

## MFT1800 Series Multifunction tester



- Simple colour-coded test selection and large clear backlit display for ease of use
- Two and three wire non-trip loop testing for RCD protected circuits
- Internal memory and Bluetooth® communications
- Type-B RCD and 3-phase RCD testing for industrial applications with no Earth
- 3-terminal earth test and stakeless testing for spike resistance measurement
- EN61010 CATIV safety ratings and tough IP54 case

### DESCRIPTION

The MFT1800 range consists of 3 instruments designed for testing low voltage electrical installations to IEC 60364. They provide all the tests required to complete the necessary electrical certification for industrial, commercial and domestic fixed wiring installations, including:

- System voltage and frequency measurement (TRMS)\*.
  - Insulation test at 100 V\*, 250 V, 500 V and 1000 V\* Including input protection against live circuits up to 600 V even when insulation test is locked-on
- Continuity resistance at 200 mA or 15 mA\*
  - Automatic - no need to press TEST so leaving both hands free to hold probes.
- Resistance range up to 100 kΩ
  - With fast continuity buzzer and selectable thresholds
- Non-trip loop test
  - Earth loop test
  - 2 and 3 wire non-trip range
  - 2 wire Hi current including phase to phase
- Prospective fault current measurement
  - Up to 20 kA
- RCD testing including:
  - Type AC, A, S, B\* and programmable RCDs 1/2 x I, 1 x I, 2 x I and 5 x I
  - 3-phase RCDs\*
  - Fast ramp test
  - Auto-test routine
  - Fault (Touch) voltage display

- Earth testing
  - 2-pole,
  - 3-pole
  - ART
  - Stakeless techniques

All instruments are IEC 61010 CAT IV 300 V rated for connection to low voltage systems with no protective device, so safe for connection anywhere on the system up to the source transformer without risk of damage from large transient spikes.

The unique modern styling allows it to be operated while stood on the floor, a ladder-shelf or platform, hung around the neck or hand-held. Dual TEST and LOCK buttons - one pair at each end - make the testers easy to operate with either the left or right hand.

Quick to pick up and use, the rotary controls are colour coded to make range selection easy and fast. They also reduce the chance of using the wrong function or range. The large crystal clear backlit display uses the patented Megger digital/analogue arc, providing indication of fluctuating readings while the dual digital readout shows precise values of key measurements simultaneously with the test parameters, such as the output voltage on insulation testing as well as the resistance value in MΩ.

## MFT1800 Series Multifunction tester

Visible and audible safety warnings are paramount when testing high-energy systems, and the MFT1800 range includes full input protection and safety warnings when a hazardous voltage is present.

If live voltages exist on a circuit during insulation or continuity testing, the voltage is displayed on the screen. If this voltage exceeds a safe level, further testing is inhibited and a warning beep sounds.

The MFT1835 features internally rechargeable batteries and charger with a charge time of less than 4 hrs, so reducing the cost of ownership.

Fully compliant with all requirements of IEC 60364 derived standards including VDE 0100 and BS 7671, the new MFT includes all the latest measurement technology in a lightweight compact design and fully protected and usable on single phase and 3 phase installations.

New measurement functions include two and three wire non-trip loop test technology for RCD protected circuits, comprehensive testing of RCDs including type B and the latest clamp-on techniques for earth testing.

The MFT1835 includes built in memory and Bluetooth® communications for downloading of memory using Megger Download Manager (supplied) for simple form filling of test results for certification software such as Megger CertSuite ([certsuite.info](http://certsuite.info)).

The new MFT1800 series has been designed for tough environments and ultimate reliability. Features include a rubber over mould for extra protection and grip, IP54 protection against dust and water and an EN61010 CAT IV safety rating. Its class leading input protection ensures the new MFT can withstand accidental misuse and voltage transients when other testers can't.

All this in an intuitive and easy to use instrument with no hidden menus or complicated screens. Tests are easily selected using the colour coded rotary switches with results clearly displayed on the high contrast dual measurement backlit display.

Included with the instrument are a standard 3-wire leadset and a mains test lead, a switched probe for fast and easy testing, a full 12-month calibration certificate and warranty upgradeable to 3 years. The MFT is supplied in a robust moulded case with plenty of additional space for optional extras like a few tools and the earth electrode test kit, comprising 2 spikes and 3 long test leads.

\* model dependant

\*\* requires optional accessory

	MFT1815	MFT1825	MFT1835
<b>Insulation ranges</b>			
100 V			■
250 V, 500 V	■	■	■
1000 V	■	■	■
Test voltage display	■	■	■
Adjustable buzzer threshold		■	■
<b>Continuity and resistance ranges</b>			
200 mA test	■	■	■
15 mA test		■	■
Adjustable buzzer threshold	■	■	■
<b>RCD tests</b>			
1/2 x I, 1 x I, 5 x I RAMP RCD test	■	■	■
2 x I		■	■
Fast ramp	■	■	■
Auto RCD test	■	■	■
Type A & AC RCDs	■	■	■
Type S RCDs	■	■	■
Type B (pure DC) RCDs		■	■
Programmable RCD	■	■	■
3-phase RCD (no Earth)		■	■
10 mA RCD	■	■	■
30 mA, 100 mA, 300 mA, 500 mA RCD	■	■	■
1000 mA RCD		■	■
<b>Earth test</b>			
2-pole**		■	■
3-pole**		■	■
3-pole ART technique**			■
Stakeless method**			■
<b>Loop testing</b>			
2-wire and 3-wire non-tripping L~PE	■	■	■
2-wire high current L~L & L~N	■	■	■
50 V to 480 V (L~N) 50 V to 280 V (L~PE)	■	■	■
Phase to Phase tests (L~L)	■	■	■
PSCC & PFC (20kA max)	■	■	■
Touch-voltage display (0 V~253 V)	■	■	■
<b>Other features</b>			
Supply measurement	■	■	■
True RMS			■
Current measurement**		■	■
Phase rotation	■	■	■
Backlight	■	■	■
Auto power-down	■	■	■
Calibration certificate supplied	■	■	■
Rechargeable batteries/charger included	■	■	■
3-year warranty (on registration)	■	■	■
Onboard memory with Bluetooth® download			■
CAT IV 300 V	■	■	■
IP54	■	■	■

## MFT1800 Series Multifunction tester

### SPECIFICATIONS

#### Insulation test

<b>Output voltage</b>	-0% +20% at rated load or less	
<b>Voltage display</b>	±3% ±3 digits ±0.5% of rated voltage	
<b>Short circuit current</b>	1.5 mA nominal test current	
<b>Test current on load</b>	1 mA at min pass values of insulation	

#### Insulation accuracy

<b>1000 Volts</b>	10 kΩ ~ 999 MΩ	±3% ±2 digits
<b>500 Volts</b>	10 kΩ ~ 500 MΩ	±3% ±2 digits
	>500 MΩ	±10% ±4 digits
<b>250 Volts</b>	10 kΩ ~ 250 MΩ	±3% ±2 digits
	>250 MΩ	±10% ±4 digits
<b>100 Volts</b>	10 kΩ ~ 100 MΩ	±3% ±2 digits
	>100 MΩ	±10% ±4 digits

#### Resistance and continuity

0.01 Ω ~ 99.9 Ω	±2% ±2 digits
100 Ω ~ 99.9 kΩ	±5% ±2 digits
<b>Open circuit voltage</b>	5 V ±1 V
<b>Test current (0 Ω ~ 2 Ω)</b>	205 mA ± 5 mA 15 mA ±5 mA (user selectable)

#### Loop test

<b>Live to earth supply</b>	48 V ~ 280 V (45 Hz ~ 65 Hz)
<b>Live to live supply</b>	48 V ~ 500 V (45 Hz ~ 65 Hz)
<b>L-N/L-L tests</b>	±5% ±3 digits

#### L-E tests\*

0.1 Ω ~ 39.9 Ω ±5%	±5 digits ± noise margin
40.0 Ω ~ 999 Ω	±10% ±5 digits

**Display range** 0.01 Ω ~ 999 Ω

**Live to earth PFC range** 20 kA

**Live to live PSCC range** 20 kA

\* Reference conditions apply.

For test environments see service data.

#### RCD tests

<b>Supply up to 100 mA</b>	48 V ~ 480 V (45 Hz ~ 65 Hz)
<b>Supply up to 1 A</b>	48 V ~ 280 V
<b>RCD type</b>	Type AC, A, S Type B (pure DC)
<b>No trip test</b>	10% ~ -0% (1/2xl)
<b>Trip test</b>	+0% ~ +10% (1xl, 2xl & 5xl)

#### Ramp test

<b>Touch voltage</b>	+5% +15% ±0.5 V (0 ~ 253 V)
<b>Trip time</b>	±1% ±1 ms
<b>Trip current</b>	±3%

#### Step increments

<b>VAR</b>	10 mA ~ 50 mA 1 mA steps
(variable RCD selection)	50 mA ~ 500 mA 5 mA steps 500 mA ~ 1000 mA 10 mA steps

#### Supply measurement

<b>Voltage</b>	10 V ~ 600 V (15 ~ 400 Hz) True RMS ±3% ± 1 V ±2 digits
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**Phase rotation indication:** L1-L2-L3 & L1-L3-L2

<b>Frequency</b>	15 Hz ~ 99 Hz ±0.5% ±1 digit 100 Hz ~ 400 Hz ±2.0% ±2 digits
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**Frequency resolution** 0.1 Hz

#### Power supply

MFT1815 & MFT1825: IEC LR6 type AA alkaline (6 cells - supplied)

MFT1835: 1.2 V NiMH (rechargeable 6 cells supplied) Mains charger for on-board re-charging (4 hours typical) 12 V car charger (cigar lighter lead - optional)

#### Earth / ground test

<b>Resolution</b>	0.01 Ω
<b>Current</b>	0.45 mA or 4.5 mA
<b>Noise rejection</b>	20 V pk/pk (7 V rms).

#### Max probe resistances Rp & Rc

100 kΩ @ 50 V
5 kΩ @ 25 V

#### 2 & 3 pole method

(0.01 Ω ~ 1.999 kΩ) ±2.0% ±5 digits

#### ART method

(1.00 Ω ~ 1.999 kΩ) ±5.0% ±5 digits

#### Stakeless method

(1.00 Ω ~ 199 Ω) ±7.0% ±5 digits

#### Current

(via optional clamp meter)

±5.0% ±3 digits.

**Range** 0.1 mA to 200 A AC

**Resolution** 0.1 mA

#### MV sensor input

(MFT1835)

including temperature (third party module)

±1.0% ±2 digits

**Range** 0.0 mV to ±199.9 mV DC

**Resolution** 0.1 mV

#### Data storage

(MFT1835)

**Capacity** 1000 results

Bluetooth® communication

# MFT1800 Series

## Multifunction tester

### DESIGN STANDARDS

Safety	IEC 61010-1:2010
	IEC 61010-30:2010
	IEC 61010-031:2008
	600 V CAT III / 300 V CAT IV (Max Phase to Phase 600 V)
	IEC 61557:2007 parts 1 to 10
EMC	IEC61326 edition 2 location class B

### ENVIRONMENTAL

#### Operating temperature range and humidity

10 °C ~ +55 °C  
90% R.H. at +40 °C max

#### Temperature (storage)

-25 °C ~ +70 °C

Maximum altitude 2000 m

#### Weight (instrument and case)

1 kg (with batteries, excluding case)

#### Dimensions (instrument and case)

150 x 85 x 235 mm

IP rating IP54

#### Calibration temperature

+20 °C

### TEMPERATURE EFFECTS

#### Temperature co-efficient

<0,1% per °C

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### ORDERING INFORMATION

Description	Order Code	Description	Order Code
MFT1815-AU	1005-270	<b>Included accessories</b>	
MFT1815-CH-DE/FR	1002-402	Printed quickstart guide	
MFT1815-SC-DE/NL/EN	1002-403	Calibration certificate	
MFT1815-SC-FR/ES	1002-405	Switched probe SP5	1007-157
MFT1825-AU	1002-406	Neck strap - Megger embroidered	2001-509
MFT1825-CH-DE/FR	1002-407	3 Wire lead set with prods and clips	1001-991
MFT1825-SC-DE/NL/EN	1002-408	Euro mains test lead SIA45 (not AU)	2000-674
MFT1825-SC-FR/ES	1002-410	AU/NZ plug test lead (AU only)	6220-828
MFT1835-AU	1002-411	AC battery charger (MFT1835 only)	1002-736
MFT1835-CH-DE/FR	1002-620	<b>Optional accessories</b>	
MFT1835-DE+P*KAL Manager software	1002-414	Soft carry case with lead/document pouch	6420-143
MFT1835-SC-DE/NL/EN	1002-415	Fused 10 A test lead set (red/blue/green) with prods and clips	1001-975
MFT1835-SC-FR/ES	1002-417	ETL30 Extension Test Lead 30 m	1000-215
		ETL50 Extension Test Lead 50 m	1000-217
		Cigar lighter adapter for battery charging.	6280-332
		Earth electrode kit	1001-810
		ETK30 (3 Pole Earth Test Kit)	1010-176
		MCC1010 Current measuring clamp	1010-516
		MVC1010 Voltage clamp	1010-518

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ISO 9001  
The word 'Megger' is a registered trademark

**Megger**®



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EURO-INDEX is fabrikant, importeur en distributeur van diverse A-merken op het gebied van test- en meetinstrumenten. Daarnaast leveren wij een groot aantal diensten om het gebruik van deze instrumenten in uw bedrijfsvoering te optimaliseren. Dit omvat uiteraard onderhoud, reparatie en kalibratie van de instrumenten, maar ook kennisdeling via de EURO-INDEX Academy en verhuur van instrumenten.

## Geautoriseerd Service Centrum

EURO-INDEX b.v. is van alle vertegenwoordigde merken een Geautoriseerd Service Centrum. Dit betekent dat uw instrumenten worden behandeld door technici die zijn opgeleid door de fabrikant en beschikken over de juiste gereedschappen en software. Er worden uitsluitend originele onderdelen toegepast en de garantie van uw instrument, evenals de certificering (ATEX, EN50379, etc.) blijven intact.

## Kalibratielaboratorium

Ons moderne service- en kalibratielaboratorium beschikt over een RvA accreditatie naar NEN-EN-ISO/IEC 17025. Deze accreditatie geldt voor grootheden, zoals gespecificeerd in de scope bij accreditatienummer K105.



Kijk voor een overzicht van al onze diensten op [euro-index.nl/diensten](http://euro-index.nl/diensten)



## Mobiele Service

Naast de vaste kalibratielaboratoria in Capelle aan den IJssel en Zaventem beschikken wij ook over laboratoria op wielen met de naam "Mobiele Service". Dit biedt vertrouwde service en kwaliteit, bij u voor de deur!

## KWS®

KWS® is een uniek servicesysteem voor uw meetinstrumenten met periodiek onderhoud en kalibratie tegen vaste, lage kosten. Uw kalibratiecertificaten zijn digitaal beschikbaar via Mijn KWS (gratis webportaal en app).

## Verhuur van meetinstrumenten

- Uitgebreid assortiment
- Nauwkeurigheid aantoonbaar door actueel kalibratiecertificaat
- Deskundig advies
- Complete levering inclusief accessoires

## EURO-INDEX Academy

- Trainingen (individueel en klassikaal)
- Cursussen en workshops
- Demonstratie- en instructievideo's
- Whitepapers



Servicebalie



Onderhoud, reparatie en kalibratie



Cursussen en workshops



Mobiele Service

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