

Instructions for Use

SWP 50
Kathrein ESU
English



KATHREIN
Digital Systems GmbH

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1 About This Guide

These instructions for use describe how you connect and set up the SWP 50 programmer. Furthermore, this manual describes how you programme single-cable outlets using the programmer and the App *ESUcontrol*.

► For more information, visit our website www.kathrein-ds.com.

⇒ The manuals are available for download at the SWP 50 product page.

2 Explanation of Symbols and Signal Words

2.1 Symbols

	General warning sign
	Fire hazard
	Caustic substances
	Risk of explosions
	Risk of material damage or malfunction

2.2 Signal Words

Warning	This signal word indicates a hazard with a medium level of risk which can lead to death or severe injuries.
Notice	This signal word indicates a hazard which can lead to damage to property or malfunction.
Tip	This signal word indicates useful tips and recommendations.

2.3 Other Symbols

Symbol	Meaning
►	Operating instruction
1, 2, 3...n	Operating instructions in a fixed order
⇒	Result of an operating instruction
✓	Condition for the execution of an operating instruction
•	List/list entry
<i>Program</i>	Buttons/connections on the device or push buttons in the user interface of the App <i>ESUcontrol</i>

3 Intended Use

The programmer SWP 50 is used for programming the single-cable outlets of the ESUcontrol 50 series.

Any use other than that specified above will invalidate the warranty or guarantee.

The following circumstances result in the loss of all warranty and liability claims towards the manufacturer:

- Impermissible use
- all kinds of interventions and changes in the electronics, mechanical design, labelling or operating software (firmware) of the device,
- removal of components or labelling on the device or its components,
- all kinds of changes in the supplied original accessories or the use of the device with accessories which have not been approved,
- improper or forcible opening of the components,
- use of cleaners containing solvents, such as acetone, nitro-cellulose thinners, petrol, etc.,
- failure to observe installation and safety instructions in this manual.

The operator must ensure that:

- the SWP 50 programmer is only used according to its intended use,
- the SWP 50 is only operated when in a faultless operational and undamaged condition,
- the user manual is always available at the location where the equipment is used, and is complete and legible,
- only staff who are sufficiently qualified and authorised start up and operate the SWP 50 programmer,
- these staff are regularly instructed in all aspects of health and safety and environmental protection, so that they are familiar with and comply with the user manual and in particular the safety instructions in it.

Tip Keep these instructions for further reference, and if the device passes to another owner, pass them on to the new owner.

4 Safety Instructions and Application Notes

4.1 Safety Instructions



WARNING

Fire hazard due to improper use or damage to the device!

Improper interventions in the device may jeopardise its electrical safety. The manufacturer accepts no liability for accidents caused by the user opening or changing the device! Opening the device and attempting to repair it yourself voids all warranty claims.

- ▶ Do not open, change or damage the device and its components.
 - ▶ Make sure that any repairs on the device are carried out by Kathrein service centres.
 - ▶ Before each use, make sure that the device is not damaged.
 - ▶ Do not use the device if it is damaged or if its rechargeable battery is damaged.
 - ▶ Keep and operate the device out of reach of children.
 - ▶ Do not modify, remove or disfigure the notices and markings applied by the manufacturer.
 - ▶ In case of an accident, seek medical attention immediately.
-

Danger to life and/or risk of damage to property when operating the device in inappropriate ambient conditions or due to improper cleaning!

Moisture in the device can lead to short circuits or unstable condition of the electronics and the rechargeable battery. Ambient temperatures outside the permitted range can damage the internal components and the battery. This can lead to a discharge of flammable gases or liquids or overheating, fire or an explosion. If the ambient temperature is outside the permitted temperature range, the device does not turn on. In the vehicle, high temperatures exceeding the permitted temperature range can develop due to direct sunlight. In winter, low temperatures can temporarily decrease the battery performance.

- ▶ Use the device indoors only.
 - ▶ Charge and store the device only on incombustible underlays.
 - ▶ Protect the device from moisture, liquids, dripping and splashing water.
 - ▶ Do not operate the device in damp areas.
 - ▶ Only use the device in a moderate climate, not in tropical conditions.
 - ▶ Do not place any liquid-filled items on top of the device.
 - ▶ Restrict cleaning to only the outer surface of the device.
 - ▶ Use a dry cloth for cleaning.
 - ▶ Ensure that the device is stored and operated only within the permitted temperature range from +5 °C to +40 °C.
 - ▶ Do not expose the device to direct sunlight.
 - ▶ Do not install the device close to the sources of heat., e.g. heating.
 - ▶ Do not store the device in the vehicle.
 - ▶ Do not charge the device in the vehicle.
-



WARNING

Danger to life and/or risk of damage to property if the device falls.

The device contains electrical and electronic components. These components can be damaged due to heavy impacts or if the device falls. As a result, the good working order of the programmer can be affected or no longer guaranteed. If the rechargeable battery is damaged, there is a fire and explosion hazard. The consequences of a damage can occur with a delay.

- ▶ Do not let the device fall.
- ▶ Do not store or operate the device in places in which it can be damaged.



WARNING

Danger to life due to improper use of batteries!

When used improperly, rechargeable batteries can be damaged, catch fire and explode. There is a risk of explosion if the rechargeable battery is replaced using an incorrect type. Damaged batteries release caustic substances or can form explosive compounds. This leads to possible damage to health, air passages and the respiratory system, skin hazards, eye hazards and other injuries. In case of fire, toxic substances (gases, liquids etc.) which can lead to severe damage to health can escape from the device and the battery.

- ▶ Use only rechargeable batteries which have been tested and approved for the device.
- ▶ Do not burn the rechargeable battery or take it apart.
- ▶ In case of fire, call a fire brigade.
- ▶ Put out a fire at a safe distance using dry powder.
- ▶ Ensure that the components of the battery do not touch the skin or eyes.
- ▶ Do not damage or open the battery or subject it to any improper use.
- ▶ Keep rechargeable batteries out of reach of children.
- ▶ Do not expose batteries to inadmissible heat, direct sunlight or fire.
- ▶ Charge the integrated rechargeable battery only within the permissible ambient temperature range from +5 °C to +40 °C.
- ▶ Make sure that the rechargeable batteries are replaced only by the Kathrein staff.
- ▶ Do not short-circuit the integrated battery.
- ▶ Do not use the battery if it is damaged and dispose of it properly; see *Waste Disposal*, p. 26.
- ▶ In case of an accident, seek medical attention immediately.

Tip

Always store the programmer and the accessories in the supplied transport case. This way, the device is better protected against damage and the accessories are always within reach.

4.2 Application Note on How to Charge the Battery



NOTICE

Risk of malfunction!

Low battery charge (< 10 %) can affect the functions of the device. The LED is lit red.

► Immediately charge the battery if the LED is lit red.

The battery is integrated in the programmer. For optimum battery performance and battery life, follow the instructions below:

- Fully charge the battery before using the device for the first time.
- It is not necessary to discharge the lithium-ion battery in the device before charging it. For technology reasons, lithium-ion batteries do not require a conditioning or a full charge cycle. A partial charge cycle can prolong the battery life.
- The charging electronics is integrated in the device. If the battery is fully charged, disconnect the device from the mains. A trickle charging at a low voltage does not take place in case of the lithium-ion battery.
- It is recommended to charge the battery in due time. The charging process can be interrupted. Frequent recharging improves the battery performance and life.
- Depending on the application of the device, it is recommended to store the device with the battery charge at 80 % and to regularly recharge it up to 80 %. The battery charge can be seen both by means of the LED and in the App *ESUcontrol*. In the app, it is possible to see the exact battery charge percentage; see also *Showing Battery Charge*, p. 22. The correct storage plays a decisive part in the battery life.
- When the battery is being charged, the LED flashes; see *Checking Battery Charge and Reading LED Indications*, p. 11.
- If the battery charge is lower than 50 %, the LED is lit orange instead of green. In this case, it is recommended to recharge the battery to preserve its performance.
- If the battery charge is lower than 10 %, the LED is lit red instead of green. In this case, it is necessary to recharge the battery. Low battery charge (< 10 %) can affect the functions of the device.
- Charge the programmer via the USB port or the F-type plug-in socket.
 - When charging via USB:
 - ~ Use the supplied USB charging cable. Other charging cables can have a higher DC resistance, which can lead to overheating or fire.
 - ~ Do not use any USB hubs or USB distributors. USB hubs and distributors can be overloaded due to the charging current of the device, which can lead to a damage and fire. Follow manufacturer's specifications.
 - When charging via the F-type plug-in socket:
 - ~ Only charge the device via the F-type plug-in socket when the device is turned off.
 - ~ Charge the programmer using the NCF 18 (BN 20510067) power supply device. Attach the EMU 05 (BN 273270) adapter to the F-type plug-in socket of the SWP 50. Screw the power supply device onto the EMU 05.
 - ~ It is possible to start the charging process via the F-type plug-in socket up to 1 hour after the device has been turned off.
 - ~ The charging process can start up to 1 minute after the voltage has been applied.

5 SWP 50 Programming Device

5.1 Functional Specification

The SWP 50 programming device, along with the *App ESUcontrol* makes it possible to configure the single-cable outlets of the ESU 50 series.

Due to the configuration of the single-cable outlets you ensure that connected devices can only use the respectively enabled user bands. Even if a receiver is configured incorrectly, or is incompatible with a single-cable system or is in the initial installation mode, then the devices connected to other programmable outlets are not interfered with. The interference-free operation of the entire single-cable satellite system across several residences is thus ensured on a permanent basis.

To check and edit the configuration of a single-cable outlet, you use the *App ESUcontrol* which is available free of charge for Android, iOS and Windows. By means of this app it is possible to quickly and intuitively enable or disable user bands. In addition, you can protect the configuration of each outlet against unauthorised changes by using a pin code.

5.2 Features

- compatible programmable single-cable outlets: ESUcontrol 50 series
- programming via USB or Wi-Fi
- Wi-Fi standard according to IEEE 802.11 b/g/n
- Wi-Fi range up to 15 m (in the appropriate environment)
- power supply from lithium-ion rechargeable battery and USB
- rechargeable battery charging via micro USB or NCF 18 plug-in power supply device
- rechargeable battery charge and charging status displayed by LED
- restore of the factory settings is possible
- ambient temperature and operating temperature: +5 °C to +40 °C
- 

5.3 Scope of Delivery

- SWP 50 programmer
- High-quality coaxial cable F-Quick/F-Quick
- USB charging and data cable
- Sturdy transport case
- Instructions for use

5.4 Controls and Connections



Fig. 1: Controls and Connections

No.	Name	Function
①	<i>ON/OFF button</i>	turns the device on and off
②	LED indicator	shows battery charge and errors
③	F-type plug-in socket	to connect to a programmable single-cable outlet and to charge battery
④	F-type loop-through socket	for special applications in the loop-through mode
⑤	<i>Reset</i> button	restarts the device
⑥	micro USB port	- to connect to a PC for configuration or charging - to connect to a standard USB charger (EN 62684)

5.5 Technical Data

	SWP 50			
Order number	21110025			
Parameter	Device	Min. Value	Typically Value	Max. Value
Input voltage USB	V	4.75	5.0	5.25
Input voltage F-type socket	V	14.0		20.0
USB charging current	mA			450
F-type plug-in socket charging current (at 14 V))	mA			300
F-type plug-in socket charging current (at 18 V))	mA			250
Charging time	h		2	3
WLAN standard		IEEE 802.11b/g/n		
Encryption		open security, WPA, WPA2		
WLAN-SSID		SWP 50		
Rechargeable battery	integrated lithium-ion rechargeable battery 3.7 V typ. 960 mAh / 3.55 Wh (1ICP5/37/53)			

6 Operating SWP 50

6.1 Connecting the Device

- Connect the F-type plug-in socket of the programmer (① in Fig. 2) to the Sat connection of a programmable single-cable outlet using the supplied coaxial cable.



Fig. 2: Connecting SWP 50 to a single-cable outlet

6.2 Turning the Device On and Off

- Turn the programmer on using the *ON/OFF button*.

6.3 Checking Battery Charge and Reading LED Indications



NOTICE

Risk of malfunction!

Low battery charge (< 10 %) can affect functions of the device. The LED is lit red when the internal protective function is active.

- Recharge the battery.

If the device is operated outside of the permitted temperature range, an internal safety function is activated. In this case, it is not possible to turn on the device or to charge it.

- Store and operate device only in the permitted temperature range.

- Check the battery charge using the LED indicators (② in Fig. 1, p. 9):

The Device is Turned On

Indicator	Meaning
LED (green)	The device is turned on/ready for operation, battery charge < 50 %.
LED (orange)	The device is turned on/ready for operation, battery charge < 50 %. ► Recharge the battery (recommended).
LED (red)	The device is turned on/ready for operation, battery charge < 10 %. ► Recharge the rechargeable battery.

The Device is Turned Off (Charging Mode)

Indicator	Meaning
LED off	The device is turned off, the rechargeable battery is fully charged, battery charge is 100 %.
LED (green, flashing)	The device is turned off, the rechargeable battery is being charged, battery charge is > 80 %.
LED (orange, flashing)	The device is turned off, the rechargeable battery is being charged, battery charge is < 80 %.

Error Indicator

Indicator	Meaning
LED (red, flashing for approx. 3 seconds)	Too high a load is connected to the F-type plug-in socket. The device turns off. ► Check the load on the F-type plug-in socket.

6.4 Resetting the Device

► Press the *Reset* button.

⇒ A reset is being carried out. The device restarts. The data connection (WLAN and USB) are re-initialised. The settings are maintained.

6.5 Resetting the Device to Factory Settings

It is necessary to reset the device to factory settings if:

- you forgot Wi-Fi settings, e.g. password, and there is no PC with USB available on site,
- the device must be reset to factory settings.

To reset the device to factory settings:

1. Press and hold the *ON/OFF button*.
2. Press the *Reset* button for 1 second.
3. Release the *Reset* button.
⇒ The LED starts to flash in orange.
4. Release the *ON/OFF button* .
⇒ The following factory settings are restored:
 - ~ Network name (SSID): *SWP 50*
 - ~ WLAN connection: *Hotspot mode*⇒ The device restarts automatically after it has been reset to factory settings.

7 *App ESUcontrol*

7.1 Functional Specification

The app *ESUcontrol* is necessary to check and change the configuration of a programmable single-cable outlet. The app allows you to quickly and intuitively block and unblock user bands of a compatible single-cable outlet. Furthermore, by means of the app it is possible to protect the configuration of an outlet against unauthorised changes by using a pin code. Together with the SWP 50 programming device, the *App ESUcontrol* is your professional tool.

The app is available free of charge for Android, iOS and Windows.

- To download the app, use the QR codes in Chapters 7.3.1, p. 13 and 7.3.2, p. 14 or search for the app *ESUcontrol* in Google Play™, App Store or at www.kathrein-ds.com.



Fig. 3: App icon

7.2 Features

- easily configure single-cable outlets connected to the programmer, either wirelessly or via a USB cable
- quickly and intuitively unblock or block user bands
- protect the configuration of the box against unauthorised changes using a pin code
- check and change the programming device network settings
- download is available free of charge for Android, iOS and Windows
- languages: English and German, both in the user interface and in the integrated user guides
- compatible with the Kathrein SWP 50 programming device

7.3 Installing *App ESUcontrol*

To operate the SWP 50 programmer, it is necessary to download the *App ESUcontrol* for your mobile device or Windows PC. The app is available for download free of charge. Pay attention to the system requirements listed on the corresponding website.

7.3.1 Android Smartphone or Tablet

- Scan the QR code below or search for the *ESUcontrol* in Google Play™.



7.3.2 Apple iPhone, iPad or iPod Touch

► Scan the QR code below or search for the *ESUcontrol* in the App Store.



7.3.3 Windows PC

1. Download the app for your Windows PC at www.kathrein-ds.com.
2. Install the app following the instructions on the screen.

7.4 How to Use the App *ESUcontrol*

- Always use the latest version of the app. Use the automatic update functions of the operating system in your device.
- Before disconnecting the cable connection between the programmer and the single-cable outlet, save configuration changes by pressing the *Program....* button.
- The programmer turns off automatically after being left idle for 30 minutes. Turn off the programmer using the *ON/OFF button* if you no longer use it.
- Reset the programmer to the factory settings if you would like to establish a quick and easy wireless connection to the app; see *Resetting the Device to Factory Settings*, p. 12. As per factory settings, the programmer operates as a WLAN hotspot with the network name (SSID) *SWP 50*.
- If there is more than one programmer in the WLAN range, assign a specific network name (SSID) to each programmer.
- The app can be connected to only one programmer at the same time. Actively disconnect the wireless connection before using the app on a different device.

8 Operating the App

A smartphone is used to explain the operation in the user interface of the *App ESUcontrol*. The following screenshots are representative for all operating systems.

8.1 Connecting the *App ESUcontrol* and the SWP 50 Programmer

1. Tap the app icon  on the smartphone or tablet or double-click on the PC to start the *App ESUcontrol*.
⇒ While the app is starting, some features of the app are shown. The app automatically searches for a programmer in the local network.
2. Turn on the programmer using the *ON/OFF button*.
⇒ The programmer turns on. The LED indicates the battery charge.
3. Check the battery charge.
4. If the battery charge is low, connect a USB charger to the USB port.
5. Connect the F-type plug-in socket of the programmer (③ in Fig. 1, p. 9) to the Sat connection of a programmable single-cable outlet using the supplied coaxial cable.

8.1.1 Connecting the Programmer and the App Wirelessly via WLAN

1. Go to the Wi-Fi settings of your mobile device or your Windows PC.
⇒ The programmer appears under the network name (SSID) *SWP 50*.
2. Select the network name *SWP 50*.
⇒ The connection between the programmer and the app on your mobile device or Windows PC is being established.

Tip

As per factory settings, the programmer operates as a Wi-Fi hotspot with the network name (SSID) *SWP 50*. If you cannot find the programmer in the Wi-Fi network, reset the programmer to its factory settings; see *Resetting the Device to Factory Settings*, p. 12.

8.1.2 Connecting the Programmer and the App on a Windows PC Using a USB cable



NOTICE

Note that a USB connection is only available for a Windows PC.

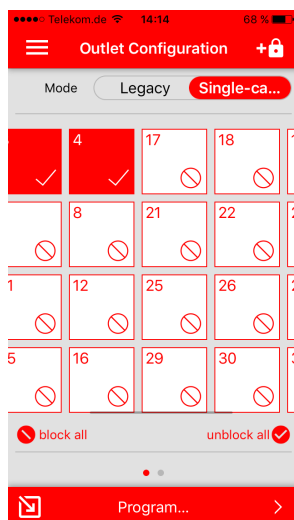
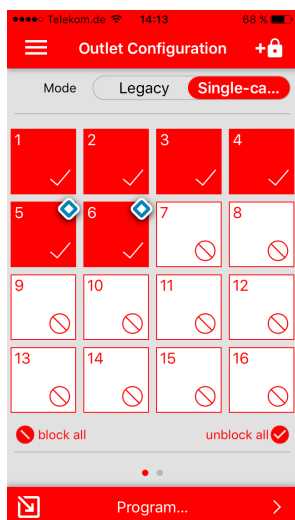
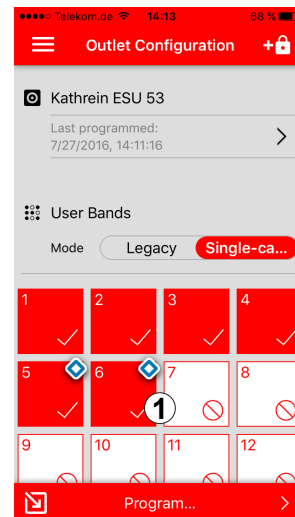
- ✓ The PC is connected to the internet.
1. Connect the USB port of the programmer to a USB port on your Windows PC using the supplied USB cable.
 2. In the app menu, open the menu item *Settings*.
 3. In *Settings*, select the used USB port.
⇒ The PC automatically searches and installs the SWP 50 driver. The connection between the programmer and the app on your Windows PC is being established.
 4. If the driver has not been installed, download it from www.kathrein.com.
 5. Install the driver.
⇒ The connection between the programmer and the app on your Windows PC is being established.

8.2 Programming a Single-cable Outlet Using the App

- ✓ The *ESUcontrol* app and the SWP 50 programmer are connected.
- ✓ Connect the programmer to a compatible single-cable outlet.

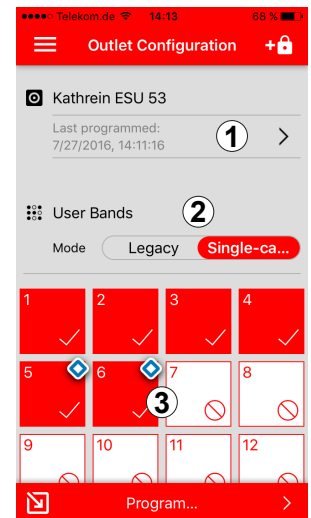
8.2.1 Operating Instructions

- The user bands are displayed as numbered buttons (① in the figure on the left).
- The configuration is shown using the following symbols:
 - ✓ – a user band is unblocked
 - ⊘ – a user band is blocked
 - ◆ – a change has been made but has not been sent to the outlet yet
 - 📄 – send changes to the outlet
- As supplied to customer, single-cable outlets of the ESU 50 series can be configured without any restrictions (Lock against change is turned off); see *Lock Against Change*, p. 19.
- If the Lock against change is on, configuration of a single-cable outlet of the ESU 50 series can only be performed by an authorised person; see *Lock Against Change*, p. 19.
- 16 user bands are shown in the user interface at the same time.
- ▶ Swipe over the numbered buttons to change between user bands 1 – 16 and 17 – 32, see figure below.



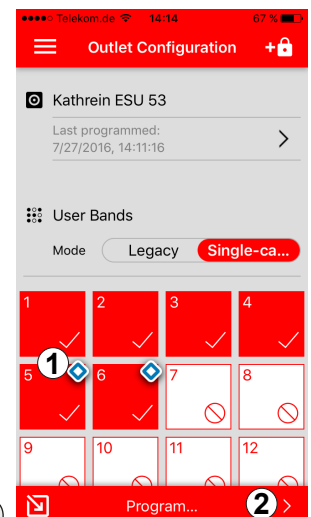
8.2.2 Displaying the Configuration of a Single-cable Outlet

1. In the App *ESUcontrol* menu, open the menu item *Program*.
 - ⇒ The configuration of the connected single-cable outlet is shown (see figure on the right):
 - Under  *ESUcontrol 5x*, it is possible to open the status indication of the connected outlet of the ESU 50 series (① in the figure on the right).
 - Under  *User Bands* you can see whether the user bands of the outlet of the ESU 50 series are blocked or unblocked and whether the Legacy mode is on (② and ③ in the figure on the right).



8.2.3 Blocking or Unblocking User Bands

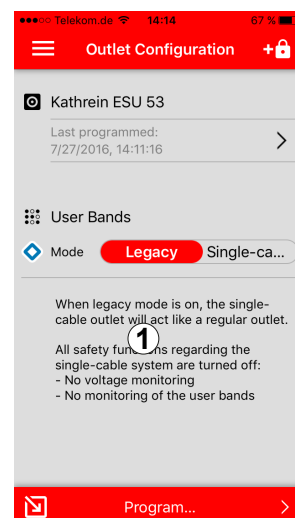
1. Tap a numbered button to block or unblock a user band.
 - ⇒ The symbol  appears in the top right-hand corner of the button (① in the figure on the right). It means that the changes have not been transferred yet.
2. Tap other numbered buttons to block or unblock other user bands.
 - ⇒ The symbol  appears in the top right-hand corner of the selected buttons.
3. Tap the button *Program...* (② in the figure on the right).
 - ⇒ The changes are transferred to the outlet. After the changes have been sent to the outlet, the symbols  and the button *Program...* are no longer displayed.



Tip The button *Program...* is visible only when the changes have been already made but have not yet been sent to a single-cable outlet.

8.2.4 Switching to the Legacy Mode

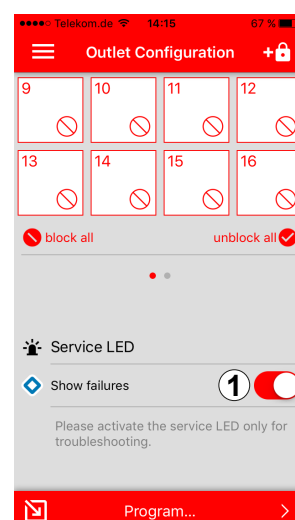
- Slide the *Legacy* switch to the left to switch to the Legacy mode.
 - ⇒ The user bands are hidden, a note appears (① in the figure on the right).
 - ⇒ The outlet of the ESU 50 series acts like a conventional outlet. There is
 - no voltage control and
 - no monitoring of the user bands.



8.2.5 Showing Failures

1. Slide the *Show failures* switch to the right to show malfunctions (failures, statuses) in the single-cable outlet by means of the service LED (① in the figure on the right).
 - ⇒ The symbol  (changes not saved yet) appears next to the *Show failures* button.
2. Tap the *Program ...* button.
 - ⇒ The service LED  shows one of the following failures/statuses on the Sat connection of the single-cable outlet:

Signal	Failure (F) or Status (S)
Red, continuous	18 V continuous operating voltage (F)
Red, continuous	22 kHz constant signal (F)
Red, continuous	Overload current > 500 mA (F)
Red, flashing	Incorrect user band information retrieval in the single-cable outlet (F)
Green, flashes shortly	The changes have been adopted by the outlet of the ESU 50 series (Z); see <i>Blocking or Unblocking User Bands, step 3</i> , p. 17.



8.3 Lock Against Change

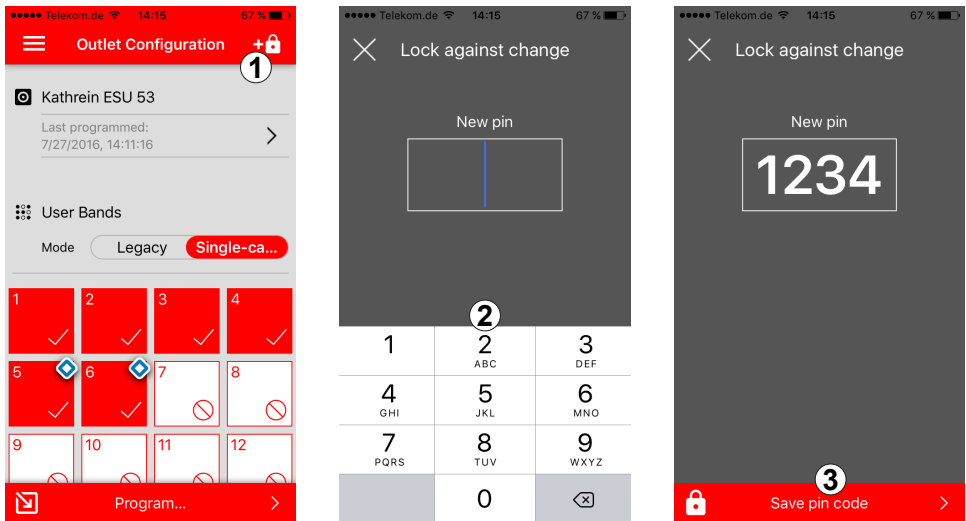
It is possible to protect the configuration of a single-cable outlet against unauthorised changes by using a pin code. The state of the Lock against change is shown by means of the lock symbol in the top right-hand corner of the user interface.

Lock Against Change	Icon
not active, no pin code (factory setting)	+🔒
active	🔒
unlocked to edit the configuration after the pin code has been entered	🔓

Tip ► If you happen to forget the pin code, reset the single-cable outlet to its factory settings in order to edit its configuration; see *Resetting a Single-cable Outlet*, p. 21. Note that the configuration of the user bands will also be reset.

8.3.1 Activating Lock Against Change

1. Configure a single-cable outlet as described in *Programming a Single-cable Outlet Using the App*, p. 16f .
2. Press +🔒 (① in the figure below).
⇒ The numeric keyboard appears (② in the figure below).
3. Enter a four-digit pin code and tap *Save pin code* (③ in the figure below).
⇒ The pin code is saved, the Lock against change is active.



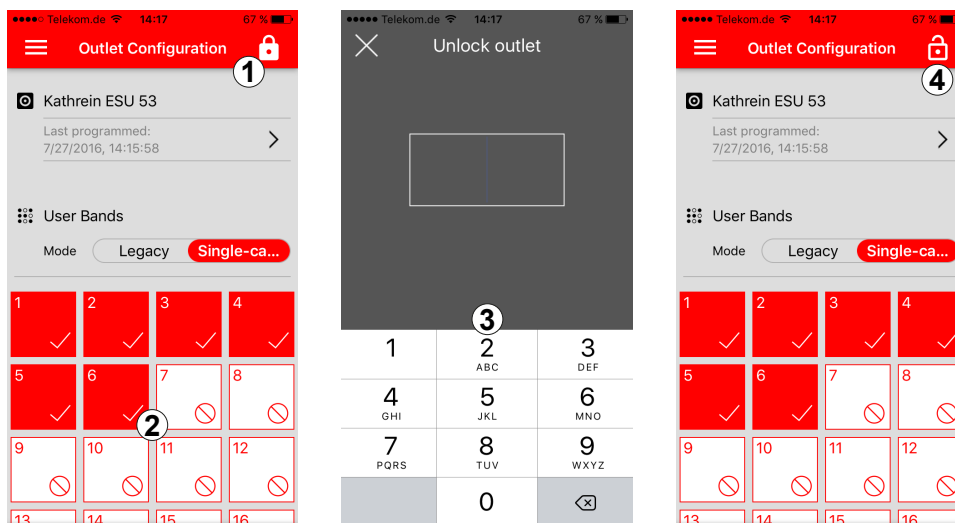
8.3.2 Unlocking the Configuration for Editing

When the configuration of a single-cable outlet is blocked for editing, this is displayed by means of a locked lock symbol in the top right-hand corner of the user interface (① in the figure below). In order to unlock the configuration of the protected single-cable outlet for editing, it is necessary to enter the pin code. The unlocking is valid temporarily and ends automatically if the connection between the app and the corresponding single-cable outlet is interrupted, e.g. when the cable between the programmer and the single-cable outlet is removed.

✓ The menu item *Program* is opened and the programmer is connected to the single-cable outlet.

✓ The lock against change has been activated by creating a pin code.

1. Tap a user band (② in the figure below) or the lock (① in the figure below) or slide the *Legacy* switch to the right.
 - ⇒ The input field for the pin code and the numeric keyboard appear (③ in the figure below).
2. Enter the four-digit password.
 - ⇒ It is possible to edit the configuration. The lock symbol shows this by an open lock (④ in the figure below).
3. Change the configuration of the single-cable outlet; see *Programming a Single-cable Outlet Using the App*, p. 16f.



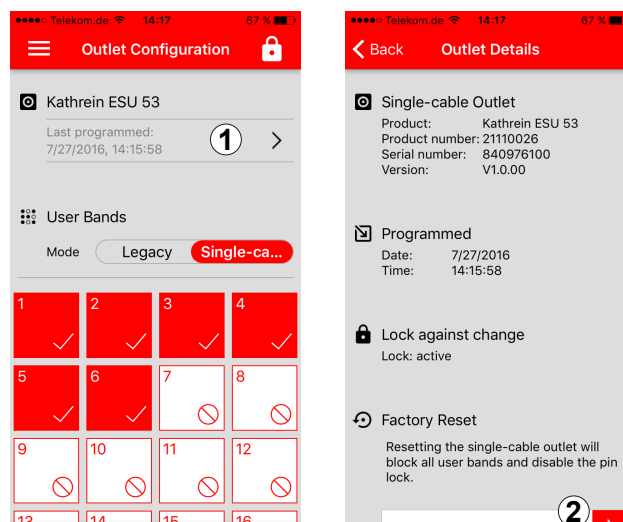
8.4 Resetting a Single-cable Outlet

Tip

Should the pin code be unknown for a protected single-cable outlet, it is necessary to reset the settings of this outlet. It is possible to reprogram the outlet and protect it using a new pin code. Before resetting a single-cable outlet, note the following:

- The reset is irrevocable. All settings will be reset.
- The Lock against change protects the outlet against an unauthorised change, the reset deletes the pin code. Due to this, the specialist dealer can see that his installation and system configuration have been changed. For this reason, it is necessary to consult the installer of the outlet, because an unauthorised changing or deleting of all settings can void warranty claims.
- Configuration of the outlet after the reset:
 - All user bands are blocked and have to be manually unlocked according to the system planning.
 - The service LED is off.
 - The lock against change is not active (pin code deleted).

1. Show the configuration of the connected programmable single-cable outlet; see *Displaying the Configuration of a Single-cable Outlet*, p. 17.
⇒ The image appears (bottom left figure).
2. Tap on the ① button (figure below) to show details.
⇒ The information about the outlet is shown (bottom right figure).
3. Tap the **Reset outlet...** button (② in the figure below).
⇒ The single-cable outlet is being reset.
4. Re-configure the single-cable outlet; see *Programming a Single-cable Outlet Using the App*, p. 16f.



8.5 Showing and Changing the Programmer Settings

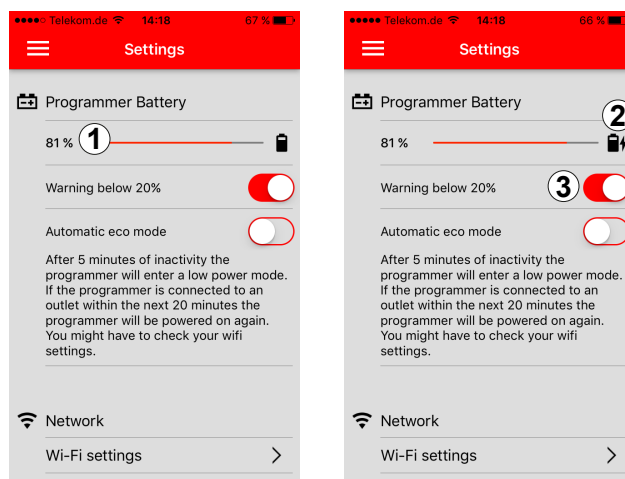
By means of the app it is possible to show and edit the programmer settings and check the battery charge.

8.5.1 Showing Battery Charge

► In the app menu, tap *Settings*.

⇒ The battery charge is shown as follows:

- ~ Battery charge percentage and progress bar (① in the bottom left figure)
- ~ A lightning bolt symbol next to the battery symbol shows that a charger has been connected (② in the bottom right figure).
- ~ It is possible to activate a warning message to be notified when the battery charge is under 20 %, (③ in the bottom right figure); see also *Activating the Warning Message for Low Battery Charge*, p. 22.

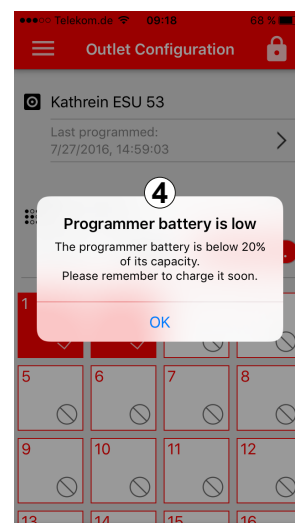


8.5.2 Activating the Warning Message for Low Battery Charge

If the battery charge falls below 20 %, you can be notified of it by means of a notification while using the app.

► Slide the switch next to the *Warning below 20 %* to the right (③ in the figure above).

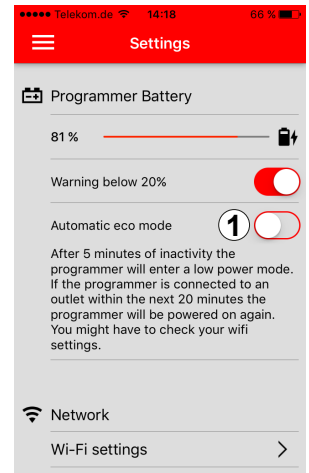
⇒ The warning message is being activated. As soon as the battery charge is below 20 %, the warning message appears (④ in figure on the right) (example from the iOS app).



8.5.3 Activating Energy-saving Mode

For the longest battery life of the SWP 50 it is possible to activate the energy-saving mode, *Automatic eco mode*. To do so:

1. In the *App ESUcontrol* menu, tap the menu item **Settings**.
2. Slide the switch next to the *Automatic eco mode* to the right (③ in the figure on the right).
 - ⇒ The energy-saving mode of the SWP 50 is activated. After being left idle for 5 minutes, e.g. the app is in the background, closed or the lock screen has been activated, the programmer goes to the energy-saving idle mode. The programmer verifies whether there is a connection to an outlet.
 - If there is no such connection, the SWP 50 ends its wireless connection to the app.
 - If the programmer is connected to the outlet within the next 20 minutes, the WLAN connection to the app will be re-established.
 - If, after 20 minutes, the programmer is not connected to the outlet, the SWP 50 turns off.



Tip If your mobile device or Windows PC does not automatically connect to the SWP 50 wireless hotspot, go to Wi-Fi settings of your device in order to establish a connection to the SWP 50; see *Connecting the Programmer and the App Wirelessly via WLAN*, p. 15..

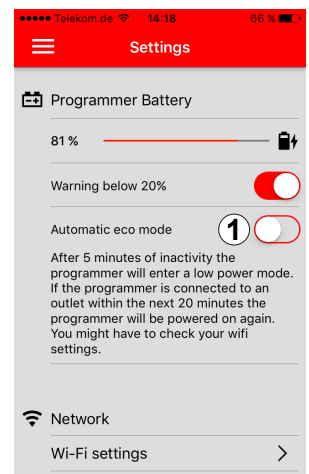
8.5.4 Changing the Programmer Network Settings

For a network connection, the programmer can either operate as a wireless hotspot in the *Hotspot mode* or be configured as a network client in the *Client mode*.

Hotspot Mode

If the *Client mode* is not active, the programmer operates as a WLAN hotspot under the configured network name (SSID). The network name according to the factory setting is **SWP 50**.

1. In the *ESUcontrol* app menu, select the menu item **Settings**.
2. Select the menu item **Wi-Fi Settings**.
 - ⇒ It is possible to change the network name (SSID) of the SWP 50 (① in the figure on the right).
3. Tap the button **Apply setting...** (② in the figure on the right).
 - ⇒ The changes are being saved.



Tip The hotspot mode is an uncomplicated connection type.
► Before a start-up, reset the programmer to the factory settings, see *Resetting the Device to Factory Settings*, p. 12..

Client Mode

In the *Client mode*, the programmer can be integrated into an already existing network.

1. In the app menu, select the menu item *Settings*.
2. Select the menu item *Wi-Fi Settings*.
3. Slide the switch next to *Client mode* to the right to activate the *Client mode* (① in figure on the right).

⇒ You can enter the Wi-Fi settings of the WLAN access point which the programmer is supposed to connect to:

- Network name (SSID) of the WLAN access point (②)
- Password of the access point (③)
- Encryption (④):
 - ~ *Open*
 - ~ *WPA (TKIP)*
 - ~ *WPA (AES)*
 - ~ *WPA2*
 - ~ *WPA2-PSK (Mixed)*

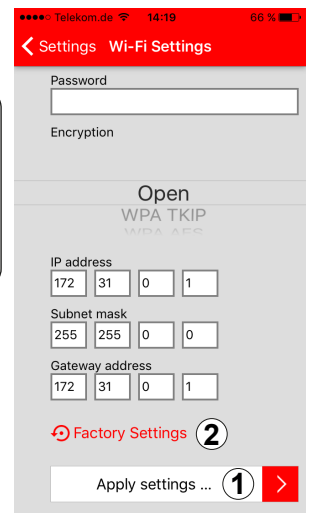
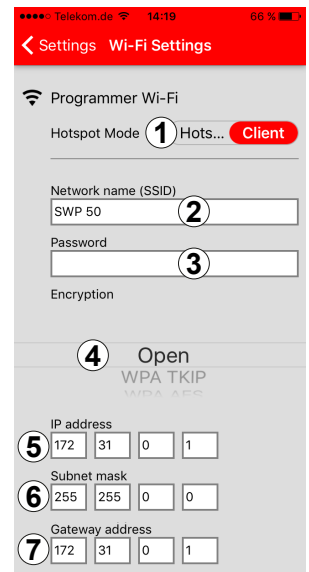
Tip We recommend using the *WPA2-PSK* encryption because it is universally compatible with very many WLAN access points.

- IP address (⑤)
- Subnet mask (⑥)
- Gateway address (⑦)

4. Tap the button *Apply setting...* (① in the figure on the right).

⇒ The changes are being saved.

Tip You can reset the Wi-Fi settings to factory settings any time.
► Tap the *Factory Settings* button (② in the figure on the right).
⇒ The Wi-Fi settings are being reset to the factory settings.



9 Service Centres

Repair Centre

autronic electronic-service GmbH

Hauptstraße 2a

35798 Löhnberg-Oberhausen

Phone [+49 6477 6123 101](tel:+4964776123101)

Fax [+49 6477 6123 020](tel:+4964776123020)

E-Mail: service-kathrein@autronic-service.de

Technical Support Service

KATHREIN Digital Systems GmbH

Eiselauer Weg 13

89081 Ulm

Phone [+49 731 270 909 70](tel:+4973127090970)

FAX [+49 731 92767-22](tel:+497319276722)

E-Mail: support@kathrein-ds.com

10 Waste Disposal



- Rechargeable batteries and batteries are special waste and not domestic waste. Used rechargeable batteries can be returned to the free community collection points or a point of sale. In Germany, the duty of the customer to return used batteries according to the German Batteries Act (BattG) applies. To meet the obligations to take back used batteries under the German Batteries Act (BattG), Kathrein is involved in the common collection scheme of the “Gemeinsames Rücknahmesystem Batterien“ Foundation.
- Dispose of the rechargeable battery properly:
 - Take only discharged rechargeable batteries to the recycling centre.
 - Secure rechargeable batteries that are not fully discharged against short circuits, e.g. by applying adhesive tape to the poles.
 - Inform the recycling centre if the rechargeable battery is damaged.
 - Do not dispose of rechargeable batteries in fire, in a hot oven or by mechanically crushing them, because this can lead to an explosion.
- Kathrein is a registered manufacturer in accordance with the requirements of the EU Directive (WEEE 2002/96/EG) and the Electrical and Electronic Equipment Act (ElektroG) in the National Register for Waste Electric Equipment (EAR). WEEE reg. no. DE 38438502.

11 EC Declaration of Conformity



EU-Konformitätserklärung / Declaration of Conformity

Hersteller / Manufacturer: **Kathrein-Werke KG**
Anschrift / Address: **Postfach 10 04 44
83004 Rosenheim**
Produktbezeichnung / Product: **Programmiergerät**
Typenbezeichnung / Type: **SWP 50**
Bestellnummer / Article number: **21110025**

Die **Kathrein-Werke KG** bestätigt hiermit, dass das bezeichnete Produkt mit den folgenden Richtlinien zur Angleichung der Rechtsvorschriften übereinstimmt.

*The **Kathrein-Werke KG** hereby confirm that the designated product complies with the following directives on the harmonisation of the laws.*

a) Funkanlagenrichtlinie / *Radio Equipment Directive* (RED (2014/53/EU vom 16.04.2014))

Folgende Normen werden eingehalten / *Applied harmonised standards:*

EN 300328 V1.9.1: 2015
EN 301489-1 V1.9.2: 2011
EN 301489-17 V2.2.1: 2012
EN 50083-2: 2012 + A1: 2015
EN 55022: 2010
EN 55024: 2010
EN 60328-1: 2014 + AC: 2015

b) RoHS (2011/65/EU vom 08.06.2011)

Folgende Normen werden eingehalten / *Applied harmonised standards:*

EN 50581 : 2012

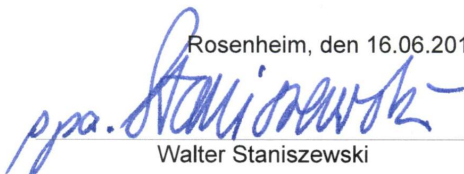
Ort, Datum:

Place, Date:

Rosenheim, den 16.06.2016

Rechtsverbindliche Unterschrift:

Binding signature:


Walter Staniszewski



Electronic equipment is not domestic waste – in accordance with directive 2002/96/EC OF THE EUROPEAN PARLIAMENT AND THE COUNCIL dated 27th January 2003 concerning used electrical and electronic appliances, it must be disposed of properly. At the end of its service life, take this unit for disposal at a designated public collection point.