

IRDAM

WST 6000

AUTOMATIC WEATHER STATION

The IRDAM WST 6000 Weather Station measures six meteorological parameters: **Wind Speed, Wind Direction, Ambient Temperature, Absolute Atmospheric Pressure, Relative Humidity and calculate the Dew Point**

The WST-6000 is a robust, compact, automatic instrument, without any **moving parts**.

The WST6000 is perfectly adapted to rigorous climates and can be equipped with a protection system against frost and icing. (Option)

Its performances are not affected by heat, snow or rain.

The weather sensors and data acquisition processor are contained in a single unit and will not corrode or wear out.

The installation of this compact weather station is easy, thanks to the integrated mast adapter for mast Ø 50mm. The WST6000 is a high precision instrument, supports without problem the vibrations and answers the slightest variation of wind.

The IRDAM technology of calculation by thermal field variation for wind speed and direction showed its reliability. It detects the thermal field variation caused by wind hitting a heated cylinder. It is the high technology equivalent of the traditional rifleman's wet finger held to the wind.

This principle of operation **WITHOUT MOVING PARTS** showed its reliability and performances on armoured vehicles, ships, alpine and industrial installations.

This weather station is an intelligent unit able to communicate in full duplex on the modern teleprocessing networks.

All the components are integrated in a tight cylinder resistant to extreme conditions. The body contains a microcontroller who registers the weather parameters, carries out auto tests, and transmits measurements and information.



IRDAM WEATHER STATION WST 6000
European patent N° 0146584
US patent N° 4905513

Features

- High reliability
- High accuracy
- Zero threshold for wind measurement
- Resistant to severe environment
- No maintenance
- No moving parts
- Rain protected
- Permanent auto test
- Serial RS-485 output
- Transmission cycle 200 ms
- Can be installed in modern network
- Easy fixing on mast (No adapter)



WST 6000

Technical Specifications

1° Wind Speed

Range	0 - 70 m/s (252km/h)
Accuracy	± (0,5 m/s + 5%)
Resolution	1/16 (0.0625) m/s

2° Wind Direction

Azimuth	0-360° (no electrical gap)
Accuracy	± 5° @ -40°C to + 60°C
Resolution	1/16 (0.0625)°

3° Air Temperature

Range	-40°C to +60°C
Accuracy	± 1°C @ wind speed >2 m/s
Resolution	1/16 (0.0625)°C

4° Relative Humidity

Range	0% to 100 %
Accuracy	± 3 % HR @ 20% to 90% ± 4 % HR @ 0 20 % and 90 – 100%
Resolution	1/16 (0,0625%HR)

5° Absolute Atmospheric Pressure

Range	300 to 1100 hPa (mbar)
Accuracy	± 1 hPa @ T _{air} ∈ [23° C] ± 3 hPa @ T _{air} ∈ [-40°C;+60°C]
Resolution	1/16 (0,0625) hPa

6° Dew Point

	Calculated from temperature and relative humidity
Resolution	1/16 (0,0625)°C

Communication

Output Protocol	EIA: RS-485 9600 bauds, simplex
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Transmission Cycle	Every 200 ms
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Structure of message	20 bytes, 1 start, 8 data, 1 parity and 1 stop
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Auto Test	Permanent, 1 byte per measure
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Start-Up	< 20 seconds, automatic from power-up to first valid output
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Options

- Automatic de-icing protection (HS)
- Programmable alarm module
- TCP-IP Interface, Ethernet
- Software for acquisition and graphic representation of multiple stations of the whole network (METEONET)
- Power supply 12V
- Serial RS-422 output (full duplex)

Physical Characteristics

Power Supply

Input voltage	24 to 48 VDC
Maxi power Wind head	< 15 W
Optional freezing protection	325 Wmax with 48VDC 80 Wmax with 24VDC

Operating Temperature	-40°C to + 60°C
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Storage Temperature	-55°C to +70°C
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Dimensions

Height	292 mm
Diameter	120 mm

Weight	1,3
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Standard Features

- Measurement of wind speed
- Measurement of wind direction
- Measurement of air temperature
- Measurement of atmospheric pressure
- Measurement of relative humidity
- Dew point calculation
- Permanent auto test
- Serial RS-485 output
- Weatherproof

Applications

The IRDAM WST6000 weather station is ideal for severe environment and for inaccessible locations.

- Alpine weather stations
- Airports and heliports
- Electrical plants
- Chemical plants
- Wind turbines
- Industrial applications control
- Alpine ropeways and cable cars
- Snowmaking equipment
- Road weather stations
- Tower cranes

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