



It combines the following measures: 2D wind speed and direction, air temperature, humidity, atmospheric pressure and solar radiation

Suitable for different applications

Compact and light

Low power consumption

Integrated compass

# Description

The TX sensor is an all-in-one sensor which can provide accurate and reliable performance for many applications such as agriculture, sports facility, marine, construction and renewable energy. The unit can be provided in different versions according to the number of necessary sensors for the specific application.

Thanks to the different available interfaces and protocols the TX sensor ensures a great flexibility of use.

Notwithstanding the high number of sensors the TX can guarantee a low power consumption which make it ideal for the installation in remote sites where only power by photovoltaic panel and battery is available.

The sensor is provided with power supply and signal cable (5m).



## Technical Specifications\*

### Measurement performance

#### Wind speed

Sensor	Ultrasounds
Measuring range	0 ÷ 60 m/s
Resolution	0.01 m/s
Accuracy	± 0.2 m/s or ± 2% (0÷35 m/s), ± 3% (> 35 m/s)

#### Wind direction

Sensor	Ultrasounds
Measuring range	0 ÷ 360°
Resolution	0.1°
Accuracy	± 2° (entire range)

#### Compass

Sensor	Magnetic
Measuring range	0 ÷ 360°
Resolution	0.1°
Accuracy	± 1°

#### Air temperature

Sensor	Pt100
Measuring range	-40 ÷ +80 °C
Resolution	0.1 °C
Accuracy	± 0.15 °C (± 0.1%)

#### Relative humidity

Sensor	Capacitive
Measuring range	0 ÷ 100%
Resolution	0.1%
Accuracy	± 2% UR

#### Barometric pressure

Sensor	Piezoresistive
Measuring range	300 ÷ 1100 hPa
Resolution	0.1 hPa
Accuracy	± 0.5 hPa

#### Solar radiation (optional)

Sensor	Termopile
Measuring range	0 ÷ 2000 W/m <sup>2</sup>
Resolution	1 W/m <sup>2</sup>
Accuracy	± 3% (100 ÷ 1000 W/m <sup>2</sup> )
Classe ISO 9060	Spectrally Flat Class C

### Operating conditions

Temperature	-40 ÷ +80 °C
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### Outputs

Serial outputs	RS232, RS485 (¼ Unit Load), RS422 and SDI-12
Communication protocols	NMEA, MODBUS-RTU, SDI-12, proprietary RS232 and RS485
Analog outputs	2 analog outputs, for wind speed and direction. Output at choice among 4 ÷ 20 mA (standard), 0 ÷ 1, 0 ÷ 5 and 0 ÷ 10 V (option 0 ÷ 10 V needs 15 ÷ 30 Vdc power supply)

Wind speed averaging interval	Configurable from 1 s to 10 min
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Electrical connection	19-pole M23 male connector
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### Power supply and Consumption

Power Supply	10 ÷ 30 Vdc
Power consumption	26 mA @ 24 Vdc without heater 8 W @ 24 Vdc with heater

### Mechanical specifications

Protection degree	IP66
Survival speed	90 m/s
Case	Plastic material. Metal parts: AISI 316.
Weight	1 kg 1.5 kg (vers. with solar rad.)

### Ordering codes

t065a-TX	PSM-t065a-TX
t065b-TX (Vers. with Sol. Rad.)	PSM-t065b-TX

\*Changes on technical performances can be applied upon request of specific calibration

