GOSSEN METRAWATT METRAHIT 2+ Universal TRMS Multimeter Instruction Manual

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Please make sure to read the detailed operating instructions in pdf format at www.gossenmetrawatt.com. The short-form instructions are no substitute for the detailed instructions!

Contents

Standard Equipment

- 1 TRMS Multimeter
- 1 protective rubber holster
- 1 Set of measuring cables KS17-ONE
- 2 AA size batteries 1,5 V
- 1 Short-form Operating Instructions
- 1 DAkkS calibration certificate

Safety Instructions

In order to maintain the flawless condition of the instrument, and to ensure its safe operation, it is imperative that you read the operating instructions thoroughly and carefully before placing your instrument into service, and that you follow all instructions contained therein. Observe the following safety precautions: The instrument may only be operated by persons who are able to recognize contact hazards and take the appropriate safety precautions. Contact hazards exist wherever voltages of more than 33 V (RMS value) and/or 70 V DC occur. The maximum allowable voltage between the instrument and earth is equal to 600 V, category III.

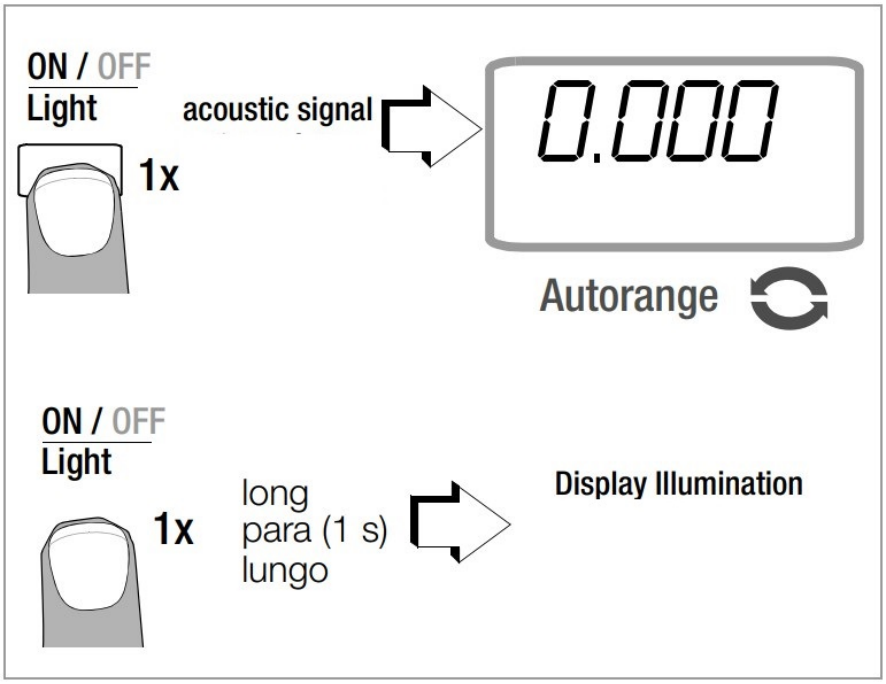
The nominal voltage of the installation may not exceed the following values:

- in monophase systems between conductor and neutral: 600 V,
- in 4-wire 3-phase systems between phase conductors: 690 V,
- in 3-wire 3-phase systems between phase conductors: 1000 V.

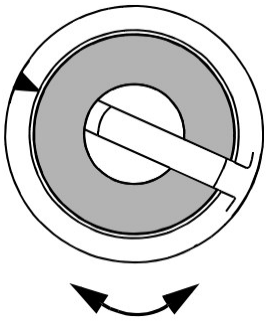
In conformity with standard DIN EN 61010-031, measurements in an environment according to measuring category III may only be performed with the safety cap applied to the test probe of the measurement cable.

Attention: Unexpected voltages may occur at defective devices, capacitors,…!
The insulation of the measurement cables may not be damaged, cables and plugs may not be interrupted!
No measurements may be made in electrical circuits with corona discharge (high-voltage)! Special care is required when measurements are made in HF electrical circuits where dangerous pulsating voltages may be present.
Measurements under moist ambient conditions are not permissible. Do not overload the measuring ranges beyond their allowablecapacities! Use original fuses only

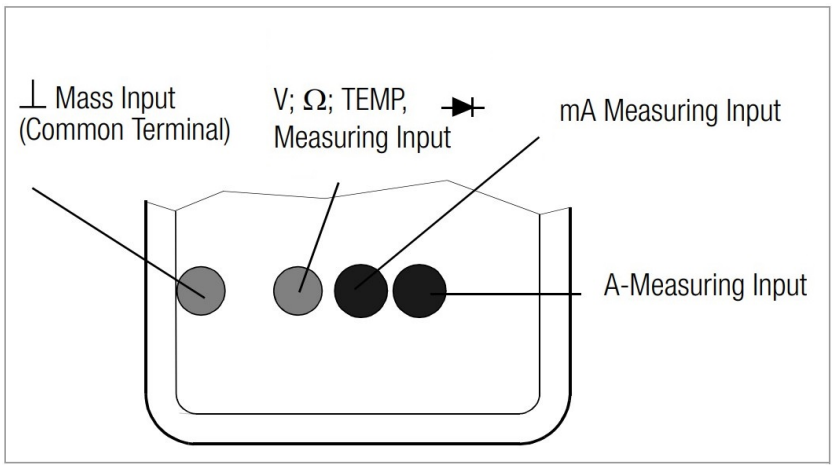
Switching on/off



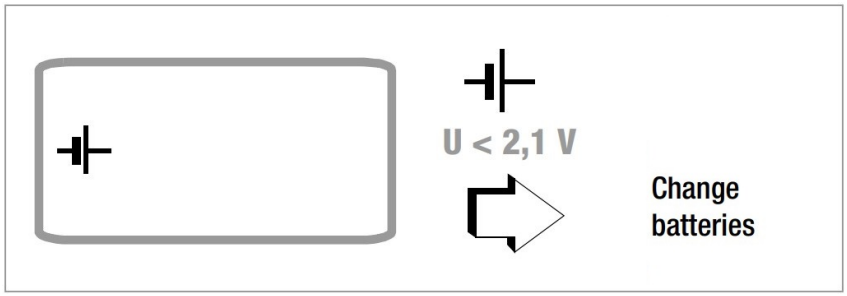
Select Measuring Function



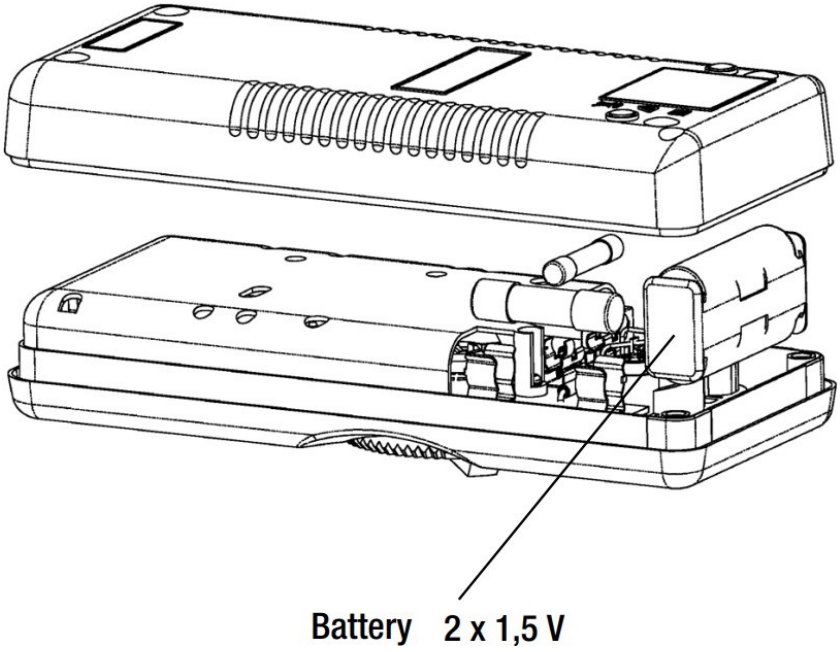
Measuring Inputs



Battery Test

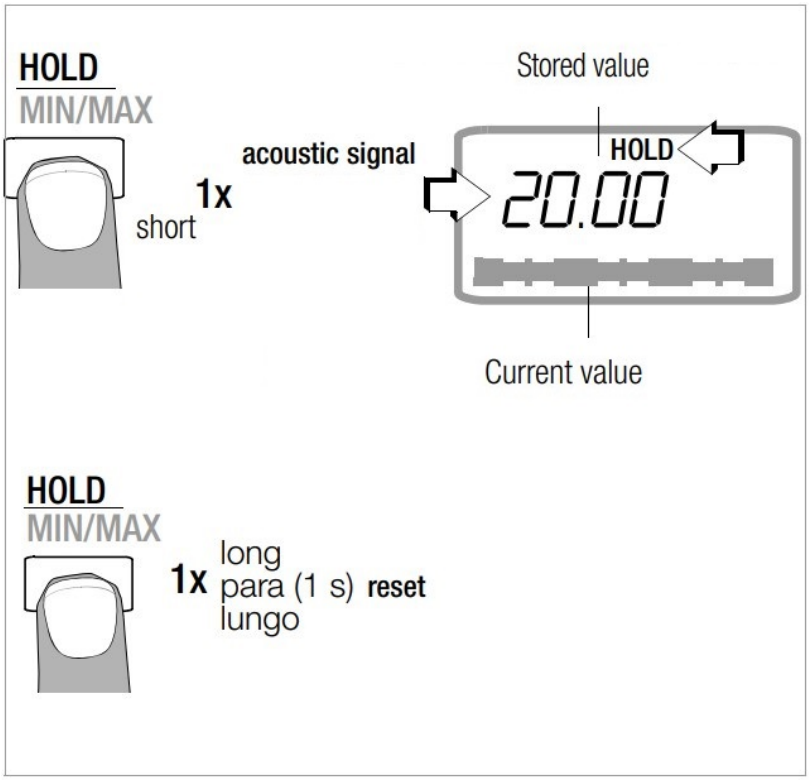


Battery Replacement

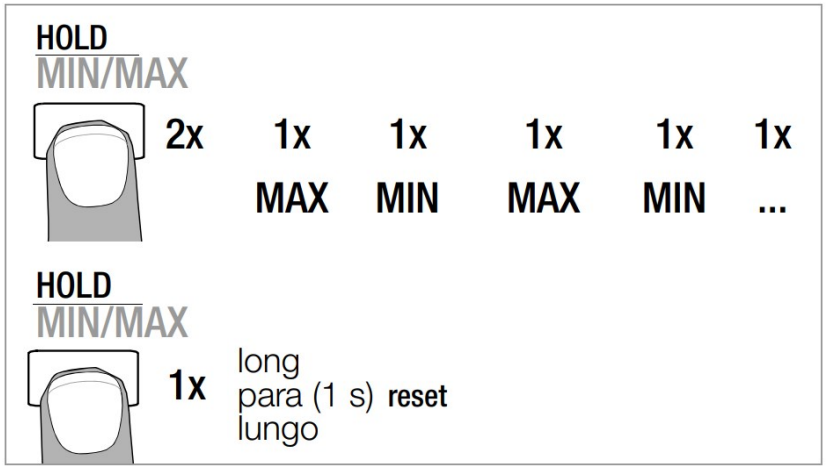


⚠ Disconnect the instrument from the measuring circuit before opening the instrument to replace the batteries or the fuse!

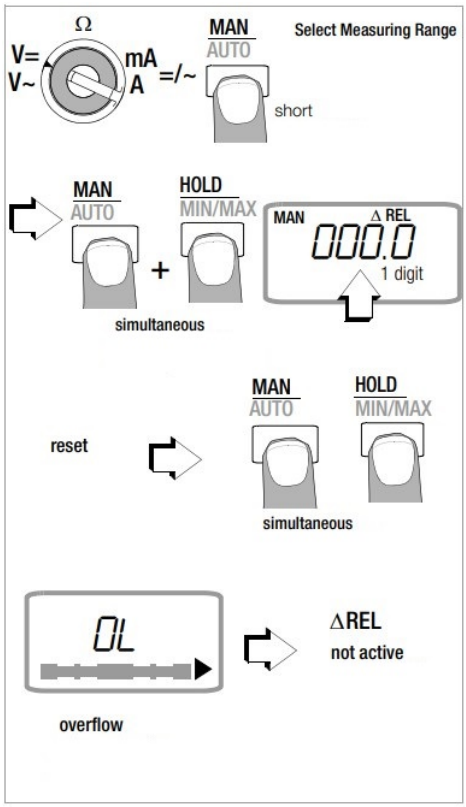
Hold / MAX / MIN



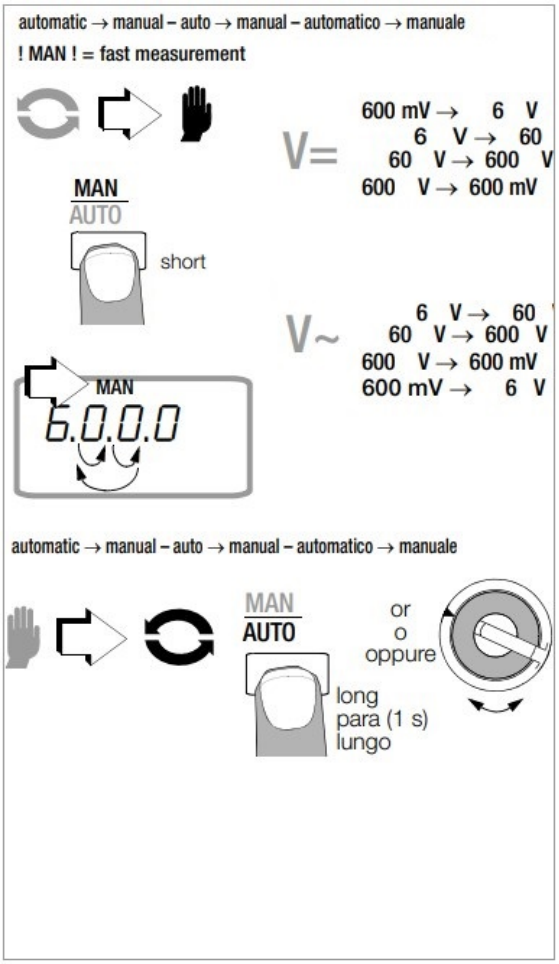
Memory MAX/MIN



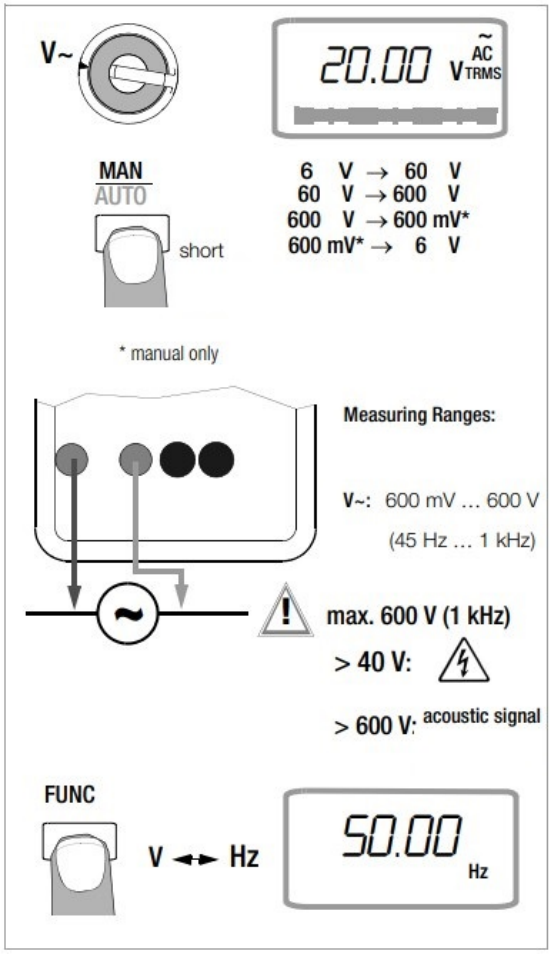
Relative Measurement



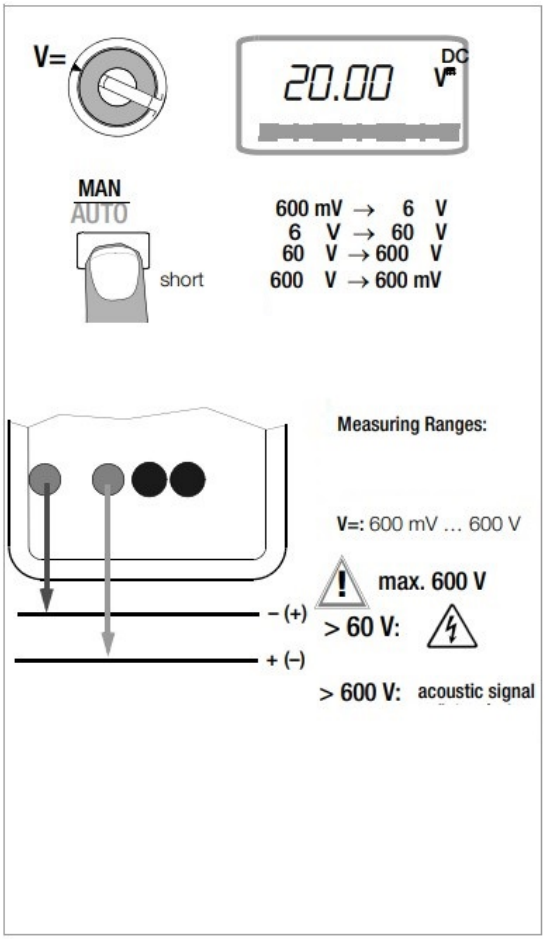
Measuring Range Selection



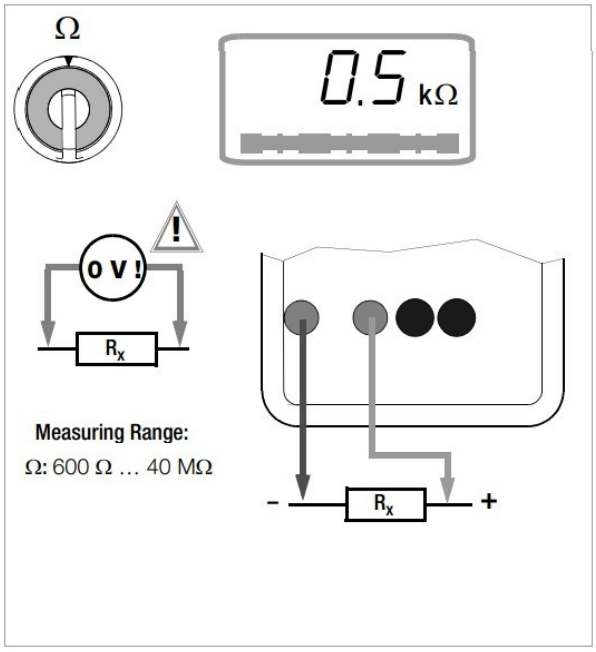
Alternating Voltage Measurement (TRMS)



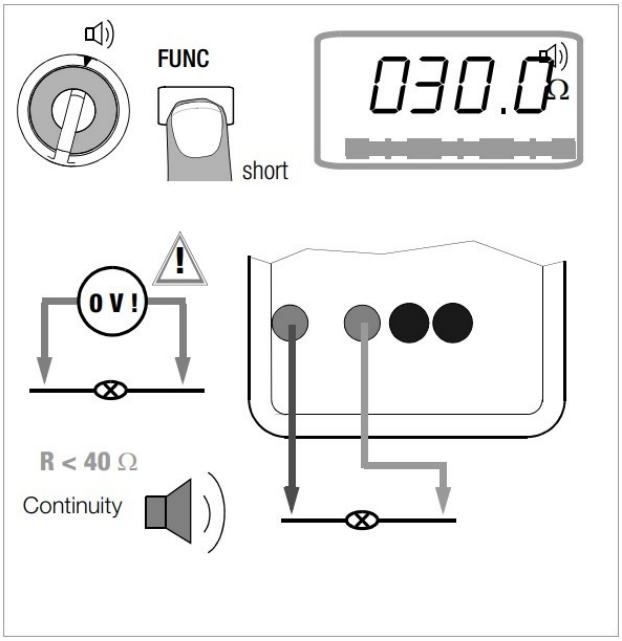
Direct Voltage Measurement



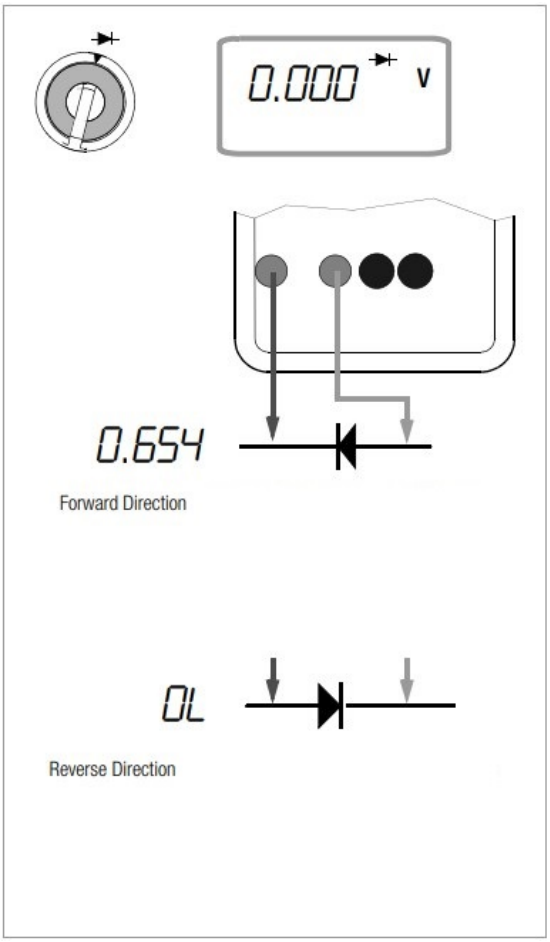
Resistance Measurement



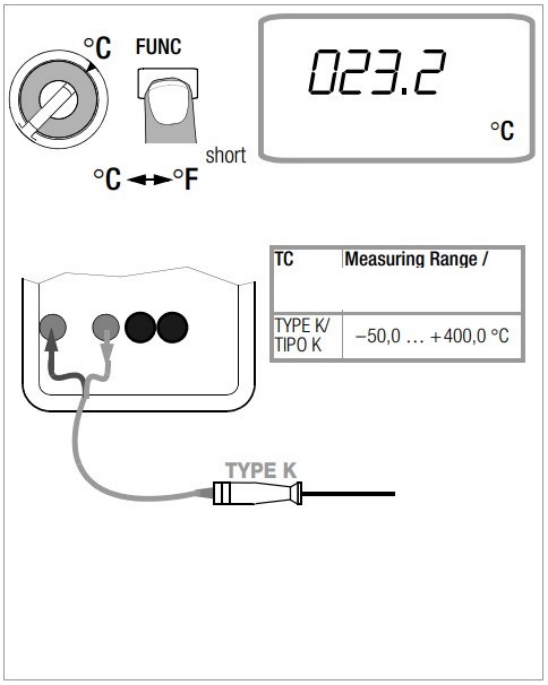
Continuity Testing



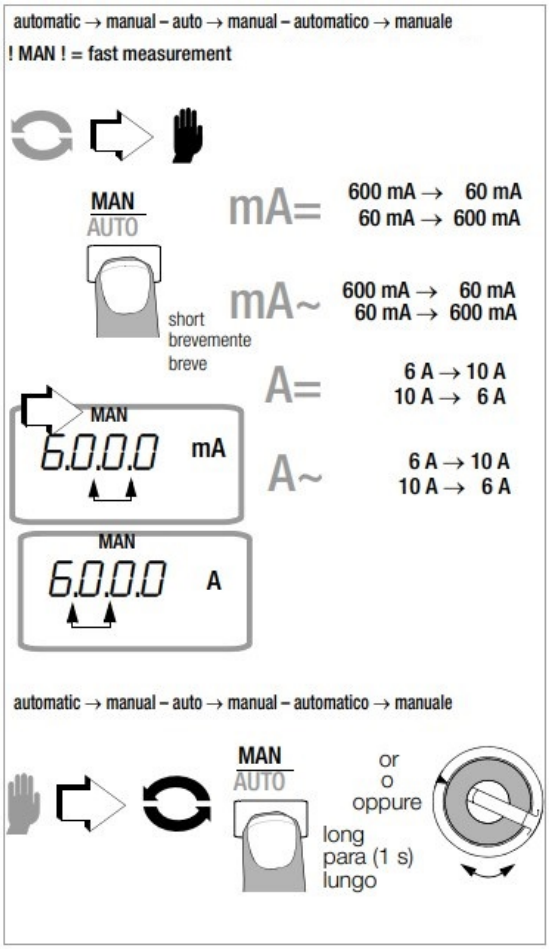
Diode Testing



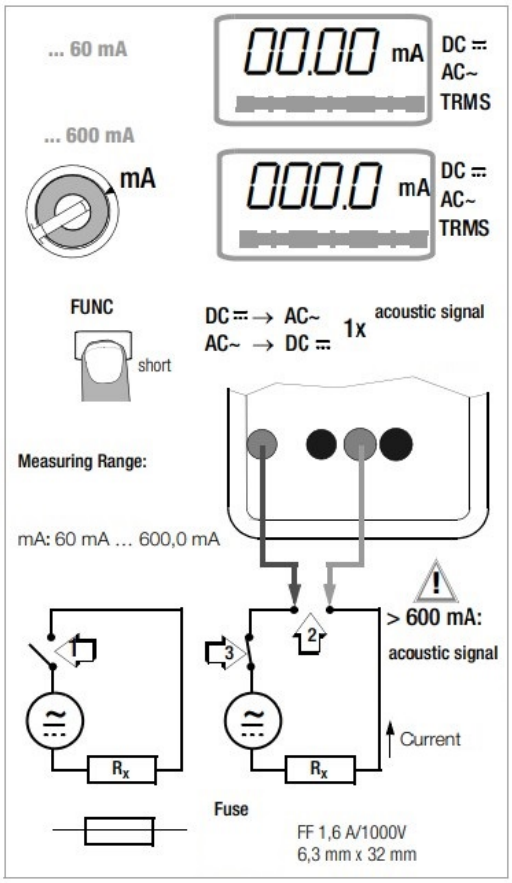
Temperature Measurement



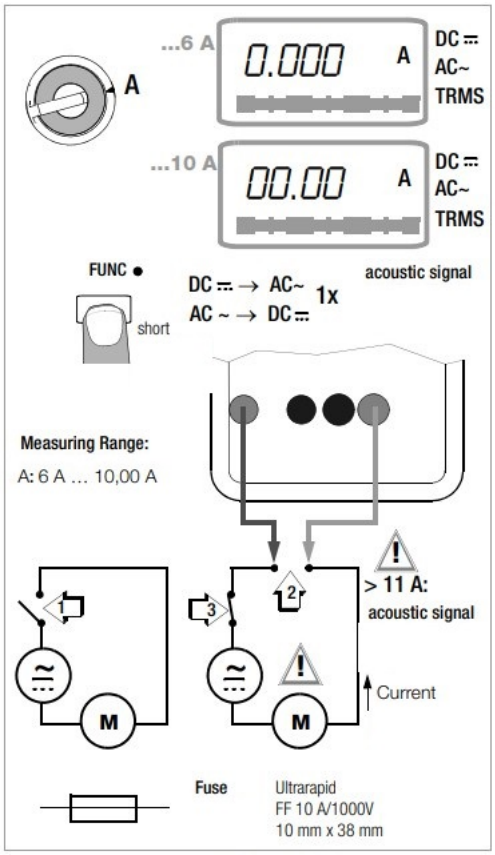
Measuring Range Selection



Current Measurement (TRMS)



Current Measurement (TRMS)



Technical Data

	Measuring Error	

Measuring range		5)	Overload capacity 1)	
	±(|… % v. MW.| + … D)			
600 mV	0,5 + 5	1 + 5	600 V DC A Crms/sine	continuous cont. per ma-nente
6 V				
60 V				
600 V				
		5)		
60 mA	1,0 + 5 (> 10 D)	1,5 + 5 (> 10 D)	1,0 A	continuous cont. per ma-nente
600 mA	1,0 + 5	1,5 + 5 (> 10 D)		
6 A	1,0 + 5 (> 10 D)	1,5 + 5 (> 10 D)	10 A 4)	
10 A	1,0 + 5	1,5 + 5 (> 10 D)		
	±(|… % v. MW.| + … D)			
600 W	1 + 5 2)		600 V DC A Crms/sine	max. 10 s
6 kW	0,7 + 3			
60 kW	0,7 + 3			
600 kW	0,7 + 3			
6 MW	0,7 + 3			
40 MW	2,0 + 3			
2 V	1 + 5			
600 W	1 + 5			

		±(|… % v. MW.| + … K)		
TIPO K	– 50,0 …+ 400,0 °C	1,0 + 5 K 3)	600 VDC/ACrms/sine	max. 10 s
		±(|… % v. MW.| + … D|)		
Hz	100 Hz	0,1 + 2	600 V 6)	max. 10 s
	1000 Hz			

1. at / a / a 0 C … + 40 C 2) with zero balancing;
2. without zero balancing + 35 digits / con
3. without sensor
4. in the range of
5. 1 … 35 d nello zero con i puntali cortocircuitati, a causa del convertitore TRMS
6. **power limiting :** 3 x 106 V x Hz @ U > 100 V Key

   MW = measured value

   d = digit

Electrical Safety

Protection class
Nominal Voltage 5,2 kV~2

IP XY(1st digit X)	Protection against foreign object entry	IP XY(2nd digit Y)	Protection against the penetration of water
4	³ 1,0 mm Æ	0	not protected

Electrical Safety of cable set KS17-ONE

Maximum Rated Voltage	600 V	600V
Measuring Category	CAT III	CAT II
Maximum Rated Voltage	1 A	16 A
with safety cap applied	.	—
without safety cap applied	—	.

Please observe the maximum values of the electrical safety of the device.

Electromagnetic Compatibility EMC

Interference Emission
61326-1 class B

Ambient Conditions

Accuracy Range 0 C … + 40 C

Operating Temperature –10 C … + 50 C

Storage Temperature – 25 C … + 70 C

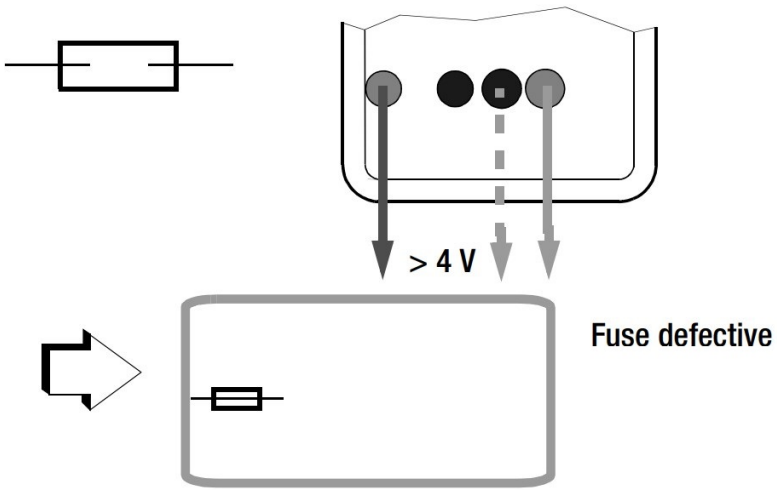
Relative Humidity 45 … 75 %,

Fuses

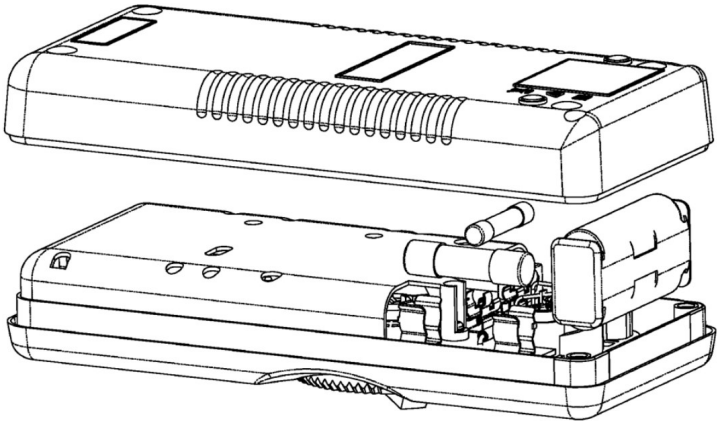
10 A: FF 10 A/1000V, 10 mm x 38 mm
600 mA: FF1,6 A/1000V, 6,3 mm x 32 mm

f you use other fuses than those indicated above you forfeit your warranty.

Internal Fuse Test



Fuse Replacement



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Repair and Replacement Parts Service

When you need service, please contact:
GMC-I Service GmbH
Service-Center
Beuthener Straße 41
90471 Nürnberg • Germany
Phone +49 911 817718-0
Fax +49 911 817718-253
E-mail service@gossenmetrawatt.com
www.gmci-service.com

Product Support

When you need support, please contact:
Contacte con:
Rivolgersi a:
Gossen Metrawatt GmbH
Product Support Hotline
Phone +49 911 8602-0
Fax +49 911 8602-669
E-mail support@gossenmetrawatt.com

Documents / Resources

	GOSSEN METRAWATT METRAHIT 2+ Universal TRMS Multimeter [pdf] Instruction Manual 3-349-477-56, METRAHIT 2, METRAHIT 2 Universal TRMS Multimeter, Universal TRMS Multimeter, TRMS Multimeter, Multimeter

References

- trawatt.com
- Servicepartner für Kalibrierungen, Reparaturen, Ersatzteile, Mietgeräte | GOSSEN METRAWATT GMC-I Service GmbH
- GOSSEN METRAWATT, GMC-I Messtechnik, GMC-Instruments