

Z2270

Probes for 4-Wire Measurement

3-447-097-03

2/3.21

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1 Safety Instructions

Observe this documentation, in particular all included safety information, in order to protect yourself and others from injury, and to prevent damage to the instrument.

- Carefully and completely read and adhere to these operating instructions. The respective document can be found at <http://www.gossenmetrawatt.com>. Retain the document for future reference.
- Read and adhere to the operating instructions included with your measuring instrument.
- 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.
- Use the instrument for milliohm measurements only (four-wire measurement) in measuring category CAT II.
- Only use the instrument and its accessories in compliance with the specified technical data and under the specified conditions (ambient conditions, IP protection code, measuring category etc.).
- The instrument may only be used as long as it's in good working order. Inspect the instrument before use. Pay particular attention to damage, broken insulation or kinked cables. Damaged components must be replaced immediately.

- If the instrument or an accessory is damaged during use, e.g. through falling, remove it from operation and secure it against inadvertent use.
- 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 the accessories after extraordinary stressing due to transport.
- Plugging in the measurement cables must not necessitate any undue force.
- Never touch conductive ends (e.g. of test probes).
- Fully unreel all measurement cables before starting a test/measurement. Never perform a test/ measurement with the measurement cable rolled up.
- Ensure that the alligator clips, test probes or Kelvin probes make good contact.
- Do not move or remove test probes, alligator clips or Kelvin probes until the test/measurement has been completed. Unwanted sparking may otherwise occur due to test current.

2 Applications

Please read this important information!

2.1 Intended Use / Use for Intended Purpose

The probes are connected to compatible measuring instruments with four-wire measuring function and are used for four-wire measurements. They connect low-impedance resistors to the measuring instrument by means of four-pole technology and compensate for erroneous influences during measurement resulting from cable and contact resistances.

Safety of the operator, 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 these operating instructions is contrary to use for intended purpose.

2.3 Liability and Guarantee

Gossen Metrawatt GmbH assumes no liability for property damage, personal injury or consequential damage resulting from improper or incorrect use of the product, in particular due to failure to observe the product documentation. Furthermore, all guarantee claims are rendered null and void in such cases.

Nor does Gossen Metrawatt GmbH accept any liability for data loss.

2.4 Opening the Instrument / Repairs

The instrument may only be opened by authorized, trained personnel in order to ensure flawless, safe operation and to assure that the guarantee isn't rendered null and void. Even original replacement parts may only be installed by authorized, trained personnel.

Unauthorized modification of the instrument is prohibited.

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.

3 The Instrument

3.1 Scope of Delivery

Please check for completeness.

- 1 Set of test probes, 1 red and 1 black
- 3 S hooks
- 1 Operating Instructions (this document)

3.2 Symbols on the Instrument and the Included Accessories



Warning concerning a point of danger (attention, observe documentation!)



Double insulation (protection category II)



European conformity marking



The device may not be disposed of with household trash. Current and further information is available on our website at <http://www.gossen-metrawatt.com> under the search terms "WEEE" and "environmental protection".

3.3 Technical Data

Ambient Conditions	
Operating temperature:	-20 ... +50 °C
Storage temperature:	-25 ... +75 °C
Relative humidity:	Max. 75% No condensation allowed
Elevation:	Max. 2000 m
Electrical Safety	
Measuring category:	CAT II 300 V 10 A
Pollution degree:	2

Mechanical Design	
Plug:	4 mm, 90° angled safety plug
Length (overall):	120 cm
Weight:	Approx. 180 g
Strain relief:	> 100 N

4 Operation

Make sure that the probes are compatible with the utilized measuring instrument. Compare the technical data and all other specifications included in the documentation for the measuring instrument to this end.

Connect the probes as specified in the documentation for the measuring instrument.

Perform measurement as described in the documentation for the utilized measuring instrument. Contact must be established by applying an appropriate amount of pressure.



Attention!

The probes may only be used for four-wire measurements (milliohm measurements) in measuring category CAT II.

If necessary, use the included S hooks for cable management. They can be used to hold 2 measurement cables together.

5 Maintenance

5.1 Cleaning

No special maintenance is required. Keep outside surfaces clean. Use a cloth for cleaning, which has been slightly dampened with water.



Attention!

Avoid the use of cleansers, abrasives or solvents.



Attention!

Never touch or clean the conductive ends of the test probes!

5.2 Replacing the Spring-Loaded Contact Pins

The spring-loaded contact pins are subject to wear and damage. The spring-loaded contact pins can be replaced.

Replacement part: Z227F spring-loaded contact pins for Kelvin probes.

Orders can be placed by contacting our sales department, See below for contact details. Information concerning replacement can be found in the supplementary sheet included with the replacement part.

6 Repair and Replacement Parts Service, Calibration Center and Rental Instrument Service

If required please contact:

GMC-I Service GmbH

Service Center

Beuthener Str. 41

90471 Nürnberg, Germany

Phone +49-911-817718-0

Fax +49 911-817718-253

e-mail service@gossenmetrawatt.com

Web www.gmci-service.com

This address is only valid in Germany.

Please contact our representatives or subsidiaries for service in other countries.

7 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.

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