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References

1.0 Introduction / Scope of Supply

Measurement **Category CATII** is for measurements performed on circuits directly connected to the low voltage installation, i.e. household appliances, portable tools and similar equipment. Measurement **Category CATIII** is for measurements performed in the building installation, i.e. distribution boards, circuit breakers, wiring, including cables, bus-bars, junction-boxes, switches, socket-outlet in the fixed installation, and equipment for industrial use and some other equipment, for example, stationary motors with permanent connection to the fixed installation. Measurement **Category CATIV** is for measurements performed at the source of the low voltage installation, i.e. electricity meters. **△** The instruction manual contains information and references, necessary for safe operation and maintenance of the instrument. Prior to using the instrument, the user is kindly requested to thoroughly read the instruction manual and comply with it in all sections. **△** Failure to read the instruction manual or to follow with the warnings and references contained herein can result in serious bodily injury or instrument damage. The respective accident prevention regulations established by the professional associations are to be strictly always enforced.

References

References marked on instrument or in instruction manual.

△ Warning of a potential danger, follow with instruction manual.

△ Reference! Please use utmost attention.

△ Caution! Dangerous voltage. Danger of electrical shock.

□ Continuous double or reinforced insulation category II IEC 536/DIN EN 61140.

CE Conformity symbol, the instrument complies with the valid directives. It complies with the EMC Directive 2014/30/EU, with standard EN 61326-1, is fulfilled. It also complies with the Low Voltage Directive 2014/35/EU, with standard EN 61010-2-032, is fulfilled.

☒ Instrument fulfills the WEEE-Directive 2012/19/EU. This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmentally safe recycling.

8.0 Maintenance

8.1 Cleaning
8.2 Calibration Interval
8.3 Battery Replacement

9.0 Technical Data

CATIV 1000V - Instrument complies to Measurement Category CATIV 1000V against Earth.

Description:

Measurement **Category CATII** is for measurements performed on circuits directly connected to the low voltage installation, i.e. household appliances, portable tools and similar equipment.

Measurement **Category CATIII** is for measurements performed in the building installation, i.e. distribution boards, circuit breakers, wiring, including cables, bus-bars, junction-boxes, switches, socket-outlet in the fixed installation, and equipment for industrial use and some other equipment, for example, stationary motors with permanent connection to the fixed installation.

Measurement **Category CATIV** is for measurements performed at the source of the low voltage installation, i.e. electricity meters.

△ The instruction manual contains information and references, necessary for safe operation and maintenance of the instrument. Prior to using the instrument, the user is kindly requested to thoroughly read the instruction manual and comply with it in all sections.

△ Failure to read the instruction manual or to follow with the warnings and references contained herein can result in serious bodily injury or instrument damage. The respective accident prevention regulations established by the professional associations are to be strictly always enforced.

△ The instrument for exchanging the batteries only! Prior to opening, the instrument has to be switched off and disconnected from any circuit. Otherwise, danger of electric shock.

△ The instrument may only be used under those conditions and for those purposes for which it was conceived. For this reason, in particular the safety references, the technical data including environmental conditions and the usage in dry environments must be followed.

△ The operational safety is no longer ensured if the instrument is modified or altered in any way.

☒ Modifying or changing the instrument will result in expiry of all guarantee and warranty claims against the manufacturer.

Instruments must be stored in dry and closed areas. In the case of an instrument being transported in extreme temperatures (high or low), a recovery time of minimum 2 hours is required prior to instrument operation.

3.0 Safety References

△ The operating instructions contain information and references required for safe operation and use of the instrument. Before using the instrument, read the operating instructions carefully and follow them in all respects.

☒ The respective accident prevention regulations established by the professional associations for electrical systems and equipment must be strictly always met.

△ To avoid electrical shock, the valid safety and VDE regulations regarding excessive contact voltages must receive utmost attention, when working with voltages exceeding 120V (60V) DC or 25V (25V) RMS AC. The values in brackets are valid for limited ranges (as for example medicine and agriculture).

△ Measurements in dangerous proximity of electrical systems are only to be carried out in compliance with the instructions of a responsible electrical technician, and never alone.

△ If the operator's safety is no longer ensured, the instrument is to be put out of service and protected against use.

1.0 Introduction / Scope of Supply

The safety is no longer insured, if the instrument (this includes accessories like test leads, etc.):

- LC display with 4000 counts
- Safety according to DIN VDE 0411/EN 61010,
- Measurement Category CATIV 1000V
- Voltage, Current and Resistance measurement
- has been stored for too long under unfavourable conditions
- has been subjected to mechanical stress during transportation or storage
- has been contaminated by leaking batteries
- Capacity and Frequency measurement
- Automatic Range Selection
- Impact and shock proof due to the robust design

Scope of Supply:

- 1 pc. Clamp Meter
- 2 pcs. Test Leads (1x red, 1x black)
- 2 pcs. Batteries 1,5 V, IEC LR03
- 1 pc. Instruction Manual

2.0 Transport and Storage

Please keep the original packaging for later transport, e.g. for calibration. Any transport damage due to faulty packaging will be excluded from warranty claims.

To avoid instrument damage, it is advised to remove batteries when not using the instrument over a certain time period. However, should the instrument be contaminated by leaking battery cells, you are kindly requested to return it to the factory for cleaning and inspection.

Instruments must be stored in dry and closed areas. In the case of an instrument being transported in extreme temperatures (high or low), a recovery time of minimum 2 hours is required prior to instrument operation.

3.0 Safety References

△ The operating instructions contain information and references required for safe operation and use of the instrument. Before using the instrument, read the operating instructions carefully and follow them in all respects.

☒ Exposure to a high frequency electromagnetic field (RF) can influence the measurement and lead to wrong display of the current. The interference is temporary and will not cause any damage to the instrument. The original accuracy is completely restored when the module is removed from the RF field. Common sources of RF fields are e.g. handheld 2-way radios (walkie-talkies) or cellular telephones. If such a source is suspected of interfering with this instrument, either turn off the transmitter or increase the distance between the transmitter and the instrument.

4.0 Proper and intended use

This instrument is intended for use in applications described in the operation manual only. Any other usage is considered improper and non-approved usage and can result in accidents or the destruction of the instrument. Any misuse will result in the expiry of all guarantee and warranty claims on the part of the operator against the manufacturer.

△ If the operator's safety is no longer ensured, the instrument is to be put out of service and protected against use.

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We assume no liability for damages to property or personal injury caused by improper handling or failure to observe safety instructions. Any warranty claim expires in such cases. An exclamation mark in a triangle indicates safety notices in the operating instructions. Read the instructions completely before beginning the initial commissioning.

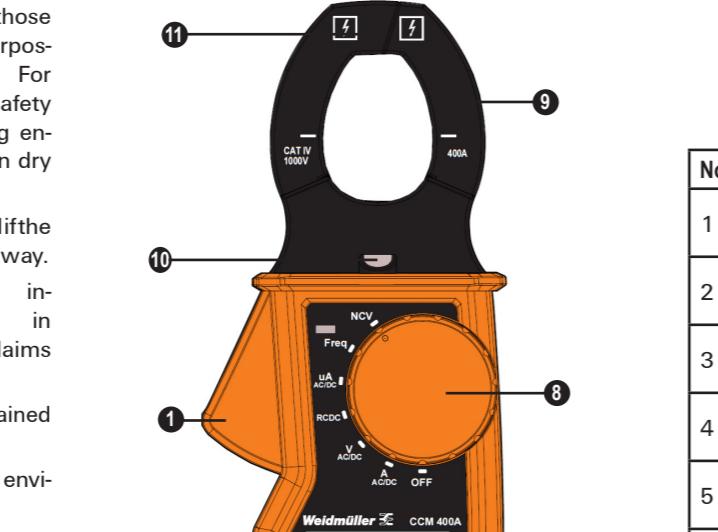
- shows obvious damage
- does not carry out the desired measurements
- has been stored for too long under unfavourable conditions
- has been subjected to mechanical stress during transportation or storage
- has been contaminated by leaking batteries

△ The instrument may only be used within the operating ranges as specified in the technical data section.

- failure to observe the instructions
- changes in the product that have not been approved by the manufacturer
- the use of alcohol, drugs, or medication

5.0 Operation elements and connections

5.1 Clamp Control and Connection Elements



1. Clamp trigger

• Set rotary switch to AC position.

• After CM powers on connect the black test lead to the COM socket and red test lead to the V/D/Cap/μA socket

• Connect test leads to UUT.

• The measured value displayed on the LCD.

2. LC display

• Set rotary switch to μA position.

• After CM powers on connect the black test lead to the COM socket and red test lead to the V/D/Cap/μA socket

• Connect test leads to UUT.

• The measured value displayed on the LCD.

3. Control keys

• Set rotary switch to μA position.

• After CM powers on connect the black test lead to the COM socket and red test lead to the V/D/Cap/μA socket

• Connect test leads to UUT.

• The measured value displayed on the LCD.

4. Ground/COM jack for voltage, mA current, resistance, continuity, capacitance, diode, frequency measurements

• Set rotary switch to μA position.

• After CM powers on connect the black test lead to the COM socket and red test lead to the V/D/Cap/μA socket

• Connect test leads to UUT.

• The measured value displayed on the LCD.

5. Input jack for all measurement from point 4

• Set rotary switch to μA position.

• After CM powers on connect the black test lead to the COM socket and red test lead to the V/D/Cap/μA socket

• Connect test leads to UUT.

• The measured value displayed on the LCD.

6. On the rear: Battery compartment

• Set rotary switch to μA position.

• After CM powers on connect the black test lead to the COM socket and red test lead to the V/D/Cap/μA socket

• Connect test leads to UUT.

• The measured value displayed on the LCD.

7. Grip area

• Set rotary switch to μA position.

• After CM powers on connect the black test lead to the COM socket and red test lead to the V/D/Cap/μA socket

• Connect test leads to UUT.

• The measured value displayed on the LCD.

8. Rotary switch

• Set rotary switch to μA position.

• After CM powers on connect the black test lead to the COM socket and red test lead to the V/D/Cap/μA socket

• Connect test leads to UUT.

• The measured value displayed on the LCD.

9. Clamp hook

• Set rotary switch to μA position.

• After CM powers on connect the black test lead to the COM socket and red test lead to the V/D/Cap/μA socket

• Connect test leads to UUT.

• The measured value displayed on the LCD.

10. Torch light

• Set rotary switch to μA position.

• After CM powers on connect the black test lead to the COM socket and red test lead to the V/D/Cap/μA socket

• Connect test leads to UUT.

• The measured value displayed on the LCD.

11. NCV detection LED

• Set rotary switch to μA position.

• After CM powers on connect the black test lead to the COM socket and red test lead to the V/D/Cap/μA socket

• Connect test leads to UUT.

• The measured value displayed on the LCD.

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The safety is no longer insured, if the instrument (this includes accessories like test leads, etc.):

- shows obvious damage
- does not carry out the desired measurements
- has been stored for too long under unfavourable conditions
- has been subjected to mechanical stress during transportation or storage
- has been contaminated by leaking batteries

△ The instrument may only be used within the operating ranges as specified in the technical data section.

☒ The warranty claim expires in cases of damages caused by failure to observe the instruction! We assume no liability for any resulting damage!

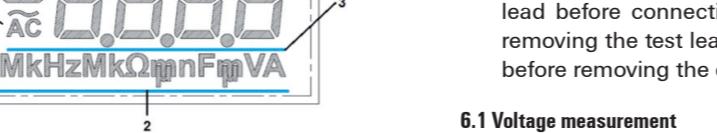
The manufacturer is not responsible for damages to property or personal injury resulting from:

- failure to observe the instructions
- changes in the product that have not been approved by the manufacturer
- the use of alcohol, drugs, or medication

2.0 Button Functions

CM has 4 pushbuttons responding to short and long presses. Functions of each button are described in table below.

3.0 LCD Segments



4.0 Power up options

Set rotary switch to A position.

• After CM powers on connect the black test lead to the COM socket and red test lead to the V/D/Cap/μA socket.

• By default, CM will be in AC measuring mode. Pressing shortly **SELECT/ZERO** button will switch it to DC mode.

• Connect test leads to UUT.

• The measured value displayed on the LCD.

5.0 Calibration Interval