

M70

Rel. 1.03 of 22/02/18

Handheld Insulation/Continuity meter up to 1000VDC

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1. ELECTRICAL SPECIFICATIONS

Accuracy is indicated as $\pm [\% \text{ readings} + (\text{no. of digits} * \text{resolution})]$ at $23^\circ\text{C} \pm 5^\circ\text{C}$, $<60\%$ HR

Continuity test on protective and equalizing conductors

Range	Resolution	Accuracy	Overload protection
0.00 ÷ 19.99Ω	0.01Ω	$\pm(2.0\% \text{rdg} + 3\text{dgt})$	605Vrms Max

Test current: $>200\text{mA DC}$ for $R \leq 5\Omega$ (included calibration of test leads)

$> 10\text{mA DC}$ per $R > 5\Omega$ (included calibration of test leads)

Open voltage: $4 < V_o < 24\text{VDC}$

Insulation Resistance (DC voltage)

Test voltage	Range	Resolution	Accuracy	Overload protection
250V	0.001 ÷ 0.100MΩ	0.001MΩ	$\pm 10\text{dgt}$	605Vrms Max
	0.101 ÷ 3.999MΩ		$\pm(2.0\% \text{rdg} + 5\text{dgt})$	
	4.00 ÷ 39.99MΩ	0.01MΩ	$\pm(5.0\% \text{rdg} + 5\text{dgt})$	
	40.0 ÷ 399.9MΩ	0.1MΩ	$\pm(5.0\% \text{rdg} + 5\text{dgt})$	
	400 ÷ 1000MΩ	1MΩ	$\pm(5.0\% \text{rdg} + 5\text{dgt})$	
500V	0.001 ÷ 0.250MΩ	0.001MΩ	$\pm 15\text{dgt}$	605Vrms Max
	0.251 ÷ 3.999MΩ		$\pm(2.0\% \text{rdg} + 5\text{dgt})$	
	4.00 ÷ 39.99MΩ	0.01MΩ	$\pm(5.0\% \text{rdg} + 5\text{dgt})$	
	40.0 ÷ 399.9MΩ	0.1MΩ	$\pm(5.0\% \text{rdg} + 5\text{dgt})$	
	400 ÷ 2000MΩ	1MΩ	$\pm(5.0\% \text{rdg} + 5\text{dgt})$	
1000V	0.001 ÷ 0.250MΩ	0.001MΩ	$\pm 15\text{dgt}$	605Vrms Max
	0.251 ÷ 3.999MΩ		$\pm(2.0\% \text{rdg} + 5\text{dgt})$	
	4.00 ÷ 39.99MΩ	0.01MΩ	$\pm(3.0\% \text{rdg} + 5\text{dgt})$	
	40.0 ÷ 399.9MΩ	0.1MΩ	$\pm(5.0\% \text{rdg} + 10\text{dgt})$	
	400 ÷ 1000MΩ	1MΩ	$\pm(5.0\% \text{rdg} + 10\text{dgt})$	
	1000 ÷ 4000MΩ		$\pm(5.0\% \text{rdg} + 10\text{dgt})$	

Open voltage: $<1.3 \times V_o$

Accuracy nominal test voltage: $-0\%, +10\%$

Short circuit current: $<3.0\text{mA}$

Nominal test current: $1\text{mA} @ 1\text{K}\Omega \times V$ ($1\text{mA} @ 500\text{K}\Omega$)

DC Voltage

Range	Resolution	Accuracy	Input impedance	Overload protection
0.1 ÷ 600.0V	0.1V	$\pm(0.5\% \text{rdg} + 1\text{dgt})$	3MΩ	605Vrms Max

AC Voltage

Range	Resolution	Accuracy	Input impedante	Overload protection
0.1 ÷ 600.0V	0.1V	$\pm(0.8\% \text{rdg} + 4\text{dgt})$	3MΩ	605Vrms Max

Max crest factor: $\sqrt{2}$

Resistance and Continuity test

Range	Resolution	Accuracy	Overload protection
0.00 ÷ 19.99Ω	0.01Ω	$\pm(2.0\% \text{rdg} + 3\text{dgt})$	605Vrms max for 1min

Buzzer sound for resistance $<2\Omega$



2. GENERAL SPECIFICATIONS

DISPLAY:

Features:	double LCD Custom 4 digit with rdg max 9999 points sign and decimal point
Sample rate:	2times/s
Conversion:	Average value

POWER SUPPLY:

Batteries:	4 x 1.5V type LR6-AA-AM3-MN 1500 alkaline batteries
Low battery indication:	" symbol at display
Life batteries:	Multimeter: about 50 hours
	LoΩ: > 1000 test @ 1Ω
	MΩ 250: >1000 test @ 480kΩ
	MΩ 500: >1000 test @ 480kΩ
	MΩ 1000: >1000 test @ 480kΩ

MECHANICAL FEATURES:

Dimensions (L x W x H):	240 x 100 x 45mm
Weight (included batteries):	450g

WORKING ENVIRONMENTAL CONDITIONS:

Reference temperature:	23°C ± 5°C
Working temperature:	0°C ÷ 50°C
Allowed relative humidity:	<70%RH
Storage temperature:	-10°C ÷ 60°C
Storage humidity:	<70%RH

REFERENCE STANDARDS:

Continuity test with 200mA:	IEC/EN61557-4
Insulation resistance:	IEC/EN61557-2

GENERAL REFERENCE STANDARDS:

Safety of measuring instruments:	IEC/EN61010-1
EMC:	IEC/EN61326-1
Product type standard:	IEC/EN61557
Insulation:	double insulation
Pollution degree:	2
Overvoltage category:	CAT III 550V (Phase – Ground) CAT III 550V (Phase – Phase)
Max height of use:	2000m

This product conforms to the prescriptions of the European directive on low voltage 2014/35/EU
and to EMC directive 2014/30/EU

This product conforms to the prescriptions of the European directive 2011/65/EU (RoHS) and the
European directive 2012/19/EU (WEEE)