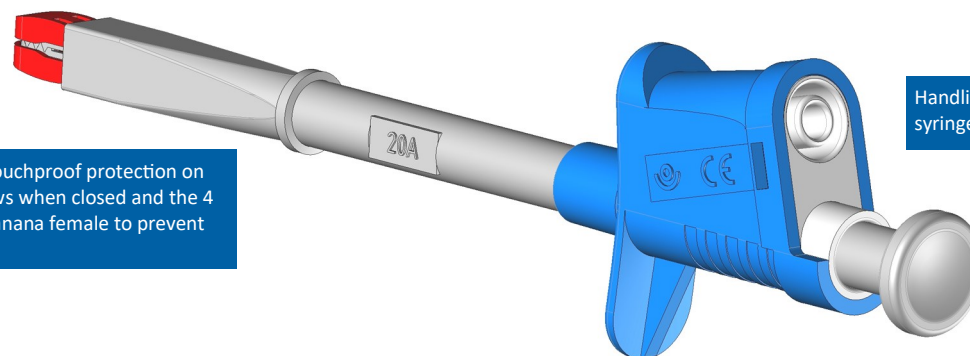


# 6009-IEC

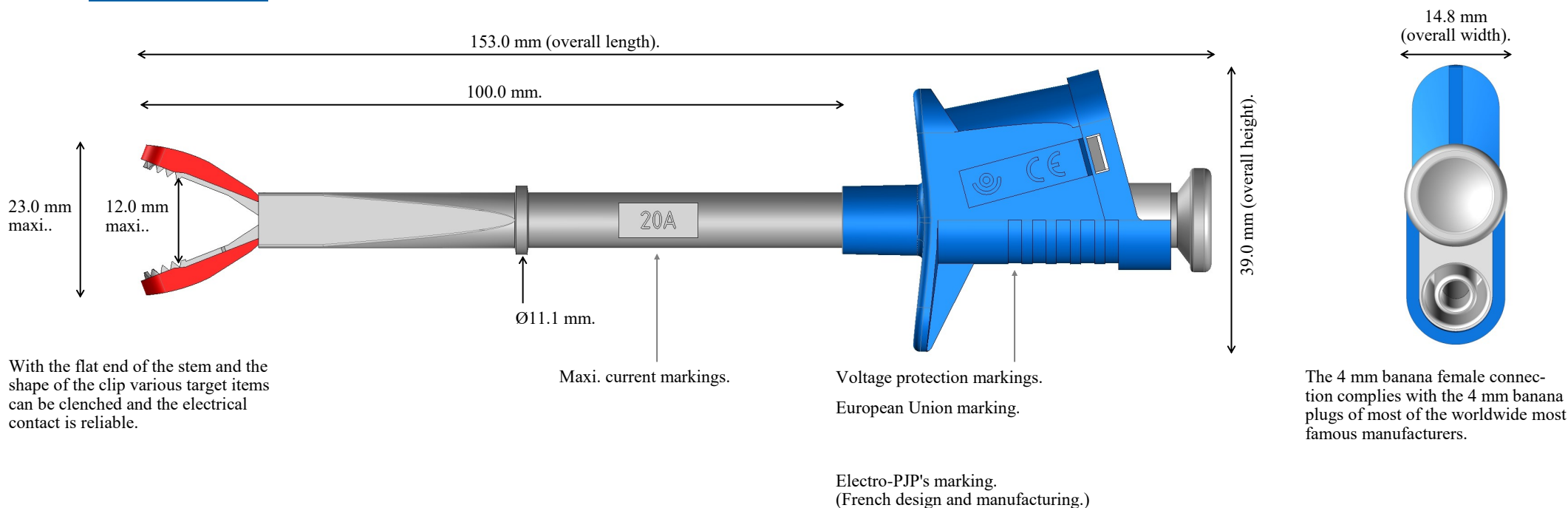
Designation : Alligator Clip w/ 4 mm Banana (female) Jack (socket).



Handling is eased by the syringe-type ergonomics.

IP2X touchproof protection on the jaws when closed and the 4 mm banana female to prevent

Optimum jaw design to clench well a lot of various items as bar, wire, screw, PCB pin, etc.



6009-IEC

Designation : Alligator Clip w/ 4 mm Banana (female) Jack (socket).

## Electrical protection

1000 V CAT II  
1000 V CAT III  
600 V CAT IV

1000 V CAT II / 1000 V CAT III / 600 V CAT IV, reinforced insulation, 20 A (at +40 °C). According to EN / IEC 61010-031:2015+A1:2018.  
IP2X (touchproof) when the jaws are closed. According to EN / IEC 60529.  
These specifications come from the creepage distances, clearances, accessible parts, and solid insulation of the clip. And the considered specifications of the environment are :

- pollution degree, 1 or 2 ;
- relative humidity, 80 % maximum for temperatures up to 31 °C decreasing linearly to 50 % relative humidity at +40 °C ;
- temperature range, +5 °C to +40 °C ;
- indoor use ; and
- altitude, 2000 m maximum.

Operating temperature range -20 °C mini., +80 °C maxi. (please see above too).

Protection against fire According to EN / IEC 61010-031:2008. It is compatible with the requirements of protection against the spread of fire and resistance to heat by its basic insulation.

Conformity

- European Directive "Low Voltage Directive" 2014/35/UE.
- International / European standard EN / IEC 61010-031:2015+A1:2018.
- European Directive "RoHS" 2011/65/EU, 2015/863/EU.
- European REACH regulation n°1907 / 2006.

Environment

- "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 %.

Materials Conductors : nickel-coated brass, steel, and brass. Insulators : please contact us.

Colors Black Red Yellow Green Blue White

Weight 0.027 kg.

Origin ■ ■ Designed and manufactured in France.

Reliability benchmark Year of 1st placing on the market 1998.

Packaging Bag of 5 units of the same color (default packaging).

## 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.

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