

Check wind sensor alignment by using laser boy

Does this solve the problem?

- 1] Yes
- 2] No
- 3] I don't know

- **Explanation**

Reference the below document for alignment procedures.



[0000-9925](#) Commissioning Instruction, V82-1.65 MW

Check varistor connections and circuit for faults

Does this solve the problem?

1] Yes

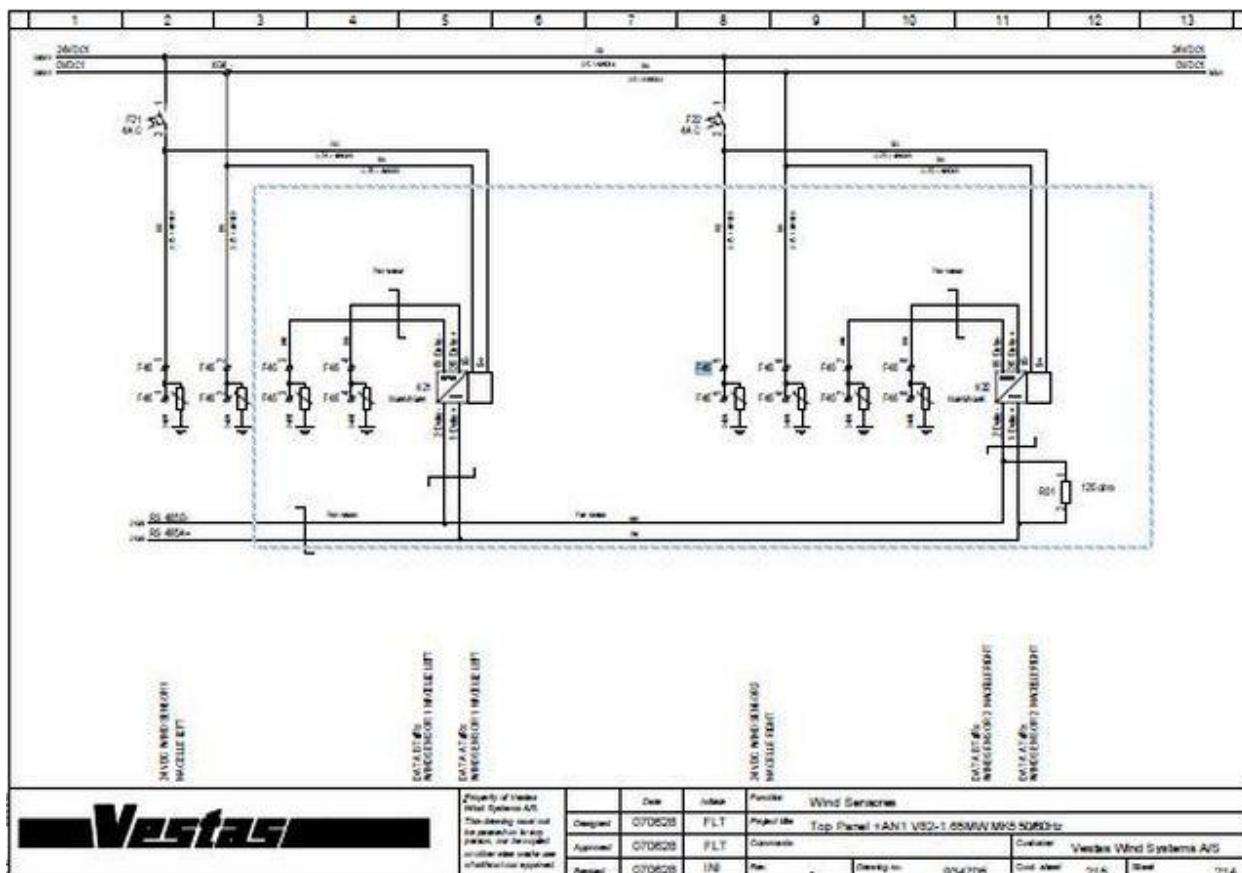
2] No

3] I don't know

- **Explanation**

Check varistor connections and internal circuit for faults. Replace the varistor box if faulty.





Ref: Drawing 934705 Sheet 214 Wind Sensors.

51706201 VARISTOR BOX X8

Check cable W 583 and W584 for any cable internal failures

Does this solve the problem?

- 1] Yes
 - 2] No
 - 3] I don't know

- ### • Explanation



Ref: Drawing [934705](#) Sheet 049 External connections wind sensors.

Navigate through the TAC II controller- Configuration=> Set wind sensor parameters. Monitor the 10 min average values.



Verify both the sensors are displaying the wind signals.

If not check the cable connection W583 and W584.

60106332 CABLE for FT702/LT 9m

60093839 CABLE LABEL NM30t. -W583

Test ultrasonic sensors B31 and B32/Replace sensors if defective

Does this solve the problem?

[1] Yes

2] No

3] I don't know

- **Explanation**

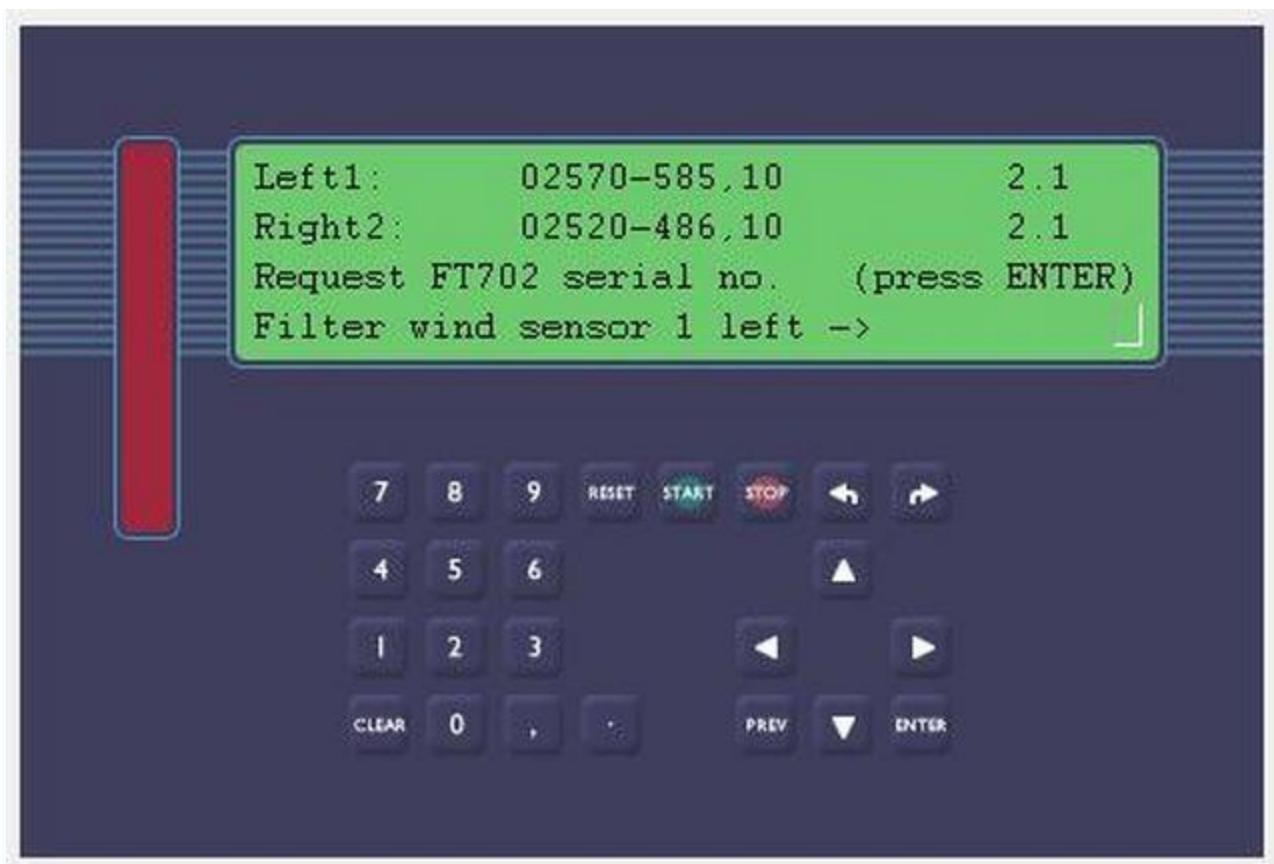


Ref: Drawing [934705](#) Sheet 049 External connections Wind sensors.

B31 and B32 wind sensors are located atop the nacelle radiator. The sensors are connected to the controller through cable no W583 and W584.



Navigate through the TAC II controller- Configuration=> Set wind sensor parameters. Confirm that the software version of the sensors is the same.



Navigate through the TAC II controller- Configuration=> Set wind sensor parameters. Monitor the 10 min average values.

Check K21 and K22 repeaters for any electrical or internal failures

Does this solve the problem?

- 1] Yes
 - 2] No
 - 3] I don't know

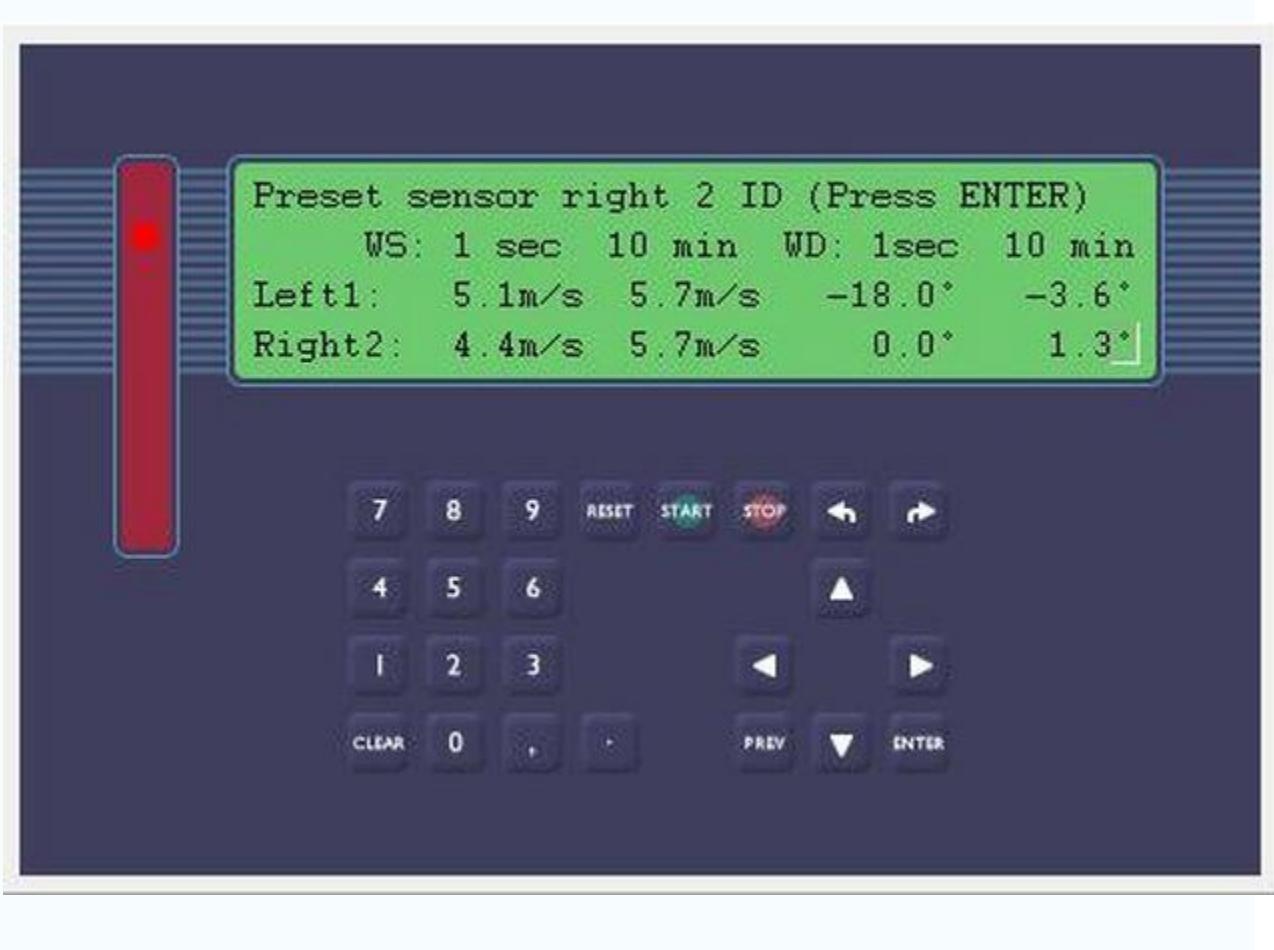
- **Explanation**



Ref: Drawing [934705](#) Sheet 214 Wind Sensors.

Test the function of the repeaters by swapping them with known functional repeaters and check to see if the signals are corrected.

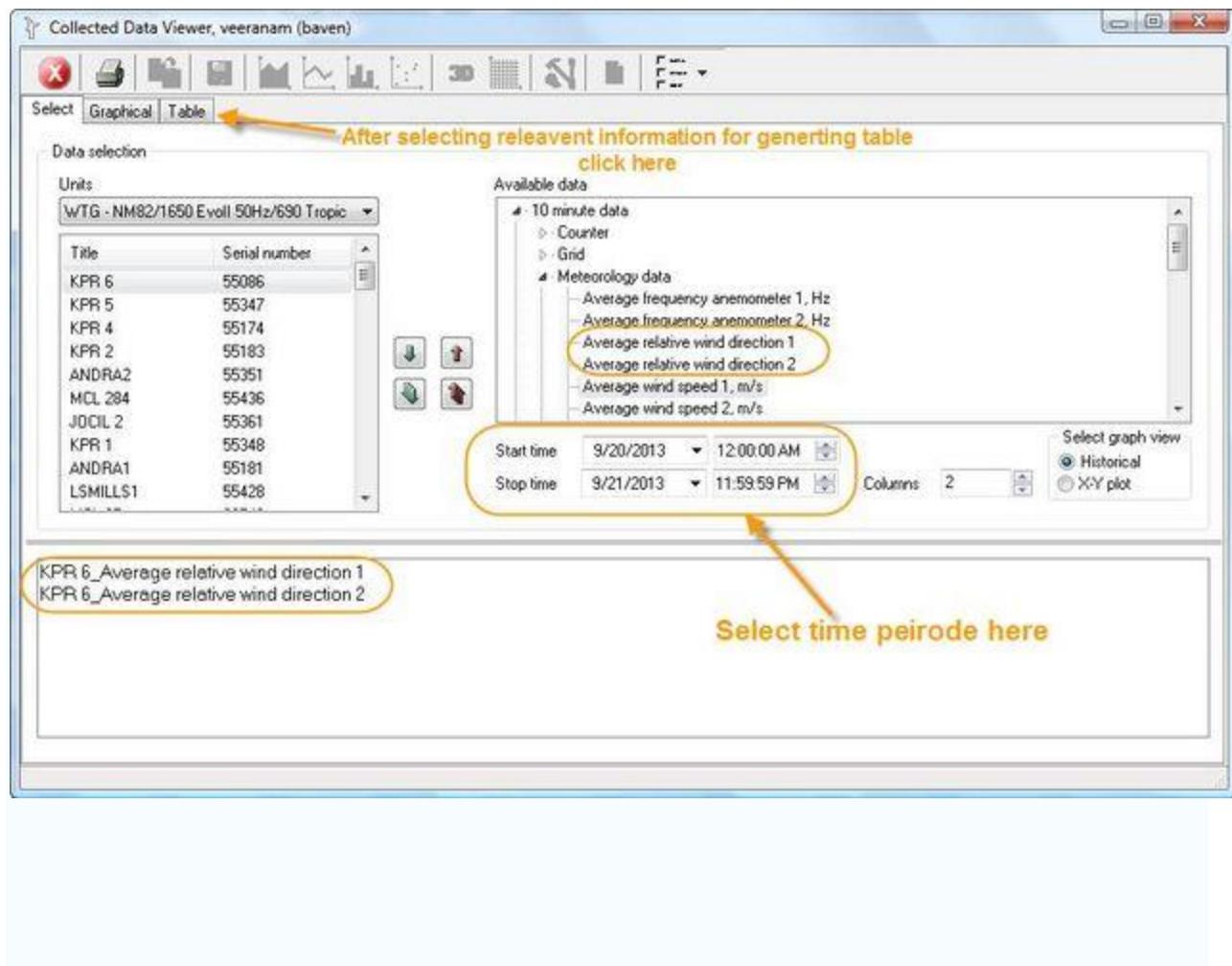
60004933 RS485/RS485 REPEATER I-75



Verify both that both of the sensors are displaying the wind parameters.

Through SCADA collected 10 min data verify the difference between two sensors.





Collected Data Viewer, veeranam (baven)

PCTimeStamp	MCL 196_Average relative wind direction 1 (1)	MCL 196_Average relative wind direction 2 (2)
9/1/2013	35	34
9/1/2013 12:10:00 AM	40	37
9/1/2013 12:20:00 AM	27	27
9/1/2013 12:30:00 AM	34	30
9/1/2013 12:40:00 AM	42	39
9/1/2013 12:50:00 AM	43	42
9/1/2013 1:00:00 AM	46	44
9/1/2013 1:10:00 AM	32	36
9/1/2013 1:20:00 AM	40	46
9/1/2013 1:30:00 AM	34	32
9/1/2013 1:40:00 AM	48	45
9/1/2013 1:50:00 AM	52	48
9/1/2013 2:00:00 AM	59	57
9/1/2013 2:10:00 AM	63	74
9/1/2013 2:20:00 AM	108	158
9/1/2013 2:30:00 AM	108	118
9/1/2013 2:40:00 AM	68	80
9/1/2013 2:50:00 AM	127	167
9/1/2013 3:00:00 AM	168	163
9/1/2013 3:10:00 AM	105	124
9/1/2013 3:20:00 AM	113	111
9/1/2013 3:30:00 AM	95	137
9/1/2013 3:40:00 AM	85	83
9/1/2013 3:50:00 AM	95	103
9/1/2013 4:00:00 AM	88	130
9/1/2013 4:10:00 AM	140	132
9/1/2013 4:20:00 AM	65	97
9/1/2013 4:30:00 AM	80	96
9/1/2013 4:40:00 AM	77	84

If the difference exceeds more than a reasonable amount 10 Minute average, (12°/10 minutes is the alarm limit), the sensor may need to be replaced (replacing the ultrasonic sensor should be the last step in the troubleshooting process).

Remember that while replacing new sensor, remove the other sensor connection physically from circuit and enable the appropriate channel (left 1 or right 2) then calibrate.

Ref the below document for wind sensor alignment.





[0000-9925](#) Commissioning Instruction, V82-1.65 MW

106510 WIND SENSOR US FT702LT V22