

Time-Domain Electromagnetic Water Detector

This Time-Domain Electromagnetic (TEM) water detector is designed for detecting water content using TEM methods. It is suitable for hydrological surveys, environmental monitoring, and geophysical investigations.



Overview

Advanced TEM Geophysical Detection

This Time-Domain Electromagnetic (TEM) detector utilizes advanced electromagnetic induction theory to analyze subsurface conductivity and magnetoconductivity. Designed for complex geological conditions, the system features a high-resolution receiver with FPGA technology and a high-power IGBT bridge transmitter. It provides a portable, efficient solution for mineral prospecting, hydrological surveys, and engineering geological investigations.

Key Features

System Capabilities

- Wire synchronization for complex geological conditions
- High-power IGBT bridge circuit for fast power-off
- High-resolution receiver with float point magnification
- FPGA technology integration
- USB port for easy data transmission

Transmitter Specifications

Max Output Current

50 A Continual	70 A Pulse
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Power Supply Range	4 V
Max Output Voltage	150 V
Frequency Range	1.25 - 125 Hz (8 frequency points)
Physical Dimensions	360 x 250 x 250 mm
Weight	9 kg

Receiver Specifications

Dynamic Range	156 dB
Bandwidth	DC to 30 KHz
Sampling Frequency	Max 5%
Physical Dimensions	324 x 210 x 230 mm
Weight (excl. batteries)	7 kg