

Wheel-e
"1 Ω" Series
WE10h30123

Designation : continuity reel-tester for measuring and testing of earth conductors .



30 meter-long fused reeled wire for wide range operating. 1 mm² cross section area because it's strong but also it can cut if necessary to prevent the operator to be pulled.

3 screw removable flange to replace easily the wire when worn.

Special flange to hold the end of the reeled wire.

Sturdy handle to reel the wire.

4 mm banana plug to connect to the probe included and the Electro-PJP's telescopic poles to touch and check metal parts.

Energized by 4 AA batteries to offer up to 10000 checkings while keeping light.

Worn on the waist by the belt to free the two hands and also the neck.

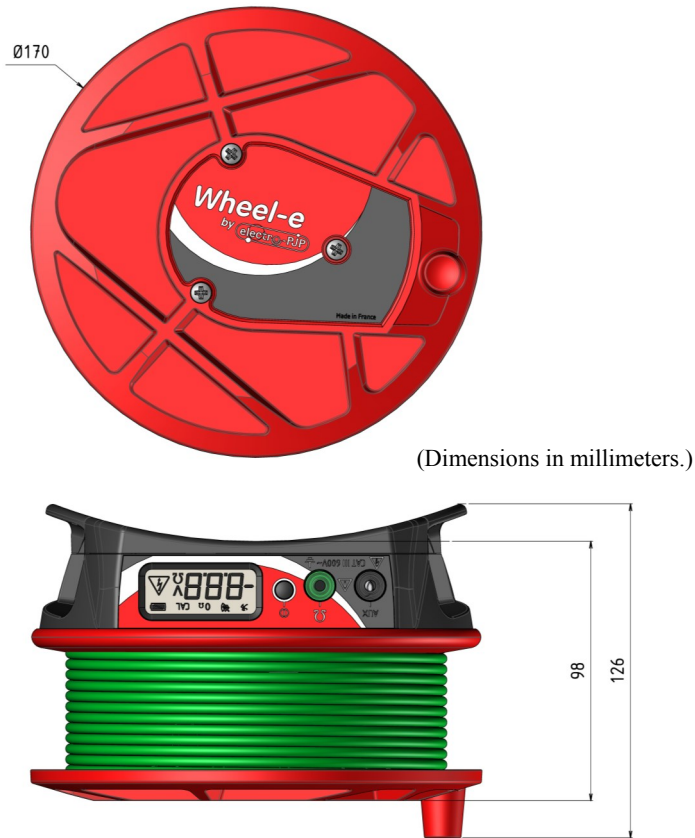
Blue / red backlit LCD to display the resistance value in dark areas and check at first glance if OK or not OK.

Loud muting beep to check if OK or not OK without reading the LCD. Mute to work in quiet areas.



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Zero ohm compensating feature to measure resistances while rejecting automatically the inner resistances of the accessories (wire, clips, etc.).

2 ohms calibrating feature to calibrate periodically and easily the tester.

Blue backlight and beep if resistance equal or lower than 1 Ω. Red backlight and no beep if resistance greater than 1 Ω.

Voltage warning to warn of abnormal voltage on the metal parts touched.

"AUX" auxiliary socket to check unplugged devices while keeping connected to the equipotentiality reference.

"Ω" main socket to connect to a probe or a pole.

A single button for all the functions to ease the operating.

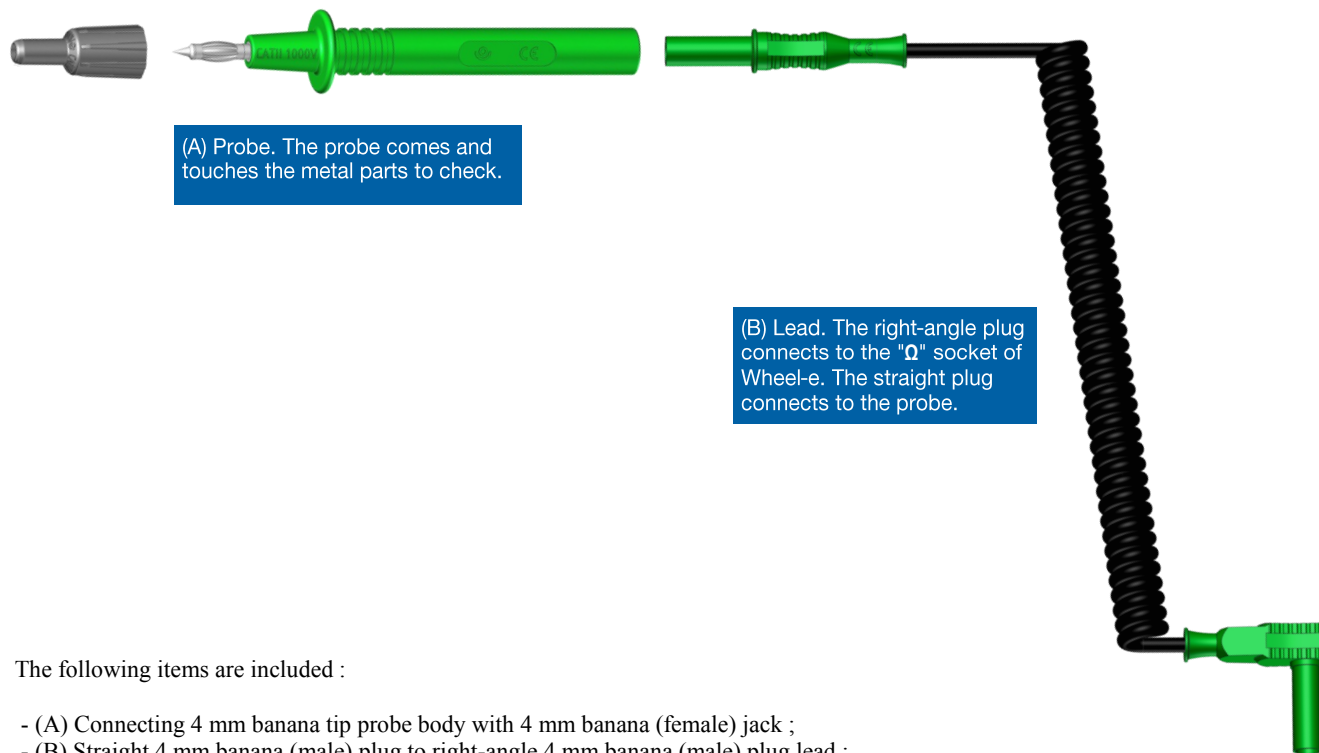
Blue / red backlit LCD to display the resistance values, the battery life, the voltage warning, the mute mode, the compensating operation, and the calibrating operation.

Measurement accuracy : $\pm 0.07 \Omega$ from 0.00Ω to 0.50Ω ; $\pm 10 \% \pm 0.02 \Omega$ from 0.50Ω to 2.00Ω ; and $\pm 8 \%$ beyond 2.00Ω . Measurement range : from 0.00Ω to 20.0Ω .

+210 mA / -210 mA current supplied to measure and test the resistances better than a usual ohmmeter.

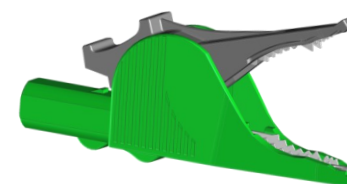
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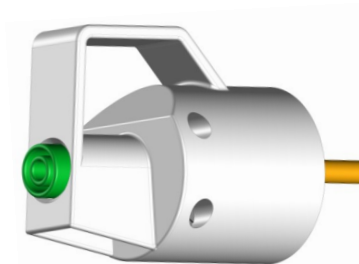


(A) Probe. The probe comes and touches the metal parts to check.

(B) Lead. The right-angle plug connects to the "Ω" socket of Wheel-e. The straight plug connects to the probe.



(C) Clip. The clip connects to the plug of the reeled wire. The jaws bite the equipotentiality reference.



(D) Power plug adapter. The adapter connects to the plug of the reeled wire. And it connects to the reference E ("French") -type power socket.

The following items are included :

- (A) Connecting 4 mm banana tip probe body with 4 mm banana (female) jack ;
- (B) Straight 4 mm banana (male) plug to right-angle 4 mm banana (male) plug lead ;
- (C) Alligator clip with 4 mm banana (female) jack (socket) ;
- (D) E-type mains AC power (male) plug to earthed 4 mm banana (female) socket adapter ;
- 4 AA (LR6) batteries ;
- 1 belt ; and
- 1 verification statement completed with COFRAC calibrated equipments.

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Electrical protection	According to EN / IEC 61010-1:2008. Reinforced insulation, 600 V CAT III / 300 V CAT IV for the pollution degrees 1 and 2, and 300 V CAT III / 300 V CAT IV for the pollution degree 3. IP2X touchproof according to EN / IEC 60529. Removable fuse. These specifications come from the creepage distances, clearances, accessible parts, and solid insulation of the product. And the considered specifications of the environment are : <ul style="list-style-type: none"> • relative humidity, 80 % maximum for temperatures up to 31 °C decreasing linearly to 50 % relative humidity at +40 °C ; • operating and storage temperature ranges, -20 °C to +55 °C ; • indoor use ; and • altitude, 2000 m maximum.
	<div style="background-color: #0056b3; color: white; padding: 5px; display: inline-block;"> 600 V CAT III 300 V CAT IV </div>
Operating temperature range	-20 °C mini., +55 °C maxi. (please see above too).
Protection against fire	UL94 V1 (insulating enclosure).
Conformity	<ul style="list-style-type: none"> • European Directive "Low Voltage Directive" 2006/95/EC. • International / European standard EN / IEC 61010-031:2008 (test report # 119313-638196B from LCIE - Laboratoire Central des Industries Electriques). • International / European standard EN / IEC 61010-1:2010 (test report # 119313-638196A from LCIE - Laboratoire Central des Industries Electriques). • International / European standard EN / IEC 61010-2-030:2010 (test report # 119313-638196C from LCIE - Laboratoire Central des Industries Electriques). • International / European standard EN / IEC 61557-1:2007 (test report # 119313-638196D from LCIE - Laboratoire Central des Industries Electriques). • International / European standard EN / IEC 61557-4:2007 (test report # 119313-638196E from LCIE - Laboratoire Central des Industries Electriques). • International / European standard EN / IEC 61326-1:2006, 61000-3-2:2009, 61000-3-3:2008 (test report # 119313-638194B from LCIE - Laboratoire Central des Industries Electriques). • European Directive "RoHS" 2011/65/EU. • European REACH regulation n°1907 / 2006. • International / European standard EN / IEC 60529.
Environment	<ul style="list-style-type: none"> • "RoHS" compliant, Pb ≤ 4 % in conductor, Pb ≤ 0.1 % in insulator, Hg ≤ 0.1 %, Cr VI ≤ 0.1 %, Cd ≤ 0.01 %, PBB ≤ 0.1 %, and PBDE ≤ 0.1 %. • REACH compliant, no substances from the candidate list of SVHC for authorisation at mass concentrations greater than 0.1 %.
Colors	Black and red case. Contact us regarding the color of the wire.
Weight	1.4 kg.
Origin	Designed and manufactured in France.
Reliability benchmark	Year of 1st placing on the market 2013.

GLOSSARY :

ACCESSIBLE. Able to be touched with a standard test finger or test pin.
BASIC INSULATION. Insulation of hazardous live parts which provides basic protection.
CAT II. Measurement or overvoltage category II. For measurement performed on / equipment connected to the building wiring.
CAT III. Measurement or overvoltage category III. For measurement performed on / equipment connected to part of a building wiring installation.
CAT IV. Measurement or overvoltage category IV. For measurement performed on / equipment connected to the origin of the electrical supply to a building.
CLEARANCE. Shortest distance in air between two conductive parts.
CREEPAGE DISTANCE. Shortest distance along the surface of a solid insulating material between two conductive parts.
DOUBLE INSULATION. Insulation comprising both BASIC INSULATION and SUPPLEMENTARY INSULATION.
EN / IEC 60529:2001. The 2001 version of the European / international standard regarding the degrees of protection provided by enclosures.
EN / IEC 61010-031:2008. The latest version (in February 2012) of the European / international standard regarding the safety requirements for electrical equipment for measurement, control and laboratory use – Part 031: Safety requirements for hand-held probe assemblies for electrical measurement and test. Version year 2008.
IP2X. Solid protection to prevent finger touch according to the European / international standard EN / IEC 60529.
"LVD". European Directive 2006/95/EC on the harmonisation of the laws of Member States relating to electrical equipment designed for use within certain voltage limits. (Usually called the Low Voltage Directive.)
NF C 93-440:1986. French standard regarding one pole plugs, sockets and safety assemblies diameter 4 mm and specially the interchangeability dimensions of plugs and sockets.
OVERVOLTAGE CATEGORY. Numeral defining a TRANSIENT OVERVOLTAGE condition.
POLLUTION. Addition of foreign matter, solid, liquid or gaseous (ionized gases), that may produce a reduction of dielectric strength or surface resistivity.
POLLUTION DEGREE. Numeral indicating the level of POLLUTION that may be present in the environment.
POLLUTION DEGREE 1. No POLLUTION or only dry, non-conductive POLLUTION occurs, which has no influence.
POLLUTION DEGREE 2. Only non-conductive POLLUTION occurs except that occasionally a temporary conductivity caused by condensation is expected.
POLLUTION DEGREE 3. Conductive POLLUTION occurs, or dry, non-conductive pollution occurs which becomes conductive due to condensation which is expected.
REINFORCED INSULATION. Insulation which provides protection against electric shock not less than that provided by DOUBLE INSULATION.
"RoHS". European Directive 2002/95/EC on the restriction of the use of certain hazardous substances in electrical and electronic equipment.
SOLID INSULATION. Insulating materials.
SUPPLEMENTARY INSULATION. Independent insulation applied in addition to BASIC INSULATION in order to provide protection against electric shock in the event of a failure of BASIC INSULATION.
TRANSIENT OVERVOLTAGE. Short duration overvoltage of a few milliseconds or less, oscillatory or non-oscillatory, usually highly damped.