



**CAT IV**

**600 V**

**CAT III**

**1000 V**

**IP54**

**UP TO**

**max. 750V!**

## Lightweight and professional fault loop meter

### Measured parameters

- Fault loop impedance measurement with 0.01Ω resolution
- Low-current impedance measurement in circuits protected by RCD  $\geq 30\text{mA}$  with 0.01 Ω resolution (100...440 V)
- Operates in networks with voltages 110/190 V, 115/200 V, 127/220 V, 220/380 V, 230/400 V, 240/415 V, 290/500 V and 400/690 V (operating range 100...750 V)
- Operating frequency 45...65 Hz
- Calculation of fault current
- Automatic differentiation between phase and phase-to-phase voltage
- Possibility of applying 1.2, 5, 10, 20 m test leads or an adapter terminated by a power network plug
- Measurement with swapped L and N conductors
- Measurement of resistance ( $R_s$ ) and reactance ( $X_s$ ) components

### Additionally

- Voltage measurement up to 750 V AC (up to 250 V with resolution of 0,1 V)
- Memory storing up to 990 records, data transmission via USB
- Battery or rechargeable battery power supply (4 x LR14)
- Check of correct connection of PE terminal by means of contact electrode

### Features

MZC-306 enables measurements in various types of networks due to a wide range of operating voltages. The device will be useful in multiple electrical works (even simple) under low-voltage powered places - including homes, buildings, public facilities and small workshops or factories.



Measurement of fault loop impedance  $Z_{L-PE}$ ,  $Z_{L-N}$ ,  $Z_{L-L}$

Measuring range acc. to IEC 61557-3:

0.13...1999 Ω for 1.2 m test leads

0.25...1999 Ω for Uni-Schuko adapter

Range	Resolution	Accuracy
0.00...19.99 Ω	0.01 Ω	±(5% m.v. + 3 digits)
20.0...199.9 Ω	0.1 Ω	±(4% m.v. + 3 digits)
200...1999 Ω	1 Ω	±(4% m.v. + 3 digits)

- Rated operating voltage  $U_{N-L}/U_{N-L}$  : 110/190 V, 115/200 V, 127/220 V, 220/380 V, 230/400 V, 240/415 V, 290/500 V, 400/690 V
- Voltage range: 100...440 V (for  $Z_{L-PE}$  and  $Z_{L-N}$ ) and 100...750 V (for  $Z_{L-L}$ )
- High current measurement (up to 30 A)
- Operating frequency range: 45...65 Hz
- Measurement is also possible when L and N circuits are swapped,
- Measurement of resistance and reactance components,
- Short circuit current calculation

Voltage measurement

Range	Resolution	Accuracy
0.0...249.9 V	0.1 V	±(2% m.v. + 4 digits)
250...750V	1 V	±(2% m.v. + 2 digits)

- Measurement available for all settings of short-circuit loop ( $Z_{L-PE}$ ,  $Z_{L-PE[RCD]}$  and  $Z_{L-N}$ ,  $Z_{L-L}$ )
- Operating frequency range: 45...65 Hz

Technical data

Electrical safety

Type of insulation according to IEC 61010-1 and IEC 61557	double
Measurement category according to EN 61010-1	IV 600 V / III 1000 V
Protection class acc. to EN 60529	IP54

Other technical data

Power supply	rechargeable / alkaline batteries, LR14 (4 pcs)
Dimensions	288 x 223 x 75 mm
Weight	ca. 2 kg
Operating temperature	0...+45°C
Storage temperature	-20...+60°C
Humidity	20...80%
Reference temperature	+23 ± 2°C
Reference humidity	40...60%
Altitude	<2000 m
Time to Auto-OFF	300 seconds
Number of Z measurements (for rechargeable / alkaline batteries)	>5000 (2 measurements/minute)
Display	LCD segmented
Quality standard	ISO 9001
The device meets the requirements of	IEC 61557
The product meets EMC requirements of	EN 61326-1 and EN 61326-2-2

m.v. - measured value

Measurement of short circuit loop impedance  $Z_{L-PE[RCD]}$  (RCD protected)

Measuring range acc. to IEC 61557:

0.43...1999 Ω for Uni-Schuko adapter

Range	Resolution	Accuracy
0.00...19.99 Ω	0.01 Ω	±(6% m.v. + 10 digits)
20.0...199.9 Ω	0.1 Ω	±(6% m.v. + 5 digits)
200...1999 Ω	1 Ω	

- Rated operating voltage  $U_N$ : 110 V, 115 V, 127 V, 220 V, 230 V, 240 V, 390 V, 400 V
- Voltage range 100...440 V
- Measurement is also possible when L and N circuits are swapped,
- Measurement of resistance and reactance components,
- Short circuit current calculation



## Standard accessories



**WS-05 adapter  
with UNI-SCHUKO  
angular plug**

WAADAWS05



**Pin probe 1 kV  
(banana socket)  
red / blue / yellow**

WASONREOGB1  
WASONBUOGB1  
WASONYEOGB1



**Test lead 1.2 m  
(banana plugs) red  
/ blue / yellow**

WAPRZ1X2REBB  
WAPRZ1X2BUBB  
WAPRZ1X2YEBB



**Crocodile clip,  
blue, 1 kV 20 A**

WAKROBU20K02



**Pin probe  
5 kV (banana  
socket) red / black**

WASONREOGB2  
WASONBLOGB2



**Test lead 0.7 m  
(banana plugs) black**

WAPRZ0X7BLBB



**M1 hanging straps**

WAPOZSZE4



**L1 hanging straps**

WAPOZSZE2



**L4 carrying case**

WAFUTL4



**NiMH battery  
4.8 V 4.2 Ah**

WAAKU07



**Mains power cable  
Euro 2-pin plug  
/ IEC C7 plug**

WAPRZLAD230



**Z7 Power sup-  
ply adapter**

WAZASZ7



**USB cable**

WAPRZUSB

## Optional accessories



**Crocodile clip  
1 kV 20 A  
red / yellow**

WAKRORE20K02  
WAKROYE20K02



**Foldable pin  
probe, 1 kV, 2 m  
(banana socket)**

WASONSP2M



**Test lead  
5 / 10 / 20 m red  
1 kV (banana plugs)**

WAPRZ005REBB  
WAPRZ010REBB  
WAPRZ020REBB



**WS-01 adapter with  
START button with  
UNI-Schuko plug**

WAADAWS01



**Pin probe 11 kV  
(banana socket) red**

WASONREOGB11



**Industrial socket  
adapter 16A / 32A**

WAADAAGT16T  
WAADAAGT32T



**Three-phase socket  
adapter 16A / 32A**

WAADAAGT16C  
WAADAAGT32C



**Three-phase socket  
adapter 16A / 32A**

WAADAAGT16P  
WAADAAGT32P



**Three-phase socket  
adapter 63 A**

WAADAAGT63P



**Cable for battery  
charging from car  
cigarette lighter  
socket (12 V)**

WAPRZLAD12SAM



**Battery container**

WAPOJ1



**Sonel Reader  
software**

WAPRORREADER