

digiPHONE+ NT Set

The all round pinpointing receiver



- Easy, fast, and reliable fault location
- 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

DESCRIPTION

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

To meet these requirements, Megger has combined two systems into one device: the digiPHONE+ NT Set.

The acousto-magnetic pinpointing and step voltage pinpointing of cable sheath faults can now be done easily, quickly, and reliably. The operating mode switches automatically, by identifying the selected sensor.

2 IN 1 – TWO PINPOINTING PROCEDURES IN ONE DEVICE



Sensor connection:
Microphone

+



Sensor connection:
Earth rods

=



Sensor connection:
Microphone & earth rods

DESCRIPTION digiPHONE+

The digiPHONE+ combines field experience, market requirements and intelligent state-of-art technology into 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 capacitive discharge. This explosive sound can be acoustically located. In connection with the magnetic signal caused by the current impulse, an evaluation of the time difference (coincidence) between the sound and the magnetic signal indicates the distance to the fault.

BNR – Background Noise Reduction

New, intelligent BNR technology with filtering and background noise suppression produces an undisturbed acoustic experience, only sending 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 it, no more 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 stable base for of the digiPHONE+ sensor even on sloped surfaces.

Tracing

The left-right indication keeps the operator on top of the cable, and a compass indicates the fault direction. Distance to the fault can be displayed in meters/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 for and finding earth faults has always required a relatively complex and permanent setting of the unit. The new ESG NT does all this automatically.

The pinpointing procedure

Pinpointing means precisely locating 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 through 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 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. Automatic zero calibration maintains the display calibration at zero.

The measured step voltage is displayed in two ways: as a bar graph (similar to a conventional pointer instrument), and as a continuous "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 it to work with any corresponding pulse generator (Recommendation: MFM 10 sheath fault pinpointing system with bi-polar voltage drop method.)

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



TECHNICAL DATA *

Display module

Display	TFT-color display, 320 x 240 pixels
Protection	IP 54
Dimensions (H x W x D)	65 x 225 x 100 mm (receiver)
Weight	0.9 kg (including batteries)

Acoustic part/Sensor DDP-SU

Safety	Volume limitation to 84 dB(A)
Gain	>120 dB, automatic
Dimensions	Diameter 230 mm
Height	140 mm
Handle length	450 ... 750 mm adjustable
Weight	2.2 kg (including handle)
Dynamic range	Acoustic channel > 110 dB
Frequency operating range	100 ... 1500 Hz
	Off 100 ... 1500 Hz
Filter stages	Low pass 100 ... 400 Hz
	Band pass 150 ... 600 Hz
	High pass 200 ... 1500 Hz
Protection rating	IP 65

Step voltage part

Sensitivity	5 μ V ... 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

ORDERING INFORMATION

Product	Order no.
digiPHONE+ NT Set	1003317-S
Display unit, sensor unit, telescope handle, connection lead, measuring tip 18 mm, measuring tip 75 mm, tripod, ground plate, headphones, earth spike (2 pcs), test lead red, test lead black, contact sponge (2 pcs), soft carry bag with mold insert, additional bag for earth spikes, batteries (6 pcs)	
Options:	
Wall mount for display unit	118303215
Wall mount for sensor unit digiPHONE+ (NT)	118303214
Floor mount for sensor unit digiPHONE+ (NT)	118303237
Measuring tip 300 mm	890026254
Measuring tip 130 mm	899006926
Wall mount for earth spike (2 pcs)	898722056
Floor mount for earth spike	128309944
Sponge for earth spike (2 pcs)	128308944
A-Frame	A-Frame

*We reserve the right to make technical changes.

Group exporter:
Multi-Tek International
Email: mti@multitekintl.com