

## PERFORMING WMT700 ZERO POINT ADJUSTMENT

This function is available for WMT700 with firmware 2.05, and above. If you have an earlier version, contact Vaisala Service for available options.

WMT700 Ultrasonic Wind Sensor is calibrated at the factory. Vaisala recommends that you inspect sensor performance according to the preset maintenance program that complies with your local regulations.

To adjust the zero point of WMT700, you need a verifier (WMT70Verifier). The verifier is a small echo-free chamber for testing the mechanical integrity of WMT700 and performing zero point adjustment. You can perform the verifier test in a laboratory or in the field.

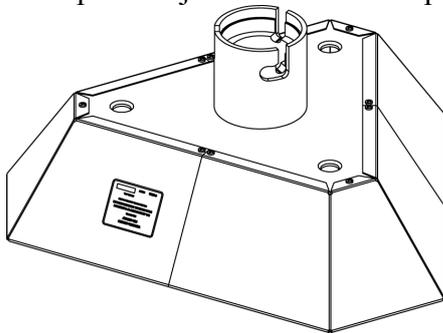


Figure 1 WM Verifier

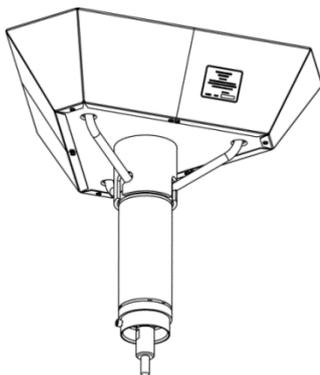


To establish a serial connection with WMT700 you need:

- Verifier
- PC with a serial port
- Cables for serial connection
- Any terminal program

To adjust the zero point of WMT700:

1. Check that WMT700 is in RS-485 mode.
2. Check that the baud rate is defined for the WMT700 being tested. The default baud rate is 9600.
3. Disable heating by disconnecting the heater supply voltage or by setting the `heaterOn` parameter to 0.
4. Slip the verifier over the three transducers.



5. Make sure the temperature inside the verifier is 15 °C ... 30 °C.
6. Switch on WMT700. Do not move the verifier or block the sensor. If the sensor is blocked, it switches on heaters preventing zero point adjustment.
7. Type **\$0open**.  
WMT700 responds with  
>
8. Type **windcal** followed by arguments.

**Example**

```
windcal 20140101,23,green
```

Where:

20140101 Zero point adjustment date, not used in calculations  
23 Air temperature in the verifier. Used for sonic temperature calculations  
green Password (always the same)

WMT700 measures zero wind and responds with several lines.

If the adjustment is successful, WMT700 ends with `calibration done\r\n`

WMT700 stores the adjustment data to the flash memory and shows the adjustment information.

9. Remove the verifier.
10. To retrieve zero point adjustment information:
  - a. Type **\$0open**.  
WMT700 responds with > .
  - b. Type **WIND\_GET**.  
WMT700 shows the date of adjustment and sensor zero point adjustment data.

Example:

```
Date :00325  
Zero :666.12, 665.93, 667.64, 667.56, 667.84, 667.65,  
Lenght:114767.3, 115038.9, 115063.6,  
Cos :4989, 4986, 5025,  
Sin :8666, 8668, 8646,  
Diff :0.0940, -0.0400, -0.0955,  
rx start[us]:427, 427, 427, 427, 427, 427,
```