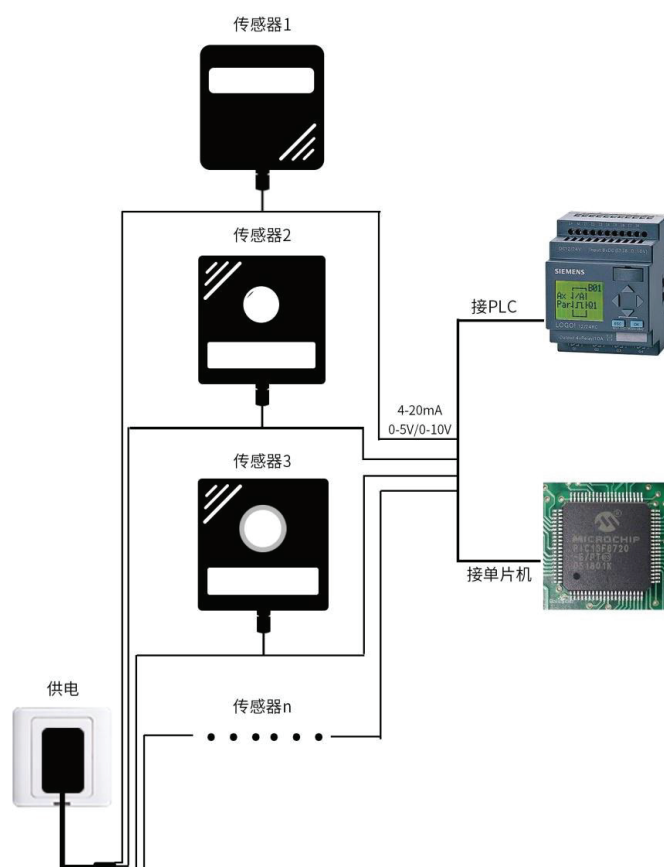
When the system needs to connect an analog version sensor, you only need to power the device and connect the analog output line to the microcontroller or PLC of DI interface, and write the corresponding acquisition program according to the conversion relationship described later.

## 单接



When the system needs to connect multiple analog sensors, each sensor needs to be connected to a different analog acquisition port of the microcontroller or PLC of DI interface, and write the corresponding acquisition program according to the conversion relationship described later.

## 多接



## 1.5 Product Selection

SN-				Company Code
	3000-			Shell code
		FXJT05-		5V Powered Polycarbonate Wind Direction Transmitter
			V05	0~5V Voltage output
			V03	0~3V Voltage output
			V025	0~2.5V Voltage output
			V15	1~5V Voltage output

## No. 2 chapter Hardware Hookup

### 2.1 Equipment pre-installation inspection

Equipment List:

- Transmitter equipment 1 tower
- Mounting Screws 4 individual
- Certificate of conformity, warranty card

### 2.2 Interface Description

5VDC power input. With reverse connection protection and overvoltage protection functions.

#### 2.2.1 Sensor Wiring



	Line Color	illustrate
power supply	brown	Power positive
	black	Negative power supply
Output	blue	Wind direction signal positive
	yellow(green)color	Wind direction signal negative

## 2.3 Installation

Flange installation and threaded flange connection make the lower pipe of the wind direction sensor firmly fixed on the flange plate and chassis. Ø80mm, exist Ø68mm Open four equal Ø4.5mm The mounting holes are used to fix it tightly on the bracket with bolts to keep the whole set of instruments at the best level and ensure the accuracy of wind direction data. The flange connection is easy to use and can withstand greater pressure.





## 2.4Precautions

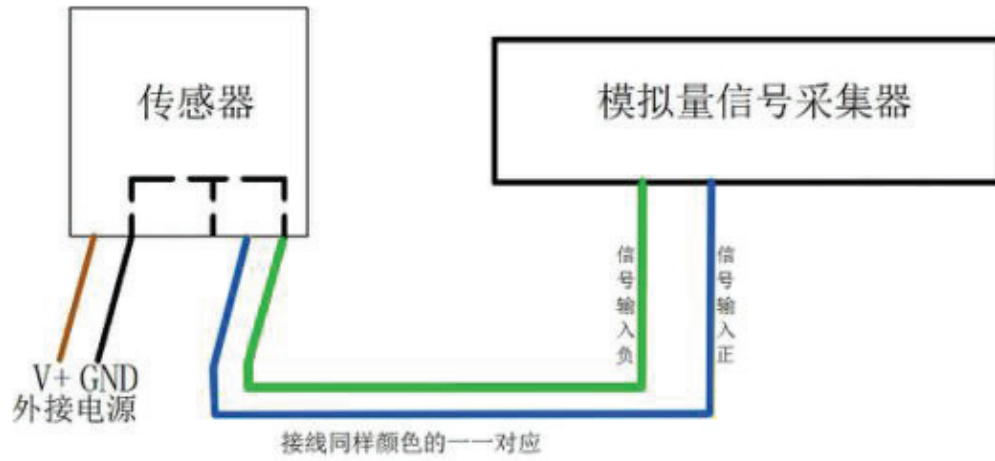
1.Users are not allowed to disassemble or touch the sensor core to avoid damage to the product.

2.Try to stay away from high-power interference equipment to avoid inaccurate measurements, such as frequency converters, motors, etc. When installing or removing the transmitter, the power supply must be disconnected first. Water entering the transmitter may cause irreversible changes.

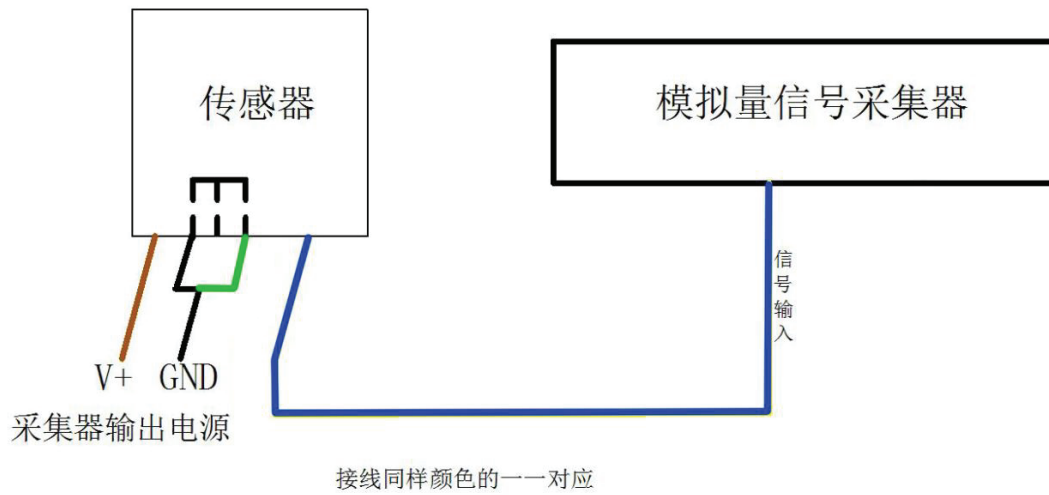
3.Prevent chemical reagents, oil, dust, etc. from directly damaging the sensor. Do not use it for a long time in an environment with condensation or extreme temperature. Prevent cold and hot shocks.

## No. 3chapter Wiring Instructions

The analog sensor wiring is simple, just connect the wire to the designated port of the device.2Independent analog output. Suitable for both three-wire and four-wire systems



Four-wire connection diagram



Three-wire connection diagram



## No. 4chapter Analog parameter meaning

**8-position conversion table**

0-5VOutput comparison table		0-3VOutput comparison table		0-2.5VOutput comparison table		1-5VOutput comparison table	
Output value (V)	correspo nd wind direction	Output value (V)	corresp ond wind directio n	Output value (V)	corresp ond wind directio n	Output value (V)	correspo nd wind direction
$\approx 0$	North Wind	$\approx 0$	North Wind	$\approx 0$	North Wind	$\approx 1$	North Wind
$\approx 0.7143$	Northea st Wind	$\approx 0.4286$	Northea st Wind	$\approx 0.3571$	Northea st Wind	$\approx 1.5714$	Northeast Wind
$\approx 1.4286$	Dongfen g	$\approx 0.8571$	Dongfe ng	$\approx 0.7143$	Dongfe ng	$\approx 2.1428$	Dongfen g
$\approx 2.1429$	Southea st Wind	$\approx 1.2857$	Southea st Wind	$\approx 1.0714$	Southea st Wind	$\approx 2.7143$	Southeast Wind
$\approx 2.8571$	south wind	$\approx 1.7143$	south wind	$\approx 1.4286$	south wind	$\approx 3.2857$	south wind
$\approx 3.5714$	Southwe st Wind	$\approx 2.1429$	Southw est Wind	$\approx 1.7857$	Southw est Wind	$\approx 3.8571$	Southwes t Wind
$\approx 4.2857$	West Wind	$\approx 2.5714$	West Wind	$\approx 2.01428$	West Wind	$\approx 4.4286$	West Wind
$\approx 5$	Northwe st Wind	$\approx 3$	Northw est Wind	$\approx 2.5$	Northw est Wind	$\approx 5$	Northwes t Wind

**16Direction conversion table**

0-5VOutput comparison table		0-3VOutput comparison table		0-2.5VOutput comparison table		1-5VOutput comparison table	
Output value (V)	correspo nd wind	Output value (V)	corresp ond wind	Output value (V)	corresp ond wind	Output value (V)	correspo nd wind

	direction		direction		direction		direction
4.84-0.15	North Wind	2.90625-0.09375	North Wind	2.421375-0.078125	North Wind	4.875-1.125	North Wind
0.15-0.46	North Northeast Wind	0.09375-0.28125	North Northeast Wind	0.078125-0.234375	North Northeast Wind	1.125-1.375	North Northeast Wind
0.46-0.78	Northeast Wind	0.28125-0.46875	Northeast Wind	0.234375-0.390625	Northeast Wind	1.375-1.625	Northeast Wind
0.78-1.09	East Northeast Wind	0.46875-0.65625	East Northeast Wind	0.390625-0.546875	East Northeast Wind	1.625-1.875	East Northeast Wind
1.09-1.40	Dongfeng	0.65625-0.84375	Dongfeng	0.546875-0.703125	Dongfeng	1.875-2.125	Dongfeng
1.40-1.71	East southeast wind	0.84375-1.03125	East southeast wind	0.703125-0.859375	East southeast wind	2.125-2.375	East southeast wind
1.71-2.03	Southeast Wind	1.03125-1.21875	Southeast Wind	0.859375-1.015625	Southeast Wind	2.375-2.625	Southeast Wind
2.03-2.34	South southeast wind	1.21875-1.40625	South southeast wind	1.015625-1.171875	South southeast wind	2.625-2.875	South southeast wind
2.34-2.65	south wind	1.40625-1.59375	south wind	1.171875-1.328125	south wind	2.875-3.125	south wind
2.65-2.96	South-southwest wind	1.59375-1.78125	South-southwest wind	1.328125-1.484375	South-southwest wind	3.125-3.375	South-southwest wind
2.96-3.28	Southwest Wind	1.78125-1.96875	Southwest Wind	1.484375-1.640625	Southwest Wind	3.375-3.625	Southwest Wind
3.28-3.59	West Southwest Wind	1.96875-2.15625	West Southwest	1.640625-1.796875	West Southwest	3.625-3.875	West Southwest Wind

			Wind		Wind		
3.59-3.90	West Wind	2.15625- 2.34375	West Wind	1.796875- 1.953125	West Wind	3.625- 4.125	West Wind
3.90-4.21	West northwe st wind	2.34375- 2.53125	West northw est wind	1.953125- 2.109375	West northwe st wind	4.125- 4.375	West northwes t wind
4.21-4.53	Northwe st Wind	2.53125- 2.71875	Northw est Wind	2.109375- 2.265625	Northw est Wind	4.375- 4.625	Northwes t Wind
4.53-4.84	Northwe st wind	2.71875- 2.90625	Northw est wind	2.265625- 2.421375	Northw est wind	4.625- 4.875	Northwes t wind