SUNBELT RENTALS

Datasheet

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MPP1000
Megger Pinpointer

- **Cable fault distance and direction via single or dual detection configuration**
- **Rugged, compact weather resistant housing**
- **Ambient noise reduction headphones**
- **Easy, trouble-free probe connection with a detachable cable system**
- **Fault detection up to 50 ft (15 m approx) away and extended battery life**
- **Ballistic pulse scale provides thump magnitude and surge period**
- **Background interference elimination via selectable acoustic frequency band**

DESCRIPTION

Specifically designed for service, industrial and power utility companies, the MPP1000 pinpoints faults in shielded and direct buried primary cables via a single or dual probe. A single probe version can be easily upgraded at any time by purchasing a second probe. The MPP1000 stand-alone unit (without probes) measures electromagnetic surge and supplies the amplitude of that surge which aids in finding the fault. Overall, the versions can successfully detect both the electromagnetic and acoustic pulses emitted from an arcing fault when it is surged. They can also be used with any Megger PFL Power Cable Fault Locating system/surge generator or other supplier.

The single probe version provides:

- Detection of the acoustic "thump" and measurement of acoustic signal strength
- Measurement of time delay between acoustic and electromagnetic signals
- Relative distance to fault calculated

The dual probe version provides:

- Detection of the acoustic "thump" and measurement of acoustic signal strength
- Measurement of time delay between acoustic and electromagnetic signals
- Relative distance to fault calculated
- Direction to the fault

The instrument's receiver is contained in a lightweight, compact housing that can easily be carried by a "hands free" adjustable strap around the neck. A convenient hook on the knurled geo-phone support poles also allows for safe cable holding. Detachable geo-phone cables reduce stress and allow for an easy, trouble-free connection. If geo-phones are not plugged in, a lock symbol is displayed and headphones are automatically muted. Headphones easily cancel ambient noises travelling through the air.

A pushbutton controls the sound volume in the headphones and can be adjusted for comfort. A single mute pushbutton simply mutes the headset, both the left and right detectors, on or off. The MPP will not automatically mute the headset on lift.

APPLICATIONS

The MPP1000 pinpoints faults while the cable is being surged by a surge generator, or "thumper." An arc occurs when the high energy surge delivered from the surge generator breaks the cable fault down and a loud acoustic emission is created. Since buried power cables are typically under 3 ft (0.9 m) or more of earth or pavement, this acoustic emission can go undetected without the aid of an acoustic amplification device. In many situations, simple acoustic amplification is not enough. Because acoustic emission from an arcing fault occurs at a single point along the cable path, information such as distance and direction to the fault becomes critical for efficient pinpointing. Without this information, the acoustic emission can mislead when pinpointing the fault.

If the cable fault is in a duct or conduit, the loudest acoustic emission will be detected either at the conduit end or the conduit's actual breaking location. When pinpointing over paving, the loudest sound may be at a

crack or seam. Because tree roots tend to carry the sound in all directions, the MPP1000 becomes especially useful.

The receiver's display shows the acoustic signal strength and the time delay between the electromagnetic surge and acoustic event. As the detector is placed closer to the fault, the acoustic signal strength increases while the time difference between surge and acoustic emission decreases. When directly over the fault, the time difference is at a minimum and the acoustic level is at a maximum. The same procedure can be used when placing the detector at a right angle to the cable path. Faults can be located quicker by using a second detector. When using two detectors, the receiver's display will show a direction arrow that points to the detector closest to the fault. When directly over the fault, the MPP display screen will alert the user of the location.

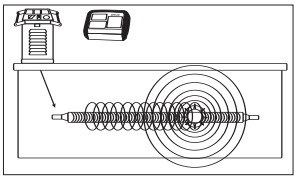
The receiver's display also provides electromagnetic surge level, a measurement of the volume of the acoustic emission, and the time difference between the two events.

FEATURES AND BENEFITS

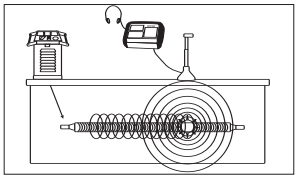
- Determines distance/direction to cable fault by measuring electromagnetic surge/acoustic emission, providing fast fault pinpointing.
- Durable, weather resistant enclosure allows for operation in almost all weather conditions.
- Durable case holds all unit components.
- Detectors sense faults up to 50 ft (15 m approx) away.
- Alerts operator to surge period by scale providing cable distance and trigger information.
- Selectable acoustic frequency band (an advanced user feature) eliminates background interference.
- Headphones easily cancel ambient noise.
- Convenient hook on knurled geo-phone allows for safe cable holding.

SPECIFICATIONS

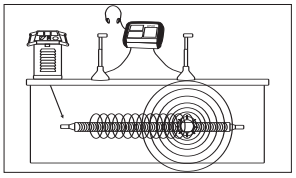
Operating Modes: .....MPP1000 stand-alone unit, single-probe version or dual-probe version
Range: .....0 to 99.9 ms
Resolution: .....0.1 ms
Inputs: .....2 (left/right) for acoustic pickups
Outputs: .....1 jack for headphones, 300 Ω per side
Volume: .....Headphone volume adjustable
Acoustic Level: .....Manual
Electromagnetic Gain: .....Automatic
Acoustic Bands: .....125 to 1000 Hz
Acoustic Pickup: .....6-ft (1.82 m) cord
Display: .....LCD with switchable backlight
Power: .....8 standard AA cell batteries
Automatic shutdown after 1 hour.
Battery Life: .....±65 hrs. continuous usage, alkaline; ±85 hrs. continuous usage, lithium (Equates to several weeks/months of normal usage.)
Operating temperature range: ..-4 to 122° F (-20 to +50° C)
Storage temperature range: ....-40 to 158° F (-40 to +70° C)
Environmental: .....Rated to IP54
Humidity: .....<95% noncondensing
MPP1000 Dimensions: .....8 L x 6.5 W x 3.25 H in.
203 L x 165 W x 83 H mm
MPP1000 Weight: .....2.15 lb (.98 kg)



The MPP1000 stand-alone unit measures electromagnetic surge and supplies the amplitude of that surge which aids in finding the fault.



Single probe version measures electromagnetic surge and acoustic emission, providing distance to the fault.



Dual probe version measures electromagnetic surge and acoustic emission at each detector, providing distance and direction to the fault.

ORDERING INFORMATION

Item (Qty)	Cat. No.
Pinpointer, stand-alone unit	MPP1000
Pinpointer, Single Probe Version Includes: (1) MPP1000, (1) carry strap, (1) headphone, (1) geo-phone, (1) carry case, (1) instruction manual, (8) "AA" batteries	MPP1001
Pinpointer, Dual Probe Version Includes: (1) MPP1000, (1) carry strap, (1) headphone, (2) geo-phones, (1) carry case, (1) instruction manual, (8) "AA" batteries	MPP1002

Item (Qty)	Cat. No.
Included Accessories	
Geo-phone [w/cable, rod, knob and spike]	36161
Headphone	36162
Carry strap	6220-780
Carry case	36120
"AA" battery (8 required)	23415
Instruction manual	AVTMMPP
MPP1000 upgrade to Single Probe Version	36177-1
MPP1000 upgrade to Dual Probe Version	36177-2
Upgrade from Single Probe to Dual Probe Version	36161

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ISO STATEMENT
Registered to ISO 9001:2000 Reg no. Q 09250
Registered to ISO 14001 Reg no. EMS 61597

MPP1000_DS_en_V01
www.megger.com

We are supporting you to deliver a world class service, every day, in every sector...

LOCATIONS

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