



OPERATING MANUAL

MINI AC LEAKAGE CURRENT METER

CMP-200



Version 1.7

The CMP-200 digital clamp meter has been designed for the purpose of clamp measurements of alternative leakage current.

Main features of the CMP-200 device are the following:

- high resolution up to 0,1mA AC,
- auto power off,
- 3½ digits display,
- white LED backlight,
- 1,2" jaw diameter,
- safe, protected clamp jaws,
- double molded housing.

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1 Introduction

We appreciate your having purchased our digital clamp AC leakage current tester. The CMP-200 meter is a modern, high-quality measuring device, which is easy and safe to use. Please acquaint yourself with the present manual in order to avoid measuring errors and prevent possible problems related to operation of the tester.

In the present manual we apply three kinds of warnings. These are texts in frames, which describe possible dangers both for the user and the tester itself. The messages starting from the word '**WARNING:**' describe situations which imply a risk for life or health should the recommendations presented in the present manual not be observed. The word '**ATTENTION!**' introduces a description of a situation where non-observance of the recommendations presented in the present manual may imply damage for the tester. Indications of possible problems are preceded by the word '**Attention:**'.

WARNING:

Before using the instrument acquaint yourself with the present manual and observe the safety regulations and recommendations specified by the manufacturer.

WARNING:

The purpose of the CMP-200 tester is to realise clamp measurements of the leakage current. Using the tester in a manner which does not comply with the recommendations specified in the present manual may lead to its damage and constitutes a source of a serious risk for the user.

WARNING:

The CMP-200 tester may be operated solely by qualified and properly authorised personnel for work at electric installations. Using the tester by unauthorised personnel may lead to its damage and constitutes a source of a serious risk for the user.

2 Safety

In order to guarantee proper operation and correctness of the obtained results it is necessary to observe the following recommendations:

- Before commencing operation of the tester please acquaint yourself thoroughly with the present manual,
- The instrument should be operated solely by properly qualified personnel, who also must be trained regarding the industrial safety regulations,
- Use great care when making measurements if the voltages are greater than 25V AC rms or 35V DC. These voltages are considered a shock hazard,
- Set function switch to the appropriate position before measuring,
- Do not exceed the maximum allowable input range,
- It is prohibited to operated the tester:
 - ⇒ If it is damaged and completely or partially out of order
 - ⇒ If it has been stored for an excessive period of time in inadequate conditions (e.g. if it is humid)
- Repairs must be realised solely by an authorised service workshop

WARNING:

Do not realise measurements with wet hands.

WARNING:

Do not realise measurements in environments in which there are inflammable gases. Otherwise operation of the tester under such conditions may cause sparking and explosion.

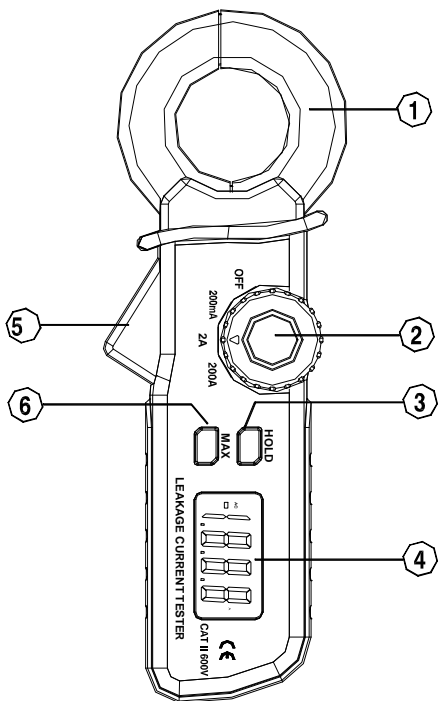
3 Preparation of the tester for operation

Having purchased the tester examine completeness of the contents of the package.

Before measurements commence, it is necessary to realise the following actions:

- Make sure the conditions of the batteries or accumulators permit to realise measurements,
- Make sure the casing of the tester is not damaged.

4 Functional description



CMP-200

1 current clamp

2 rotational selector

- **OFF** – tester off
- **200mA, 2A, 200A** – measurement ranges

3 **HOLD button**

- Data Hold function
- Back Light function

4 **LCD display**

5 **clamp trigger**

6 **data MAX hold function**

5 Measurements

5.1 AC current measurements

WARNING:

Do not take current readings on circuits where the maximum current potential is not known. Do not exceed the maximum allowable input range while measuring current.

WARNING:

Do not realise measurements if the battery compartment is open.

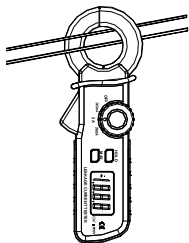
In order to realise a measurement of alternative current, it is necessary to realise the following actions:

- Set the Function switch to desired range, if the range of the measured is not known, select the highest range first,
- open the clamp and place it properly on a cable
- read the result of the measurement on the display,
- move to the lower range if necessary.

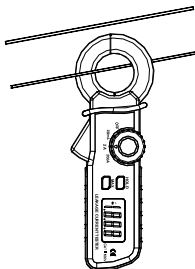
Attention:

During measurements of the current make sure the clamp is properly placed. Otherwise the results of the measurements will not be exact. The most exact result we will get if the wire is placed in the middle of clamp.

Refer to the diagrams below for examples of the tester's applications



Leakage current measurements



Load current measurements

5.2 DATA HOLD Function

To freeze the LCD tester reading, press the HOLD button. The word HOLD will appear on the LCD while the tester is in the Data Hold mode. To release the Data Hold function and return the tester to normal operation, press the “Hold Backlight” key again. The word HOLD will switch off.

5.3 Backlight display

Press and hold the **HOLD** button key for more than 2 seconds to turn on the backlight. This will also activate the Data Hold function. To release the Data Hold function and return the tester to normal operation, press the **HOLD** button momentarily. To turn off the backlight, press and hold the **HOLD** button for more than 2 seconds.

5.4 DATA MAX HOLD Function

To freeze the max reading on the LCD, press the **MAX** button. The word **MAX** will appear on the LCD while the tester is in the Max hold mode. To release the tester to normal operation, press the **MAX** button.

6 Replacement of the batteries

The CMP-200 tester is supplied by means of two 1.5V AAA batteries. It is recommended to use alkaline batteries

Attention:

When making measurements with a battery's mnemonic on, one must take into account additional indefinite measurement uncertainty or unstable working of the meter.

In order to replace the battery it is necessary to do the following:

- place rotational selector in the position OFF and remove the one rear Phillips head screw,
- open the battery compartment and replace the required two 1.5V AAA batteries,
- re-assemble the tester.

7 Cleaning and maintenance

The casing of the tester may be cleaned with a soft, damp cloth using all-purpose detergents. Do not use any solvents or cleaning agents which might scratch the casing (powders, pastes, etc.).

The electronic system of the tester does not require maintenance.

8 Storage

In the case of storage of the device, the following recommendations must be observed:

- Make sure the tester and its accessories are dry,
- In the case the tester is to be stored for a prolonged period of time, the battery must be removed from the device.

9 Dismantling and utilization

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

Worn-out electronic equipment should be sent to a collection point in accordance with the law of worn-out electric 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, worn-out batteries and accumulators.

10 Attachments

10.1 Technical data

- The „m.v.” means the measured value of standard.

AC current measurement

Range	Resolution	Basic uncertainty
199,9mA	0,1mA	$\pm(5\% \text{ m.v.} + 8 \text{ digits})$
1,999A	0,001A	$\pm(5\% \text{ m.v.} + 10 \text{ digits})$
199,9A	0,1A	$\pm(2,5\% \text{ m.v.} + 10 \text{ digits})$

- frequency range 45...65Hz

Other technical data

- Measurement category in acc. with EN 61010-1:2004 II 600V
- Ingress protection in acc. with PN-EN 60529 IP40
- Pollution degree.....2
- Power supply..... two 1.5V AAA batteries
- Clamp size..... 30mm (1,2")
- Overrange indication..... OL displayed
- Display rate2 readings/second, nominal
- DisplayLCD, 3½ digit (1999 count)
- Dimensions..... 182 x 61 x 34 mm
- Weight (including batteries)225 g
- Operating temperature and humidity.....
.....0°C to 30°C (32°F to 86°F) max 90%

-30°C to 40°C (86°F to 104°F) max 75%
-40°C to 50°C (104°F to 122°F) max 45%
- l) Storage temperature and humidity
 -20 to 60°C (-4 to 140°F) max 80%
- m) Max. operating altitude 3000m (10000ft.)
- n) Auto OFF approx. 15 minutes
- o) Compliance with the requirements specified in the following norms EN 61010-1:2004
 EN 61010-2-032
- p) Quality standard ISO 9001

10.2 Standard equipment

The standard set provided by the manufacturer includes the following components:

- The CMP-200 tester,
- 1.5V AAA battery (2 pieces),
- Operating manual,
- Warranty card.

10.3 Manufacturer

The manufacturer of the device, which also provides guarantee and post-guarantee service is the following company:

SONEL S. A.

ul. Wokulskiego 11

58-100 Świdnica

Tel: +48 74 858 38 60

Fax: +48 74 858 38 09

E-mail: export@sonel.pl

Web page: www.sonel.pl

Note:

Service repairs must be realised solely by the manufacturer.

Made in China for SONEL S.A.