FOERSTER

MINEX PRODUCT FAMILY

Active metal detectors for reliable detection of the smallest metallic objects

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Reliable detection of the smallest metallic objects. The MINEX product family comprises active metal detectors for the reliable detection and precise pinpointing of small metallic objects. The systems have been specifically developed for demanding mine and UXO detection applications and are particularly suitable for locating so-called minimum-metal or "plastic" mines with very low metal content.

MINEX metal detectors operate using electromagnetic induction (EMI). An exciter coil generates a magnetic field that induces electrical eddy currents in metallic objects. The resulting secondary magnetic field is detected and evaluated by a receiver coil, enabling metallic objects to be reliably detected and precisely located.

Dual-frequency technology provides high sensitivity to different types of metal. At the same time, integrated ground compensation functions support reliable operation even under challenging environmental conditions and on mineralized or otherwise non-cooperative soils. Audible and visual signals as well as a vibration alarm assist the operator in precise target localization.

Different MINEX models are available depending on the application. While the MINEX 4.610 is designed for detecting the smallest metallic objects and minimum-metal mines, the MINEX 4.611 extends the range of applications to wires and conductive materials, including components of IEDs.

YOUR ADVANTAGES AT A GLANCE

High detection sensitivity: Dual-frequency technology for reliable detection of the smallest metallic objects

Precise pinpointing: Double-D search coil concept for accurate target localization and detection near large metal structures

Reliable on challenging soils: Ground learning function for compensating interfering ground effects

Intuitive target indication: Audible and visual signals as well as a vibration alarm support reliable and precise target detection

Robust field operation: Designed for demanding environmental conditions and protected against water and extreme temperatures

Flexible applications: Solutions for minimum-metal mines and – with the MINEX 4.611 – wires and conductive materials

MINEX 4.610

Metal detector for minimum-metal mines

Precise detection of the smallest metallic objects. MINEX 4.610 is a rugged metal detector designed for the reliable detection of very small metallic and near-surface objects. It has been specifically developed for locating so-called minimum-metal or "plastic" mines and combines high detection sensitivity with precise target pinpointing.

Dual-frequency continuous wave technology ensures consistently high sensitivity to different types of metal. Two integrated search coils in the Double-D search head enable precise pinpointing and support detection along large metal structures such as railway tracks, fences or vehicles. The search head can also be rotated by 90°, allowing flexible adaptation to different search and operating positions.

Five sensitivity ranges and a fast ground learning function are available for different operating conditions. During ground learning, the detector is first calibrated to the surrounding environment and then adapted to the respective ground conditions. This supports reliable operation even on non-cooperative soils.

All control and display elements are integrated directly into the handle. Tactile control buttons facilitate reliable operation even under poor visibility conditions. Detected targets are indicated by audible and visual signals as well as an additional vibration alarm in the handle. For night operations, the LED indicators can be deactivated in Military Mode.

YOUR ADVANTAGES AT A GLANCE

High detection sensitivity: Dual-frequency technology for consistently high sensitivity to different types of metal

Precise pinpointing: Double-D search head for accurate target localization and detection along large metal structures

Flexible search positions: 90° rotatable search head for convenient operation while standing, kneeling or lying down

Adaptable to challenging soils: Five sensitivity ranges and ground learning function for different ground conditions

Intuitive operation: Integrated tactile controls in the handle for reliable operation even under poor visibility conditions

Clear target indication: Audible and visual signals as well as a vibration alarm for reliable target detection

Designed for demanding operations: Military Mode for night operations and rugged, waterproof design rated to IP68

TECHNICAL INFORMATION

DIMENSIONS - DETECTOR:	— Length: 920 mm (folded: 657 mm) — Max. overall length: 1,677 mm — Width: 97 mm — Height: 253 mm (folded: 293 mm)
DIMENSIONS - SEARCH HEAD:	Oval, 210 × 285 mm
DIMENSIONS - SOFT CASE:	720 × 340 × 150 mm (H × W × D)
WEIGHT:	— 2.2 kg without batteries — 2.6 kg complete with batteries — 2.5 kg soft case
WATERPROOF - ELECTRONICS AND SEARCH HEAD:	IP 68, 2 m, 30 minutes
STORAGE TEMPERATURE (WITHOUT BATTERIES):	- 57 °C to +71 °C / - 135 °F to +160 °F
PERMISSIBLE AMBIENT TEMPERATURE RANGE:	- 37 °C to +71 °C / - 99 °F to +160 °F
POWER SUPPLY:	— 3 × 1.5 V alkaline battery — 3 × 1.2 V NiMH rechargeable batteries
BATTERY SIZE:	IEC LR/HR 20 (according to ANSI STD, size "D")
BATTERY LIFETIME ALKALINE BATTERY:	> 40 h at an ambient temp. of +20 °C (+68 °F) (1.5 V, VARTA LONGLIFE Power)
BATTERY LIFETIME NIMH RECHARGEABLE BATTERY:	> 30 h at an ambient temp. of +20 °C (+68 °F) (1.2 V, ANSMANN-10000 mAh)
MEAN TIME BETWEEN FAILURES (MTBF):	— MIL-HDBK-217F N2 and ANSI/VITA 51.1-2013 (R2018) — NPRD-2011 for non-electronic components
NATO STOCK NUMBER:	— MINEX 4.610, 2297493, Hardcase, 6665-12-429-4759 — MINEX 4.610, 2292181, Softcase, 6665-12-429-4758

CERTIFICATIONS

MIL-Standard certifications

- MIL-STD 810H Method 501.7, Procedure I - High Temperatures, Storage
- MIL-STD 810H Method 501.7, Procedure II - High Temperatures, Operation
- MIL-STD 810H Method 502.7, Procedure I - Low Temperatures, Storage
- MIL-STD 810H Method 502.7, Procedure II - Low Temperatures, Operation
- MIL-STD 810H Method 503.7, Procedure I-C - Thermal Shock
- MIL-STD-810H Method 506.6, Procedure I - Rain
- MIL-STD-810H Method 512.6, Procedure I - Submersion
- MIL-STD-810H Method 514.8, Oscillation Broadband Noise
- MIL-STD-810H Method 516.8, Drop Test
- MIL-STD-810G Method 505.5, Procedure II - Solar Radiation (continuous test solar radiation)

EMV/CE certifications

- ETSI EN 303 454 V1.1.1:2018-01
- DIN EN 50364:2019-05
- ETSI EN 301 489-1 V2.2.3
- DIN EN 55032:2016-02
- DIN EN 61000-4-2:2009-12
- DIN EN 61000-4-3:2011-04
- DIN EN 62368-1:2021-05

IMAS certification

CWA 14747-1:2003-06-01

Additional certifications

- IEC 60068-2-11:2020
- IEC 60068-2-78:2012
- IEC 60529 - Protection type test IP68
- DIN EN 60068-2-27:2010-02
- DIN EN 60068-2-1:2008-01/ -2-2:2008-05

MINEX 4.611

Metal detector for minimum-metal mines, wires and conductive objects

Precise detection of metals, wires and conductive objects. MINEX 4.611 is a rugged metal detector designed for the reliable detection of very small metallic and near-surface objects. It is particularly suitable for locating so-called minimum-metal or "plastic" mines and extends the detection capabilities to wires and conductive objects, including components of IEDs.

Digital dual-frequency continuous wave technology ensures consistently high sensitivity to metals, wires and conductive materials. Two integrated search coils in the Double-D search head enable precise pinpointing and support detection along large metal structures such as railway tracks, fences or vehicles. The search head can also be rotated by 90°, allowing flexible adaptation to different search and operating positions.

Nine sensitivity ranges allow precise adjustment to the respective detection task. For challenging ground conditions, a fast ground learning function and additional noise cancelling are available.

All control and display elements are integrated directly into the handle. Tactile control buttons facilitate reliable operation even under poor visibility conditions. Detected targets are indicated by audible and visual signals as well as an additional vibration alarm in the handle. For night operations, the LED indicators can be deactivated in Military Mode. An integrated function test, malfunction alarm, low-battery indicator and Supervisor Mode further support reliable field operation.

YOUR ADVANTAGES AT A GLANCE

Extended detection capabilities: Reliable detection of metals, wires and conductive materials

High detection sensitivity: Digital dual-frequency technology for consistently high sensitivity to different types of targets

Precise pinpointing: Double-D search head for accurate target localization and detection along large metal structures

Flexible search positions: 90° rotatable search head for convenient operation while standing, kneeling or lying down

Adaptable to challenging soils: Nine sensitivity ranges, ground learning and noise cancelling for different operating conditions

Intuitive operation and target indication: Audible and visual signals, vibration alarm and tactile controls for reliable operation

High operational reliability: Integrated function test, Military and Supervisor Modes as well as malfunction and low-battery indicators

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CERTIFICATIONS

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- MIL-STD 810H Method 503.7, Procedure I-C - Thermal Shock
- MIL-STD-810H Method 506.6, Procedure I - Rain
- MIL-STD-810H Method 512.6, Procedure I - Submersion
- MIL-STD-810H Method 514.8, Oscillation Broadband Noise
- MIL-STD-810H Method 516.8, Drop Test
- MIL-STD-810G Method 505.5, Procedure II - Solar Radiation (continuous test solar radiation)

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- DIN EN 60068-2-27:2010-02
- DIN EN 60068-2-1:2008-01/ -2-2:2008-05

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The FOERSTER Group is represented by subsidiaries and representatives in over 60 countries worldwide. You can find a complete overview on our website.

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