

USB Wireless Wind Speed and Direction Sensors

⌘ W110 USB
⌘ W110L USB

Wireless anemometer with USB output provides reading data from wireless wind speed and wind direction sensors on personal computer. Receiver output are ASCII coded strings which allow the use of different programming languages for develop custom software applications. Receiver can operate on Windows, Linux or OS X operating system.

FEATURES

- Long range - up to 1300 m in an open field site. Also available with external antenna which extends range up to 8 km
- Sensors battery life up to 3 years
- Receiver powered form USB
- Easy to setup: install drivers, connect USB receiver to USB port, receive data from wireless wind speed and wind direction sensors
- Receiver output is data packet of ASCII coded strings



Models, standard range:



☞ W110L USB/WS



☞ W110L USB/WSD

Models, extended range:



☞ W110 USB/WS



☞ W110 USB/WSD

OPTIONS

Wind tunnel certificated version available

Sensor with 50 Ohm output for connecting the external antenna (SMA connector)

SENSOR MOUNTING ACCESSORIES

Self levelling mounting assembly

Magnetic mounting assembly

Magnetic self levelling mounting assembly

1

RECEIVER ACCESSORIES

External antenna with 4 m cable, magnetic mounting

2

YAGI antenna

3

SPARE PARTS

Spare anemometer cups

4

Spare wind vane

5

Spare sensors

6



1



2



3



4



5



6



TECHNICAL DATA

RECEIVER

- **PC interface:** USB
- **USB bus powered operational current:** 30 mA
- **USB cable:** type »A«, lenght 1.5 m
- **LED for indication of received data packet**
- **Available drivers for Windows, Linux and OS X**
- **VirtualComPort Communication:**
9600 BPS, 8 Bits of Data, 1 Stop Bit, No Parity
- **Output:** data packet of ASCII coded string
- **Receiving data distance:** up to 1300 m,
with external antenna up to 8 km
- **Operating Frequency:** 868 MHz, option 915 MHz
- **Dimensions:** 80 x 60 x 20 mm

SENSORS

- **Wind speed measurement range:**
0,6 m/s - 50,0 m/s
- **Wind speed resolution:** 0,1 m/s
- **Wind speed accuracy:** +/- 3 %
- **Wind direction measurement range:** 0° - 359°
- **Wind direction resolution:** 1°

- **Wind direction accuracy:** +/- 2,5°
- **Temperature measurement range:** -30°C...+60 °C
- **Temperature resolution:** 1 °C
- **Data transmission rate:** every 2 sec
- **Range:**
type of W110L USB, up to 250 m visible distance
type of W110L USB, up to 1300m visible distance
(3-5km with Yagi antennna)
- **Battery (changeable):** 3,6 V AA lithium battery
- **Battery life:** up to 3 years
- **Bearings:** precision stainless steel ball bearing
- **Temperature operating range:** -25 °C...+60 °C
- **Material - housing:** AL/PVC
 - **cups (replaceable):** PA (POLYAMIDE)
 - **vane (replaceable):** Carbon
- **Dimensions - WS sensor:** Height 210 mm, overall
diameter cup to cup 120 mm
- **Dimensions - WSD sensor:** Height 290 mm,
overall vane diameter 220 mm cup to cup 120 mm
- **Mounting:** mounts on a pipe with ø 20 mm
diameter

OUTPUT DATA PACKET STRUCTURE

B1: Start string

B2: Data Type [1 - Wind speed, 2 - Wind direction]

B3 - B5: Sensor address

B6 - B9: Wind data

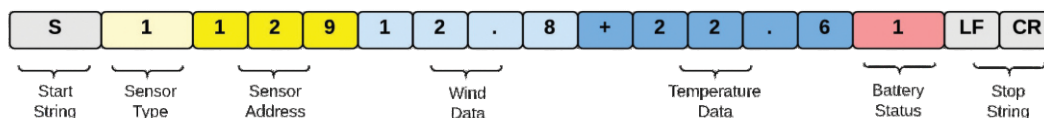
B10 - B14: Temperature data

B12: Sensor Battery Status

[0 - Batery OK, 1 - Battery Low]

B16 - B17: Stop strings

Data packet example: sensor address 129: Wind speed 12.8m/s, Temperature +22.6°C, Sensor battery low.



Data packet example: sensor address 129: Wind direction 218°, Temperature -2.6°C, Sensor battery OK.

