

General Description

OIAC12 is a configurable impact recorder, based on MEMS accelerometer. The device is powered with replaceable standard C batteries that guarantees at least 1 year 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 3992 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.

OIAC12 has an IP67 robust metal case that offers a versatile mounting flange to be adapted to a wide range of situations.



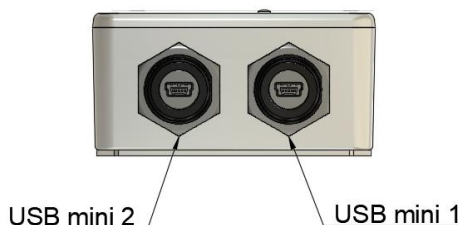
Features

- Up to $\pm 8g$
- User configurable
- USB memory stick with downloadable software interface
- Event non-volatile memory
- Works with low cost and standard Alkaline C 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

OIAC12† 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 _S	Storage Temperature without batteries	-20	55	°C
T _A	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_A = 25°C, unless otherwise noted.

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
V _{CC}	Supply Voltage Range	2x C alkaline batteries	2,3	3	3,5	V
I _{CC}	Current consumption	Awake - led on	-	5,1	-	mA
		Awake - led off	-	4,8	-	mA
		Sleep - Monitoring	-	78	-	µA
F _S	Sampling frequency		-	400	-	Hz
F _C	Cutoff frequency		-	200	-	Hz
R _g	Shock range		-	±8	-	g
M	Memory	Number of events	-	-	3992	-
Res	Resolution	±8g	-	0,1	-	g

MECHANICAL CHARACTERISTICS

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
IP	Protection grade	-	-	-	IP67	
Wt	Weight	Batteries included	-	472	-	g
W	Width	-	-	77	-	mm
L	Length	-	-	143,5	-	mm
H	Height	-	-	39	-	mm

MECHANICAL DIMENSIONS

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

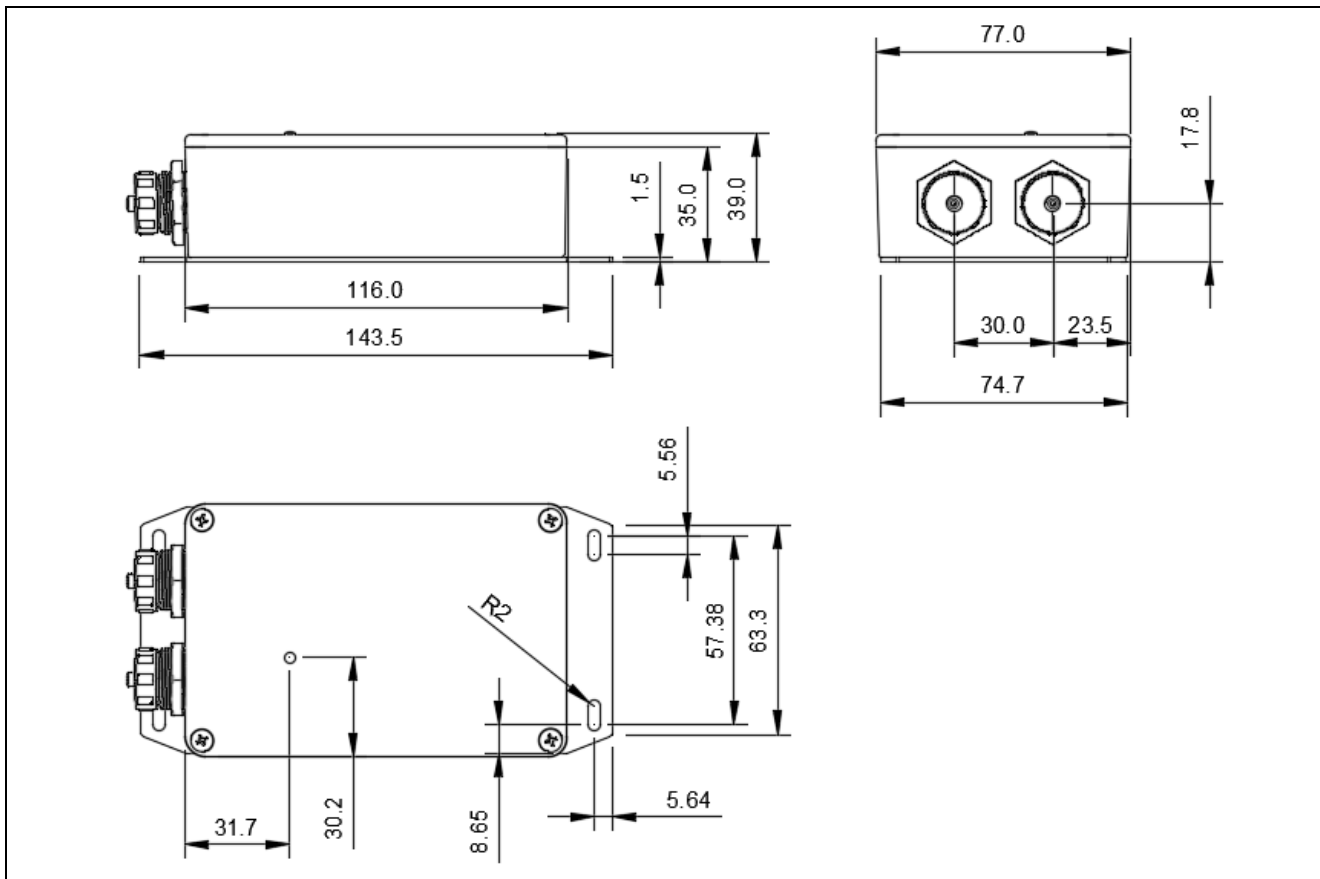


Figure 1 – Metal case dimensions

AXES CONFIGURATION

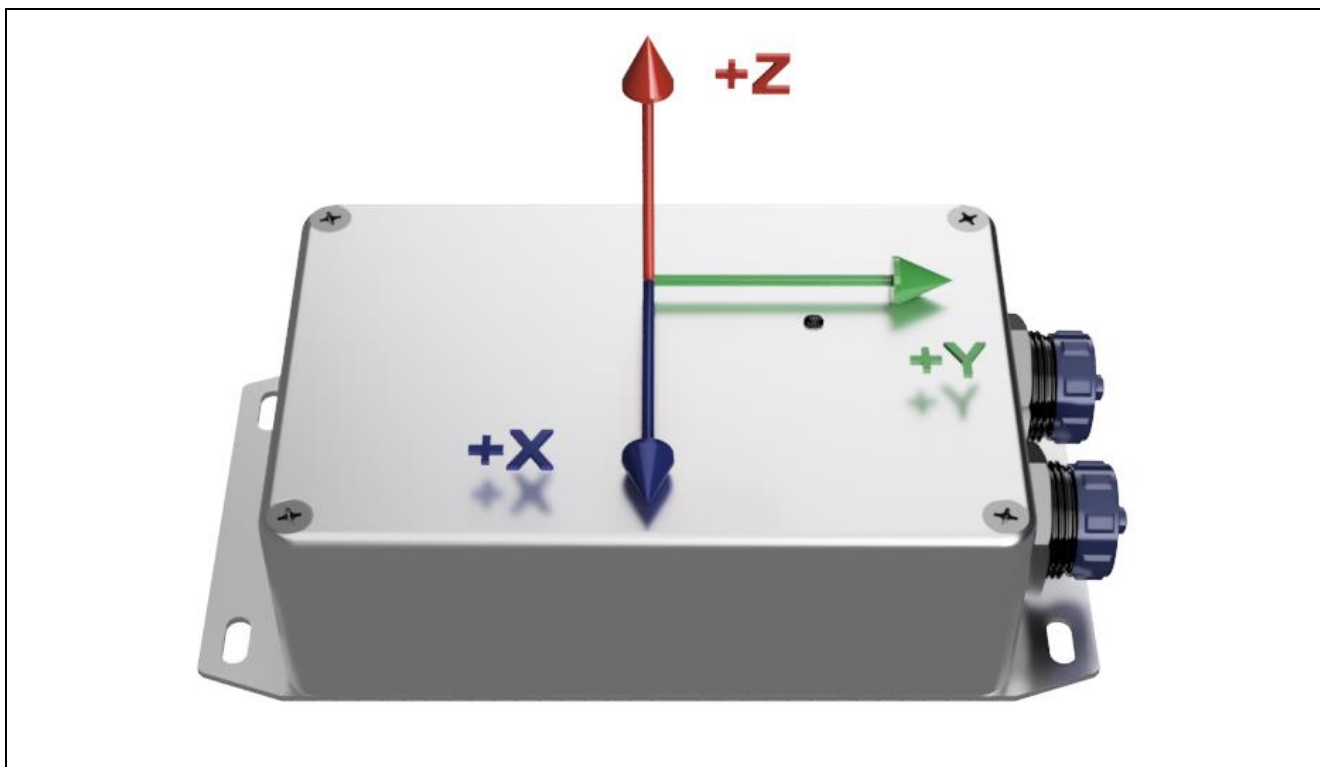


Figure 2 – Axes configuration schematic