



# MANUAL

User Manual | Biofeedback-training | eSense-App | Finger Clip

Version 2.3.6 | 24.08.2018



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## Delivery contents

- Mindfield® eSense Temperature Sensor
- 1 Velcro electrode
- eSense app from Mindfield (from the App Store, Google Play or Amazon Appstore)
- Detailed instruction for efficient biofeedback training



**Delivery contents eSense Temperature**

## Skin temperature in general

The temperature at the surface of the skin changes according to blood circulation through body tissue. The small blood vessels (arterioles) crossing through the tissue are surrounded by fibers of smooth muscle, which are controlled by the sympathetic nervous system.

In a state of increased exertion, excitement and stress, these muscle fibers contract, causing a stenosis of vasculature. This leads to a reduction of skin temperature, since blood circulation through the tissue is reduced. In contrast, in a state of relaxation, the musculature is also bound to relax, causing the vasculature to expand. Hence, the skin temperature rises.

Mental stress often leads to a lower peripheral perfusion and a decrease of skin temperature at the hands, caused by increased activity of the sympathetic nervous system. This has a sense of evolution because tension and anxiety originally served the preparation for an impending flight or an attack. As a result, as much blood as possible is available in the working muscles (upper arms, thighs and torso), which is achieved by the narrowing of vessels in the hands, feet and forearms.

For example, think of a speech that you gave in front of an audience or a job interview panel. If you were anxious in those situations, can you remember having cold (and sweaty) hands?

This physiological stress reaction can be useless or even harmful in many contexts in modern society (e. g. mental exertion, worries, psychosocial stress, and anxiety disorder). A conscious control of physiological stress can help you react in a more relaxed and efficient manner to many situations. Biofeedback is an established way to learn this kind of control!

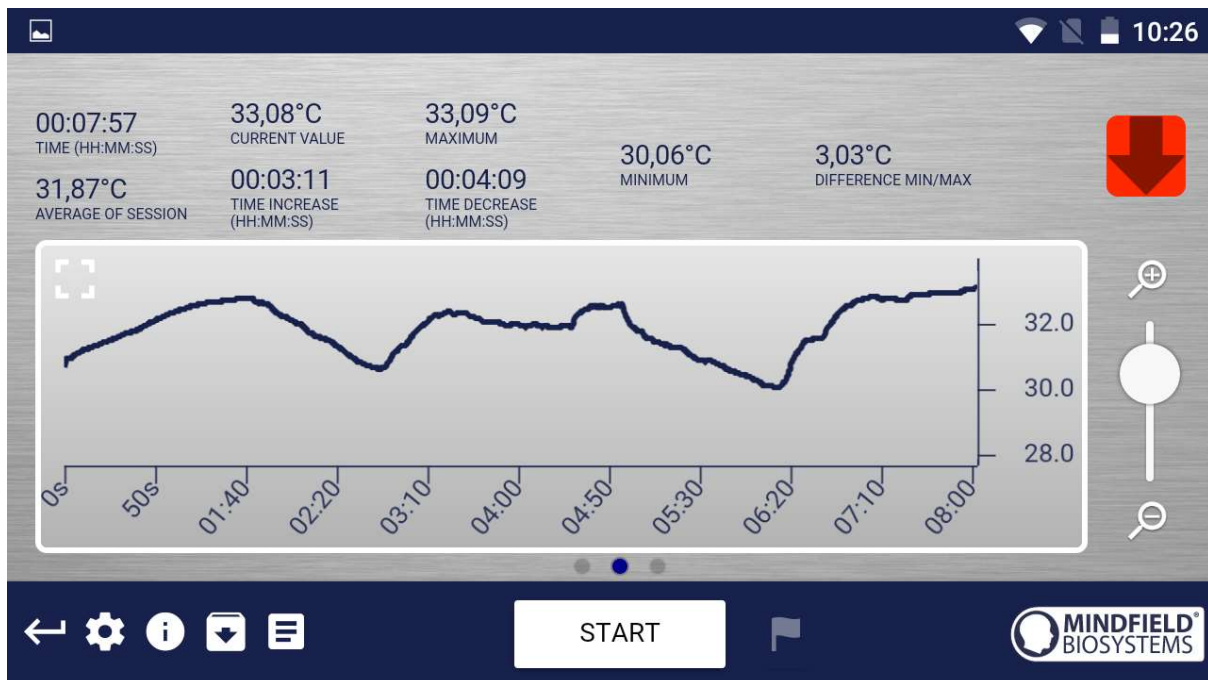


## Skin temperature and biofeedback training

To reduce stress and its vegetative symptoms, biofeedback-training can be conducted by striving for a **rise** of the skin temperature.

Biofeedback with skin temperature is mainly applied in relaxation exercises. It's easy to handle and learn. Experience with this technique shows a high rate of success and improvement of subjective well-being. In the therapeutic field, skin temperature biofeedback is often used in migraine and chronic pain. If you suffer from a serious disorder or medical condition, always consult a professional physician or therapist, and do not attempt to treat yourself. Biofeedback training is not an officially recognized medical procedure. Hence the eSense Temperature is not a medical device and may only be used for stress reduction training.

A particularly easy and effective biofeedback method is hand warming training. It works with the eSense Temperature sensor attached to a finger, or simply held between the thumb and index fingers. You will learn through direct feedback to intentionally raise the temperature of your fingers, thus increasing perfusion in your hands. The biological temperature sensors in our hands give us only an inaccurate impression of our skin temperature. We can just roughly decide between warm, cool, cold and so on. The real-time feedback with the precise eSense Sensor will give you much more precise information on the perfusion and temperature of your hands, enabling you to learn conscious control of these parameters and your relaxed well-being.



**Example measurement curve eSense temperature with peaks in temperature because of several stressors and relaxation exercises**

Hand warming training aims to show a person their skin temperature and help them get direct control over the blood circulation in their outer limbs.

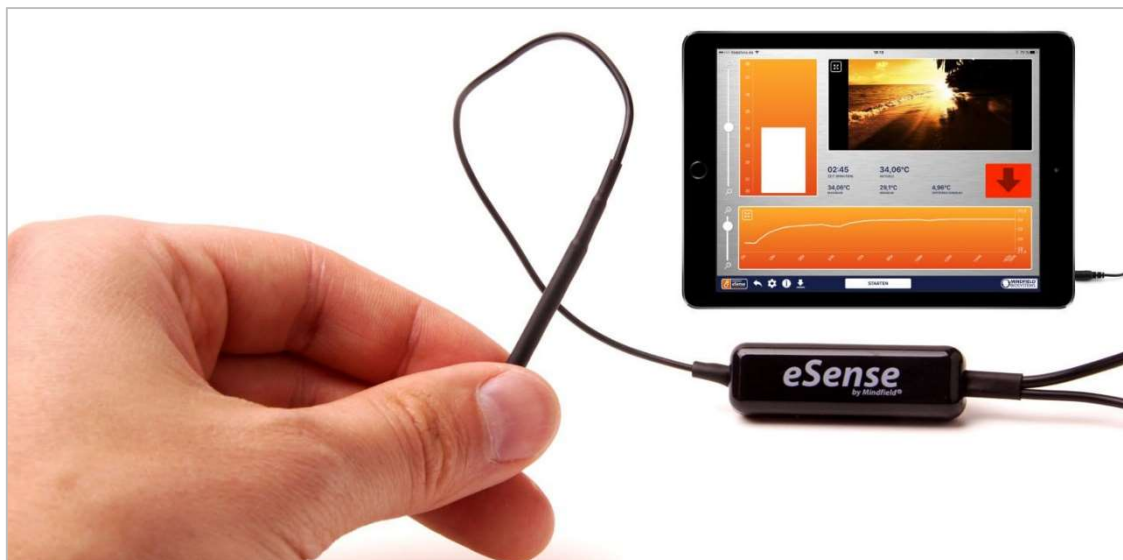
Biofeedback training consists of four training stages. For the first training, schedule about 60 to 90 minutes of free time in which you can conduct the training undisturbed and at a stretch.

It must also be differentiated between different types of stress. There is “bad stress,” distress, and there is “good stress,” eustress. You need to ask yourself if you are stressed because you feel overwhelmed and are angry about something or because you are upset. Or are you “stressed” because you are full of drive and are excited? In both cases, the eSense Skin Response shows elevated values, but in the first case only, this is to be judged negatively. In the second case, you can simply enjoy and use the active or euphoric state.

## Process of training

1. To train successfully, find a quiet room with a temperature of 20-22°C / 68-72 °F and where there are no phones and sources of distraction. Make sure the room has convenient seating and that you are wearing comfortable clothing. As skin temperature depends also on ambient temperature, you should try to perform each training session under similar ambient conditions.

Use the accompanying tape (or a fabric tape of your choice, e.g. Leukoplast™) to attach the temperature sensor to your index or middle finger. Plastic tape works as well, although it's less comfortable because it's airtight and can make your fingers perspire.



**eSense Temperature in use with a tablet**

2. You should get accustomed to the ambient temperature for at least five minutes (acclimatization), letting the training start while your body is in a relaxed and constant state. This phase of acclimatization can already raise your hand temperature by several degrees.

## First stage (observe and experiment; determine your initial status)

1. In comparison with other biofeedback techniques, you will need fewer sessions for a reliable success. 6-10 sessions should be sufficient. To keep focused throughout the entire session, you should limit each session's length to about



30 minutes. If you start feeling tired while training, you should shorten your sessions and practice more often instead.

2. You should record your baseline state for 2-3 minutes at the beginning of each session, letting the sensor temperature adapt to your finger. Sit upright and comfortable, and do NOT watch the temperature but simply let the device measure. The temperature should reach a constant level for the actual training to begin.
3. In your first session, take ten minutes and try to relax. How you do this is up to your personal preferences and possibilities. Do NOT watch the temperature in the app! Training is about measuring whether relaxation already leads to a higher temperature in yourself.
4. Now look at the measured values and whether you have already caused an increase in temperature by relaxing. Were there sections of rising values? Did the level remain constant? Or does the curve drop slowly during the measurement? How do you rate your ability to relax during the measurement? You may already be able to determine a relationship between the curve and the tension or relaxation you are feeling. Regardless of whether you've succeeded, familiarize yourself with the feedback in the app. Observe the measured values and test whether you are able to influence the temperature at will. After that, the first training phase is over.



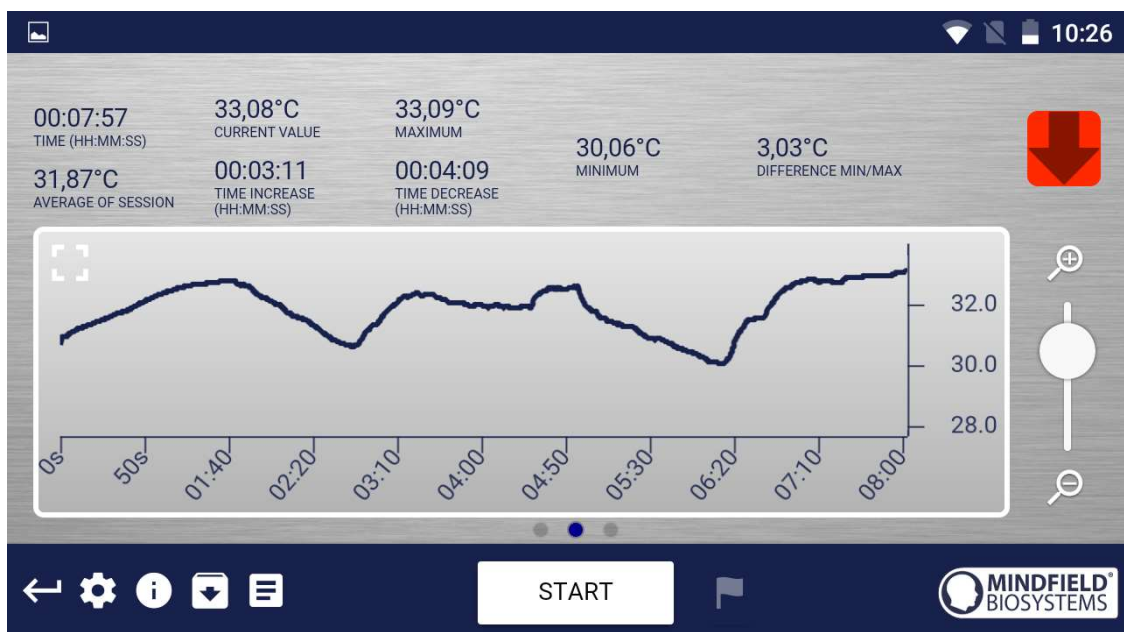
**Example for a situation with rising stress; the temperature is falling**



**Example for a resting phase with rising relaxation; the temperature rises**

5. This is your initial training state. Of course, the day also plays a role here; it may make a difference whether you are measuring after a stressful working day (or even at work) or at the end of a relaxing weekend. **Use the corresponding function of the app to export this baseline as a CSV file.**

**You can do this by selecting the measurement in the archive. This will allow you to access your baseline later (in addition to the archive) by other tools (such as Excel).**



**Example of a measurement curve**

Before taking another measurement, try to pay attention to the daily activities during which you are more likely to have hot or cold hands. These observations may be useful later in further sessions.

## **Second stage (biofeedback training with the temperature feedback)**

1. The second stage consists of multiple sessions. These sessions should always follow the following scheme. Start every session with a 2-3-minute baseline measurement WITHOUT watching the values to reach a steady state.
2. Now you can start to train conscious relaxation, using the feedback signal. Watch the temperature values while relaxing and try to find ways to bring them up. It can be helpful to imagine yourself lying in the sun, relaxing in a sauna, or putting your hands into warm water. You can also work with autosuggestion techniques, telling yourself sentences like, "My left hand feels warm...it feels even warmer now..." Feel free to experiment.
3. As with every activity, regular practice is the key to success. You should be able to raise your skin temperature by several degrees, unless your baseline is already at 33-34°C / 91-93°F. The colder your hands are in the first place, the more potential you have to raise their temperature. In general, your hands can reach a temperature of more than 36°C / 97°F, which is the temperature of your body's core.

## **Third stage (transfer; relaxation without feedback)**

1. Now you can check if a state of deepened relaxation, and the corresponding rise in skin temperature, can already be achieved without feedback. After measuring the baseline as usual, you should alternate between watching and not watching the feedback (two minutes each way). The longer and more often you can keep the temperature up without the feedback, the better your self-control has already become. When you are not using the feedback, don't look at the values in the app.
2. Perform multiple sessions in third stage. When you can keep your skin temperature up for a prolonged time and mainly without feedback, you have successfully completed this stage.

3. Our eSense app offers not only free training but procedures as well. These are ready-made training programs that you can customize according to your wishes. For the best comparability of training sessions, these should always be performed under identical conditions (same time of day, electrode position and type) and of approximately identical duration. The procedures are a great help. For more information, see the relevant section of this manual.

#### **Fourth stage (deliberate provocation, relaxation and stress coping)**

1. Finally, you should check if you have acquired improved stress resilience. Start a session with the baseline as usual, then keep your skin temperature on elevated levels (well above 30°C / 86°F) for a couple of minutes.
2. Try to bring yourself into a strenuous situation. You can recall previously memorized everyday situations in which you had cold hands, or situations that made you tense and angry. You can also move to a stressful environment or ask another person to exert a stressful stimulus upon you. Keep the stress situation short and do not overload your ability to cope with it.
3. Now under stress, observe if the temperature drops, and still try to keep the temperature at a high level and avoid temperature drops. Always change phases of stress and targeted relaxation.
4. If you can sustain elevated levels of skin temperature during strenuous situations, ideally at levels above your personal maximum in the first stage, you have learned to remain relaxed and calm even in difficult and stressful situations. You have fully reached the goal of hand warming training!

## Functions of the Mindfield eSense App

The eSense comes with the eSense app which you can load for free in the Google Play Store (Android), Apple App Store (iOS) or Amazon App Store.

It offers a wealth of features for effective biofeedback training in a modern design. Essential functions are the display of measured values as bar graph and oscilloscope, feedback via video, music, sound, vibration and new: light with the help of smart bulbs (Magic Blue and Philips Hue). You receive a comprehensive evaluation after each measurement and can compare measurements with each other in the archive and export them as CSV files.

The app is available in English, German, Spanish, French, Italian, Portuguese, Ukrainian, Russian, Turkish, Dutch, Japanese and Chinese. The language is chosen automatically according to the set language of the smartphone or tablet.

### Download Links



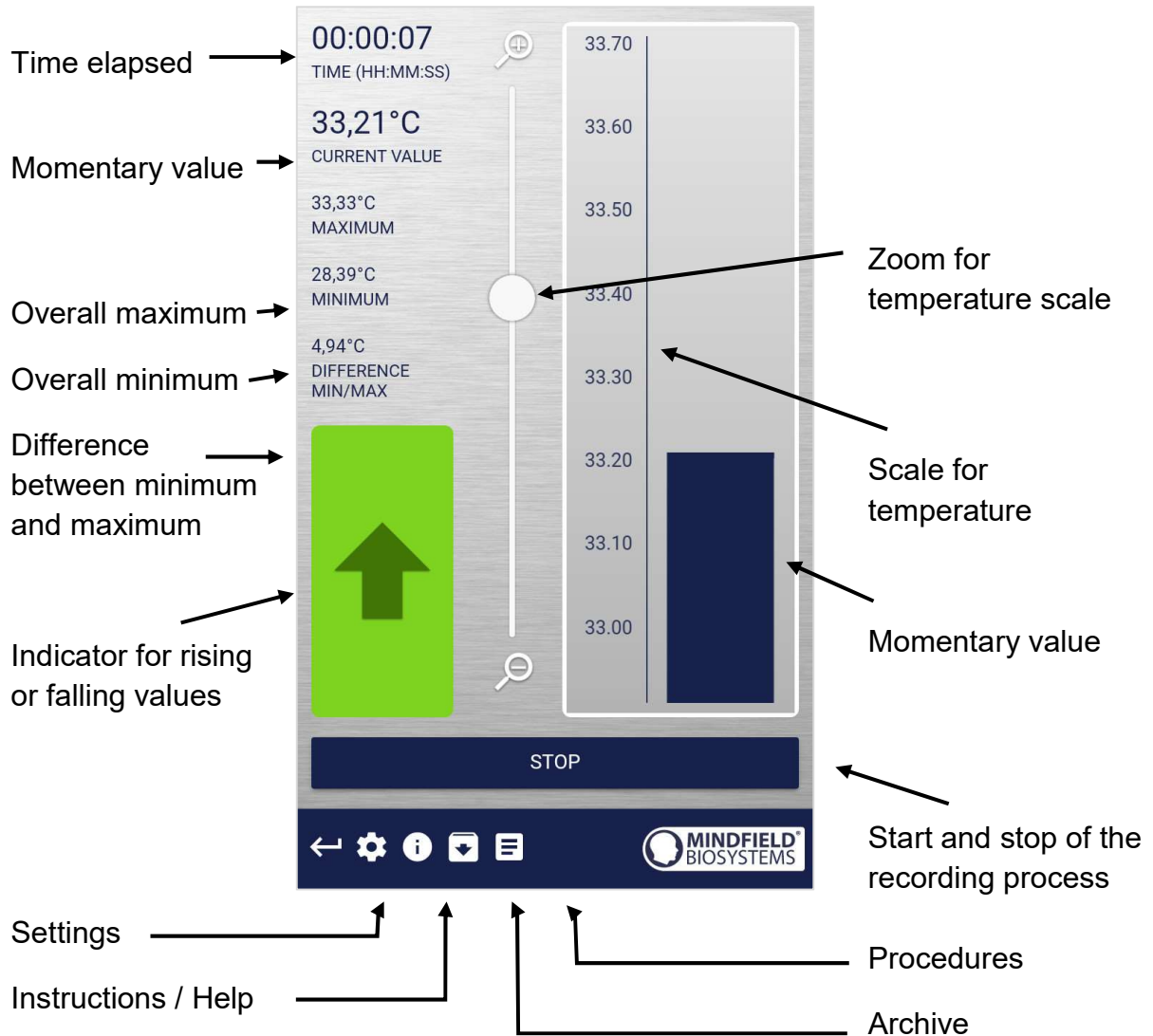
iOS: <https://itunes.apple.com/us/app/mindfield-esense/id1141032160?mt=8>

Android: <https://play.google.com/store/apps/details?id=com.mindfield.boisystem.esense>

Amazon: <https://www.amazon.com/dp/B073VPZ97R>

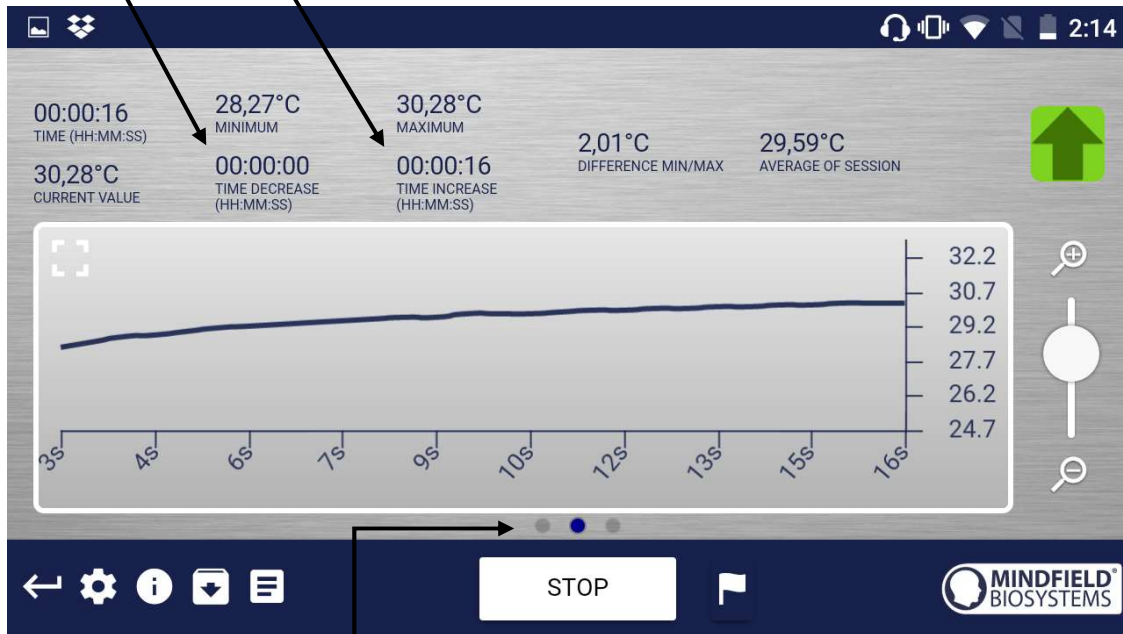


## General view



Absolute decrease of measured values

Absolute increase of measured values

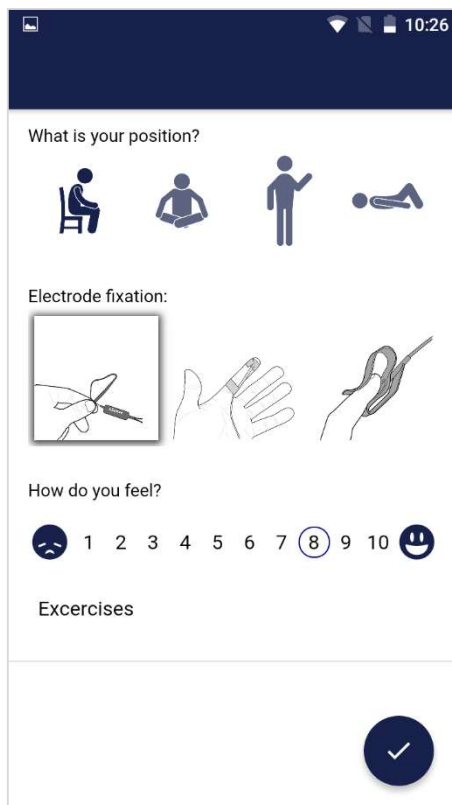


set marker

Swipe the screen to the left or right to change between this main screen and the video view. After the measurement is made, you can also switch to the pie charts.

## Survey (optional)

If you have toggled this option on in the settings, a survey will appear after each measurement. This enables you to archive reproducible measurements and to document changes in your measurements (if you f.i. change the electrodes type or if you start to use the eSense while lying down instead of sitting).



### What is your position?

Choose between sitting, legged/yoga sitting, standing or laid.

### Electrode fixation

The first image represents holding the sensor, the second image represents adhesive tape, and the third image represents the finger clip.

### How do you feel?

Here you set your mood after the session. This enables you to save your mood in connection with the measurements for the long-term.

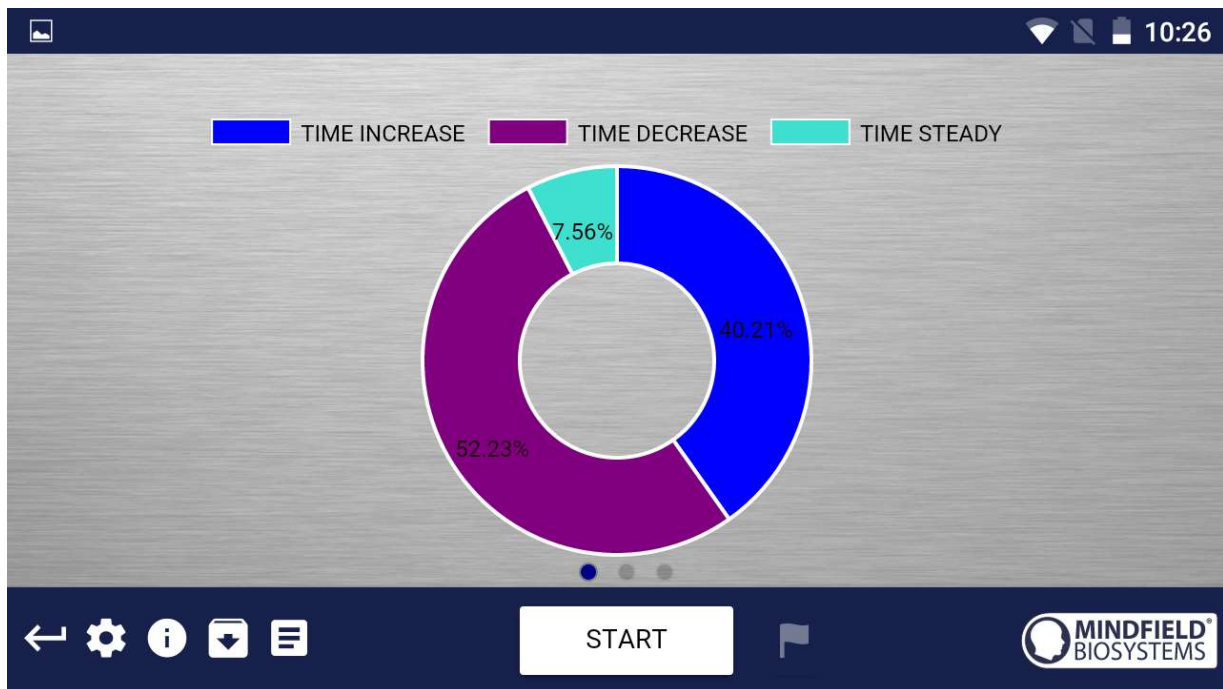
### Note (here "Test tone and tactile")

Here you can simply note a free text to the measurement. We suggest noting down special circumstances so that you can classify measurements with a lot of stress or relaxation even much later in time.

## Pie charts (after a measurement)

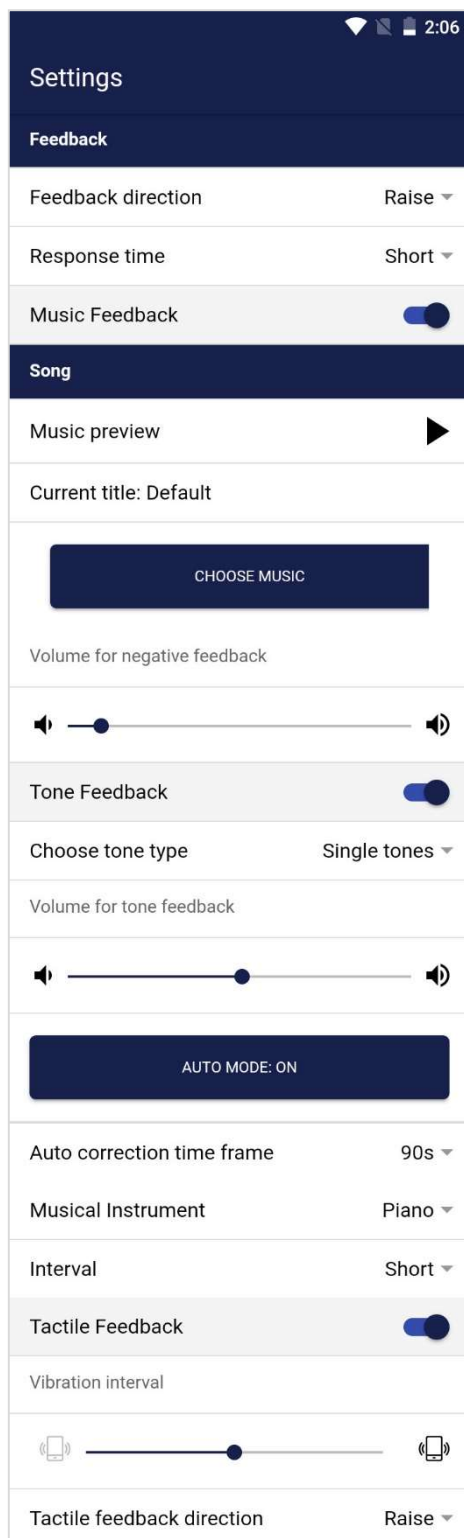
After the measurement (and optional survey), in the landscape mode, a survey appears with a chart: the time proportions of rising, falling or steady values (see screenshot).

Here too you can swipe the screen to the left or right to change between the pie chart and the graph of your measurement.



The pie charts after a measurement

## Settings (Overview)



The screenshot shows the 'Settings' screen of the eSense app. It is divided into two main sections: 'Feedback' and 'Song'. The 'Feedback' section includes settings for 'Feedback direction' (set to 'Raise'), 'Response time' (set to 'Short'), 'Music Feedback' (a toggle switch that is turned on), 'Tone Feedback' (a toggle switch that is turned on), 'Choose tone type' (set to 'Single tones'), and 'Tactile Feedback' (a toggle switch that is turned on). The 'Song' section includes a 'Music preview' button, a 'Current title: Default' label, a 'CHOOSE MUSIC' button, a 'Volume for negative feedback' slider, an 'AUTO MODE: ON' button, an 'Auto correction time frame' (set to '90s'), 'Musical Instrument' (set to 'Piano'), 'Interval' (set to 'Short'), 'Vibration interval' slider, and 'Tactile feedback direction' (set to 'Raise').

### Feedback Direction

Decide if rising ("raise") or falling ("lower") values should count as success for the feedback. The default-setting is short, which makes the feedback change fast to changes in the values. For longer measurements, we recommend middle or long; then the reaction time is a bit delayed and the eSense doesn't react to the smallest change of the values anymore.

### Response time

Adjust how sensitive and quick the feedback will react to a changing direction (rising or falling) of the values.

### Music Feedback

Volume for negative feedback: When values move in the wrong direction, the sound becomes quieter.

### Music Preview

Tab the play button to listen to the chosen song.

### Choose music

You can choose default or your own music.

### Volume for negative feedback

Set the volume for the music.

### Tone Feedback

You can always hear sounds from other Apps in the background.

### Choose tone type

You can choose between a single or continuous tone.

### Auto Mode

If this is activated, the range of values in which the tones are changing are adjusted automatically. The minimum- and maximum-value of the set correction frame is used automatically for the lower and upper border for the following interval.

### Auto correction time frame

(just visible if the auto mode is activated)

You can set the time frame in which the auto mode is adjusting itself.

### Musical instrument

You can choose from several pre-installed instruments.

### Interval

Set an interval for the tone feedback.






### Tactile Feedback

Your device will vibrate as feedback.

### Tactile Feedback Direction

Decide if rising ("raise") or falling ("lower") values should count as success for the feedback.



Smart bulb feedback	<input checked="" type="checkbox"/>
Choose a bulb	Philips Hue ▾
Hue is not configured yet, please tap on the button below to configure Hue:	
<b>CHANGE HUE SETTINGS</b>	
Hue brightness level	
 <input type="range"/> 	
Range for white bulbs (see Smartbulb FAQ)	
0% <input type="range"/> 100%	
<b>AUTO MODE: ON</b>	
Auto correction time frame	90s ▾
Lower range color	
Upper range color	
<b>Video</b>	
	
Video	Burning Wood ▾
<b>General</b>	
Session name:	Messung
Time length X-Axis	90s ▾
Temperature scale	Celsius ▾
Decimal separator	Comma ▾
Sample Rate (CSV Export)	1Hz ▾
Survey after recording	<input checked="" type="checkbox"/>

### Smart bulb feedback

The smart bulb will change its color according to values.

### Choose a bulb

You can choose between the Philips Hue and the Magic Blue.

### Change Hue Settings

Adjust the Settings for the Hue Bridge and Bulb.

### Hue brightness level

Adjust the brightness level of the smart bulb.

### Value range from-to

(not visible if the auto mode is activated)

Adjust the value range in which the bulb feedback is active. We suggest you set the range wide in the beginning and make it smaller if necessary. Alternatively, you can also choose the auto mode.

### Auto Mode

When toggled on, the value range in which the light changes is set automatically. The minimum- and maximum-value of the set correction frame is used automatically for the lower and upper border for the following interval.

### Auto correction time frame

(just visible if the auto mode is activated)

You can set the time frame in which the auto mode is adjusting itself.

### Video

Select: In the Dropdown Menu, you can choose also "Custom". You can choose your own videos from the hard drive of your device.

### Session name

Set the shown name of the measurements in the archive.

### Time length X-Axis

You can set the time frame which is shown on the graph while measuring.

### Decimal separator

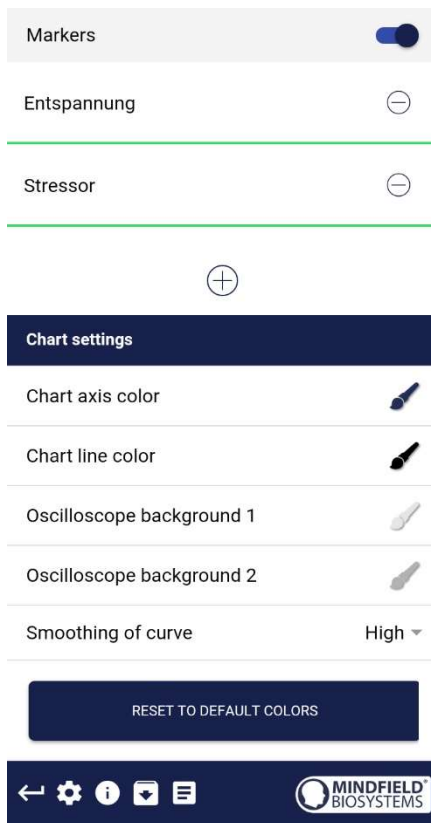
You can choose between point or comma.

### Sample Rate (CSV Export)

This determines how many values per Second are recorded. More values (a higher value of Hz) creates more detailed data, but also increases the size of the download-file.

### Survey after recording

Here you can toggle on or of the survey (position, electrode type, mood, note) after each measurement.



### Markers

If toggled on, you can add markers by tapping the + Button. Those are the markers you can then choose while a measurement (see “set markers” in the general view in the landscape mode above).

### Chart settings

You can change the colors of the chart and oscilloscope in the general view.

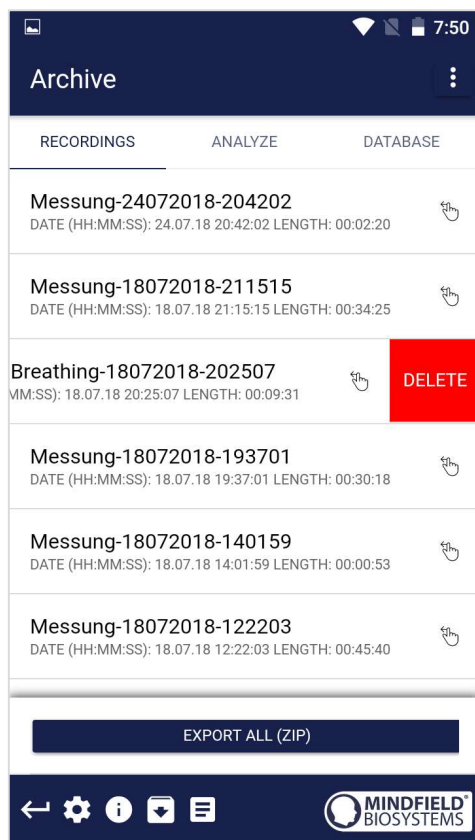
### Smoothing of curve

The peaks of the curve are smoothed out if set to High or Middle. The curve is not altered when set to None.

### Reset to default colors

You can anytime go back to the default colors of the chart in the general view.

## Archive (overview)



The app contains also an archive, in which you can save your measurements and export them as well. You can watch those in detail again, compare them to each other and export them individual or all together (as ZIP file).

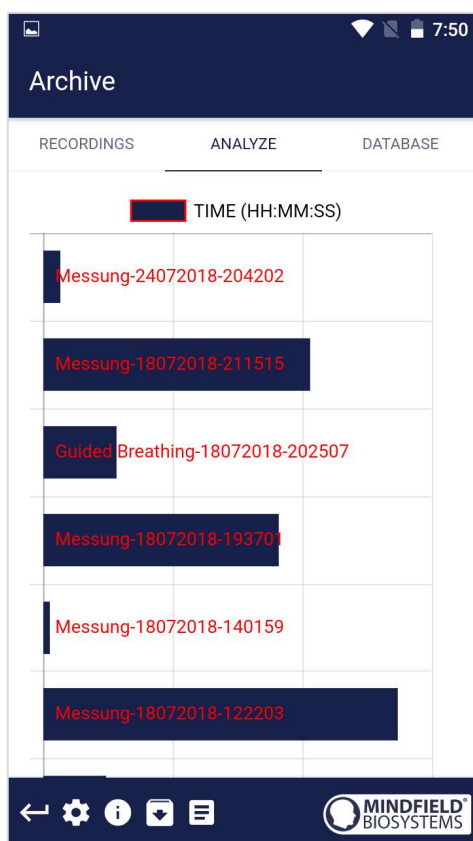
### Recordings

You can see the measurements listed here. You can see an individual measurement by tapping on it.

To select certain measurements and compare them in the Analyze tab, tap on the 3 points in the upper right corner and choose "Select".

If you want to delete a measurement from this list, you can swipe it to the left (shown from the third measurement).

In the lower area, you see the button to export all measurements as compressed ZIP-data.

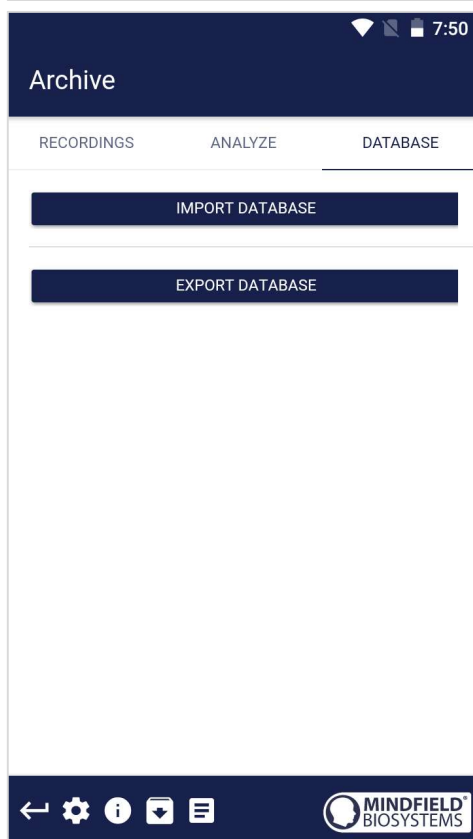


## Analyze

Here all measurements are listed according to the following factors:

Time, Average of Session  $\mu$ S, Minimum  $\mu$ S, Maximum  $\mu$ S, Difference Min/Max  $\mu$ S, Time Increase, Time Decrease, Total SCR, % of SCR of Session.

With this, you can recognize trends over time and over several measurements (if, for example, your % of SCR of Session is decreasing by regular training, you can see this here at a glance)

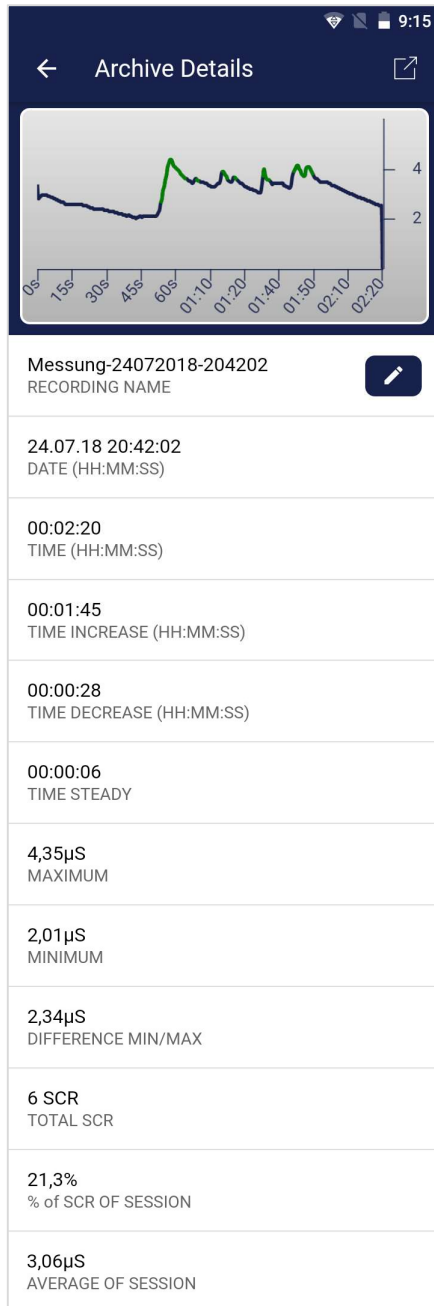


## Database

You can import and export all measurements as a database (.sql-file). The database is saved locally on the device and can be imported at a later point. For example, in case of a fresh installation of the app. We will add another option of an online backup of the database with an update of the eSense app in the future.

**This option is just available under Android right now and will be also available for iOS in the future.**

## Archiv (individual view)



## Export data

If you click on the export symbol on the top right, you can export the measurements as a .csv-file with all common apps (f.i., send over the Messenger, WhatsApp, email etc.) or simply save them on your device or in your cloud.

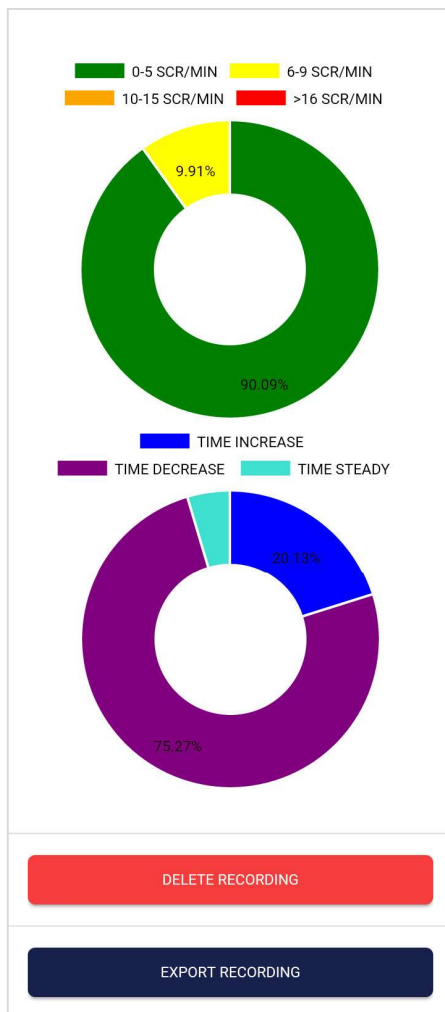
The data are exported as a .csv-file (comma separated values). This format can be opened f.i. with Microsoft Excel or Open Office Calc (for free).

If you like to work with Google, Google Sheets can be an alternative to Excel for you. You can open your exported .csv-files and visualize and access them via the cloud easily from several devices. Google Sheets has almost the same functions as Excel, and the interface is very similar as well.

**Notice:** We have also created a detailed guide for the CSV export and the processing of your data in a separate guide. This can be found under the following link:

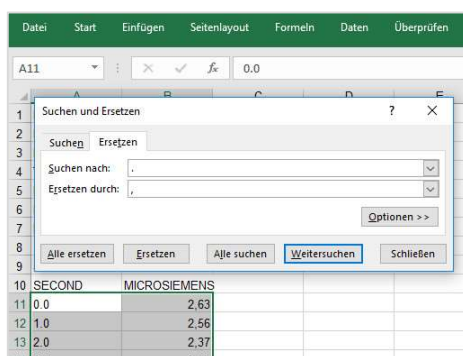
<http://mindfield.de/esense-csv-guide>





## SRC

You can see the SRC of the measurement here as well. Both pie charts are the same as those that you see right after the measurement. You can find more information in the chapter *Skin Conductance Response (SCR)* in this manual.



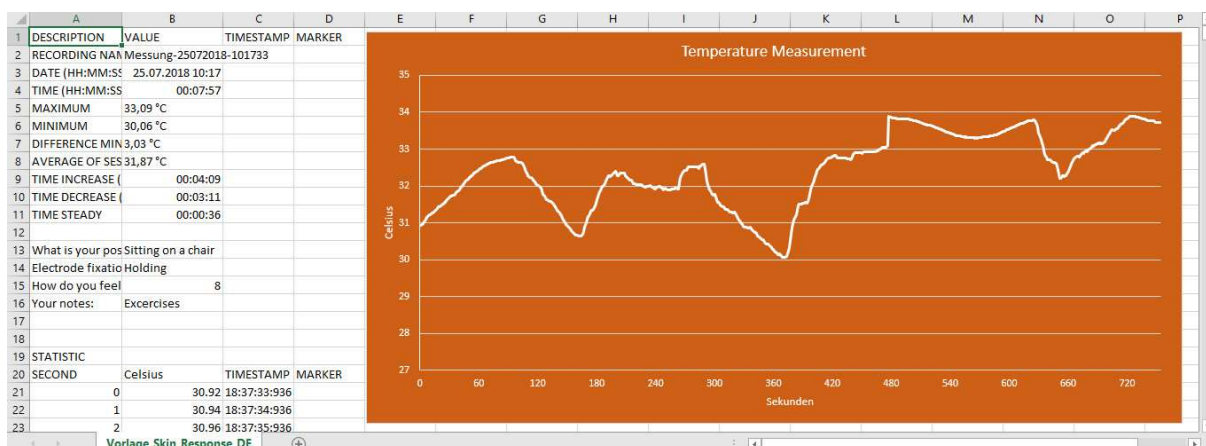
SECOND	MICROSIEMENS
0.0	2.63
1.0	2.56
2.0	2.37
3.0	2.44

## In Excel™ or Google Sheets™

**Notice:** If you open the .csv-file with Excel™ (or Google Sheets™) and your values make no sense, then there is usually a different set language in the eSense App and Excel™ and Sheets™.

**Notice:** We have also created a detailed guide for the CSV export and the processing of your data in a separate guide. This can be found under the following link:

<http://mindfield.de/esense-csv-guide>

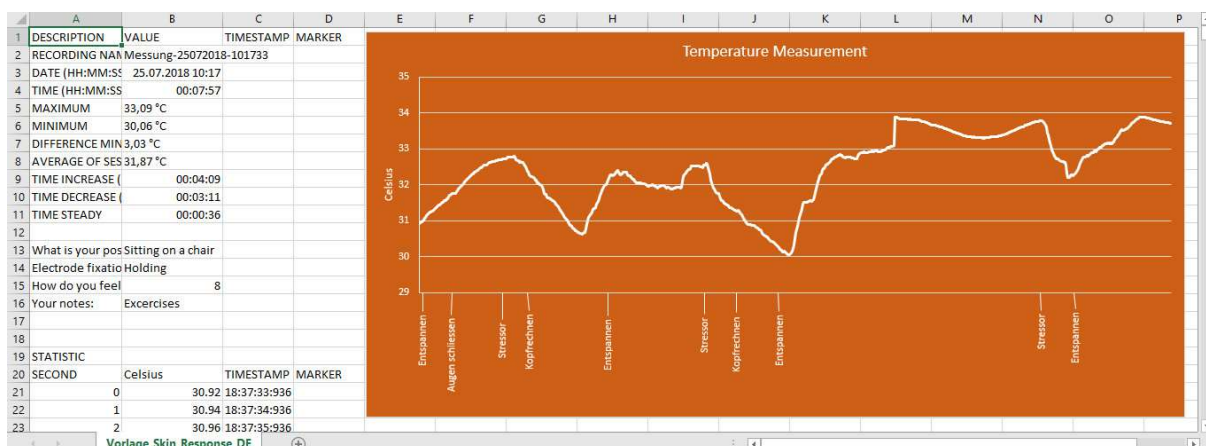


**Exported data in Excel**

## Marker feature

You can also set markers during your measurements. For example, if you have a regular biofeedback exercise which involves breathing calm at a specific point, you can set a marker in that moment when you breath calmly. Later in the exported data, you can see the moment where you breathed calmly. Especially in longer measurements with several actions, this comes in handy.

The markers can be displayed especially well in Excel:



**Exported measurement in Excel with markers**

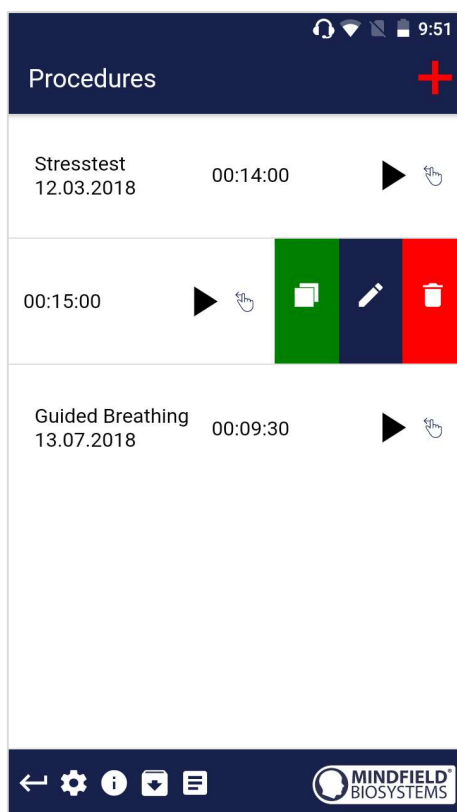
## Procedures

A procedure consists of several assembled modules. With this new feature, you can build the perfect individual relaxation guide, a stress test, pre-defined biofeedback training or use it for research.

There are many possibilities. During a procedure, your skin response or temperature (depending on the eSense sensor you have) is recorded, and after the procedure, you see your results for each module and in total.

We suggest you test the demo-procedures which are included in the app. Those will give you a guided overview over the different modules and functions of the procedures.

## Procedures Settings



### Edit or delete procedure

To edit a procedure, simply swipe it to the left in the overview.

You can then tap the blue pen-symbol to edit the module.

If you want to copy the procedure, tap on the green copy-symbol.

By touching the red trash symbol, you can delete the module.

## Procedure editor

Procedure editor

Procedure name

Relaxation

Created at:

12.03.2018

Export settings

Decimal separator

Point

Sample Rate (CSV Export)

1Hz

Start time (00:00:00)

Text

90

▼

Fixation cross

120

▼

Text

30

▲

End time (00:15:00)

Add module to procedure

+

← ⚙ ⓘ ⬇ ☰

MINDFIELD BIOSYSTEMS

### Procedure name

Here you can name your procedure with a suitable name (in this example, it is simply "test").

### Decimal separator

You can choose between point or comma.

### Sample Rate (CSV Export)

This determines how many values per second are recorded. More values (a higher value of Hz) creates more detailed data but also increases the size of the download-file.

### Procedure editor with modules

You can change the order of the single modules by the arrows.

To edit a single module, simply swipe it to the left.

The color of the modules in this overview is determined by your settings in the module editor.

### Add Module to procedure

Start to add modules to your procedure by pushing the + -sign!

## Add new module

Add new module

Procedure general settings

Procedure name

Test

Created at:

25.03.2018

Module type

Image file ▾

Module duration


120s.

⌚

⌚

Module color

Image module settings



Feedback image

Meditation - 1 ▾


←

⚙️

ℹ️

⬇️

☰



### Module Type

You can choose between a text, a video, an audio file, a fixation cross, an arrow or a bar graph.

### Module duration

Set how long the module will last. Simply swipe the slider to the left or right.

### Module color

Determine the color of the module in the procedure editor.

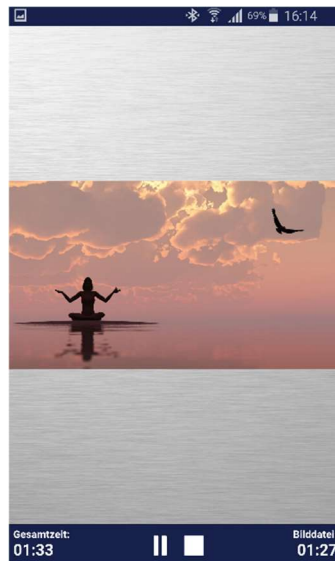


## Overview of the modules



### Text module

This module shows a text which you can edit.



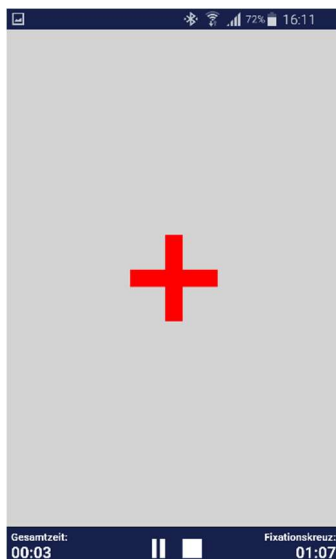
### Picture module

The picture module shows either a standard picture from the app or a picture from your gallery.



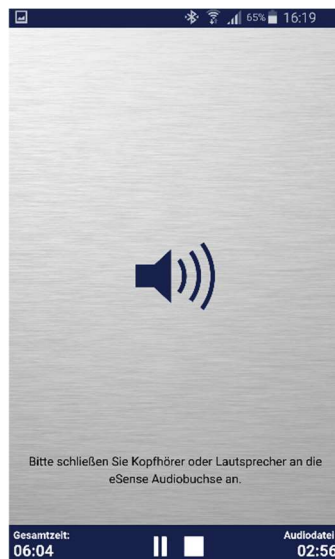
### Video module

In the video module, you can choose either the standard video from the app or use your own video.



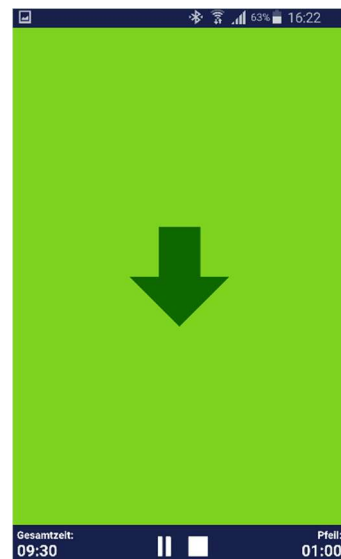
### Fixation cross module

The cross changes its color according to the conductance and provides direct biofeedback.



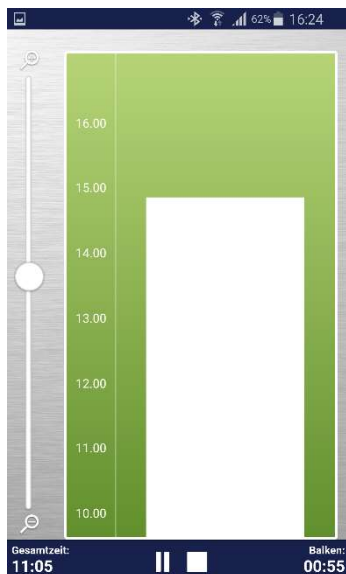
### Audio module

The audio module is playing a relaxing song. You can choose your own music.



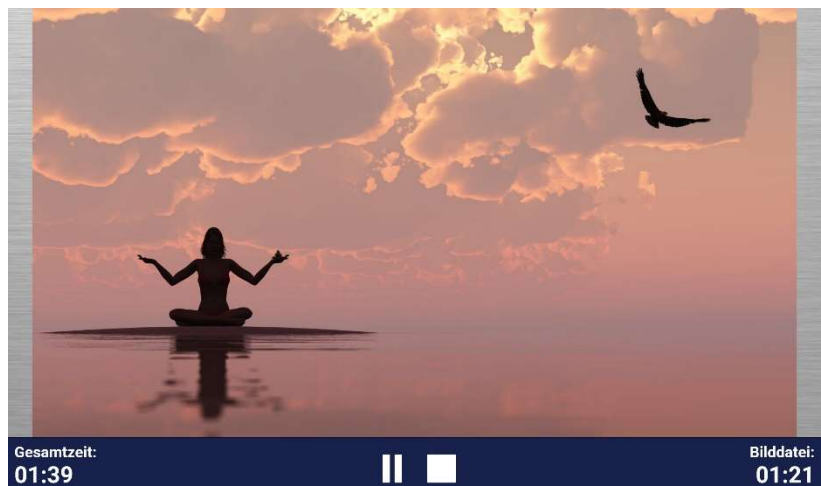
### Arrow module

The arrow changes according to relaxation and gives you direct biofeedback.



### Bar graph module

The bar graph shows your current value and gives you direct biofeedback.



### Picture module in landscape format

The procedures can be displayed in landscape format.



### Procedure in archive

## Supported devices Android

In general, Android smartphones and tablets from Android 4.4 can be used with the eSense without complications.

Your Android device requires a 3.5mm jack (headphone jack) for external microphones, which is built-in into most devices by default.

We suggest the [Amazon Fire 7](#) as an affordable tablet to use with the eSense.

## Supported devices iOS

The following iOS devices can be used with the eSense:

Apple® iPhone® from 4S

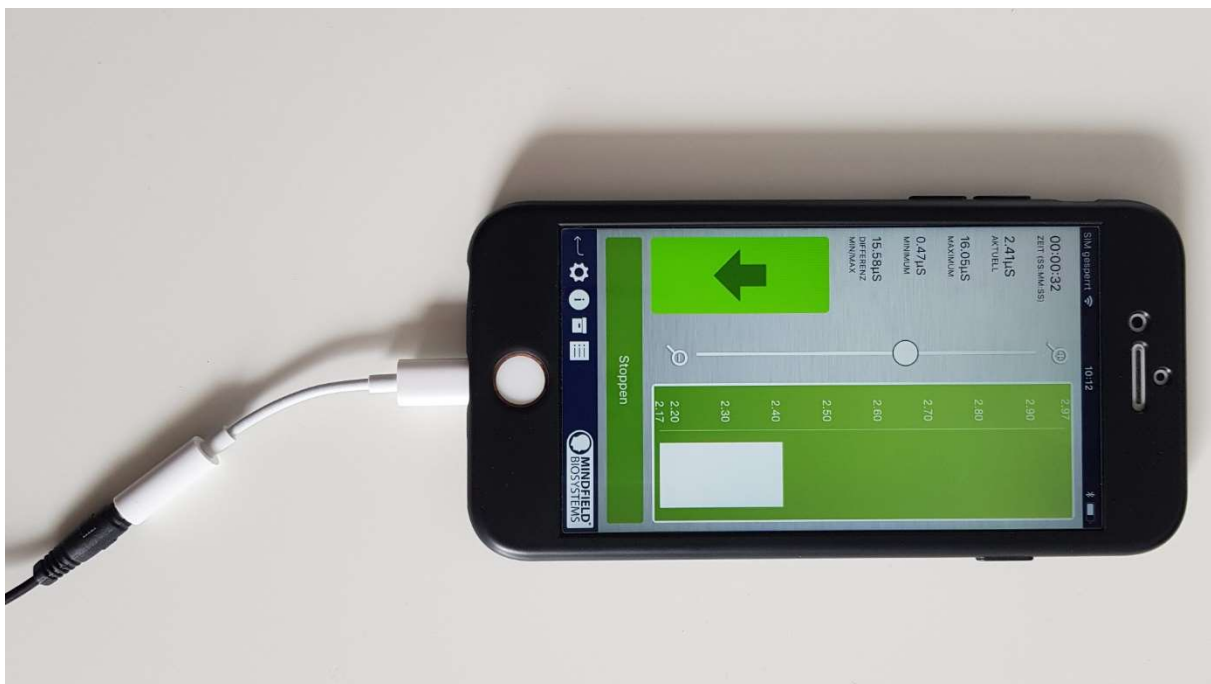
Apple® iPad® from 2nd Generation

Apple® iPad® Pro

Apple® iPod touch® from 5th Generation

Apple® iPhone 7, iPhone 7 Plus, iPhone 8, iPhone 8 Plus and iPhone X (in combination with the included Lightning to 3.5 mm Headphone Jack Adapter)

**Additional note iOS 7 and higher:** The eSense works through the microphone port. From iOS 7 or higher, you have to allow the eSense app to use the microphone port, otherwise it will not work. During installation, you will be asked for permission to use the microphone port. Please answer with “Yes” or “Allow”. After installation, you can make this setting manually: Allow the eSense app to use the microphone port in the system settings of your iOS device: Settings -> Privacy -> Microphone.



Lightning to 3.5 mm Headphone Jack Adapter

## New: Smart Bulb (optional)



**eSense Skin response in use with the Magic Blue smart bulb**

The eSense app can support biofeedback via smart bulbs. Smart bulbs can change their colors and brightness and can be controlled via Bluetooth. In combination with the eSense app, smart bulbs indicate your level of stress or relaxation via the light from the bulb.

Currently, the eSense app supports the Magic Blue and Phillips Hue smart bulbs. From within the eSense App, you can connect to the Magic Blue or the Phillips Hue and use the smart bulb in your biofeedback session.

We have a separate FAQ for the smart bulbs also here:

<https://www.mindfield.de/en/category/11-esense.html?download=151>

### Magic Blue

You can buy the Magic Bulb at our shop at <https://mindfield-shop.com/en/magic-blue-led-esense.html> or Gearbest at [https://www.gearbest.com/smart-light-bulb/pp\\_230349.html](https://www.gearbest.com/smart-light-bulb/pp_230349.html)

## Phillips Hue

You should find the Phillips Hue in every well-sorted electronic store. You can also order online. A list of the on- and offline-merchants can be also found on the page of the Phillips Hue: <https://www2.meethue.com/en-us>

We suggest you use one of the starter kits from Phillips, with the eSense. This also contains a colored bulb ("Color Ambience"):

<https://www.amazon.com/dp/B06Y3QXSGX>

We recommend the Hue Color ambience for the best experience because with the colors, the feedback can be enhanced with different colors.



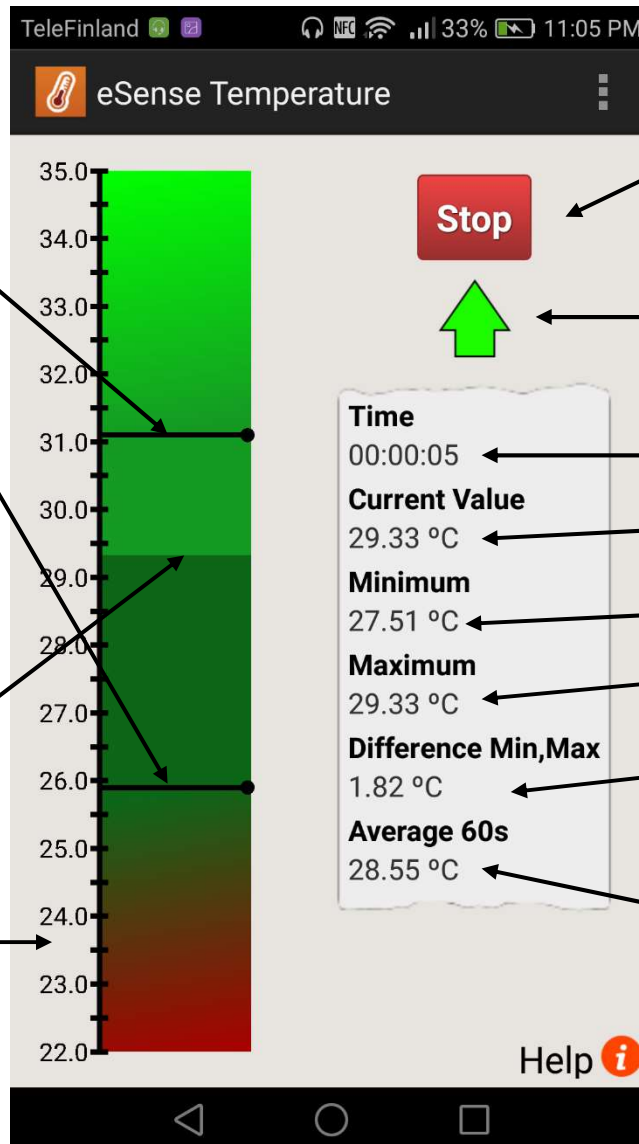
## Functions of the previous eSense Temperature App

### General View

Moveable training thresholds for the color gradient (hot to cold)

Momentary temperature value

Temperature scale (°C or °F)



Start and stop of the recording process

Indicator for rising or falling values

Time elapsed

Momentary value

Overall minimum

Overall maximum

Difference between minimum and maximum

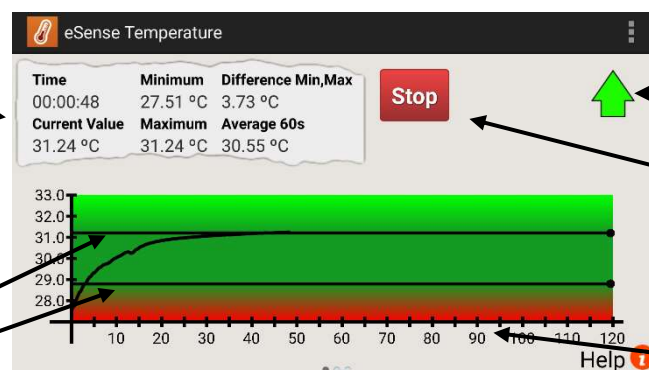
Last 60 second's average value

Help 

Instructions and help

Same values like in vertical format

Moveable training thresholds for the color gradient

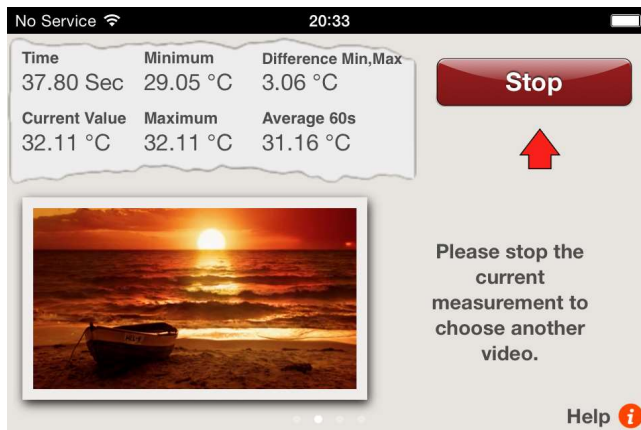


Indicator for rising or falling values

Start and stop of the recording

Time scale in seconds

## Set up of animation



Sweep your finger over the display to change between the horizontal format and the animation.

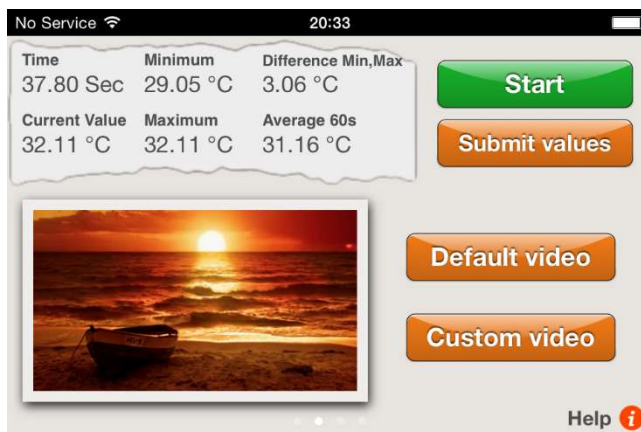
Double tap on the animation to maximize it.

Move two fingers together ("pinch") to shrink the animation to its original size!

Rising temperatures keep the animation going, while falling temperatures stop it.

You want to raise your skin temperature, so keep the animation going!

Tap on Custom Video to choose your own video, and tap on Default Video to return to the standard video!



**When using iOS, your custom video must be in the "Camera Roll."**

**Here's how you add a video to it:**

1. Send the video to yourself in an e-mail.
2. Open the e-mail in the Mail app.
3. Download the video.
4. Click and hold the video and select "Save to Camera Roll."
5. Now you can select the video from within the eSense app.

A list of supported video formats for iOS can be found here:

<http://www.apple.com/de/iphone/specs.html>

**When using Android, your video must be in the "Gallery."**

**Here's how you add a video:**

1. Send the video to yourself in an e-mail.
2. Open the e-mail in the Mail app.
3. The video will be shown as an attachment. Click the dots on the right edge of the attachment and select "save".
4. The video is now in the Gallery and can be loaded by eSense.

**As an alternative, you can use Dropbox:**

1. Move the video into your Dropbox.
2. Select the video from the Dropbox and export it onto the SD card in the "Movies" folder (in the Gallery).

A list of supported video formats for Android can be found here:

<http://developer.android.com/guide/appendix/media-formats.html>

## Configuration of auditory feedback



### Audible Feedback on/off

You can always hear sounds from other Apps in the background.

### Volume for negative Feedback

When values move in the wrong direction, the sound becomes quieter:

0% = mute

100% = undiminished volume

### Feedback Direction

Decide if rising ("raise") or falling ("lower") values should count as success for the feedback.

### Choose Song

Please choose any Audio file.



Display on iPhone®

### Feedback Response Time

Adjust how sensitive and quick the feedback will react to a changing direction (rising or falling) of the values.

### Export and forward of measured values



After stopping a recording, you can transfer the measured values via e-mail (in iOS, you need an email account for this function).

Five values per second are saved to a CSV file, where every line indicates one value; so, five lines correspond to one second of measurement.

Click on "Submit values" to send a CSV (comma separated value) file to your personal or any other email.

The file can be processed in Microsoft Excel™ or Open Office.

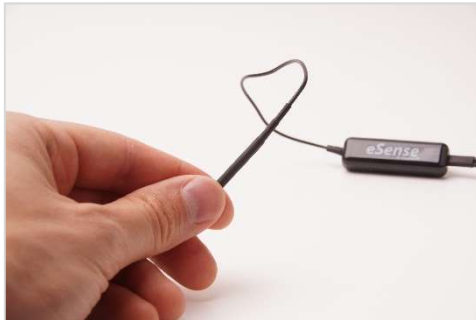
### Important note regarding iOS

The previous eSense iOS app is not supported by iOS 11 anymore. Please use the eSense app instead, under iOS 11.

## Options for fixation of sensor

You can simply hold the sensor, fixate it with a Leukosilk (medical tape) or use our Finger clip.

### Holding



Holding between index finger and thumb.

No additional equipment necessary.

### Leukosilk (medical tape)



Mounting on a finger or the palm.

Fixation with Leukosilk.

More comfortable.



## Finger Clip



No sticking.

No heat accumulation.

Best fixation of temperature sensor.

### **Our recommendation**

You can order the Finger Clip here:

<https://mindfield-shop.com/innovative-finger-clip-for-temperature-sensor.html>

## Extending the cord of the eSense

If you wish to use a longer cord between the eSense and your smart phone or tablet, you can extend the original cord of the eSense with a common, 4-pin, 3.5mm jack headset extension cord. We have tested three cords that have worked well:

2m cord: <http://amzn.to/2kJwqBM>

0,5m cord: <http://amzn.to/2kKEONs>

110cm cord: <http://amzn.to/2jJg1LZ>

All three suggested cords cost between £6-8 and are available from Amazon. Alternatively, you should be able to use other 4-pin cords as well.

## EC Declaration of Conformity for the Mindfield eSense

In accordance with the following directive(s):

The Electromagnetic Compatibility Directive (EMC) (2004/108/EG)  
RoHS - Restriction of (the use of certain) hazardous substances (2011/65/EU)  
WEEE Waste Electrical and Electronic Equipment (2002/96/EG & 2008/34/EG)

### The manufacturer

Mindfield Bio-systems Ltd.  
Hindenburgring 4  
D-48599 Gronau  
Germany

WEEE-Reg.-Nr. DE 24465971

hereby declares that the following product:

“Mindfield® eSense Temperature”

complies with all applicable essential requirements of the directives.

It is in conformity with the applicable requirements of the following documents:

DIN EN 60950-1 Information technology equipment – Safety – Part 1: General requirements (2011-01)

DIN EN 55022 Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement (2008-05)

DIN EN 55024 Information technology equipment - Immunity characteristics - Limits and methods of measurement (2011-09)

Place: Gronau

Date: 19th of August 2017

*N. Rockensüß*  
 **MINDFIELD®**  
BIOSYSTEMS  
www.mindfield.de  
*A Better State of Mind*

Niko Rockensüß, Managing Director



The Mindfield eSense has to be recycled as electrical waste according to the legal requirements.

WEEE-Reg.-Nr. DE 24465971

## Manufacturer

Tel: + 49 (0)2565 406 27 27 · Fax: + 49 (0)2565 406 27 28 · E-Mail:  
info@mindfield.de

Please send never unprompted packages to us. Unfree returns will not be accepted and cannot be processed.

[illegible]