

INFRA C22

Wireless Triaxial Vibration Monitor

The INFRA system is used to monitor construction activities, blasting, train traffic, road traffic, vibration in buildings etc.

- All-in-one datalogger and vibration sensor
- Up to 4 month of continuous monitoring on internal rechargeable batteries
- Built-in 4G modem
- Micro-SD memory card
- Simultaneous bar graph and waveform registration
- Weather proof
- Digital signal processing
- Post-processing, presentation and remote management in INFRA Net
- Multi button keypad
- GPS



INFRA C22 measures according to the following national and international standards:

DIN 4150-3 Anlage	1 – 315 Hz	NS 8141:2013 Byggverk	3 – 400 Hz
DIN 4150-2 KB RMS	1 – 80 Hz ¹ 125ms	NS 8141:2001 Byggverk	5 – 300 Hz
ISEE Seismograph	2 – 250 Hz	NS 8176 Komfort, RMS 1s	1 – 80 Hz ¹
AS 2187.2-2006	2 – 250 Hz	SS 4604861 Komfort, RMS 1s	1 – 80 Hz ¹
Arrêté de 1994 (explosif)	1 – 150 Hz	SS 4604861 Komfort, RMS 1s	1 – 80 Hz ⁵
Circulaire ICPE de 1986	1 – 150 Hz	Ofm 9/1997 dB	1 – 80 Hz ⁶
Référentiel SNCF - IN 1226	1 – 150 Hz	ÖNORM S 9020	1 – 315 Hz
SBR-A	1 – 100 Hz	ÖNORM S 9012 RMS 1s	1 – 80 Hz ⁵
SBR-B, RMS 125 ms	1 – 80 Hz ¹	ISO 10816-2 RMS 1s	5 – 500 Hz ³ 125ms
Toronto bylaw 514	1 – 100 Hz	ISO 2631-2 RMS 1s	1 – 80 Hz ¹
Toronto bylaw 514	2 – 250 Hz	ANSI S2.71 RMS 1s	1 – 80 Hz ¹
Turkey Mining and Quarry	2 – 250 Hz	NCh 3577	1 – 315 Hz
BS 7385	1 – 300 Hz	Geophone	5 – 500 Hz
SN 640 312a	5 – 150 Hz	PN-B-02170	1 – 100 Hz ⁴
Acceleration	5 – 300 Hz	PN-B-02170	1 – 100 Hz ²
SS 4604866 Spräng	5 – 300 Hz	FTA (VdB)	1 – 80 Hz ⁷
SS 025211 Schakt	5 – 150 Hz	BS 6841 (VDV)	
SS 025211 Schakt	2 – 150 Hz		

¹20 mm/s, ²25 mm/s, ³200 mm/s, ⁴250 mm/s, ⁵700 mm/s², ⁶50-117 dB, ⁷50-118 dB

Technical Data

DIRECTION OF SENSITIVITY

C22 measures triaxial vibration.

MEASURING

The unit has built in digital signal processing, which processes all incoming data in real time according to the selected standard. The unit measures maximum values for each interval and at the same time, it records time history data when the vibration level exceeds the user preset threshold.

SAMPLING

The geophone signals are sampled at 4096 Hz using a high resolution A/D converter for a wide dynamic range. When a preset trigger level is exceeded a time history is recorded.

RECORDING

Recording time is up to 2 minutes, with up to 5 seconds pre-trig time.

POWER SUPPLY

Internal Lithium-Ion batteries that easily can be changed.

MEASURING RANGE

Frequency range 1 Hz - 500 Hz. The Geophones have a calibrated sensitivity within +- 2%. Maximum vibration level is 250 mm/s (10 in/sec) dependent on the selected standard.

SENSOR ELEMENT

The sensor elements are rugged high quality velocity sensing geophones with long term stability and wide dynamic range.

IDENTITY

The serial number of the unit and important metadata always follows the recorded data. This makes it possible to trace data to a certain unit.

MEMORY

Micro SD industrial memory card. 1 GB in standard configuration.

DATA TRANSFER

All data is buffered on the memory card and is sent when the next cellular communication takes place. If cellular communication is not possible, data is kept for transfer at a later time.

DATA AND SERVICE MESSAGES

Data and service messages are sent via INFRA Net for maximal flexibility.

CALIBRATION

The unit has an internal memory for identity, calibration factors, calibration date etc.

SENSOR CHECK

Internal dynamic test performed each time monitoring is initiated to confirm the sensors are responding and the unit is level.

USER INTERFACE

With a keyboard and display settings can be changed. The display also shows battery status, signal strength, and the latest events.

REMOTE OPERATION

Settings can be changed remotely using INFRA Net.

MECHANICAL & ENVIRONMENTAL

Weather proof aluminum house with rubber seals. It has holes for bolts passing through in both horizontal and vertical direction.

Material: Powder coated aluminum house and polycarbonate antenna cover.

Dimension: 146 x 127 x 89 mm (5.8 x 5.0 x 3.5 in)
(Including antenna cover, excluding connector and standoffs.)

Protection class: IP67

Weight: 1820 grams (4.0 lbs) incl 2 batteries
Operating temperature: -20 to + 50 °C (-4 to 122 °F)

CE APPROVAL

EMC: 2014/30/EU

LVD: 2014/35/EU

RoHS: 2011/65/EU (2015/863)

Product specifications and descriptions in this document are subject to change without notice.

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Doc. nr DS089_D5222-EnW

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