

EUROPE'S LARGEST SELECTION OF TEST & MEASUREMENT EQUIPMENT FOR HIRE

**INLEC.COM**

# DATA-SHEET



Nationwide Low Call  
**0333 6000 600**

**WHY BUY**  
WHEN YOU CAN HIRE

**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)

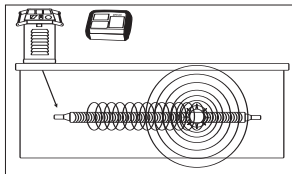
**Storage temperature range:** ....-40 to 158° F (-40 to +70° C)

**Environmental:** .....Rated to IP54

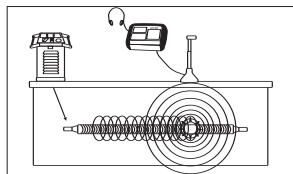
**Humidity:** .....<95% noncondensing

**MPP1000 Dimensions:** .....8 L x 6.5 W x 3.25 H in.  
203 L x 165 W x 83 H mm

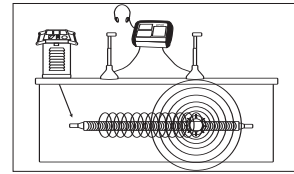
**MPP1000 Weight:** .....2.15 lb (.98 kg)



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.	Item (Qty)	Cat. No.
Pinpointer, stand-alone unit	MPP1000	<b>Included Accessories</b>	
Pinpointer, Single Probe Version	MPP1001	Geo-phone [w/cable, rod, knob and spike]	36161
Includes: (1) MPP1000, (1) carry strap, (1) headphone, (1) geo-phone, (1) carry case, (1) instruction manual, (8) "AA" batteries		Headphone	36162
Pinpointer, Dual Probe Version	MPP1002	Carry strap	6220-780
Includes: (1) MPP1000, (1) carry strap, (1) headphone, (2) geo-phones, (1) carry case, (1) instruction manual, (8) "AA" batteries		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

**UK**  
Archcliffe Road, Dover  
CT17 9EN England  
T (0) 1 304 502101  
F (0) 1 304 207342

**UNITED STATES**  
4271 Bronze Way  
Dallas, TX 75237-1019 USA  
T 1 800 723 2861  
T 1 214 333 3201  
F 1 214 331 7399

**OTHER TECHNICAL SALES OFFICES**  
Norristown USA, Toronto CANADA,  
Mumbai INDIA, Trappes FRANCE,  
Sydney AUSTRALIA, Madrid SPAIN  
and The Kingdom of BAHRAIN.

**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  
Megger is a registered trademark

# INLEC, supporting you to deliver a world class service, every day, in every sector ...



## OUR COMMITMENT TO YOU

### A wealth of knowledge and experience.

You can take advantage of expert advice to ensure you get the best, most appropriate and cost effective equipment for the job. We supply a wide variety of industries, so if there is another way to do the job or save you time and money we'll pass on the benefit of our experience for free.

### Honest advice, just a phone call away.

If we don't have a particular item, rather than hiring you something that won't do the job, we would rather direct you to an alternative supplier. You will always be provided with full instructions and if you still need help, call our technical team on Nationwide Low Call 0333 6000 600. Our aim is to save you time, frustration and money.

### Top quality equipment from major manufacturers.

With Inlec you'll get the most accurate, reliable and well-maintained equipment available. Prices are regularly reviewed to ensure you always enjoy the best value for money. We have made a significant investment in test equipment so we ensure that it's well packed to minimise damage and delay.

### We really do listen to you.

You won't waste your time contacting Inlec. Every request for equipment is logged and carefully considered. Listening to our customers helps keep our product range up to date and relevant. If you are unhappy about any aspect of our service please let us know so we can put it right.

## YOUR 5 WAY GUARANTEE

### 1 GUARANTEE SAME DAY DESPATCH

We understand why prompt delivery is important to you. So, if we confirm your order before 3pm, you are guaranteed same day despatch.

### 2 OUR PRICE GUARANTEE

Inlec guarantee you real value for money. Our price match policy is simple - if you can hire the same product for less elsewhere, we guarantee to match that price and reduce it by a further 10% of the difference - and still deliver our industry leading technical and customer support.

For full details check our price-match guarantee online

### 3 TOP QUALITY GUARANTEED

All equipment is thoroughly checked prior to dispatch to ensure you receive it in full, safe working order. Your shipment will be securely packed and include manufacturer's instructions, accessories or consumables and a valid calibration certificate where appropriate. In addition, Inlec offer a 24 hour replacement service if you decide the equipment is not suitable for your application\*.

### 4 FRIENDLY, KNOWLEDGEABLE ADVICE GUARANTEED

Inlec are happy to provide you with free advice, from an unbeatable team of experienced, knowledgeable and friendly engineers and hire experts.

### 5 YOUR GUARANTEE OF THE BEST CUSTOMER SERVICE

Throughout your hire we will work hard to ensure you enjoy the very best in support and service from Inlec. We guarantee you won't find better service anywhere in the industry.

\*subject to availability and conditions

## Europe's leading Test Equipment Hire Specialist



LAB NO. 0535



Nationwide Low Call 0333 6000 600

Online: [www.inlec.com](http://www.inlec.com)

Inlec UK Ellerbeck Way, Stokesley Business Park, Stokesley N Yorkshire TS9 5JZ United Kingdom



CERT. NO. GB93/1773



Accredited Contractor