#### M71 - GEO416

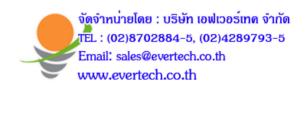
### INSTRUMENTS FOR MEASURING EARTH RESISTANCE AND GROUND RESISTIVITY

Models **M71** and **GEO416** are innovative instruments for measuring ground resistance with 2-wire and 3-wire methods and ground resistivity (only GEO416) with 4-wire method in compliance with reference standards. The instruments allow carrying out measurements with a wide measuring range ( $50k\Omega$ ) and an efficient internal compensation of the disturbance effects present on systems. Model **GEO416**, differently from model **M71**, allows storing each measurement result in its own internal memory and to download the saved data with the aid of the dedicated software.

FUNCTIONS	M71	GE0416
2-wire earth measurement	•	•
3-wire earth measurement	•	•
Measuring range	0.01Ω - 50kΩ	$0.01\Omega$ - $50$ k $\Omega$
4-wire method ground resistivity		•
Compensation of disturbance voltages	•	•
Compensation of test cables	•	•
Storage of results		•
Optical/USB interface for connection		
to PC		•
Safety	EN61010-1	EN61010-1
Measurement category	CAT III 240V	CAT III 265V
Power supply	4x1.5V Type AA	6x1.5V Type AA
Size (LxWxH) mm	240x100x45	222x162x57
Weight (with batteries)	630g	1kg

ACCESSORIES	Code
Standard	
- Set of 3 cables + 3 alligator clips 2 metal probes	
(only M71)	KIT0071
- Set of 4 cables + 4 metal probes (only GEO416)	KITTERRNE
- Set of 4 alligator clips (only GEO416)	COC4-UK
- Carrying bag (only M71)	SP-6085
- Carrying bag (only GEO416)	BORSA2000N
- ISO9000 calibration certificate	
- User manual on CD-ROM (only M71)	
- Quick reference guide (only M71)	
Optional	
- PC Windows software + optical / USB cable	
(only GEO416)	TOPVIEW2006









# **GEO416**

Rel. 1.01 of 16/10/07

**Professional meter for Earth Resistance measurements** 

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# 1. ELECTRICAL SPECIFICATIONS (\*)

Accuracy in indicated as  $\pm$  (% of reading + number of digits) at 23°C  $\pm$  5°C ; <60%HR

Earth Resistance 3-wire and 2-wire systems				
Range (Ω)	Resolution (Ω)	Accuracy		
0.01 ÷ 19.99	0.01			
20.0 ÷ 199.9	0.1			
200 ÷ 1999	1	$\pm$ (2.5%rdg + 2dgt)		
2.00 ÷ 19.99k	0.01k			
20.0 ÷ 49.9k	0.1k			

Test current: $\leq 12 \text{mAAC}$ Open circuit voltage: $\leq 25 \text{V ACTRMS}$ Test frequency: $77.5 \text{Hz} \pm 1 \text{Hz}$ Rprobes: $\leq 50 \text{k}\Omega$ 

Earth Resistivity ρ with 4-wire method			
Range (Ωm)	Resolution (Ωm)	Accuracy	
0.06 ÷ 19.99	0.01		
20.0 ÷ 199.9	0.1	±(2.5%rdg + 2dgt)	
200 ÷ 1999	1		
2.00 ÷ 19.99k	0.01k		
20.0 ÷ 199.9k	0.1k		
0.20 ÷ 3.15M	0.01M		

Test current: $\leq 12 \text{mAAC}$ Open circuit voltage: $\leq 25 \text{V ACTRMS}$ Test frequency: $77.5 \text{Hz} \pm 1 \text{Hz}$ Probe distance range: $1 \div 10 \text{m}$ Rprobes: $\leq 50 \text{k}\Omega$ 

Noise Voltages		
Range (V)	Resolution (V)	Accuracy
460	1	±(2.0%rda + 2dat)





## **GEO416**

Rel. 1.01 of 16/10/07

#### **Professional meter for Earth Resistance measurements**

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### 2. GENERAL SPECIFICATIONS

**DISPLAY, MEMORY, SERIAL INTERFACE:** 

Features: Custom LCD with backlight

Visible area: 73x65 mm

Memory: 999 locations
Serial interface: RS-232 /USB

**POWER SUPPLY:** 

Batteries: 6 batteries 1.5V type LR6-AA-AM3-MN 1500

Low batteries indications: " symbol at display

Batteries life: about 500 test

**MECHANICAL FEATURES:** 

Dimensions: 222 (W) x 162(L) x 57(D) mm

Weight (included batteries): about 1kg

**WORKING ENVIRONMENTAL CONDITIONS:** 

Reference temperature:  $23^{\circ}\text{C} \pm 5^{\circ}\text{C}$  Working temperature:  $0^{\circ} \div 40^{\circ}\text{C}$  Allowed relative humidity:  $<80^{\circ}\text{HR}$  Storage temperature:  $-10 \div 60^{\circ}\text{C}$  Storage humidity:  $<80^{\circ}\text{HR}$ 

**GENERAL REFERENCE STANDARDS:** 

Safety of measuring instruments: IEC / EN61010-1 Safety of accessories: IEC / EN61010-031

Product type standard: IEC / EN61557-1, IEC / EN61557-5

Insulation: double insulation

Pollution degree: 2

Overvoltage category: CAT III 240V to ground, 415V between inputs

Max altitude: 2000m

EMC: EN61326-1(1998) + A1(1999)

This instrument complies with the requirements of the European Low Voltage Directives 2006/95/CEE (LVD) and EMC 2004/108/CE

