

ULP NMEA2000 CALYPSO Ultra Low Power Ultrasonic Wind Meter



ULP NMEA2000 CALYPSO Ultra Low Power Ultrasonic Wind Meter User Manual

[Home](#) » [CALYPSO](#) » ULP NMEA2000 CALYPSO Ultra Low Power Ultrasonic Wind Meter User Manual 

Contents

- [1 ULP NMEA2000 CALYPSO Ultra Low Power Ultrasonic Wind Meter](#)
- [2 Product Information](#)
- [3 Product Usage Instructions](#)
- [4 FAQs](#)
- [5 Product Overview](#)
- [6 Package Content](#)
- [7 Installation Instructions](#)
- [8 Technical specifications](#)
- [9 Accessories](#)
- [10 Communication Protocols](#)
- [11 General information](#)
- [12 Warranty](#)
- [13 Documents / Resources](#)
 - [13.1 References](#)

CALYPSO

ULP NMEA2000 CALYPSO Ultra Low Power Ultrasonic Wind Meter



Product Information

- **Specifications**

- **Dimensions:** Not specified
- **Weight:** 200 grams (7 ounces)
- **Power:** 12V, 20 mA @115.200 bauds
- **Sensors:** Ultrasonic transducers (4x) with a sample rate of 1 Hertz
- **Wind Information:** Sample rate of 1 Hz, Threshold: 0.5 m/s (1.12 mph)
- **Easy Mount:** 3 x M4 lateral female tripod thread, 3 x M4 interior female tripod thread

Product Usage Instructions

- **Installation Instructions**

- **Before Installing the Wind Sensor**
 - Plug in the ULP NMEA2000 to the NMEA2000 cable/backbone.
 - On your display/plotter, choose the ULP NMEA2000 as the wind source in the settings.
 - Verify wind data is appearing on your NMEA2000 display/plotter.
- **Installing the NMEA2000 on the Mast**
 - Place the ULP N2K on top of the mast or a pole away from any object that can disturb the airflow to the wind sensor in a 2 meter radius (6.5 feet).
 - Connect it to the NMEA2000 cable. If the cable is longer than 6 meters (19.7 feet), the cable needs an in-line terminator.
 - Make sure the North Mark is facing the bow of the boat to obtain correct wind readings.
 - Tighten the screws to fasten the wind sensor to the mast.

FAQs

- **Q: How do I know if my ULP NMEA2000 is working correctly?**
 - **A:** To verify proper functionality, you can check if wind data is being displayed on your NMEA2000 display/plotter after installation.
- **Q: Can the ULP NMEA2000 be mounted on any type of boat?**
 - **A:** The ULP NMEA2000 can be mounted on various types of boats including daysailers, cruising boats, trainers and race officials' boats, and motorboats.

Product Overview

Thank you for choosing the ULP NMEA2000 wind meter from Calypso Instruments. This is the first model of the ULP NMEA2000 of our Generation II ULPs, representing an important technology breakthrough condensing an extensive R+D investment:

- Both shape and firmware have been enhanced for improved rain performance. This is key for static applications such as weather stations.
- Mechanical design has been revamped making the unit more robust and dependable.
- Easy plug and play into NMEA2000 cable without the need for a gateway.

Applications for the ULP NMEA2000 are the following:

- Daysailers
- Cruising
- Trainers and Race Officials
- Motorboats

Or any other application where an NMEA2000 backbone, display or plotter is used.



Package Content

- **The package contains the following:**
 - Ultrasonic ULP NMEA2000 Wind Instrument
 - Serial number reference on the side of the packaging.
 - A quick user guide on the back of the packaging and some more useful information for the customer.
 - M4 headless screw (x6) *
 - M4 screw (x3)*

Installation Instructions

Before installing the unit:

1. Plug in the ULP NMEA2000 to the NMEA2000 cable/backbone.
2. On your display/plotter, choose the ULP NMEA2000 as the wind source in the settings. The manner to do this will vary depending on the brand of the display/plotter. Please refer to your display/plotter's manual.
3. Verify wind data is appearing on your NMEA2000 display/plotter.



Installing the ULP NMEA2000 on top of the mast.

1. Place the ULP N2K on top of the mast or a pole away from any object that can disturb the airflow to the wind

- sensor in a 2-meter radius (6.5 feet).
2. Connect it to the NMEA2000 cable. If the cable is longer than 6 meters (19.7 feet), the cable needs an in-line terminator. *
 3. Make sure the North Mark is facing the bow of the boat to obtain correct wind readings.
 4. Tighten the screws to fasten the wind sensor to the mast.
 - Cables with in-line terminators and in-line terminators are available accessories on our website:
www.calypsosinstruments.com.



Technical specifications

The ULP NMEA2000 has the following technical specifications:

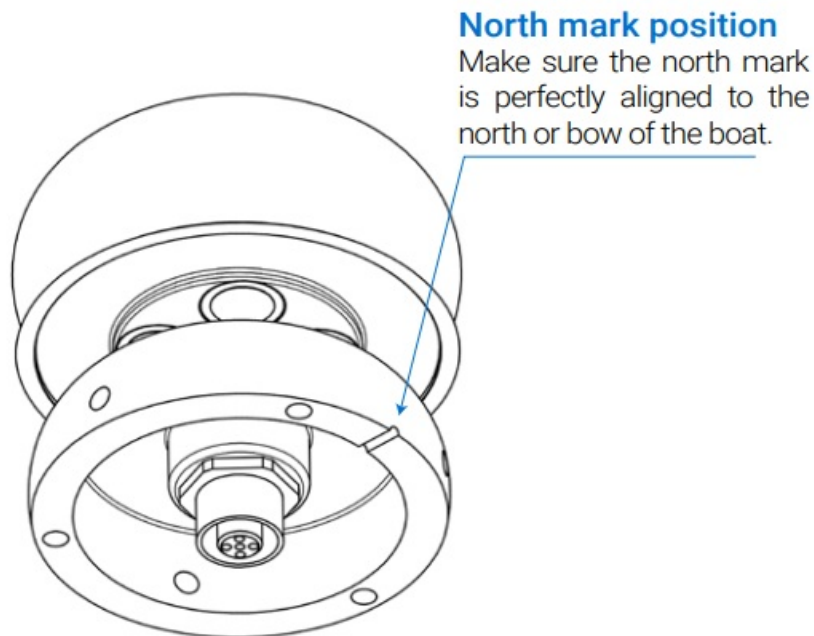
- **Dimensions**
 - **Diameter:** 70 mm (2.76 in.)
 - **Height:** 74 mm (2.91 in.)
- **Weight**
 - 200 grams (7 ounces)
- **Power**
 - 5-36 VDC
- **Power Consumption**
 - 20 mA @115.200 bauds, 12V
- **Sensors**
 - Ultrasonic transducers (4x) Sample rate: 1 Hertz

The ULP NMEA2000 has been designed to avoid any mechanical parts to maximize reliability and minimize maintenance. The transducers communicate between themselves two by two using ultrasonic range waves. Each pair of transducers calculates the signal delay and get information about both wind direction and wind speed.

- **Wind Information**
 - Wind speed
 - Wind direction
- **Sample rate:**
 - 1 Hz
- **Wind Speed**
 - **Range:** Range: 0.5 to 45 m/s (1.12 to 100 mph)
 - **Accuracy:** ± 0.1 m/s at 10m/s (0.22 at 22.4 mph)
 - **Threshold:** 0.5 m/s (1.12 mph)
- **Wind direction**

- **Range:** 0 – 359°
- **Accuracy:** $\pm 1^\circ$ RMS at 10 m/s (22.37 mph)
- **Easy mount**
 - 3 x M4 lateral female tripod thread
 - 3 x M4 interior female tripod thread

It can be mounted either on a pole or mast mount (with inferior screws or lateral screws).



Accessories

- We offer a variety of accessories such as a 20-meter NMEA2000 cable with an in-line terminator, in-line terminators and a mast mount. All accessories can be found on our website at www.calypsoinstruments.com.
- The ULP NMEA2000 can be mounted on our specifically designed mast mount for the ULP NMEA2000 as shown in the following photo.



Calibration

- The ULP NMEA2000 has been calibrated with accuracy, following the same calibration standards for each unit.
- Calibration reports for a specific unit can be purchased upon request.

Communication Protocols

- **OneNet Class Code:** 85
- **OneNet Function Code:** 130

PNG Information:

- 059392- ISO Acknowledgment
- 059904- ISO Request
- 060928- ISO Address Claim
- 065240- ISO Commanded Address
- 126208- NMEA – Request group function
- 126208- NMEA – Command group function
- 126208- NMEA – Acknowledge group function
- 126208- NMEA – Read Fields – group function
- 126464- PGN List – Transmit PGNs group function
- 126464- PGN List – Received PGNs group function
- 126993- Heartbeat
- 126996- Product Information
- 126998- Configuration Information
- 130306- Wind Data

General information

General recommendations

- Regarding mounting the unit, the masthead has to be prepared for the mechanical installation. Align the North mark of the ULP NMEA2000 to the bow for maximum accuracy of wind angle.
- Make sure to install the sensor in a location for example, the masthead on a boat, where it is free from any object that may obstruct the flow of wind to the sensors within a 2-meter radius.

Other important aspects:

- Do not attempt to access the transducer area with your fingers;
- Do not attempt any modification to the unit;
- Never paint any part of the unit or alter its surface in any way.
- NOT allow to be submerged fully or partially in water.
- If you have any questions or doubts, please contact us directly.

Maintenance and repair


- The ULP NMEA2000 does not require great maintenance given the new design of non-moving parts.
- Transducers must be kept clean and aligned. Impacts or incorrect impulsive handling may lead to transducer misalignment.
- The space around the transducers must be empty and clean. Dust, frost, water, etc... will make the unit stop working. The ULP NMEA2000 can be wiped clean with a damp cloth being careful to not touch the transducers.

Warranty

- The warranty covers defects resulting from defective parts, materials and manufacturing, and is made known to the manufacturer within 24 months after the purchase date.
- Warranty is void in case of non-following the instructions of use, repair, or maintenance without written authorisation.
- Any wrongful use given by the user will not incur any responsibility on the part of Calypso
- Instruments; therefore any harm caused to the ULP NMEA2000 by a mistake will not be covered by the warranty. Using assembly elements different from those delivered with the product will void the warranty.
- Changes in the transducer's position/alignment will avoid any warranty.
- For further information please contact Calypso Technical Support through sales@calypsoinstruments.com or visit www.calypsoinstruments.com.
- Ultra-Low-Power Ultrasonic NMEA2000 wind meter (ULP NMEA2000)
- User manual English version 1.0
- www.calypsoinstruments.com.

If you want to know more about our new ULP NMEA2000 wind meter, please keep reading or visit our website www.calypsoinstruments.com.

Documents / Resources

 <p>ULTRA-LOW-POWER ULTRASONIC NMEA2000 WIND METER (ULP NMEA2000) User Manual</p>	<p>CALYPSO ULP NMEA2000 CALYPSO Ultra Low Power Ultrasonic Wind Meter [pdf] User Manual</p> <p>ULP NMEA2000 CALYPSO Ultra Low Power Ultrasonic Wind Meter, ULP NMEA2000, CALYPSO Ultra Low Power Ultrasonic Wind Meter, Ultra Low Power Ultrasonic Wind Meter, Low Power Ultrasonic Wind Meter, Ultrasonic Wind Meter, Wind Meter</p>
--	---

References

- [Welcome to nginx!](#)
- [User Manual](#)