

03/17-W13-HUND



## Instruction manual 524 0033

WiFi adapter for Sensor-CASSY (524 0033)

### 1 Description

The WiFi adapter (524 0033) can connect a Sensor-CASSY 1 (524 010, USB or RS232) or Sensor-CASSY 2 (524 013) and 524013) unit wirelessly to a PC or tablet computer using WiFi or creates its own wireless local area network (access point).

It enables Sensor-CASSY modules to connect wirelessly to our apps (see Section 8) or CASSY Lab 2 (524 220).

### 2 Technical data

WiFi:	802.11 b/g/n as an access point or client (WPA/WPA2)
Button:	For switching between access point and client configurations
Configuration:	Via built-in web server
Connector:	Plug for connection to Sensor-CASSY (20-pin)
Depth of cascading:	Max. 7 CASSY modules
LEDs:	Blue, red, green
Power supply:	Via Sensor-CASSY
Dimensions:	50 mm x 25 mm x 60 mm
Weight:	0.1 kg

### 3 Accessories

- App (see Section 8)
- CASSY Lab 2 (524 220)

### 4 Usage

The WiFi adapter is plugged in to the left-hand side of Sensor-CASSY module and is powered from the module itself. The WiFi adapter can also be connected to a Power-CASSY module (524 011, USB or RS232) if another Sensor-CASSY is connected to the right of the Power-CASSY module.

#### Instructions

When the WiFi adapter is plugged in, the RS232 socket or USB port must not be connected. Only one communications channel can be open at a time.

CASSY Lab and the apps display the values and plots all the quicker when the WiFi connection is better.

#### 4.1 Initial set-up of access point

The WiFi adapter as supplied sets up its own wireless local area network (WLAN) with which a computer, tablet or smart phone can connect directly. This operating mode is called "access point" mode and a blue LED remains lit to indicate when it is activated.

In order for the WiFi adapter to be found in the network more easily, it is given a name. The standard name for this is "CASSY-XXX", whereby "XXX" is replaced by the last three numbers of its MAC (media access control) address. This name can be modified by means of the configuration app (see Section 5) and is used by the WiFi adapter, for example, as the name of the access point, as the DHCP host name and as the name in the app (see Section 8).

To connect end devices to the WiFi adapter, it suffices to connect to the WiFi network with the "CASSY-XXX" name.

The apps (see Section 8) will then locate the WiFi adapter automatically

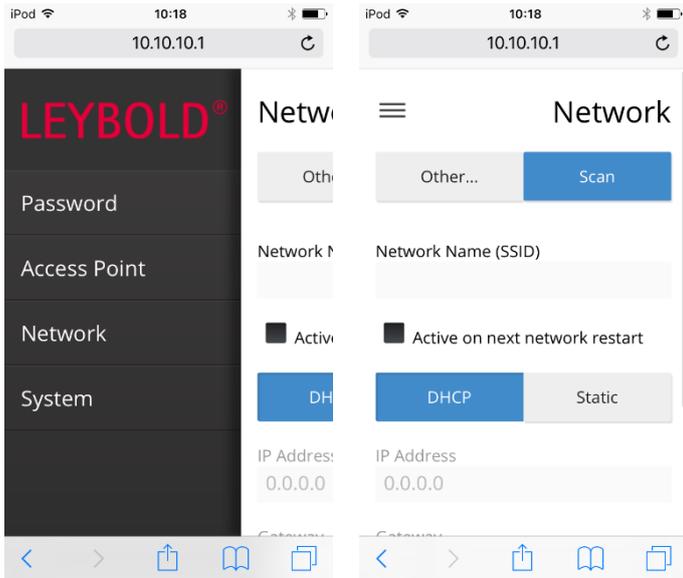


Fig. 1: The data for accessing the network (Network menu option) need to be input first while the WiFi adapter is directly connected to a device. A smart phone is sufficient for this purpose.

**4.2 Configuration as a client**

If the WiFi adapter is to be included in an existing network, it needs to be configured as a client

The adapter itself has a built-in web server running on it along with the configuration app which makes it possible to enter the access data for the existing network via a direct access point connection.

- Connect your device (computer, tablet, smart phone) to the WiFi adapter (access point, blue LED lit), e.g. "CASSY-XXX".
- Enter the web address 10.10.10.1 into the browser on your device.
- Wait for the configuration page to load (see Fig. 1).
- Select **Scan** and wait for the server to scan the network.

- Select the network from the list and enter the password. If the network fails to appear in the list, enter its name and password using the **Other** option.
- Select **Save** (see Fig. 2).
- Switch the WiFi adapter into client mode using the blue button.
- The red LED will start to flash until the connection has been successfully established.
- If the red LED starts flashing quickly, then connection to the network has failed. Then switch the adapter back to access point mode with the blue button and start again from the beginning.
- The apps (see Section 8) and CASSY Lab 2 will locate the WiFi adapter automatically if they are part of the same network.

The WiFi adapter recalls its most recent operating mode (access point or client), meaning that the blue button will not usually be needed again.

**5 Other configuration options**

The menu on the left-hand side offers the following options:

- Secure access to the configuration with a user name and password (see Fig. 3)
- Secure access to access point mode with a password (see Fig. 3)
- Option to rename the WiFi adapter. This means that you can chose a more simple name, e.g. for when only one WiFi adapter is in use. The default # characters represent placeholders for the last three characters of the WiFi adapter's MAC address.

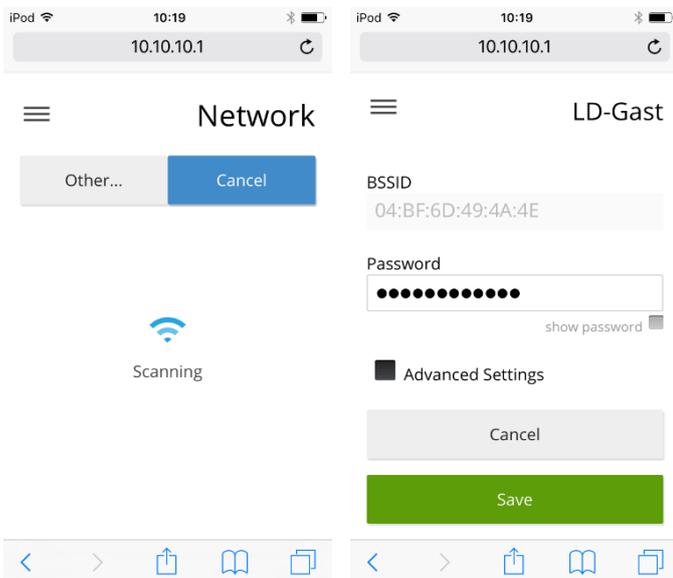


Fig. 2: Scanning existing networks and entry of network password.

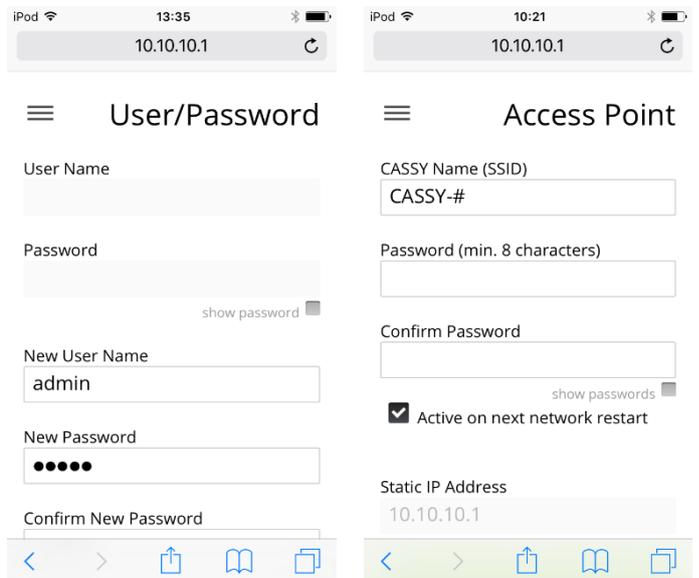


Fig. 3: Access to the configuration app and access point mode can be secured by means of a password. The name of the access is the same as that used for the WiFi adapter in the network.

## 5.1 Web address of configuration app

The web address for the configuration app is always `http://cassyname`. In this case `cassyname` is the name configured for the access point. Whether the web browser finds this address, though, may be dependent on the settings and operating system in use.

Access options are:

- `http://cassyname`
- `http://cassyname.local`
- `http://10.10.10.1` (in access point mode only)
- `http://cassy` (in access point mode only)
- `http://cassy.local` (in access point mode only)

It is also possible to omit the `http://` pre-cursor.

## 5.2 Default settings

Resetting the device back to its default factory settings deletes all passwords and network names without offering a confirmation prompt. Pressing the blue button on the WiFi adapter for 10 seconds resets the adapter. The blue LED then flashes while the reset procedure is carried out.

## 6 Establishing a connection

When the WiFi adapter has been properly configured and a connection to a network or computer has been established, the LED will light up (see Section 6). Then it is possible to establish a connection to an app or to Cassy Lab 2.

App: Any Sensor-CASSY module connected will appear in the connection settings and can be selected from there.

CASSY Lab 2: A connected Sensor-CASSY module will be displayed as an available device in the CASSY dialog window. Press **Connect** to establish a connection.

In either case, the green LED will then light up (see Section 6).

The configuration (see Sections 4 and 5) should not be changed while a connection is established.

## 7 Meaning of LEDs

The LEDs at the side indicate various operating states.

### 7.1 Blue

The WiFi adapter is configured as an access point and can be connected directly to any device (computer, tablet, smart phone).

The blue LED will flash rapidly while the device is resetting to its default factory settings (see Section 5.1) or during the course of a firmware update (see Section 8.1).

### 7.2 Red

The red LED will flash while a connection to network is being established. If the connection is established successfully, the LED will then remain lit. If the connection does not work properly, the LED will flash quickly.

### 7.3 Green

Connection has been made to an app or to CASSY Lab 2. None of the other LEDs will be lit at this time.



Fig. 4: Sensor-CASSY can also be sensibly used with smart phones and tablets.

## 8 Apps for Sensor-CASSY

### 8.1 Multimeter (free of charge)

The Android app from the Playstore simulates a pointer instrument and supports the numerous sensors for voltage, current, force and magnetic fields.

The app also supports other CASSYs via USB or Bluetooth.

### 8.2 Oscilloscope (free of charge)

The Android app from the Playstore simulates a dual-channel oscilloscope and supports the numerous sensors for voltage, current, force and magnetic fields.

The app also supports other CASSYs via USB or Bluetooth.

### 8.3 CASSY App (free of charge)

The CASSY App is available for all conventional operating systems (Android, iOS and Windows). It reproduces the functional environment of the Mobile-CASSY (524 005) on a tablet computer with the additional possibility of being able to export measurement values and diagrams to other apps or to the cloud.

### 8.4 CASSY Lab 2 (524 220)

The WiFi adapter is also supported by CASSY Lab 2.

Download:

[http://www.ld-didactic.com/software/cassylab2\\_en.msi](http://www.ld-didactic.com/software/cassylab2_en.msi)

### 8.5 Automotive Diagnosis Tester (739 589)

The WiFi adapter is also supported by the Automotive Diagnosis Tester.

Download:

[http://www.ld-didactic.com/software/autotester\\_en.msi](http://www.ld-didactic.com/software/autotester_en.msi)

## 9 Firmware updates

If the configuration app has access to the internet, it will automatically check for any updates and will give you a prompt to install it if you wish. Such an update may also include upgrades to the firmware of the WiFi adapter, which can also be updated separately by dragging the relevant firmware file to the System menu option.

Download: <http://www.leybold-shop.com/5240033>