

IRDAM

WST-6000N

NAVAL WEATHER STATION

The IRDAM WST6000N Weather Station measures four meteorological parameters: **Wind Speed, Wind Direction, Ambient Temperature and Absolute Atmospheric Pressure.**

It is robust, compact, automatic and **WITHOUT MOVING PARTS.**

The WST6000N 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. **Especially treated for the marine conditions, it resists to galvanic and salt work corrosion.**

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 6000N
European patent N° 0146584
US patent N° 4905513

Features

- High reliability
- Resistant to galvanic and salt work corrosion conditions
- No moving parts
- Resistant to severe environment
- Zero threshold for wind measurement
- High accuracy
- No maintenance
- Easy fixing on mast (No adapter)
- Rain protected
- Permanent auto test
- Serial RS-485 output
- Transmission cycle 200 ms
- Can be installed in modern network
- Compatible with the modern teleprocessing networks



WST-6000N

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° |
| 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° 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 |

COMMUNICATION :

| | |
|-------------------------------|--|
| Output protocol | EIA : RS-485 Simplex |
| Rapidity of modulation | 9600 bauds |
| Transmission cycle | One message every 200ms |
| Structure of message | 20 bytes, 11 bits by byte (1 start, 8 data, 1 parity, 1 stop) |
| Auto test | 1 bit by weather measurement |
| Start-up | <20 seconds, automatic from power-up to first valid output |

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

Storage Temperature

-55°C to +70°C

Dimensions

| | |
|----------|--------|
| Height | 292 mm |
| Diameter | 120 mm |

Weight

1,3

STANDARD FEATURES :

- Measurement of wind speed
- Measurement of wind direction
- Measurement of air temperature
- Measurement of atmospheric pressure
- Permanent auto test
- Serial RS-485 output
- Weatherproof
- Resistant to galvanic and salt work corrosion conditions

APPLICATIONS :

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

- Ships
- Off shore stations
- Harbours for sport ships and for rescue
- Airports and heliports
- Electrical plants
- Chemical plants
- Wind turbines
- Industrial applications control
- Road weather stations
- Tower cranes

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