



930318 Masthead Sensor for Wind Speed and Direction.



A totally self-contained, proven, masthead unit, coupled via a 5-core down lead for supply in and NMEA out.

The wind speed section has quality ball race bearings, removable cups easily replaced if damaged, and a hall effect speed sensor. Two reverse polarity, strength matched magnets ensure that there is negligible variation in their vertical field.

A single magnet in the balanced vane, using a purpose made, low sensitivity, fluxgate coil, detects the direction. The effect of the earth's field or the speed magnets on this is negligible.

The bearing for the direction sensor is external, ensuring a perfect seal. The choice of plastics for the vane and the top assembly offer the low friction and wear requirements essential for long life.

The head is mounted on a 316 stainless steel arm, supported by a glass reinforced, two part base, with an internal plug and socket coupling to the down lead.



TECHNICAL SPECIFICATION

- **Input Voltage** 12/24V (10-36V DC).
- **Current Consumption** 50mA (approximate).
- **Ambient Temperature** -40°C to +85°C.
- **Data Output** NMEA 0183
- **Output Load** 4 x NMEA compatible inputs.
- **Cable Length** 20m



MASTHEAD SENSOR

This is designed for mounting on the mast cap or from a bracket on the side of the mast, but in either case it must be free from magnetic fields and the arm must point forward. This is essential for a true relationship to the meter, and also presents the sensor with the least disturbed airflow.

Like all engineering parts, the precision ball races in the masthead will not achieve their free running ability until they have been run in. This will not affect higher wind speed-readings, but the lowest readings will not be obtained initially. You should allow a few weeks use before judging the performance.

INSTALLING THE MASTHEAD

Unscrew the two screws on the top of the base moulding about 1/4" (6mm) and pull the base moulding off. You will see that these screws have 'O' ring seals on them inside. For this reason, do not completely remove the screws. The cable can now be seen entering an orange terminal block. **DO NOT UNSCREW THIS.** This block is a socket, and pulling it forward will release it from the fixed plug. The masthead is then free.

The base has two large 'O' ring seals on it. One on top to seal the joint you have just opened, and one below to seal the base to the mast cap. Take care not to loose these. Using the cable base as a template, spot mark through the fixing holes to the mast cap. The cable should run aft with the single screw forward. Use stainless steel screws to fix this to the cap. (either No 6 self tapping screws, or M3 machine screws).

If the cable is removed from the base it must be re-sealed at the entry point, using silicone sealant. Replace the masthead, ensuring that all 'O' rings are in position. The cable should then be fed down the mast, as appropriate to the mast design. Protect it at entry and exit points from chaffing. The cable may be run through a deck seal, or a conventional 5-way deck plug.



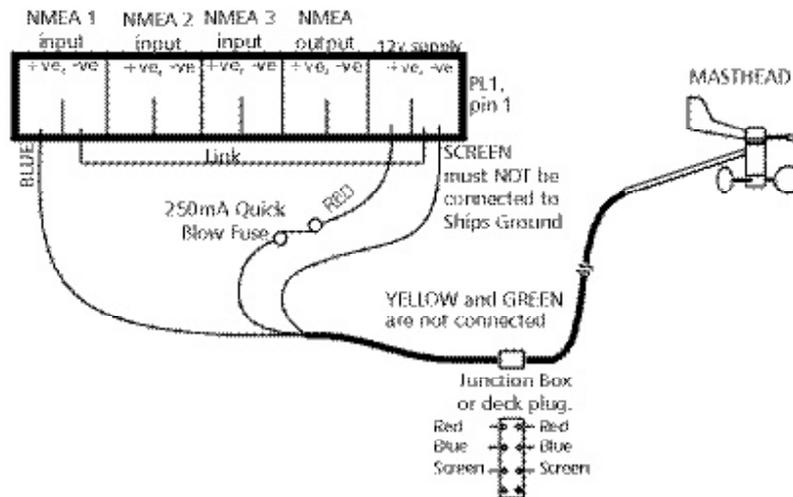
CONNECTIONS

Cable Colour	Function
Red	12 or 24V Power Input to the Wind Sensor
Blue	NMEA Data output of the Wind Sensor 0V is logical low, 5V is logical high
Yellow	not connected (NMEA -ve)
Green	not connected (NMEA in)
Screen	-ve (0V)

Do not connect the cable screen to Ships Ground. If the cable is cut to fit a deck plug or junction box, ensure the screen of the cable is continuous and not connected to ships ground.

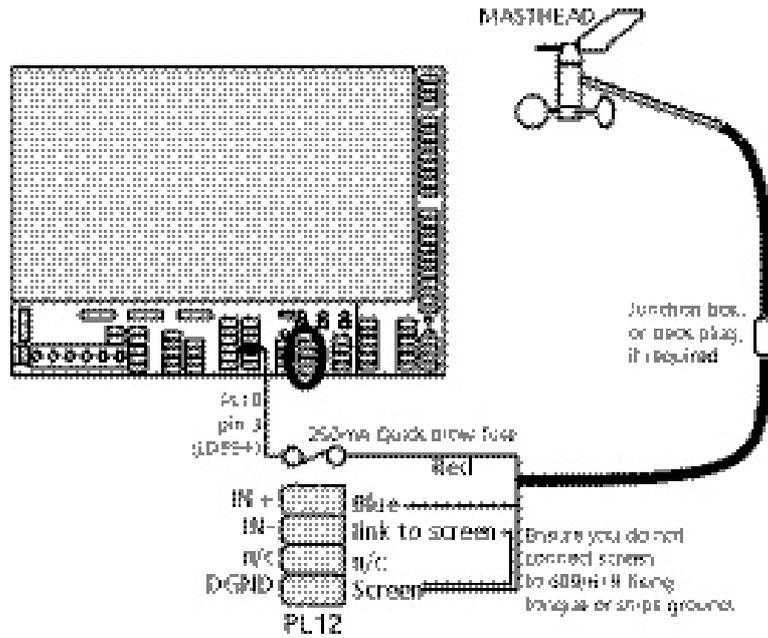
C-net 2000

Connect the Masthead cable to the 10 way terminal block on the back of the display as follows:

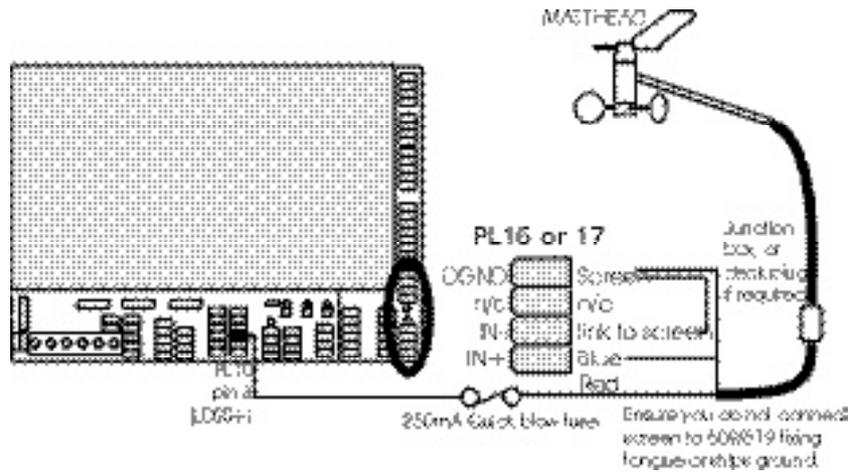


Pilot computer 930609 or 930619.

Connect the Masthead cable to PL12 in a 930609, as follows:



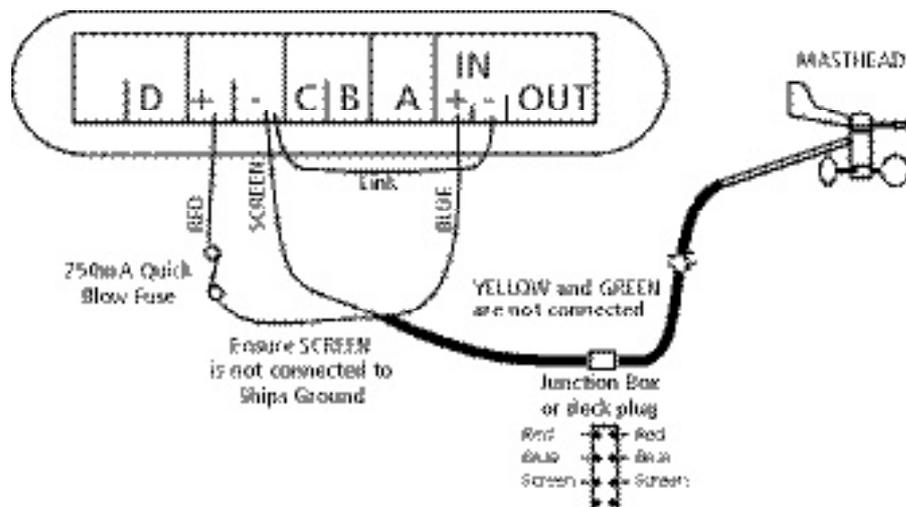
Connect the Masthead cable to PL17 or 16 in a 930619 as follows:





C-net Mk1

Connect the Masthead cable to the 10 way terminal block on the back of the display as follows:





CALIBRATION

Calibration is performed in the factory and is only affected if there is a dramatic change in the surrounding magnetic field.

Masthead alignment is corrected locally on any C-net 2000 or if available on any other instrument connected.

INSTRUMENT CARE

The masthead wind speed bearings are ball races, with stainless steel balls running in precision machined self-lubricating plastic, and should give years of satisfactory service, but if you step your mast in winter, it is good practise to put a few drops of light oil between the cups and the body, and allow it to soak in. Use only good oil i.e. 3 in 1. **Do not use** a release agent, like WD40, as these attack plastic.



A Company committed to Quality.



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This product complies with
EMC Directive 89/336/EEC