#### MT329



## **Bluetooth Handheld Multifunction Tester**

The MT329 is a handheld multifunction tester that combines Insulation and Continuity testing, Resistance, Loop Impedance, RCD, Voltage, and Phase Sequence tests in one device. The Loop Impedance test offers two methods: a high-current test up to 18.3A and a ZL-PE RCD range test that ensures RCDs rated above 30mA do not trip during the test. The MT329 features several RCD test functions, including Auto Test, Residual Current Test with various current settings, and RCD Test Time. The insulation test function operates at 250V, 500V, and 1000V, measuring insulation resistance up to 4000MΩ with automatic discharge after testing. It also provides Low Ohm Resistance measurements. Additional functions include AC and DC voltage measurement, an AC+DC auto-mode, Data Hold, and auto power-off. The large backlit multi-LCD displays simultaneous measurements, ensuring clear visibility. With a CAT IV 600V rating, the MT329 provides a high level of safety. The meter also features Bluetooth communication and internal memory for data storage and transfer. The Bluetooth app, compatible with both Android and iOS, enhances versatility, making the MT329 suitable for troubleshooting and preventative maintenance tasks for electricians.





Ergonomically Designed for Easy, One-handed Measurements.



Easy to Identify Input Terminals



**Magnetic Strap Enables Hands-Free** Testing



Readings

#### **Features**

- 3 insulation test rage 250V, 500V, 1000V
- Insulation Resistance up to 4000MΩ
- Measures AC and DC voltage up to 500V
- AC+DC Mode and Data Hold
- Loop Impedance testing with a high current of up to 18.3A
- Loop Impedance measurement of RCD not tripping above 30mA
- PFC and PEFC readings
- Phase Sequence Test
- Type-A, Type AC and Type-B RCD Testing
- RCD Trip time tA 0.5x, tA 1x, tA 2x, tA 5x,
- RCD AUTO test and RCD Trip level.
- Auto discharge of voltage test signal
- Download stored data to iOS or Android App via Bluetooth
- Auto Power Off

Function	Range	Accuracy
AC Voltage	0.1V - 500.0V	±(2.0% +5)
DC Voltage	0.1V - 500.0V	±(2.0% +5)
Duty Cycle	0.0% - 100.0%	±(2.0% +5)
Low Voltage Continuity	$0.01\Omega - 400\Omega$	±(2.0% +5)
Low Current Resistance	0.1Ω – 1999Ω	±(2.0% +5)
Phase Sequence Test	100V – 550V (45Hz to 65Hz)	
Insulation Insulation Test Range Measuring Range	250V – 500V – 1000V 0.001ΜΩ – 4000ΜΩ	
Rated Current	1mA	
Low Ohm (Continuity)	0.01Ω - 400Ω	
Open Short Circuit Voltage	4 ··· 9V DC	
Measurement Current		
	200mA	
Loop Impedance ZL-PE, ZL-N, ZL-L	$0.1\Omega - 9999\Omega$ (Max 18.3A at 550V)±(5.0% +5)	
PSC / PEFC	0.001A – 40.0kA (Calculated based on Zs & rated Voltage)	
Voltage Range	180V to 550V AC	
ZL-PE RCD	$0.1\Omega - 9999\Omega$ (No-Trip) ±(6.0% +5)	
PSC / PEFC	0.001A – 20.0kA (Calculate based on Zs & rated Voltag	
Voltage Range	180V to 550V AC	
Size	210 x 97 x 68mm	
Weight	634g	





MT329

**Handheld Multifunction Installation Tester** 

**Australia** 

















**Bluetooth Handheld Multifunction Tester** 

## **RMS Leakage Current during RCD time measurements**

	_				_							
	Multiplication Factor Setting											
IΔn	0.5		0.5			2			5			
ΙΔΠ	<b>^</b>	$\sim$		<b>^</b>	$\sim$		<b>1</b>	$\sim$		<b>1</b>	$\sim$	
10	5	3.5	5	10	20	20	20	40	40	50	100	100
30	15	10.5	15	30	42	60	60	84	120	150	210	300
100	50	35	50	100	140	200	200	280	400	500		
300	150	105	150	300	420	600						
500	250	175	250	500								
1000	500	350	500									

### RCD $I_A$ tripping current measurement for sinusoidal residual current

Selected RCD Rated Current	Measurement Range	Test Current	Step Size	Basic Uncertaincy
10 mA	3.0 ~ 11.0 mA			
30 mA	9.0 ~ 33.0 mA			
100 mA	30 ~ 110 mA	$0.3 \times  \Delta_n  \sim 1.1 \times  \Delta_n $	10% of <sup>I∆n</sup>	±10% <sup>l∆n</sup>
300 mA	90 ~ 330 mA			
500 mA	150 ~ 550 mA			

# RCD tripping test and $t_A$ tripping time measurement

RCD Type	Multiplication Factor Setting	Measurement Range	Accuracy		
	0.5 l∆n	10.0ms-300ms			
General	1 I∆n	10.0ms-300ms			
General	2 I∆n	10.0ms-150ms			
	5 l∆n	10.0ms-40ms	±(2%+10digits)		
	0.5 l∆n	10.0ms-500ms			
Selective	1 I∆n	10.0ms-500ms	]		
	2 l∆n	10.0ms-200ms			
	5 l∆n	10.0ms-150ms			

## **RE-protective conductor resistance for RCD**

Selected RCD Rated Current	Measurement Range	Test Current	Accuracy
10mA	10Ω - 5000Ω	4 mA	0 ~ +10% ±8 digits
30mA	10Ω - 1660Ω	12 mA	0 ~ +10% ±5 digits
100mA	$1\Omega - 500\Omega$	40 mA	
300mA	1Ω - 166Ω	120 mA	0 150/ 15 digita
500mA	1Ω - 100Ω	200 mA	0 ~ +5% ±5 digits
1000mA	1Ω - 50Ω	400mA	

### Measurement of Touch Voltage UB Referred to Rated Residual Current

Range	<b>Test Current</b>	Basic uncertainty
0.1V - 99.9V	0.4 x l∆n	0 to 10% ± 5

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Contact Us **South Africa** 

**Australia** 



