GMR Flex Lightweight Surface Magnetic Resonance

Bringing a new level of flexibility to non-invasive groundwater investigations, the GMR Flex is built on a versatile architecture of modular, adaptable, and highly portable components, engineered with the familiar rich features, high precision, and field ruggedness of the GMR.

Highly Portable Surface NMR

- Designed for economy and efficiency
- Easily expandable configurations
- Optimized for investigations to 80m depth
- Ultra-short dead-time (<1ms)
- Accepted as airline checked luggage

Compact & Flexible Form Factor

Packaging the most advanced features into a lightweight platform, GMR Flex enables fast and efficient surveying of groundwater systems at depths to 80 meters (260 feet). Modular components can be combined to optimize depth of investigation while minimizing equipment weight and size. In its most compact configuration, the GMR Flex Transmitter can be operated from batteries with no additional modules. Modules for Tuning and DC capacitance can be added to increase output power and depth of investigation. In addition to standard GMR features, the GMR Flex also includes ultra-fast switching for dead-times of less than 1 ms.

GMR Flex Lightweight Surface Magnetic Resonance

SPECIFICATIONS

2000V GMR Flex

Operable as a single unit or with expansion modules

PERFORMANCE SPECS:

- Maximum coil output: 2000V (4000V_{PP}), 400A
- Bus voltage: 250V
- Ultra-short dead-time: <1ms
- One full-duplex Tx/Rx channel & one Rx-only channel
- Wideband receiver noise <300pV/rt(Hz)
- Pulse sequences with phase cycling: FID (T_2*), 4-Phase (T_1), Spin echo & CPMG (T_2), Adiabatic sweeps†
- Supports transmit and receive on the same loop, or on separated loops

SAFETY FEATURES:

- Analog voltage meters on panel
- Auto-shutdown in case of improper connection
- Environmentally-rated connectors with no-touch contacts

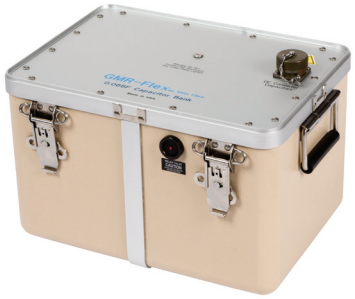
DC Capacitor Expansion Module

PERFORMANCE SPECS:

- Capacitance: 66 mF

SAFETY FEATURES:

- Auto-shut down for safety in case of improper connection
- Fast voltage-bleed circuit



Two Channel Rx Expansion Module

Adds two high-voltage receive channels with short dead-time

High-Voltage Surface Cables

Durable insulation with environmentally rated connectors

Tuning Expansion Module

PERFORMANCE SPECS:

- Capacitance: 15.5 µF
- 2400V rating

SAFETY FEATURES:

- Auto-shutdown in case of improper connection
- Transmitter operates only when tuning lid is securely closed and shuts down if opened

† Protected by US Patents: US 7,986,143 B2; US 8,451,004 B2; US 8,581,587 B2; US RE43,264 E; US 10,145,915 B2.
Additional Patents: EP 1 651 974 B1; US 9,599,688 B2; US 9,551,807 B2; US 9,588,068 B2; US 10,302,733 B2.

* Confirmed by multiple independent third-party field tests.

CE Certified.

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