

The allround **pinpointing receiver** – for **easy, fast, and reliable** fault location



digiPHONE+ NT Set

- Acoustic and step voltage fault location in one device
- BNR technology for perfect acoustic quality and noise immunity
- Automatic filtration of interfering signals
- Automatic setting of all parameters, no adjustments necessary

sebaKMT



2 in 1 – Two pinpointing procedures in one device

With new developments in cable fault location and pinpointing, SebaKMT is continuously striving to offer customers time-saving and cost-effective solutions.

To meet the requirements, SebaKMT combined two systems in one device: the **digiPHONE+ NT Set**.

The acousto-magnetic cable fault pinpointing and step voltage pinpointing of cable sheath faults can thus be done easily, quickly, and reliably.

The operating mode switches automatically, by identifying the selected sensor.



All special features at a glance

digiPHONE+

- » Automatic adjustment of values
- » BNR – Background Noise Reduction
- » APM – Auto Proximity Mute when approaching the handle. (acoustic impact protection)
- » 84 dB(A) limiter (according to noise and vibration protection laws, e.g. „OSHA“)
- » Distance measurement in milliseconds or meter/feet
- » Easy tracing with left-right indicator
- » „Compass“ for fault direction indication
- » High ground stability of the sensor up to 45°

ESG NT

- » Automatic suppression of external potentials
- » Automatic adaptation to the voltage level
- » Automatic detection of the pulse rate
- » Automatic zero adjustment
- » Very high measuring sensitivity in the μV range
- » Very easy operation
- » Cable mounting at the dividable insulated earth rod

With the proven SebaKMT EasyGo principle, almost no operational steps are required. Basic settings can be made in the easiest way possible, by using the rotary encoder.



Description digiPHONE+

The digiPHONE+ combines field experience, market requirements and intelligent state-of-art technology to a new concept. Top acoustic properties, modern design, and easy operation make the digiPHONE+ the perfect device for cable fault pinpointing.

The Principle

For fault pinpointing, a flashover sound is generated by a capacitative discharge. This explosive sound can be acoustically located. In connection with the magnetic signal caused by the current impulse, the time difference (coincidence) between the sound and the magnetic signal is evaluated and indicates the distance to the fault.

BNR – Background Noise Reduction

The new, intelligent BNR technology with filtering and background noise suppression produces an undisturbed acoustic experience, and lets only the fault sound to your ears.

APM – Automatic Proximity Mute

As soon as one approaches the handle, the sound switches off, before the hand touches the handle. No crack or acoustic impact. After removing the hand, a short delay ensures that the sensor is standing stable and possible mechanical oscillations have ceased, before the headset is activated.

Housing

The new housing concept of the sensor in connection with a floating microphone suspension reduces the body sound of the sensor itself and provides a solid standing of the digiPHONE+ sensor even on sloped surfaces.

Tracing

The left-right indication keeps the operator always on top of the cable, and a compass indicates the fault direction. Distance to fault can be displayed in meter/feet.

Description ESG NT

Earth faults in the cable sheath have always had a direct influence on the longevity and quality of cables. Finding these faults is one of the most important factors in maintaining value.

So far, searching and finding earth faults has always requested a relatively complex and permanent setting of the unit. The new ESG NT does all this automatically.

The pinpointing procedure

Pinpointing means the precise location of faults in the cable sheath. These faults cause the measuring current to flow into the ground. When it exits the cable at the fault point, the measuring current builds a voltage gradient which can be measured by earth rods and an earth fault locator. The accurate location of sheath faults is done by the step voltage method: as it approaches the fault point, the step voltage potential increases, decreasing with reversed polarity after it passes the fault. The change in polarity allows the fault to be located precisely.

Functional description

The ESG NT earth fault locator measures the step voltage potential produced by a test generator in the underground. Other existing underground distortions such as potential equalisation current, DC offset, 16 2/3 Hz or influences of cathodic protection systems are automatically detected and eliminated. The automatic zero calibration maintains the display calibration continuously at zero

The measured step voltage is displayed in two ways: as a bar graph (similar to a conventional pointer instrument), and as a continuing „history-display“ which shows both, the current process and the last 5 to 6 measurement records.

Moreover, the ESG NT has automatic pulse recognition, which allows working with any corresponding pulse generator (Recommendation: SebaKMT's new MFM 10 Sheath Fault Pinpointing System with bi-polar voltage drop method.)

digiPHONE+ NT Set

Technical data

Display module	
Display	High-contrast color TFT, 320 x 240 pixels
Protection class	IP 54
Dimensions receiver (H x W x D)	65 mm x 225 mm x 100 mm
Weight	0.9 kg (incl. batteries)

Acoustic part / Sensor DDP-SU	
Safety	Volume limitation to 84dB(A)
Gain	> 120 dB
Dimensions	Diameter 230 mm
Height	140 mm
Handle length	480 ... 750 mm adjustable
Weight	2,2 kg (incl. handle)
Dynamic range	Acoustic channel >110 dB
Frequency range	100 ... 1500 Hz
Filter stages	OFF 100 ... 1500 Hz Low pass 100 ... 400 Hz Band pass 150 ... 600 Hz High pass 200 ... 1500 Hz
Protection class	IP 56

Step voltage part	
Sensitivity	5 µV ... 200 V
Suppression of disturbances	50/60 Hz, 16 2/3 Hz, KKS, DC
Zero adjustment	Automatically
Pulse recognition	Automatically
Length earth rods	1 m (dividable and isolated)
Weight earth rods	0.8 kg each
Length test leads	2 m



Scope of delivery

- » Receiver digiPHONE+ NT
- » Set of batteries
- » 2 earth rods
- » Test leads
- » Manual
- » Sensor unit
- » Telescopic handle
- » Tip 18 mm
- » Tip 75 mm
- » Tripod
- » Sensor lead
- » Headset

Options

- » Tip 300 mm
- » Tip 130 mm
- » Ground plate
- » Carrying bag
- » Vehicle installation kit

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SebaKMT · Dr.-Herbert-Iann-Str.6 · 96148 Baunach/Germany
 Tel. +49 (0) 95 44 - 6 80 · Fax +49 (0) 95 44 - 22 73
 sales@sebakmt.com · www.sebakmt.com

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