

Seismograph

SGD-SEL48M и SGD-SEL24MB



SPECIFICATIONS

Technical specifications	Value	
	SGD-SEL48M	SGD-SEL24MB
Number of Channels	48	24
Up-hole channel	Yes, 2 additional independent	
Noise, (Gu=42 dB, 0 to 199 Hz), μV	< 0,15	
Maximum input signal, Vpp	$\pm 2,5$	
Input impedance of the recording channel (differential mode), k Ω	> 20	
Pre-amplification gain (Gu) of the recording channel, dB	0, 6, 12, 18, 24, 30, 36, 42 or 48	
System registration signal dynamic range, dB	> 144	
Instant registration signal dynamic range, dB	> 105	
The coefficient of mutual influences between registering channels, dB	> 110	
Suppression ratio of the input common-mode signal, dB	> 90	
Frequency range, Hz	DC to 199 (398, 796, 1592, 3184)	
Sampling rate (selectable), ms	2, 1, 0.5, 0.25 и 0.125	
Total harmonic distortion, %	< 0,003	
A/D converter resolution	24	
Record length (fixed), samples/channel	2000	
The capacity of the built-in non-volatile memory data, the number of records on 48 channels	340	
The capacity of the external memory USB Flash Drive, GB	32	
Data output format	SEG-Y	
Display	8.4" Active TFT LCD, monochrome black/white	
Resolution graphic display, points (dots)	640•480	
Brightness, cd/m ²	900	
Contrast	1000:1	
Keyboard	Sealed, Schild	
Interface for connecting an external computer	USB 1.0 DEVICE	
Interface to connect a standard storage device USB Flash Drive	USB 2.0 HOST	
Interface for synchronization systems SGD-S, SGD-SP, etc.	Yes, TTL and RS-232	
Interface for synchronization systems SGD-SHC80, SGD-SHC155, SGD-SHC310 and SGD-SHR300	Yes, make/break	
Rated output voltage built-in rechargeable batteries, V	-	12
Nominal capacity built-in rechargeable battery,, A•h	-	8.5
Duration continuous operation of the battery, h	-	> 7
Time charge a completely discharged battery, h	-	< 14
The charge voltage of the battery from an external power supply, V	-	20 ... 28
Supply voltage DC from an external power supply, V	10,5 to 28	10,5 to 28
Maximum power consumption, W	24	16
Protection rating IEC standard 60529 (*transport position)	IP64/IP67*	
Operation temperature, °C	- 30 to +70	
Overall dimensions, mm	340•295•152	
Weight, kg	5,5	7,5

INTERFACES

- Interface for synchronization systems SGD-S, SGD-SP, etc.
- Interface for synchronization systems SGD-SHC80/155/310 or SGD-SHR300.
- Interface USB 2.0 HOST to connect a standard storage device USB Flash Drive.
- Interface USB 1.0 DEVICE to update the firmware, channels parameters testing seismograph, reading recorded data from an external computer.

RECORDING DATA

- Recording a single exposure to the explosive excitation seismic source.
- Recording a single impact of the non-explosive excitation seismic source.
- Recording with the accumulation of non-explosive (impulse) excitation seismic source

SYNCHRONIZATION

- SGD-S Shooting system.
- SGD-SP Electromagnetic Seismic Source System.
- SGD-SHC80 (SGD-SHC155, SGD-SHC310) Hammer Source Synchronization System via cable
- SGD-SHR300 Hammer Source Synchronization System via radio

SGD-SHC80/155/310 Hammer Source Synchronization System via cable

Technical specifications	Value
Registration sensor signal acceleration/impact (accelerometer)	AD22281
Delay time accelerometer SGD-SAH or SGD-SAD, μ s	< 0,25
Cable length, m	80, 155 or 310
Supply voltage, V	7,5 ...16
Supply current, mA	5
Protection rating IEC standard 60529	IP67
Operation temperature, °C	- 40 to +70
Dimensions SGD-SAH accelerometer, mm	56•40•20
Weight SGD-SHC80 synchronization system, kg	< 2
Weight SGD-SHC155 synchronization system, kg	< 4
Weight SGD-SHC310 synchronization system, kg	< 8



SGD-SHR300 Hammer Source Synchronization System via radio



Technical specifications	Value
Registration sensor signal acceleration/impact (accelerometer)	AD22281
Delay time accelerometer SGD-SAH or SGD-SAD, μ s	< 0,25
Accuracy of synchronization, μ s	< 0,1
The maximum distance between the source and the seismograph, m	300
The operating frequency of the radio module, MHz	433
Duration continuous operation of the battery, h	50
The supply voltage (charge) from an external power supply, V	10,5 to 28
Operation temperature, °C	- 40 to +70
Protection rating IEC standard 60529	IP67
Overall dimensions (without antenna and cable), mm	150•64•35
Weight, kg	< 1,5

The charger SGD-BC7502

Technical specifications	Value
Number of rechargeable batteries at the same time	2
Rated voltage of each battery, V	12
Rated charging current of each battery, A	1,7
Charge according to DIN 41773	IU
Charging time for a fully discharged battery «12 V, 18 A•h», h	< 14
Power supply from the AC "50/60 Hz", V	85 ... 264
Power consumption, W	75
Protection rating IEC standard 60529	IP50
Operation temperature, °C	- 10 to +60
Overall dimensions, mm	232•192•110
Weight, kg	< 1,6



Battery SGD-B1217



Technical specifications	Value
Type of battery	Lead-acid battery
Nominal battery voltage, V	12
Nominal battery capacity, A•h	17
Protection rating IEC standard 60529	IP67
Operational temperature range in discharge mode, °C	- 30 to +60
Operational temperature range in charge mode, °C	+ 5 to +50
Overall dimensions, mm	250•190•85
Weight, kg	< 6,4

COMPLETE SET

Product Name	Quantity	
	SGD-SEL48M	SGD-SEL24MB
Seismograph SGD-SEL	1	1
Seismic cable 24 take-outs at 2 (2.5, 5, 10 or 12.5) m, two connectors to connect to the seismograph	2	1
Vertical geophone:		
- geophone GS One (10 Hz, land, L=0.5 m, connector - KCL-4FA)	52*	26*
- geophone GS-20DX/PC-801 (10 Hz, land, L=0.5 m, connector - KCL-4FA)	52*	26*
- geophone GS-20DX/PC-901 (10 Hz, marsh, L=0.5 m, connector - KCL-4FA)	52*	26*
- geophone GS-20DX/PC-901-02 (10 Hz, marsh, L=0.5 m, connector - KCL-4FA)	52*	26*
- geophone GS-20DX/PC-901-03 (10 Hz, marsh, L=0.5 m, connector - KCL-4FA)	52*	26*
Horizontal geophone:		
- geophone GS-20DX-2B/PC-801 (10 Hz, land, L=0.5 m, connector - KCL-4FA)	52*	26*
Synchronization System:		
- SGD-SHC80/155/310 Hammer Source Synchronization System via cable (80, 155 or 310 meters)	2*	1*
- SGD-SHR300 Hammer Source Synchronization System via radio (up to 300 meters)	2*	1*
- SGD-S Shooting System		
- SGD-SP Electromagnetic Seismic Source System		
The charger SGD-BC7502	1	-
Battery "12 V 17 A•h" with cable length of 2 meters	2*	-