

Fluke 1630

Earth Ground Clamp Meter

Technical Data

Earth Ground loop resistance measurements for commercial, industrial, and utility applications



The clamp-on ground testing technique used by the Fluke 1630 simplifies ground loop testing and enables non-intrusive leakage current measurement.

The compact and rugged design makes the Fluke 1630 easy to use in small places and harsh environments, while the "Display-Hold" and the continuity testing with an audible alarm function, ensures convenience in use. The novel technique means that earth ground loop testing and continuity testing can be completed without breaking the circuit.

- A wide ground loop resistance range, from 0.025 Ω to 1500 Ω, to satisfy all requirements
- Large jaw opening of 35 mm (1.38 in) for tests on ground conductors and/or equipotential bus bars
- Measurement of ground leakage current, from 0.2 mA to 1000 mA, without needing to disconnect - ideal for system troubleshooting
- Wide ac current measurement range from 0.2 A to 30 A allows one instrument for multiple applications
- Continuity loop test - quickly assess whether resistance is less than 40 Ω, with audible alarm
- User-defined HI / LO Alarm limits, for rapid measurement evaluation
- Handy "Display-Hold" button for capturing readings in hard-to-reach places
- Time saving memory function automatically records and stores measured values
- Automatic self calibration ensures correct measurement every time

Stakeless testing system

The Fluke 1630 uses the Stakeless testing method, which eliminates the need to disconnect parallel ground rods and find suitable locations for placing auxiliary ground stakes. This saves time and enables users such as industrial and utility electricians, and field service electricians and contractors, to perform earth ground loop tests in locations where it is not possible to use other techniques, such as inside buildings or on power pylons. With the Stakeless testing method, earth ground stakes are no longer necessary. The Fluke 1630 Earth Ground Clamp is placed around the earth ground rod or the connecting cable. A known voltage is induced by one half of the clamp and the current is measured by the other half. The tester automatically determines the ground loop resistance at this grounding connection.

Applications

- Earth Ground loop testing in various installations - for example, high voltage pylons, buildings, cell phone substations, RF transmitters, etc.
- Inspection of lightning protection systems
- Leakage current measurement

General specifications

Operating error	Refers to the operating temperature range and is guaranteed for 2 years
Storage temp. range	-20 °C to 60 °C (-4 °F to 140 °F)
Reference temp. range	23 °C ± 5 °C (73 °F ± 9 °F)
Storage humidity	< 75 % R _H
Operating humidity	< 85 % R _H
Display	9999 digit LC-display with special symbols
Protection	IP20 according to IEC 529/EN 60529
Safety	300 V, CAT III / pollution degree 2 IEC 61010-1
Weight	640 g (1.4 lb)
Conductor size	35 mm (1.38 in) approximately
Dimension (length x width x depth)	257 mm x 100 mm x 47 mm (1 in x 3.9 in x 1.9 in)
Emission	IEC 1000 4-2, IEC 61326-1 class B
Immunity	IEC 61000-4-2, 8 kV (air) criteria A IEC 61000-4-3, 3 V/m performance criteria A
Range selection	Auto
Overload indicator	"OL" on display
Measuring time	0.4 sec
Measuring frequency	3.333 kHz
Battery type	9 V alkaline (type IEC 6 LR 61)
Battery life	≥ 8 hours (continuous operation)
Power consumption	40 mA
Low battery indication	Display symbol

Ground Loop Resistance (Autorange)

Operating temperature: 0 °C to 50 °C (14 °F to 122 °F)

Range	Resolution	Operating error ¹
0.025 - 0.250 Ω	0.002 Ω	± 1.5 % rdg ± 0.05 Ω
0.250 - 9.999 Ω	0.02 Ω	± 1.5 % rdg ± 0.1 Ω
10.00 - 99.99 Ω	0.04 Ω	± 2.0 % rdg ± 0.3 Ω
100.0 - 199.9 Ω	0.4 Ω	± 3.0 % rdg ± 1.0 Ω
200.0 - 400.0 Ω	2 Ω	± 5.0 % rdg ± 5 Ω
400.0 - 600.0 Ω	5 Ω	± 10 % rdg ± 10 Ω
600.0 - 1500 Ω	20 Ω	± 20 %

¹Note: Loop resistance with no inductance, external magnetic field < 50 A/m, external electrical field < 1 V/m, conductor centered.

Continuity

Beep if resistance < approx. 40 Ω

Ground/leakage current mA~

(Autorange, 50/60 Hz, true-rms, crest factor < 3.0)
Operating temperature: -10 °C to 50 °C (14 °F to 122 °F)

Range	Resolution	Operating error
0.200 - 1.000 mA	0.001 mA	± 2.5 % rdg ± 0.05 mA
1.00 - 10.00 mA	0.01 mA	± 2.5 % rdg ± 0.05 mA
10.0 - 100.0 mA	0.1 mA	± 2.0 % rdg ± 0.3 mA
100 - 1000 mA	1 mA	± 2.0 % rdg ± 3 mA

Current A~

(Autorange, 50/60 Hz, true-rms, crest factor < 3.0)
Operating temperature: -10 °C to 50 °C (14 °F to 122 °F)

Range	Resolution	Operating error
0.20 - 15.00 A	0.01 A	± 2.0 % rdg ± 0.03 A
15.00 - 30.00 A	0.01 A	± 3.0 % rdg ± 0.03 A

HI/LO Limit Evaluation

Values from 0 Ω to 1510 Ω may be preset for automatic comparison. If the measured value is outside of the limit an audible and visual signal is given.

Recording

Measured values can be saved or logged with a defined time interval from 1 to 255 s. Recorded values may then be recalled on the display of the instrument.

The Fluke 1630 Earth Ground Clamp Meter includes:

- Carrying case with strap
- Resistance test loop
- Users manual in English, French, Spanish, German, Italian, Portuguese and Simplified Chinese



Fluke. Keeping your world
up and running.™

Fluke Corporation
PO Box 9090, Everett, WA USA 98206

Fluke Europe B.V.
PO Box 1186, 5602 BD
Eindhoven, The Netherlands

For more information call:
In the U.S.A. (800) 443-5853 or
Fax (425) 446-5116
In Europe/M-East/Africa +31 (0) 40 2675 200 or
Fax +31 (0) 40 2675 222
In Canada (800)-36-FLUKE or
Fax (905) 890-6866
From other countries +1 (425) 446-5500 or
Fax +1 (425) 446-5116
Web access: <http://www.fluke.com>

©2006 Fluke Corporation. All rights reserved.
Specifications subject to change without notice.
Printed in U.S.A. 12/2006 2791074 D-EN-N Rev A

ООО "ЛайфЭлектроникс"

"LifeElectronics" LLC

ИНН 7805602321 КПП 780501001 Р/С 40702810122510004610 ФАКБ "АБСОЛЮТ БАНК" (ЗАО) в г.Санкт-Петербурге К/С 30101810900000000703 БИК 044030703

Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибуторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибуторских договоров

Мы предлагаем:

- Конкурентоспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помочь разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



Тел: +7 (812) 336 43 04 (многоканальный)
Email: org@lifeelectronics.ru