

# the ReLog

A vibration data logger  
from ReVibe Energy

Measure and analyse  
vibrations with extreme  
precision



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# APPLICATIONS FOR THE RELOG

The ReLog can be used in several applications where continuous vibration, shock and impact recording is core to understand the monitored object's behavior



## POTENTIAL USAGE WITH THE RELOG

- Failure mode analysis
- Product evaluation
- Certification testing
- Vibration monitoring
- Shock monitoring
- Qualification testing
- Machine health
- Impact monitoring

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## ABOUT REVIBE ENERGY

Welcome to the world of vibrations

ReVibe is a Swedish company based in the city of Gothenburg that was founded in 2014 by local entrepreneurs, Chalmers Ventures and Saab Group.

The company vision is to establish ReVibe as the worlds leading suppliers of vibration data loggers as well as vibration energy harvesting units.



**SAAB**

# ReLog

## Highlighted features

1

### High sample rate and bandwidth

the ReLog is configurable for different sample rates to give you the flexibility of measuring between 0 - 32,000 Hz with a bandwidth of 10 kHz

2

### High precision and accuracy

with low noise level of less than 6mg across the bandwidth and 16 bit resolution, the ReLog ensures that you always will get the best precision when measuring vibrations

3

### Measure for several weeks

with extensive battery life and memory capacity (32 GB, 64 GB or 128 GB) the ReLog is capable of measuring for up to 155 hours when sampling at 32 kHz in 3 directions and several weeks when using lower sampling rate

BUILT WITH

## PRECISION AND QUALITY IN MIND

The ReLog has been built by engineers who value high quality instruments and products that last. At ReVibe, we pride ourselves with delivering products that are considered to be of the highest quality. The ReLog is no exception.

# VibInspect analysis software

When you are done measuring, simply connect the ReLog to a PC and the measurement files will be easily available for further analysis in the included software. Analysis include e.g. discrete fourier transform, power spectral density, acceleration distribution, orbit plots, etc.

## FEATURES

- Change ReLog settings prior to recording vibrations and configure parameters
- Apply several different filters
- Export functionality to other file formats
- View and analyse recorded data

## INCLUDED ANALYSIS FEATURES

- PSD
- FFT
- Spectrogram
- Histogram
- Power over bandwidth



## TECHNICAL DETAILS

- Files stored as 3-channel .wav
- Convertible to .csv via export function

## SYSTEM REQUIREMENTS

- Windows 10 or later versions
- Memory: 8 GB (minimum), 16 GB (recommended)
- Processor: 64 bit required

# ReLog

## Technical specifications

### PHYSICAL & ENVIRONMENTAL

Weight	220 g
Dimensions	103 x 61 x 25.8 mm
Operating temperature	-20°C – 60°C (-4°F to 140°F)
Calibrated temperature	-20°C – 60°C (-4°F to 140°F)
Recommended storage temperature	+10°C – 30°C (50°F to 86°F)
Charching temperature	0°C – 40°C (32°F to 104°F)
Shock limit	2,000 g

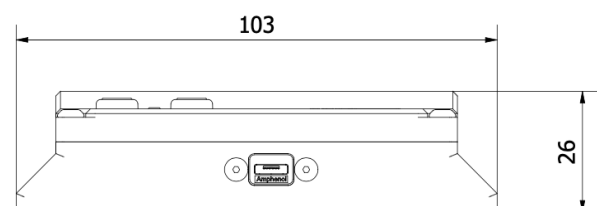
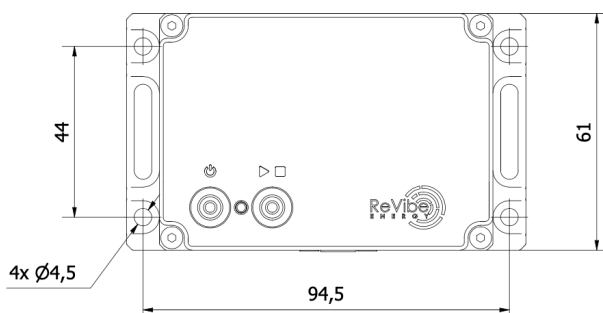
### STORAGE

Type of storage	Internal SD card
Transfer of data	Via USB cable to PC
Storage size	ReLog S: 32 GB ReLog M: 64 GB ReLog L: 128 GB
Max. recording length with 32,000 Hz sample rate	ReLog S: 46 hours ReLog M: 93 hours ReLog L: 155 hours

### FEATURES

RTC (Real-time-clock)	Yes
Logging while charching over USB (can be connected to power outlet)	Yes
CE, RoHS compliant	Yes

### DIMENSIONS







# ReLog

## Technical specifications

### PRIMARY ACCELEROMETER

Accelerometer	Capacitive MEMS
Main features	High frequency, high G and low noise
Sample rate per axis	32,000 Hz 16,000 Hz 8,000 Hz 4,000 Hz
Bandwidth	-3 dB at 10 kHz
Measurement range	+/- 50 g
Shock resistance	10,000 g
Resolution	1.5 mg
Noise density	26 $\mu\text{g}/\sqrt{\text{Hz}}$
Analog anti-aliasing filter cutoff frequency	10 kHz

### TEMPERATURE SENSOR

Temperature range	-40°C to +150°C (-40°F to 302°F)
Accuracy	$\pm 0.20^\circ\text{C}$ from -10°C to +85°C at 3.0 V  $\pm 0.25^\circ\text{C}$ from -20°C to +105°C from 2.7 V to 3.3 V
Total temperature drift	0.00073 °C

### SECONDARY ACCELEROMETER

Accelerometer	Capacitive MEMS
Main features	DC accurate, long-term stability and minimal drift versus temperature
Sample rate per axis	4,000 Hz 2,000 Hz 1,000 Hz 500 Hz 250 Hz 125 Hz
Bandwidth	-3 dB at 550 Hz
Measurement range	+/- 2.048 g +/- 4.096 g +/- 8.192 g
Shock resistance	5,000 g
Resolution	3.9 $\mu\text{g}$ at +/- 2.048 g 7.8 $\mu\text{g}$ +/- 4.096 g 15.6 $\mu\text{g}$ +/- 8.192 g
Noise density	25 $\mu\text{g}/\sqrt{\text{Hz}}$
Analog anti-aliasing filter cutoff frequency	1.5 kHz

# ReLog



## Technical specifications

### BATTERY SPECIFICATIONS

Chemistry	Rechargeable Lithium-Ion
Nominal capacity	ReLog S: 2,600 mAh ReLog M: 3,000 mAh ReLog L: 3,400 mAh
Minimum capacity	ReLog S: 2,500 mAh ReLog M: 2,900 mAh ReLog L: 3,300 mAh
Operating temperature	-20°C – 60°C (-4°F to 140°F)
Storage temperature	1 month: -20°C – 60°C (-4°F to 140°F) 3 months: -20°C – 45°C (-4°F to 49°F) 1 year: -20°C – 20°C (-4°F to 4°F)
Battery time at full sampling rate	Approximately 155 hours