

Z227W

Angle Probes for 4-Wire Measurement

3-447-106-03

1/9.21

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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 device.

- Carefully and completely read and adhere to this supplement. The respective document can be found at <http://www.gossenmetrawatt.com>. Retain the document for future reference.
- Carefully and completely read and adhere to the condensed operating instructions, as well as the operating instructions, for the associated instrument. The respective documents can be found at <http://www.gossenmetrawatt.com>. Retain these documents for future reference.
- Only use the angle probes with the corresponding instrument.
- The angle probes may only be used for the tests/measurements described in the documentation for the associated instrument.
- Use the angle probes in undamaged condition only. Inspect the angle probes before use. Pay particular attention to damage, interrupted insulation or kinked cables.
- If damage occurs during use, for example if the angle probes are dropped, remove them from opera-

tion permanently and secure them against inadvertent use.

- Only use the angle probes within the limits of the specified technical data and conditions (ambient conditions, IP protection code, measuring category etc.).
- Use the probes only in measuring category O.
(The probes may not be used in measuring categories II, III or IV.)
- Do not use the angle probes after long periods of storage under unfavorable conditions (e.g. humidity, dust or extreme temperature).
- Do not use the angle probes 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 unroll all measurement cables before starting a test/measurement. Never perform a test/measurement with the measurement cable rolled up.
- Ensure that the angle probes make good contact.
- Do not move or remove the angle probes until testing/measurement has been completed.
Unwanted sparking may otherwise occur due to test current.
- Use only the specified Z227F spring-loaded contact pins as replacement parts.

2 Applications

Please read this important information!

2.1 Intended Use / Use for Intended Purpose

The Z227W angle probes are connected to the METRACELL BT PRO battery tester.

They're used to contact difficult to access battery terminal posts when measuring internal battery resistance ("resistance" measurement). They permit four-wire measurement, i.e. 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.

Connect the probes and perform measurement as described in the documentation for the METRACELL BT PRO. Contact must be established by applying an appropriate amount of pressure.



Attention!

Z227W angle probes may only be used for the "resistance" measurement with the METRACELL BT PRO battery tester.

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

Safety of the operator, as well as that of the device, is only assured when it's used for its intended purpose.

2.2 Use for Other than Intended Purpose

Use of the product for any purposes other than those described in this supplement, or in the operating instructions for the respective measuring instrument, 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.

2.4 Opening the Instrument / Repairs

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 Device

3.1 Scope of Delivery

- 2 Angle probes, 1 red and 1 black
- 3 S hooks
- 1 Supplement (this document)

3.2 Meanings of Symbols on the Device



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.gossenmetrawatt.com> under the search terms "WEEE" and "environmental protection".

3.3 Technical Data

Ambient Conditions	
Operating temperature:	-20 °C ... +50 °C
Storage temperature:	-25 °C ... +75 °C
Relative humidity:	Max. 75% No condensation allowed
Elevation:	Max. 2000 m
Electrical Safety	
Measuring category:	CAT O, 24 V, 2 A
Pollution degree:	2
Mechanical Design	
Angle:	80°
Length:	127 cm
Weight:	200 g (total)

3.4 Relevant Standards

The tester has been manufactured and tested in accordance with the following safety regulations: EN 61010-031.

4 Maintenance

4.1 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!

4.2 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 pin. Orders can be placed by contacting our repair and replacement parts service department → 4.

Information concerning replacement can be found in the supplementary sheet included with the replacement part.

5 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.


6 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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