Extended Datasheet
EQ-I81- Earthquake early warning system

Manufacturer:	EQ Earthquake Ltd
Power:	
Input voltage:	18VDC 1A.
Adapter:	Input: 110~240 VAC, 50/60 Hz, Output: 18VDC 1A.
Battery:	Rechargeable battery, 12V, 3.3Ah (not included with unit).
Operating time (battery only):	> 3 weeks
Enclosure:	
Type:	Wall mount unit.
Material:	4 mm, aluminum enclosure.
Resistance:	Waterproof (IP66).
Dimensions:	190 mm x 245 mm x 92.5 mm (w x h x d).
Environment:	
Operation temperature:	-20~60°C
Storage temperature:	-20~60°C
Connectivity:	
Protocols:	RS232, TCP/IP (Ethernet expansion module)
Telemetry:	theNexus (server), proprietary software
Software:	EQ-I81 Tool, EQ-I81 Monitor
Sensor:	
Type:	Triaxial
Scale:	+-2G
Freq. response:	DC–50Hz
Dynamic range:	82dB
Digitizer:	
Type:	ADC
Acquisition:	3 axes (X,Y,Z)
Sample rate:	User adjustable, 5 sps - 500 sps per channel
Resolution:	16 bit
Dynamic range:	96dB
Resolution:	0.06mg
Recordings:	
Memory type:	Internal Flash
Size:	128Mb
Format:	".txt" - detailed event logs with event #, trigger time, date, PGA, output type, length. ".sac" – acceleration recordings*. seed/mseed – by conversion with software
Buffer size:	150 min @ 20 SPS (all 3 components)

Time Synchronization:	NTP
Triggering:	Multiple triggering rules can be defined to run independently. Up to 10 rules in total.
Methods:	- "Earthquake Alert" proprietary algorithm. - Threshold triggering (minimum exceedance time can be defined) - STA/LTA (0.01–15Hz)
Sensor:	
Type:	"Earthquake Alert" detection sensor + MEMS sensor
Sensitivity:	≥ 5 mg @ 0.1 Hz – 15Hz
Indicators:	RED: error; Flashing RED: earthquake warning. GREEN: standby; Flashing GREEN: detection mode, ok. ORANGE: programming mode; Flashing ORANGE: upload/download, change of settings.
Self test:	Automatic periodic self test
Outputs:	
2x30sec recordings/siren:	8Ω, 50W – Siren/Loud Speakers 300mV / 600Ω(Line out)–Public Address System/Amplified speakers.
Continuous/pulse signal:	12V continuous (2.7A), 5V (50mA), Relay NO/NC (10 A, 277 VAC, general use, 40°C)** – control of auxiliary systems.
Approvals and tests:	Laboratory tests at: ▪ SEESL (Baffalo NY), USA ▪ UNIVERSIDAD DE GUADALAJARA, Mexico DEPARTAMENTO DE INGENIERIA CIVIL Y TOPOGRAFÍA INSTITUTO DE INGENIERÍA SÍSMICA ▪ The Institute for Petroleum Research and Geophysics, Israel ▪ Laboratory of the Kandilli observatory, Istanbul, Turkey ▪ Laboratory of seismology, University of Athens, Greece + Many other laboratories □IEC 60950-1: 2005, including Amendment A1: 2009 □EN 60950-1: 2006, including Amendments A11: 2009, A1: 2010, A12: 2011, A2: 2013 □SI 60950 Part 1: 2009, including Amendment A1: 2011
EMI & RFI	IS 961 - 6.1, 6.2 ,12.3 ,12.5

Parts and Functions

Top View

Power Input
18VDC Adapter

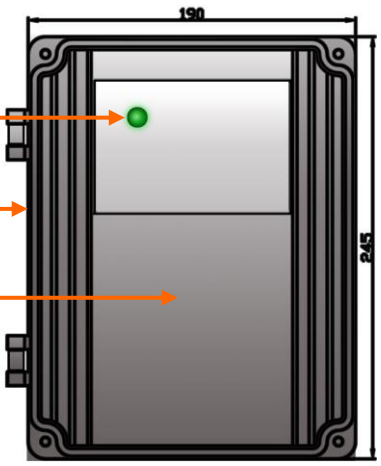
Output and Data Connections
40W – Siren/Loud Speakers
Line out – Public Address System
12V – Activation of Systems
5V – Controllers (Elevators/Trains/etc.)
NO/NC – Dry contact for systems activation
RS232.

Front View

Status Indication LED
Green - Okay/ Red - Error

Measurements
190 x 245 x 92.5 mm

Enclosure
Heavy duty 4mm - Thick, Waterproof Enclosure (IP66)



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RS232.

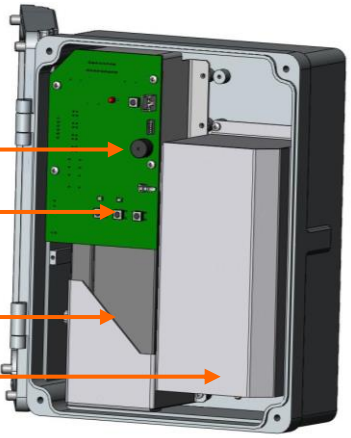
Inside View

Buzzer
Beeps if There is an Error

Testing and Maintenance Buttons
For Periodic Testing of the System

Battery
12V – Standard rechargeable Battery

Sensor
The Earthquake Detection Sensor



Disclaimer:
The technical specifications brought forth in this document are subject to change without notice. The contents of this publication have been examined for compliancy with the hardware and software described. Nevertheless, discrepancies cannot be ruled out. Any liability and warranty for the accuracy of this information is excluded.

Note:
Only authorized technicians are allowed to install, service, and/or operate the EQ-I81 early warning system. Any unauthorized attempt to handle the system might result in its failure to perform as designed.

* License required.
** For non-conductive load.

For more information please contact us by e-mail - contact@earthquakealert.com.