

# MI 3309 DeltaPAT



- ✓ Easy to use
- ✓ Unique P/RCD testing technology
- ✓ Dual power
- ✓ Pass/Fail LED indicators

## Portable Appliance Tester

**NEW**  
Differential leakage current test  
Mains and battery powered



The new MI 3309 DeltaPAT is both **battery** and **mains powered** multifunctional instrument intended to perform measurements for testing the electrical safety of portable electrical equipment. The instrument contains **unique P/RCD testing technology** that prevents mains RCD from tripping out while measurements are being performed. Due to dual power capability of MI 3309, the instrument can perform also tests that are usually found on larger, heavier machines (e.g. differential leakage, touch leakage, power consumption testing etc) while still maintaining a **lightweight** portable design. The instrument is equipped with additional inputs for performing **tests on fixed installed appliances**. The handling and use of the instrument is clear and simple due to large graphical LCD screen with backlight, two PASS / FAIL LED indicators and HELP screens for each measurement. The MI 3309 can store up to 1500 test results with parameters that can be downloaded onto a PC for further data handling and creation of test report (software included in standard set). The lightweight design, pre-programmed and custom test sequences and optional bar-coding system make the MI 3309 an ideal instrument for high volume professional safety testing of portable appliances. The MI 3309's extended communication facility supports the use of an RS232 label printer and RS232 barcode scanner.

#### THE FOLLOWING TESTS CAN BE PERFORMED:

- Functional and visual inspection;
- Earth bond resistance;
- Insulation resistance; Insulation resistance of isolated accessible conductive parts;
- Substitute leakage current; Substitute leakage current of isolated accessible conductive parts;
- Differential leakage current test;
- Touch leakage test;
- P/RCD test;
- Power test;
- IEC cord polarity test;
- TRMS voltage meter.

#### KEY FEATURES:

- Graphic LCD with resolution of 128 x 64 dots, with backlight.
- The graphic display offers easy reading of results, indications, measurement parameters and messages.
- Large green and red lights for additional PASS / FAIL indication placed at the sides of the LCD.
- Large data flash memory for storing test results & parameters (about 1500 tests with parameters can be stored in average).
- Two communication ports (USB and RS232C) for communication with PC, and barcode reader.
- Built-in real time clock.
- Bar-coding system for quick test code selection and identification of device under test.
- Programmable limits for PASS / FAIL evaluation.
- Fully compatible with new Metrel PATLink PRO PC software package, included in standard set (download, view, print and export of test results).
- Optional PC SW PATLink PRO Plus (advanced test result analysis and professional test report creation)
- Portable and lightweight design.
- Rechargeable battery powered instrument with built-in charging circuit.
- The instrument can operate from mains power or batteries.



#### POWERFUL FUNCTIONS FOR FAST AND EFFICIENT PERIODIC TESTING:

- Pre-programmed test sequences;
- Fast testing with the help of barcodes;
- Test sequences can be uploaded from PC;
- Simple test menu.

#### APPLICATION:

- Professional portable appliance testing
- General portable appliance testing
- Multi-location portable appliance testing

#### STANDARDS APPLIED:

##### Electromagnetic compatibility (EMC)

EN 61326

##### Safety (LVD)

EN 61010-1

EN 61010-031

##### Functionality

EN 61557

VDE 0404-1

VDE 0404-2

VDE 0701-0702

NEN 3140

BS 89

# Technical specifications

## Earth continuity (200 mA in to 2.00 Ω)

Range	Resolution	Accuracy
0.00 Ω ÷ 19.99 Ω	0.01 Ω	± (5 % of reading + 3 digits)
20.0 Ω ÷ 199.9 Ω	0.1 Ω	Indication only
200 Ω ÷ 1999 Ω	1 Ω	

## Insulation resistance, Insulation – S resistance (250 V<sub>DC</sub>, 500 V<sub>DC</sub>)

Range	Resolution	Accuracy
0.00 MΩ ÷ 19.99 MΩ	0.01 MΩ	±(5 % of reading + 3 digits)
20.0 MΩ ÷ 49.9 MΩ	0.1 MΩ	Indication only
50.0 MΩ ÷ 199.9 MΩ	0.1 MΩ	

## Differential leakage current (230 V<sub>AC</sub>)

Range	Resolution	Accuracy
0.00 mA ÷ 19.99 mA	0.01 mA	±(5 % of reading + 5 digits)

## Touch leakage current (230 V<sub>AC</sub>)

Range	Resolution	Accuracy
0.00 mA ÷ 7.0 mA	0.01 mA	±(10 % of reading + 5 digits)

## Substitute leakage current (30 V<sub>AC</sub>)

Range	Resolution	Accuracy
0.00 mA ÷ 9.99 mA	0.01 mA	±(5 % of reading + 3 digits)
10.0 mA ÷ 20.0 mA	0.1 mA	

## (P)RCD testing (10 mA, 15 mA, 30 mA)

Range	Resolution	Accuracy
0 ms ÷ 300 ms (1/2xIΔN)	0.1 ms	±3 ms
0 ms ÷ 300 ms (IΔN)	0.1 ms	
0 ms ÷ 40 ms (5xIΔN)	0.1 ms	±1 ms

## Power measurement (230 V<sub>AC</sub>)

Range	Resolution	Accuracy
0.00 kVA ÷ 4.00 kVA	0.01 kVA	±(5 % of reading + 3 digits)

## Voltage TRMS measurement

Range	Resolution	Accuracy
80 ÷ 300 V	1 V	±(2 % of reading + 2 digits)

## Polarity test (<50 V AC)

# General data

Power supply voltage:	9 VDC (6x1.5 V battery or accu, size AA), 230 VAC
Operation:	10 h
Working temperature range:	0 °C ÷ 40 °C
Maximum relative humidity:	95 % RH (0 °C ÷ 40 °C), non-condensing
Display:	128 x 64 dots matrix display with backlight
Memory:	1500 memory locations
Communication port:	RS232 (PS/2 connector, female), USB (connector Typ B)
Overvoltage category:	CAT II / 300 V
Protection classification:	Double insulation
Protection degree:	case IP 40 /connectors IP 20
Dimensions (w x h x d):	14 cm x 8 cm x 23 cm
Weight:	1,2 kg



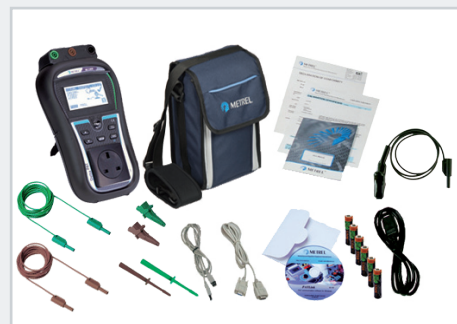
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## Ordering information:

Standard set

Part No.: MI 3309



- Instrument MI 3309 DeltaPAT
- Small soft carrying bag
- IEC cable, 2 m, 2 pcs
- Test lead, black, 1.5 m
- Crocodile clip, green
- Crocodile clip, brown
- Test probe, green
- Test probe, brown
- PC software PATLink PRO
- RS232 cable
- USB cable
- Test lead, green 1.5 m
- Test lead, brown 1.5 m
- Test lead with crocodile, black 1.5 m
- Instruction manual
- Short instruction manual
- Calibration certificate
- NiMH rechargeable batteries, type AA, 6 pcs

## Optional accessories:

Photo	Order No.	Acc. description
	A 1302	Set of carrying straps
	A 1303	Soft hand strap
	A 1276	Printer ONeil 2te (RS232)
	A 1295	Labels for A 1276
	A 1328	HI-Q Labels for A 1276
	A 1306	PC SW PATLink PRO Plus with USB and RS232-PS/2 cable
	A 1203	Upgrade code PATLink PRO to PATLink PRO Plus
	A 1105	Barcode scanner
	A 1014	Test probe, black
	A 1013	Crocodile clip, black

Note! Photographs in this catalogue may slightly differ from the instruments at the time of delivery. Subject to technical change without notice.