QM5389V

Voltage type outdoor aluminum wind speed and direction integrated sensor

User Manual

File Version: V23.2.26

QM5389V using the standard ,easy access to PLC， DCS and other instruments or systems for monitoring wind speed,conductivity state quantities.The internal use of high-precision sensing core and related devices to ensure high reliability and excellent long-term stability,can be customized

RS232,RS485,CAN,4-20mA,DC0~5V\10V,ZIGBEE,Lora,WIFI,GPRS and other output methods.

Technical Parameters

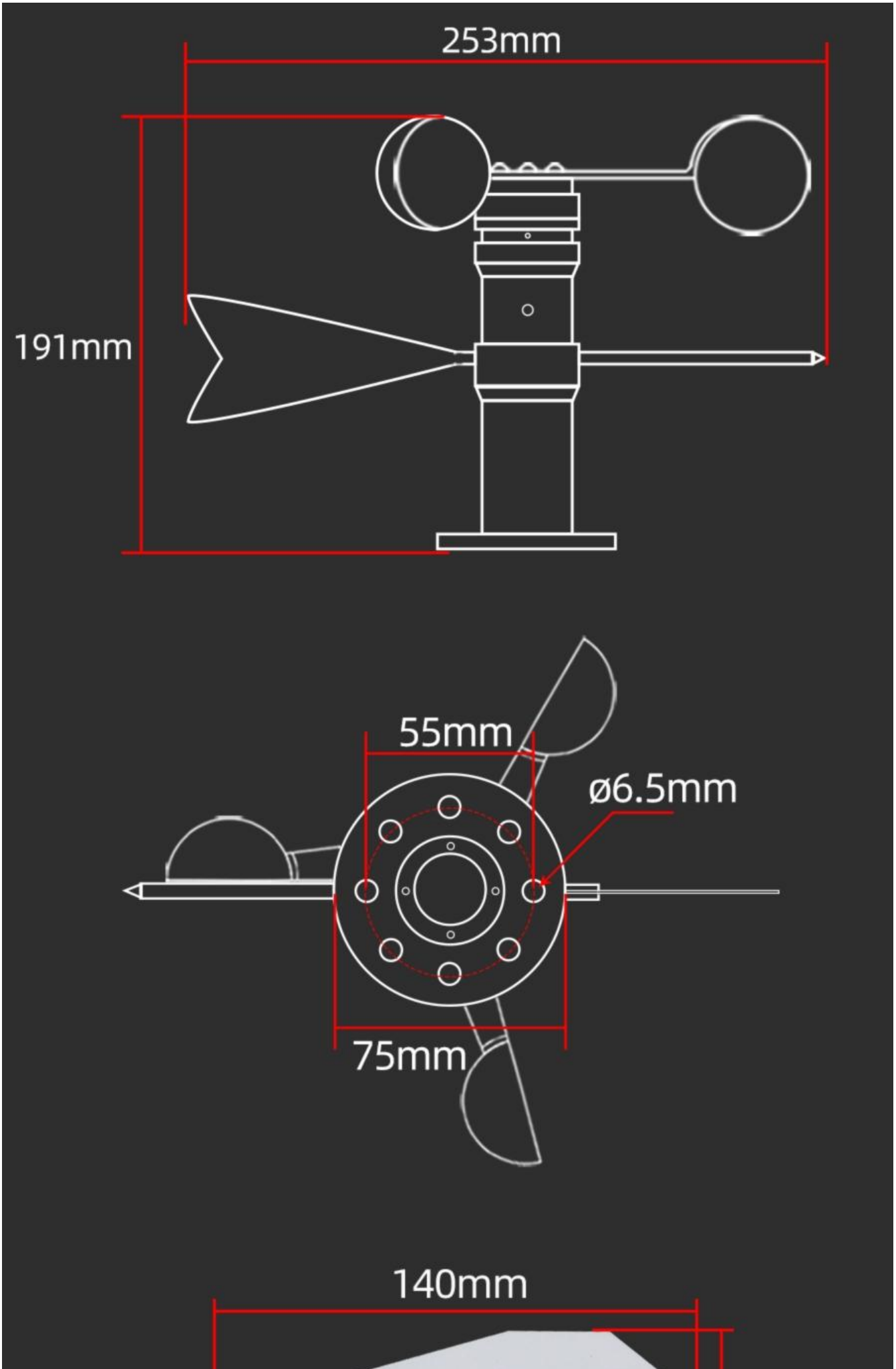
Technical parameter	Parameter value
Brand	TRANBALL
Wind speed range	0~30m/s
Start wind	0.2m/s
Wind speed accuracy	±3%
Shell material	aluminum
Wind direction range	0~360°
Wind direction resolution	22.5°
Power	DC12~24V 1A
Running temperature	-30~85℃

Product Selection

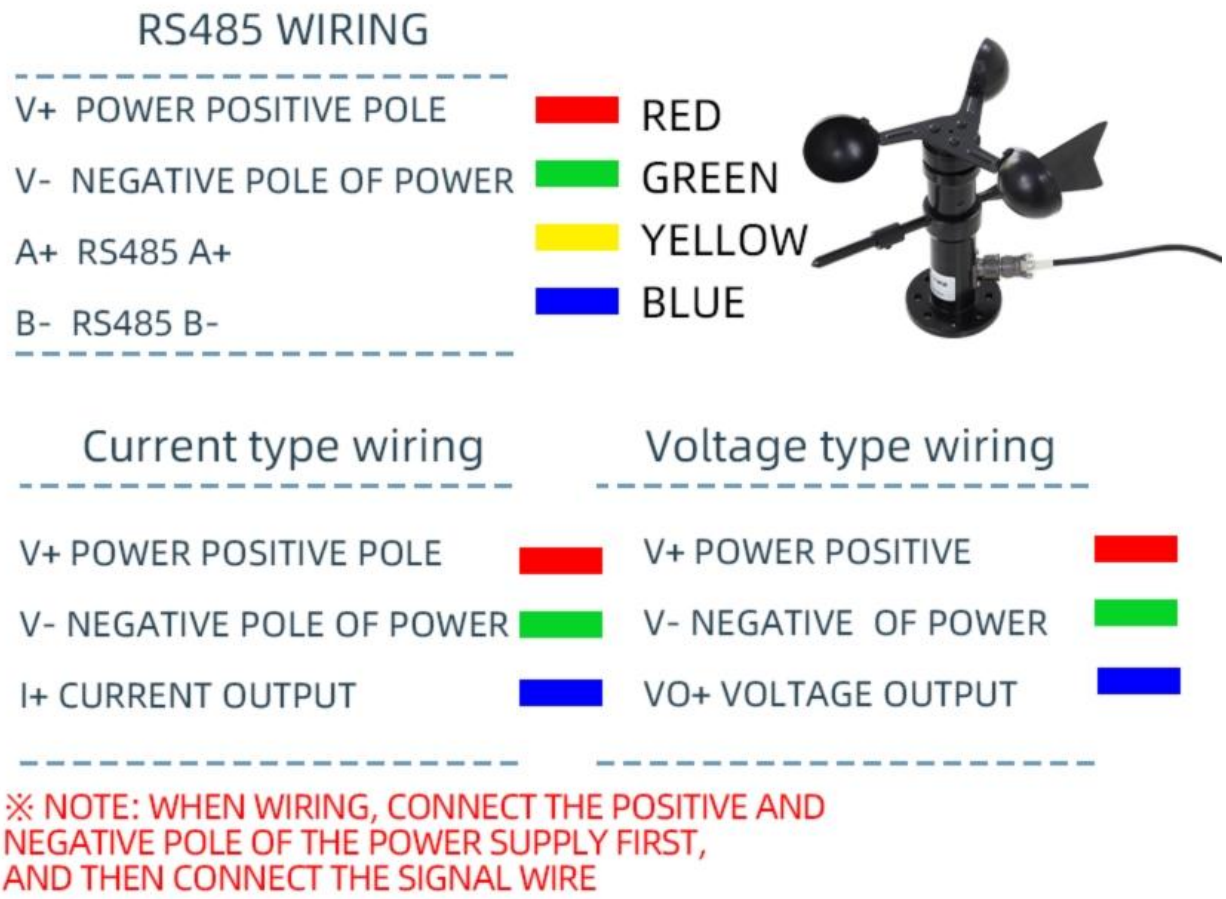
Product DesignDC0-5V,DC0-10VMultiple output methods, the products are divided into the following models depending on the output method.

Product model	output method
QM5389V5	DC0-5V
QM5389V10	DC0-10V

Product Size

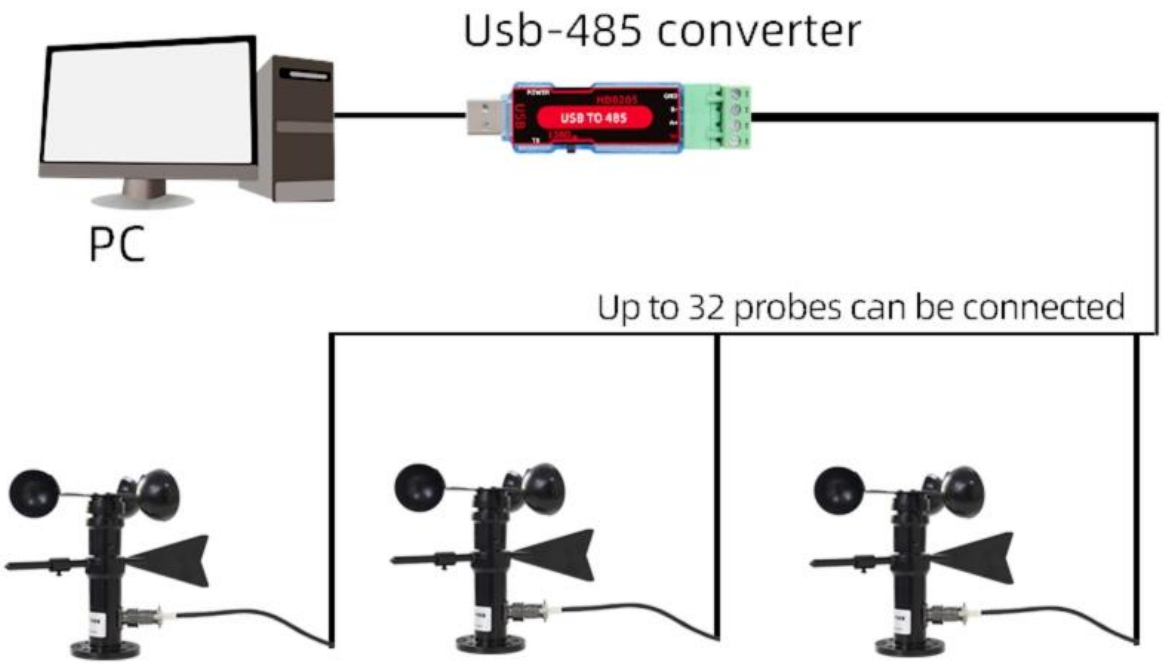

253mm
191mm
55mm
ø6.5mm
75mm
140mm

How to wiring?



Application solution

■ Application scheme



How to use?

Product List

1. wind speed and DC0-5Vvoltage computing relationship

For example, the range is 0~30m/s, the analog output is 0~5V DC0-5Vvoltage signal, wind speed and DC0-5Vvoltage The calculation relationship is as shown in the formula: C = (A2-A1) * (X-B1) / (B2-B1) + A1, where A2 is wind speed range upper limit, A1 is the lower limit of the range, B2 is DC0-5Vvoltage output range upper limit, B1 is the lower limit, X is the currently read wind speed value, and C is the calculated DC0-5Vvoltage value. The list of commonly used values is as follows:

DC0-5Vvoltage(V)	wind speedValue (m/s)	Calculation Process
0	0.0	(30-0)*(0-0)÷(5-0)+0
1	6.0	(30-0)*(1-0)÷(5-0)+0
2	12.0	(30-0)*(2-0)÷(5-0)+0
3	18.0	(30-0)*(3-0)÷(5-0)+0
4	24.0	(30-0)*(4-0)÷(5-0)+0
5	30.0	(30-0)*(5-0)÷(5-0)+0

As shown in the above formula, when measuring 2.5V, current DC0-5Vvoltage is 15m/s。

2. conductivity and DC0-5Vvoltage computing relationship

For example, the range is 0~360°, the analog output is 0~5V DC0-5Vvoltage signal, conductivity and DC0-5Vvoltage The calculation relationship is as shown in the formula: C = (A2-A1) * (X-B1) / (B2-B1) + A1, where A2 is conductivity range upper limit, A1 is the lower limit of the range, B2 is DC0-5Vvoltage output range upper limit, B1 is the lower limit, X is the currently read conductivity value, and C is the calculated DC0-5Vvoltage value. The list of commonly used values is as follows:

DC0-5Vvoltage(V)	conductivityValue (°)	Calculation Process
0	0.0	(360-0)*(0-0)÷(5-0)+0
1	72.0	(360-0)*(1-0)÷(5-0)+0
2	144.0	(360-0)*(2-0)÷(5-0)+0
3	216.0	(360-0)*(3-0)÷(5-0)+0
4	288.0	(360-0)*(4-0)÷(5-0)+0
5	360.0	(360-0)*(5-0)÷(5-0)+0

As shown in the above formula, when measuring 2.5V, current DC0-5Vvoltage is 180° 。

1. wind speed and DC0-10Vvoltage computing relationship

For example, the range is 0~30m/s, the analog output is 0~10V DC0-10Vvoltage signal, wind speed and DC0-10Vvoltage The calculation relationship is as shown in the formula: C = (A2-A1) * (X-B1) / (B2-B1) + A1, where A2 is wind speed range upper limit, A1 is the lower limit of the range, B2 is DC0-10Vvoltage output range upper limit, B1 is the lower limit, X is the currently read wind speed value, and C is the calculated DC0-10Vvoltage value. The list of commonly used values is as follows:

DC0-10Vvoltage(V)	wind speedValue (m/s)	Calculation Process
0	0.0	(30-0)*(0-0)÷(10-0)+0
1	3.0	(30-0)*(1-0)÷(10-0)+0
2	6.0	(30-0)*(2-0)÷(10-0)+0
3	9.0	(30-0)*(3-0)÷(10-0)+0
4	12.0	(30-0)*(4-0)÷(10-0)+0
5	15.0	(30-0)*(5-0)÷(10-0)+0
6	18.0	(30-0)*(6-0)÷(10-0)+0
7	21.0	(30-0)*(7-0)÷(10-0)+0
8	24.0	(30-0)*(8-0)÷(10-0)+0
9	27.0	(30-0)*(9-0)÷(10-0)+0
10	30.0	(30-0)*(10-0)÷(10-0)+0

As shown in the above formula, when measuring 5V, current DC0-10Vvoltage is 15m/s。

2. conductivity and DC0-10Vvoltage computing relationship

For example, the range is 0~360°, the analog output is 0~10V DC0-10Vvoltage signal, conductivity and DC0-10Vvoltage The calculation relationship is as shown in the formula: C = (A2-A1) * (X-B1) / (B2-B1) + A1, where A2 is conductivity range upper limit, A1 is the lower limit of the range, B2 is DC0-10Vvoltage output range upper limit, B1 is the lower limit, X is the currently read conductivity value, and C is the calculated DC0-10Vvoltage value. The list of commonly used values is as follows:

DC0-10Vvoltage(V)	conductivityValue (°)	Calculation Process
0	0.0	(360-0)*(0-0)÷(10-0)+0
1	36.0	(360-0)*(1-0)÷(10-0)+0

2	72.0	(360-0)*(2-0)÷(10-0)+0
3	108.0	(360-0)*(3-0)÷(10-0)+0
4	144.0	(360-0)*(4-0)÷(10-0)+0
5	180.0	(360-0)*(5-0)÷(10-0)+0
6	216.0	(360-0)*(6-0)÷(10-0)+0
7	252.0	(360-0)*(7-0)÷(10-0)+0
8	288.0	(360-0)*(8-0)÷(10-0)+0
9	324.0	(360-0)*(9-0)÷(10-0)+0
10	360.0	(360-0)*(10-0)÷(10-0)+0

As shown in the above formula, when measuring 5V, current DC0-10Vvoltage is 180° 。

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