

HIGH-CURRENT LOOP IMPEDANCE METER MZC-330S



Sonel S.A.
ul. Wokulskiego 11
58-100 Świdnica
tel. +48 74 85 83 878
fax +48 74 85 83 808

export@sonel.pl
www.sonel.pl

Standard accessories of the meter MZC-320S:

meter MZC-320S
test lead with banana plug; 1,2m; black
test lead with banana plug; 1,2m; yellow
pin probe with banana connector - yellow
pin probe with banana connector - black
test lead 3m (2 pcs.)
„crocodile” clip K03
Kelvin clamps (2 pc.)
high-current probe with banana connector (2 pc.)
charger
carrying case for accessories
cable
Sonel Reader software
manual
Calibration certificate

WMPLMZC320S
WAPRZ1X2BLBB
WAPRZ1X2YEBB
WASONBLOGB1
WASONYEOGB1
WAPRZ003DZBB
WAKROBL30K03
WAKROKELK06
WASONSPGB1
WAZASZ7
WAFUTL14
WAPRZUSB
WAPROREADER

Additional accessories of the meter MZC-320S:

test lead with banana plug for loop impedance 2p method impedance measurements with 2-pole method:
- 5 m length
- 10 m length
- 20 m length
two wire test lead 6m with banana plug
L-4 soft case for accessories
Sonel Report Plus software

WAPRZ005YEBB
WAPRZ010YEBB
WAPRZ010YEBB
WAPRZ006DZBB1
WAPRZ006DZBB2
WAPROREPORTPLUS

MZC-330S

• Measurement of very low short circuit loop impedances (with resolution 0,1 mΩ) with a current of 130 A at 230 V; maximum 300 A at 550 V or with a current 24 A at 230 V, maximum 30 A at 550 V (with resolution 0,01 Ω)

- measurements in installations with rated voltages between: 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 and frequencies 45...65 Hz,

- ability to perform measurements in short circuit system: phase-phase, phase-protective, phase-neutral

- differentiation between the phase voltage and the inter-phase voltage while calculating the short circuit current

- ability to change the length of test lead,

- four-pole method, test leads do not require calibration (measurement with current 300 A).

- Touch voltage and touch shock voltage measurement with resistor 1 kΩ).
- AC voltage measurement in range 0...440V.
- Memory of 999 measurement results with an ability to transfer the data to a PC
- Ability to transmit date thru USB.
- Meter meets the requirements of the standard EN 61557.

Voltage measurements (True RMS)

Range	Resolution	Accuracy
0...550 V	1 V	±(2% m.v. + 2 digits)

- frequency range: DC, 45...65 Hz
- input impedance of the voltmeter: 200 kΩ

Frequency measurements (for voltages in range 5...550 V)

Range	Resolution	Accuracy
45,0...65,0 Hz	0,1 Hz	±(0,1% m.v. + 1 digit)

Electric security:

- type of insulation double, according to PN-EN 61010-1 and IEC 61557
- measurement category IV 600 V acc. to EN 61010-1
- protection class acc. PN-EN 60529 IP20 (IP67 with front cover closed)

Other technical data:

- power supply build in Li-Ion 7,2 V/8,8 Ah
- resistor limited the current : for 4 pole method 4p 1,8 Ω
- for two pole method 2p 9,4 Ω for U≤253 V, 19 Ω for U>253 V
- number of short circuit loop measurements 2000 (4/min.)
- temperature coefficient ±0,1% measured value /C
- dimensions 390 mm x 310 mm x 170 mm
- weight 6,6 kg

Rated operational conditions:

- operating temperature 0...+40 °C

Short circuit loop parameters measurement using high current (4p, I_{max}=300 A)

High-current of measurement of short circuit loop impedance Z:

measuring range according to IEC61557: 7,2 mΩ...1999 mΩ

Range	Resolution	Accuracy
0...199,9 mΩ	0,1 mΩ	±(2% m.v. + 2 mΩ)
200...1999 mΩ	1 mΩ	

Short circuit resistance R and reactance X display range

Range	Resolution	Accuracy
0...199,9 mΩ	0,1 mΩ	±(2% m.v. + 2 mΩ) impedance reading for a particular measurement
200...1999 mΩ	1 mΩ	

Short circuit current indication

measuring range according to IEC 61557: for U_n = 230 V 115,0 A...32,0 kA
for U_n = 400 V 200 A...55,7 kA
for U_n = 500 V 250 A...69,4 kA
for U_n = 690 V 345 A...95,8 kA

Range	Resolution	Accuracy
115,0...199,9 A	0,1 A	Accuracy of the current indication computed, respectively, with the use of resistance measurements
200...1999 A	1 A	
2,00...19,99 kA	0,01 kA	
20,0...199,9 kA	0,1 kA	
200 kA...*	1k A	

* 230 kA for U_{LN}
400 kA for U_{LL}

Touch voltage measurements U_{ST} and shock voltage U_T

Range	Resolution	Accuracy
0...100 V	1 V	±(10% m.v. + digits)

Short circuit loop parameters measurement using standards current (2p, I_{max}=30 A)

Short circuit loop impedance Z measurement:

measuring range according to IEC61557: 0,13 Ω...199,9 Ω for test leads length 1,2 m

Range	Resolution	Accuracy
0,00...19,99 Ω	0,01 Ω	±(2% m.v. + 3 digits)
20,0...199,9 Ω	0,1 Ω	±(3% m.v. + 3 digits)

Short circuit resistance R and reactance X display range

Range	Resolution	Accuracy
0,00...19,99Ω	0,01Ω	±(2% m.v. + 3 digits) impedance reading for a particular measurement
20,0...199,9Ω	0,1Ω	±(3% m.v. + 3 digits) impedance reading for a particular measurement

Readings short circuit current

Range	Resolution	Accuracy
1,150...1,999 A	0,001 A	Accuracy of the current indication computed, respectively, with the use of resistance measurements
2,00...19,99 A	0,01 A	
20,0...199,9 A	0,1 A	
200...1999 A	1 A	
2,00...19,99 kA	0,01 kA	
20,0...40,0 kA	0,1 kA	

„m.v.“ - measured value.