

## General Description

**OIAC11** is a configurable impact recorder, based on MEMS accelerometer. The device is powered with replaceable standard AA batteries that guarantees at least 3 months of operation under normal use. The accelerometer provides the acceleration monitoring up to 8g of force.

The device offers a simple interface to configure the detection threshold and the current time. The embedded non-volatile memory can save up to 62 events.

The software interface is available onboard: you can easily download it any time, thanks to the embedded USB memory.

The device is equipped with a red light, that blinks during operation every minute, to communicate that it is alive.

OIAC11 has an IP67 robust metal case that offers a versatile mounting flange to be adapted to a wide range of situations.



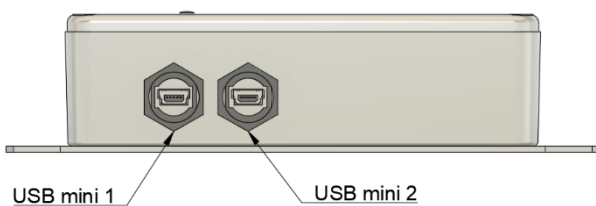
## Features

- Up to  $\pm 8g$
- User configurable
- USB memory stick with downloadable software interface
- Event non-volatile memory
- Works with low cost and common AA batteries
- USB mini connector for connections
- Metal robust enclosure with mounting flanges
- IP67
- Alive indicator

## Applications

Logistics / Transport and Storage  
 Transformers  
 Turbines  
 Automotive parts  
 Construction equipment

## Pin Functions



### Connectors

No.	Name	Function
1	USB mini 1	Device communication with host PC
2	USB mini 2	Memory stick with downloadable software interface

## Ordering Information

**OIAC11†** Impact data logger with USB mini connectors

† Optoi reserves the right to change the circuitry and specifications without notice at any time.

**ABSOLUTE MAXIMUM RATINGS**

Symbol	Parameter	Min	Max	Unit
T <sub>S</sub>	Storage Temperature without batteries	-20	55	°C
T <sub>A</sub>	Operating Temperature Range with alkaline batteries	-20	55	°C

Stresses beyond those listed under "Absolute Maximum Ratings" may cause permanent damage to the device.

Exposure to absolute maximum rated conditions for extended periods may affect device reliability.

**ELECTRICAL CHARACTERISTICS**

T<sub>A</sub> = 25°C, unless otherwise noted.

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
V <sub>CC</sub>	Supply Voltage Range	2x AA alkaline batteries	2,3	3	3,5	V
I <sub>CC</sub>	Current consumption	Awake - led on	-	5,1	-	mA
		Awake - led off	-	4,8	-	mA
		Sleep - Monitoring	-	78	-	µA
F <sub>S</sub>	Sampling frequency		-	400	-	Hz
F <sub>C</sub>	Cutoff frequency		-	200	-	Hz
R <sub>g</sub>	Shock range		-	±8	-	g
M	Memory	Number of events	-	-	62	-
Res	Resolution	±8g	-	4	-	mg

**MECHANICAL CHARACTERISTICS**

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
IP	Protection grade	-	-	-	IP67	
Wt	Weight	-	-	234	-	g
W	Width	-	-	60,5	-	mm
L	Length	-	-	140,2	-	mm
H	Height	-	-	32,5	-	mm

**MECHANICAL DIMENSIONS**

The dimensions are expressed in mm, tolerance  $\pm 0.1$ mm.

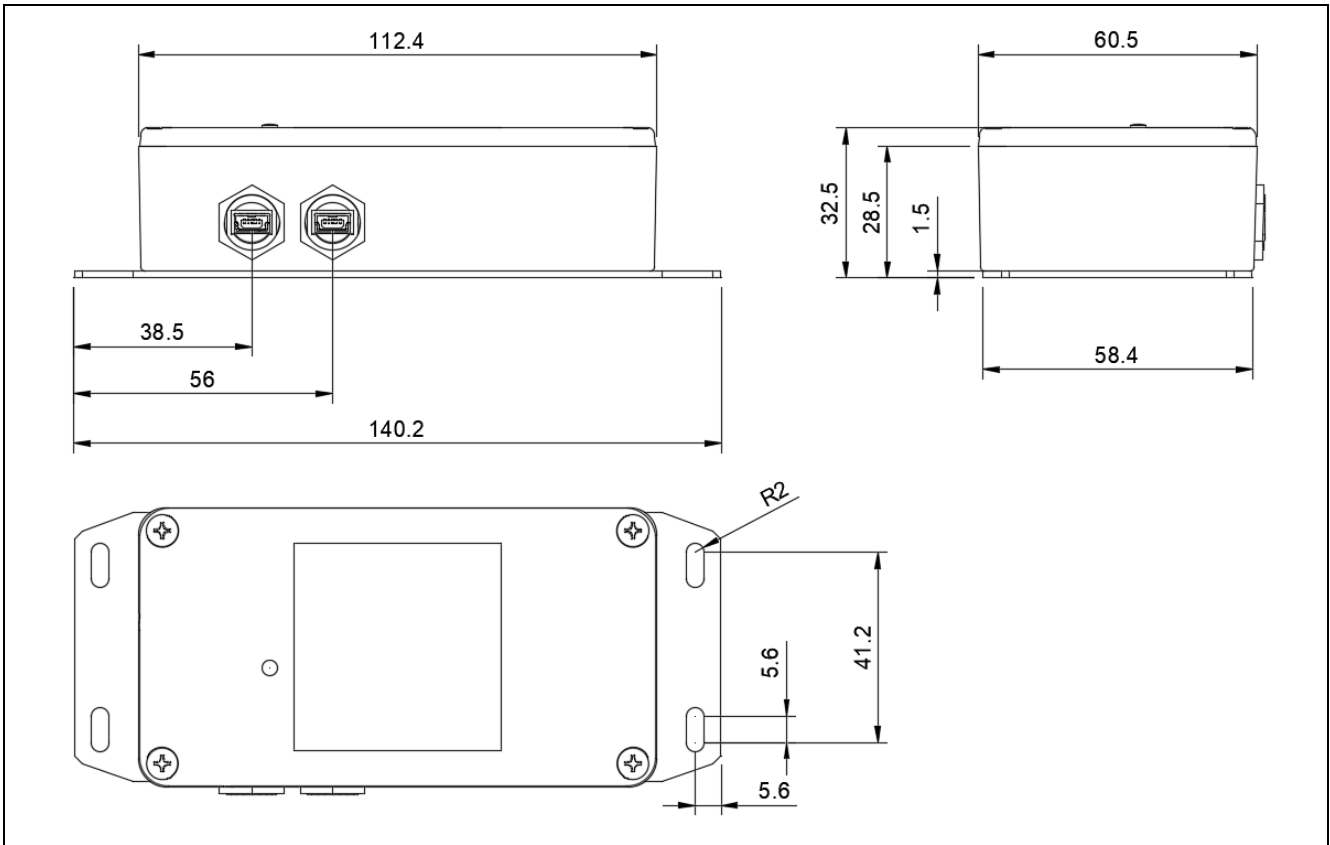


Figure 1 – Metal case dimensions

**AXES CONFIGURATION**

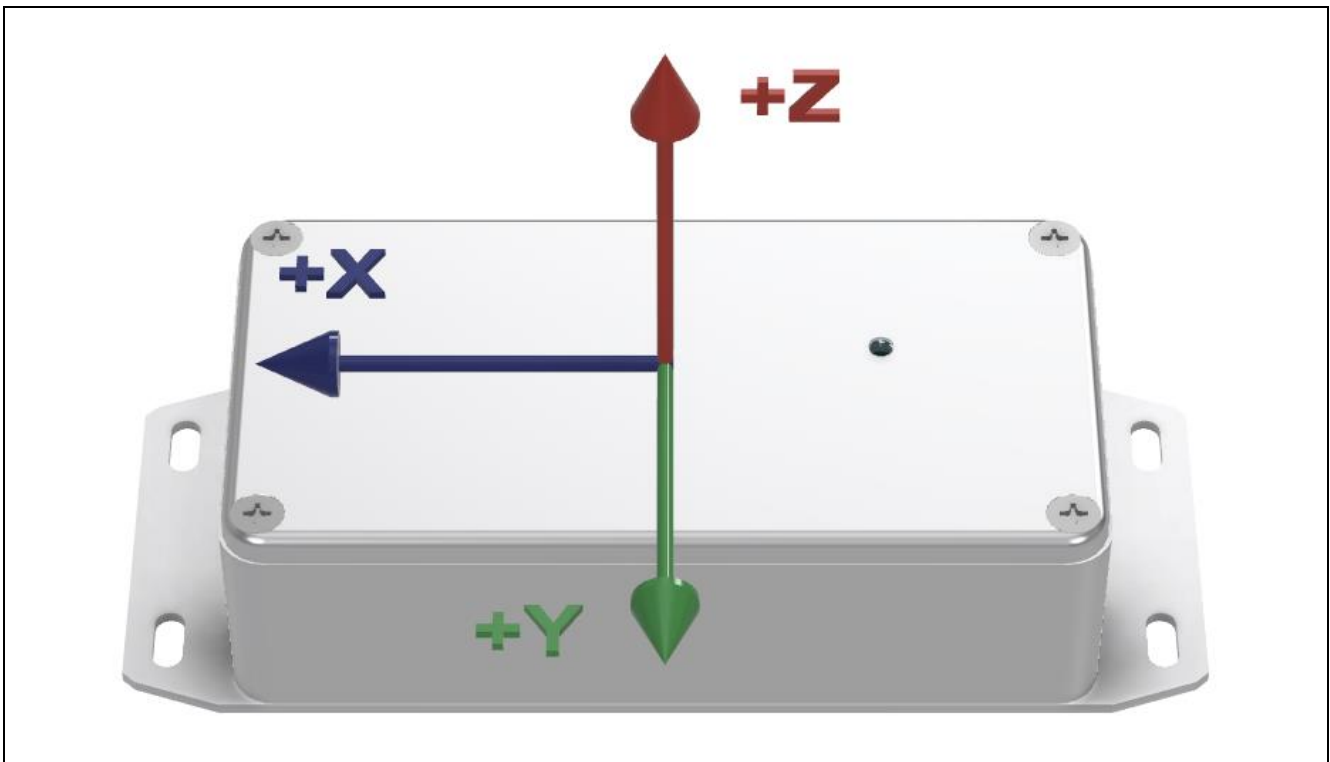


Figure 2 – Axes configuration schematic