GOSSEN METRAWATT
GMC-INSTRUMENTS GROUP

METRISO PRIME

High-Voltage Insulation Tester

3-349-820-37
4/6.25



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1 Safety Instructions



Read and follow these instructions carefully and completely in order to ensure safe and proper use.
The instructions must be made available to all persons who use the instrument.
Keep for future reference.

General

- The instrument may only be used by qualified electricians in commercial applications. It is not a consumer product.
- Observe and adhere to the following safety rules: 1) Shut down entirely. 2) Secure against restart. 3) Assure absence of voltage at all poles. 4) Ground and short circuit. 5) Cover neighboring live components, or make them inaccessible.
  (See also, for example, “DIN VDE 0105-100, Operation of electrical installations – Part 100: General requirements” for Germany.)
- Observe and comply with all safety regulations which are applicable for your work environment.
- Wear suitable and appropriate personal protective equipment (PPE) whenever working with the instrument.
- The functioning of active medical devices (for example pacemakers, defibrillators) and passive medical devices may be affected by voltages, currents and electromagnetic fields generated by the instrument and the health of their users may be impaired. Implement corresponding protective measures in consultation with the manufacturer of the medical device and your physician. If any potential risk cannot be ruled out, do not use the instrument.

Accessories

- Use only the specified accessories (included in the scope of delivery or listed as optional accessories) with the instrument.
- Carefully and completely read and adhere to the product documentation for optional accessories. Retain these documents for future reference.

Handling

- Use the instrument in undamaged condition only.
  Inspect the device before use. Pay particular attention to damage, interrupted insulation or kinked cables.
  Damaged components must be replaced immediately.
- Use the accessories and all cables in undamaged condition only.
  Inspect accessories and all cables before use. Pay particular attention to damage, interrupted insulation or kinked cables.
- If the instrument or its accessories don’t function flawlessly, permanently remove the instrument/accessories from operation and secure them against inadvertent use.
- If the instrument or accessories are damaged during use, for example if they’re dropped, permanently remove the instrument/accessories from operation and secure them against inadvertent use.
- If there are any signs of interior damage to the instrument or accessories (e.g. loose parts in the housing), permanently remove the instrument/accessories from operation and secure them against inadvertent use.
- The instrument and the accessories may only be used for the tests/measurements described in the documentation for the instrument.
- Equipment and accessories from Gossen Metrawatt GmbH are designed to function ideally with products from Gossen Metrawatt GmbH which are specifically intended for this purpose. Unless expressly confirmed otherwise in writing by Gossen Metrawatt GmbH, they are not intended or suitable for use with other products.
- Route cables in an orderly fashion, e.g. the mains power cable and accessory cables. Loose, disorderly cables result in unnecessary danger of tripping and falling.

Measurements/Tests

- Be prepared for the occurrence of unexpected voltages at devices under test (e.g. defective devices). For example, capacitors may be dangerously charged.
- Be aware that dangerous pulsating voltages may occur in HF circuits.
- Do not perform any measurements in electrical circuits with corona discharge (high-voltage).

Operating Conditions

- Do not use the instrument and its accessories after long periods of storage under unfavorable conditions (e.g. humidity, dust or extreme temperature).
- Do not use the instrument and its accessories after extraordinary stressing due to transport.
- Do not expose the instrument to direct sunlight for long periods of time. Overheating may cause damage to the instrument.
- Only use the instrument and its accessories within the limits of the specified technical data and conditions (ambient conditions, IP protection code, measuring category etc.).
- Do not use the instrument in potentially explosive atmospheres. Danger of explosion!
- Do not use the instrument in areas subject to the risk of fire. Danger of fire!

Batteries

- The instrument may only be operated with batteries. Operation with power packs is life endangering and thus impermissible.
- Use batteries in undamaged condition only. Risk of explosion and fire in the case of damaged batteries!
  Inspect the batteries before use. Pay particular attention to leaky and damaged batteries.
- When using batteries, the respective test/measuring instrument may only be used with inserted and secured battery compartment lid. Otherwise, dangerous voltages may occur at the battery terminals under certain circumstances.

Measurement Cables and Establishing Contact

- Plugging in the measurement cables must not necessitate any undue force.
- Never touch conductive ends (for example of test probes).
- Fully unroll all measurement cables before starting a test/measurement. Never perform a test/measurement with the measurement cable rolled up.
- Avoid short circuits due to incorrectly connected measurement cables.
- Ensure appropriate contacting (e.g. at the test probes, alligator clips, Kelvin probes, etc.).
- Do not move or remove contactors (e.g. test probes, alligator clips, Kelvin probes etc.) until testing/measurement has been completed. Unwanted sparking may otherwise occur due to test current.

Calibration

- Comply with national calibration regulations and laws.
- Calibration may only be carried out by authorized service centers.

2 Applications

Please read this important information!

2.1 Intended Use / Use for Intended Purpose

The METRISO PRIME insulation measuring instrument is in compliance with IEC 61 557/EN 61 557/VDE 0413, “Equipment for testing, measuring or monitoring of protective measures in systems with line voltages of up to 1000 V AC and 1500 V DC”, Part 2,“Insulation resistance measuring instruments”.

It’s suitable for measuring the insulation resistance of devices and systems in a voltage-free state with nominal voltages of up to 1000 V, as well as for the measurement of insulation resistance of up to 1 TΩ with open-circuit voltages of up to 5000 V.

The instrument is also equipped with a 2000 V measuring range for direct and alternating voltages. This provides users with the advantage of checking devices under test for the absence of voltage, and discharging capacitive devices under test.

Safety of the user, as well as that of the instrument, is only assured when it’s used for its intended purpose.

2.2 Use for Other than Intended Purpose

Using the instrument for any purposes other than those described in the condensed operating instructions or these instrument operating instructions is contrary to use for intended purpose. Use for other than the intended purpose may lead to unforeseeable damage!

2.3 Liability and Guarantee

The warranty provided by Gossen Metrawatt GmbH, as well as its liability, are governed by the applicable contractual and mandatory statutory provisions.

3 Documentation

3.1 Information Concerning these Instructions

Read these instructions carefully and attentively. They contain all necessary information for safe use of the instrument. Comply with them in order to protect yourself and others from injury, and to avoid damaging the instrument.

The latest version of these instructions is available on our website:
https://www.gossenmetrawatt.de/en/service-support/download-center/

Errors and Suggestions for Improvement

These instructions have been prepared with utmost care in order to ensure correctness and completeness. Unfortunately, errors can never be entirely avoided. Continuous improvement is part of our quality goal, so we always appreciate your comments and suggestions.

Gender Equality

For better readability, only the masculine form is used in these instructions in a grammatically impartial sense. The feminine and diverse forms are of course always implied as well.

Trademark Law

Product designations used in this document may be subject to trademark law, brand law and patent law. They are the property of their respective owners.

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3.2 Identification of Warnings

Instructions for your safety and for the protection of the instrument and its environment are provided as warnings and notes at certain points within these instructions.

They're laid out as shown below and are graded in terms of the severity of the respective hazard. They also describe the nature and cause of the hazard, the consequences of non-observance and what must be done to avoid it.



DANGER

Death or serious injury is almost certain.



WARNING

Death or serious injury is possible.



CAUTION

Minor or moderate injury is possible.

ATTENTION

Damage to the product or the environment is possible.



Note

Important information



Tip

Useful additional information or application tip

4 The Instrument

4.1 Scope of Delivery

Standard Scope of Delivery:

1 High-voltage insulation measuring instrument with permanently connected measurement cables and test probes, 2 alligator clips (5 kV version) and battery module with batteries
1 Carrying strap
1 Set of operating instructions

4.2 Optional Accessories

Some measurements necessitate optional accessories:

- ISO-Kalibrator 1 calibration adapter (M662A)
- KY 5000A alligator clips (Z580B)
- Guard 5000A guard cable (Z580C)
- Leadex 5000 extension cable (Z580D)
- F2000 D universal carrying pouch (Z700D)

4.3 Meanings of Symbols on the Instrument



Warning concerning a point of danger
(attention: observe documentation)



Danger: High-Voltage!
Life endangering high voltage of up to 5 kV is present at the test probes.

CAT II/III/IV Measuring category II/III/IV



Continuous, doubled or reinforced insulation

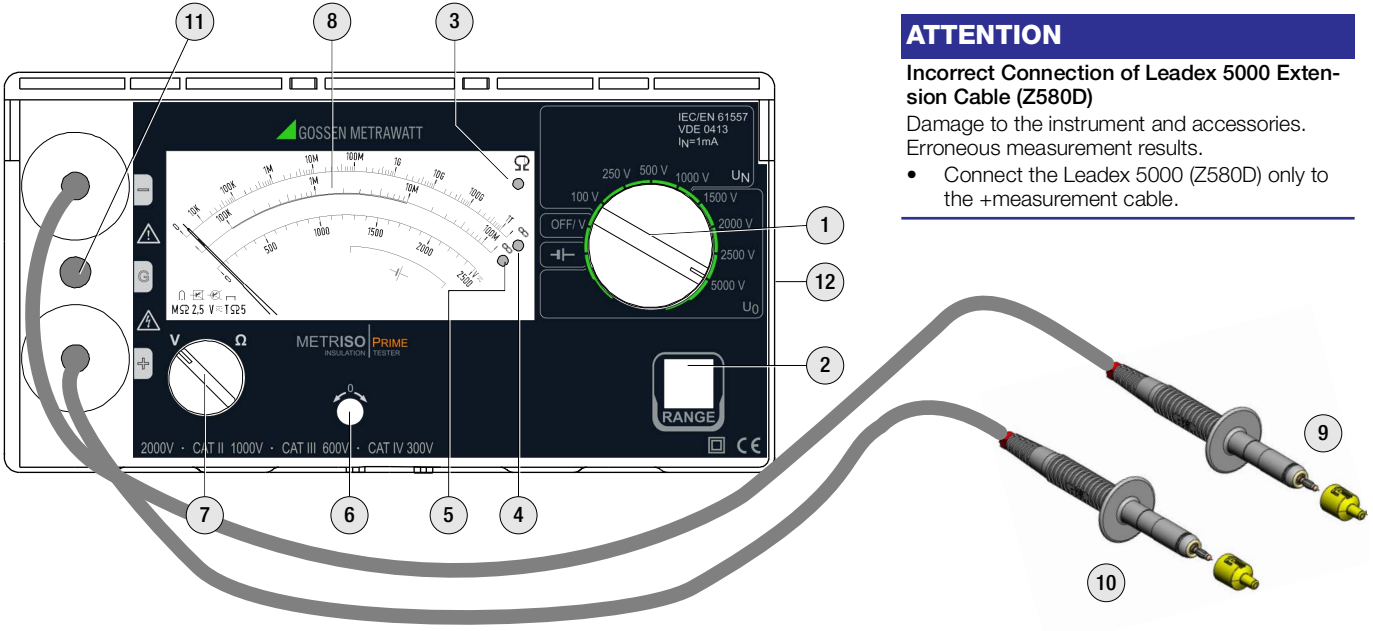


The instrument may not be disposed of with household trash (see chap. 14).



European conformity marking

4.4 Instrument Overview



ATTENTION

Incorrect Connection of Leadex 5000 Extension Cable (Z580D)

Damage to the instrument and accessories.
Erroneous measurement results.

- Connect the Leadex 5000 (Z580D) only to the +measurement cable.

1 Range selector switch for test voltage, battery test and power shutdown

ATTENTION

Intermediate switch positions are not defined.

Incorrect setting. Erroneous measurement results.

- Set the range selector switch to the exact position.

2 **RANGE** switch for measuring range selection

3 Ω indicator LED: green = measurement OK
Off = measurement invalid, battery too weak

4 LED lights up: Measuring range or scale of up to 1 TΩ has been selected

5 LED lights up: Measuring range or scale of up to 100 MΩ has been selected

6 Adjusting screw for mechanical zero balancing

7 Function selector switch for voltage or insulation resistance measurement

8 Analog display

9 Test probe of the –measurement cable with safety cap

10 Test probe of the +measurement cable with safety cap

11 Guard cable connector socket (accessory: Guard 5000A – Z580C)

12 Battery module

4.5 Analog Display

The logarithmic representation of the upper resistance scale allows for quick recognition of the order of magnitude.

In order to achieve the required accuracy during protective measures testing, the **RANGE** key makes it possible to switch to the expanded lower measuring range of 100 kΩ to 100 MΩ.

The two orange LEDs (4 and 5) at the right-hand side of their respective scales indicate which of the two resistance measuring ranges is active at the moment.

The Ω indicator LED lights up green if the insulation measurement is valid. If this LED does not light up, this means that the selected test voltage value has not been reached. Perform a battery test and replace the batteries if necessary (see chap. 10.2).

The two lower scales are for voltage measurement and the battery test.

4.6 Relevant Standards

IEC 61010-1 DIN EN 61010-1 VDE 0411-1	Safety requirements for electrical equipment for measurement, control and laboratory use – Part 1: General requirements
IEC 61010-031 DIN EN 61010-031 VDE 0411-031	Safety requirements for electrical equipment for measurement, control and laboratory use – Part 31: Safety requirements for hand-held probe assemblies for electrical measurement and testing
IEC 61010-2-030 DIN EN 61010-2-030 VDE 0411-2-030	Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-030: Particular requirements for testing and measuring circuits
IEC 61557-1 IEC 61557-2 DIN EN 61557-1 DIN EN 61557-2 VDE 0413-1 VDE 0413-2	Electrical safety in low voltage distribution systems up to 1000 V AC and 1500 V DC – Equipment for testing, measuring or monitoring of protective measures – Part 1: General requirements Part 2: Insulation resistance
IEC 61326-1 DIN EN 61326-1 VDE 0843-20-1	Electrical equipment for measurement, control and laboratory use – EMC requirements – Part 1: General requirements
DIN EN 60529 VDE 0470-1	Test instruments and test procedures – Degrees of protection provided by enclosures (IP code)

4.7 Characteristic Values

Insulation Resistance

Scale/ Standard	Measuring Range	Nominal Range of Use	Nominal/ Test Voltage U_N/U_T	Nominal/ Test Current I_N/I_T	Intrinsic Error [1]	Operating Error
① VDE0413	100 kΩ … 100 MΩ	100 kΩ … 10 MΩ	100 V 250 V 500 V 1000 V	1 mA	±2.5%	±30% of the measured value
②	10 kΩ … 1 TΩ	100 kΩ … 100 GΩ	100 V/1500 V 250 V/2000 V 500 V/2500 V 1000 V/5000 V	1mA/0.7mA 1mA/0.5mA 1mA/0.4mA 1mA/0.1mA	±5%	

Response After Power On When Measuring Insulation Resistance

Response time: < 100 GΩ: < 3 s; > 100 GΩ: < 8 s
Also applies if test voltage or the measuring range is changed.

Direct and Alternating Voltage

Measuring Range	Frequency	Internal Resistance	Max. Allowable Voltage	Intrinsic Uncertainty [1]
0 … 2000 $V_{DC/AC}$	15 Hz … 500 Hz	5 MΩ	2200 $V_{DC/AC}$ max. 10 s	±5%

Protective Functions

Connection	Internal Resistor	Max. Permissible Voltage	Protective Functions
–measurement cable	—	To +measurement cable/ guard cable: 2000 $V_{DC/AC}$ max. 10 s	Connected to ground via protective diodes
+measurement cable, insulation measurement	—	To –measurement cable / guard cable: 2000 $V_{DC/AC}$ max. 10 s	High-voltage cascade diodes, PTC thermistors [2] and series resistors
Guard cable	Between guard and measurement cable: 90 kΩ	To measurement cable: 2000 $V_{DC/AC}$ max. 10 s	PTC thermistors [2] and series resistors
Battery	—	10 V	Reverse polarity protection with diodes

[1] Based on a scale length of 97.5 mm (100 MΩ range) or 109.8 mm (1 TΩ range)
[2] PTC thermistor cool-down time until start of a new measurement: at least 2 minutes!

Display

Measuring movement	Moving-coil mechanism with core magnet
Scale length	111.5 mm (longest scale)

Reference Conditions

Ambient temperature	+23 °C ±2 K
Relative humidity	40% ... 60%
Frequency of measured quantity	50 Hz ±10 Hz (during voltage measurement)
Waveform of line voltage	Sine, deviation between TRMS and rectified value < 1%
Battery voltage	8 V ±1%
Normal position of use	Horizontal

Power Supply

Batteries	6 ea. 1.5 V mono cell / D LR20
Working range	6 V … 10 V
Battery operating time	600 measurements with 1000 V test voltage and measuring resistance of 1 MΩ, 12,000 measurements with 500 V test voltage and measuring resistance of 500 kΩ, 5 s per measurement – 25 s pause

Ambient Conditions

Operating temperature range	0 °C ... + 40 °C
Storage temperature range	–20 °C … +60 °C (without batteries)
Relative humidity	Max. 75%, no condensation allowed
Elevation	To 2000 m

Electrical Safety

Protection class	II
Test voltage	8.5 kV_{AC}
Measuring category	1000 V CAT II, 600 V CAT III, 300 V CAT IV
Nominal voltage U_N	1000 V
Open-circuit voltage U_0	5000 V
Pollution degree	2

Electromagnetic Compatibility (EMC)

Product standard DIN EN 61326-1

Interference emission		Class
EN 55022		B
Interference immunity	Test value	Feature
EN 61000-4-2	Contact/atmos. – 4 kV/8 kV	B
EN 61000-4-3	10 V/m	B

Mechanical Design

Dimensions	W× D × H: 290 × 250 × 140 mm
Weight	3.4 kg with batteries
Protection	IP 52 (protection against ingress of solid foreign objects: dust protected; protection against water ingress: dripping – 15° angle)

Response After Power On When Measuring Insulation Resistance

Response time	< 100 GΩ: < 3 s; > 100 GΩ: < 8 s Also applies if test voltage or the measuring range is changed.

5 Initial Startup

5.1 Inserting the Batteries

✓ The function selector switch is set to the **V** position.
✓ The range selector switch is set to the **OFF/V** position.
✓ The instrument is fully disconnected from all external electrical circuits.

➪ Unscrew the battery module.
➪ Disconnect the battery clip.
➪ Pull the battery holder out of the battery module.
➪ Insert batteries (type as specified in chap. 4.7) into the battery holder with correct polarity in accordance with the symbols.
➪ Push the battery holder back into the battery module.
➪ Press the battery clip back onto the contacts, making sure that polarity is correct.
➪ Correctly reinsert the battery module into the housing (with text visible) and screw it tight.
➪ Perform a battery test. See chap. 10.2.

5.2 Switching the Test Instrument On and Off

As long as the function selector switch is set to **Ω** and the range selector switch is not set to **OFF/V**, the test instrument remains switched on.

6 Using the Test Probes

Maximum rated voltage	300 V	600 V	1000 V	5000 V
Measuring category	CAT IV	CAT III	CAT II	—
With safety cap attached	•	•	—	—
Without safety cap	—	—	•	•

In order to establish contact inside 4 mm sockets, the safety caps have to be removed by prying open the snap fastener of the safety cap with an object (e.g. a second test probe).

7 Measuring Direct and Alternating Voltage

Direct voltages and sinusoidal alternating voltages with frequencies ranging from 15 to 500 Hz can be measured with this test instrument.

Voltage measurement is used to test for the absence of voltage before performing the insulation resistance measurement, as well as for automatic discharging of capacitive devices under test. The falling voltage value can be observed at the display.

Pointer deflection at the measuring instrument is always positive for the measurement of direct voltage, regardless of the polarity of the connections. Alternating voltage is always indicated as an RMS value.

Note

Voltage measurement is independent of the battery.
We nevertheless recommend always operating the instrument with batteries.

➪ Set the function selector switch to the **V** position.
➪ Make sure that the pointer is indicating **0** on the **V scale** when at rest. If necessary, adjust the pointer with the help of the positioning screw for the mechanical zero point.
➪ The range selector switch is irrelevant for voltage measurement, but we recommend setting it to **OFF/V**.
➪ Contact the measuring point with both test probes.
➪ Read the measured value from the **V scale**.

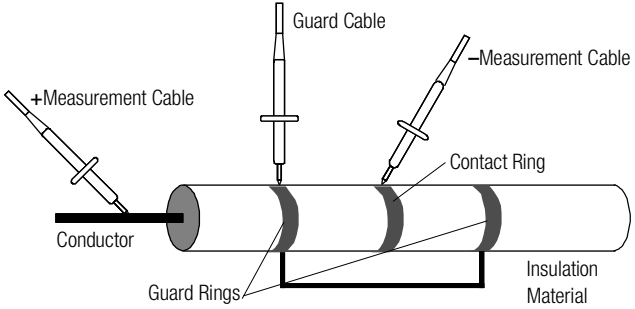
8 Measuring Insulation Resistance

Use the guard terminal for measurements within the 100 GΩ (10 GΩ) to 1 TΩ range. See chap. 8.1.

8.1 Measurement with Guard Cable (with Guard 5000A accessory)

The measurement of very high resistances necessitates extremely minimal measuring current and may be rendered problematic as a result of influences such as electromagnetic fields, humidity or surface current. An accurate test setup is thus absolutely essential.

A guard cable must be used for measurements within the 100 GΩ (10 GΩ) to 1 TΩ range, in order to prevent surface current from distorting measurement results. The guard rings prevent current at the surface of the insulation material from flowing from the +measurement cable to the – measurement cable, instead of through the insulation material itself.



- ➪ Insert the plug from the guard cable into the appropriate socket in the test instrument.
- ➪ Plug the alligator clip onto the guard cable test probe.
- ➪ Connect the alligator clip to the guard ring located between the two measuring points on the insulation material under test.
- ➪ Refer to chap. 8.2 regarding the measuring procedure.

Note

The following materials can be used as guard rings: aluminum foil, copper foil or metallic hose clamps.

8.2 Measuring Procedure

DANGER

Electric Shock due to Capacitively Charged Devices Under Test

Life endangering!

Capacitive devices under test such as cables can be charged with up to approximately 5000 V, depending on the selected nominal voltage.

- Never touch the conductive ends of the test probes.
- After each measurement, discharge the device under test in a controlled manner. See procedure below.
- If possible, use the included alligator clips in order to contact the device under test.

ATTENTION

Overvoltage Influence
Tripping of the Auto-Reversible Fuse (PTC Thermistor) due to Overvoltage or Interference Voltage

Damage to the instrument.

- Allow to cool for at least 2 minutes.

Two measuring ranges are available for the measurement: 10 kΩ to 1 TΩ and 100 kΩ to 100 MΩ. Select 100 kΩ to 100 MΩ if you want to measure with the higher accuracy required after protective measures testing.

- ✓ The device under test is voltage-free. See chap. 7 with regard to testing.
- ➪ Set the function selector switch to the Ω position in order to activate test voltage.
- ➪ The display range can be pre-selected with the **RANGE** key:
  - 10 kΩ to 1 TΩ or
  - 100 kΩ to 100 MΩ. If this range is selected, LED (5) lights up.
- ➪ Depending on the nominal voltage of the device under test, use the range switch to select the required nominal voltage: 100 V, 250 V, 500 V, 1000 V, 1500 V, 2000 V, 2500 V or 5000 V.

LED (4) lights up to indicate that the upper measuring range, namely 10 kΩ to 1 TΩ, has been activated.

➪ Contact the measuring point with the two test probes and wait until the pointer has settled in. Depending on the device under test, this may take anywhere from several seconds to half a minute if, for example, large capacitors (long cables) have to be charged.

➪ Read the measured value from the upper scale.
If the Ω indicator LED (3) lights up green, the insulation measurement is valid. If this LED does not light up, this means that the selected test voltage value has not been reached. Perform a battery test (see chap. 10.2).

➪ Discharge the device under test:
Set the function selector switch to the **V** position. Contact the device under test until the pointer indicates 0 V.
Do not reverse polarity at the device under test while discharging. The instrument would otherwise be damaged.

8.3 Evaluating Measured Values

In order to assure that the limit values set forth in DIN VDE regulations are not fallen short of under any circumstances, the insulation measuring instrument's intrinsic and influence error must be taken into consideration. The following table lists the minimum display values required for insulation resistances that must be displayed, taking the instrument's maximum operating error into consideration (under nominal conditions of use), in order to ensure that the specified limit values are not fallen short of. Intermediate values can be interpolated.

The table is valid for test voltages ranging from 100 V to 1000 V.

100 kΩ to 100 MΩ Scale			
Limit Value [kΩ]	Display Value [kΩ]	Limit Value [MΩ]	Display Value [MΩ]
100	130	1	1.3
200	260	2	2.6
300	400	3	4
400	550	4	5.5
500	700	5	7

9 Storage and Transport

ATTENTION

Unintentional Power-On

Damage to the product.
Battery depletion.

- Set the function selector switch to the **V** position and the range selector switch to the **OFF/V** position.

ATTENTION

Improper Storage

Damage to the product and measuring error due to environmental influences.

- Store the instrument in a protected location and only within the limits of the specified permissible ambient conditions. The respective ambient conditions (temperature, humidity etc.) can be found in chap. 4.7.
- Remove batteries during lengthy periods of non-use (e.g. vacation). This prevents excessive battery depletion or leakage, which may result in damage to the instrument under unfavorable conditions.

ATTENTION

Improper Transport

Damage to the product and measuring error.

- Transport the instrument only within the limits of the permissible ambient conditions (temperature, humidity etc.) (see chap. 4.7).
- For best possible protection, we recommend using the carrying pouch which is available for the instrument – refer to the instrument's data sheet for further details.

10 Maintenance

10.1 Cleaning



DANGER

Life Endangering due to Electric Shock!

The instrument and its accessories are operated with electrical power, thus resulting in a general risk of electric shock. This can be fatal or cause serious injuries.

- The instrument, the accessories and all connected conductors must be voltage-free before and during cleaning. Switch the test instrument off and disconnect it from mains power.
- Never immerse the instrument/accessories in water or other liquids.
- Never touch the instrument/accessories with wet or moist hands.

ATTENTION

Unsuitable Cleaning Agents

Unsuitable cleaning agents such as aggressive or abrasive cleansers result in damage to the instrument/accessories.

- Use a cloth for cleaning, which has been slightly dampened with water.
- Avoid the use of cleansers, abrasives or solvents.

Keep the outside surfaces of the instrument and any accessories clean.

10.2 Testing and Replacing Batteries

The batteries must be replaced with new ones:

- If the pointer no longer remains within the scale identified with the battery symbol when the range selector switch is set to battery test.
- When the indicator LED no longer lights up green at the respectively desired test voltage.

Proceed as described under “Initial Startup” (see chap. 5.1). Always replace the entire set of batteries!

A battery test can also be performed. The range selector switch must be briefly set to the ⊣⊢ position to this end.

Pointer deflection within the ⊣⊢ scale for the battery test indicates the condition of the batteries with an average load amounting to a test voltage of 1000 V. The function selector switch position is not taken into consideration. The left end of the scale represents minimum required supply voltage and the right end represents maximum available supply power.



Note

If the pointer is only deflected into the minimum power supply range, the batteries must be replaced.

10.3 Calibration

Use of the instrument and resultant stressing influence the device and lead to deviation from warranted accuracy values.

In the case of strict measuring accuracy requirements, as well as in the event of severe stressing (e.g. severe climatic or mechanical stress), we recommend a relatively short calibration interval of once per year. If this is not the case, a calibration interval of 2 to 3 years is usually adequate.

Please contact GMC-I Service GmbH for calibration services (see chap. 12).

11 Repair

If your instrument requires repair, please contact our service department (see chap. 12).

Note

Loss of Warranty and Guarantee Protection

Unauthorized modification of the instrument is prohibited. This also includes opening the instrument.

If it can be ascertained that the instrument has been opened by unauthorized personnel, no guarantee claims can be honored by the manufacturer with regard to personal safety, measuring accuracy, compliance with applicable safety measures or any consequential damages.

If the guarantee seal is damaged or removed, all guarantee claims are rendered null and void.

The device may only be repaired or opened by authorized, qualified personnel who are familiar with the associated dangers.

Original replacement parts may only be installed by authorized, qualified personnel.

12 Contact, Support and Service

Gossen Metrawatt GmbH can be contacted directly and conveniently – we have a single number for all of your needs! Whether you require support or training, or have an individual inquiry, we can answer all of your questions here:

+49 911 8602-0

Monday to Thursday: 08:00 am - 4:00 p.m.
Friday: 08:00 am - 2:00 p.m.

Or contact us by e-mail at: info@gossenmetrawatt.com

Do you prefer support by e-mail?

Measuring and Test Technology: support@gossenmetrawatt.com

Industrial Measuring Technology: support.industrie@gossenmetrawatt.com

Enquiries concerning training and seminars can also be submitted by e-mail and online:

training@gossenmetrawatt.com
https://www.gossenmetrawatt.de/en/knowledge/webinars/

Please contact GMC-I Service GmbH for repairs, replacement parts and calibration*:

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Germany

* DAkkS calibration laboratory per DIN EN ISO/IEC 17025 accredited by the Deutsche Akkreditierungsstelle GmbH under reference number D-K-15080-01-01

13 CE Declaration

The instrument fulfills all requirements of applicable EU directives and national regulations. We confirm this with the CE mark.

The CE declaration is available upon request.

14 Disposal and Environmental Protection

Proper disposal makes an important contribution to the protection of our environment and the conservation of natural resources.

ATTENTION

Environmental Damage

Improper disposal results in environmental damage.

Follow the instructions concerning return and disposal included in this section.

14.1 Disposal of Waste Equipment, Batteries, and Rechargeable Batteries

Old devices and (rechargeable) batteries contain valuable raw materials that can be recycled, as well as hazardous substances which can cause serious harm to human health and the environment, and they must be recycled and disposed of correctly.



The symbol depicting a crossed-out garbage can on wheels refers to the legal obligation of the owner or end-user not to dispose of old devices and batteries or rechargeable batteries with unsorted municipal waste (“household trash”). The (rechargeable) batteries must be removed from the old device (where possible) without destroying them and the old device and the (rechargeable) batteries must be disposed of separately. The type and chemical composition of the (rechargeable) battery are indicated on the battery’s labelling. If the abbreviations “Pb” for lead, “Cd” for cadmium or “Hg” for mercury are included, the battery or rechargeable battery exceeds the limit value for the respective metal.

You are obligated to comply with respective local requirements and implement them correctly on site. Further information can be obtained, for example, from the responsible authorities or your local distributor.

Please also observe the owner’s or end user’s responsibility with regard to deleting personal data, as well as any other sensitive data, from old devices before disposal.

14.2 Disposal of Packaging Materials

Packaging and its components must be disposed of correctly, separate from unsorted municipal waste (“household trash”). You are obligated to comply with respective local requirements and implement them correctly on site. Further information can be obtained, for example, from the responsible authorities or your local distributor.

We recommend retaining the original packaging materials in case you might require servicing or calibration in the future.



WARNING

Danger of Asphyxiation Resulting from Foils and Other Packaging Materials

Children and other vulnerable persons may suffocate if they wrap themselves in packaging materials, or their components or foils, or if they pull them over their heads or swallow them.

- Keep packaging materials, as well as their components and foils, out of the reach of babies, children and other vulnerable persons.

14.3 Regulations for the Federal Republic of Germany

The following comments refer specifically to the legal situation in the Federal Republic of Germany.

Waste Equipment, Electrical or Electronic Accessories and Batteries or Rechargeable Batteries

Old devices and electrical or electronic accessories, as well as waste batteries and rechargeable batteries, used in Germany can be returned free of charge to Gossen Metrawatt GmbH or the service provider responsible for their disposal in compliance with applicable regulations, in particular laws concerning packaging and hazardous goods. Batteries and rechargeable batteries must be returned in the discharged state or with

appropriate precautions against short circuiting. Further information regarding returns can be found on our website.

Packaging Materials

Packaging which is not subject to so-called system participation is returned to the appointed service provider. Further information regarding returns can be found on our website.

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