



TDS12287AL

Wind speed meter

This outdoor wind speed meter is a three-cup sensor with low start speed which can measure wind speed up to 50m/s (180km/h). The TDS12287AL is particularly useful to protect motorised outdoor shades and comparable devices, to avoid damage from high wind speed.

On the TDS system, the wind speed can be visualised as actual wind speed on the TELETASK touch panels, touch screens and also on mobile devices like a smart phone. On the OPUS and MAIOR touch screens you can have wind speed line graphs of today, last week, last month and last year.

The wind speed output signal of the sensor is a 4-20mA current loop signal which means that the TDS system can also detect a broken wire or sensor failure. In such case it can take the shield in at that moment of error and send a 'wind sensor error' message to a touch screens.

APPLICATION

Wind speed metering with 4-20mA output for general purpose applications and in particular to be integrated with the TELETASK home automation system.

The sensor can be used for all kind of applications for residential and professional use like villas and apartments, large buildings like airports, ports, meteorology, environmental data applications, industrial and agricultural buildings and to protect general technical outdoor installations.

CHARACTERISTICS

The analogue output signal is a direct indication for the measured wind speed for speeds up to 50m/sec (180km/h)

SETTINGS

Configuration

Via PROSOFT Suite V3.0 or higher.

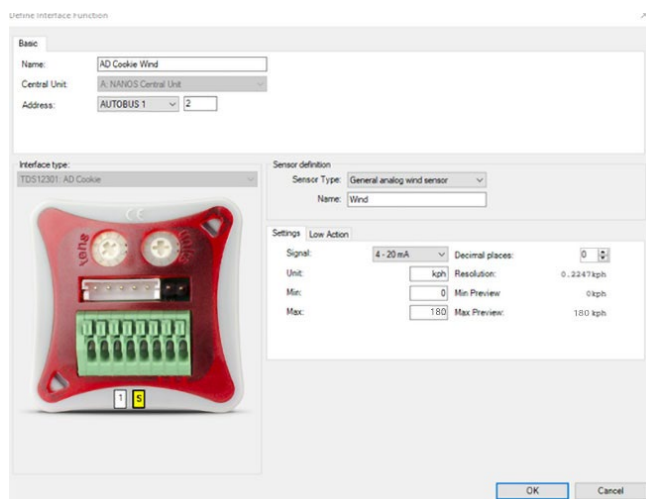
Set in PROSOFT: Type of sensor "general analog wind sensor"

Signal "4 – 20 mA"

Unit "kph"

Decimal places "0"

Min 0 ; Max 180



INSTALLATION

On any flat surface, 30 cm away from the wall or other surface. Be sure that the sensor is installed where the wind speed is most important for the application. Preferably installed on top of the roof of the building at the highest point on a bracket of 30cm (not included), or higher on a vertical pillar in the air. Avoid that trees or buildings influence the metering. If you can't avoid this, take the possible error into consideration in your PROSOFT settings. If used for protection of shades, please

notice that a short wind burst may not be measured. Use the proper setting to avoid damage to the protected equipment.

Supply voltage

12VDC (minimum 9V).

- ! To be installed by a qualified person only.
- ! Follow the safety standards from the local authorities to be compliant with all regulations and safety equipment when working on heights.

CONNECTIONS

Output

4-20mA = 0-50m/s wind speed (0 - 180km/h).

Black wire: GND ; Red wire: +12V ; Yellow wire: 4-20mA out.

The sensor is provided with a signal cable with a length of 3 meters.

Output impedance $\leq 125\Omega$

Calculation formula:

$$W(m/s) = (I - 4) \times 50 / 16 \quad (I = 4-20mA)$$

! Only connect/disconnect with power supply off.

The maximum length between the sensor and the analog input interface is 200 meter (3 x 0.5mm²).

If there is a fourth (spare) wire in the cable, connect it with GND at the interface side. Do not connect it at the sensor side.

Same for the shield if you use a shielded cable.

POWER CONSUMPTION

Max 0.84W (70mA on 12V supply)

DIMENSIONS

Sensor housing: 220W x 175H x 220D (mm)

(ground plate diameter 80mm)

Sensor cable length: 3 meter

Alu mounting bracket: not included; minimum 30cm length/height recommended.

NET | GROSS WEIGHT

Sensor: 0.445 kg including cable | 0.725 kg

PACKAGING CONTENT:

TDS12287AL aluminium black wind speed sensor with 3meter black cable.

ENVIRONMENTAL CONDITIONS

Storage (with no condensation or icing)

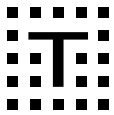
Temperature: -30°C to +70°C max.

Relative humidity: 5% to 95%

Operation (with no condensation or icing)

Temperature: -30°C to +70°C max.

Relative humidity: 5% to 95%.



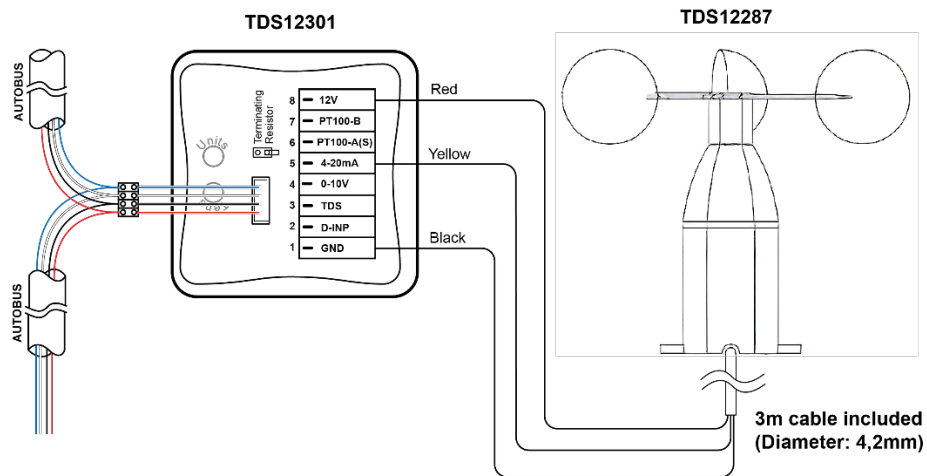
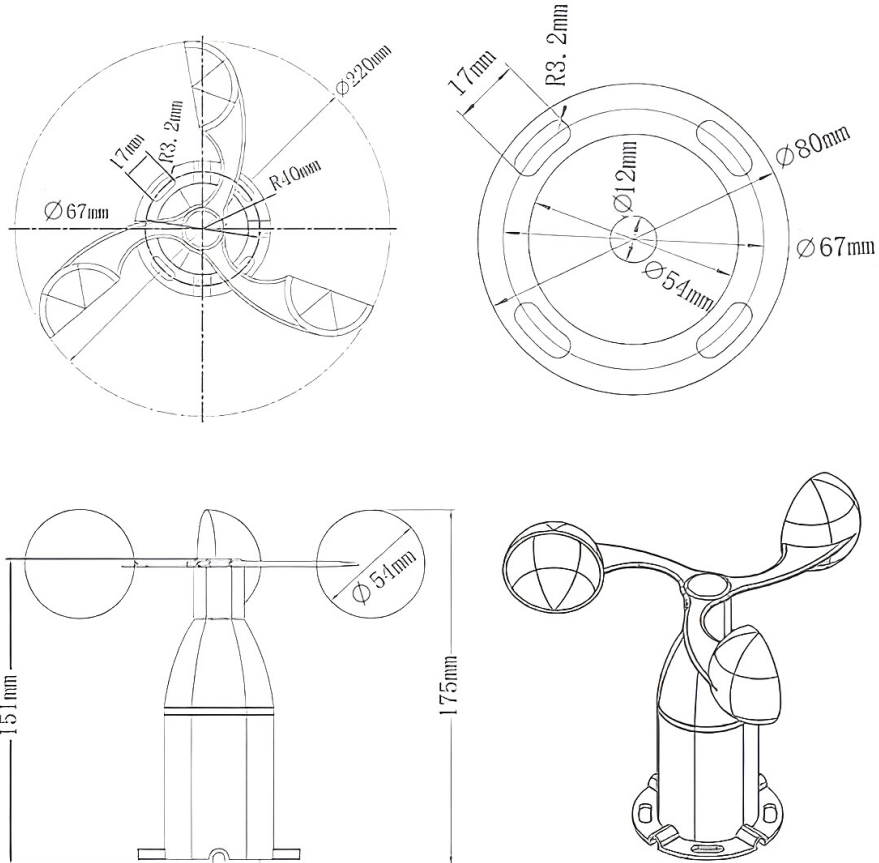
IP PROTECTION RATE

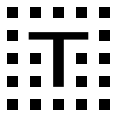
IP64

LIMITED WARRANTY

Four years: warranty voids when the unit is disassembled. Or when the sensor is damaged with sharp/heavy objects or corrosive liquids.

SCHEMATIC DRAWINGS





Beaufort scale	Name of wind	Wind speed(m/s)	(km/h)	Terrestrial phenomenon	Sea surface state
0	Calm	0~0.2	< 1	Quiet, smoke rising straight up	Calm
1	Light air	0.3~1.5	1~5	Smoke can indicate the wind direction, but the Weather vane cannot rotate.	Smooth sea
2	Light air	1.6~3.3	6~11	The human face feels the wind, the leaves make a slight noise, and the Weather vane can rotate.	Small waves
3	Breeze	3.4~5.4	12~19	Leaves and twigs sway endlessly, flags unfold	Small waves
4	Soft breeze	5.5~7.9	20~28	It can blow up dust and paper on the ground, and the twigs of trees move slightly	Slight sea
5	Fresh breeze	8.0~10.7	29~38	Small branches with leaves sway, and inland water surfaces have wavelets	Moderate sea
6	Strong breeze	10.8~13.8	39~49	Big tree branches swaying, wires whistling and making noise, making it difficult to lift an umbrella	Big wave
7	Strong wind	13.9~17.1	50~61	The whole tree is shaking, and walking in the wind feels inconvenient	Huge waves
8	Strong wind	17.2~20.7	62~74	Micro branches are broken, and people feel a lot of resistance when moving forward	High sea
9	Strong wind	20.8~24.4	75~88	Damage to the building (movement of chimney top and roof tiles)	Raging waves
10	Fierce wind	24.5~28.4	89~102	Rare on land, it can cause trees to be pulled up and severely damage buildings when seen	Raging waves
11	Storm	28.5~32.6	103~117	There are few on land, but if there are, there must be significant damage	Extraordinary phenomena
12	Hurricane	32.7~36.9	118~133	Very few on land, with great destructive power	Extraordinary phenomena
13	Hurricane	37.0~41.4	134~149	Very few on land, with great destructive power	Extraordinary phenomena
14	Hurricane	41.5~46.1	150~166	Very few on land, with great destructive power	Extraordinary phenomena
15	Hurricane	46.2~50.9	167~183	Very few on land, with great destructive power	Extraordinary phenomena
16	Hurricane	51.0~56.0	184~201	Very few on land, with great destructive power	Extraordinary phenomena
17	Hurricane	56.1~61.2	202~220	Very few on land, with great destructive power	Extraordinary phenomena