

# Soft fingertip force sensor

**buttonsens<sup>®</sup>**

*Quantifying fingertip forces*

**buttonsens<sup>®</sup>** enables the quantitative analysis of **finger forces** and **dexterity**.

The textile sensor can be utilized to **measure forces** when pushing a **button** or at any other finger-object interaction.

## **buttonsens<sup>®</sup> key features:**

- quickly measure the force with an easy to use sensor
- visualize and analyze data in realtime via a mobile app
- quantify forces to design best practices and work standards for processes
- analyze mechanical properties of button or switches for ergonomic optimization
- enable precise work flow standards by creating thresholds and using auditory or visual feedback



## Technical information

Sampling rate:  
Up to 100 Hz

Conformable  
and flexible

Accuracy (% at ZAS): +/-5



Battery life:  
up to 48 hours

Force range:  
2.5 – 60 N or 10 – 150 N

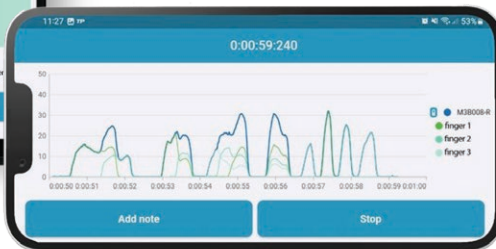
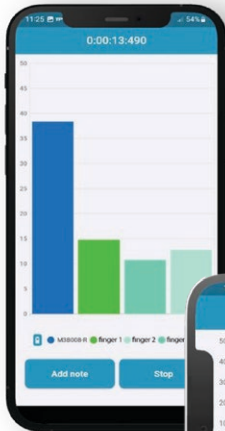
## loadapp® technical specifications

Connect up to 6 electronic units

Synchronize measurement with video

Export data as ASCII and share instantly

Visualize data as time series and get  
visual or audio feedback in realtime



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## buttonsens® applications

buttonsens® is the leading technology for mobile force evaluation in many fields in which the load on the hand is to be monitored in daily routine. Some example applications include:

Rehabilitation: grasping, writing	Ergonomics in industrial applications
Sports: Archery, cycling, tennis, golf	Training & education in manual therapy and medicine
Industry: Automotive, robotics, exoskeletons	And many more ...

## buttonsens® sensors

Technical data	buttonsens
number of sensors	1-3
dimensions (mm)	17 x 17 Standard and custom
sampling rate (Hz)	10-100
transmission	Bluetooth® LE
operating devices	iOS or Android mobile devices
power supply	3V coin cells

## buttonsens® glove

The buttonsens® glove is a highly accurate and reliable solution for load measurements on the entire hand. The system consists of a palm sensor and up to 12 finger sensors, which can be combined as desired.



### emed®

*Accurate & reliable foot analysis*

**emed®** enables the analysis of the barefoot at highest quality level.

Easily scan the **pressure distribution** and get a reliable and accurate **analysis of the foot function**.

### loadpad®

*Force evaluation on deformable surfaces*

**loadpad®** enables the effortless measurement of forces on contact areas and interfaces.

Utilize the mobile, wireless and versatile sensors to **analyze contact forces** between objects accurately and reliably.

### loadsol®

*Truly wireless load measurement*

**loadsol®** enables truly wireless in-shoe force measurement **now in any environment** and with **any movement**.

Capture the interaction between foot and ground **accurately, effortlessly**, and with **flexibility**.

### pedar®

*Leading system for in-shoe measurement*

**pedar®** enables the analysis of the **interaction between the foot and the shoe** at highest quality and precision levels.

Use the system for **in-shoe pedography** and collect reliable pressure and load distribution data.

### pliance®

*Accurate surface pressure analysis*

**pliance®** enables the measurement of force and **pressure** distribution between **3D-deformed interfaces**.

Utilize pliance to analyse pressure on **seats, saddles, mattresses** and any other soft or hard object.

### texsens®

*Unobtrusive low pressure sensing*

**texsens®** enables the analysis of local pressures between soft interfaces (e.g. between skin & textiles).

Use texsens to precisely quantify pressure and **optimize your wearable products** or **garmets**.