SCARLET TECH

WL11-WS/WSD
Wireless Wind Logger
User Guide

Overview

WL11 series is high performance and cost effective wireless wind speed and direction (optional) logger. Low power wireless technology is adopted to achieve 3 years sensor battery life. Sensors continuously measure and transmit data. Display unit receives data, calculates average values and stores them into SD card. Current data received from sensors, as well as part of the wind speed history are presented on LCD display. All operating parameters can be set by using three buttons on the receiver unit.

Sensor units

Wind speed (WS)

The sensor will be switched on automatically when the anemometer cups revolve. It switches off 6 hours after the anemometer cups stop revolving. Wind speed data will be transmitted by wireless module.

Temperature The sensor is located within the sensor. It can take up to 30 minutes to sensor reach the surrounding air temperature. The measurement is received and displayed on Display unit.

Wind direction (WD)

The sensor will be switched on automatically when the anemometer tail revolve. It switches off 6 hours after the anemometer tail stop revolving. Wind speed data will be transmitted by wireless module.
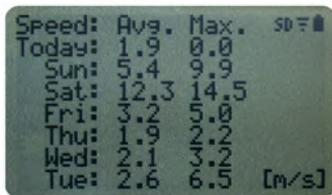
Display unit

Press any button to turn on the display of the unit. The unit will never be really off unless the batteries are pulled out. The power consumption is very low and 2 Lithium batteries can last for 12 months if only WS sensor is connected.
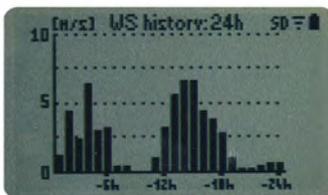

Receive data LED blinks every time when new data are received– every 2 seconds at normal reception. In case the display unit has no data from sensor for 30 seconds it shows two dashes. Signal strength is numerically shown in dB.

Display data Shortly press F button to switch between 4 screens

- Screen 1 displays current wind speed, temperature, wind direction (optional), date and time

- Screen 2 displays 7 days history of average and maximum wind speed

- Screen 3 displays 24 h graph of hourly average wind speed

- Screen 4 displays 24 h graph of hourly average temperature

Log data Please see the section "Data logger" for more details.

Setup device Please see the section "Settings" for more details.

Range

The range is up to 250 meters (up to 1200 m with optional antenna) - at 10 m sensor mounting height and when there is no obstacle between the sensor and the display unit. Inside the building the range is much shorter. Normally the signal can penetrate two to three concrete walls.

Settings

Enter setup menu Hold the F key to enter the setup menu.

Change settings Use UP and DOWN buttons to select the parameter you wish to change and press F button to enter. Change values by pressing UP and DOWN buttons. Press the F button to write a new value into the permanent memory and move to the next parameter.

Quit setup menu Hold the F key for 3 seconds to exit setup menu.

Menu

Time: Time in 24 h format. Ex. 00:31.

Date: Date in year/month/day format. Ex. 19/05/2015.

Day: Weekday. Ex. Tuesday.

WS Address: Set sensor address of the wind speed sensor you want to connect to. Ex. 76.

WD Address: Set the sensor address of the wind direction sensor you want to connect to. Ex. 53. *NOTE:* Must be 00 if WD sensor is not installed.

WS units: Wind speed unit (m/s, km/h, knots, mph).

Temperature unit: Temperature unit (° C or ° F).

Logging int: Logging interval (10 sec, **1 min**, 10 min or 60 min).

Power saving: Yes: display automatically switches off after 1 min. No: display is always ON

Reset Data: No/Yes

Language: English/French

WS Cal. Factor: Calibration factor for wind speed   (-10.0…+10.0%, in 0.5% steps)

Data logger

Auto logging

Data are stored to SD card every full hour in .txt format. This occurs automatically and no user intervention is needed. Each data has date & time stamp. Logging interval can be adjusted from 10 sec to 1 h (See section "Settings" for more details).

Measurements

- Current, average and maximum wind speed
- Temperature
- Wind direction (optional)

Download data

It is recommended to extract data from SD card every month to prevent data from losing in case of low battery in receiver or other factors. The downloaded data are suitable for processing in Excel.

Mark "NA" In logged data present missed wind data for marked interval.

Mark "nW" In logged wind direction data present undefined wind direction (no wind).

Handling, & Maintenance

Battery replacement

Sensor unit When the sign S starts alternate with battery icon, replace the sensor battery. Take off the battery cover by turning sensors bottom part anti clockwise. Pull out the battery holder and insert new 3.6 V AA **Lithium** battery.

Display unit Battery icon on LCD indicates the status of receiver batteries. Replace the battery if necessary. Battery are placed under the lid at the backside of the display unit. Use 1.5 V AA lithium battery to prolong the operating time.

Packing list (Model WS)

- WS Sensor unit x 1
- Display unit x 1
- User guide x 1
- Carrying case x 1
- Certificate of conformity x 1
- Lithium battery x 1 (AA/ER14505/3.6 V)

Packing list (Model WSD)

- WS Sensor unit x 1
- WD Sensor unit x1
- Display unit x 1
- User guide x 1
- Carrying case x 1
- Certificate of conformity x 1
- Lithium battery x 1 (AA/ER14505/3.6 V)

Warranty

Warranty conditions

This product is guaranteed for one year after date of purchase. During limited warranty period any defective product will be repair or replace with comparable product without charges. The limited warranty does not cover battery and damages of any kind including physical caused accidentally or from misuse. Manufacturer's responsibility is limited to repair or replace the product. Any liability for direct or indirect damage caused by product failure is excluded. The claimed product will be repaired or replaced only when returned to the store where it was purchased together with original invoice.