

ANGEL React Systems

User Manual



ANGEL React Manual, Version ENU 1.0

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The users bear full responsibility for any application of our products.

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Welcome

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 accident.

Please read this manual carefully before working with ANGEL React.

About ANGEL React

ANGEL React detects emergencies during day-to-day work and places an emergency call immediately and automatically via an app. Depending on the configuration, previously defined emergency contacts are contacted via text message, email, and an automated voice call. This notifies them of your emergency situation and location, and enables them to provide assistance immediately. The ANGEL React Watchdog also deactivates the voltage source or voltage circuit on which you are currently working.

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

2.1 ANGEL React Shirt and Clip System

ANGEL React is based on the Shirt System and the Clip System

- The Shirt System detects:
- Electrical accidents
- Falls from a height
- Motionlessness
- Elapsed Task Timer



Elapsed Task Timer



2.2 ANGEL React Watchdog

The ANGEL React Watchdog is an additional component of ANGEL React and only works in combination with an ANGEL React Shirt System (in special cases with an ANGEL React Clip System). It has a potential-free contact to ensure that the voltage circuit /source on which you are working is interrupted immediately in the event of an emergency.

2.3 ANGEL React Restart Inhibit

The ANGEL React Restart Inhibit is required in addition to the Watchdog if you are using this in combination with an existing stationary emergency stop circuit that does not feature its own Restart Inhibit. The ANGEL React Restart Inhibit enables the Watchdog to be correctly connected to an existing emergency stop circuit.

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 operation.

It also contains important instructions for the safe, proper, and efficient use of your equipment.

- Read all sections of this manual that apply to your work before using the equipment.
- Follow all the safety instructions, warnings, and other instructions it contains.
- Always use ANGEL React exactly as described in this manual.
- Always keep the manual ready to hand where you are using ANGEL React.

Any use of ANGEL React other than that described in this user manualis improper use. Improper use may impair the safety of the equipment and result in property damage or personal injury.

NOTE: Neither we, nor the manufacturer, nor the supplier will be liable for any injury 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 this manual.

Reading the manual alone does not release you from the obligation to independently and responsibly apply all rules, regulations, and laws relevant to your work.

• Only use ANGEL React in compliance with all applicable company-specific rules, national and international safety regulations, and the regulations concerning accident prevention, occupational safety, and environmental protection.

This section only contains some of the legal information, and has been shortened to make it easier to read. The complete, current, and legally binding documents, along with our terms of business, terms of use, and software license conditions can be found here: www.adresys.com/legal

The following warnings are used in this manual:

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.



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

NOTE: ANGEL React may only be used as an additional safety measure.

Safety instructions

Always use ANGEL React exactly as described in this user manual.

The following safety instructions apply to all ANGEL React products. The safety instructions that apply to the individual products can be found in the respective Quick Start Guide.

Risk due to damage

- Do not use the ANGEL React equipment if you notice any mechanical or other damage, or if any other unusual situations arise.
- Contact our Support team immediately if you become aware of problems or damage.
- Only have the equipment repaired by ADRESYS or a service contracting party ٠ listed on the website.

Malfunction due to opening the equipment components

- 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.

Malfunction due to improper handling of the equipment



Do not expose the ANGEL React system components, including the Genius or the Restart Inhibit, to extreme heat or direct sunlight (e.g., inside a closed car).

This could damage the lithium-ion battery in the Genius, for example. Protect the electronic components against moisture and high levels of humidity. •

Danger due to a lack of attention



Only use ANGEL React if the circumstances permit.

- Do not allow the use of ANGEL React to distract you from your immediate surroundings and activity.
- If you are using the ANGEL React Watchdog with third-party equipment, be aware that this equipment may be energized.

Warning

Danger due to lack of data or Bluetooth® connection Be aware that the ANGEL React system may not work reliably or be able to place emer-



gency calls if the data or Bluetooth® connection is not activated or if these connections are missing. The Watchdog cannot deactivate the voltage circuit. You should not assume that the system can call for help or interrupt voltage circuits in every situation.

- Ensure that the ANGEL React App, the Genius, and the Watchdog 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.

Warning



Danger when using unapproved accessories

Only use the ANGEL React equipment with the genuine ADRESYS accessories. • The ANGEL React accessories must not be used for other applications.

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 equipment 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.

Danger

•

Risk of injury due to arc fault Do not use ANGEL React as arc fault protection.



Wear arc-resistant work clothing. Comply with national regulations and internal company provisions for the prevention of arc faults.

Danger

Risk of injury due to an equipment malfunction

A malfunction of the ANGEL React equipment may be indicated by smoke or an unusual odor.



• Disconnect the Watchdog or the Restart Inhibit from the voltage supply and contact our Support team.

Danger

/!\

Risk of injury due to explosion

- Never use ANGEL React equipment in the presence of flammable gases, as this may result in a fire or an explosion.
- Never use your ANGEL React equipment in a potentially explosive working environment.

Danger

Risk of injury due to contact with voltage

- The Watchdog and the Restart Inhibit may only be installed in existing emergency stop circuits by trained and qualified electricians.
- The ANGEL React equipment does not protect you against contact with voltage or electrical accidents.
- Always observe the applicable safety regulations and your duty of care.
- Do not deliberately induce contact with voltage.

Emergency call chain

Your ANGEL React system detects the following emergencies:

- Free fall with impact, followed by motionlessness for a defined time as an indication of a fall accident.
- Prolonged motionlessness (No Motion)
- A voltage change in the body as indication of an electrical accident (only with the Shirt System)
- Elapsed Task Timer

You are also able to initiate an emergency call manually using the SOS button.

5.1 How the emergency call chain works

In the event of an emergency, ANGEL React sets the emergency call chain in motion via the app and notifies your emergency contacts, which means:

- Depending on the configuration, your emergency contacts receive text messages, emails, and an automated voice call.
 - Text messages and emails inform your contacts of your emergency situation and your GPS data.
 - The automated voice call is intended to draw additional attention to the emergency situation.
- Ideally, your emergency contacts will be able to provide immediate assistance, but will at least notify the emergency responders.
- If you have activated the emergency call center service, an emergency call will also be made to the call center, who will provide assistance.

In addition to notifying the emergency contacts, the Genius will also alert those in your immediate surroundings to your emergency by means of optical and acoustic signals.

5.2 Emergency contacts

You will need to create emergency contacts to use the ANGEL React system.

Emergency contacts are people who can help you immediately in an emergency. You choose your own emergency contacts, and you can also change them at any time.

 Typical emergency contacts are team colleagues, team leaders, company first responders, or people you know in a social context.

5.2.1 Responsibilities of the emergency contacts

Responsibilities of your emergency contacts after being notified of an emergency via the ANGEL React App:

- Call you, clarify the situation, decide what type of assistance is needed
- If you do not answer, your emergency contacts must initiate appropriate assistance, for example:
 - Establishing your last known location and providing assistance directly on site
 - Calling emergency responders and passing on information from the emergency text

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

MADRESYS	
General information	
EMERGENCY CONT	ACTS
New contact	
This emergency contact will having been set as an emerge text message, e-mail	ency contact via
• 43 - 1 234567890	
🥌 Primary 🛒	Active

5.2.2 Help Coordination Portal

Your emergency contacts will receive a link to the ANGEL React Help Coordination Portal.

- This portal provides detailed information about the accident including the type of accident and location (with a corresponding link to Google Navigation).
- This portal also provides your emergency contacts with recommendations for action.

Please note:

- Recommendations for action may vary on a case-by-case basis.
- Emergency contacts must continue to check their text messages for updates throughout the duration of an emergency!

5.3 Emergency call center

Use of the emergency call center is an add-on service in addition to the emergency contacts. The emergency call center is an external, paid service provider that ensures your emergency call is handled professionally and organizes assistance.

Purchasing an activation code switches on your emergency call center subscription for one year.

IMPORTANT: The service of the emergency call center may not be available in your country.

The emergency call chain via the emergency call center works as follows:

- While your emergency contacts are contacted by the ANGEL React system, the emergency call center is also notified of your accident.
- The emergency call center calls you.
- If you do not answer, the emergency call center calls your primary emergency contact and ascertains whether they can assist you.
- If the emergency call center can reach neither you nor your primary emergency contact, it raises the alarm with the emergency responders, and sends them to your last known GPS position.

The emergency response chain is activated at the discretion of the emergency call center. The triggering of alarms (or false alarms that you do not acknowledge) by the emergency call center may result in costs for assistance services (e.g., recovery, search, and emergency response call-out costs) which will be borne solely by the user if they are liable for them. For more information, refer to section 7.3.3 False alarm.



6.1 Icons in the ANGEL React App

	Genius	 The Genius processes all the data that is recorded by the sensors. The following are displayed here: Optional: Skin contact with the ANGEL React Shirt electrodes Genius battery level 	
	Emergency call	 Emergency call communication services: Shows the two possible alarm chains: via emergency contacts, or emergency contacts + emergency call center. Information about account details and location Test using the practice alarm 	
Å .	Optional: Electrical accident	The ANGEL React Shirt System detects an electrical accident by mea- suring the voltage drop between both upper arms.	
*~	Fall accident	ANGEL React detects a free fall with impact. If this is followed by motionlessness, it assumes a fall accident.	
	No Motion	ANGEL React detects motionlessness if you do not move for an extended period of time.	
	Watchdog	The ANGEL React Watchdog ensures that the voltage circuit /source on which you are working is deactivated in the event an emergency is reported.	
Ö	Task Timer	 The Task Timer can be used in the following situations: For activities involving increased risk If your smartphone has no data connection The start of a timer is also transferred to the server so that if you do not acknowledge a pre-alarm, an alarm can also be triggered without a data connection. 	



Alarm Details

cident is active

Open in Google Map

Silver Shirtest needs help!

Where: 47'50'04.2"N 13'01'39.4"E

6.2 Colors in the app and Genius

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

NOTE: Please note that the Watchdog works with different colors from the Genius and the app. For more information, refer to section 8.3.2 Color display of the ANGEL React Watchdog



Shirt System/ Clip System

ANGEL React is based on the Shirt System or 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 falls fall accidents and motionlessness, but only the Shirt Genius also detects electrical accidents. The Genius forwards information to the ANGEL React App.
- The ANGEL React App runs on your smartphone. This carries out emergency communication.

ANGEL React Shirt System

- In addition to the Shirt Genius and app, the ANGEL React Shirt System includes a smart T-shirt.
- Electrodes in the upper arm cuffs of the T-shirt measure the voltage in your upper arms and the equipment detects when voltage is flowing through your body.
- The Shirt Genius is clicked onto the left upper arm.

ANGEL React Clip System

• In the ANGEL React Clip System, the Clip Genius is attached to a belt, waistband, etc. with its cradle.

- The Shirt System detects
- Electrical accidents
- Fall accidents
- No Motion (motionlessness)
- Elapsed Task Timer



- The Clip System detects
- Fall accidents
- No Motion (motionlessness)
 - Elapsed Task Timer



7.1 Scope of delivery

Check that all the listed components are included in your delivery. If anything is missing, contact Support.

7.1.1 ANGEL React Shirt System

When you purchase an ANGEL React Shirt System, you will receive the following components:

- ANGEL React T-shirt
- Shirt Genius Starter Package with accessories

ANGEL React T-Shirt



ANGEL React Shirt Genius Starter Package



7.1.2 ANGEL React Clip System

Angel React Clip Genius Starter Package

ANGEL React Clip cradles for attaching the Clip Genius to a waistband, belt, etc.



Clip Genius

Cuffs with integrated electrodes

7.2 Commissioning

You will need to carry out the following steps before you can use your ANGEL React Shirt System or Clip System for the first time. These are described in more detail in the next few sections.

- Downloading the ANGEL React App
- Put on the ANGEL React T-Shirt or attach the ANGEL React Clip cradle
- Pair the Genius and the ANGEL React App
- Register in the ANGEL React Portal

NOTE: Carry out all of these steps before using your ANGEL React Shirt or Clip System for work. Schedule half an hour for this task.

Both the Genius and your smartphone must have at least 30% battery charge to carry out the installation process. The Genius is supplied to you charged, but place it in the charger during commissioning to be on the safe side.

7.2.1 Downloading the ANGEL React App

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

- Use the smartphone that you carry with you during your daily work for the ANGEL React App.
- Download the appropriate app using the QR codes shown. The ANGEL React App is supported from Android version 7.1.1 and from iOS version 10.



ANGEL React App

Switch your cell phone to Bluetooth® mode. You need Bluetooth® LE (4.2. or higher). You will find a list of smartphone models on which the ANGEL React App will not run on our website at **www.adresys.com/en/angelreact/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: In the event of an alarm, your location is sent to the emergency contacts and emergency call center in the form of GPS data so you can be found.
- Voice calls and text messages: In the event of an emergency, the emergency contacts and the emergency call center are notified by text messages and by an automated voice call.

You should also allow the following to ensure that the ANGEL React App always works in the background:

- Turn off battery saver option
- Ignore battery optimization

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

IMPORTANT: If you lose the Bluetooth® connection or close the ANGEL React App, the Genius will beep every couple of seconds.

7.2.2 Putting on the T-shirt/attaching the clip

You can wear the ANGEL React T-shirt beneath your work clothes in the same way as a regular T-shirt.

- Make sure that the silicone electrodes on the upper arm cuffs are in good contact with your skin.
- If you have very dry skin, it may help to moisten the electrodes with a little water.
- Contact Support if the cuffs of your ANGEL React T-shirt are too tight or too loose.

Caution

Allergic reaction due to wearing the ANGEL React T-shirt

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

You can attach the ANGEL React Clip cradle 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.

You can leave the Genius in the charger while carrying out the following steps.

- Place it in the cradle later, when you are about to start work.
- With the T-shirt, the Shirt Genius must be correctly attached (the "arrow" points towards the back of your upper arm) and the cradle must be secured around the Genius.

7.2.3 Pairing the Genius and the ANGEL React App

- To carry out the following steps correctly, watch the video about pairing mode:
 - You will need the serial number to identify the Genius.
 - The six-digit key is the code/PIN you enter to pair the Genius with the ANGEL React App.



Link to pairing video

6-digit key/code/PIN ------

 Serial number - it always contains the letters "QP"

 In order to pair it click the Genius into the contacts of the charger, take it off again and click it back on. Repeat the process several times. The charger must be connected to a power supply.

ADRESYS

- The Genius first lights up red and then flashes blue: it is then ready for pairing.
- Open the ANGEL React App and follow the instructions. The app will guide you through the pairing process and registration in the ANGEL React Portal.

Problems with pairing mode:

If the Genius does not flash blue, start pairing mode manually:

- Place the Genius on the contacts of the charger.
- Detach the Genius from the contacts again, then click it back onto the contacts.
- Repeat this process at least five times until the Genius flashes blue.
- If the Genius does not flash blue, try it again, slightly faster or slower.

NOTE: 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 the colors during this time.

Please leave the Genius in the charger during the update.

7.2.4 Registering in the ANGEL React Portal

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

- Register in the Portal with the email address you used to register in our system (e.g., when you ordered your ANGEL React system). If you experience problems with the email address, contact Support.
- Make sure you have entered all the details correctly so you can be helped and found in an emergency.
- Make sure that the correct company name is stored in the ANGEL React Portal and contact Support if this is incorrect.

• **NOTE:** Your Genius is your personal safety device; it is used to access your account. For this reason, do not pass on your Genius to a third party to avoid possible misuse and/or damage to your data.

7.2.4.1 Setting up emergency contacts

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



NOTE: After entering all data, raise a practice alarm to check that your emergency contacts receive the emergency text messages/emails and an automated voice call. Familiarize yourself with the process.

7.2.4.2 How to change the emergency contacts

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

You can:

- set up new contact
- activate other contacts, depending on your work situation
- change the primary emergency contact

The change takes effect immediately after opening the emergency call screen: Therefore go back to the app's home screen and press the emergency call icon.

7.2.4.3 Optional: Activating the emergency call center



IMPORTANT: Your smartphone must be capable of sending text messages abroad in order to contact the emergency call center. Please check your settings and contract to make sure of this.

Purchasing the emergency call center activation code

You can purchase the emergency call center service at a later time. If you wish to do so, contact Support or an ANGEL React sales partner.

Log into the ANGEL React Portal, then tap:

EMERGENCY CALL-> ACCOUNT DETAILS-> MANAGE ACCOUNT and then tap the pencil icon beside **EMERGENCY CALL CENTER.**

NOTE: The service of the emergency call center may not be available in your country.

7.3 Usage

7.3.1 Getting started – for daily use

At the start of the working day:

- Make sure your Genius is charged.
- Enable Bluetooth® and the location on your smartphone, and start the ANGEL React App.
- Put on the ANGEL React T-shirt or attach the ANGEL React Clip cradle to your work clothes.
- Click the Genius into the cradle.
 - The app will usually connect to your Genius automatically.
 You will then hear a connection tone and the status will change to READY.
 The Genius emits an audible signal if something is not right.
- Keep your smartphone with you or nearby at all times and check the status of the app at regular intervals.
- Take the Genius out of the cradle if you will not need emergency detection for a short time (e.g., while driving your car, in a meeting, etc.). Then simply click the Genius back into the cradle to restart emergency detection.

At the end of the working day:

- Remove the Genius from the cradle and place it in the charger supplied to recharge it overnight.
- 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 Tshirt in the "Care instructions" section. You can launder it at 40°C in your household wash, but never iron it or put it in a tumble dryer.

7.3.2 Emergency detection



NOTE: Your smartphone requires a data connection in order to send emergency information. If this connection is unavailable, the data will be sent the next time you are connected.

If you want to make use of our service in situations without a data connection, set a Task Timer (see section 7.3.4 Task Timer).

7.3.2.1 Electrical accident (only with the ANGEL React Shirt)

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

A current flow between your upper arms in the single-digit mA range is all it takes for the ANGEL React Shirt System to trigger an alarm.

7.3.2.2 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.

7.3.2.3 No Motion

No Motion detects when a person remains motionless for a certain length of time. The system then raises a pre-alarm in the form of a continuous tone. A slight movement of the Genius cancels the pre-alarm. If you do not acknowledge the pre-alarm, ANGEL React assumes this is an emergency situation. It then initiates the emergency response chain.

7.3.2.4 Manual alarm

The SOS button allows you to raise an alarm manually in emergency situations.



7.3.3 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 response chain is not set in motion if you do not require assistance.

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

If an alarm is triggered 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 triggered (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.

NOTE: The number of the emergency call center may be unknown to you or may be hidden. Answer the call anyway.

If there is no reply from you (even though your Genius is sounding an alarm, your emergency contacts and the emergency call center are calling, etc.), your emergency contacts must ensure you receive the necessary assistance. The emergency call center will assume you have had a serious accident and will call the emergency responders (unless you have tapped **NO HELP NEEDED** or **FALSE ALARM**).

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

7.3.4 Task Timer

You need the Task Timer in the following situations:

- Before carrying out high-risk work on your own
- 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

You program the Task Timer for a certain period of activity, and it saves the last known GPS position. The Task Timer alarm sounds five minutes before the programmed time elapses. This can then be disabled or extended. If you do not do this, the Task Timer sets the emergency response chain in motion as soon as the programmed time ends.

NOTE: If your smartphone has no Internet access or access to mobile data, you will not be able to extend or disable your Task Timer. The emergency response chain will be set in motion automatically when the programmed time has ended.

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

NOTE: Do not start the Task Timer unless your smartphone has enough charge 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.



Here you can save the activity, duration, and "Send activity message" as a template, and then select this template next time.

Check this checkbox if you want your emergency contact to be notified that the Task Timer is active when you start your activity.

7.4 Data and Settings

7.4.1 Change Data

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

- change your personal data
- change and activate/deactivate emergency contacts
- activate the emergency call center

7.4.2 Settings

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





7.5 Updates

7.5.1 Update the ANGEL React App

We regularly update the ANGEL React App.

- You should check for pending updates in your app store
- Confirm the update manually, if necessary.
- The Genius is also updated at regular intervals. You will be notified of a firmware update in the notification window.
- Confirm the firmware update in the notification window of the ANGEL React App.
- You will need a successful Bluetooth® connection to run the update.
- This can take up to 20 minutes.
- The Genius flashes in all the colors during the update.

• Place your smartphone and the Genius in their chargers during the update. This will avoid problems arising during the update process.

NOTE: The ANGEL React system is unable to place any emergency calls during the update.

7.6 Removing the Genius from the system and

pairing it again

Your Genius and the ANGEL React App on your smartphone are permanently connected to one another. In daily use, the Genius cannot be paired with another smartphone, and the smartphone cannot be paired with another Genius.

7.6.1 Removing the Genius from the ANGEL React App

Sometimes it is necessary to pair the app with a new Genius. To do this, the Genius must first be unpaired from the app and the connection to the Watchdog must also be removed.



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

7.6.2 Pairing the app with a new Genius

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

- Remove the old Genius fom both the ANGEL React App and Bluetooth® on your smartphone.
- Switch the new Genius to pairing mode and pair it with your ANGEL React App (see section 7.2.3 Pairing the Genius and the ANGEL React App).

7.6.3 Using the app on a new smartphone

- Install the ANGEL React App on your smartphone.
- You will need to pair your Genius again: switch the Genius to pairing mode and pair it with the ANGEL React App on your new smartphone.
- Log in to the app and Portal. The app will function as it did before with all of your data.

NOTE: A Genius can never be paired with two smartphones; a new pairing removes the old pairing.

7.7 Technical data

7.7.1 Operating conditions

The operating conditions define the physical environment and the parameters for using the Genius. Use it under the following operating conditions.

Temperature	
Operation	-10 bis +55 °C
Storage	-10 bis +55 °C
Storage: optimum storage temperature to maximize battery life	+10 bis +25 °C 0 bis +45 °C while charging
While charging	0 bis +45 °C
Air humidity	10–90%, no condensation

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.

7.7.2 Disposing instructions

The ANGEL React T-shirt can be disposed of in the same way as conventional textiles. You should ideally check your national regulations for the disposal of textiles.

Disposing of the Genius

At the end of its service life, do not dispose of the Genius and its accessories with your household waste!

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

The ANGEL React Genius and its accessories are subject to the EU Waste Electrical and Electronic Equipment Directive 2012/19/EU (WEEE directive). The Genius and its accessories 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 Genius 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 Genius and its accessories must always take place in accordance with the applicable regulations.

NOTE: The device must not be transported if the lithium-ion battery shows signs of a defect. If it is smoking, for example, or is unusually hot, cool it down underwater in a ceramic washbasin, and ask for advice on its correct disposal (e.g., from our Support).

7.7.3 Care instructions for the ANGEL React T-shirt

40	X	Ο	\bigotimes	X
Gentle wash cycle	Do not tumble dry	Do not dry clean	Do not bleach	Do not iron

Washing could damage the Shirt Genius, while the Genius cradle could damage the T-shirt or other textiles in the washing machine.

- Remove the Shirt Genius and the Genius cradle before washing.
- Wash the T-shirt with color detergents; it is not necessary to use special detergents.
- To ensure a longer service life, we recommend washing the T-shirt in a laundry bag, and spinning at no more than 1200 rpm.

Do not tumble dry or iron the ANGEL React T-shirt because it contains electronic components.

• Only dry the T-shirt on a washing line.

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

NOTE: Contact Support if the status in the app remains LIMITED (orange) even though it has connected correctly. This may be the result of washing.

7.8 Declaration of conformity

Trade name: ANGEL React

Model name: Genius Manufacturer's address: ADRESYS Adaptive Regelsysteme Gesellschaft m.b.H., Oberndorfer Straße 35/C, 5020 Salzburg, Austria

The electronic components comply with the following standards:

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 EN IEC 63000 :2018

contains: FCC ID: X8WBT840 contains: IC: 4100A-BT840

CE

Declaration of Conformity

Manufacturer:

Adaptive Regel Systeme GmbH Oberndorfer Strasse 35 5020 Salzburg Austria

Equipment declared compliant under our sole responsibility:

Angel Genius

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

Regulation	Description	Standards used to verify compliance	
RE Directive 2014/53/EU	of the European Parliament and of the Council of 16 April 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 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment	EN IEC 63000 :2018	

Place and date of issue:

Ulrich Klapper Managing director



ANGEL React Watchdog

The ANGEL React Watchdog is based on the ANGEL React Shirt System and is an additional component that provides added safety. It is possible to use the Watchdog with the Clip System in special cases, although these are not covered by this manual.

NOTE: The Watchdog has been found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

If the Genius detects an emergency, it calls for assistance via the ANGEL React App and sends a signal to the Watchdog. If possible, the Watchdog interrupts the voltage circuit to which it is connected. It sends a switch-off command via a potential-free contact.

It is important to note here that only those devices that are connected to the Watchdog can be switched off.

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

The Watchdog can be used in two different scenarios (see overview graphic):

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

Watchdog-Overview



Use with a non-stationary energy 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 stop input and feature a Restart Inhibit.

Use with an existing stationary emergency stop circuit:

The Watchdog may only be connected to an existing emergency stop circuit via a

Restart Inhibit. We strongly recommend that you use the ANGEL React Restart Inhibit.
 The Watchdog is wired to an existing emergency stop circuit. Here, the Watchdog is connected to the Restart Inhibit via the connection cable. This is wired into the emergency stop circuit. The Restart Inhibit must also be supplied with line voltage.

Danger

Danger due to unsuitable or missing restart lock when working with the Watchdog.
Make sure that your installation has a fully functional restart lock.



If this is not the case (or you are unsure), use the ANGEL React Restart Inhibit. The Restart Inhibit may only be installed in existing emergency stop circuits by

trained and qualified electricians.

For more information about the Restart Inhibit, see section 9 ANGEL React Restart Inhibit.

8.1 Scope of delivery

Check whether your Watchdog has been delivered with the equipment you asked for. If not, contact Support.

ANGEL React Watchdog



IMPORTANT: The Watchdog may only be used in combination with a **power-limited** power supply unit **less than 15W** in according with **IEC61010-1** and **IEC61010-2-201**.

QR codes for the Watchdog

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

- Square QR code (USER) for the front of the Watchdog: scan this to connect your app to the Watchdog.
- Circular QR code (ADMIN) for the back panel: scan this if you require administrator rights for the Watchdog, for example, if you wish to carry out a Watchdog update.

ANGEL React WATCHDOG 22PT01-00006

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 can also stick the QR codes to the Watchdog.

- Do this if you want to make it easy for users to connect to the Watchdog. If it is critical that the circuit is interrupted, however, and you want to prevent unauthorized persons from connecting easily, you can make the code accessible only to selected persons.
- Anyone who has been given access to the ADMIN QR code decides whether to make all Watchdog users administrators, or only you or a selected group.





ANGEL React Watchdog connection cable according to the order

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

Other optional components:



For use with an existing stationary emergency stop circuit:

See overview graphic in section 8, green line with ANGEL React plug for the Restart Inhibit: AD-S04130-00	\bigcirc
See overview graphic in section 8, orange line with open end: AD-S04131-00	O

- ANGEL React Restart Inhibit for the Watchdog .
- ANGEL React Splitter for the Watchdog: for example, when using several Watchdogs with a ۰ single Restart Inhibit
- ANGEL React Extender: for joining several connection cables ٠

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

Commissioning 8.2

You will need to carry out the following steps before you can use the ANGEL React Watchdog for the first time. These are described in more detail in the next few sections.

- Start up the ANGEL React system ۰
- Optional intermediate step: mount the Watchdog •
- Connect the Watchdog .
- Connect the ANGEL React App and the Watchdog .

8.2.1 Starting up the ANGEL React Shirt System

For more details go to 7.2 Commissioning

Mounting the Watchdog (optional intermediate step) 8.2.2

If you are using your Watchdog in a stationary application, it should be mounted:

- To do this, take the DIN rail out of the back panel of your Watchdog.
- Screw it onto the wall with two screws or attach it in another suitable manner.
- Allow the Watchdog to engage in the rail.

NOTE: 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.

8.2.3 Connecting the Watchdog

Connect the Watchdog to the system with which you are working via the connection cable supplied with the ANGEL React plug. To do so, insert the plug into the corresponding socket on the Watchdog.



Depending on the area of use, there are two options for connecting the cable to the energy source

- Use with a non-stationary energy source with switch-off function: connect the Watchdog to the energy source via the connection cable.
- Use with an existing stationary emergency stop circuit: a restart lock must be connected to • both the Watchdog and the emergency stop circuit.

Danger

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Danger due to faulty connections

- If the Watchdog and Restart Inhibit are not connected and used correctly, this can result in (life-threatening) contact with voltage.
- The open end of an ANGEL React connection cable may only be connected by
 - trained and qualified electricians. If the Watchdog is connected to third-party equipment, make sure that this is
- de-energized while the connection is being established. Do not connect the Watchdog to consumers that should never be turned off, for .
- example, emergency lighting systems. In the case of an existing stationary emergency stop circuit, the Watchdog may • only be used with a certified restart lock. This must be connected by trained and qualified electricians.

Connecting the App and the Watchdog 8.2.4

The ANGEL React App and the Genius must be connected to the Watchdog before being used for the first time. To do so, scan the square QR code (USER) on the slip of paper provided or on the front of your Watchdog.

- If your cell phone does not have a QR code scanner, you can also start a scanner via the Watchdog icon on the app start screen.

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

If the Watchdog requires a firmware update, you can do this via a direct administrator connection from the app to the Watchdog. To do this, simply scan the round sticker on the back panel of the Watchdog (see section 8.4 Update).

8.3 Usage

8.3.1 Daily use

- Start your ANGEL React Shirt System.
- Connect the Watchdog to the voltage circuit on which you are working.
 - Watchdog to non-stationary energy source: connect the Watchdog to the energy source via the Watchdog connection cable.
 - Use with a stationary emergency stop circuit: if you have not already done so, connect your Watchdog to the Restart Inhibit. See section 9 ANGEL React Restart Inhibit.
- Make sure that the Watchdog is connected to an external voltage supply (power-limited power supply unit less than 15 W in accordance with IEC61010-1 and IEC61010-2-201).
- The Genius automatically connects to the Watchdog.

8.3.2 Color display of the ANGEL React Watchdog

When using ANGEL React, please always act according to the colors shown. Check the colors and status regularly in the app as well as on the Genius and the Watchdog. Be aware that the colors in the app and the Genius differ from the colors of the Watchdog.

The colors of the Watchdog habe the following meanings:

red	The Watchdog is being supplied with voltage.	
flashing red	The Watchdog has detected an emergency and switched off the external voltages source. It flashes red until you have manually reset the Watchdog switch in the app and reactivated the emergency stop circuit.	
alternating 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 voltage	
alternating red/orange	Internal fault or shutdown of the Watchdog	

8.3.3 Emergency detection

If the ANGEL React Shirt System detects an emergency (electrical accident, fall accident, motionlessness, elapsed Task Timer, or manual alarm), it sounds an alarm and sets the emergency response chain in motion. At the same time, the Watchdog ensures that the voltage circuit to which you have connected it is interrupted.

Danger

Risk of injury due to contact with voltage

- The Watchdog is not a shutdown device in the sense of a disconnector (e.g., a circuit breaker).
- Ŵ
- The Watchdog may only be used as an additional safety measure. It cannot carry out an all-pole disconnection.
- The equipment does not protect you against contact with voltage or electrical accidents.



To be able to work with the Watchdog again after it has detected an emergency, proceed as follows:

- Acknowledge the emergency in the ANGEL React App.
- If your Watchdog icon continues to light up red and the app is NOT READY -> tap the Watchdog icon and reactivate the Watchdog switch.
- If you are using the ANGEL React Restart Inhibit, press the green button to restart.
- The equipment does not protect you against contact with voltage or electrical accidents.

8.4 Update

- In the ANGEL React App, tap the Watchdog icon.
- 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.
- Start the firmware update.

8.5 Removing the Genius-Watchdog connection

If you are no longer using a Genius, you can remove the connection to the Watchdog(s), although you do not have to do this.

 In the app, tap the Watchdog icon. Here, you can remove the connection to the Genius by leaving the group(s).

8.6 Technical data

8.6.1 Operating conditions

The operating conditions define the physical environment and the parameters for using the ANGEL React Watchdog. Use it under the following operating conditions.

Temperature		
Operation	-10 bis +55 °C	
Storage	-10 bis +55 °C	
Nominal voltage	5 V, +/- 10%	
Nominal current	500 mA	
Maximum operating height	2000m above sea level	
Usage	Indoors	
Air humidity	5 – 95 %rh, non-condensing	
Overvoltage category	OVCII	
Shutdown	Single pole	
Pollution degree	PD2	
Protection class	2, totally insulated	

Data for the potential-free contact:

AC general use	126 VA 42 VAC/3 A utilization category AC-15
DC general use	36 W 60 VDC/0.6 A at L/R=40 ms
AC resistive load	168 W 42 VAC/4 A utilization category AC-1
DC resistive load	90 W 60 VDC/1.5 A resistive load
AC switching capacity	250 VA limited by internal fuse
DC switching capacity	250 W limited by internal fuse
Data for the connection cable to the potential- free contact	300 Vrms/5 A, 2x0.5 mm2, 2 m length; 3000 V wire/wire With Sub-D connection: AD-S04128-00 With ANGEL React plug: AD-S04130-00 With open end: AD-S04131-00

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.

8.6.2 Disposal instruction



At the end of its service life, do not dispose of the ANGEL React Watchdog and its accessories with your household waste!

Disposal for customers in EU countries (including the European Economic Area) The Watchdog and its accessories are subject to the EU Waste Electrical and Electronic Equipment-Directive 2012/19/EU (WEEE directive).

The Watchdog and its accessories 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 Watchdog 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 therespective country. Disposal of the Watchdog and its accessories must always take place in accordance with the applicable regulations.

CE

Declaration of Conformity

Manufacturer:

Adaptive Regel Systeme GmbH Oberndorfer Strasse 35 5020 Salzburg Austria

Equipment declared compliant under our sole responsibility:

ANGEL Watchdog

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

Regulation	Description	Standards used to verify compliance
RE Directive 2014/53/EU	of the European Parliament and of the Council of 16 April 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	IEC 61010-1:2010 + 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 V2.2.3 (2019-11) (additionally covered version: V1.9.2) EN 301 489-17 3.2.4 (2020-09) [Article 3.1 (b)]
	의 동안 이 같이 좋아.	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 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment	EN IEC 63000: 2018

Place and date of issue:

Ulrich Klapper

Managing director



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V5.0

For further details about applicable directives and standards refer to the product documentation. Observe the safety instructions.

ANGEL React Restart Inhibit

The ANGEL React Restart Inhibit can be used in combination with the Watchdog. It enables the Watchdog to be correctly connected to an existing emergency stop circuit.



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

9.1 Scope of delivery

Always use the ANGEL React Restart Inhibit in combination with the Watchdog and an ANGEL React Shirt System (if necessary, ANGEL React Clip System).

Check that the Restart Inhibit has been supplied with the corresponding accessories.

If not, contact Support.

NOTE: Only use the Restart Inhibit with genuine ANGEL React accessories. The accessories must not be used for other applications.



Short-cicuit adapter

The AD-S04130-00 cable is required between the Restart Inhibit and the Watchdog; this must be ordered **separately**, however.

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

9.2 Installation

Caution

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Risk due to damage

- Do not install the Restart Inhibit if you have noticed transport damage to the enclosure.
- The Restart Inhibit should generally be taken out of operation if you notice mechanical or other damage or unusual situations. In this case, contact Support.

Danger

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

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- Always have the Restart Inhibit connected to the emergency stop 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 specialist.
- Keep the key for the lid of the Restart Inhibit in a safe place so that it cannot be opened by unauthorized persons.

NOTE: Install the Restart Inhibit vertically +/- 90 degrees.

The following applies to the base of the Restart Inhibit:



- Connection for I/O lines for wiring into the emergency stop circuit(s)
- Voltage supply to the Restart Inhibit (100-240 VAC)

And to the top of the Restart Inhibit:

Socket for the Watchdog plug (LEMO socket)



USB-C port for the voltage supply to the Watchdog

9.2.1 Connections inside the Restart Inhibit



Connect the power cable wires (100-240 VAC) for the Restart Inhibit according to the connection diagram.

Wire the cables of the emergency stop circuit(s) to the red and yellow terminals according to the connection diagram.



NOTE: Following successful installation, the proper function of the Restart Inhibit must be checked by a qualified electrician.

9.3 Usage

If your Restart Inhibit has been installed in the existing emergency stop circuit by a trained and qualified electrician, it will be extremely easy to operate.

Connect your Watchdog to the Restart Inhibit

- The LEMO socket on the top of the Restart Inhibit is used as the connection for the ANGEL React connection cable.
 - If a suitable cable for connecting the Watchdog and Restart Inhibit is not included, you
 will need to order one from ADRESYS. The order number is AD-S04130-00. It is not possible to use a different cable.
- The USB-C port on the top of the Restart Inhibit is used for the Watchdog voltage supply.

9.3.1 Color display of the Restart Inhibit

Green restart button does NOT light up	 Your Restart Inhibit is connected to the emergency stop circuit(s) and the Watchdog and is working in accordance with standards; the emergency stop circuit is closed Or the Restart Inhibit is not being supplied with voltage
Restart button lights up green	 A shutdown has been triggered by the Watchdog Or the ANGEL React connection cable has not been connected Or the Watchdog is not being supplied with voltage

9.3.2 Emergency detection

If your ANGEL React system detects an emergency (electrical accident, fall accident, No Motion, manual alarm, or elapsed Task Timer), it sounds a local alarm using acoustic and optical signals, the ANGEL React App makes an emergency call to your emergency contacts (and the emergency call center), and the Watchdog opens the emergency stop circuit.

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

If you wish to reactivate your Restart Inhibit and thereby the entire ANGEL React system after an emergency has been detected, proceed as follows:

- Acknowledge the emergency in the ANGEL React App.
- Tap the Watchdog icon and move the Watchdog switch back to active.
- Tap the green illuminated restart button on the Restart Inhibit. This should go out after being pressed once.

NOTE: If the restart button does not go out after being pressed, check whether you have actually reset the Watchdog correctly in the app after it has been triggered.

9.4 Servicing

9.4.1 Replacing fuses

The Restart Inhibit contains various fuses. Always have the fuses replaced by a trained and qualified electrician.

The electrician should do the following:

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

9.4.1.1 Backup fuse for the voltage supply to the safety relay



The defective fuse is signaled by the illumination of the red LED in the corresponding fuse holder.

 Replace this fuse with a type 5x20 mm glass tube, 250 mAT fuse

9.4.1.2 Fuses in the emergency stop circuit

The specified current ratings and voltages for the safety relay must not be exceeded (see load curve in section 9.5.1 Operating conditions).



Danger

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

9.4.2 Taking the Watchdog out of operation

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

NOTE: The emergency stop circuit will continue to function, but be aware that the Watchdog will no longer be able to open it.

9.5 Technical data

9.5.1 Operating conditions

The operating conditions define the physical environment and the parameters for using the ANGEL React Restart Inhibit. Use it under the following operating conditions.

Temperature		
Operation	-10 bis +55 °C	
Storage	-10 bis +55 °C	
Maximum operating height	2000 m above the sea	
Usage	Indoors, no direct sunlight	
Ingress protection	IP 20	
Flammability of enclosure	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 V AC/0.75 A max.	
Internal power consumption	Max. 15 W	

9.5.2 Connections

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

Load curve for resistive and inductive load



0	Ohmsche Last	L/R = 0 ms
2	Induktive Last	L/R = 40 ms

Connectors

I/O line connection	2x PG11 screw connection
Watchdog connection	1x 6-pin LEMO socket, black
USB-C port connection	For supplying external devices (Watchdog) max. 5 VDC/2 A

Watchdog connection cable

Cable data	300 Vrms/5 A, 2x0.5 mm2, 2 m length
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9.5.3 Disposal instructions



At the end of its service life, do not dispose of the ANGEL React Restart Inhibit and its accessories with your household waste!

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

The Restart Inhibit and its accessories are subject to the EU Waste Electrical and Electronic Equipment Directive 2012/19/EU (WEEE directive). The Restart Inhibit and its accessories 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 Restart Inhibit 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 therespective country. Disposal of the Restart Inhibit and its accessories must always take place in accordance with the applicable regulations.

9.6 Declaration of conformity

CE

Declaration of Conformity

Manufacturer:

Adaptive Regel Systeme GmbH Oberndorfer Strasse 35 5020 Salzburg Austria

Equipment declared compliant under our sole responsibility:

Restart Inhibit for Watchdog

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

Regulation	Description	Standards used to verify compliance
EMC Directive 2014/30/EU	of the European Parliament and of the Council of 16 April 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 26 February 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 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment	EN IEC 63000 :2018

Place and date of issue: Ulrich Klapper Managing director



V5.0 11/ For further details about applicable directives and standards refer to the product documentation. Observe the safety instructions.

Legal information

This section only contains some of the legal information, and has been shortened to make it easier to read. The complete, current, and legally binding documents, along with our terms of business, terms of use, and Firmware license conditions can be found here: www.adresys.com/legal

ANGEL React helps you in critical work situations and can save lives. ANGEL React is not personal safety equipment as defined in Regulation (EU) 2016/425. To ensure the highest levels of workplace safety, always observe the national safety standards and safety regulations. You must not, under any circumstances, expose yourself to a higher level of risk, or rely on the ANGEL React alone. We cannot guarantee that the product will detect every emergency situation.

ANGEL React is not designed or intended for the diagnosis, prevention, monitoring, or treatment of diseases, injuries, or for other medical purposes. ANGEL React is not a medical device as defined in the Regulation (EU) 2017/745 of 05/25/2017.

Some of the preconditions for the use and performance of ANGEL React 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, 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 app), or for a controlled shutdown by the Watchdog. Furthermore, due to the differing areas of use, ADRESYS does not guarantee that every emergency situation will be detected.

We accept no liability for possible losses or damage caused by failure to follow the instructions, or due to improper use of the equipment.

Privacy

This section only 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. It is only in an emergency that the information needed to provide assistance is sent to the emergency call center (if you have subscribed to this service) so that assistance can be sent to your location. 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.

Detailed information about the processing of your personal data can be viewed in the ANGEL React privacy policy at **www.adresys.com/legal**

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

FAQ

I cannot find the AN- GEL React App in my app store.	Search for "ANGEL React" or "ANGEL REACT ADRESYS" and check that you have spelled it correctly or used the right QR code.	
An error message appears when I enter my email address in the ANGEL React Portal. What do I need to do?	 Check that your email address is correct. Each email address can only be used once in the ANGEL React Portal. Make sure that you have not already used your email address. Contact our Support if you need any further help. 	
My smartphone does not connect to the Genius.	 Turn flight mode on and off again, and enable Bluetooth®. Repeat this process if necessary. 	
Where can I find the battery charge status of my Genius?	Connect the Genius to your smartphone. The Genius battery charge level is displayed on the GENIUS tab on the start screen of the ANGEL React App.	
The Genius is not displayed in the ANGEL React App.	Make sure that you have enabled Bluetooth® on your smartphone and that the Genius is charged. The Genius must also be in pairing mode and flashing blue.	
My Genius does not switch to pairing mode. It flashes orange and beeps.	Take it out of the T-shirt/Clip cradle or out of the charger and wait	

In pairing mode, the Genius displays the message "Bind timeout".	 The Genius is no longer in the pairing mode. Make sure that the Genius is not already paired with another smartphone, or that the other smartphone cannot be reached by the Genius. Restart pairing mode. You have 30 seconds in which to enter the key from the back of the Genius in the app. 	
My Genius is clicked into the contacts on the T-shirt/Clip, but it is not flashing, and the status message in the ANGEL React App is still gray.	 The Genius's battery may be fully discharged or the Genius may have been clicked onto the contacts incorrectly. Note that the Genius luminous strip ("arrow") on the T-shirt must point towards the back of your upper arm, for example. 	
How do I remove the Genius from Blue- tooth®?	The method differs from one smartphone to another. One way could be: SETTINGS-> BLUETOOTH-> GENIUS-> (gearwheel symbol)-> FORGET/REMOVE. • Contact our Support immediately if you have any problems.	
My Genius beeps continuously.	 A recurring beep means that your smartphone is not nearby and the Bluetooth® connection between the smartphone and the Genius has been lost. Make sure that your smartphone is within wireless range. Make sure that the ANGEL React App is active Check whether the app has been closed by the system settings ("Battery optimization") In your Sound settings, extend the time after which the Genius begins to beep if this is necessary and practical. 	
My Shirt Genius beeps when I move my arms.	 This indicates that the T-shirt is not making ideal skin contact. Make sure the T-shirt is sitting snugly against your skin. You can turn off the beeping by setting the Sound settings to IMPORTANT. 	
My phone battery is discharged and the Genius is beeping.	Remove the Genius from the cradle and charge your smartphone. The system will then be ready to use again. ANGEL React does not work without the Genius and smartphone, and cannot set the emergency response chain in motion.	
The Genius and app both have the color orange.	The app normally says what the problem is. The battery of the Genius may be empty. The app and Genius also switch to orange if there are problems with the emergency call or mobile data. The problem can sometimes be resolved by waiting. If you have to be active yourself, your Genius will inform you with audible signals.	
I don't know why the Genius and app light up red.	 There are a number of possible reasons, e.g., the battery may have discharged, or your contract with the emergency call center may have expired. Contact our Support if the app does not provide you with enough information. Be aware that the system will not be able to place emergency calls while red. 	

Why do the emergency contacts have different availability to the emer- gency call center?	These two emergency call channels work independently of one another, so their availability can also differ. The availability is normally 100%, but it may be limited when you start up for the first time.What ha respondent though I them?		Our alarm path has several escalation levels, and you can cancel the emergency response chain yourself at any time. You do this by answering the calls from your emergency contacts and/or the emergency call center.
Why does the ANGEL React App say that the emergency call is not 100% available?	This percentage only relates to the percentage by which the app has been connected to the emergency call center or the emergency contacts since it was started. It does not say anything about the con- nection at the present time. You may have lost the data connection in the meantime, which would reduce the percentage.		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 emergen- cy, and so will notify the emergency responders. If the responders are not needed, you will have to pay for the costs incurred yourself.
The emergency call is sending me a message that my location is inaccurate.	• Check whether you have activated the location In some working environments, such as inside buildings, it might not be possible to precisely determine your location.	What can I do to avoid triggering the No Motion alarm during a meeting or any other activity that involves	 The pre-alarm sounds if your Genius does not detect any movement for a certain amount of time. The pre-alarm stops as soon as you move the upper arm holding the Shirt Genius or the Clip Genius. During a meeting, etc., you should ideally remove the Genius
Can I injure myself with the Clip Genius?	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, clip the ANGEL React Clip cradle onto	very little movement?	 from the cradle. Don't forget to click it back into the cradle once your period of inactivity has come to an end.
	another body part. Doing so will prevent bruises and other mechanical injuries.	I would like to hand over my ANGEL React	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
My ANGEL React Shirt System App is telling me that my electrodes on the cuffs do not	 Check that all the electrodes are lying against your skin Moisten the skin beneath the electrodes if necessary to improve the contact 	system to another per- son; what can I do?	 following. Remove the Genius from your app. Contact Support to enable another person to connect your Genius to their app.
have good skin contact.	The problem will normally resolve itself quickly if the upper arm size of your ANGEL React T-shirt is correct.	The button on my	There may be two reasons for this: • The USB-C cable is not correctly connected and the Watchdog is
Will the function of my ANGEL React Shirt System be impaired if I sweat heavily?	We have sealed all our electronic components to protect against sweat and moisture. If your T-shirt is very wet, you should change it as this can impair its functionality.	Watchdog is not light- ing up; why is this?	 The OSB-C cable is not correctly connected and the watchdog is not being supplied with voltage. The Restart Inhibit is not being supplied with voltage (110-240 VAC).
Is rain a problem?	Our Genius is IP 20 rated. This means that the Genius can withstand a few drops of rain, but it is not rain-resistant.	I would like to protect more than four users with a single Watchdog;	You can install multiple Watchdogs and connect them to a single sys- tem using a Splitter.
What happens when my Task Timer expires?	The ANGEL React system issues an alarm just before the programmed time comes to an end. You can then extend or deactivate the timer. You will need a data connection to do this, however, otherwise our server will not know that you have extended or deactivated the timer. When the timer expires, you will be sent an alarm, and the emergency call chain will be set in motion.	what can I do? My watchdog cannot be operated with a powerbank, what can I do?	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 powerbank may switch off. Use another powerbank or use another supply method via USB.
What happens if my emergency contacts don't pick up when the ANGEL React system makes an automated voice call?	No problem. Your emergency contacts can make a return call to the system. A voice recording will inform them about the emergency and instruct them to check their text messages.	I need to use the Watchdog elsewhere; what can I do to ensure that the emergency stop function does not remain permanently triggered?	 You do not need to uninstall your Restart Inhibit. Insert the short-circuit plug instead of the Watchdog and the triggering is blocked. After inserting the plug, simply press the green restart button once.

Despite being pressed, the green restart button on the Restart Inhibit lights up continuously.	 This may be due to the following: You might not have acknowledged an active alarm on the Watchdog. The operating voltage may not be connected to the Watchdog (USB-C cable not connected or loose). The cable for the potential-free contact is not correctly connected to the Watchdog.
The emergency stop circuit is not closed/ activated by the Restart Inhibit; what can I do?	 Check the following: Is the operating voltage connected to the Watchdog (USB-C cable not connected or loose)? Is the cable for the potential-free contact correctly connected to the Watchdog? Is the Restart Inhibit being supplied with voltage (110-240 VAC)? Are the internal fuses, 4 A gG 10x38 mm or 250 mAT 5x20 mm, intact (Notice: May only be replaced by an electrician!) Have you pressed the green restart button on the Restart Inhibit? Have you acknowledged an active alarm on the Watchdog?

Support

To contact us:

ADRESYS Adaptive Regelsysteme Gesellschaft m.b.H. Oberndorferstraße 35/C A-5020 Salzburg Contact: 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.

