Ferrolux®
Systematic line and fault location system

- **Plan view of the target line location**
- **Excellent results, even when cables are bunched**
- **Location of joints**
- **Modular sensor design (plug and play)**
- **Multifunctional system combines the most effective pinpointing methods in one device**

DESCRIPTION

The Ferrolux® Rx audio frequency receiver with IFS tracing sensor locates lines and cable faults with a high level of precision as it combines several functions in one device. These include the SuperMax and SignalSelect (signal flow direction identification) locating functions, plus tried-and-tested audio frequency functions.

This means that the highly precise receiver is still able to deliver clear results in areas with lines that are routed closely together.

Longer tasks are still easy as the device weighs very little and provides a systematic and intuitive display of the measurement results.

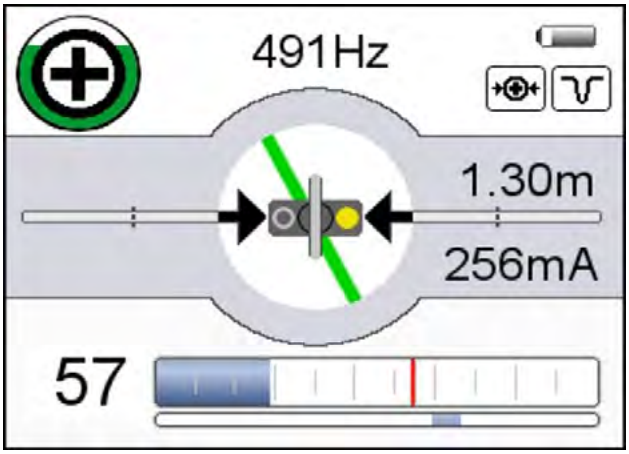
Combined with the audio frequency generators in the Ferrolux® FLG series, even joints and cable faults (e.g. short circuits in wires) can be located with precision.

SPECIAL FEATURES

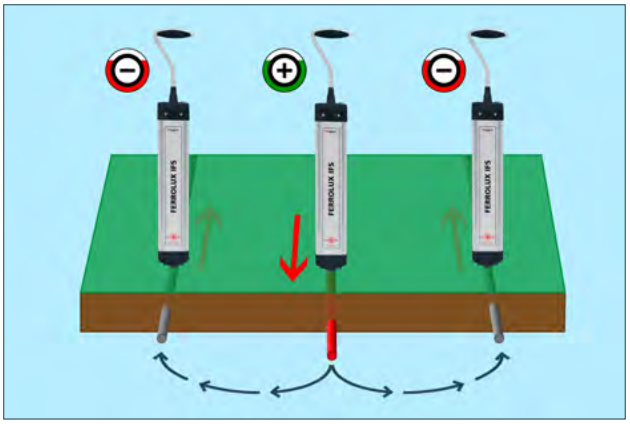
- Plan view of the target line location
- Continuous display of the installation depth and current strength
- Detects the current direction and signal quality
- Frequency scanning
- Programmable function keys
- Sensor weighs just 900g
- Rapid menu navigation with easyGO
- Probe location mode

This is all possible thanks to a continuous display of the installation depth and the signal current as well as automatic supporting functions (e.g. minimum turbidity).
The device can be tailored to suit personal working habits thanks to the programmable F1/F2 function keys. The user can switch between frequencies, modes or speaker settings very quickly. This is also the simplest way to save a data point or waypoint.

GPS coordinates can be added via a Bluetooth® interface. All measurement data can be displayed graphically on the display, which is still legible even in bright sunlight, or on a computer.



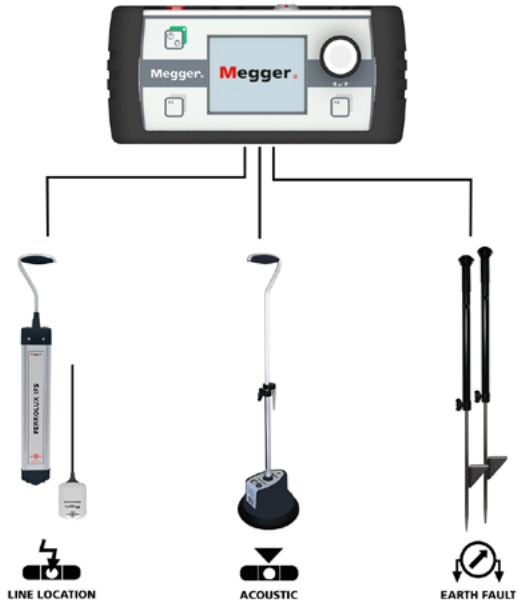
Along with the tracking signal, the new measurement screen provides a clear overview of all relevant information that can be useful in locating the cable or probe.



If there are several lines (cables, pipes) located next to each other, it is often difficult to determine which the correct one is. Sometimes the signal from the generator can flow through both lines, but the signal in the lines may be flowing in different directions. With the SignalSelect function, the generator applies a signal that contains direction information. When the device is positioned over the correct cable, a "+" symbol is displayed to facilitate precise identification.

Ferrolux® - the multi-functional platform

The modular, multi-functional pinpointing system is based on the Ferrolux® Rx audio frequency receiver with universal control unit. It is easy to connect additional sensors to the Ferrolux® MLE set using plug and play.



In addition to tracing and fault location, with audio frequency, it enables the user to acoustically pinpoint cable faults with great precision and accurately locate cable sheath faults using the voltage gradient method.

The set Ferrolux® MLE is equipped with a surge wave receiver type digiPHONE+ enabling the user to acoustically pinpoint flashover faults in cables that are routed in the ground. Excellent acoustic characteristics, background noise reduction, automatic headphone cut-off and an 84 dB volume limit ensure that the fault can be located efficiently using the proven coincidence method.

The Ferrolux® MLE can even locate faults in the cable sheath, which always have a direct influence on the service life and quality of cables. Once two earth probes have been connected, the control unit switches to the voltage gradient method. A signal generator then creates a potential gradient at the fault location.

The device is so sensitive, it even displays voltage differences in the µV range. The device features automatic interference signal filtering and parameter adjustment, so no manual adjustment is required during use. A fault can be located in minutes.

TECHNICAL DATA

Ferrolux® Rx — audio frequency receiver

Incoming frequencies	50 Hz, 60 Hz, 100 Hz, 120 Hz, 491 Hz, 512 Hz, 640 Hz, 982 Hz, 1090 Hz, 8440 Hz, 9820 Hz, radio (15 kHz to 23 kHz), 32,768 Hz
Dynamic range	120 dB
Sensitivity	5 µA @ 1 m (33 kHz)
Depth measurement at active frequencies	0.1 to 7 m
Depth measurement accuracy	5% @ 1 m
Current strength measurement at active frequencies	1 mA to 400 A
Current measurement accuracy	10%
Current direction (SignalSelect)	For all active frequencies
Measurement data memory	99 measurements with 99 measuring points
Display	TFT 3.5" graphic, measured values displayed as a bar graph and numerically
Power supply	6x LR6 (AA)
Operating time	> 15 h
Display unit dimensions (L x W x H)	100 x 220 x 80 mm
Weight	< 1 kg (control unit and tracing sensor)
Sensor unit dimensions (L x W x H)	730 x 100 x 45 mm
Operating temperature	-20 to +55°C
Storage temperature	-30 to +70°C
Degree of protection	IP 54
Interfaces	Bluetooth for pairing with GPS receiver, headphones, connection points for an IFS sensor to locate lines or digiPHONE+ 4 mm connection sockets for connecting the soil probes
Location methods	Normal minimum, normal maximum, super maximum (precision location), minimum turbidity (of cable joints location)
Suitable generators	FLG 12, FLG 50, FLG 200

Ferrolux® IFA — readout antenna (optional)

Incoming frequencies	As for Ferrolux® Rx
Dynamic range	120 dB
Current direction detection (SignalSelect)	For all active frequencies
Weight	Approx. 125 g
Dimensions (L x W x H)	40 mm x 60 mm x 30 mm

Surge wave receiver, (type digiPHONE+)

Safety	Acoustic limit of 84 dB (A)
amplification	> 120 dB
Dimensions	Diameter 230 mm, height 140 mm
Handle length	450 to 750 mm, adjustable
Weight	2.2 kg (including handle)
Dynamic range	Acoustic channel > 110 dB
Frequency range	100 to 1500 Hz
Filter stages	Off 100 to 1500 Hz, low-pass 100 to 400 Hz, band-pass 150 to 600 Hz, High-pass 200 to 60 Hz
Degree of protection	IP 65

Voltage gradient location with earth probes

Sensitivity	5 µV to 200 V
Interference suppression	50/60 Hz, 16 2/3 Hz, KKS, DC
Zero-point adjustment	Automatic
Cycle detection	Automatic
Length of probes	1 m (separable and insulated)
Weight of probes	0.8 kg each
Length of connecting cable	2 m

ORDERING INFORMATION

Product	Order no.
Ferrolux® Rx audio frequency receiver, including connecting cable and carry case	1011692
Ferrolux® MLE pinpointing system consisting of Ferrolux® Rx, "acoustic" sensor set and "earth fault" sensor set Including connecting cables, carry cases, measuring tips 18 mm/75 mm, tripod, base plate, headphones, contact sponge	1012140
OPTIONS:	
Ferrolux® IFA readout antenna for cable identification	1011682
"Acoustic" sensor set for Ferrolux® Rx, including connecting cable, carry case, test probes, headphones, surge wave receiver	1011721
"Earth fault" sensor set for Ferrolux® Rx, including earth probes, connecting cables, contact sponge	1011722
Holux GPS receiver	118307212
Headphones for Ferrolux® Rx	2010525
300 mm measuring tip for ground microphone	890026254
130 mm measuring tip for ground microphone	899006926
Recommended signal generators	
Ferrolux® FLG 12, 12 W audio frequency generator	1012522
Ferrolux® FLG 50, 50 W audio frequency generator	810670
Ferrolux® FLG 200, 200 W audio frequency generator	820000072

Ferrolux® Rx

"Acoustic" sensor set

"earth fault" sensor set

Ferrolux® IFA

Ferrolux® FLG 12

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