

# Wallis&Gill N2K Wind Sensor

**WARNING READ BEFORE CONNECTING!**

## N2K M12 Female Connector Wiring

**N2K PIN 2 +12VDC**

**N2K PIN 3 GROUND (GND)**

**N2K PIN 4 DATA HIGH**

**N2K PIN 5 DATA LOW (CENTER PIN)**



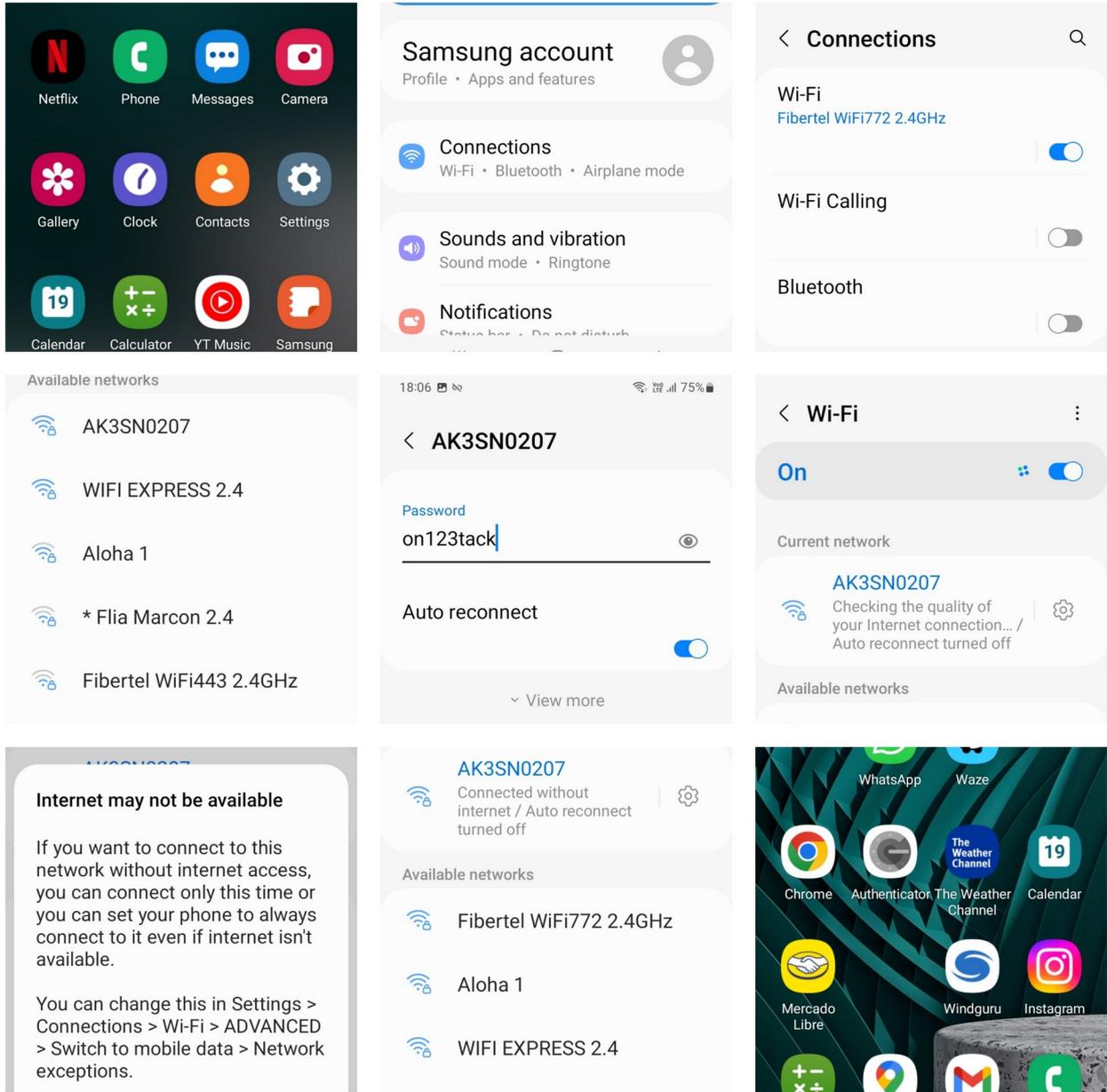
## Basic and Test Installation Instructions

Here we will cover initial testing of your sensor. This step must be done before you attempt to install in a hard to reach location like a mast or roof top etc.

1. Remove from packing. **DO NOT DROP OR PLACE HEAVY OBJECTS ABOVE OR CLOSE TO SENSOR.**
2. Wire N2K M12 Female connector. Identify +12VDC and GND wires.
3. Connect +12VDC to nominal 12VDC (7VDC to 17VDC OK) power.
4. Connect GND to 12VDC negative power line.
5. Connect PC/Phone/Tablet to unit WIFI network (access point SSID) SN0214 (or similar) with default WiFi password **on123tack**. Use Chrome (browser) and open URL <http://10.0.0.1/> (more see \*Addendum 1).
6. Test sensor by clicking on the top image/logo (<http://10.0.0.1/large>). Rotate wind speed measurement rotor. Rotate wind angle measurement vane. After about 10 seconds you should be able to see accurate wind data. If wind speed or direction do not change contact Wallis&Gill support for help.

Notes: The images shown in this doc are for serial number 214. Your serial number can be found on the bottom of your unit. You only need to wire 2 pins of the M12/N2K female connector for initial WiFi test or for non N2K use. Some images below show older SSID with AK3SN0\*\*\* format.

# Samsung Android Connect To Sensor WiFi Image Flow

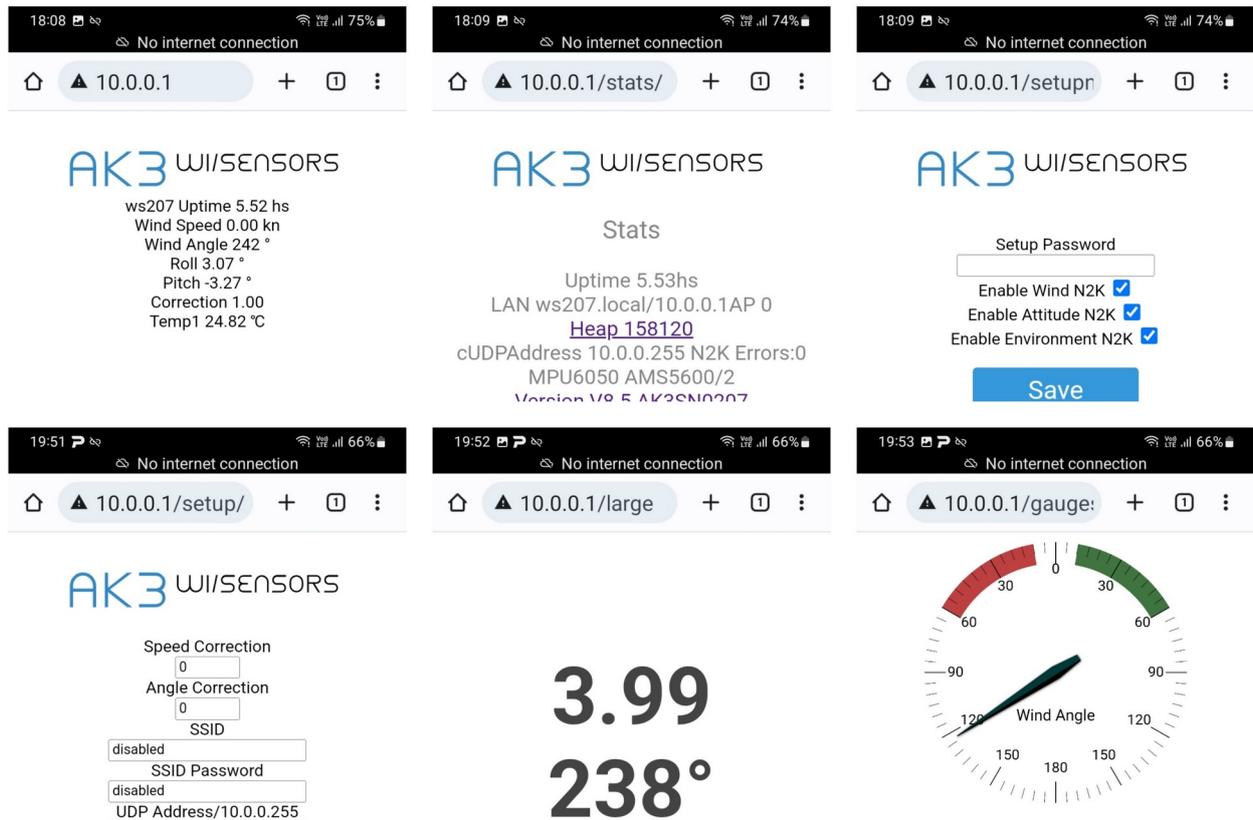


## Network Configuration Instructions

The unit comes with the external client WiFi connection set to disabled/disabled. If not using as wired N2K unit, you will need to use an external WiFi network. Large vessels or vessels with very high masts require a high quality WIFI ROUTER that it is strategically placed forward of the mast base and not covered by metal surfaces. We quality assure and test with very tall 30 meter mast height. You will need to gather your WiFi network name and password. You will need to test this information with your cellphone or other device to make sure it is working correctly. Some routers may have advanced or incompatible WiFi settings, that may work with your phone but will not work with the sensor. Keep WiFi router settings as simple as possible. **Note that you CAN use the N2K wired network AND the NMEA0183 WiFi systems at the same time.**

1. As initial test above and at the main page location of <http://10.0.0.1/> click on the **Setup** button. Enter the default setup password **321tackon**.
2. Set the SSID to your WiFi network name.
3. Set the SSID Password to your WiFi network password.
4. Make sure the Setup Password field is set and press the **Save** button. The unit will restart and attempt to connect to the external WiFi network as configured.
5. You can verify that it has connected correctly by clicking on the bottom logo image of the setup page (<http://10.0.0.1/stats/>). If only the builtin access point IP of 10.0.0.1 appears then it has not connected correctly. If this is the case, make sure you are in range, no interference exists from other WiFi traffic and that your router data and router are working correctly. If you have connected correctly you will see a router provided IP number similar to 192.168.12.123 (or 192.168.x.x, 10.x.x.x, where x is any number) and a connection power measurement (lower number is better.)
6. After verifying your network connection you can access the sensor from the external WiFi network using the IP it has been assigned (or the ws214.local style mDNS hostname. See addendum)
7. Now you can turn on SignalK and NMEA0183 UDP data packets and provide an IP address or an IP address broadcast address (the end in .255) for use by other devices like an OpenPlotter OpenCPN program.

# N2K Configuration and More Screenshots



## N2K Configuration

You must enter manually the N2K setup page (/setupn2k/) in the browser: <http://10.0.0.1/setupn2k/>. There you can enable or disable the 3 N2K PGNs (data types) that the sensor can send.

## Other Configuration Settings

The /setup/ page has many settings that are self explanatory, but more help is available if you use a tablet or laptop Chrome browser and you hover the mouse over the input options and fields. There you can read details on each setting option.

Basically the /setup/ page allows for

1. WiFi network configuration as explained earlier.
2. For the sending of selectable NMEA0183 UDP data packets to a given IP address or broadcast to a whole /24 IP network.
3. And for the correction of sensor values like angle etc.

**Experimental data widgets are also available for demo purposes.**

## Mounting Wind Instrument/FRAGILE

For correct use the wind sensor must be mounted where it is not affected by boat structures, sails, rigging etc. Usually at the top of the mast in forward position pointing exactly to the bow.

New version SN0200+ allows easy disassembly/assembly see Addendum below.

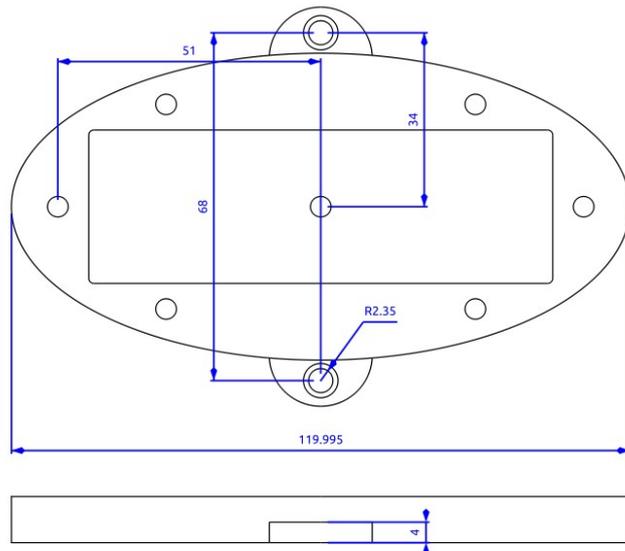
You should MAKE SURE that the instrument faces the BOW of your boat or NORTH if using for weather station.

## Maintenance

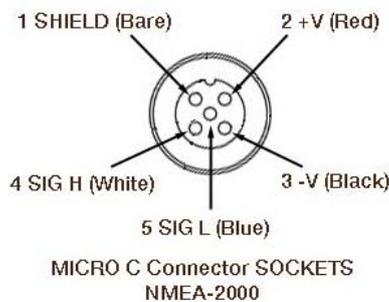
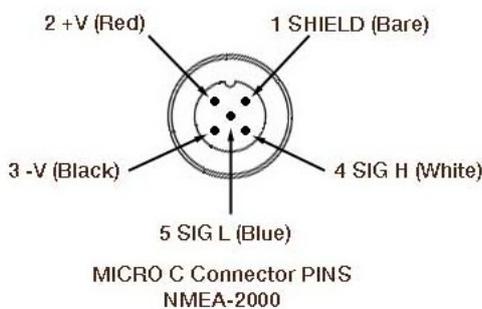
The ceramic bearings allow for years of use at sea but are sensitive to dust and other small particles. You need to clean with compressed air (or WD40) every year or after contact with dust storms etc.

You should lightly spray rotor assembly with UV resistant white or transparent paint every 2 years.

## Sensor mounting plate



## N2K M12 5 Pin connectors



**Wired N2K please connect M12 5 pin as per wiring page 1:**

**N2K: SIG L is Blue. SIG H is Green. -V is GND Black. +V is +12VDC BROWN**

## Addendum 1: MDNS/Bonjour/Avahi-Daemon

This product uses mDNS for hostname announcement. Linux laptops, Windows, MAC, but NOT Android, usually have this turned on as part of a default network domain name resolution protocol.

So, instead of using IP 10.0.0.1 when connected directly via the product AP you should be able to use the hostname ws214.local, where 214 is from the serial number SN0214.

On android all is not lost since you can download from the Google Play Store an mDNS discovery app and type in ws214 (or in some cases ws214.local) and search for the IP number.

This is very useful when you connect this product to an external WiFi LAN that will assign an IP based on DHCP and that is not easily discovered unless you login to the product AP and check the /stats/ page.

## Addendum 2: Factory password change

When connected to your sensor you can change the AP WIFI password and the setup (save changes) password here: <http://10.0.0.1/setuppwd/> BE VERY CAREFUL YOU DO NOT LOOSE THE NEW PASSWORD. Access to sensor can only be reset by taking apart the sensor unit and using a special programming cable.

## Addendum 3: Disassemble Sensor

In case you need to repair or clean your sensor:

- 1-. Remove wind vane by carefully by pulling up it up by conical bottom part (slowly! You may need to wiggle slightly).
- 2-. Use a small flat screwdriver to remove side slot silicon glue from sensor body.
- 3-. Use a small flat screwdriver to pry open shell from the top inserting tool vertically. Slowly and carefully. Once it is a few mm open you can open by firmly grabbing the case from the front side.
- 4-. Once open you can easily remove the wind vane and wind rotor assemblies for cleaning (with compressed air or WD40) or for replacement with parts ordered from us.
- 5-. Assembly is the reverse of this list you will need a small amount of white silicon sealant for extra protection.
- 6-. Take advantage and clean with alcohol and then gently spray rotor assembly with a small amount of white or transparent UV resistant plastic spray paint every 2 years.

# **Por favor...**

**!No Instalar en lugar de difícil acceso sin probar completamente antes!**

**Ejemplo: Probar solución completa en mesa de trabajo, antes de instalar en tope de mástil.**

**Usar fuente de 12VDC 2Amp (o circuito de batería de barco ) de buena calidad.**

**Colocar fusible de 2A y usar buenos cables.**