

METRAHIT IM XTRA (M273A/D/W) & METRAHIT IM E-DRIVE (M274A/B)

3-447-036-15
1/11.18

Bitte lesen Sie unbedingt die ausführliche Bedienungsanleitung im Format PDF unter www.gossenmetrawatt.com. Die Kurzbedienungsanleitung ersetzt nicht die ausführliche Bedienungsanleitung!

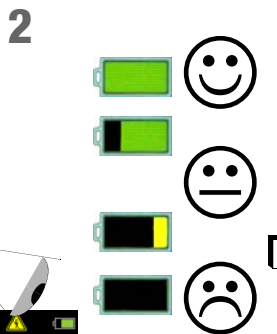


Please make sure to read the detailed operating instructions in pdf format at www.gossenmetrawatt.com. The short-form instructions are no substitute for the detailed instructions!

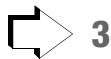


Download Center

- D** 1 Einschalten
GB 1 Switching on



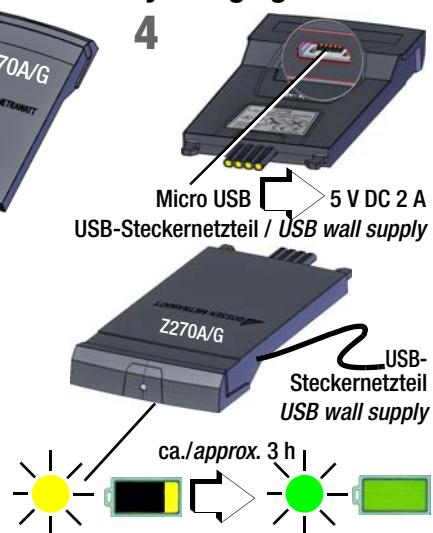
- 2 Akkuanzeige
 2 Battery control



- 3 Akku herausziehen
 3 Battery removal

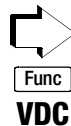
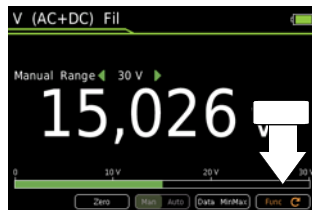
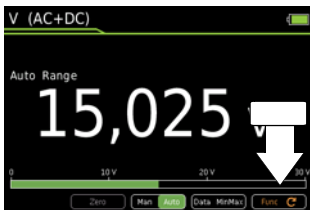
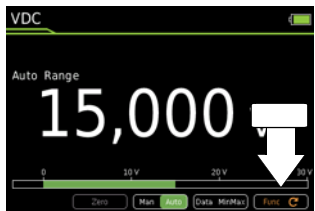


- 4 Akku laden
 4 Battery charging



Bitte beachten Sie die aktuell gültigen Sicherheitshinweise für Lithium-Ionen-Akkus!
 Please observe the currently valid safety notes for lithium-ion batteries!

D / GB **Messung auswählen / Select measurement**

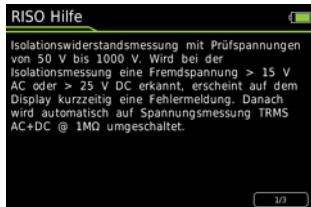
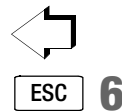
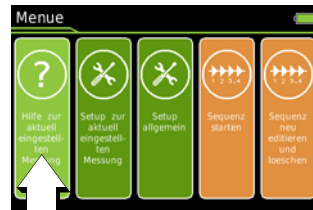
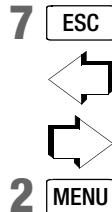
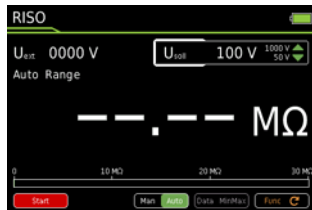
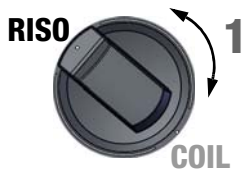


	Func	FUNC 1 x	FUNC 2 x	FUNC 3 x	FUNC 4 x		FUNC 1 x
RISO / RINS	0/4	Coil	DAR	PI			
V~ / VAC 1)	0/5	Hz 1)	Duty AC 1)	RPM AC 1)	V AC Fil 1)	A~ / AAC 2)	Hz 2)
V= / VDC (Clip = 0)	0/3	V (AC+DC)	V (AC+DC) Fil			A= / ADC (Clip ≠ 0)	A (AC+DC)
Ω	0/4	F	Temp RTD	Temp TC			
	0/2						
Rlo/2L	0						
mΩ/4 – Rlo/4L	0						
A= / A DC	0/4	A (AC+DC)	A AC	Hz			

1) Clip = Aus / Off

2) Clip = 1:1 / 1:10 / 1:100 / 1:1000

(D) / (GB) Hilfe, Daten und Anschlussbild aufrufen / Call up help, data and wiring diagram

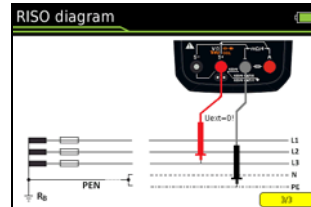
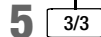


RISO Hilfe

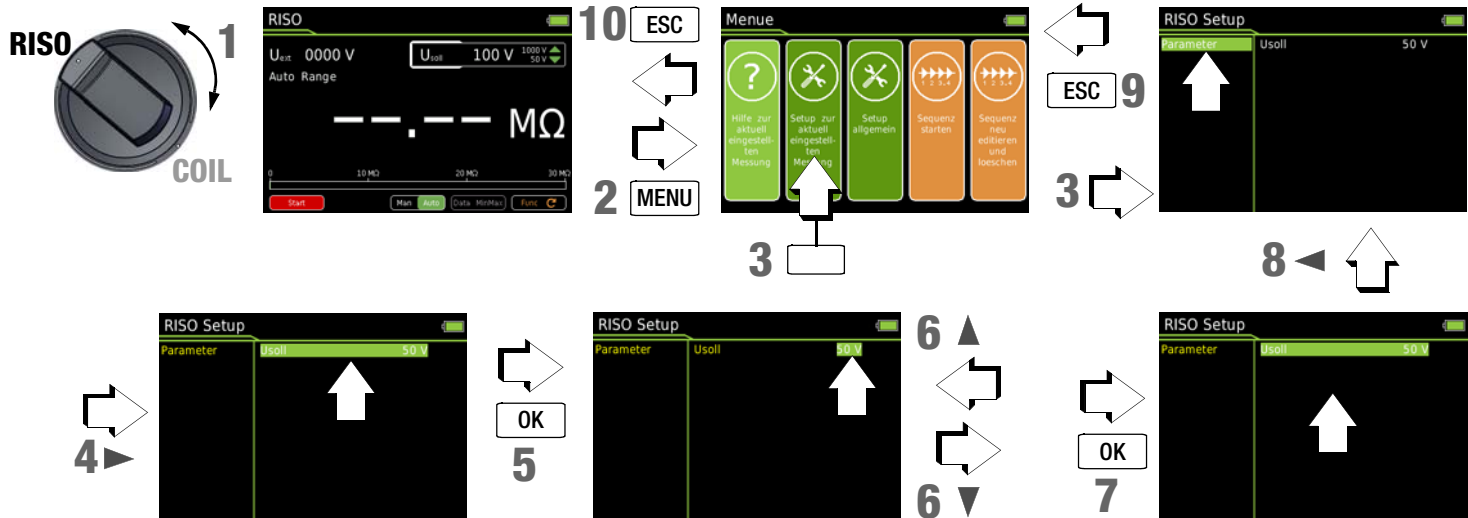
EN 61557-2

Messbereich	Bemessungsausgangsspannung U _N (U _{ISO})	Bemessungsstrom I _N
300 kΩ	50/100/250/500 V	>= 1,0 mA
3 MΩ	50/100/250/500/1000 V	
30 MΩ	50/100/250/500/1000 V	
300 MΩ	50/100/250/500/1000 V	
3000 MΩ	250/500/1000 V	

2/3



D / GB Setup zur aktuell eingestellten Messung / Setup for currently selected measurement



D Setup allgemein – Übersicht System-Parameter

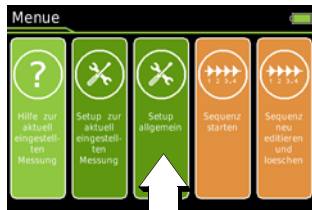
≠ OFF



1

2

MENU



3



Setup allgemein		
System	Batterie	88%
Speicher	Version	1.001.00
Schnittstelle	Kalibrierdatum	** ** * ** *
Info	Justierdatum	** ** * ** *
Sprache	Uhrzeit	13:58:12
	Datum	12.11.18
	Speicherbelegung	0.0%
	Ambient light	0 lux
	Backlight PWM	50%
	Temperatur	23.0 °C

4

Setup allgemein		
System	Deutsch	
Speicher	Englisch	
Schnittst.		
Info		
Sprache		

5

Setup allgemein		
System	Uhrzeit	13:58:12
Speicher	Datum	08.10.18
Schnittstelle	Helligkeit	5
Info	Auto-OFF	10 min
Sprache	Anzeige Nullen	000.0
	Change Password	...
	Displayprofile	Normal
	Default settings	...

6

Setup allgemein		
System	Aufzeichnung	Start
Speicher	Aufnahmetyp	Wiederk.
Schnittstelle	Speicherrate	00:00,5
Info	Aufnahmezeit	Unbegr.
Sprache	Hysterese	Aus
	Trigger	Aus
	Unterer Grenzw.	+00000
	Oberer Grenzw.	+01000
	Gruppen	...
	Speicher leeren	...

7

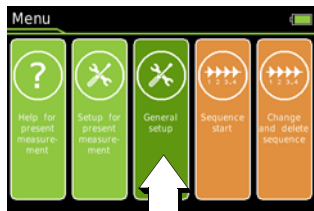
Setup allgemein		
System	Bluetooth	Aus
Speicher	PIN
Schnittstelle	Name	
Info	Adresse	
Sprache		

GB General Setup – Overview of system parameters

≠ OFF



1



3



General setup		
System	Battery	88%
Memory	Version	1.001.00
Interface	Calibration date	** ** * ** *
Info	Adjust date	. . .
Language	Time	13:58:12
	Date	12.11.18
	Memory occup.	0.0%
	Ambient light	0 lux
	Backlight PWM	50%
	Temperature	23.0 °C

4

General setup		
System	Deutsch	
Memory	English	
Interface		
Info		
Language		

5

General setup		
System	Time	13:58:12
Memory	Date	08.10.18
Interface	Brightness	5
Info	AutoPowerOff	10 min
Language	Leading zeros	000.0
	Change Password	...
	Display profile	Normal
	Default settings	...

6

General setup		
System	Recording	Start
Memory	Record Type	Periodic
Interface	Rate	00:00.5
Info	Record Time	Unlimit.
Language	Hysteresis	Off
	Trigger	Off
	Trigger Low Limit	+00000
	Trigger High Limit	+01000
	Groups	...
	Clear memory	...

7

General setup		
System	Bluetooth	Off
Memory	PIN
Interface	Name	
Info	Address	
Language		

D Setup allgemein – System-Parameter einstellen

Beispiel: Sprache Deutsch > English

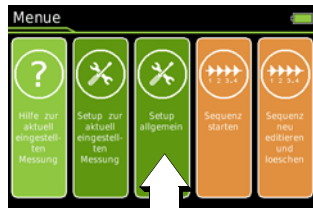
≠ OFF



1

2

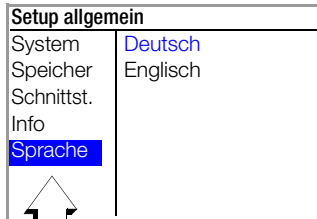
MENU



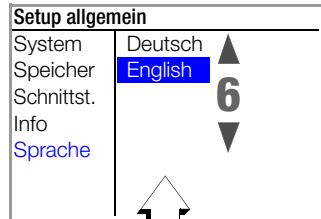
3



4

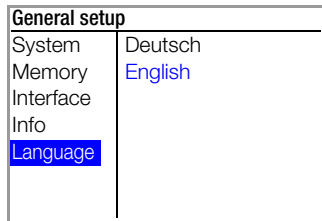


5



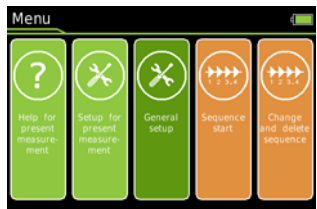
OK

7



ESC

8



ESC

9



GB General setup – Set system parameters

Example: Language English > Deutsch (German)

≠ OFF

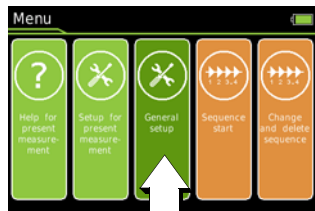


1

2



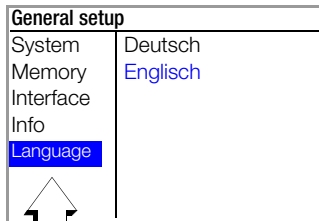
MENU



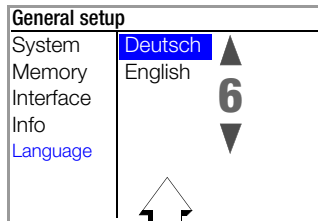
3



4

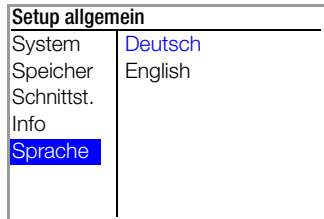


5



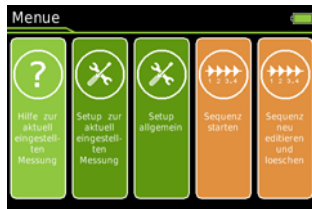
OK

7



ESC

8



ESC

9



D

RISO/Ω**Rlo/mΩ/4**Fremdspannungs-
überwachung

Folgende
Messungen sind
nur an
spannungsfreien
Messobjekten
möglich.
Fremdspannung
sperrt das
Auslösen der
Messung!

GB

RISO/Ω**Rlo/mΩ/4**Interference
voltage control

The following
measurements
are possible on
voltage-free
devices.
External voltage
disables the
measurement!

F

RISO/Ω**Rlo/mΩ/4**Surveillance de
tension étrangère

Les mesures
suivantes ne sont
possibles
qu' avec des
appareils sans
tension.
La tension
indépendante
arrête la mesure!

E

RISO/Ω**Rlo/mΩ/4**Supervisión de
tensión ajena

Las siguientes
mediciones son
factibles sólo
sobre objetos
exentos de
tensión.
La tensión ajena
bloquea la medi-
ción!

I

RISO/Ω**Rlo/mΩ/4**Monitoraggio di
tensione esterna

Le seguenti
misure sono
possibili soltanto
se l'oggetto da
misura è privo di
tensione.
Le tensioni
esterne impedis-
cono la misura!

NL

RISO/Ω**Rlo/mΩ/4**Stoorspannings-
controle

De volgende
metingen zijn
alleen aan
spanningsloze
meetobjecten
mogelijk.
Stoorspanning
blokkeert de
meting!

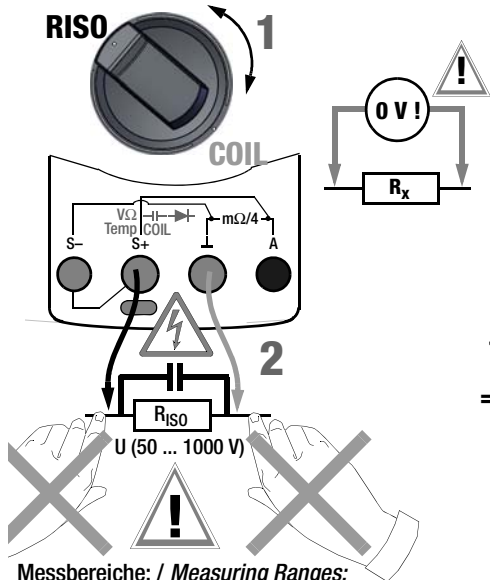
CZ

RISO/Ω**Rlo/mΩ/4**Kontrola
cizího napětí

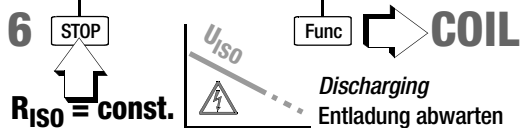
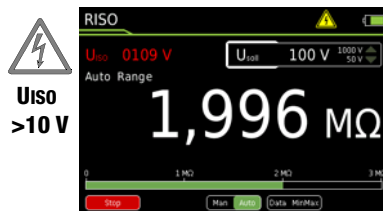
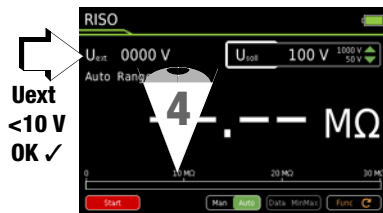
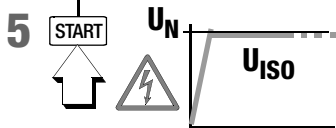
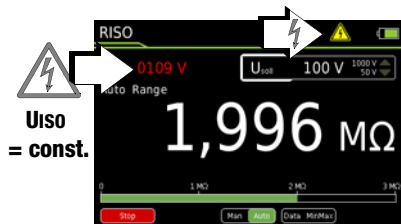
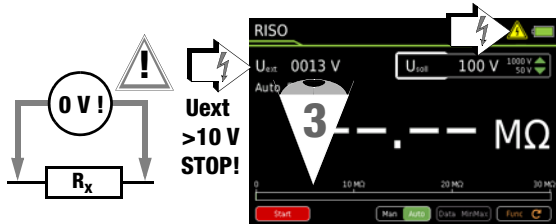
Následující
měření se
provádějí v zaří-
zeních bez
napětí.
Cizí napětí
blokuje start
měření!

U = 0 V!

D / GB RISO – Isolationsmessung / Isolation measurement



Messbereiche: / Measuring Ranges:
300 kΩ/3 MΩ/30 MΩ/300 MΩ/3000 MΩ

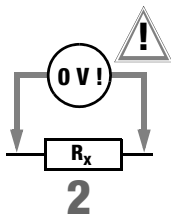


max 1000 V
min 50 V
SET U_{iso}
3

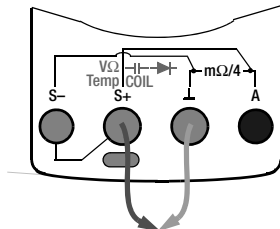
3-447-035-yy

Anleitung Manual

D / GB Ω (2L) – Widerstandsmessung 2-Leiter / 2-wire resistance measurement



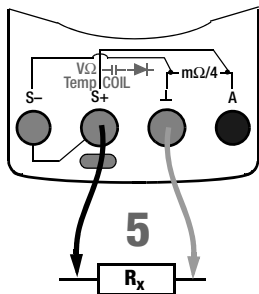
Messbereiche: / Measuring Ranges:
300 Ω /3 k Ω /30 k Ω /300 k Ω /3 M Ω /30 M Ω



3 Messleitungsenden kurzschliessen
Close Probe Tips



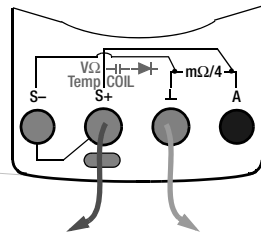
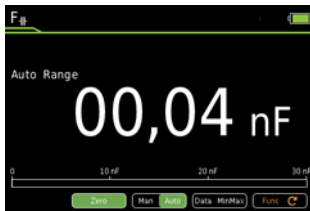
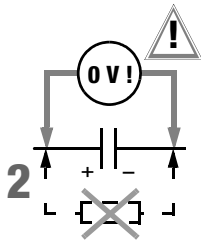
4 Zero



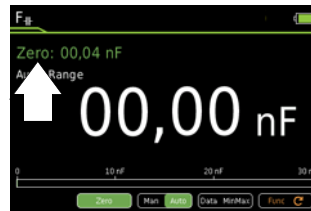
Func



D / GB – Kapazitätsmessung / Capacitance measurement

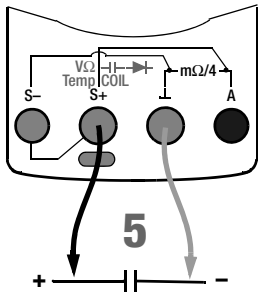


3 Messleitungsenden öffnen
Open Probe Tips

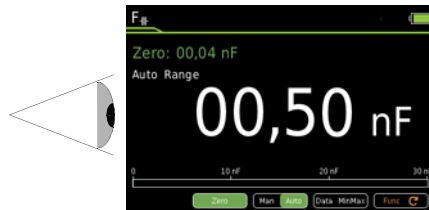


4 Zero

Messbereiche: / Measuring Ranges:
30 nF/300 nF/3 μ F/30 μ F/300 μ F



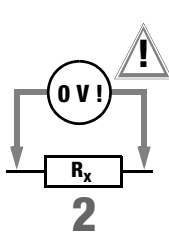
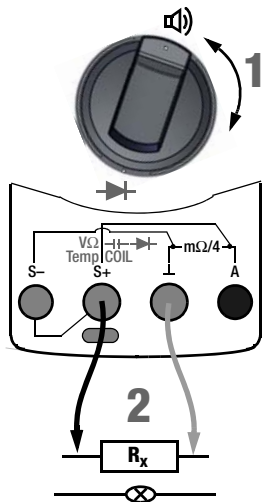
5



Func

Temp RTD

(D) / (GB) 🔊 Durchgangsmessung – ➔ Diodenmessung / 🔊 Continuity measurement – ➔ Diode measurement



Schwelle *Threshold*

▲ max 90 Ω
▼ min 1 Ω

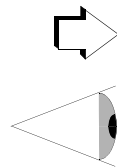
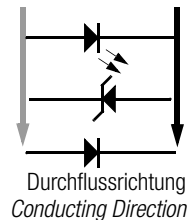
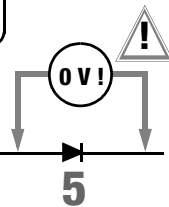
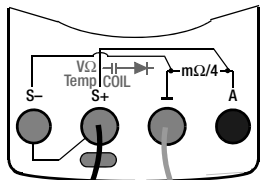
SET
3



< xx Ω
Durchgang
Continuity



4 Func ➔

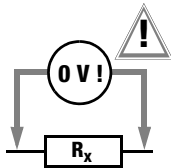


Messbereich: / *Measuring Range:*

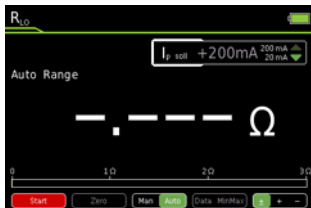
🔊 300 Ω

➔ 4,5 V

D / GB Rlo (2L) @ 200 mA – Milliohmmessung 2-Leiter / 2-wire milliohm measurement



Messbereiche: / Measuring Ranges: 2
3 Ω / 30 Ω

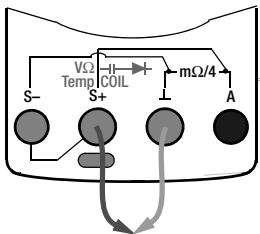


I_p soll / I_p set
20 mA / 200 mA
SET
4

3 Polarität I_p
Polarity I_p



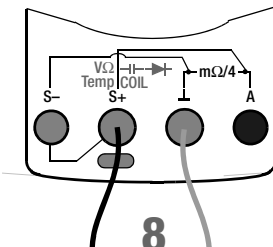
5 **START**



6 Messleitungsenden kurzschliessen
Close Probe Tips



7 **Zero**

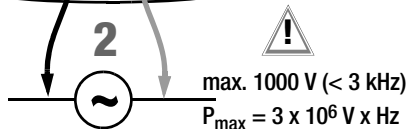
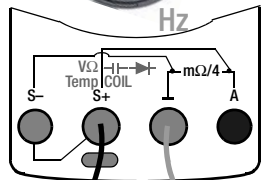


8



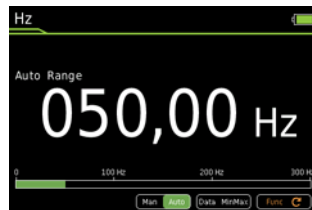
9 **STOP**

(D) / (GB) VAC, Hz, Duty AC, RPM AC, VAC Fil

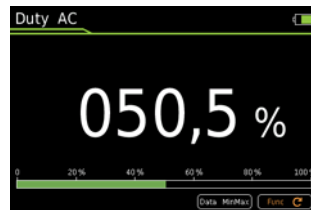


Zero

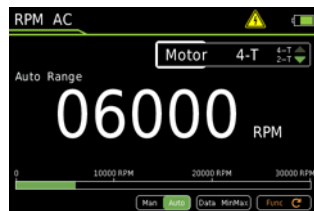
3 Func



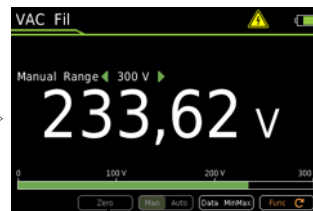
4 Func



5 Func



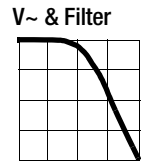
6 Func



Zero

Func

Fil: Filter aktiv / active



VAC

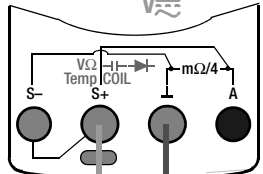
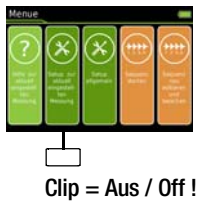
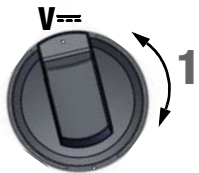
Messbereiche: / Measuring Ranges:

V: 300 mV/3 V/30 V/300 V/1000 V

Hz: 300 Hz/3 kHz/30 kHz/300 kHz

Duty AC: 2,0 ... 90,0 %; RPM: 30 ... 30000

D / GB VDC, V (AC+DC), V (AC+DC) Fil

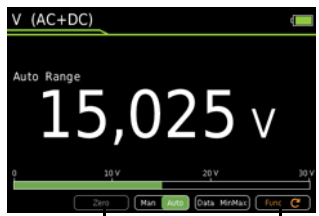


2

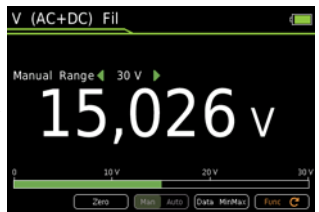
max. 1000 V (< 3 kHz)
 $P_{max} = 3 \times 10^6 \text{ V} \times \text{Hz}$



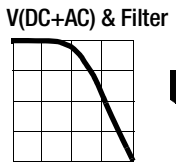
Zero 3 Func



Zero 4 Func



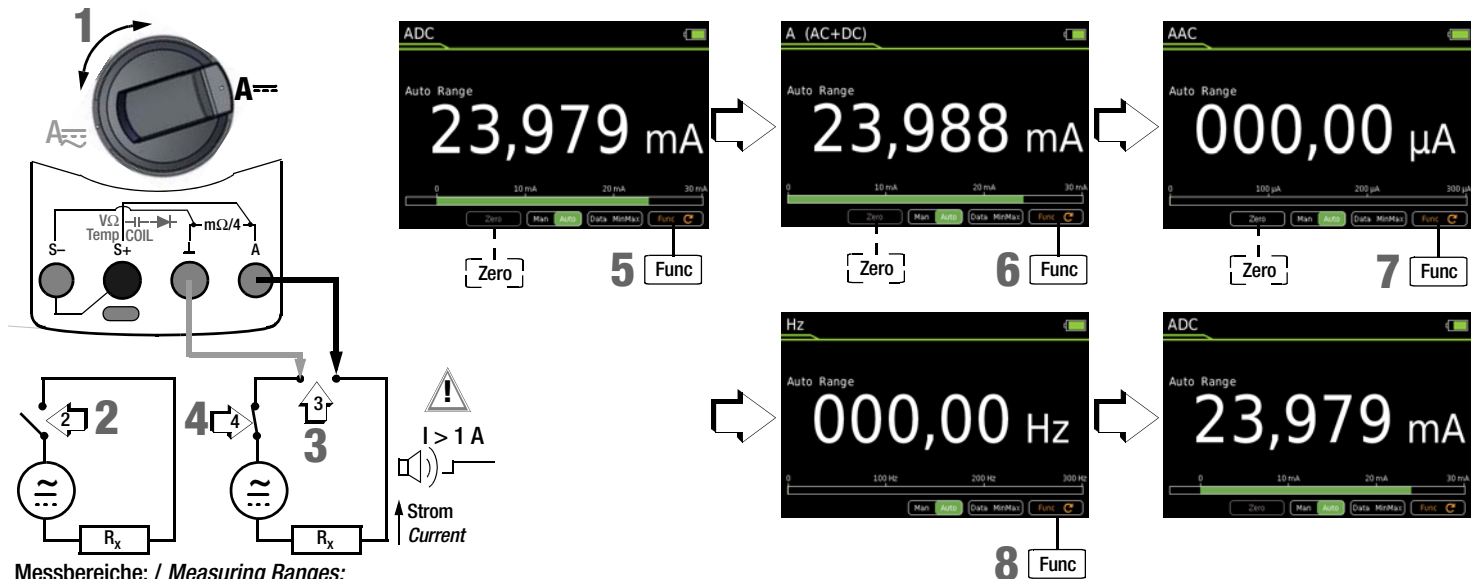
Zero 5 Func



Messbereiche: / Measuring Ranges:
V: 300 mV/3 V/30 V/300 V/1000 V

Fil: Filter aktiv / active

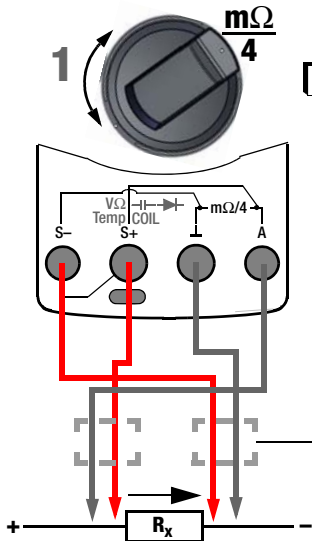
D / GB ADC, A (AC+DC), AAC, Hz



Messbereiche: / Measuring Ranges:

A: 300 µA/3 mA/30 mA/300 mA/1 A – **Hz:** 300 Hz/3 kHz/30 kHz/300 kHz

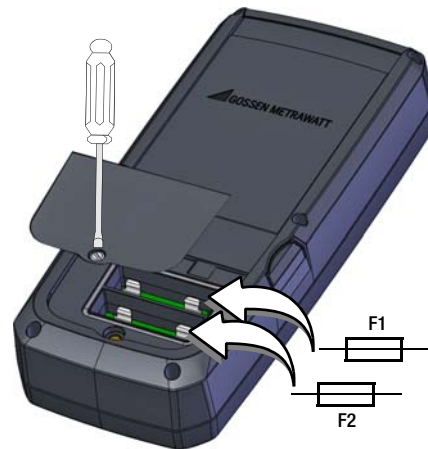
D / GB **mΩ/4 (4L)**



D / GB **Sicherungen / Fuses**

F1 (Messbereich / *Measuring range* 300 μ A ... 1 A): FF 1A/1000 V AC/DC

F2 (Messbereich / *Measuring range* mΩ): FF 0,315 A/1000 V AC/DC



D / GB Tastensonde (Z270S) / Remote Probe (Z270S)

 Sicherheitskappe /
 Safety Cap

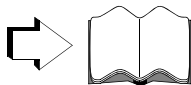
 Prüfspitze /
 Test probe


START

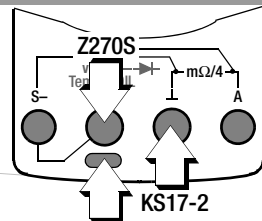
STORE

 Sicherheitskragen /
 Safety Collar

3-349-996-15


 Bedienungsanleitung
 Operating Instructions

Tasten am Multimeter <i>Keys at the Multimeter</i>	Tasten auf der Messsonde <i>Keys at the Test Probe</i>	Funktion <i>Function</i>
Start (Soft-Key)		Messtaste <i>Measurement key</i>
STORE		Speicher-/Sendetaste <i>Save/Send key</i>





EU - KONFORMITÄTSERKLÄRUNG
DECLARATION OF CONFORMITY



Dokument-Nr./
Document-no: 858 / 3-085a

Hersteller/
Manufacturer: GMC-I MESSTECHNIK GMBH

Anschrift /
Address: Südwestpark 15
D - 90449 Nürnberg

Produktbezeichnung/
Product name: Multimeter, Isolationswiderstand & Milliohm-meter
Multimeter, isolation resistance tester & milliohm-meter

Typ / Type: METRAHIT IM XTRA /E-DRIVE BT WIFI

Artikel-Nr / Article no: M273B, W, D M274B, W

Das bezeichnete Produkt stimmt mit den Vorschriften folgender Europäischer Richtlinien überein, nachgewiesen durch die vollständige Einhaltung folgender Normen:

The above mentioned product has been manufactured according to the regulations of the following European directives proven through complete compliance with the following standards:

Nr. / No.	Richtlinie Directive	Making available of radio equipment - RED Directive - Attachment of CE mark : 2017
2014/53/EU	Bereitstellung von Funkanlagen - RED Richtlinie - Anbringung der CE-Kennzeichnung : 2017	
Anforderungen an die Sicherheit gemäß 2014/35/EU Safety requirements according to 2014/35/EU		
EN Norm/Standard EN 61010-1 : 2010 EN 61010-2-033 : 2012	IEC/Deutsche Norm IEC 61010-1 : 2011 IEC 61010-2-033 : 2012	VDE-Klassifikation/Classification VDE 0411-1 : 2011 VDE 0411-2-033 : 2012

Anforderungen an die elektromagnetische Verträglichkeit gemäß 2014/30/EU
Requirements for electromagnetic compatibility according to 2014/30/EU

Grundnorm / Generic Standard
EN 61326-1 :2013

Nürnberg, den 08.11.2018

Ort, Datum / Place, date:

Geschäftsführung / managing director

Diese Erklärung bescheinigt die Übereinstimmung mit den genannten Normen, Standards oder sonstigen Zuordnungen von Eigenschaften, die in den technischen Unterlagen der entsprechenden Produktbezeichnungen sind zu erwarten.

This statement certifies compliance with the above mentioned directives but does not include a property appraisal. The safety rules given in the product documentation, also as part of the supply, shall be observed.

Registrieren Sie Ihr Gerät unter / Register your device at
www.gossenmetrawatt.com → **myGMC**

Ihre Vorteile für Ihr Digitalmultimeter / Your Benefits for your digital multimeter

- 2 Jahre Garantieverlängerung / 2 years warranty extension
- Seriennummernsicherung / backup for serial number
- kostenlose Downloads / free downloads
- Infohotline / info hotline
- Update Information
- Anwendungsinformationen / Application Notes



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