

# TNT<sub>®</sub> - GEN4 SERIES

## **Portable Appliance Testers**



With three generations of Industry respected models and a proven pedigree you can rely on, the new Gen4 TnT Series is now available in Australia and New Zealand.

All Gen4 models provide a host of features and functions never before seen on any appliance tester.

With solid **10Amp** and **\*20Amp** capability (**\*TnT +XM**) and a totally new **Meter Mode**® function (providing instant power, voltage and current measurements) the **Gen4 TnT** series boast a comprehensive list of tests and analysis as required under our <u>AS/NZS 3760:2010 Standards</u>.

<u>Designed and Manufactured in Australia</u> to meet stringent testing requirements - some of the tightest in the world - the **TnT Gen4** series now sets its own new standard of reliability and ruggedness.

This makes the **Gen4** a unique and specialised product, capable of performing any test as specified and reporting/recording results in a clear yet concise manner, with display <u>readings that make sense</u>.

Physical characteristics of the **Gen4** also have major design enhancements. From simple features such as an integrated carry handle, through to special removable inter-locking power cords, quick change fuse holder/spare fuse carrier, sloping top panel and front loaded test sockets.

The TnT Gen4 series is the logical choice for serious Test & Tag operators, Industry and Mining.

## Features include:

- Meter Mode TnT Gen4 series
- Simplified one button testing
- Test icons & Symbols on Large LCD
- Large fonts during tests showing results & progress
- Mains/Input Polarity test on startup
- Optional 20 Amp Operation (TnT+XM)

- True RCD ramp up test (RCD & + models)
- User settable functions
- Test extend capability
- Impact resistant and flame retardant casing
- Built in carry handle
- Flashing Test Fail indicator



# **SPECIFICATIONS**

### **Ouick Overview:**

The **TnT** series is developed around one of the most powerful Microprocessors used in any appliance tester world wide, allowing the **TnT** to perform a series of complex & accurate internal calculations.

The result is an easy to use, intuitive hand held Portable Appliance Tester (PAT), designed to test for electrical safety and accuracy of 240VAC rated appliances (including RCD results on specific models). Simple one button automatic testing makes this series fast and easy to use.

The **TNT** series provides operators the ability to fully comply with the requirements of the AS/NZS 3760 Standard. This advanced engineering also enables the **Gen4** series to be updated/upgraded as specifications & Standards change in the future, providing owners with excellent return on investment.

The large Backlit LCD display shows easy to follow menus, meaningful icons & selectable test screens for simpler user operation.

'On-start' tests range from mains supply testing, check of connectivity, polarity with flashing fail indicators (also when test has failed), through to user selectable options where applicable, e.g. RCD ramp current etc. Functions vary depending on model, but the flexibility of this series suits all levels of Industry.

Advanced features include ability to extend some test functions/ times, e.g. the earth bond test to 30 seconds allowing operators to obtain proper contact with the earth of some appliances.

The **TnT Gen4** series consist of 5 models, scaled up from the basic **TnT el**, through to on board digital RCD test models, PC connectivity (with WinPATS Software) & full Memory-Data upload/download and storage capability. (Site Data etc.)
The new, compact **20 Amp** model **TnT +XM** is also introduced.

Select a tester from the chart to suit your individual needs.

## Overview: Memory Units TnT +M types

- **Storage of up to 5,000 Items-** with 8 tests per Item record. (40 000 total tests)
- Each item includes site (max 16), location, description, make, model, serial no., \*asset no., test frequency, test type, comments, and no. of tests.
- Library can store thousands of locations, descriptions, makes, models and comments.
- Each test record has Date/Time Stamp from inbuilt RTC.
- Compatible with WCM-Scanner for easy data entry & retrieval.
- Upload and Download records to/from PC with WinPATS<sup>TM</sup> Memory Software. This may also be used as an \*Asset Management System for non-electrical items
- Mini Keyboard supplied for site data & setup Item info. input
- Optional 20,000 item memory factory upgrade is available.

## **Tests Performed / Specifications**

#### **Mains Supply Test**

Checks Polarity and continuity of mains supply by LED indicators (A-N, A-E, and N-E). (Flashing--;

#### **CLASS 1 Earthed Appliance**

- Appliance Check: Ensures appliance is plugged in and turned on.
- Earth Bond Test: 200mA test current. Pass level Less than 1.0 Ω. Measurement: 0.01Ω to 10 Ω.
- Insulation Test: 500VDC / 250VDC. Pass level Greater than 1M  $\Omega$ . Measurement:  $0.1\Omega$  to  $10M\Omega$ . \*See also Leakage Test

#### **CLASS 2 Double Insulated Appliance**

- Appliance Check: Ensures appliance is plugged in and turned on.
- Earth Bond Test: 200mA test current. Pass level Less than 1.0Ω. Measurement:  $0.1\Omega$  to  $10\Omega$ . Insulation Test: 500VDC / 250VDC. Pass level greater than 1MΩ. Measurement:  $0.1\Omega$  to 10MΩ. \*See also Leakage Test

#### Extension Leads

- Earth Bond Test: 200mA test current. Pass level Less than 1Ω. Measurement: 0.010 to 10.00s
- Insulation Test: 500VDC / 250VDC . Pass level Greater than 1M $\Omega$ . Measurement: 0.1 $\Omega$  to 10.0M $\Omega$ .
- Continuity/Polarity Test: 250VAC check continuity and polarity of leads. Displays Pass/Fail.

#### Leakage Test \*

- Leakage Current: 0 to 30.0mA at 200 to 265V
- Earth Leakage Test: 240VAC Mains. Pass level 1, 2.5, 5.0 mA leakage test levels with up to 10Amp load operation.

\*TnT+XM model is capable of up to 20 Amp load

**Note 1:** Pass level for CLASS 1 is 5 mA Pass level for CLASS 2 is 1 mA

**Note 2:** Leakage test may be performed if for any reason a standard CLASS 1 or CLASS 2 is not possible.

#### RCD Test

- > Trip Current: 2 to 500mA in 1mA steps. User selectable.
- Trip Time: 0 to 3,000ms at .001sec resolution.
- Current Ramp Trip Test: 0 to 500mA in 1mA increments.

#### **Power Measurement**

- Leakage Current: 0 to 30.0mA at 200 to 265V
- Load Current: 0.0 to 10Amp (20Amp for TnT +XM)
- Voltage: 200 to 265VAC
- Power Factor: 0.00 to 1.00
- Apparent Power: 0 to 2400VA
- Power 0 to 2400W

#### Meter Mode®

- Load Current: 0.0 to 10Amp
- Voltage: 200 to 265VAC
- Apparent Power: 0 to 2400VA
- Power: 0 to 2400W

# TnT<sub>®</sub> Gen4 Series

Tester Function Chart	TnT el	TnT RCD	TnT +	TnT +M	TnT +XM
Meter Mode 🛜	✓	✓	✓	✓	✓
Class I / Class II	✓	✓	✓	✓	✓
Extension leads	✓	✓	✓	✓	✓
Leakage Current	✓	✓	✓	✓	✓
500V Insulation / 250V Insulation	✓	✓	✓	✓	✓
RCD Testing		✓	✓	✓	✓
Mains Supply Test	✓	✓	✓	✓	✓
Power Measurement			✓	✓	✓
Data Connectivity to PC / Laptop via on-board USB port			✓	✓	✓
Printer Connectivity via laptop/PC			✓	✓	✓
Direct Tag Printer connectivity via on-board serial port				✓	✓
WCM Keyboard included with TnT Model				✓	✓
Direct Keyboard connectivity via on-board PS/2port				✓	✓
20 Amp Operation (Power & Earth Bond etc.)					✓
Memory - 5,000 Item Storage				✓	✓
Memory - 20,000 Item Storage (Factory upgrade option)				✓	✓
WinPATS base software			✓		
WinPATS software (optional)			✓		
WinPATS memory Base Software				✓	✓
WinPATS Memory Software (optional)				✓	✓
WCM-Keyboard				✓	✓

## **Contents**

#### TnT -el G4

- Appliance tester with leakage test
- Instruction user guide
- Earth Bond lead 1800mm
- IEC to 3 PIN plug test lead 500mm
- Carry bag & Locking power lead

### TnT RCD G4

- Same as TnT -el
- In-built RCD Test Module & Firmware

### TnT + G4

- Same as TnT RCD
- WinPATS Base software
- Interface ports (scanner, printer & keyboard)
- USB Cable (for Connection to PC)

## TnT +M G4

- Same as TnT +
- 5000 Item memory (on-board mem module)
- WinPATS Memory Base Software
- \*Includes WCM Compact Keyboard as standard for Site/Item Entry
  TnT +XM G4

- Same as TnT +m
- 20Amp operation, C/W 20A IEC Lead (15amp 3 Pin plug)

Note: TnT +M versions use keyboard for direct data entry on-site. No need for PC at site

## **TnT Gen4 models**

all incorporating the new METER MODE function



## **Meter Mode Function**

Meter Mode ®, developed for the new TnT Gen4 Models, is unique and not found on any other PAT.

This very useful function is intended for quick and simple electrical measurements whilst providing accurate readings.

Though not intended to replace specific, possibly more accurate test equipment, quick tests are easily performed e.g. - measuring power consumption of a bar heater or drill to check the ratings, test power/voltages on outlets around sites on different circuits, confirm specifications etc.

No need to carry around extra test gear like clamp or multi-meters.

Meter Mode features four discrete options - Volts, Amps, Watts, and Volt / Amps.

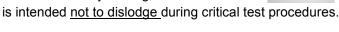
Electrical parameters are displayed on the large LCD screen as Volts in AC, Current in Amps, Power Measurement in Watts and VA in Volt/AMPS. Hold 'F3' in primary Menu Screen for 2 seconds and the screen will change to Meter Mode, showing Volts by default with the test socket not 'Live' until proceeding to actually test.

The TnT Gen4 stays locked in Meter Mode regardless of power on/off until you decide to exit this mode. No need to reset each time you move to another power outlet or location. Appropriate warnings will flash 🔅 and the screen indicates when test socket is about to go 'Live'. Pressing 'ENTER' key will exit Meter Mode and return to normal functions. "Brilliant Australian inventiveness!"

## Features exclusive to the TnT Gen4

## **Unique Locking Power Cable:**

This revolutionary locking, removable cable



## Rear Panel TnT+ Gen410amp Series



## Rear Panel TnT+ Gen420amp Series





This product is totally Australian Designed and manufactured,

using premium grade components and materials

Designed & Manufactured by

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## **Optional Accessories**

WinPATS<sup>TM</sup> Base WinPATS<sup>TM</sup> Full Version WinPATS<sup>™</sup> Memory base WinPATS<sup>TM</sup> Memory 20,000 Item memory u/g Tinned Earth Strap 500mm 3-Phase Adaptor WCM Barcode Printer WCM Barcode Scanner Wireless Scanner Alligator/Probe Lead Set **Isolation Transformer** Hydraulic trolley Hard Transit case WCM Compact Keyboard Adapter Cable- 20Amp/3Pin socket to 10Amp /3Pin plug

| Part No: WinPATS Base | Part No: WinPATS Part No: WinPATS MBase | Part No: WinPATS M Part No: WCM -20KM Part No: TnT-ES500 Part No: WCM-3 phase | Part No: WCM -TTP | Part No: WCM -Scanner Part No: WCM -WScanner | Part No: WCM -Probe Set | Part No: WCM -ISOT II | Part No: WCM-TROLLEY Part No: WCM-HTC Part No: WCM—KEYB Part No: WCM-20/10

NOTE:- TnT Gen 4 Testers now include an extended Warranty Option. Standard Warranty period is 12 months covering workmanship/materials under normal use.

Warranty or Service must be performed by Wavecom Instruments. Return shipping costs are the responsibility of the customer. Return shipping within Australian Capital Cities will be provided by

24 month Conditional Warranty:- The TnT must be CALIBRATED & Serviced every 12 months for the first 2 years by Wavecom Instruments. Otherwise the Standard Warranty will apply.

See www.wavecom.com.au for current Calibration charges.



