TDS12287 — Wind speed meter

This outdoor wind speed meter is a three-cup sensor with low start speed which can measure wind speed up to 45m/s (162km/h). The TDS12287 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 some of the TDS touch screens you can have wind speed line graphs (wind speed line graph 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, can take the shield in at that moment of error and send a 'wind sensor error' message to a touch screen.

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 installations.

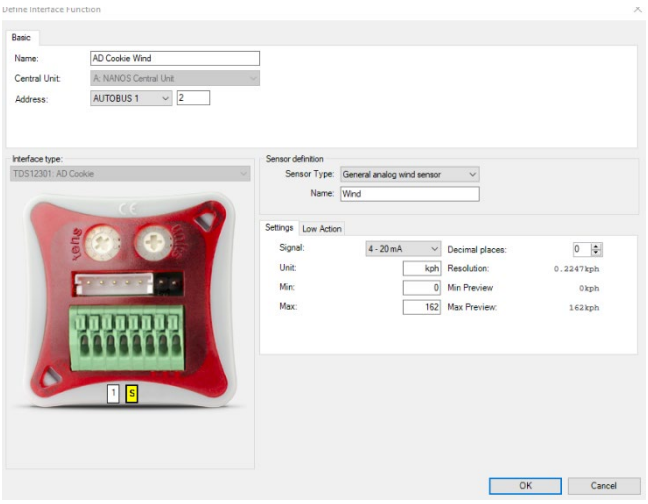
CHARACTERISTICS

The analogue output signal is a direct indication for the measured wind speed for speeds up to 45m/sec (162km/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 162



INSTALLATION

Mounting

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, or higher on a vertical pilar 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 = 0-45m/s wind speed (0 - 162km/h).
Black wire: GND ; Red wire: +12V ; Yellow wire: 4-20mA out.
The sensor is provided with a signal cable with a connector close to the sensor for easy replacement in case of a failure.
Output impedance ≤900Ω
Calculation formula:
W(m/s) = (I−4)×45/16 (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 0.5W (42mA on 12V supply)

DIMENSIONS

Sensor housing: 18W x 160H x 180D (mm)
(ground plate diameter 70mm)
Sensor cable length: 3 meter
Alu mounting bracket:
Foot diameter: 88 mm - Mounting top: 66 x 85 mm
Total height: 300mm

NET | GROSS WEIGHT

Sensor: 0.25 kg| 0.55 kg
Alu mounting bracket 30cm: 0.30 kg | 0.42 kg

PACKAGING CONTENT:

TDS12287 black wind speed sensor with 3 meter black cable
Alu mounting bracket 30cm (black)

ENVIRONMENTAL CONDITIONS

Storage (with no condensation or icing)

Temperature: -35°C to +60°C max.
Relative humidity: 5% to 99% max.

Operation (with no condensation or icing)

Temperature: -35°C to +60°C max.
Relative humidity: 5% to 99% max.

IP PROTECTION RATE

IP64

LIMITED WARRANTY

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

SCHEMATIC DRAWINGS