

SWARM Vibration

Part of Omnidots' environmental monitoring solution

Omnidots is a leading manufacturer of vibration monitoring sensors including the SWARM v2.2cw designed specifically for the North American market and ISEE Compliance. Our products have been proven accurate and reliable in 3rd party labs and validated across thousands of projects worldwide. We offer products which make monitoring simpler yet more flexible for more accurate data and faster response when and where it's needed most.

Key Features:

- Triaxial MEMs accelerometers for accurate readings in any direction
- Auto leveling - consistent results mounted at any angle
- Reliable communication through 4G, WiFi, Ethernet, or WiFi Live View
- 3 alert levels with customer alert messaging for easy comprehension
- Rugged IP65 enclosure
- Internal storage for >1 week of data
- Long life battery - up to 10 weeks of remote monitoring
- Continuous recording and transparent record keeping through Honeycomb dashboard

DATA ACQUISITION



Direction: X, Y, Z

Range frequency: 0.5 - 250 Hz

Range velocity: ± 300.0 mm/s (± 12 in/s)

Range acceleration: ± 40 g

Measurements: PPV, PPA, PVS, VDV, $V_{eff(max)}$, V_{per} , KBFmax, KBFTm, Velocity traces

Noise (RMS): 25 μ m/s at 250 Hz BW (1 mil/s)

Resolution: 0.5 μ m/s (0.02 mil/s)

Dominant frequency determination: FFT

Applications: Construction, Blasting, Mining

APPLICABLE STANDARDS

ISEE (USBM RI 8507 & OSMRE) / BS7385 / DIN4150-3 / DIN 4150-2 / DIN 45669-1 / SN 640 312a / SBR-B / SBR-A / Circulaire du '86 / IN 1226



GPS LOCATION

Sensor type: GPS receiver

Accuracy: 10 meter CEP (33 ft CEP)

SENSOR TILT

Maximum velocity level: 300 mm/s (12 in/s)

LOGGING INTERVAL TIME

Range: 2 - 6000 seconds

ALARM TRIGGER LEVEL

Range (PPV): 0.1 - 300mm/s (0.004 - 12 in/s)

HONEYCOMB CLOUD SERVICE (personal dashboard)

Displays: PPV, PPA, PVS, VDV, Veff(max), Vper, KBFmax, KBFTm, Velocity traces, FFT

Exports: PPV, PPA, PVS, VDV, Veff(max), Vper, KBFmax, KBFTm, Velocity traces

Velocity: Peak particle velocity

Frequency: Dominant frequency

Traces: 1000 samples per second

Number of traces: Maximum of 5 highest traces per hour

Data storage: Secure data centre

ALARM SETTINGS

Alarm level curve: ISEE (USBM RI8507 & OSMRE), DIN curve, SBR curve, Circulaire '86, SN 640 312a, IN1226, Flat line

Type of message: E-mail, SMS, personal dashboard

COMMUNICATION

Wireless: WiFi, 4G/LTE, WiFi Live View

Wired: Ethernet

MODEM

Network: 4G/LTE

INTERNAL MEMORY

Storage: ~ 1 work week storage of log records

DIMENSIONS

Dimensions: 109 x 130 x 45 mm (4.29 x 5.12 x 1.77 inch)

Weight: 260 gr (9.17 oz)

SENSOR POSITIONING

Mounting: 1 screw and 1 plug included

Auto levelling; Auto axes alignment: Automatic adjustment by gravity



AMBIENT CONDITION

Ingress protection rating: IP65

Operating temperature range: 14°F to 158°F
-10°C to 70°C

Storage temperature range: -22°F to 194°F
-30°C to 90°C

POWER SUPPLY

Power source: External

Minimal power supply: 5V USB power (min. 4.5V, max. 5.5V), min. 1A power (5W)

Power consumption: 25mW sleeping, 1W idle, 3W active, 5W max

CALIBRATION

Recommended biennial (every two years)*

Certified calibration by a Omnidots certified facility

* When used according to product manual and within ambient specifications.



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