DCFSJT 70m/s WIND SPEED SENSOR **MANUAL**

WIRING CONNECTION

Analog	Color	Description
Power	Brown	Power+
	Black	Power-
Output	Blue	Signal+
	Yellow(Green)	Signal-

Comm.	Color	Description
Power	Brown	Power+(10-30Vdc)
	Black	Power-
Comm.	Yellow	485-A
	Blue	485-B

LETTER of AGREEMENT

Basic communication parameters

Code	8-bit binary
Data bit	8-bit
Parity bit	no
Stop bit	1 person
Error checking	CRC (Redundant Cyclic Code)
Baud rate	1200bit/s、2400bit/s、4800bit/s、9600 bit/s、19200 bit/s、38400 bit/s、57600 bit/s、115200 bit/s，Default: 4800bit/s

Data frame format definition

Modbus-RTU communication protocol is adopted, the format is as follows:

Initial structure ≥ 4 bytes of time

Address code = 1 byte

Function code = 1 byte

Data area = N bytes

Error check = 16-bit CRC

Ending structure ≥ 4 bytes of time

Address code: It is the address of the transmitter, which is unique in the communication network (factory default 0x01).

Function code: The function instruction of the command issued by the host, this transmitter only uses the function code 0x03 (reading register data).

Data area: The data area is the specific communication data. Note that the high byte of the 16bits data comes first!

CRC code: two-byte check code.

Host inquiry frame structure:

Address code	Function code	Register start address	Register length	Check digit low	Check digit high
1byte	1byte	2byte	2byte	1byte	1byte

Slave response frame structure:

Address code	Function code	Effective bytes	Data area	Second data area	Nth data area	Check code
1byte	1byte	1byte	2byte	2byte	2byte	2byte

Register address

Register address	PLC or configuration address	Content	Support function code	Definition description
0000 H	40001	Instantaneous wind speed	0x03/0x04	The definition indicates that the uploaded data is 10 times of the real value
07D0 H	42001	Device address	0x03/0x04/0x06	1~254（Factory default 1）
07D1 H	42002	Device baud rate	0x03/0x04/0x06	0 stands for 2400 1 stands for 4800 2 for 9600 3 for 19200 4 stands for 38400 5 stands for 57600 6 represents 115200 7 for 1200

Communication protocol example and explanation

Example: Read the wind speed value of device address 0x01

Inquiry frame：

Address code	Function code	Starting address	Data length	Check digit low	Check digit high
0x01	0x03	0x00 0x00	0x00 0x01	0x84	0x0A

Response frame: (for example, the current wind speed is 8.6m/s)

Address code	Function code	Returns the number of valid bytes	Current wind speed value	Check digit low	Check digit high
0x01	0x03	0x02	0x00 0x56	0x38	0x7A

Wind speed calculation:

Current wind speed: 0056H (hexadecimal) = 86=> Wind speed = 8.6m/s

COMMON PROBLEMS & SOLUTIONS

Device cannot be connected to PLC or computer

possible reason:

1) The computer has multiple COM ports, and the selected port is incorrect.

2) The device address is wrong, or there are devices with duplicate addresses (the factory default is all 1).

3) Baud rate, check mode, data bit, stop bit error.

4) The host's polling interval and waiting time for answering are too short, and both need to be set above 200ms.

5) The 485 bus is disconnected, or the A and B lines are reversed.

6) If the number of devices is too large or the wiring is too long, power should be supplied nearby, and a 485 booster should be added, and a 120Ω terminal resistance should be added.

7) The USB to 485 driver is not installed or damaged.

8) The equipment is damaged.