Datasheet

TILIA V210

1-315Hz Geophone Velocity Sensor + Recorder

TILIA SERIES

Velocity Sensor

Number of sensors	3 Orthogonal
Sensor Technology	Geophone, Long Travel Electronically Extended
Bandwidth	1 - 315Hz
Fullscale Range	±250mm/s, ±100mm/s, ±10mm/s digitally selectable
Dynamic Range	130dB @ (1-50Hz)
Damping	0.7
Mass travel distance	4mm
Linearity	0.3% of full scale

Digitizer

Sampling	Simultaneous
Channels	3 channels
Resolution	24 bit Sigma-Delta converters
Dynamic Range	> 138dB
Sample Rates	50, 100, 200, 250, 500, 1000
Anti Aliasing Filter	Analog and digital

Time

Time sources	GNSS, PTP, NTP, RTC
Time Host	Instruments with GNSS receiver can work as PTP master for other instruments in the daisy chain or network.
Time offset	as low as 40ns offset between daisy chained instruments.

Events & Triggers

Event Recording	Event + Continuous Recording
Trigger Algorithms	STA/LTA, Threshold, Time, MMI
Threshold	Freely configurable
Pre-event period	1-120 seconds
Post-event period	1-180 seconds
Streaming	seedLink

Communication

Ethernet	10/100 Base-T (2 interfaces) 2nd interface for daisy chain
Daisy Chaining	Integrated support. Data, PoE, PTP in single ethernet cable.
Node Spacing	100m for V210 2000m for V210F
Long-Distance PoE	Optional 1000m extenders
4G/LTE	Optional External
Optional	V210F with 2 x Fiber Optical Ethernet Transceivers built-in

Data, Storage & Servers

Record Types	Events, Ringbuffer
Data Format	Miniseed
Removable Memory	microSD Card (32GB default)
Data Upload	FTP or Seisodin Cloud
Data Retrieval	uSD, FTP, Web Interface

Dimensions & Environment

Dimensions	120 x 179 x 104mm
Weight	2.0 kg
Installation	Single-bolt + 3 levelling screws
Ingress Protection	IP67 with mated connectors
Material	Anodized Aluminum
Temperature	-20 to +70°C
Humidity	0-100% RH non-condensing

Power

Sources	4 prioritized power sources DC supply, PoE, External Battery, Internal Battery
Supply Voltages	DC: 18-60V (48V nom.) PoE: 40-57V (48V nom.) Ext Battery: 11-14.5V (12V nom) Int Battery: 3.0-4.2V (3.7V nom.)
Power Consumption	~1.5W from DC supply
Protection	Reverse, Over/Under voltage
Grounding	Grounding Point on base

Connectors

Ethernet	2 x RJ45 (optional MIL)
Power	1 x 4p M12
GNSS	1 x SMA

Configuration & Monitoring

Configuration	Configuration through intuitive and modern web interface. Smartphone friendly interface.
Health Monitoring	Instrument generates state-of-health reports, log files and heart beats.

Certification and tests

Seismic Qualification	60068-3-3 Seismic Zone 4

SEISODIN

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