REFERENCES AND ACCESSORIES

References	Anemoscope description
ANTC_D3.1	USCITA RS485 MODBUS

Optional	Description
ANTC_RISC	Self-regulating heater integrated into the body
ANTC_INOX	Anemometer material in AISI 316 STAINLESS STEEL
CAV_SCH5x0,5	Connection cable for anemometer with heater supplied in the required length

APPLICATION

The ANTC anemoscope has been expressly designed for industrial applications such as:

- Automated greenhouses
- Photovoltaic solar trackers
- Cable cars for ski plants
- Cranes and Mobile Cranes
- Wind turbines
- Weather Stations

RS485 MODBUS

Thanks to the MODBUS protocol, installation and data display is even easier, in particular:

- Immediate integration into various supervisory, control and automation systems
- Open specifications that do not require hardware constraints
- Reliable communication between automation devices
- Interoperability between devices from different manufacturers

Modbus

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CE

NUOVACEVA AUTOMATION

Wind vane anemoscope
Industrial design for all environment
Digital output RS485 MODBUS
Rotating transducer mounted on double ball bearing
360° Range
Male connector M12

Modbus

ANTC D3.1 - ANODIZED ALUMINIUM

Wind vane anemoscope with Digital RS485 MODBUS output for industrial use.

The ANTC series has been designed and built for industrial applications, in particular:

- Surveys for wind towers
- Historical analysis data logger
- Wind threshold control for photovoltaic sails and solar trackers

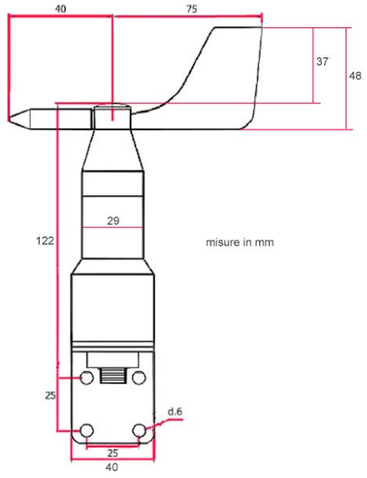
However, it is used in any sector where reliable, robust and precise product characteristics are required.

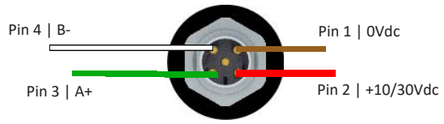
The body of the rotor is machined aluminum with stainless steel support. The head rotates on ball bearings. The vane is made of nylon shock-absorbent and easily interchangeable. It also features a convenient connector for connection.The count rate is via optical transducer, a digital encoder with 12 pulses per revolution.

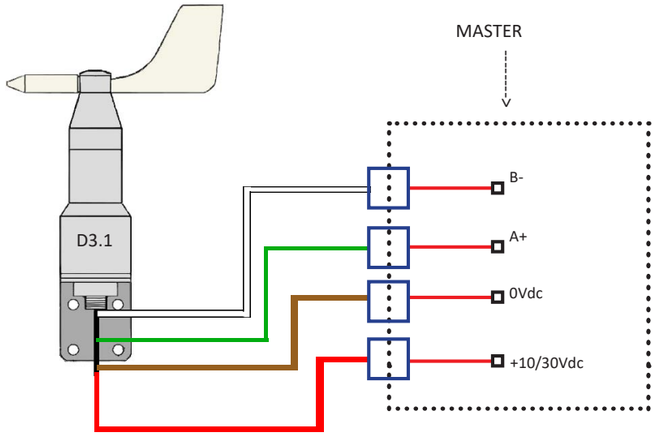
EACH TRANSDUCER IS TESTED AND EQUIPPED WITH A CALIBRATION CERTIFICATE.
On request, it's possible a periodic check and product calibration.

CONNECTION & DIMENSIONS

It is possible to combine the anemoscope with a master device with MODBUS protocol to view the data immediately and give alarm signals







MODBUS PROTOCOL REGISTER

HOLDING REGISTER							
REGISTER ADRESS	REGISTER ACCESS	MSB..LSB	VARIABLE NAME	TYPE	UNITS	VARIABLE DESCRIPTION	DEFAULT VALUE
1	R	(15..0)	Wind Speed	uint16	km/h	Anemometer wind speed	--
2	R/W	(15..0)	Modbus ID	uint16	--	Modbus ID	244
3	R	(15..0)	Wind direction	uint16	Angle °	Wind Vane wind direction	--
4	--	--	--	--	--	--	--
5	--	--	--	--	--	--	--
6	--	--	--	--	--	--	--
7	R/W	(15..0)	Device Sensor	uint16	--	Sensor connected to PCB (0: Anemometer / 1: Wind Vane)	1
8	R/W	(15..0)	Baudrate	uint16	BAUDS/100	Modbus baudrate (96:9600 / 192:19200)	192
9	R/W	(15..0)	Parity	uint16	--	Modbus parity (0: None / 1: Even)	1

INPUT REGISTER							
REGISTER ADRESS	REGISTER ACCESS	MSB..LSB	VARIABLE NAME	TYPE	UNITS	VARIABLE DESCRIPTION	DEFAULT VALUE
1	R	(15..0)	Wind Speed	uint16	km/h	Anemometer wind speed	--
5	--	--	--	--	--	--	--
3	R	(15..0)	Wind direction	uint16	Angle °	Wind Vane wind direction	--
4	--	--	--	--	--	--	--
5	--	--	--	--	--	--	--
6	--	--	--	--	--	--	--
5	--	--	--	--	--	--	--
5	--	--	--	--	--	--	--
5	--	--	--	--	--	--	--

TECHNICAL FEATURES

Electric Features

Power supply	10...30 Vdc
Max. current	15 mA
Output	Digitale RS485 MODBUS
Type of contact	Rotary transducer

Measurements

Mechanical Range	da 1° a 360°
Average error	0,06%
Standard deviation error	1,01%
Output	Digital RS485 MODBUS

Mechanical Features

Materials	Machined aluminum
Connector	M12
Weight (No cable)	300 g
Body rotor H	122mm
Body rotor + support	147mm
Size with connector M12	7,5 mm
Top body rotor min. diam.	29 mm
Top body rotor max. diam.	40 mm
Max. diam. with vane	115 mm
Storage temperature	-40 ºC +85 ºC
Operating temperature	-20 ºC +85 ºC
EMC	EN 61000-6-1:2001 EN 55022:2001, Class B
Protection	IP66

WIND VANE ORIENTATION

The wind vane must be oriented towards NORTH and its output signal RS485 corresponding 00 00 will conform to the angles and directions of the board.

To orient the wind vane towards NORTH, align the fixing bracket perpendicular to the NORTH.

WIND DIRECTION - OUTPUT RATIO TABLE

Direction	Angle	RS485 output
North	0.0	00 00
North-northeast	22.5	00 16
Northeast	45.0	00 2D
East-northeast	67.5	00 43
East	90.0	00 5A
East-southeast	112.5	00 70
Southeast	135.0	00 87
South-southeast	157.5	00 9D
South	180.0	00 B4
South-southwest	202.5	00 CA
Southwest	225.0	00 E1
West-southwest	247.5	00 F7
West	270.0	01 0E
West-northwest	292.5	01 24
Northwest	315.0	01 3B
Northwest-North	337.5	01 51
If the wind speed is below 3km/h, the angle will be uncertain