

## 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	GEO416
2-wire earth measurement	•	•
3-wire earth measurement	•	•
Measuring range	0.01 $\Omega$ -50k $\Omega$	0.01 $\Omega$ -50k $\Omega$
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 bat.type AA	6x1.5V bat.type AA
Dimensions (LxWxH)	240x100x45	222x162x57
Weight (batteries included)	630g	1kg

ACCESSORIES	Code
<b>Standard</b>	
Set of 3 cables + 3 alligator clips 2 metal probes (only M71)	KIT0071
Set of 4 cables + 4 metal probes (only GEO416)	KITERRNE
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)	
<b>Optional</b>	
PC Windows software + optical / USB cable (only GEO416)	TOPVIEW2006



**M71**  
HV000071



**GEO416**  
HV000416





## 1. ELECTRICAL SPECIFICATIONS

Accuracy in indicated as  $\pm$  (% of reading + number of digits) at  $23^{\circ}\text{C} \pm 5^{\circ}\text{C}$ ; <60%HR

### Earth Resistance 3-wire and 2-wire systems

Range ( $\Omega$ )	Resolution ( $\Omega$ )	Accuracy	
		Disturbance $\leq 3V_{rms}$	$3V_{rms} < \text{Disturbances} < 6V_{rms}$
0.01 $\div$ 19.99	0.01	$\pm(2.0\%rdg + dgt)$	$\pm(4.0\%rdg + 10dgt)$
20.0 $\div$ 199.9	0.1		
200 $\div$ 1999	1		
2.00k $\div$ 19.99k	0.01k	$\pm(3.0\%rdg + 3dgt)$	$\pm(6.0\%rdg + 10dgt)$
20.0k $\div$ 49.9k	0.1k		

Test current:  $\leq 12\text{mAAC}$   
 Open circuit voltage:  $\leq 25\text{V ACTRMS}$   
 Test frequency:  $110\text{Hz} \pm 1\text{Hz}$

### Noise Voltages

Range (V)	Resolution (V)	Accuracy
0.0 $\div$ 99.9	0.1	$\pm(2.0\% rdg + 2dgt)$
100 $\div$ 299	1	

## 2. GENERAL SPECIFICATIONS

### DISPLAY:

Features: Custom LCD  
 Visible area: 53x53 mm

### POWER SUPPLY:

Batteries: 4x1.5V battery type LR6-AA-AM3-MN 1500  
 Low batteries indications: "🔋" symbol at display  
 Batteries life: about 500 test  
 AutoPowerOFF: after 5 min from last action

### MECHANICAL FEATURES:

Dimensions: 240(L) x 100(W) x 45(H) mm  
 Weight (included batteries): about 0.6kg

### 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%HR  
 Storage temperature:  $-10 \div 60^{\circ}\text{C}$   
 Storage humidity: <80%HR

### GENERAL REFERENCE STANDARDS:

Safety of measuring instruments: IEC / EN61010-1, IEC / EN61557-1, IEC / EN61557-5  
 Technical documentation: IEC / EN61187  
 Safety standard accessories: IEC / EN61010-031, IEC / EN61010-2-032  
 Insulation: double insulation  
 Pollution degree: 2  
 Overvoltage category: CAT III 265V to ground, max 415V between inputs  
 Max altitude: 2000m  
 EMC: EN61326-1

This instrument complies with the requirements of the European Low Voltage Directives 2006/23/EEC (LVD) and EMC 2005/108/EEC

