



213 VMHU Masthead Unit Wind Sensor Tests

Cable colour differences between brands

Function \ Brand	A+T	B&G
Supply (5 or 6.5V)	Red	Orange
0V	Black	Black
W/A Phase 1	Yellow	Red
W/A Phase 2	Green	Green
W/A Phase 3	Blue	Blue
W/Speed	White	Violet

Check the MHU supply voltage

Different systems have different supply voltages. The most common supply voltages are 6.5V or 5V (+/- 2%) depending on the system. A+T and B&G H2000 & H3000 are 6.5V. B&G H5000 & WTP3 are 5V. At the mast base junction box put the Black probe of a Voltmeter on the Black wire and the Red probe on the Supply wire (Orange or Red). If there is no, or a low voltage, then disconnect the mast cable and measure the wires coming from the processor again. If there is still no/low voltage, then the processor or cable through the boat is faulty.

Wind Speed not working

Are the wind cups spinning? At the mast base junction box identify which cable goes back to the Instrument Processor and disconnect the Wind Speed wire (Violet or White). Now tap this wire repeatedly on and off the Black wire whilst watching the readout... the faster you tap the wire, the faster the reading (approximately 1 Hz/knot). If you do not get a reading, the Processor or cable through the boat is at fault. If you do get a reading, the Mast Head Unit or mast cable is at fault.

Wind Angle not working

Initially you do not need to disconnect anything. If the Mast Head Unit is working correctly, then the voltages measured with Black probe on Black wire should approximately agree (+/- 5%) with one of the tables below.

If any of the voltages do not agree then it is most likely that there is a fault up the mast, but to be sure, disconnect the three Wind Angle Ø wires, being careful not to let them short and measure them again.

Statistically the fault is far more likely to be the MHU itself. However, if any of the wires measure either 0V or the Supply Voltage, then suspect a short circuit in the mast cable. This can be verified by completely disconnecting the mast cable and carrying out a continuity test.

Voltage table for systems with 6.5V MHU Supply

Angle	Ø1 V (Red or Yellow)	Ø2 V (Green)	Ø3 V (Blue)
0	0.2	4.8	4.8
30	0.6	3.3	5.9
60	1.7	1.7	6.3
90	3.3	0.6	5.9
120	4.8	0.2	4.8
150	5.9	0.6	3.3
180	6.3	1.7	1.7
210	5.9	3.3	0.6
240	4.8	4.8	0.2
270	3.3	5.9	0.6
300	1.7	6.3	1.7
330	0.6	5.9	3.3

Voltage table for systems with 5V MHU Supply

Angle	Ø1 V (Red or Yellow)	Ø2 V (Green)	Ø3 V (Blue)
0	0.2	3.7	3.7
30	0.5	2.5	4.5
60	1.4	1.4	4.8
90	2.5	0.5	4.5
120	3.7	0.2	4.5
150	4.5	0.5	2.5
180	4.8	1.4	1.4
210	4.5	2.5	0.5
240	3.7	3.7	0.2
270	2.5	4.5	0.5
300	1.4	4.8	1.4
330	0.5	4.5	2.5