

OMEGA-48M RESISTIVITY SYSTEM



Resistivity instrument measures amplitude parameters of output current of the transmitter, electrical potential difference between measuring electrodes (apparent resistivity), time parameters of chargeability (apparent chargeability) determined on voltage decay curve at measuring electrodes after switching off the current.

OMEGA-48M is a multichannel Resistivity system designed for vertical electrical sounding (VES) and induced polarization (IP) methods on electrical resistivity tomography (ERT) technology.

RESISTIVITY SYSTEM OMEGA-48 CONSISTS OF

- Multi-electrode 10-channel Resistivity instrument which includes transmitter, receiver and switching unit connected to current and measuring lines in a single heavy duty cable with waterproof enclosure
 - Two sections of multi-core cable with 24 electrode each.
- Software for system control, results acquisition, data processing and interpretation:
- developing field measuring protocol, SEQ files,
 - managing measuring process, data collection and storage,
 - visualization and editing field data,
 - visualization of inversion result.

SPECIFICATIONS

Number of electrodes in the seismic cable	48, 72, 96
Number of channels for simultaneous measurement	1...10
Electrode spacing, m	1, 2, 3, 5, 10
Signal form	direct current bipolar impulses of regulated duration with pauses
Operating temperature	-40...+50 C
Light consumption, W	15
Maximum consumption, W	300
Power supply unit's capacity, A*h	12
Size, mm	420x220x340
Weight, kg	12
Power supply unit's size, mm	280x250x170
Power supply unit's weight, kg	10
Lifetime, years	10
average time between failures, hours	35000
Warranty, months	18



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SPECIFICATIONS

Transmitter

Impulses duration, sec	0,01...100
Pause duration between impulse duration, sec	0,01...100
Output voltage, V	1...500
Current accuracy, %	±1
Output current, A	0,001...2 (1V...125V); 0,001...0,5 (126V...500V).
Maximum output currencty, W	250

Receiver

Input resistance of receiving channel, MOhm	42
Common mode range on input of receiving channel, V	-15 ...15
Sample rate ADC, Hz	1000
Frequency range by level -3dB, Hz	0...450
Noise floor, mV	1
Dynamic range, dB	120
Receiving channel gain	1/8, 1/4, 1/2, 1, 2, 4, 8, 16, 32, 64
Automatic gain control of receiving channel	independent for each channel
Common mode rejection, dB	100

