TRANSIENT ELECTROMAGNETIC INSTRUMENT (MINERAL)

Mineral Exploration

The GT-10 transient electromagnetic instrument is mainly applied in mineral exploration and water and mineral prospecting in the middle and deep parts, and can detect depths ranging from 30 to 1300 meters. It is widely used in underground polymetallic deposits, water exploration, underground electrical stratification, delineation of underground water-filled karst caves and exploration of steeply inclined geological structures.

Coal seams and coal seam mined-out (subsidence) areas and water-filled areas; The census and exploration of geothermal resources and oil and gas fields in high-resistance covered areas (such as carbonate rocks, igneous rocks and permafrost covered areas); Tunnel water exploration and geological structure tracing, etc.

The workload of this transient electromagnetic method detection: Three measurement lines are laid along the ground, with a measurement point interval of 2 meters. Conduct exploration of goaf areas; The detection effect on underground low-resistance is obvious. Verified with the existing known goaf data, the effect is good.

Main Applications:

1.Medium and deep resource exploration, suitable for exploration of resources from 30 meters to 800 meters underground, including minerals, groundwater, oil and gas.

2.Environmental and disaster monitoring, identification of water-filled karst caves and geological structures, to provide basis for environmental governance.

3.Oil and gas resource exploration, especially suitable for high resistivity covered areas, such as carbonate rocks, igneous rocks and permafrost covered areas of geothermal resources exploration, oil and gas field survey and exploration.

4.Surface geophysical exploration is used for underwater geological engineering investigation of oceans, lakes, etc., to assess underwater geological structure and resource distribution.

5.Mineral resource exploration is used to identify and evaluate the location, size and reserves of polymetallic deposits to improve the efficiency of mineral exploration. Specific applications include metal mineral exploration, deep structure exploration, fault zone exploration and so on.

6.Exploration of groundwater resources, determine the distribution and reserves of groundwater, search for underground water sources, identify water-filled karst caves and steep dip geological structures. Specific applications include groundwater exploration, water-filled area exploration, underground electrical stratification, etc.

7.Engineering geological survey to assess the geological conditions of tunnels, subways, underground pipelines and other projects to ensure the safety of infrastructure construction. Coal seam detection and caving.

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Technical Specifications :

Alternate Model Number	GT-10
A/D Converter	32Bit
Dynamic Range	160dB
Sampling Rate	1μs, 4μs, 16μs
Number of Acquisition Channels	2
Background Noise	1μV
Voltage Measurement Range	-200V-200V
Voltage Measurement Resolution	≤300nV
Measurement Accuracy	0.1%
Input Gain Range	1/80-8000
Minimum Sampling Interval	4μs
Noise Suppression	>100dB
Passband	0-500kHz
Superposition Times	1-65535 Times
Computer System	PC104 Industrial Control Computer, 8.4 "Color LCD Screen (Full Windows Operation Interface)
Data Storage	2GB (Expandable)
Storage Capacity	≥30000
Data transmission	USB2.0
Power Supply	The Built-in Battery Can Ensure Operation For More Than 8 Hours And Can Be Externally Connected To 9-18VDC
Size	403mm × 330mm × 178mm (Length × Width × Height)
Weight	8kg
Working Temperature	-10°C-50°C

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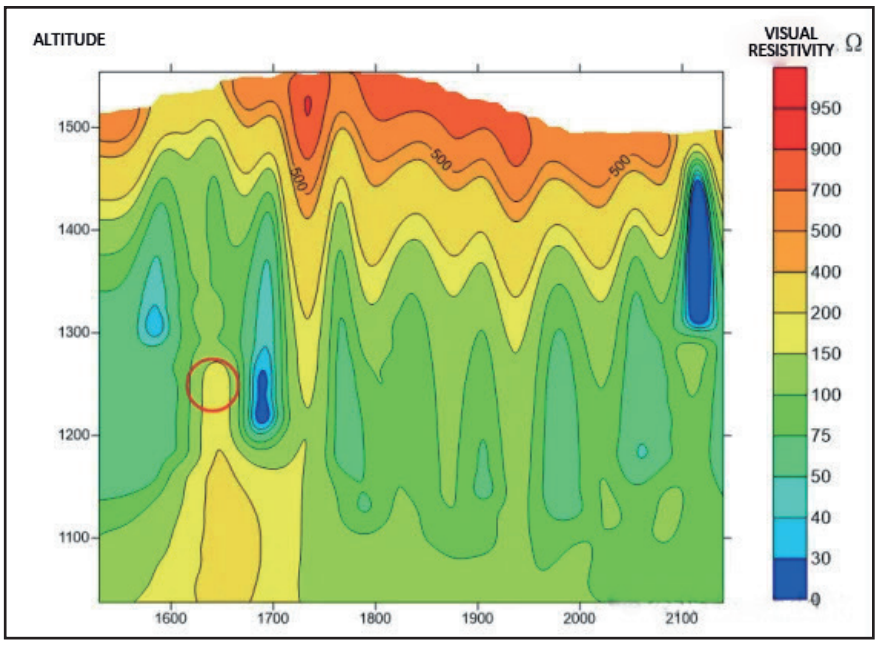
Transmitter Technical Specifications :

Transmission voltage (V)	36-57
Sending current intensity (A)	25, 50,100, 200
Current pulse width (ms)	10, 20, 40
Transmitting waveform	A Bipolar Square Wave With a Duty Cycle of 1:1
Maximum transmission power (KW)	12
Synchronization mode	Cable Synchronization
Turn-off time	It Varies With The Magnitude of The Power Supply Current And The Sending Coil, Ranging From 0.5 to 300μs
Size	312mm × 274mm × 136mm (Length × Width × Height)
Weight	2kg
Working temperature	-10°C-50°C

Coil Model :

Specification	Detection Depth
Custom Size	40m



Result Interpretation Map

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