



CURRENT CLAMP C-6A



USER MANUAL

Version 1.02 18.10.2023



1 Description

The C-6A clamp is designed to measure AC currents with frequencies up to 10 kHz for range 10 mA...10 A.

The output signal is a voltage proportional to the measured current at the sensitivity of 100 mV/A. It is introduced via a cable (length: 2.2 m) ended with a pin suitable for a socket in the meter.

The arrow marked on one of the clamps indicates the direction of current flow. It is assumed that the current flows in the positive direction if it flows from the source to the receiver. This orientation of clamps is required for the correct power measurement.

2 Safety

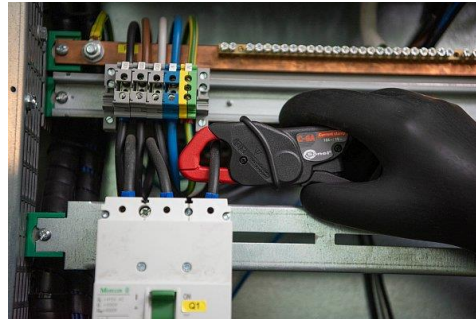


NOTE!

- Do not expose the clamp to water.
- Do not use non-insulated clamps for conductors with a potential exceeding 600 V with respect to the ground, in systems with the measurement category higher than III and systems of measurement category IV with potential exceeding 300 V.

3 Operation

To measure the current, open the clamp slightly by turning the clasp, clamp it on the conductor with flowing current and roughly center the conductor relative to the clamp loop. Pay attention to the direction of the arrow, to avoid the power measurement error.



The gap (formed by the faces of the core) should be kept perfectly clean.

4 Cleaning and maintenance



NOTE!

Apply only maintenance methods specified by the manufacturer in this manual.

Before cleaning, disconnect the clamp from the tested circuit and the meter. Do not spray the clamps with water.

Remove the dust from the gap with a soft and dry cloth. Periodically wipe the accessible iron part of the jaws with an oil-soaked cloth to prevent possible corrosion.

The clamp may be cleaned with a soft, damp cloth using all-purpose detergents. Do not use any solvents.

5 Dismantling and utilisation

Worn-out electric and electronic equipment should be gathered selectively, i.e. it must not be placed with waste of another kind.

Worn-out electric equipment should be sent to a collection point in accordance with the law of waste electrical and electronic equipment.

Before the equipment is sent to a collection point, do not dismantle any elements.

Observe the local regulations concerning disposal of packages.

6 Reference conditions

- temperature+20°C ...+26°C
- relative humidity..... 20...75%
- conductor..... centred in the jaws
- frequency of sinusoidal current 48...65 Hz
- total harmonic distortion <1%
- current constant component..... none
- permanent magnetic field ... <40 A/m (Earth's magnetic field)
- variable, external magnetic field..... none
- conductors in the immediate vicinity no current flow

7 Technical data

Basic technical data

Current range	Accuracy ¹⁾	Max. phase error
0.01...0.1 A	±(3% + 1 mA)	unspecified
0.1...1 A	±2.5%	±5°
1...12 A	±1%	±3°

¹⁾ as % of the measured value

- frequency range..... 40 Hz...10 kHz
- output level 100 mV AC/1 A AC



- When using the clamp with a SONEL meter, total measurement accuracy of the measuring system of the meter and clamp is specified in the manual of a given meter.
- The accuracy of the clamp given in this manual is not the sum of the accuracy of the meter and accuracy of the clamp.

Other technical data

- insulation type acc. to IEC 61010-1 double
- measurement category acc. to IEC 61010-1 III 600 V
- pollution degree 2
- ingress protection acc. to IEC 60529
 - closed jaws..... IP40
 - open jaws..... IP30
- dimensions..... 135 × 50 × 30 mm
- weight ca. 180 g
- jaws opening distance 21 mm
- height of open jaws..... 69 mm
- maximum diameter of tested cable ∅20 mm
- length of clamp cable..... 2.2 m
- operating temperature -10°C...+55°C
- relative humidity..... <90%
- altitude a.s.l..... ≤2000 m
- the product meets the EMC requirements according to ..
 - IEC 61010-1, IEC 61010-2-032, IEC 60529, IEC 61326-1

8 Manufacturer

The manufacturer, which also provides guarantee and post-guarantee services:

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