

# Firstbeat Bodyguard 3 For Research Device for Clinical Grade ECG-based HRV Monitoring



The **Firstbeat Bodyguard 3 (BG3)** is a personal measurement device for clinical grade ECG-based HRV monitoring. It measures motion tracking data and heart rate to the nearest millisecond. For research, it provides highly accurate raw data to confidently assess physiological reactions.

BG3 sensor and electrodes enable ECG-based beat-to-beat heart rate data, the “gold standard” for heart rate variability (HRV) monitoring used in clinical settings.

BG3 for research includes the BG3 sensor and Firstbeat Bodyguard 3 Exporter tool. You can purchase electrodes directly from Firstbeat or use compatible clinically approved ECG electrodes with the device.

When a new research project starts, the selected number of BG3 measurement devices will be delivered at once to the customer. In research projects and for educational purposes, devices may be re-used and circulated between research participants.

The technology is reliable for all users, both during rest and in motion. Unlike optical sensors, accuracy is not dependent on, e.g., skin pigment or temperature, anatomy, or motion state.

The Bodyguard 3 is not a medical device, with the help of which diseases could be discovered or cured. Bodyguard 3 devices purchased for normal Firstbeat Life/Firstbeat Sports use are not compatible for research use and the necessary software.

## Bodyguard 3 for Research Starter Pack

Price per unit. Bodyguard 3 Exporter tool included.

1 - 9	299,00 Euro / unit
10 - 99	279,00 Euro / unit
100+	249,00 Euro / unit

## Electrodes

Price per box. One (1) box includes 10 pouches (total of 300 electrodes)

**33,00 Euro / box**

Prices shown are subject to applicable tax.



# Firstbeat Bodyguard 3 | Technical Specifications

Device for Clinical Grade ECG-based HRV Monitoring

## RR-interval Measurement

BG3 measures beat-by-beat intervals as time between consecutive R-peaks in ECG. Measurement resolution: 1ms.

## 1-Channel ECG

- 256 Hz
- 18-bit per sample
- Motion noise suppression with HP 4.4Hz  
→ optimal for wearable rhythm monitoring

## Data Export\*

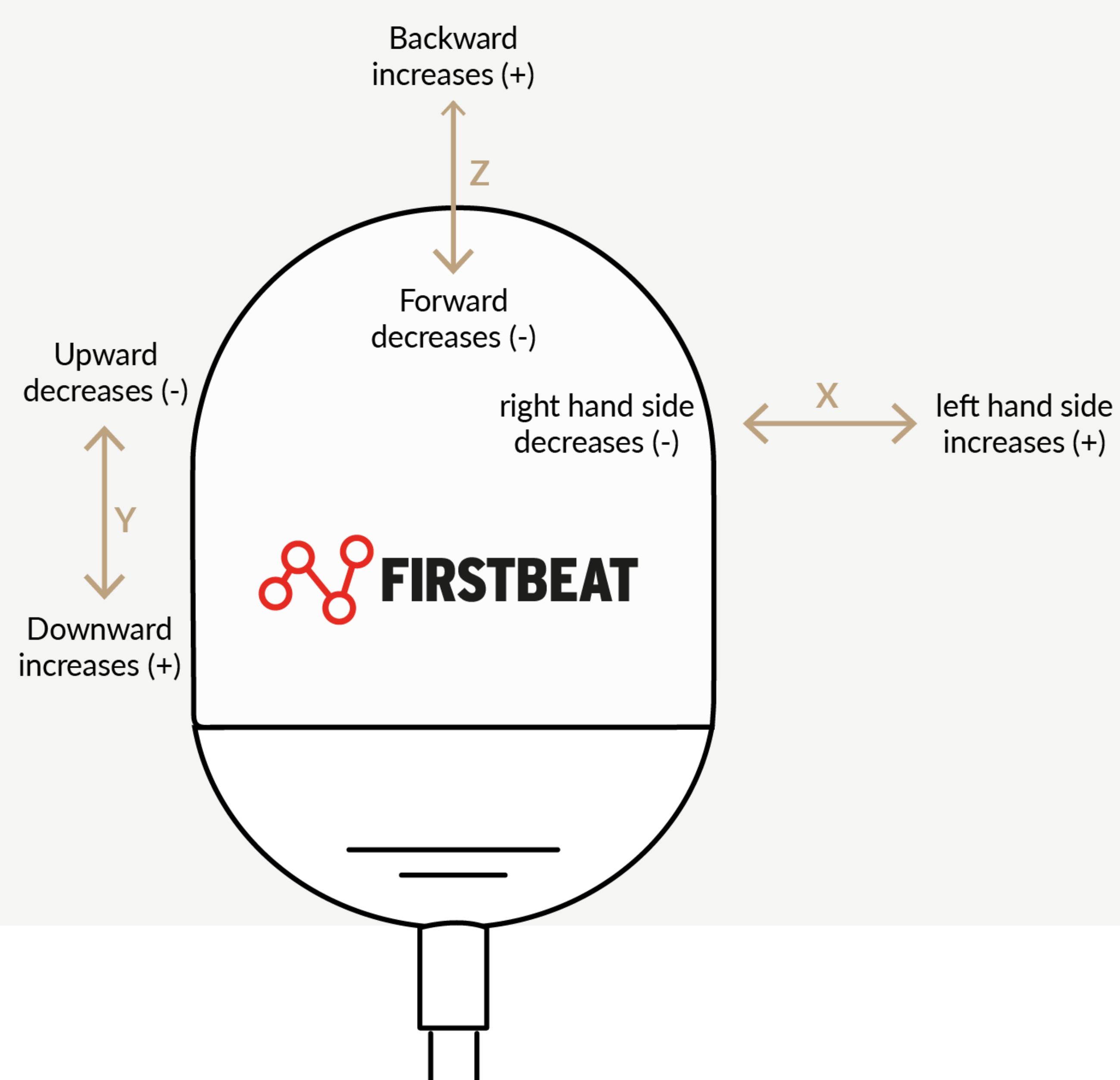
to CSV (ECG, ACC, RRI) format.

## Accelerometer

Accelerometer provides measurement data for three (3) dimensions (X, Y, Z). When device is attached to a person to correct position, the dimensions are as follows (see the picture on right):

- Dimension X measures acceleration right and left.
- Dimension Y measures acceleration up and down.
- Dimension Z measures acceleration forward and backward.

**3D ACC:** 25.6Hz, +-8G, 16- bit integer per channel, 1G corresponds to 1024 LSB



## Battery and Charging Procedures

**Battery life:** up to 7 days in a continuous 24/7 measurement, 6 months in standby mode

**Charging time from empty to full:** approximately 75 minutes

## Measurement and Storage

**Measurement temperature:** +5 - +45 C°

**Storage temperature:** -20 - +60 C°

**Storage capacity:** Up to 36 hours of full RAW data (ECG, ACC, RRI). Up to one month of RRI recording only.

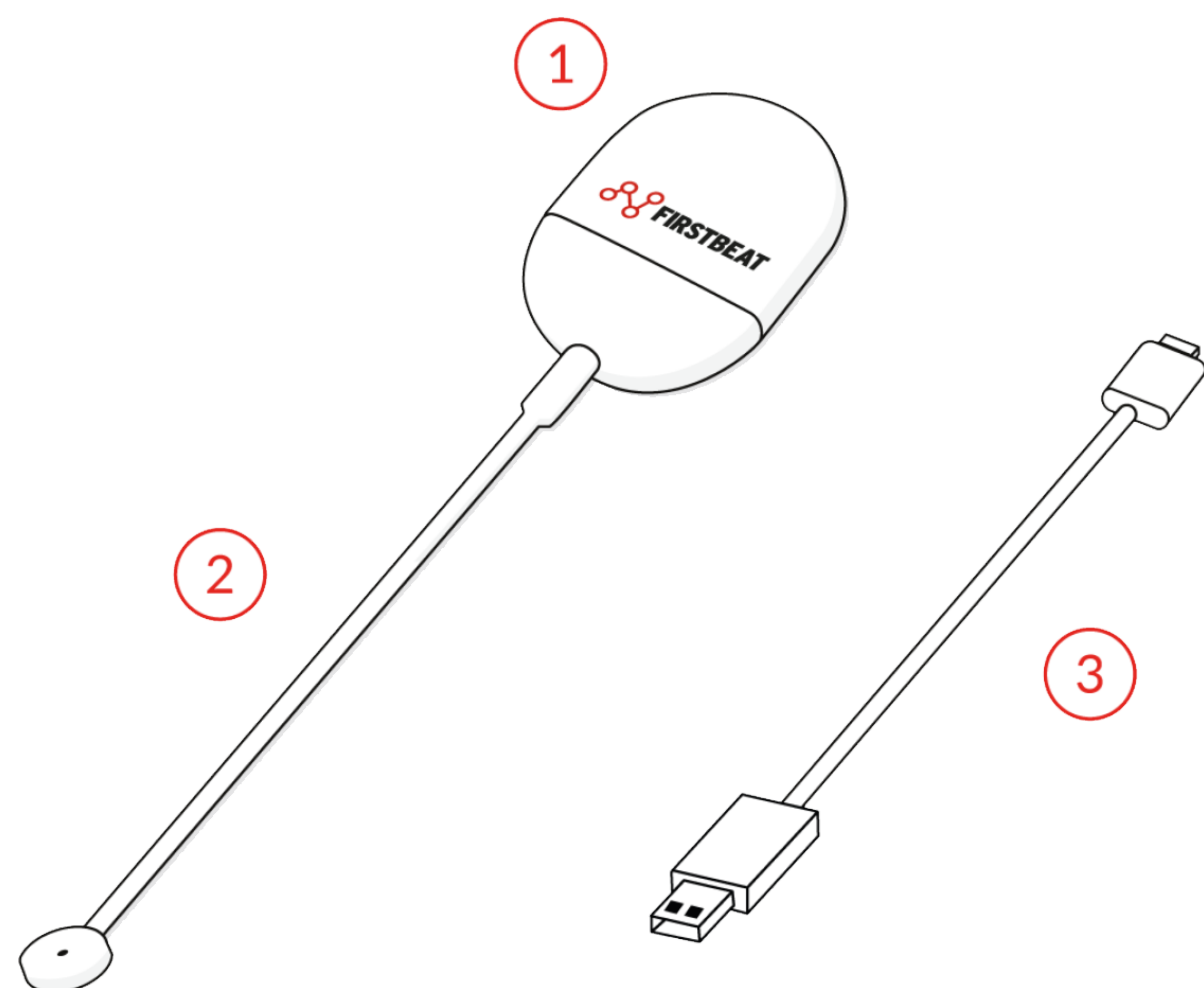
## IP Class Information

**IP class during measurement:** IP54

## Dimension

**Weight:** 26 grams

**Size:** 54mm x 38mm x 7,7mm



1 Firstbeat BG3 recorder | 2 Firstbeat BG3 electrode cable | 3 USB charging cable