IGU-16HR 3C

SMARTSOLO
World's First Smart Seismic Sensor

www.smartsolo.com

IGU-16HR 3C
Features

- New Generation Smart 3C Seismic Sensor
- Share the same peripherals as IGU-16
  Greater equipment investment savings
- High resolution data
  with up to 0.25ms sampling and 24-bit delta-sigma ADC
- All-In-One Modular design
  provides maximum productivity, maintenance free operation and easy battery replacement
- Built-in GPS receiver and disciplined high precision clock
- Suitable for one station to million station operations
- Based on the most highly regarded DT-SOLO HS geophone
  with 10Hz and 5Hz options
- 30days Up to 30 days of continuous recording
  (see Technical specs for details)
- Most cost effective system on the market
- Compatible with vibroseis and impulsive energy sources
- 1.7kg Light weight and compact size
- Simple LED State Indicator
  Green for "good to go" and Red for "no good"

TECHNICAL SPECIFICATIONS

General Specifications

Parameters	Specification	
Seismic data channel(s)	3	
ADC resolution	24 bits	
Sample intervals	0.25, 0.5, 1, 2, 4 milliseconds	
Preamplifier gain	0dB to 36 dB in 6 dB steps	
Anti-alias filter	206.5 Hz @ 2ms (82.6% of Nyquist) Selectable - Linear Phase or Minimum Phase	
DC blocking filter	1Hz to 10Hz, 1Hz increments or DC Removed	
Operating temperature	-40˚C ~ +70˚C	
Waterproof	IP67	
Data Storage	32 GB (can be expanded to 64GB)	
Physical Size	w/ High Capacity Battery Pack	w/ Standard Battery Pack
	103mm (L) × 95mm (W) ×187mm (H) (w/o spike)	103mm (L) × 95mm (W) ×150mm (H) (w/o spike)
Weight	2.4kg (Including internal battery and spike)	1.7kg (Including internal battery and spike)
Operating Life@25°C	30 days Continuous @2ms 60 days Segmented @2ms (12hours ON/12hours SLEEP)	15 days Continuous @2ms 30 days Segmented @2ms (12hours ON/12hours SLEEP)
Recharge Time	< 6 hours	< 3.5 hours
Charging Temperature Range	+3˚C ~ +40˚C	

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DTCC DYNAMIC TECHNOLOGIES

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TECHNICAL SPECIFICATIONS

Channel Performance

Parameters	Specification
(@ 2ms sample interval, 31.25 Hz, 25°C, unless otherwise indicated)	
Maximum Input Signal	±2.5Vpeak @ Gain 0dB
Instantaneous Dynamic Range	125dB@ 2ms Gain 0dB
Equivalent Input Noise	0.18μV@ 2ms Gain 18dB
Total Harmonic Distortion	<0.0002%@ Gain 0dB
Common Mode Rejection	>100dB
Gain Accuracy	<1%
GPS Time Standard	1ppm
Timing Accuracy	±10μs, GPS Disciplined
Cross Feed	< -110dB
System Dynamic Range	145 dB
Frequency Response	0~1652Hz

Acquisition Performance

Parameters	Specification
Natural Frequency	5Hz
Spurious Frequency	>170Hz (>150Hz in horizontal sensor)
Distortion	<0.1%@12Hz, (0° ~ 10°) V tilt. <0.15%, (0° ~ 3°) H tilt
Damping	0.7
Sensitivity	76.7V/m/s (1.95 V/in/s)
Remark	All parameters are specified at +22°C in the vertical position for vertical geophone and horizontal position for horizontal geophone unless otherwise stated.

DT-SOLO
The Heart of SmartSolo

- High Quality
- High Sensitivity
- Super Reliable
- Greater Savings
- Low Distortion
- Single Point Receiver
- Industry Leader
- Available in 10 Hz & 5 Hz

SmartSolo®
The Future of the Seismic Industry

Smaller crew size, less man power and simpler equipment
- Lower operational cost
- Less environmental impact
- Improved HSE

Million channels capability
- High channel density
- Better image at lower cost

Super reliable, lower power consumption, longer operating time
- High productivity
- Lower operational cost

Highly efficient data harvesting and management
- Lower operational cost
- Better user experience