

TXM-22 & TXB-07

22 kW Geophysical Transmitter and Transmitter Control Box

The TXM-22 is a highly efficient multi-purpose geophysical power source. It is designed for use in connection with the TXB-07 controller unit. The TXM-22 and TXB-07 form a powerful and flexible transmitter for geophysical applications such as Controlled Source Audio Magnetotellurics (CSAMT), Controlled Source Electro magnetics (CSEM) or Long Offset Transient Electromagnetics (LOTEM).

It can be operated in a wide frequency range between 0.001 Hz and 8,192 Hz. The output current is adjustable up to a maximum of +/-40A. The nominal output voltage is +/-560V.

The TXM-22 is powered by a 50/60Hz, 3-phase, 400V generator. In order to unleash the full capabilities of the system, a generator of min. 40kVA should be used.

The transmitter outputs are connected to 3 electrodes, thus offering the possibility to rotate the current vector in any direction. The TXB-22 uses a Pulse-Width Modulation (PWM) to control the transmitted currents. By this means it is possible to create different output waveforms such as sine wave, square wave, triangle, saw-tooth, Pseudo Random Binary Sequences (PRBS) or other user definable signals. For frequencies higher than 2048 Hz the TXM-22 will transmit a square wave only.

The controller unit TXB-07 synchronizes the TXM-22 in reference to the GPS time signal. The parametrization is done with a laptop or a touch-screen computer connected to the controller box. Optionally, it is possible to record the time series of the three injected currents.

The user friendly control software provides a comfortable access to all relevant control parameters of the TXM-22.



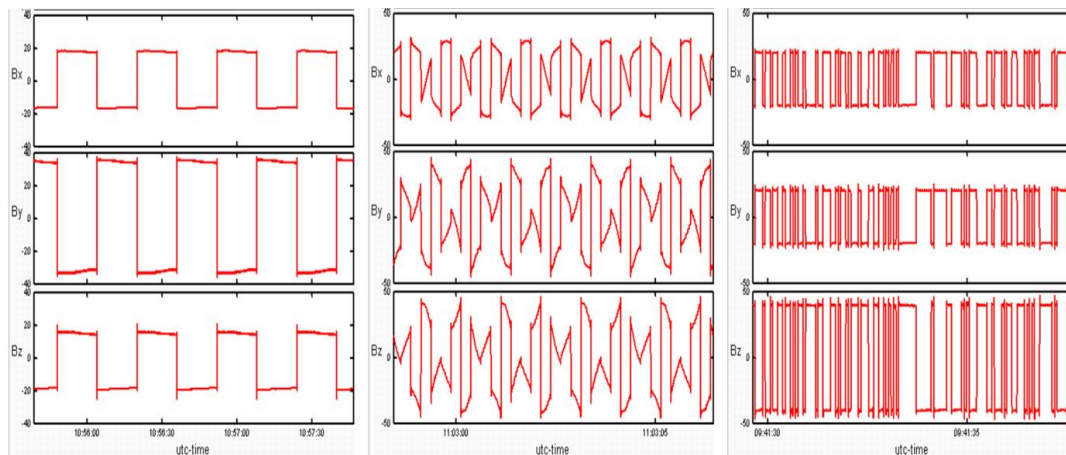
TXM-22



TXB-07

Features

- Frequency range from 1mHz to 8192Hz
- Current vector can be rotated freely due to 3 electrode output
- Predefined or user programmable waveforms
- Automatic execution of joblists
- Recording of the 3 output currents with 24Bit A/D conversion (option)
- Synchronization by GPS timing signal
- Automatic system self-check during start-up
- Control via W-LAN or LAN with external computer
- User friendly control software



Different recorded Tx-Signals (displayed are the recorded 3 phase currents)

Technical Data of TXM-22

Frequency range	1/1024sec to 8,192Hz
Input	3 phase 50/60 Hz, 400V, socket IEC60309 32A red
Output voltage	+/- 560V (1120V peak to peak)
Max. output current	+/-40A (80A peak to peak)
Load	Grounded dipole or loop
Transmitter signal wave forms	Square wave, sine wave, triangle, sawtooth, PRBS, user defined with up to 2048 set points
System control	By TXB-07 transmitter controller via cable with 19-pole Mil connector
Case	Aluminum case 19"
Weight	35 kg
External dimensions	480mm x 514mm x 354mm
Ambient temperature range	0°C to +40°C non condensing

Technical Data of TXB-07

Interconnection to TXM-22	Cable with 19 pin connector galvanically decoupled
System control	By external laptop or touchscreen computer via W-LAN or LAN
Ratio for current measurement	25 mV/A
Measurement channels	3
A/D conversion	24 Bit with up to 65,536 samples per second
Synchronization	by GPS
Storage media	Compact flash or USB pendrive
Ambient temperature range	-30°C to +60°C
Weight	5.5kg
External Dimensions	406mm x 330mm x 174mm
Power	By TXM-22 or external 12V battery
Case	Ruggedized waterproof plastic case

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