

//ANGEL React

# Manual

Version ENU 1.1, 09/2024

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# Introduction

Thank you for opting for **ANGEL React**. We developed these systems to increase your safety at work, and to ensure that you can receive assistance as quickly as possible in the event of an emergency.

## 1.1 About this manual

This manual is intended to familiarize you with the **ANGEL React** equipment and its handling. It describes what you must consider when using **ANGEL React** for the first time, as well as during daily usage.

It also contains important instructions for the safe, proper, and efficient use of your equipment. Following the instructions in this document will help you to prevent danger, repair costs, and avoid possible down time due to incorrect use.

This manual is to be supplemented by existing national safety standards for accident prevention and environmental protection.

Please read this manual carefully before working with **ANGEL React**.

### 1.1.1 Symbols and conventions

In this document, the following symbols and formatting styles are used:

Symbol/format	Description
✓	Conditions to be met before starting a task
▶	Instructions that can be carried out in any order
1. 2.	Instructions that have to be carried out in the given order 1. Step 2. Step 2.1 Substep 2.2 Substep
→ / ➡	Expected outcome of a step/task
<b>Text in bold</b>	Text shown on a device, its display or in a software
<i>Text in italics</i>	ADRESYS product name
 / <b>Note:</b>	Additional information, explanations, or tips

### 1.1.2 Terminology

<b>ANGEL React</b> Shirt	General term for all <b>ANGEL React</b> garments in the form of a shirt. It includes the following: <ul style="list-style-type: none"><li>• <b>ANGEL React</b> T-Shirt</li></ul>
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### 1.1.3 List of warnings

The following symbols indicate safety instructions for avoiding hazards.

#### DANGER



Failure to observe the relevant safety instructions will result in serious injury or even death.

#### WARNING



Failure to observe the relevant safety instructions may result in serious injury or even death.

#### CAUTION



Failure to observe the relevant safety instructions may result in minor or moderate injury.



Consider cybersecurity warnings and notes to ensure availability and integrity of your systems and to prevent security issues like data leak or data loss.

## 1.2 About ANGEL React

The **ANGEL React** system detects emergencies during day-to-day work and places an emergency call immediately and automatically via the **ANGEL React** App. Depending on the configuration, previously defined emergency contacts are informed via text messages, e-mails, and an automated voice call about the emergency and the location of the injured person. This way, the emergency contacts can help immediately.

**ANGEL React** is a product from ADRESYS Adaptive Regelsysteme Gesellschaft m.b.H.

### 1.2.1 Shirt system/Clip system

**ANGEL React** is based on the Shirt system or the Clip system.

The Shirt system detects:

- Motionlessness
- Fall accidents
- Elapsed Task Timer
- Manual alarm
- Electrical accidents



The Clip system detects:

- Motionlessness
- Fall accidents
- Elapsed Task Timer
- Manual alarm



The **ANGEL React Shirt system** can be used with the **ANGEL React T-Shirt**.

The **ANGEL React Clip system** can be used with either a clip or smart trousers. For more information about smart trousers contact us at [angelreact@adresys.com](mailto:angelreact@adresys.com).

The Shirt or Clip system can be supplemented with the following **ANGEL React** components:



Watchdog



Restart Inhibit



Location Beacon

### 1.2.2 Watchdog

The Watchdog is an additional component of **ANGEL React** and only works in combination with a Shirt or Clip system. In an emergency, the system (Genius) sends a signal to the Watchdog, that triggers an emergency-off circuit. The potential-free contact can also be integrated into an automation system or it can be used to start a siren.

### 1.2.3 Restart Inhibit

The **ANGEL React** Restart Inhibit is required in addition to the Watchdog if you are using it in combination with an existing stationary emergency-off circuit that does not feature its own restart lock.

The Restart Inhibit enables the Watchdog to be correctly connected to an existing emergency-off circuit.

#### 1.2.4 IPS and Location Beacon

IPS provides location information especially for areas which lack a stable GPS signal (e.g., cellars, tunnels, buildings). It can also extend GPS and provide additional location information to better and faster locate users, e.g., by telling the company name and floor level inside of an office building.

The **ANGEL React** Location Beacon is a device that enables location determination as part of an IPS installation. It helps to find a casualty in case of an emergency alarm more quickly by providing the **ANGEL React** system with accurate indoor location information.

#### 1.2.5 Designated use

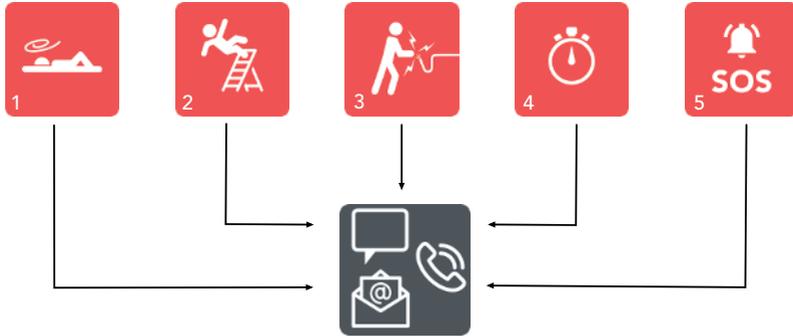
**ANGEL React** does not offer protection against electrical accidents, fall accidents or other kinds of accidents. Always use your **ANGEL React** system as an additional safety measure.

**ANGEL React** is no medical device as defined in the Regulation (EU) 2017/745 of 05/25/2017. It is not designed or intended for the diagnosis, prevention, monitoring, or treatment of diseases, injuries, or for other medical purposes.

**ANGEL React** is no personal safety equipment as defined in prenorm DIN VDE V 0825-1 or -11 and no PPE as defined in regulation (EU) 2016/425.

## 1.3 About the emergency call chain

**ANGEL React** detects emergencies while working and activates the emergency call chain.



1	No Motion (motionlessness)	4	Elapsed Task Timer
2	Fall accident	5	Manual alarm
3	Electrical accident (Shirt system only!)		

### 1.3.1 How the emergency call chain works

After the detection of an emergency and depending on the configuration, the **ANGEL React** App sends text messages, e-mails, and an automated voice call to your emergency contacts. They should be able to help you straight away, as your location will also be sent to them.

#### The following will happen

- The Genius and your smartphone raise an optical and audible alarm to draw attention to your emergency.
- Your emergency contacts receive text messages, e-mails (depending on your configuration), and an automated voice call.
  - Text messages (and optional e-mails) inform about the incident and provide a link to the Help Coordination Portal (see chapter [Help Coordination Portal](#) (page 12))
  - The automated voice call draws additional attention to the emergency.
- Ideally, your emergency contacts will be able to provide immediate assistance.

### 1.3.2 Emergency contacts

Using an **ANGEL React** system, you need to define emergency contacts. Emergency contacts are people who can help you immediately in case of an emergency.

You choose your own emergency contacts, and you can change them at any time.

Your emergency contacts do not have to install the **ANGEL React** App on their smartphone.

### 1.3.2.1 Responsibilities of the emergency contacts

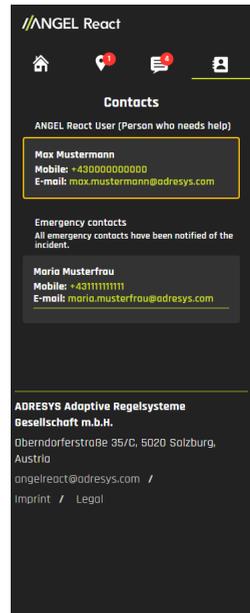
Typical emergency contacts are:

- Team colleagues or team leaders
- Company first responders or receptionist
- People you know in a social context.

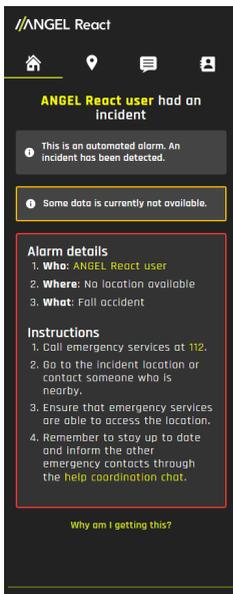
The responsibilities of your emergency contacts after an emergency message are the following:

- Call you, clarify the situation, decide what type of assistance is needed.
- Initiate appropriate assistance if you do not answer, for example:
  - Verify your last known location and help directly on site.
  - Call emergency responders and pass on information from the emergency text.

**IMPORTANT:** Your emergency contacts need a smartphone with an active SIM card and they must be able to receive text messages.



### 1.3.2.2 Help Coordination Portal



During an emergency alarm, your emergency contacts receive a link to the Help Coordination Portal.

- The portal provides detailed information about the incident including a corresponding link to Google Maps.
- It provides your emergency contacts with recommendations for action (the recommendations may vary on a case-to-case basis).
- It is possible to communicate via this portal:
  - The injured can send information about their status.
  - The emergency contacts can inform each other about their actions.

Please note:

- During an incident the emergency contacts must continue to check their text messages for updates, they must not rely on the Help Coordination Portal alone.

You can always get to your Help Coordination Portal via EMERGENCY CALL -> EMERGENCY CALL COMMUNICATION. There you can find all incidents within the last week, all chats within the last day and your emergency contacts.

## 1.4 Understanding colors and icons

### 1.4.1 Icons of the ANGEL React App

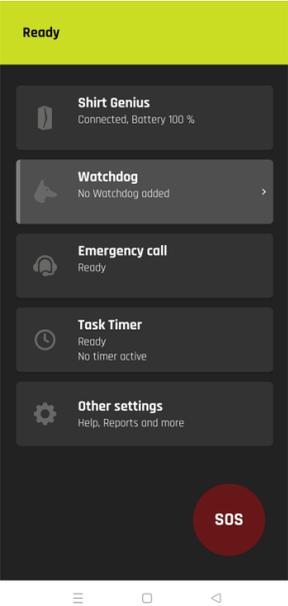
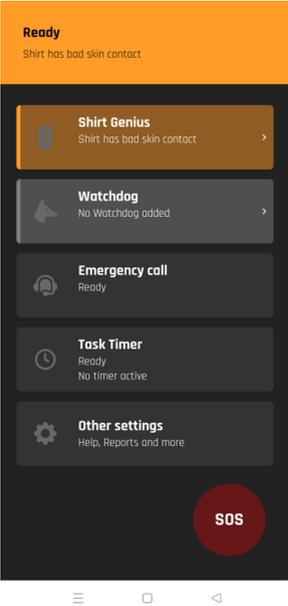
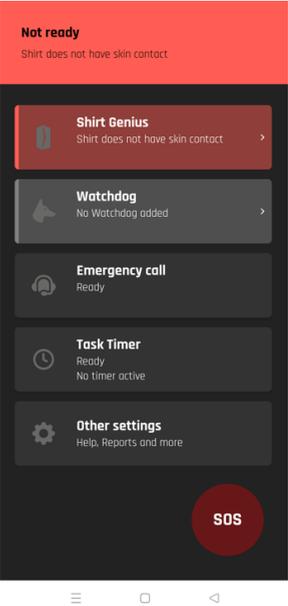
	Genius	<p>The Shirt or Clip Genius processes all the data that is recorded by the sensors. The following are displayed here:</p> <ul style="list-style-type: none"> <li>• <b>Optional: skin contact with the ANGEL React Shirt electrodes</b></li> <li>• Genius battery level</li> </ul>
	Emergency call	<p>Here you can find information about the following:</p> <ul style="list-style-type: none"> <li>• Account details and location</li> <li>• Practice alarm</li> <li>• A link to Help Coordination Portal</li> <li>• The emergency call services</li> </ul>
	<b>Optional: electrical accident</b>	<b>The ANGEL React Shirt system detects an electrical accident by measuring the voltage drop between both upper arms.</b>
	Fall accident	<b>ANGEL React</b> detects a free fall with impact. If this is followed by motionlessness, the system assumes a fall accident.
	No Motion	<b>ANGEL React</b> detects motionlessness if you do not move for an extended period.
	<b>Optional: Watchdog</b>	An activated Watchdog ensures that the electrical circuit it is connected to is interrupted after an emergency.
	Task Timer	<p>The Task Timer can be used in the following situations:</p> <ul style="list-style-type: none"> <li>• For activities involving increased risk</li> <li>• If your smartphone has no data connection</li> </ul> <p>The start of a Task Timer is transferred to the server. If you do not acknowledge a pre-alarm after the timer is elapsed, an alarm can be triggered even without a data connection.</p>

### 1.4.2 Colors in Genius and app

Our colors provide information about and reflect the status of the **ANGEL React** system. The Genius and the app communicate using the same color.

Please note that the Watchdog works with colors that are different from the ones on Genius and app. For more information, refer to section [Color display of the Watchdog](#) (page 50).

#### Colors in Genius and app

Green - READY	Orange - LIMITED	Red – NOT READY
Genius and app are working correctly.	There are problems. Note the status message in the app.	The system is not working correctly.  Action is required. Note the status message.
		

#### Colors only on the Genius

<b>Blue flashing</b> <b>PAIRING MODE</b>	The Genius must flash blue before pairing.  You will find more information about pairing mode in section <a href="#">Pairing</a> (page 27).
<b>All colors</b> <b>FIRMWARE UPDATE</b>	Stop working and wait until the update is complete (up to 20 minutes). We recommend connecting the smartphone and the Genius to the charger during this time.

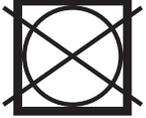
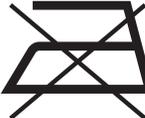
### Colors of the Genius on the charging station

<b>Constant red</b>	Battery is not charging properly.
<b>Green flashing</b>	Battery is charging.
<b>Constant green</b>	Battery is full.

On the charging station, the Genius LED might be constant and at full brightness. In all other situations, the Genius LED is flashing.

## 1.5 Care instructions of the ANGEL React Shirt

The following care instructions apply to the **ANGEL React** T-Shirt.

				
Gentle wash cycle	Do not tumble dry	Do not dry clean	Do not bleach	Do not iron

1. Remove the Shirt Genius and – if you wear an **ANGEL React** T-Shirt - the Genius cradle before washing.
2. Do not turn the shirt inside out when washing to protect the electronics.
3. Put the shirt in a laundry bag to ensure a longer service life.
4. Wash the shirt with color detergents; it is not necessary to use special detergents.
5. Spin the shirt at no more than 1200 rpm.
6. Do not tumble dry or iron the shirt because of its electronic components. Only dry the shirt on a washing line.

The functionality of the shirt may be impaired by mechanical stresses, as well as detergent deposits during the washing cycle.

- ▶ Contact our support if the status in the app remains LIMITED (orange) even though it has connected correctly. This may be a result of washing.

## 1.6 Disposal instructions

An **ANGEL React** Shirt can be disposed of in the same way as conventional textiles. You should ideally check your national regulations for the disposal of textiles.

### Disposal of the electronic devices



At the end of its service life, do not dispose of the electronic devices of your **ANGEL React** system (Genius, Watchdog, Restart Inhibit, Location Beacon and their accessories) with your household waste!

### WARNING

#### Risk of injury due to a defect battery of the Genius



The Genius must not be transported if the lithium-ion battery is smoking, unusually hot or shows any other sign of a defect.

- ▶ In case the battery is hot, cool it under water in a ceramic washbasin.
- ▶ Ask for advice on the battery's correct disposal (e.g., from our support)

### Disposal for customers in EU countries (including the European Economic Area)

The electronic devices of the **ANGEL React** system (e.g., Genius, Watchdog, charging station) are subject to the EU Waste Electrical and Electronic Equipment Directive 2012/19/EU (WEEE directive).

These devices can generally be disposed of where other electronic devices are disposed of (e.g., waste salvage center, recycling center). As part of our legal obligations under the above legislation, we also offer to take back the equipment, and ensure that it is correctly disposed of by authorized recycling agents.

### Disposal for customers outside the European Economic Area

Contact the relevant authorities and inquire about the environmental regulations applicable in the respective country. Disposal of the electronic devices of the **ANGEL React** system must always take place in accordance with the applicable regulations.

# Safety

This chapter contains important instructions for the safe, proper, and efficient use of **ANGEL React**. Any use of **ANGEL React** other than that described in this user manual, or the respective Quick Start Guides is improper use. Improper use may impair the safety of the equipment and result in property damage or personal injury. It could invalidate warranty claims.

- Read this user manual carefully before using **ANGEL React**.
- Contact our support if you do not understand any of the instructions in this document.
- Follow all the safety instructions, warnings, and other instructions the user manual.
- Only use **ANGEL React** in compliance with all applicable company-specific rules, national and international safety regulations, and regulations on accident prevention, occupational safety, and environmental protection.
- Only use **ANGEL React** and any accessories according to the instructions in this user manual.
- Always keep the user manual and the respective Quick Start Guide ready to hand when you are using **ANGEL React**.

The following safety instructions apply to all **ANGEL React** products.

The safety instructions applying to the individual products can be found in the respective Quick Start Guide and chapter of this manual.

## 2.1 Safety instructions

### 2.1.1 General instructions

- ▶ Comply with the workflows described in this document. Avoid interruptions or distractions that could affect safety.
- ▶ Only use **ANGEL React** if the circumstances permit.
- ▶ Do not allow the use of the **ANGEL React** system to distract you from your immediate surroundings and activity.
- ▶ If your **ANGEL React** system or any accessory does not seem to function properly, do not use it. If in doubt, contact our support.
- ▶ Contact our support immediately if you become aware of problems or damage.
- ▶ Only have the equipment repaired by ADRESYS or a service contracting party listed on our website.

### 2.1.2 Environmental conditions

- ▶ Do not use the **ANGEL React** system under ambient conditions that exceed the temperature and humidity limits listed in the user manual/Quick Start Guide.
  - Do not expose the Genius to extreme heat or direct sunlight (e.g., inside a closed car).
  - Protect the electronic components against moisture and high levels of humidity.
- ▶ Do not use your **ANGEL React** system in the presence of explosive gas or vapors.

- ▶ Only use your **ANGEL React** system if the circumstances permit.

### 2.1.3 Notes for safe operation

- ▶ Do not open the system components of your **ANGEL React** equipment.
- ▶ Do not touch the electronic components as this may result in injury and malfunctions.
- ▶ Do not continue to use any **ANGEL React** device if its housing is damaged. A broken housing presents risk of injury and malfunction. Specifically, there is risk of touching dangerous voltages or injury due to sharp edges.
- ▶ Do not continue to use any **ANGEL React** device if its cables are damaged.
- ▶ In the event of a malfunction of the Genius, immediately remove it from your work wear and contact our support. A Genius malfunction may be indicated by smoke or an unusual odor.
- ▶ Do not deliberately induce voltage contact: Any **ANGEL React** equipment does not protect you against voltage contact or electrical accidents, it can just reduce the damage.

# Shirt and Clip system

**ANGEL React** is based on the Shirt system and the Clip system. Both work with a Genius and an app.

Both versions of the **ANGEL React Genius** are electronic data processing units that detect motionlessness and fall accidents, but only the Shirt Genius also detects electrical accidents. The Genius forwards information to the **ANGEL React App** via Bluetooth®. Your personal data is attached to the Genius.

The **ANGEL React App** runs on your smartphone. It carries out the emergency communication.

## The ANGEL React Shirt system

In addition to Shirt Genius and app, the **ANGEL React** Shirt system includes a smart shirt.

Electrodes in the upper arm cuffs of the shirt detect when voltage is flowing through your body.

The Shirt Genius is clicked onto the left upper arm.

The **ANGEL React** Shirt system detects:

- **Electrical accidents**
- No Motion (motionlessness)
- Fall accidents
- Elapsed Task Timer



The **ANGEL React Shirt system** can be used with the **ANGEL React** T-Shirt.

## The ANGEL React Clip system

For using the **ANGEL React** Clip system, the Clip Genius is attached to a belt, waistband, etc. with its holder.

It can also be used with smart trousers and be fixed in their cover pocket.

The **ANGEL React** Clip system detects:

- No Motion (motionlessness)
- Fall accidents
- Elapsed Task Timer



If you use an **ANGEL React** Shirt system, it is possible to use the Shirt Genius as a Clip Genius. To do so, ask your **ANGEL React** sales partner to order a **ANGEL React** Accessory-Switch-Clip to fix the Genius on your workwear.

## DANGER

### Risk of injury due to unsuitable Genius



If you use a Clip Genius on an **ANGEL React** Shirt, the **ANGEL React** App will not work properly.

- ▶ Take care to always combine your **ANGEL React** Shirt system with a Shirt Genius.

## 3.1 Scope of delivery

Check that all the listed components are included in your delivery.

If anything is missing, contact our support.

### WARNING



#### Risk when using unapproved accessories

- ▶ Only use **ANGEL React** with the genuine accessories. The **ANGEL React** accessories must not be used for other applications.

#### 3.1.1 ANGEL React Shirt system

### DANGER



#### Danger of suffocation through shirt packaging

- ▶ To avoid danger of suffocation, keep the plastic bag of the **ANGEL React** Shirt away from babies and children.

Purchasing an **ANGEL React** Shirt system, you will receive the following components:

- **ANGEL React** Shirt: According to your order this will be one of the following shirts:
  - **ANGEL React** T-Shirt
- Shirt Genius Starter Package with accessories

#### ANGEL React T-Shirt

- 1 Cuffs with integrated electrodes
- 2 Electrically conductive textile cable (integrated into the back of the T-Shirt)
- 3 Shirt Genius
- 4 Cradle for the Shirt Genius
- 5 Place for a logo



### ANGEL React Shirt Genius Starter Package



- 1 Shirt Genius
- 2 Charging station for Shirt Genius with cable and power supply unit
- 3 Two cradles for attaching the Shirt Genius to the ANGEL React T-Shirt

### 3.1.2 ANGEL React Clip system

#### ANGEL React Clip Genius Starter Package



- 1 Clip Genius
- 2 Charging station for the Clip Genius with cable and power supply unit
- 3 **ANGEL React** clip (holder) for attaching the Clip Genius to a waistband, belt, etc.

If you ordered smart trousers, your starter package will come along without a clip (holder).

## 3.2 Commissioning

You will need to carry out the following steps before you can use your **ANGEL React** system for the first time.

Both the Genius and your smartphone should at least be charged 30% to carry out the commissioning process. The Genius is supplied to you charged but place it in the charging station during commissioning to be on the safe side.

1. Download the **ANGEL React** App.
2. Put on the appropriate working clothes (e.g., **ANGEL React** T-Shirt).
3. Pair the Genius and the **ANGEL React** App.
4. Register in the **ANGEL React** Portal.

These are described in more detail in the next few sections.

Carry out all these steps before using your **ANGEL React** system for work. Schedule half an hour for this task.

### DANGER

#### Serious health consequences with implanted medical devices



The integrated magnetic contacts in the Genius may affect the reliability of other electronic devices if they are worn too close to the heart.

- ▶ Consult a doctor before using the **ANGEL React** Shirt system if you wear a pacemaker, defibrillator, or other implanted electronic devices. Clarify whether the small, imperceptible currents in the microampere range could impair the function of these devices.

#### 3.2.1 Downloading the app

You will need to install the **ANGEL React** App on your smartphone in order to use your **ANGEL React** system.

- Use the smartphone you carry with you during your daily work.
- Download the **ANGEL React** App using the QR code shown. The app is supported from Android version 7.1.1 and from iOS version 14.



Switch your smartphone to Bluetooth® mode. You need Bluetooth® LE (4.2. or higher). You can find a list of smartphone models on which the **ANGEL React** App will not run on our website (FAQ).

Allow the **ANGEL React** App to access the following:

- **BLUETOOTH®:** This maintains the connection between the Genius and the app; it activates the emergency call chain via the smartphone.
- **LOCATION:** During an emergency alarm, your location is sent to the emergency contacts in the form of GPS data so you can be found.
- **VOICE CALLS/TEXT MESSAGES/(optional) E-MAILS:** During an emergency alarm, the emergency contacts are notified by text messages, e-mails and by an automated voice call.

Also necessary is the following:

- Turn off the battery saver option.
- Ignore the battery optimization.

The **ANGEL React** App uses very little battery charge but does run constantly in background mode while you are using it. Battery optimization would automatically turn off the app since you are not actively using it for long periods.

If you lose the Bluetooth® connection or close the app, the Genius will beep after a certain time (depending on your sound settings).

### 3.2.2 Putting on the Shirt or Clip

#### Putting on the ANGEL React Shirt

## CAUTION

### Allergic reaction due to wearing the **ANGEL React** Shirt



- ▶ Remove the shirt immediately if you experience skin irritation or itching. The electrodes contain silicone.
- ▶ Also remove the shirt if you feel constricted, or if the cuffs are too tight.

You can wear the **ANGEL React** T-Shirt beneath your work clothes in the same way as a regular shirt. Always make sure, that the upper arm cuffs of your shirt are on your bare skin.



1. Attach the Shirt Genius to your **ANGEL React** Shirt:
  - 1.1 **T-Shirt:** Attach the cradle to your shirt correctly and place the Shirt Genius (the "arrow" of the Genius must point towards the back of your upper arm)
2. Make sure that the silicone electrodes on the upper arm cuffs are in good contact with your skin.
3. If you have very dry skin it may help to moisten the electrodes with a little water.
4. Contact our support if the cuffs of your shirt are too tight or too loose.

### Attaching the clip (holder)

You can attach the clip (holder) to a belt, waistband, or other place on your work clothes where it neither restricts nor presses against you. For reliable fall accident detection, the Clip Genius must be attached to your torso or hip.

### 3.2.3 Pairing

Leave the Genius in the charging station while carrying out the following steps.

#### The process of pairing

1. Use the shown QR code to watch an explanatory video on pairing.
2. Take a look at the label on the underside of your Genius before starting the pairing process.
  - You might need the serial number to identify the Genius.
  - During the process, the **ANGEL React** App may ask you for the six-digit key (or code or PIN).



✓ To start the pairing process, your Genius must flash blue.

1. Click the Genius into the contacts of the charging station.
2. Detach the Genius from the contacts, then click it back onto the contacts.
3. Repeat these last two steps at least five times.
4. If the Genius does not flash blue, try it again, slightly faster, or slower.
5. Open the **ANGEL React** App now and follow the instructions. The app will guide you through the pairing process and registration in the **ANGEL React** Portal.

#### Update after pairing

Once you have completed pairing, the Genius often requires a firmware update. This can take up to 20 minutes, and the Genius flashes in all its colors during this time.

- ▶ Place the Genius on the charging station during the update.

### 3.2.4 Registering

Once you have paired successfully, the app takes you to the **ANGEL React** Portal. Follow the instructions here and enter all the necessary data:

- ▶ Make sure you have entered the data correctly so you can be helped and found in an emergency.
- ▶ Make sure that the correct company name is stored in the Portal and contact our support if this is incorrect.

## Misuse of your data by passing on your Genius

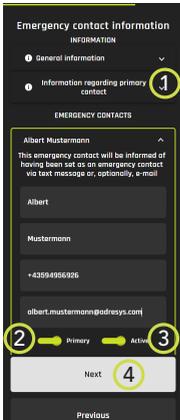


Your Genius is your personal safety device. It is used to access your account and may be misused.

- ▶ Do not pass on your Genius to a third party to avoid possible misuse and/or damage to your data.

### 3.2.4.1 Setting up emergency contacts

You can create a list of emergency contacts in the **ANGEL React** Portal.



- 1 Click here to learn about the primary emergency contact.
- 2 Make one of the contacts your primary emergency contact. This is important if you use the service of the emergency call center.
- 3 Activate suitable contacts by clicking **ACTIVE** beneath their name. They will be informed in the event of an alarm.
- 4 Enter additional emergency contacts by clicking **NEXT**.

After entering all data, raise a test alarm to check that your emergency contacts receive the emergency text messages/e-mails and an automated voice call. Familiarize yourself with the process.

### 3.2.4.2 Changing emergency contacts

You can change your emergency contacts at any time in the **ANGEL React** Portal. To do so, tap **EMERGENCY CALL** -> **MANAGE CONTACTS**.

Here you can do the following:

- Set up new emergency contacts.
- Activate/Deactivate emergency contacts, depending on your work situation.
- Change the primary emergency contact: the primary emergency contact is only important if you are still using the services of the emergency call center.
- Open the emergency call screen by going back to the app's home screen and pressing the emergency call icon.

The change takes effect immediately after refreshing the website of the **ANGEL React** Portal.

### **3.2.4.3 Optional: emergency call center**

A new registration to the emergency call center is not possible anymore. If you have an active subscription to its services, you can, of course, still use them.

## 3.3 Operation

### 3.3.1 Daily use

At the beginning of your working day:

#### WARNING

##### Risk due to lack of data or Bluetooth® connection

The **ANGEL React** system may not work reliably or be able to place emergency calls if the data or Bluetooth® connection is not activated or if these connections are missing. You should not assume that the system can call for help in every situation.



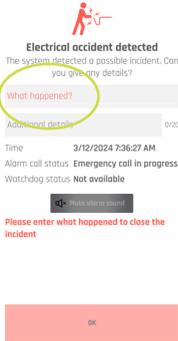
- ▶ Ensure that the **ANGEL React** App and the Genius (and also the **Watchdog** if you use one) are always connected via Bluetooth®.
  - ▶ Check the notifications in the **ANGEL React** App.
  - ▶ Start the Task Timer if your cell phone does not have a permanent data connection.
1. Enable Bluetooth® and the location on your smartphone, and start the **ANGEL React** App.
  2. Attach the Genius to your working clothes: Click it into your clip or the Shirt cradle. If you wear smart trousers, put the Genius into the cover pocket and ensure, that the contacts are placed correctly.
    - 2.1 The app will usually connect to your Genius automatically. You will then hear a connection tone and the status will change to **READY**.
    - 2.2 The Genius emits an audible signal if something is not right.
  3. Always keep your smartphone with you or nearby and check the status of the app at regular intervals.

Remove the Genius from the shirt/clip if you will not need emergency detection for a short time (e.g., while driving your car, in a meeting, etc.). Then simply attach it again to restart emergency detection.

At the end of the working day:

1. Remove the Genius and place it in the charging station supplied to recharge it overnight.
  2. Disable Bluetooth® and the location to save your smartphone's battery.
- ▶ When using the **ANGEL React Shirt** system, read the care instructions for the **ANGEL React Shirt** in chapter [Care instructions of the ANGEL React Shirt](#) (page 16). You can launder it at 40°C in your household wash, but never iron it or put it in a tumble dryer.

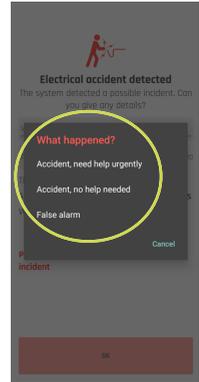
### 3.3.2 Emergency detection



After an emergency is detected, the Genius starts an audible and optical alarm, and the **AN-GEL React** App activates the emergency call chain.

If you are able to, open the app and tell the system (and your emergency contacts) more about your current situation.

You can also communicate with your emergency contacts via the Help Coordination Portal. A text message with a link to this portal is sent to you and your emergency contacts after an emergency detection.



Your smartphone requires a data connection to send emergency information. If this connection is unavailable, the data will be sent the next time you are connected. When working in a location without data connection, you can set the Task Timer.

#### 3.3.2.1 No motion

No Motion detects when a person remains motionless for a certain period. The system then raises a pre-alarm in the form of a continuous tone and vibration of the smartphone. A slight movement of the Genius cancels the pre-alarm.

### WARNING

#### Risk of undetected emergency due to vibrating pre-alarm of the smartphone



If you carry your smartphone close to your Genius it is possible that its vibrating pre-alarm will simulate movement to the Genius in the event of a No Motion emergency. This cancels the No Motion alarm.

- ▶ Make sure you carry your smartphone on the one side of your body where you are NOT wearing the Genius (especially when using a Clip system).

If you do not acknowledge the pre-alarm, **ANGEL React** assumes an emergency. It activates the emergency call chain.

#### 3.3.2.2 Fall accident

The **ANGEL React** system's sensors detect fall accidents in the event of a free fall from a height of around one meter or more, followed by impact and motionlessness. First the **ANGEL React** App raises a pre-alarm and then – if this is not acknowledged – an emergency call.

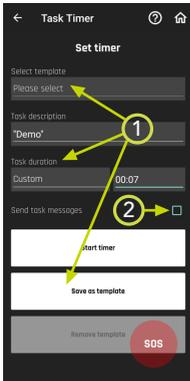
### 3.3.2.3 Electrical accident (only with the Shirt system)

To detect electrical accidents, the Shirt Genius measures the voltage on your upper arms via the electrodes in the cuffs of the **ANGEL React** Shirt. A drop in voltage allows it to draw conclusions about the current flow in your body.

### 3.3.2.4 Task Timer

The Task Timer should be used in the following situations:

- Before carrying out high-risk work.
- If your smartphone will temporarily have no access to a data connection, and so will be unable to place an emergency call, e.g., in a basement.



- 1 Here you can save the activity, duration, and **Send activity message** as a template, and then select this template next time.
- 2 Check this checkbox if you want your emergency contact to be notified that the Task Timer is active when you start your activity.

You program the Task Timer for a certain period of activity, and it saves the last known GPS position. The Task Timer alarm sounds before the programmed time elapses. Now disable or extend the timer. If not, the Task Timer activates the emergency call chain as soon as the programmed time ends.

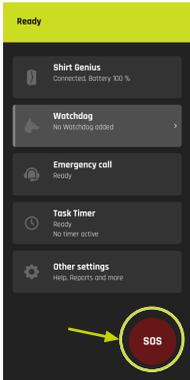
If your smartphone has no access to mobile data you will not be able to extend or disable your Task Timer. The emergency call chain will be activated automatically when the programmed time has ended.

- ▶ Find a location with access to mobile data and extend or disable the Task Timer.
- ▶ If this is not possible go to a location where your smartphone has mobile phone reception so that you can be called.

Do not start the Task Timer unless your smartphone has enough battery for the Task Timer runtime, plus at least one hour in reserve. Otherwise, you will be unable to deactivate the Task Timer, or receive any calls, and the emergency response chain will be set in motion.

### 3.3.2.5 Manual alarm

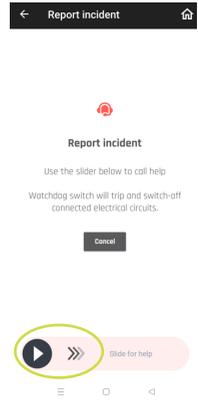
The SOS button allows you to raise a manual alarm in emergency situations.



When you tap the SOS button, you must move the slider to the right manually to start a count-down.

This will prevent false alarms.

A manual alarm activates the emergency call chain in the same way as an automatically detected emergency.



### 3.3.2.6 False alarm

Your **ANGEL React** system is designed not to generate false alarms. This is why it works with pre-alarms, for example, so that the emergency call chain is not activated if you do not require assistance.

	Pre-alarm	Emergency alarm
Motionlessness	x	x
Fall accident	x	x
Elapsed Task Timer	x	x
Electrical accident (only with the Shirt System)		x

If an alarm is raised but you do not require assistance, you can tap **False alarm** or **No help needed** in the app to notify your emergency contacts.

You must always respond to calls after an alarm has been raised (even after you have tapped **False alarm** or **No help needed**):

- Your emergency contacts will almost certainly call you.
- The emergency call center will always call you if you have activated this service.

If there is no reply from you (even though your Genius is sounding an alarm, your emergency contacts are calling, etc.), your emergency contacts must ensure you receive the necessary assistance. They might call the emergency responders.

In no case will ADRESYS accept any liability costs that might be incurred by false alarms.

### 3.3.3 Data and settings

#### 3.3.3.1 Changing data

The **ANGEL React** Portal is accessed via EMERGENCY CALL -> ACCOUNT DETAILS -> MANAGE ACCOUNT.

There you can carry out the following steps:

- Change your personal data.
- Change and activate/deactivate emergency contacts.

### 3.3.3.2 Settings

Select OTHER SETTINGS -> SETTINGS to change the language or sounds, for example.



## Sound

- 1 IMPORTANT profile:  
Sounds only used in alarm situations, and if the system is NOT READY (red).
- 2 We recommend that you use the STANDARD setting.

### 3.3.4 Updates

#### Update of the ANGEL React App

The app is updated on a regular basis.

- Confirm the update manually, if necessary.
- Check for pending updates in your app store, if necessary.

#### Firmware update

The Genius is also updated on a regular basis. You will be notified of a firmware update in the notification window.

1. Confirm the firmware update in the notification window of the **ANGEL React** App.
2. Ensure a successful Bluetooth® connection to run the update.
3. Place your smartphone and the Genius in their charging stations during the update. This will avoid problems during the update process.

The update can take up to 20 minutes. The Genius flashes in all colors during this time.

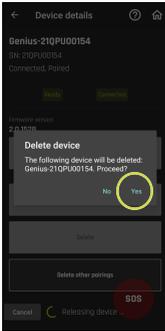
The **ANGEL React** system is not able to place any emergency calls during an update.

### 3.3.5 Pairing the Genius with a new smartphone

Your Genius and the **ANGEL React** App on your smartphone are permanently connected to one another. You might share your Genius with several other smartphones, but the Genius can only be connected to one smartphone at a time.

### 3.3.5.1 Removing the Genius from the app

Sometimes it is necessary to pair the **ANGEL React** App with a new Genius. To do so, the previous Genius must first be unpaired from the app. If you are working with a Watchdog, the connection to the Watchdog must also be removed.



To remove the Genius from the app, go to GENIUS-> GENIUS DETAILS -> REMOVE.

Tap **Yes** to confirm.

Remove the Genius from the Bluetooth® system settings on your smartphone as well.



Please contact our support if you are unable to remove the Genius from the **ANGEL React** App. Once you have removed the Genius from both the app and the Bluetooth® system settings, you will be able to pair your app with a new Genius.

### 3.3.5.2 Pairing the app with a new Genius

To pair your app with a new Genius, proceed as follows:

1. Remove the old Genius from both the **ANGEL React** App and Bluetooth® on your smartphone.
2. Switch the new Genius to pairing mode and pair it with your ANGEL React App. For more information see chapter [Pairing](#) (page 27).

### 3.3.5.3 Using the app on a new smartphone

1. Install the **ANGEL React** App on your smartphone. For more information see chapter [Downloading the app](#) (page 25).
2. Follow the lead of the setup wizard: It will ask you to pair your existing, registered Genius to the **ANGEL React** App on your new smartphone. For more information about pairing go to chapter [Pairing](#) (page 27).
3. Log in to the app and portal. The app will function as it did before with all your data.

### 3.3.6 Sharing a Genius

You can share a Genius with several smartphones.

Always keep in mind, that the Genius is your access to the data in the **ANGEL React** Portal. Personal data and data of the emergency contacts is attached to the Genius, not to the smartphone.

A Genius can be paired with up to eight smartphones, but it can only connect to one **ANGEL React** App at one smartphone at a time.

It always builds a connection to the first **ANGEL React** App in its vicinity.

Please note the following:

- Since data is attached to the Genius, the **ANGEL React** Apps on all smartphones use the same account and the same list of emergency contacts.
- The account in the **ANGEL React** App should be assigned to a function or role like “Shift worker in big hall” and not to a particular user’s name.
- If the maximum pairing number of eight is reached the oldest pairing is deleted.

If you do not want other smartphones to have access and use your Genius, you can remove the possibility of OTHER PAIRINGS in the app.

### 3.4 Technical data

The operating conditions define the physical environment and the parameters for using the Genius. You must only use the Genius under the following operating conditions:

<b>Temperature</b>	
Operation	-10 to +55 °C
Storage	-10 to +55 °C
Storage: optimum storage temperature to maximize battery life	+10 to +25 °C
While charging	0 to +45 °C while charging
<b>Humidity</b>	
Air humidity	10-90%, no condensation
<b>Battery</b>	
Charging time	No more than 2 hours
Genius running time	Typically 12 hours (1 working day)
Battery type	Lithium-ion battery

In accordance with part 15 of the FCC provisions, operation is subject to the following conditions:

- This device must not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

## 3.5 Declaration of conformity

### 3.5.1 Genius: Declaration of conformity

<b>Manufacturer:</b>
ADRESYS Adaptive Regelsysteme Gesellschaft m.b.H. Oberndorferstraße 35/C 5020 Salzburg Austria

Equipment declared compliant under our sole responsibility:

#### Angel React Genius

We hereby declare this equipment to be in conformity with the following directives:

Regulation	Description	Standard used to verify compliance
RE Directive 2014/53/EU	of the European Parliament and of the Council of April 16 <sup>th</sup> 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC	EN 62368-1: 2014 + AC: 2015 EN 300 328 V2.2.2 (2019-07) (partly) [Article 3.2] EN 301 489-1 V2.1.1 (2017-02) (additionally covered version: V1.9.2) [Article 3.1 (b)] EN 301 489-17 3.1.1 (2017-02) [Article 3.1 (b )] EN 62479: 2011 EN 61326-1: 2013
RoHS Directive 2011/65/EU	of the European Parliament and of the Council of June 8 <sup>th</sup> 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment	EN IEC 63000: 2018





# Watchdog

The Watchdog is an accessory to the **ANGEL React** Shirt and Clip system. It provides additional safety.

If the Genius detects an emergency, it calls for help via the **ANGEL React** App and sends a signal to the Watchdog. Via a potential-free contact the Watchdog commands to switch off a power source or to interrupt the electrical circuit you are working in. The potential-free contact can also be integrated into an automation system, or it can be used to start a siren.

The Watchdog can also be used as part of an Indoor Positioning System (IPS). For more information about this use case go to chapter [IPS](#) (page 41).

Keep in mind, that only those devices that are electrically connected to the Watchdog can be switched off.

## 4.1 Usage

### 4.1.1 Switch-off device

Up to four **ANGEL React** users can work with one Watchdog.

As you can see in the graphic below, the Watchdog can be used in two different scenarios:

- With a non-stationary power source with switch-off functionality
- With an existing stationary emergency-off circuit

#### Use with a non-stationary power source with switch-off functionality:

The Watchdog is connected to a device that can output electrical voltages via a connection cable with a suitable adapter (e.g., Sub-D connection). The device must have an emergency-off input and feature a restart lock.

#### Use with an existing stationary emergency-off circuit:

## DANGER

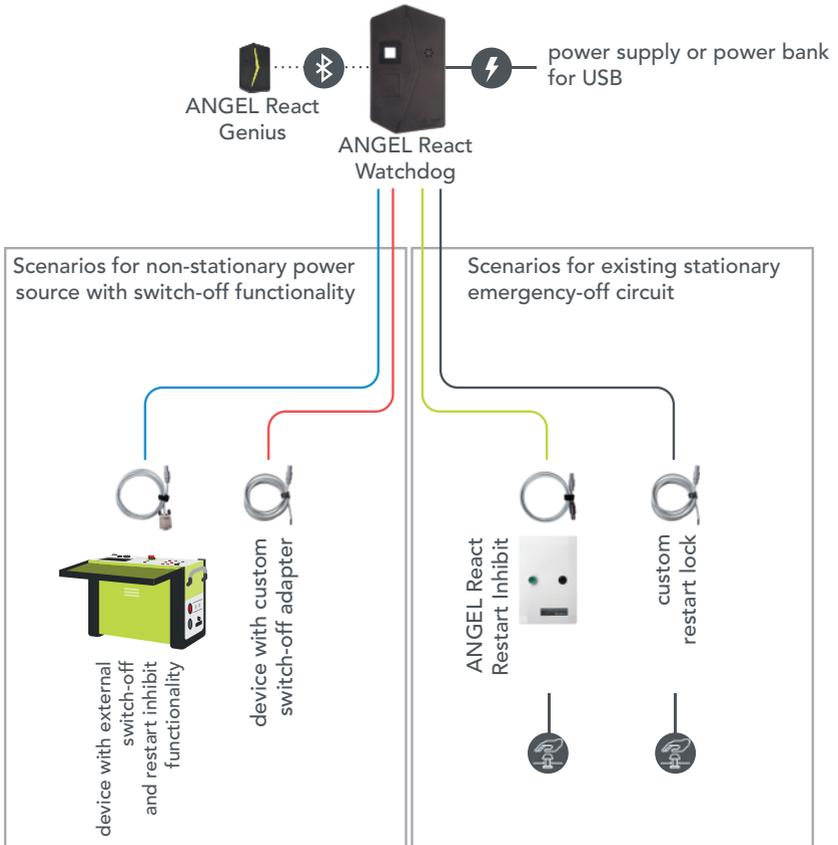
### Danger due to unsuitable or missing restart lock



- ▶ Always connect the Watchdog to an existing emergency-off circuit via a restart lock.
- ▶ If you do not have a restart lock (or are not sure if you have one) use the **ANGEL React** Restart Inhibit.
- ▶ Have a trained and qualified electrician install the Restart Inhibit into the emergency-off circuit.

The Watchdog is wired to an existing emergency-off circuit. Here, the Watchdog is connected to the Restart Inhibit via the connection cable. This is wired into the emergency-off circuit.

- ▶ The Restart Inhibit must be supplied with line voltage.



#### 4.1.2 IPS

An **ANGEL React** Watchdog can be used as a location beacon and as part of an Indoor Positioning System (IPS). This function is enabled by default.

Before using your Watchdog as part of an IPS, do the following:

1. Scan the ADMIN QR Code of the Watchdog.
2. Configure the location data of your Watchdog.
  - 2.1 Provide the Watchdog with a location description, e.g., about the room number, floor number etc.
  - 2.2 Enter the GPS location (highly recommended!).

It limits the number of possible connections to Genii from 4 to 3 if you use your Watchdog as a location beacon.

Go to chapter [Disabling the IPS function](#) (page 51) for information about deactivating the IPS function of your Watchdog.

## 4.2 Safety

Before using an **ANGEL React** Watchdog, carefully read all the safety instructions in chapter [Safety](#) (page 18) and also stick to the following rules:

- ▶ Do not use the Watchdog in explosive atmospheres.
- ▶ Do not connect the Watchdog to loads that must not be switched off, such as emergency lights.
- ▶ Do not open the Watchdog.
- ▶ Disconnect the Watchdog from the power supply if you notice any kind of malfunction or damage. A malfunction of the Watchdog may be indicated by smoke or an unusual odor.

## 4.3 Scope of delivery

Check whether your Watchdog has been delivered with the equipment you asked for. If anything is missing contact our support.

### WARNING



#### Risk when using unapproved accessories

- ▶ Only use **ANGEL React** with the genuine accessories. The **ANGEL React** accessories must not be used for other applications.

#### 4.3.1 Watchdog



**ANGEL React** Watchdog



Power-limited power supply unit less than 15W



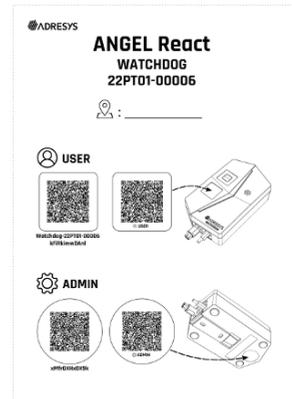
Mounting rail on the back panel of the Watchdog

#### 4.3.2 QR Codes

The scope of delivery includes a slip of paper with two different QR codes.

**Square QR code (USER):** scan this to connect your app to the Watchdog.

**Circular QR code (ADMIN):** scan this if you require administrator rights for the Watchdog, for example, if you wish to carry out a firmware update.



- ▶ File this slip of paper away in a folder.
- ▶ If you are using several Watchdogs, enter the location of the Watchdog on the slip of paper.
- ▶ You may stick the QR codes to the Watchdog.

- Stick the USER QR code to the front of your Watchdog if you want to make it easy for users to connect to the Watchdog. If it is critical, when the circuit is interrupted, however, and you want to prevent unauthorized persons from connecting easily, you can make the code accessible only to selected people.
- Be careful if you stick the ADMIN QR code to the back panel of your Watchdog.
  - Keep in mind that anyone with access to this code can make any Watchdog user an administrator.
  - Anyone with access to the ADMIN QR code can also change the data of the Watchdog (especially data about the location).

### 4.3.3 Connection cable

You will get your **ANGEL React** Watchdog connection cable according to your order.

- ▶ Make your order depend on your use case.

**For use with a non-stationary power source with switch-off functionality:**

<p>Connection cable with Sub-D connection: AD-S04128 See overview graphic <a href="#">Switch-off device</a> (page 40), blue line</p>	
<p>Connection cable with open end: AD-S04131 See overview graphic <a href="#">Switch-off device</a> (page 40), red line</p>	

**For use with an existing stationary emergency-off circuit:**

<p>Connection cable with <b>ANGEL React</b> plug for the Restart Inhibit: AD-S04130 See overview graphic <a href="#">Switch-off device</a> (page 40), green line</p>	
<p>Connection cable with open end: AD-S04131 See overview graphic <a href="#">Switch-off device</a> (page 40), grey line</p>	

### 4.3.4 Optional components

The following components are not part of the scope of delivery but can be ordered easily.

- **ANGEL React** Restart Inhibit for the Watchdog: see chapter [Restart Inhibit](#) (page 55)
- **ANGEL React** Splitter for the Watchdog: for using several Watchdogs with one single Restart Inhibit
- **ANGEL React** Extension: for joining several connection cables

Only use the Watchdog with genuine **ANGEL React** accessories. The accessories must not be used for other applications.

## 4.4 Commissioning

Carry out the following steps before using the **ANGEL React** Watchdog for the first time.

These are described in more detail in the next few sections.

1. Start the **ANGEL React** system.
2. Optional intermediate step: mount the Watchdog.
3. Install the **Watchdog**.
4. Connect the **ANGEL React** App and the Watchdog.

### CAUTION

#### Risk due to damage



- ▶ Do not install the Watchdog if you have noticed transport damage to the housing or the cables.
- ▶ Take the Watchdog out of operation if you notice mechanical or other damage or unusual situations. Contact our support.

#### 4.4.1 Starting the ANGEL React system

For more details go to chapter [Commissioning](#) (page 25) of the **ANGEL React** Shirt or Clip system.

#### 4.4.2 Mounting (optional intermediate step)

For using your Watchdog in a stationary application, it should be mounted:

1. To do this, take the mounting rail out of the back panel of your Watchdog.
2. Screw it onto the wall with two screws or attach it in another suitable manner.
3. Allow the Watchdog to engage in the rail with a clearly audible click.



Make sure you slide the Watchdog into the rail from top to bottom or sideways. This will ensure that it cannot slip out of the fastening.

## DANGER

### Risk of injury during wiring and installation

If the Watchdog (and Restart Inhibit) are not wired and installed correctly, this may result in life threatening voltage contact.



- ▶ The Watchdog must only be installed in existing emergency-off circuits by trained and qualified electricians.
- ▶ The open end of an **ANGEL React** connection cable must only be connected by trained and qualified electricians.
- ▶ If the Watchdog is connected to third-party equipment make sure this is de-energized while the connection process.
- ▶ In the case of an existing stationary emergency-off circuit, the Watchdog must only be used with a certified restart lock. This restart lock must be connected by trained and qualified electricians.

To connect the Watchdog to the system you are working with you need a connection cable supplied with a **ANGEL React** plug.



1. Insert the plug into the corresponding socket of the Watchdog.
2. Make sure the Watchdog is connected to an external power supply (power-limited power supply unit less than 15 W).

Depending on your use case, there are two options for connecting the cable to the power supply.

Use with a non-stationary power source with switch-off function:

- ▶ Connect the Watchdog to the power supply via the connection cable.

Use with an existing stationary emergency-off circuit:

- ▶ Use a certified restart lock, e.g., the **ANGEL React** Restart Inhibit.

### 4.4.4 Connecting

✓ The **ANGEL React** App and the Genius must be connected to the Watchdog before using it for the first time.

1. If your smartphone does not have a QR code scanner you can get to a scanner via the Watchdog icon on the app start screen.
2. Scan the square QR code (USER) on the slip of paper provided or on the front of your Watchdog.

- ➔ Once you have connected your **ANGEL React** App to a Watchdog, the app will automatically connect to this Watchdog again in future.

## WARNING

### Risk due to lack of data or Bluetooth® connection



The **ANGEL React** system may not work reliably if the data or Bluetooth® connection is not activated or if these connections are missing. The Watchdog cannot initiate the interruption of a current flow.

- ▶ Ensure that the **ANGEL React** App, the Genius, and the Watchdog are always connected via Bluetooth®.
- ▶ Check your app for information about this connection.

If the Watchdog requires a **firmware update** after connecting to the app you can do this via a direct administrator connection from the app to the Watchdog. To do this, simply scan the round ADMIN QR code of your Watchdog. For more information see chapter [Update](#) (page 51).

## 4.5 Operation

### 4.5.1 Daily use

1. Start your **ANGEL React** system.
2. Make sure your Watchdog is working correctly: There is a connection to a power supply, the LED on the Watchdog is red.
3. The Genius automatically connects to the Watchdog.
4. Check your **ANGEL React** App: if the system and the Watchdog are working, it shows the color green.

### 4.5.2 Color display of the Watchdog

When using **ANGEL React**, always act according to the colors shown.

1. Check the colors and status regularly in the **ANGEL React** App as well as on the Genius and the Watchdog.
2. Be aware that the colors in the app and the Genius differ from the colors of the Watchdog. See chapter [Colors in Genius and app](#) (page 14) to learn more about the colors of app and Genius.

#### Meaning of the colors of the Watchdog:

RED	The Watchdog is being supplied with power.
FLASHING RED	The Watchdog has detected an emergency and switched off the external power source. It flashes red until you have manually reset the Watchdog switch in the app and reactivated the emergency-off circuit.
ALTERNING RED/ BLUE	Active management connection between a smartphone and the Watchdog (for updates and configuration)
ALL COLORS	Firmware update in progress
NO COLOR	The Watchdog is not being supplied with power.
ALTERNING RED/ ORANGE	Internal fault or shutdown of the Watchdog

### 4.5.3 Emergency detection

## DANGER

### Risk of injury due to voltage contact

The Watchdog does not protect you against electrical accidents or contact with voltage.



- ▶ The Watchdog may only be used as an additional safety measure.
- ▶ It cannot carry out all-pole disconnection.
- ▶ It is not a switch-off device in the sense of a disconnecter (e.g., a circuit breaker).

If the **ANGEL React** system detects an emergency (motionlessness, fall accident, electrical accident, elapsed Task Timer, or manual alarm) it raises an alarm and activates the emergency call chain. At the same time, the Watchdog commands to switch off the electrical power source you are working on via potential-free contact.

### Process after an emergency detection

To work again with the Watchdog after an emergency detection, proceed as follows:

1. Acknowledge the emergency in the **ANGEL React** App.
2. If your Watchdog icon continues to light up red and the app is **NOT READY**, tap the Watchdog icon and reactivate the Watchdog switch.
3. If you are using the **ANGEL React** Restart Inhibit press the green button for restart.

### 4.5.4 Update

1. Make sure, your **ANGEL React** App is up to date.
2. Tap the Watchdog icon in the app.
3. Scan the QR code in the ADMIN circle; this will either be stuck to the back panel of your Watchdog or filed away in a folder.
4. Start the firmware update.

### 4.5.5 Removing the Genius-Watchdog connection

If you are no longer using a Genius remove its connection to the Watchdog(s).

1. Tap the Watchdog icon in the **ANGEL React** App. Here, you can remove the connection to the Genius by leaving the group(s).
2. Also delete the **ANGEL React** account that relates to the Genius. Chapter [Removing the Genius from the app](#) (page 35) gives you more detail.

### 4.5.6 Disabling the IPS function

The Watchdog may be used as part of an IPS, in its default setting the location beacon function is enabled.

This setting limits the number of possible connections to Genii to 3.

If you do not need this IPS function switch it off:

1. Tap the Watchdog icon and go to SETTINGS.
2. Scroll down to FEATURES.
3. Slide the green button next to ENABLE LOCATION BEACON to the left.

After switching off the IPS function, your Watchdog can connect to 4 different Genii.

## 4.6 Technical data

The operating conditions define the physical environment and the parameters for using the **ANGEL React** Watchdog. Only use it under the following operating conditions:

Temperature Operation/Storage	-10 to +55 °C
Rated current	500 mA
Rated voltage	5 V ±10%
Maximum operating height	2000m above sea level
Usage	Indoors
Air humidity	5 - 95%rh, non-condensing
Overvoltage category	OVC II
Shutdown	Single pole
Pollution degree	PD 2
Protection class	2, totally insulated

### Data for potential-free contact

AC General Use	126VA 42VAC/3A Utilization Category AC-15
DC General use	36W 60VDC/0.6A at L/R=40ms
AC resistive load	168W 42VAC/4A Utilization category AC-1
DC resistive load	90W 60VDC/1.5A resistive load
AC switching capacity	250VA limited by internal fuse
DC switching capacity	250W limited by internal fuse
Data of the connection cable to the potential-free contact	250 Vrms/5A, 2x0,5mm <sup>2</sup> , 2m length with Sub-D-connector: AD-S04128 with <b>ANGEL React</b> Connector: AD-S04130 with open end: AD-S04131

The Watchdog requires no maintenance and must not be cleaned.

In accordance with part 15 of the FCC provisions, operation is subject to the following conditions:

- This device must not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

The Watchdog has been found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules.

## 4.7 Declaration of conformity

<b>Manufacturer:</b>
ADRESYS Adaptive Regelsysteme Gesellschaft m.b.H. Oberndorferstraße 35 5020 Salzburg Austria

Equipment declared compliant under our sole responsibility:

### ANGEL React Watchdog

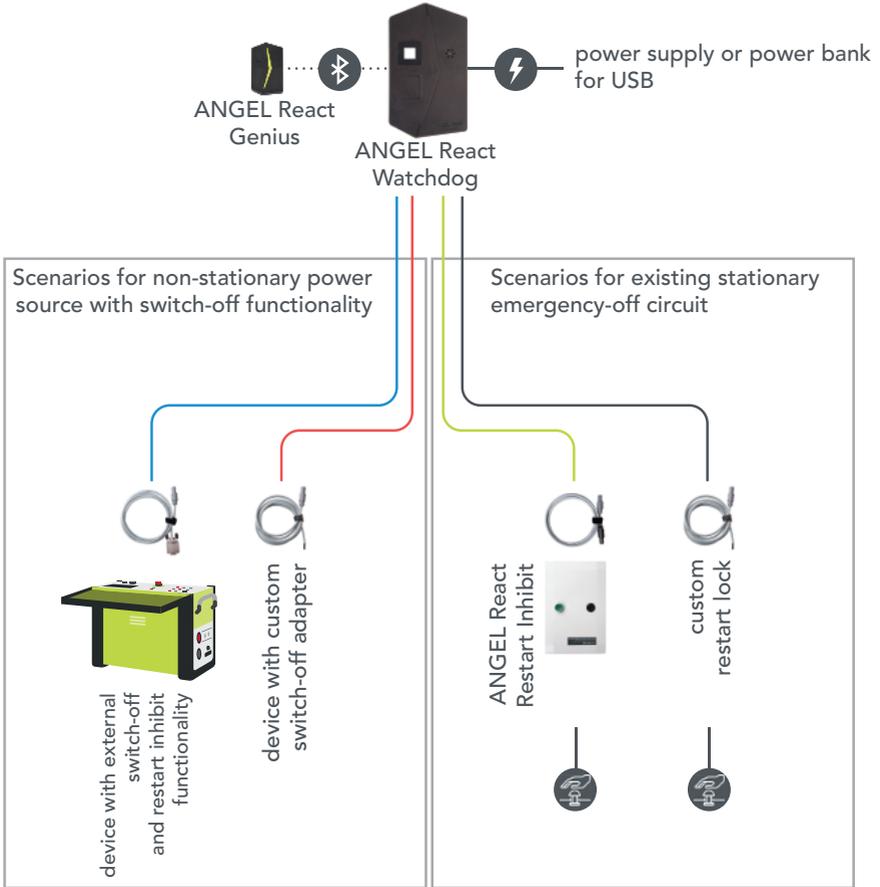
We hereby declare this equipment to be in conformity with the following directives:

Regulation	Description	Standard used to verify compliance
RE Directive 2014/53/EU	of the European Parliament and of the Council of April 16 <sup>th</sup> 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC	IEC61010-1: 2010 + A1: 2016 EN 61010-2-201: 2018 [Article 3.1 (a)]  EN 300 328 V2.2.2 (2019-07) (partly) [Article 3.2]  EN 301 489-1 V2.1.1 (2017-02) (additionally covered version: V1.9.2) EN 301 489-17 3.2.4 (2020-09) [Article 3.1 (b)]  EN 62311: 2008  EN IEC 61326-1: 2021 (additionally covered version: EN 61326-1: 2013)
RoHS Directive 2011/65/EU	of the European Parliament and of the Council of June 8 <sup>th</sup> 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment	EN IEC 63000: 2018



# Restart Inhibit

The **ANGEL React** Restart Inhibit is used in combination with a Watchdog and an **ANGEL React** system. It enables the Watchdog to be correctly connected to an existing emergency-off circuit.



The Restart Inhibit is wired to an existing emergency-off circuit. It must be supplied with line voltage.

## 5.1 Safety

Before using the Restart Inhibit, carefully read all the safety instructions in chapter [Safety](#) (page 18) and also stick to the following rules:

- ▶ You must not use the Restart Inhibit if you notice mechanical or other damage, or any unusual conditions. A malfunction of the Restart Inhibit may be indicated by smoke or an unusual odor. Take the device out of operation and have it uninstalled by a qualified electrician.
- ▶ Never touch any live parts inside the Restart Inhibit.
- ▶ Do not use the Restart Inhibit in explosive atmospheres.

## 5.2 Scope of delivery

Check that all the listed components are included in your delivery.

If anything is missing contact our support.

### WARNING



#### Risk when using unapproved accessories

- ▶ Only use **ANGEL React** with the genuine accessories. The **ANGEL React** accessories must not be used for other applications.



**ANGEL React**

Restart Inhibit



Key

for opening the Restart Inhibit



Short-circuit adapter \*

\* The short-circuit adapter can be used to enable a restart of the emergency-off circuit, although the Restart Inhibit is not connected to the Watchdog.

- ▶ Order the AD-S04130 cable separately. It is required to connect the Restart Inhibit to the Watchdog.

## 5.3 Installation

### CAUTION

#### Risk due to damage



- ▶ Do not install the Restart Inhibit if you have noticed transport damage to the housing or the cables.
- ▶ Take the Restart Inhibit out of operation if you notice mechanical or other damage or unusual situations. Contact our support.

### DANGER

#### Danger when opening the Restart Inhibit

Touching live parts inside the Restart Inhibit can result in life-threatening or even fatal injuries.



- ▶ Always have the Restart Inhibit connected to the emergency-off circuit by a qualified electrician.
- ▶ The Restart Inhibit may only be opened by a qualified electrician.
- ▶ Always have the fuses of a connected Restart Inhibit replaced by a qualified electrician.
- ▶ Keep the key for the lid of the Restart Inhibit in a safe place so that it cannot be opened by unauthorized persons.

Install the Restart Inhibit vertically +/- 90 degrees.

#### The following applies to the base of the Restart Inhibit:



- 1 I/O lines connection for wiring into the emergency-off circuit(s).
- 2 Voltage supply for the Restart Inhibit 100-240 VAC.

## And to the top of the Restart Inhibit:



- 1 Socket for the Watchdog plug (Lemo socket).
- 2 USB-C port for the Watchdog power supply.

### 5.3.1 Connection to the Watchdog

Connect your Watchdog to the Restart Inhibit via the connections on the top of the Restart Inhibit:

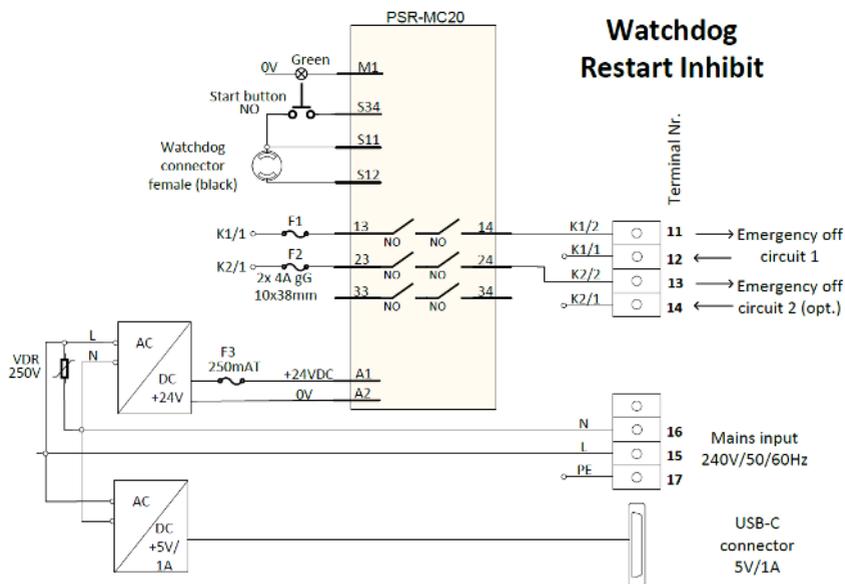
- ✓ The Lemo socket on the top of the Restart Inhibit is used to connect the **ANGEL React** Watchdog Connection Cable.
- 1. If no suitable cable is enclosed for connecting the Watchdog to the Restart Inhibit, one must be ordered from ADRESYS. The order number is AD-S04130-00.
- 2. Do not use a different cable.
- ✓ The USB-C port on the top of the Restart Inhibit is used for the Watchdog voltage supply.
- ▶ Connect Restart Inhibit and Watchdog via this port.

### 5.3.2 Connections inside the Restart Inhibit



- 1 Connect the power cable wires (100-240 VAC) for the Restart Inhibit according to the connection diagram below.
- 2 Wire the cables of the emergency-off circuit(s) to the red and yellow terminals according to the connection diagram below.

## Connection diagram



## 5.4 Operation

After your Restart Inhibit has been installed in the existing emergency-off circuit by a trained and qualified electrician it will be extremely easy to use and operate.

### 5.4.1 Color display of the Restart Inhibit

Green restart button does NOT light up.	<ul style="list-style-type: none"><li>• Your Restart Inhibit is connected to the emergency-off circuit(s) and the Watchdog. It is working in accordance with standards. The emergency-off circuit is closed.</li><li>• OR the Restart Inhibit is not being supplied with voltage</li></ul>
Restart button lights up green.	<ul style="list-style-type: none"><li>• A shutdown has been triggered by the Watchdog</li><li>• OR the <b>ANGEL React</b> connection cable has not been connected</li><li>• OR the Watchdog is not being supplied with voltage</li></ul>

### 5.4.2 Emergency detection

If your **ANGEL React** system detects an emergency (No Motion, fall accident, electrical accident, manual alarm, or elapsed Task Timer), it sounds a local alarm using acoustic and optical signals, the **ANGEL React** App informs your emergency contacts, and the Watchdog commands the Restart Inhibit to interrupt the emergency-off circuit.

The green restart button on the Restart Inhibit starts to light up.

#### Reactivating the system

If, following the detection of an emergency, you wish to reactivate your Restart Inhibit and thus the entire **ANGEL React** system, proceed as follows:

1. Acknowledge the emergency in the **ANGEL React** App.
2. Click on the Watchdog icon and set the Watchdog switch to **ACTIVE** again.
3. Press the green illuminated restart button on the Restart Inhibit. This should go out after being pressed once.

#### Troubleshooting

If the restart button light does not go out permanently after pressing, there may be various reasons:

- You have not reset the Watchdog properly after tripping.
- There is no connection between the Watchdog and the Restart Inhibit.
- The Watchdog is not being supplied with power.

The **short-circuit adapter** can be used if the Restart Inhibit is not connected to the Watchdog, but a restart of the emergency-off circuit is to be enabled.

## 5.5 Servicing

### 5.5.1 Replacing fuses

The Restart Inhibit contains various fuses.

Always have the fuses replaced by a trained and qualified electrician. This electrician should do the following:

1. Make sure that the Restart Inhibit is de-energized while it is open.
2. Open the Restart Inhibit with the key provided.

## DANGER

### Danger when using incorrect fuses



The safe function of the device cannot be guaranteed if incorrect fuses are used.

- ▶ Read the following chapter carefully and make sure you are using the right fuses.

#### 5.5.1.1 Backup fuse for the voltage supply of the safety relay

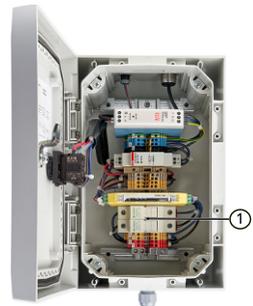


- 1 The defective fuse is signalled by the illumination of the red LED in the corresponding fuse holder.
- 2 Replace this fuse with a type 5x20 mm glass tube, 250 mA T fuse.

#### 5.5.1.2 Fuses of the emergency-off circuit

The specified current ratings and voltages for the safety relay must not be exceeded. The load curve in chapter [Operating conditions](#) (page 64) provides more information on the topic.

- 1 Use only type 10 x 38 mm 4A type gG fuses here.



### **5.5.2 Taking the Watchdog out of operation**

If the Watchdog is to be taken out of operation the emergency-off function can be bypassed by inserting the short-circuit plug instead of the connection cable into the Watchdog.

If you are using the short-circuit plug the emergency-off circuit will continue to function, but the Watchdog will no longer be able to open it.

## 5.6 Technical data

The operating conditions define the physical environment and the parameters for using the **ANGEL React** Restart Inhibit.

### 5.6.1 Operating conditions

Temperature	
Operation	-10 to +55 °C
Storage	-10 to +55 °C
Maximum operating height	2000 m above sea level
Usage	Indoors, no direct sunlight
IP protection	IP 20
Housing flammability	UL 94-V0
Protection class	2, totally insulated
Air humidity	5 - 95% rh, non-condensing
Pollution degree	PD2

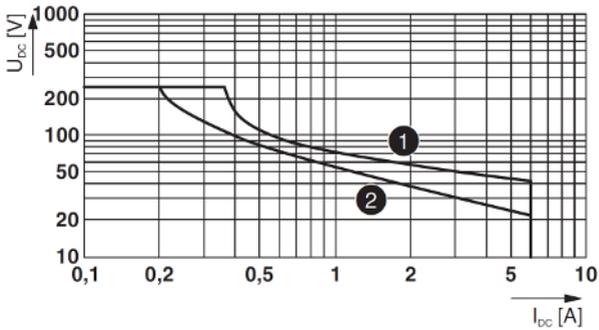
The Restart Inhibit requires no maintenance and must not be cleaned.

Shutdown	1 or 2-pole, depending on the selected type of wiring
Input voltage for internal supply	100 - 240 VAC/0.75 A max.
Internal power consumption	Max. 15 W

### 5.6.2 Connections

Switching voltage	12 - 250 V AC/DC (see load curve below)
Switching current	3mA – 4A AC/DC (see load curve below)
Breaking capacity range	60mW - 1000W
Maximum inrush current	6A AC/DC
Output circuit fuse	4 A gL/gG 10x38 mm cartridge
Mech. switching cycles	10 million

## Load curve



1 Ohmic load ( $L/R = 0\text{ms}$ )

2 Inductive load ( $L/R = 40\text{ms}$ )

## Connectors

I/O lines connection	2x PG11 screw connection
Watchdog connection	1x six-pin black Lemo socket
USB-C port connection:	For supplying external devices (Watchdog), max. 5 VDC/2 A

## Watchdog connection cable

Cable data	300 Vrms/5 A, 2x0.5mm <sup>2</sup> , 2m length
------------	--

## 5.7 Declaration of conformity

### 5.7.1 Declaration of conformity

<b>Manufacturer:</b>
ADRESYS Adaptive Regelsysteme Gesellschaft m.b.H. Oberndorferstraße 35/C 5020 Salzburg Austria

Equipment declared compliant under our sole responsibility:

#### **ANGEL React Restart Inhibit for Watchdog**

We hereby declare this equipment to be in conformity with the following UK regulations:

<b>Regulation</b>	<b>Description</b>	<b>Standard used to verify compliance</b>
EMC Directive 2014/30/EU	of the European Parliament and of the Council of April 16 <sup>th</sup> 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC	EN IEC 61000-6-1: 2019 EN IEC 61000-6-3: 2007+A1: 2012
LV Directive 2014/35/EU	of the European Parliament and of the Council of February 26 <sup>th</sup> 2014 on the harmonisation of the laws of the member states relating to the making available on the market of electrical equipment designed for use within certain voltage limits (recast)	EN 61439-1: 2011
RoHS Directive 2011/65/EU	of the European Parliament and of the Council of June 8 <sup>th</sup> 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment	EN IEC 63000: 2018



### 5.7.2 Declaration of conformity UK

<b>Manufacturer:</b>
ADRESYS Adaptive Regelsysteme Gesellschaft m.b.H. Oberndorferstraße 35/C 5020 Salzburg Austria

Equipment declared compliant under our sole responsibility:

#### **ANGEL React Restart Inhibit for Watchdog**

We hereby declare this equipment to be in conformity with the following UK regulations:

<b>Regulation</b>	<b>Description</b>	<b>Standard used to verify compliance</b>
Electromagnetic Compatibility Regulation 2016	The Product Safety and Metrology etc. (Amendment etc.) (EU Exit) Regulation 2020 and subordinate legislations Amendment of the Electromagnetic Compatibility Regulations 2016	EN IEC 61000-6-1: 2019 EN IEC 61000-6-3: 2007+A1: 2012 EN 61439-1: 2011
RoHS	The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulation 2012	EN IEC 63000: 2018



# Indoor Positioning System (IPS)

IPS is an add-on to the **ANGEL React** system. With IPS, **ANGEL React** locates users in case of an emergency and sends their location to the **ANGEL React** system.

## 6.1 About IPS

IPS ensures that an **ANGEL React** system functions more reliably indoors, because the IPS provides additional location information. Location information is crucial in the case of an accident.

The **ANGEL React** system detects emergencies while working and reacts by calling for help. It informs your emergency contacts about your situation and location. This way the emergency contacts can help you very quickly – if your position is accurate enough.

By default, **ANGEL React** uses GPS to determine the location, but that technology has limitations: it is not available everywhere - or not everywhere as precise as needed. It also does not allow to give additional, contextual information that would help.

IPS provides location information especially for areas which lack a stable GPS signal (e.g., cellars, tunnels, buildings). It can also extend GPS and provide additional location information to better and faster locate users, e.g., by telling the company name and floor level inside of an office building.

Our IPS was designed to efficiently cover wide areas, delivering a coarse indoor location quickly. The exact fine location is then determined using the acoustic signal emitted by the Genius and smartphone.

If your **ANGEL React** App indicates that it cannot determine the location or can only do so inaccurately, consider using IPS.

### 6.1.1 Designated use

IPS helps to find an injured person after an accident more quickly by providing your **ANGEL React** system with accurate location information.

**Location beacon** devices provide the necessary location information, replacing or extending the role of GPS signals.

IPS locates an injured, if they are using an **ANGEL React** system, because the IPS is connected to the Genius: if an accident is detected, the **ANGEL React** system will set the emergency call chain in motion and inform the emergency contacts. The **Genius** receives the IPS signals sent by the location beacons and combines them to get an overall IPS location.

The Location Beacon is not a personal emergency call system; it cannot set the emergency call chain in motion by itself. Just the **ANGEL React** system can do this.

It is also not a general tracking system that helps finding goods in a storehouse. It locates **ANGEL React** users in case of an emergency and sends their location information to the **ANGEL React** system.

### 6.1.2 Components

For IPS you need

- an **ANGEL React** Shirt or Clip system
- Location beacons



#### As a location beacon you might use

- **ANGEL React** Location Beacon(s): the Location Beacon is a permanently powered device, that is designed to cover wide areas. Its fully integrated into the **ANGEL React** system.
- **ANGEL React** Watchdog(s): in addition to further functions, the Watchdog can act as location beacon as well. Please read chapter [Watchdog](#) (page 40) to learn more.
- Other beacon types on request (e.g., battery powered)
- Any other Bluetooth®-based location beacons, that implement the EddyStone protocol. Contact us if you plan to integrate and use **third-party beacons**.

### 6.1.3 Planning

Before purchasing IPS components, we recommend putting some effort in planning.

The following things should be considered:

- The area you want to cover with IPS.
- Whether you want the location information to be accurate to the room or to the floor.
- Connectivity: is there mobile radio or internet coverage everywhere in the IPS area?
- The situation in the target areas: where are possibilities for permanent power supplies (power outlets)?
- The range of every single location beacon: it will tell you how many location beacons you will need.
- In general: the position of the location beacons
- ▶ Create a plan that documents the positions of the beacons and the location data that should be linked to them.

If you feel unsure how to best plan your IPS, get in touch with an expert or feel free to contact us at [angelreact@adresys.com](mailto:angelreact@adresys.com) or via a local sales partner.

At ADRESYS, we get a lot of knowledge during development of IPS and numerous practical/on-site experiences. We can help in designing the IPS solution that best suits your needs and accompany your process.

## 6.2 Location Beacon as part of IPS

The **ANGEL React** Location Beacon is part of an IPS. It is a permanently powered device, that is designed to cover wide areas. The Location Beacon is embedded in the **ANGEL React** system and works smoothly with it in the following way:

- The Genius receives the IPS signals sent by the Location Beacons and gets an overall IPS location.
- In case of an incident, the **ANGEL React** App on the smartphone query the IPS location from the Genius. This IPS location is sent to the **ANGEL React** server, along with other information, as part of the alarm.
- On the server, the IPS information is temporarily stored and accessible to the emergency contacts through the Help Coordination Portal. The Server can also associate information from the Location Beacon with other data. For example, the server can associate beacons with location information, in case the beacons do not carry such information directly.

We discriminate different IPS system types, depending on where the location information for IPS is stored:

- In a **distributed** IPS installation, the location information is stored in the location beacon devices. You don't need any central instance, like the Server, to determine the IPS location. Not all location beacon types are able to operate in a distributed manner.
- In a **centralized** IPS installation, there is usually one instance which has access to all location information and associates the location information to the beacons. The location beacons themselves only contain a unique ID, but no location information. Typically, most beacon types can operate in a centralized IPS system.
- In a **hybrid** installation, we have distributed and centralized elements.

The **ANGEL React** Watchdog and **ANGEL React** Location Beacon can operate in all IPS system types (distributed, centralized, hybrid).

### 6.2.1 Safety

Before using an **ANGEL React** Location Beacon, carefully read all the safety instructions in chapter [Safety](#) (page 18) and also stick to the following rules:

- ▶ Do not use the Location Beacon in explosive atmospheres.
- ▶ Do not open the Location Beacon.
- ▶ Disconnect the beacon from the power supply if you notice any kind of malfunction or damage. Such malfunction may be indicated by smoke or unusual odor.

### 6.2.2 Scope of delivery

Check that all the listed components are listed in your delivery.

If anything is missing contact our support.

## WARNING



### Risk when using unapproved accessories

- ▶ Only use **ANGEL React** with the genuine accessories. The **ANGEL React** accessories must not be used for other applications.



ANGEL React  
Location Beacon



Cable for power supply  
(USB-C to USB-C)



ADMIN QR code  
for the Location Beacon

Be careful with the ADMIN QR code. Anyone with access to this code can change the data of the Location Beacon.

- ▶ File this slip of paper away in a folder.
- ▶ If you are using several Location Beacons, enter the location of the beacon on the slip of paper.
- ▶ You may stick the QR code to the back of your Location Beacon.

### 6.2.3 Installation

The operator of an IPS has to carry out a few steps before the Location Beacon is ready for use.

#### 6.2.3.1 Mounting

## DANGER

### Danger from falling objects

If you do not mount your Location Beacon properly, it might fall from the wall/ceiling.



- ▶ Make sure you slide the **ANGEL React** Location Beacon into the rail from top to bottom or sideways. This will ensure that it is fixed, i.e., that it cannot be moved without releasing the attachment.
- ▶ Only use the original DIN rail for mounting.
- ▶ If your DIN rail looks damaged or breaks during the process of mounting, contact our support and order a new one. Never use a rail, that is not from ADRESYS: your Location Beacon might slip out of the fastening.

- ✓ To guarantee good localization, always mount your Location Beacon on the ceiling or a raised position on the wall.
- ✓ Mounting a Location Beacon on the ceiling usually guarantees better localization.
- ✓ Find a place for your Location Beacon, that's not behind suspension grids etc., as this will affect the signal strength.

1. To mount the location beacon, take the DIN rail out of the back panel.
2. Screw it onto the ceiling/wall with two screws.
3. Allow the Location Beacon to engage in the rail.
4. Ensure that the mounting rail has firm hold.

#### 6.2.3.2 Connection to power supply

Your **ANGEL React** Location Beacon needs to be constantly powered. There are two different ways to connect the Location Beacon to a power supply.

##### Connection via power socket

## DANGER



### Risk of injury during the installation process

- ▶ Only trained and qualified electricians must install sockets that can be used as a power source for the Location Beacon.

The Location Beacon can always be powered via a 230-volt socket.

1. Make sure an appropriate socket is installed in the vicinity of the Location Beacon.
2. Connect the Location Beacon to the socket via the cable included in the scope of delivery.

## Connection via POE (Power over Ethernet)

You can also use an Ethernet box as an energy source for your Location Beacon.

1. Get a POE to USB Adapter.
2. Connect your Location Beacon to the POE adapter.

### 6.2.3.3 Connection to the ANGEL React system

Once the **ANGEL React** Location Beacon is mounted and connected to a power supply, the operator needs to set it up.

#### Data entered in the Location Beacon is broadcasted in the near vicinity



Nearby devices have free access to this data.

- ▶ Provide your Location Beacon with crucial information about location or building, that can be open to everyone.
- ▶ Never add sensitive information to the location data of you Location Beacon.

In the scope of delivery of your Location Beacon, you can find a QR code. Scan this code to connect to and manage your device.

1. Open your **ANGEL React** App and go to **OTHER SETTINGS** and **SCAN QR CODE**.
2. Scan the QR code of your Location Beacon.
3. Name your Location Beacon (to distinguish it from others) and note the name.
4. Press **SETTINGS** on the device screen of your app and configure the location data of your beacon.
  - 4.1 Provide the Location Beacon with a location description, e.g., the room number or floor number.
  - 4.2 Enter the GPS location (highly recommended!).

➔ From now on, the Location Beacon will automatically work with any Genius/**ANGEL React** system in its vicinity.

If you feel unsure about the process, contact our support.

Once you have scanned the QR code of your Location Beacon, it might need a firmware update. This might take several minutes.

- ▶ After the connection process, check the location data of the beacon.

## 6.2.4 Operation

### 6.2.4.1 Daily use

In daily use you have to do nothing but the following:

1. Make sure the Location Beacon is permanently connected to a power source.

2. Check the functioning of the Location Beacon from time to time by checking your location data.

#### 6.2.4.2 Operating the system

As operator of an IPS with **ANGEL React** Location Beacons you need to check their data and functionality from time to time.

##### 6.2.4.2.1 Update

1. Make sure, your **ANGEL React** App is up to date.
2. Tap the QR code scanner in your app.
3. Scan the ADMIN QR code of your Location Beacon; this will either be stuck to your beacon or filed away in a folder.
4. Start the firmware update. It will take several minutes.

##### 6.2.4.2.2 Checking location data

To ensure proper operation of your IPS installation, you should check it from time to time. As time progresses, your Location Beacon(s) can be impacted by different events like the following:

- Low battery
  - The beacon is unplugged because the outlet was needed (and forgotten to plug in again)
  - Firmware update required
1. Check the following to verify placement, associated location data and operation of every Location Beacon:
    - ▶ Is the Location Beacon placed at the right position?
    - ▶ Is it powered?
    - ▶ Does it have enough battery power to operate for at least 18 months?
    - ▶ Is it visible to the **ANGEL React** system?
    - ▶ Is the installed firmware up to date?
  2. Do the following to check, if every Location Beacon provides the right data:
    - 2.1 Tap OTHER SETTINGS and LOCATION in your ANGEL React App to check the location information of your Location Beacon.
    - 2.2 Scan the ADMIN QR code of your Location Beacon if you have to edit the location information.

#### Checking the data by triggering a test alarm

You can also check your information data by triggering a test alarm. The location data of the Location Beacon will then be shown in the Help Coordination Portal of the emergency contacts.

### 6.2.5 Technical data

The operating conditions define the physical environment and the parameters for using the **ANGEL React** Location Beacon.

Temperature Operation/Storage	-10 to +55 °C
Rated current	500 mA
Rated voltage	5 V ±10%
Maximum operating height	2000m above sea level
Usage	Indoors, (outdoors)
Air humidity	5 - 95%rh, non-condensing

### Estimated signal range

The signal range depends heavily on the nature of the surroundings, e.g. the walls of your building.

Field range	Max. 200m (radius) line of sight
Industrial	Max. 50m (radius)
Office	Max. 30m (radius)

The Location Beacon requires no maintenance and no cleaning.

## 6.2.6 Declaration of conformity

<b>Manufacturer:</b>
ADRESYS Adaptive Regelsysteme Gesellschaft m.b.H. Oberndorferstraße 35 5020 Salzburg Austria

Equipment declared compliant under our sole responsibility:

### ANGEL React Location Beacon

We hereby declare this equipment to be in conformity with the following directives:

Regulation	Description	Standard used to verify compliance
RE Directive 2014/53/EU	of the European Parliament and of the Council of April 16 <sup>th</sup> 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC	IEC61010-1: 2010 + A1: 2016 EN 61010-2-201: 2018 [Article 3.1 (a)]  EN 300 328 V2.2.2 (2019-07) (partly) [Article 3.2]  EN 301 489-1 V2.1.1 (2017-02) (additionally covered version: V1.9.2) EN 301 489-17 3.2.4 (2020-09) [Article 3.1 (b)]  EN 62311: 2008  EN IEC 61326-1: 2021 (additionally covered version: EN 61326-1: 2013)
RoHS Directive 2011/65/EU	of the European Parliament and of the Council of June 8 <sup>th</sup> 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment	EN IEC 63000: 2018



# Legal information

This section contains some of the legal information and has been shortened to make it easier to read. Scan the QR code to find the complete, current, and legally binding documents, along with our terms of business, terms of use, and software license conditions.



Some of the preconditions for the use and performance of the ANGEL React systems are outside ADRESYS's sphere of influence. ADRESYS aims to ensure high availability of the services but is dependent on third party services (network operator, GPS signal) over which ADRESYS has no influence. ADRESYS does not guarantee interruption-free or fault-free operation, a controlled shutdown, or suitability for a specific purpose. No guarantees can be accepted with respect to specific availability times and modes of operation of **ANGEL React** (including the **ANGEL React** App), or for a controlled shutdown by the Watchdog and the Restart Inhibit. Furthermore, due to the differing areas of use, ADRESYS does not guarantee that every emergency situation will be detected.

We, the manufacturer, and the supplier accept no liability for any injury, loss or damage resulting from the use of the **ANGEL React** system for purposes other than those for which it was intended. Correct and safety-conscious use also includes observing the instructions in the Quick Start Guide and user manual.

# Privacy

This section contains part of the privacy policy and has been shortened to make it easier to read. Privacy and your data are very important to us at ADRESYS. Your personal data will be processed in accordance with the applicable data protection laws of the European General Data Protection Regulation (GDPR), and any other applicable local data protection regulations.

All data are also contained on servers within the borders of the European Union and are protected by modern firewalls.

We anonymize your personal data. Data cannot be linked to you in the long-term; even if we need it for statistical analyses, it remains anonymized.

Only one GPS position will be stored for you, and this will be the last known position. Whenever a new position report is received, the previous position is overwritten. There is thus no movement profile for you; there is simply one position – the last known position.

You have the right to information, correction, deletion, restriction of data processing, data portability, and objection at all times. You can revoke any consents with future effect.

Scan the QR code to find the **ANGEL React** privacy policy that gives you detailed information about the processing of your personal data.

If you have any questions about data protection, please do not hesitate to contact us.



# FAQ

If you were not able to find the answer to your questions concerning our ANGEL React devices by reading our manual carefully, you might find them in our Frequently Asked Questions.

If you have some other questions not mentioned here, just contact our support.

Setup and installation	
I cannot find the <b>ANGEL React</b> App in my app store.	Search for " <b>ANGEL React</b> " or " <b>ANGEL React</b> ADRESYS" and check that you have spelled it correctly or used the right QR code.
An error message appears when I enter my e-mail address in the <b>ANGEL React</b> Portal.  What do I need to do?	<p>Check that your e-mail address is correct.</p> <ul style="list-style-type: none"> <li>• Each e-mail address can only be used once in the <b>ANGEL React</b> Portal. Make sure that you have not already used your e-mail address.</li> <li>• Contact our support if you need any further help.</li> </ul>
The Genius is not displayed in the <b>ANGEL React</b> App.	<ul style="list-style-type: none"> <li>• Turn flight mode on and off again and enable Bluetooth®.</li> <li>• Check if the Genius is running (charged) and in pairing mode (blue flashing).</li> <li>• Check if your Genius is already connected to another smartphone. In this case, it is not visible to your phone.</li> </ul>
My Genius does not switch to pairing mode.  It flashes orange and beeps.	<p>Take it of the Shirt/clip or out of the charging station and wait until the light stops flashing orange.</p> <ul style="list-style-type: none"> <li>• Restart the app.</li> <li>• Start pairing mode again by clicking and releasing the Genius into and out of the contacts on the Shirt/clip or charger at least five times.</li> <li>• Make sure that you do not click and release the Genius too quickly or too slowly (around 1 second pause).</li> </ul>

<p>I want to continue the pairing process, but my app says "Bind timeout".</p>	<p>The Genius is no longer in pairing mode.</p> <ul style="list-style-type: none"> <li>• Check that the Genius is running.</li> <li>• Check if the Genius is in pairing mode (flashing blue).</li> <li>• Restart pairing mode: you have 30 seconds in which to enter the key from the back of the Genius in the app.</li> <li>• When repeating the pairing process, ensure that you first search for devices again to have the correct device entry.</li> <li>• Restart the app. This usually checks all preconditions for correct operation, such as if Bluetooth® is enabled on your device.</li> <li>• Ensure in the system settings that the Genius is not already paired. The list of paired devices can be found in the Bluetooth® settings. If the Genius device appears under "Paired devices", then please remove it (via "Delete", "Unpair", "Disconnect", etc.)</li> </ul>
<p>The App of my <b>ANGEL React</b> Shirt system is telling me that my electrodes on the cuffs do not have good skin contact.</p>	<ul style="list-style-type: none"> <li>• Check that all the electrodes are lying against your skin.</li> <li>• Moisten the skin beneath the electrodes if necessary to improve the contact.</li> </ul> <p>The problem will normally resolve itself quickly if the upper arm size of your <b>ANGEL React</b> Shirt is correct.</p>
<p><b>Daily use</b></p>	
<p>Can I injure myself with the Clip Genius?</p>	<p>In principle there is no risk of injury. However, if you are performing an activity where you have to regularly lay down or drop down onto the side with the Clip Genius, shift the Clip system holder onto another body part. Doing so will prevent bruises and other mechanical injuries.</p>
<p>Where can I find the battery charge status of my Genius?</p>	<p>Connect the Genius to your smartphone.</p> <p>The Genius battery charge level is displayed on the <b>GENIUS</b> tab on the start screen of the <b>ANGEL React</b> App.</p>
<p>What can I do to avoid raising the No Motion alarm during a meeting or any other activity that involves very little movement?</p>	<p>The pre-alarm sounds if your Genius does not detect any movement for a certain amount of time.</p> <ul style="list-style-type: none"> <li>• The pre-alarm stops as soon as you move the Shirt Genius or the Clip Genius.</li> <li>• During a meeting, etc., you should ideally remove the Genius from the cradle or cover pocket.</li> <li>• Don't forget to click it back on once your period of inactivity has come to an end.</li> </ul>
<p>Is rain a problem?</p>	<p>Our Genius is IP 20 rated. This means that the Genius can withstand a few drops of rain, but it is not rain-resistant.</p>

<p>Will the function of my <b>ANGEL React</b> Shirt system be impaired if I sweat heavily?</p>	<p>We have sealed all our electronic components to protect against sweat and moisture. If your Shirt is very wet, you should change it as this can impair its functionality.</p>
<p>What happens when my Task Timer expires?</p>	<p>The <b>ANGEL React</b> system raises an alarm to remind you that the programmed time comes to an end. You can then extend or deactivate the timer. You will need a data connection to do this, otherwise our server will not know that you have extended or deactivated the timer. When the timer expires, an emergency alarm will be raised, and the emergency call chain will be set in motion.</p>
<p>What happens if my emergency contacts do not answer the automated voice call from the <b>ANGEL React</b> system?</p>	<p>No problem. Usually, your emergency contacts will see the alarm text messages when checking their phone.</p> <p>Depending on the configuration, they will also receive e-mails.</p> <p>They can also make a return call to the system. A voice recording will inform them about the emergency and instruct them to check their text messages.</p>
<p>What happens if the emergency responders arrive even though I do not need them?</p>	<p>Our alarm path has several escalation levels, and you can cancel the emergency call chain yourself at any time. You do this by answering the calls from your emergency contacts and/or the emergency call center.</p> <p>Please be careful, if you use the services of the emergency call center: After an emergency is reported or after the Task Timer has elapsed, if you ignore your app, your Genius, your emergency contacts, AND the emergency call center, the system will assume there is a real emergency, and will notify the emergency responders. If the responders are not needed, you will have to pay for the costs incurred yourself.</p>
<p>How do I remove the Genius from my system's Bluetooth® setting?</p>	<ul style="list-style-type: none"> <li>• The method differs from one smartphone to another. One way could be: SETTINGS -&gt; BLUETOOTH -&gt; GENIUS -&gt; (gearwheel symbol) -&gt; FORGET/REMOVE.</li> <li>• Contact our support immediately if you have any problems</li> </ul>
<p>I would like to pass on my <b>ANGEL React</b> system to another person; what do I do?</p>	<p>Your Genius is usually permanently connected to your app, so if you want to hand it over to someone else, you will need to do the following.</p> <ul style="list-style-type: none"> <li>• Remove the Genius from your app.</li> <li>• Contact our support to enable another person to connect your Genius to their app.</li> </ul> <p>For more information read chapter <a href="#">Sharing a Genius</a> (page 35).</p>
<p><b>Problems and errors</b></p>	
<p>My app starts not automatically when my smartphone starts.</p>	<p>Check in the app settings that the option "Start app automatically" is enabled.</p> <p>Check if the app auto-start is supported for your phone. If not, try to configure auto-start for the <b>Angel React</b> App manually in your system settings.</p>

<p>My phone battery is discharged, and the Genius is beeping.</p>	<p>Remove the Genius from the holder and charge your smartphone. The system will then be ready to be used again.</p> <p><b>ANGEL React</b> does not work without Genius and smartphone and cannot activate the emergency call chain.</p>
<p>My Genius is clicked into the contacts of the Shirt or clip, but it is not flashing.</p>	<ul style="list-style-type: none"> <li>• The Genius’s battery may be fully discharged or the Genius may have been clicked onto the contacts incorrectly.</li> <li>• Note that the Genius luminous strip (“arrow”) on the shirt must point towards the back of your upper arm, for example.</li> </ul>
<p>My Shirt Genius beeps when I move my arms.</p>	<p>This indicates that the shirt is not making ideal skin contact.</p> <ul style="list-style-type: none"> <li>• Make sure the shirt is sitting snugly against your skin.</li> <li>• You can turn off the beeping by setting the sound settings to <b>IMPORTANT</b>.</li> </ul>
<p>My Genius beeps continuously.</p>	<p>This can mean that the app wants your attention.</p> <ul style="list-style-type: none"> <li>• Check your app for messages or dialogs.</li> </ul> <p>A recurring beep can also signal that your smartphone is not nearby and the Bluetooth® connection between the smartphone and the Genius has been lost.</p> <ul style="list-style-type: none"> <li>• Make sure that your smartphone is within wireless range.</li> <li>• Make sure that the <b>ANGEL React</b> App is active.</li> <li>• Check whether the app has been closed by the system settings (“Battery optimization”)</li> </ul>
<p>The Genius and app light up orange.</p>	<p>The app normally tells you, what the problem is.</p> <p>The battery of the Genius may be empty.</p> <p>The app and Genius also switch to orange if there are problems with the emergency call or mobile data.</p> <p>The problem can sometimes be resolved by waiting.</p> <p>If you need to take action, your Genius will inform you with audible signals.</p>
<p>I don’t know why the Genius and app light up red.</p>	<p>There are several possible reasons.</p> <ul style="list-style-type: none"> <li>• Contact our support if the app does not provide you with enough information.</li> <li>• Be aware that the system will not be able to place emergency calls while red.</li> </ul>
<p>Why does the <b>ANGEL React</b> App say that the emergency call is not 100% available?</p>	<p>This percentage only relates to the percentage by which the app has been connected to the emergency contacts since it was started. It does not say anything about the connection at the present time. You may have lost the data connection previously, which would reduce the percentage.</p>

<p>The emergency call is sending me a message that my location is inaccurate.</p>	<ul style="list-style-type: none"> <li>• Check whether you have activated the location.</li> <li>• Ensure that you have granted precise location permission to the app.</li> <li>• In some working environments, such as inside buildings, it might not be possible to precisely determine your location.</li> </ul>
<p>My firmware update has failed, what should I do?</p>	<p>If an error occurs during the Genius' firmware update, e.g., because your smartphone enters standby status, the app shows "Update failed". Proceed like this:</p> <ul style="list-style-type: none"> <li>• Power-off the Genius and restart the <b>ANGEL React App</b>.</li> <li>• Connect smartphone and Genius to the charger.</li> <li>• Retry the firmware update.</li> <li>• Please contact support if the firmware update fails more than 2 times.</li> </ul>
<p>I lost my Genius, is there anything I should do.</p>	<p>Yes!</p> <p>Since your personal data is attached to your Genius, contact our support. They will clear your personal data from the device. This is necessary for you to use your e-mail address again for a new pairing for example.</p>
<p><b>Questions concerning Watchdog and Restart Inhibit</b></p>	
<p>The button on my Watchdog is not lighting up; why is this?</p>	<p>There may be two reasons for this:</p> <ul style="list-style-type: none"> <li>• The USB-C cable is not correctly connected, and the Watchdog is not being supplied with voltage.</li> <li>• The Restart Inhibit is not being supplied with voltage (110-240 VAC).</li> </ul>
<p>My Watchdog cannot be operated with a power bank, what can I do?</p>	<p>Modern power banks are often designed for intensive charging of smartphones. The Watchdog is sometimes not recognized as a „load“ due to the low power consumption, which is why the power bank may switch off. Use another power bank or use another supply method via USB.</p>
<p>I would like to protect more than 4 users with one single Watchdog; what can I do?</p>	<p>You can install multiple Watchdogs and connect them to a single system using a Splitter.</p>
<p>Despite being pressed, the green restart button on the Restart Inhibit lights up continuously.</p>	<p>This may be due to the following:</p> <ul style="list-style-type: none"> <li>• You might not have acknowledged an active alarm on the Watchdog.</li> <li>• The operating voltage may not be connected to the Watchdog (USB-C cable not connected or loose).</li> <li>• The cable for the potential-free contact is not correctly connected to the Watchdog.</li> </ul>

<p>The emergency-off circuit is not closed/activated by the Restart Inhibit; what can I do?</p>	<p>Check the following:</p> <ul style="list-style-type: none"> <li>• Is the operating voltage connected to the Watchdog (USB-C cable not connected or loose)?</li> <li>• Is the cable for the potential-free contact correctly connected to the Watchdog?</li> <li>• Is the Restart Inhibit being supplied with voltage (110-240 VAC)?</li> <li>• Are the internal fuses, 4 A gG 10x38 mm or 250 mA 5x20 mm, intact (Notice: May only be replaced by an electrician!)</li> <li>• Have you pressed the green restart button on the Restart Inhibit?</li> <li>• Have you acknowledged an active alarm on the Watchdog?</li> </ul>
<p>I need to remove the Watchdog (for using it somewhere else); what can I do to ensure that the emergency-off function does not remain permanently triggered?</p>	<p>You do not need to uninstall your Restart Inhibit.</p> <ul style="list-style-type: none"> <li>• Insert the short-circuit plug instead of the Watchdog and the triggering is blocked.</li> <li>• After inserting the plug, simply press the green restart button once.</li> </ul>

# Support

## 10.1 Contact us

ADRESYS Adaptive Regelsysteme Gesellschaft m.b.H.

Oberndorferstraße 35/C

A-5020 Salzburg

Contact: [support@adresys.com](mailto:support@adresys.com)

Telephone: +43 59495 6969

We are available from Monday to Friday between 8:00 am and 6:00 pm. If you are unable to reach us, please leave us a message and we will get back to you directly. We make every effort to respond to all your concerns as quickly as possible.

