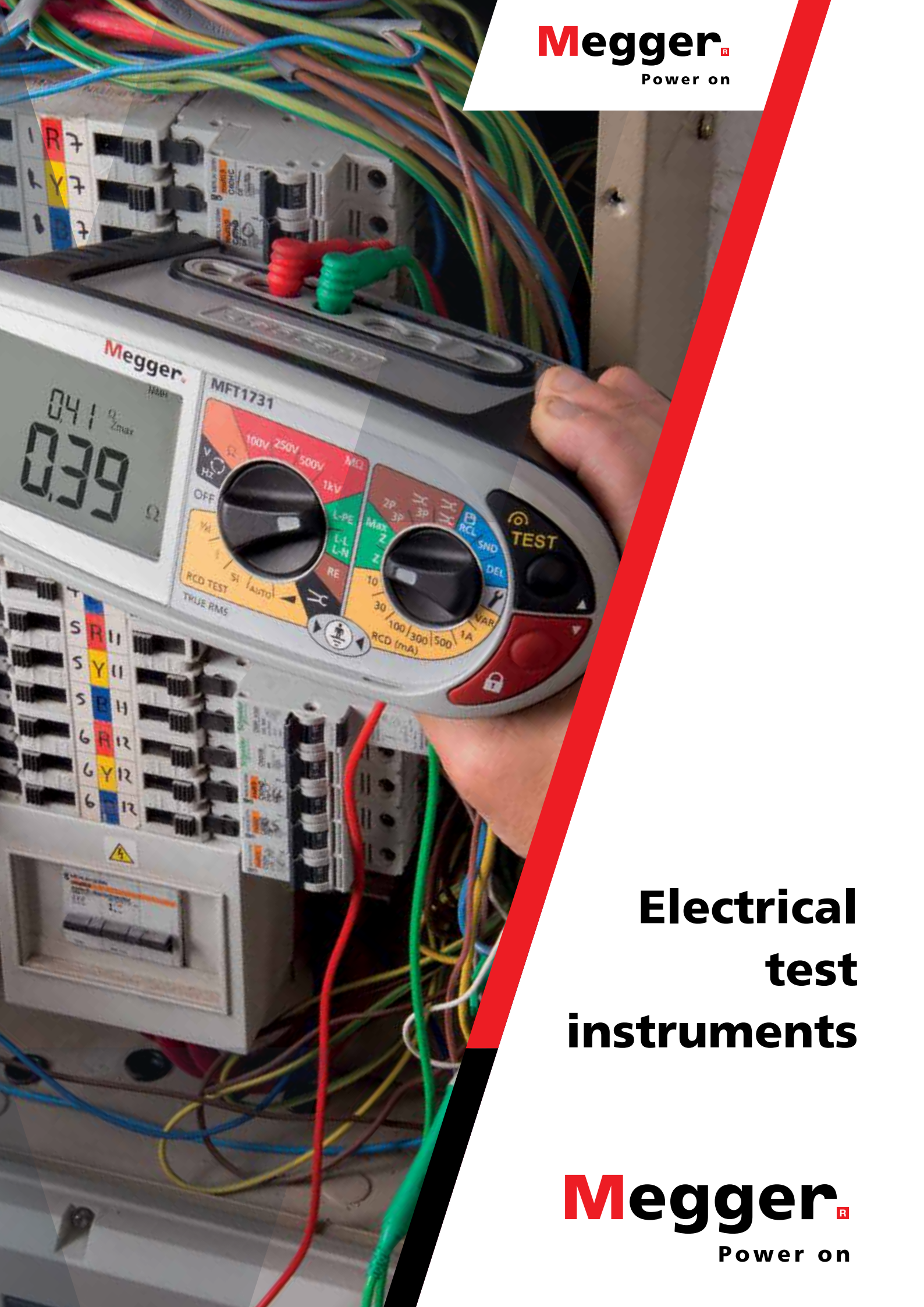


Megger[®]
Power on



Electrical test instruments

Megger[®]
Power on

New products

MFT1701 series multifunction installation testers

- Offering increased functionality and better value



MIT2500 high voltage insulation and continuity tester

- 2.5 kV tester that is hand-held and weighs less than 1 kg



AVO800 series multimeters

- High end multimeters designed with the electrical contractor in mind



MIT400/2 series insulation and continuity meters

- Ensure that you do not over-stress the installation



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Don't miss out!

You can extend the warranty of many Megger test instruments shown in this catalogue to three years, free of charge, simply by registering the purchase of the product. This is in addition to the free technical support available for the life of your new Megger instrument. Product registration is available either using the Megger web site or the supplied reply paid card.

Power on

Keeping your customers' power on is essential for the success of your business. That is why we are dedicated to creating, reliable, easy-to-use portable test equipment that makes your business more efficient; and backing them up with world-leading support and expertise when you need a helping hand.

We can assist your certification and maintenance testing for predictive, diagnostic or routine purposes. By working closely with electrical contractors, both large and small, standards bodies and scheme providers, we contribute to the dependability and advancement of the electrical installation industry.

Power on with Megger!

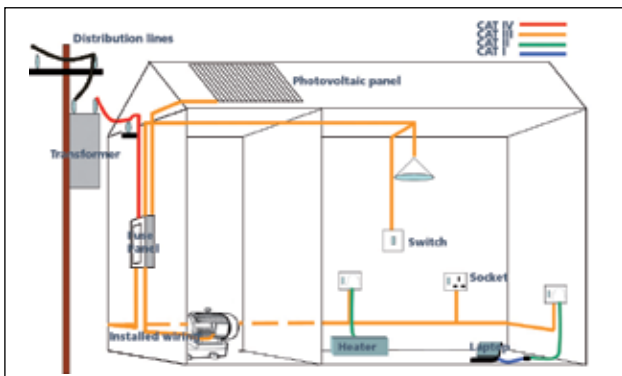
You and EN 61010

Are you trusting to luck, or are you using a tester that is safe to do the job you want? The basic design of electrical testers has a major affect on its safety.

To help protect you from serious injury the IEC has developed a system of safety categories (CAT) related to the design of your tester and the locations in which you work.

The CAT rating is not a measure of how well your tester protects you from the error you make; it is a measure of how well your meter protects you from those surges and spikes that occur on the supply line. Things like lightning strikes and switching transients that can result in spikes of thousands of volts and huge amounts of energy.

You can help protect yourself by buying testers with the highest category rating CAT IV. They don't cost any more. Most of Megger's test instruments already have a CAT IV rating.



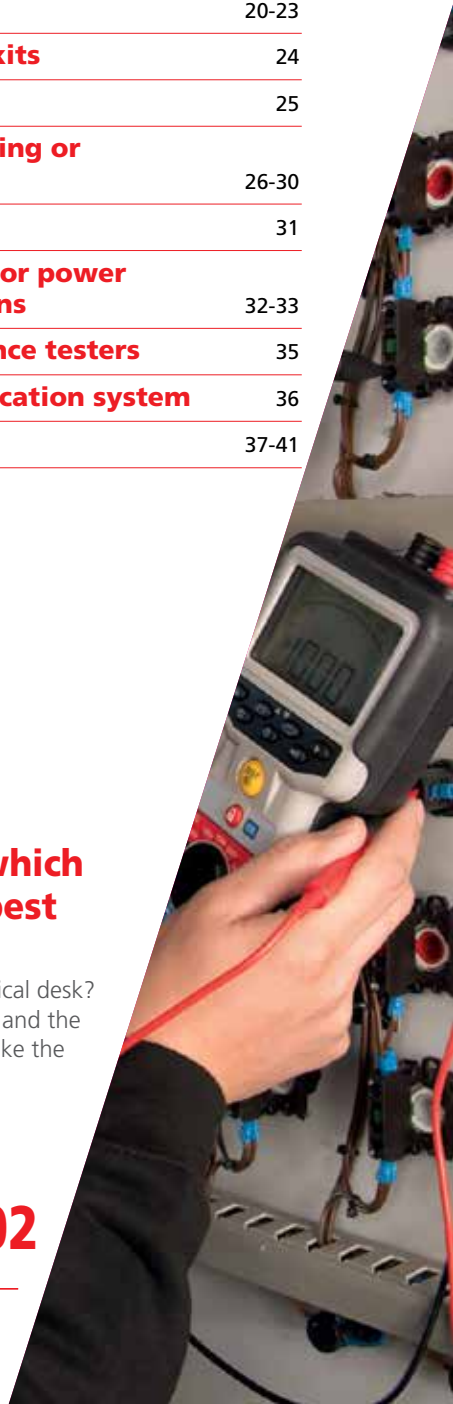
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Trying to decide which Megger tester is best for you?

Why not call the Megger technical desk? They'll talk through your needs and the way you work and help you make the right decision for your business.

Call
01304 502 102



Multifunction testers

MFT1701 series

The MFT1701 series is tough, even tougher than its popular predecessor. It won't go bang when connected across phases, when it gets dropped or bounced, when it's used in the rain, when the wrong range is selected or when accidentally connected to live circuits – even with the test locked on!

Dust and rain proof to IP54, the MFT1701 series offers CAT IV safety, meaning that you can use it in any environment without a second thought. To make it more convenient, test buttons are located at either end of the tester meaning you can use the hand that is available to initiate testing, or you can use the CAT IV probe with test button if you prefer.

We have changed the features on each of the testers, introducing useful functions such as Z_{MAX} and Auto RCD on the complete range. Even the carry case has been rethought; there is now a large soft carry case on the MFT1731. The MFT1711 is the perfect single-phase tester for domestic work while the MFT1721 and MFT1731 are three-phase testers extending the applications in to the commercial and industrial arenas.

With the changing market, and the opportunity that installation of vehicle charging points affords, the MFT1731 now offers a selection of earth electrode tests.

Take a closer look
[uk.megger.com/
MFT1701](http://uk.megger.com/MFT1701)

Loop testing ranges

- 2 and 3-wire non-trip with resolution of 0.01Ω L-PE
- L-PE 48 V to 280 V, 45 Hz to 65Hz
- High current loop testing L-L and L-N
- L-L 48 V to 480 V, 45 Hz to 65Hz dependant on model
- Won't trip 6 A MCBs
- PFC or PSCC measurement at same time as loop resistance
- Auto-start loop test

RCD testing ranges

- Auto RCD on all testers
- RCD Ramp test to measure exact RCD tripping current
- Type A, AC, B, Selective, programmable and 3-phase RCDs dependant on model
- Auto-start RCD test dependant on model

Continuity and resistance testing range

- 200 mA test with an option of 15 mA on MFT1721 and MFT1731
- Auto-start continuity test
- Easy test lead null – stored even when switched off
- Fast buzzer with adjustable threshold on all testers
- Resistance measurement from 0.01 Ω to 99.9 kΩ

Insulation testing ranges

- 250 V, 500 V and 1000 V on all models and 100 V on MFT1721 and MFT1731
- Test voltage displayed during insulation resistance measurement
- Adjustable buzzer threshold on MFT1721 and MFT1731
- 25 V or 50 V test inhibit option
- Protection against live circuits up to 600 V even when test locked-on

Voltage, phase rotation and frequency test range

- 10 V – 600 V a.c. / d.c. Trms on all models
- Phase rotation on MFT1721 and MFT1731
- Frequency measurement 15 Hz to 400 Hz
- Touch voltage

Large bright dual parameter display

- Displays test voltage at the same time as insulation resistance
- Displays loop resistance and prospective fault current
- Enhanced viewing angle with intelligent backlight

Earth electrode testing on MFT1731

- Tests unconnected earth electrode resistance - 3-wire test
- Tests with electrode connected to system - ART 3-wire test requires optional Iclamp
- Stakeless or clamp-on technique – Requires optional I and Vclamps
- 2-wire testing

Communications on MFT1731

- Bluetooth downloading
- On-board memory

Cells rechargeable in situ on MFT1731





		MFT1711	MFT1721	MFT1731
Insulation test ranges	1 kV, 500 V and 250 V	■	■	■
	100 V	■	■	■
	Adjustable buzzer threshold	■	■	■
	Test voltage applied displayed	■	■	■
Continuity and resistance range	Full protection against live circuits	■	■	■
	200 mA test current for certification	■	■	■
	15 mA to prolong battery life	■	■	■
	Adjustable buzzer threshold	■	■	■
Earth loop impedance ranges	Auto-start continuity test	■	■	■
	2-wire no-trip test L-PE	■	■	■
	3-wire no-trip test L-PE	■	■	■
	L-PE 48 V to 280 V, 45 Hz to 65 Hz	■	■	■
	2-wire high current test	■	■	■
	L-N / L-E 48 V to 280 V, 45 Hz to 65 Hz	■	■	■
	L-N / L-E 48 V to 480 V, 45 Hz to 65 Hz	■	■	■
	PSCC or PFC calculations displayed with loop impedance	■	■	■
	Up to 20 kA fault current	■	■	■
	ZMAX value retained	■	■	■
RCD testing	Calculated R1 + R2	■	■	■
	10, 30,300,500 mA RCDs	■	■	■
	1000 mA RCDs	■	■	■
	½ I, I and 5 I tests	■	■	■
	0° and 180° phase angle	■	■	■
	High speed auto RCD test	■	■	■
	Ramp test	■	■	■
	Type A, AC and S RCDs	■	■	■
	Programmable RCDs	■	■	■
	Type B RCDs	■	■	■
	3-phase RCDs	■	■	■
	Touch voltage display 0 V to 230 V	■	■	■
	10 V to 600 V AC and DC voltage	■	■	■
Voltage, frequency and phase rotation	True RMS measurement	■	■	■
	Frequency 15 Hz to 400 Hz	■	■	■
	Phase rotation	■	■	■
	Phase rotation	■	■	■
Earth electrode resistance testing	Stakeless or clamp-on testing**	■	■	■
	3-pole testing	■	■	■
	Attached rod 3-pole testing*	■	■	■
	25 V or 50 V output voltage	■	■	■
Intelligent safety system	Ground noise check	■	■	■
	Test inhibit	■	■	■
	Safe contact detection	■	■	■
	Live circuit warning	■	■	■
Additional benefits	Auto discharge	■	■	■
	Analogue arc	■	■	■
	Hard plastic carry case	■	■	■
	Large soft carry bag	■	■	■
	Probe incorporating test button	■	■	■
	Current measurement 0.1mA to 200 A	■	■	■
	On-board recharging	■	■	■
	On-board memory	■	■	■
	Bluetooth® downloading from memory or blobbing	■	■	■
	Weather and dust proof to IP54	■	■	■
	Safety rated to CAT IV 600 V	■	■	■
FREE calibration certificate	■	■	■	
1 year warranty up-gradable to 3 years FREE	■	■	■	

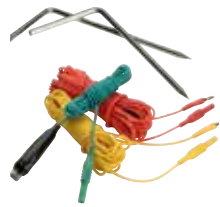
MFT series accessories



1001-991
3-wire test lead set



1001-975
3-wire 10 A fused test lead set



1001-810
3-wire earth electrode test set



1002-490
Red, blue and green probes and clips

*Require optional Iclamp ** requires optional I and V clamp

Multifunction tester with certification software

MFT1731 On-site kit

Not only is the MFT1731 a rechargeable instrument but it also offers on-board results storage for downloading, Offering both on-site certificate filling by sending your current result to a storage device, notebook or laptop, there and then on site, or the ability to store the results of your tests to download to your computer off site. The MFT1731 uses Bluetooth technology to communicate because it's fast, effective and there are no extra leads to store.

The MFT1731 On-site package includes the form filling software and a 3-pole earth resistance testing kit, making it the best-value electrical testing package on the market.



It won't go bang when....

- connected across phases
- it gets dropped
- used in the rain
- accidentally testing live circuits

The complete on-site testing kit includes all you need

- 2-wire non-trip loop testing
- 3-wire non-trip loop testing
- Fast 2-wire high current loop testing
- Insulation testing
- Continuity and resistance measurement
- Single and 3-phase RCD testing
- 3 pole earth electrode testing
- True rms voltage and frequency measurement
- Phase rotation
- Test results storage
- PowerSuite On-site certification software
- Rechargeable batteries



Accessories



1001-012
100 A current clamp



1006-408
Test and carry waist pouch
for MFTs

Insulation and continuity testers

MIT200 series

MIT220 and MIT230 are two of the smallest insulation testers available

Both products have a combination of digital readout and analogue display, using Megger's patented DART display technology. The display includes a clear, accurate digital read-out, and an analogue pointer response for evaluating circuit charge and discharge characteristics.

The tough ABS instrument housing is designed to withstand the rigours of hard use, whilst small enough to drop into your pocket when not in use. In addition, a useful battery status indication is always displayed.

Continuity testing

- Automatic continuity testing is performed at 200 mA to ensure compliance with international requirements. No need to press the test button
- All instruments will measure up to 100 Ω on continuity, of which 0-10 Ω is performed at greater than 200 mA
- Lead null is possible up to 9.99 Ω ensuring the ability to null fused test leads as well as standard leads

- Voltage protection should you touch a live circuit
- Continuity buzzer provides a means of rapid cable testing and circuit identification, with voltage protection should you accidentally touch a live circuit
- The buzzer operates at a 5 Ω threshold

Insulation testing

- There is a choice of two or three test voltage ranges providing an ideal solution to most low voltage insulation testing applications
- Insulation measurement up to 1000 M Ω on all ranges
- Auto discharge ensures all circuits are safely discharged after testing
- 1000 V insulation test ranges have a high voltage warning prior to test voltage being applied

Special Features

- Exceptional value for money
- Pocket sized tester
- Live circuit protected

MIT200 series accessories



1002-001
2 wire test lead set



1002-015
2-wire 500 mA fused test lead set

	MIT220	MIT230
250 V and 500 V test ranges to 1000 M Ω	■	
250 V, 500 V and 1000 V test ranges to 1000 M Ω		■
Continuity (200 mA) measurement	■	■
Voltage detection	■	■
Intelligent safety system	■	■
Fast buzzer range	■	■
Display backlight	■	■
CATIII 600 V	■	■
IEC61010	■	■
Warranty upgradeable to 3 years FREE	■	■



Take a closer look
uk.megger.com/MIT200

Insulation and continuity testers

MIT300 series

The Megger insulation testers are like no other testers you have used

Packed with features

- Thick rubber armoured case
- Clear colour coded selectors
- Large, easy to read display
- Super grip test-leads with lock on croc clips
- Auto-start continuity test
- Tough and easy to use
- Safe
- Weatherproof to IP54
- USB downloading on MIT330

Megger insulation testers are designed to take the knocks that happen when working on site.

They are rubber armoured and have an integral solid lid to protect the display.

The heavy-duty hinge allows the lid to be locked away beneath when in use, making it easy to use and impossible to lose.

And you don't need to pull out the test leads to shut the lid.

The Megger MIT insulation testers are easy to use and quick to learn

There are no buried functions, so it is easy to use these insulation testers.

The colour coding helps test selection, speeding up testing time and helping you identify faults fast.

The quick start guide in the lid keeps all the basic information at hand if you need it.

Your safety is Megger's number one concern

These safety features look after you and the tester –

- **Safety interlock to prevent unsafe connection of the test leads**
- **Safe contact detector keeping you and your tester safe during continuity testing if it's accidentally connected to a live circuit**
- **Live voltage warning alerts the user to a circuit voltage over 25 V when insulation testing**
- **Safety lockouts –**
 - Prevents continuity testing on live circuits
 - Prevents insulation testing when circuit voltage is greater than 50 V

Hands free operation

MIT300 series insulation testers are well balanced to hang comfortably around your neck enabling hands free operation when you need it.

The continuity test and buzzer start automatically when you connect to a circuit, saving you time.

Insulation tests can be started using a switched probe or the test button on the front of the tester.

Take a closer look

uk.megger.com/MIT300

No need for third hand!

The best place for a test button is on the probe.

By using a switched probe rather than a standard one there is no longer a need to look away from the probe to find the TEST button on the instrument, or use a third hand if both are already holding the probes. Simply press the button already under your finger. Definitely safer and quicker.



Features



Handy neck strap for hands free operation.



Clear range selector for poor light conditions.



Double hinge keeps screen free from scratches or swings under to snap out of sight.



Shutter to prevent hazardous lead combinations.

MIT series accessories



1002-491
Red and black probes and clips



1002-001
2 wire test lead set



1002-015
2-wire 500 mA fused test lead set



1007-156
Remote switched probe with special plug



MIT320 comes with switched probe and calibration certificate

		MIT300	MIT310	MIT320	MIT310A Analogue	MIT330	
Insulation testing	250 V	■	■	■	■	■	
	500 V	■	■	■	■	■	
	1000 V			■	■	■	
	Test range	1000 MΩ	1000 MΩ	1000 MΩ	1000 MΩ	1000 MΩ	
	Insulation limit alarm 0.01 MΩ to 1000 MΩ			■		■	
Continuity testing	Continuity to 100 Ω	■	■	■	■	■	
	Continuity buzzer	■	■	■	■	■	
	Lead null to 9 Ω	■	■	■	<1/2 Ω	■	
	Adjustable buzzer 1 to 100 Ω			■		■	
	Audible buzzer disable			■		■	
Voltage measurement	Volts AC/DC		600 V	600 V	600 V	600 V	
Resistance measurement	10 Ω to 1 MΩ range			■		■	
	10 Ω to 2 KΩ range				■		
Features	Voltage warning	■					
	Default voltmeter		■		■	■	
	Backlit display			■		■	
	Backlit selector ranges			■		■	
	Locking test button	■	■	■	■	■	
	Auto power-down	■	■	■		■	
	Switched test probe			■		■	
	Data storage						
	Download via USB port						
	IP54 weatherproof	■	■	■	■	■	
	Accepts rechargeable batteries	■	■	■	■	■	
	Included accessories	2 wire lead set	■	■	■	■	■
		Free calibration certificate	■	■	■	■	■
	Warranty upgradeable to 3 years FREE	■	■	■	■	■	

Insulation and continuity tester for electrical and industrial maintenance

MIT400/2 series



Features include:

- Designed for the electrical and industrial markets
- Stabilized insulation test to -0% +2% test voltage to minimise installation stress
- Variable insulation test voltage from 10 V to 1000 V
- Single range, faster continuity testing from 0.01 ohm to 1 Mohm
- Insulation testing up to 1000 V and 200 Gohm in a hand held instrument
- Rechargeable options for mains and car charging
- 600 V Trms AC and DC voltage measurement
- Test result storage and Bluetooth® downloading
- Live circuit detection and protection
- CATIV 600 V application and IP54 environmental protection

A range of insulation and continuity testers in an ergonomic design with the latest measurement techniques and live circuit protection.

The MIT400/2 series insulation and continuity testers now have faster continuity testing and stabilized insulation test voltages for more accurate and productive installation testing.

Insulation testing has the addition of feedback control to stabilize the test voltage to less than +2% over voltage, for safer and more accurate measurement.

Variable test voltage is also available from 10V to 1000V.

Continuity testing is now fully automatic from 0.01 ohms to 1 MΩ with fast contact detection whilst continuously protecting against accidental contact with live circuits.

The diagnostic insulation tests, such as Polarisation Index and Dielectric Absorption Ratio, offered by the MIT400/2 series allow trending of the performance of motors. This makes it ideal for the engineer working in the industrial maintenance sector who needs to plan maintenance or some more solid evidence when taking a motor out of service.

Take a closer look

uk.megger.com/MIT400-2

Accessories



1002-001
2 wire test lead set



1006-513
MIT2500 only



1002-015
2-wire 500 mA fused test lead set



1007-464 Charger kit
MIT430/2 and MIT2500 only

Hand-held insulation and continuity tester for higher voltage applications

MIT2500



The MIT2500 is the smallest 2500V hand held insulation tester on the market.

Additional "Variable Voltage" allows any voltage from 100 V to 2500 V to be selected.

Output voltage is stabilized to -0% +2% for accurate test measurement without risking over-voltage on the circuit.

Complete with Polarization Index (PI) and Dielectric Absorption Ratio (DAR) testing, test result storage and downloading.

Features include:

- Tough enough for the industrial and electrical maintenance
- Insulation testing up to 2500 V and 200 Gohm in a hand held instrument
- Guard terminal for high insulation resistance accuracy
- Variable insulation test voltage from 50 V to 2500 V
- Stabilized insulation test to -0% +2% test voltage
- Single range, faster continuity testing from 0.01 ohm to 1 Mohm
- Diagnostic testing with Polarisation Index (PI) and Dielectric Absorption Ratio (DAR)
- Rechargeable options for mains and car charging
- Test result storage and Bluetooth® downloading
- Live circuit detection and protection
- CATIV 600 V application and IP54 environmental protection

Take a closer look

uk.megger.com/MIT2500

		MIT400/2	MIT410/2	MIT420/2	MIT430/2	MIT2500
Insulation test voltages	2.50 kV					■
	250 V , 500 V and 1 kV	■	■	■	■	■
	50 V and 100 V		■	■	■	■
	Variable from 10 V to 1 kV		■	■	■	
	Variable from 100 V to 2.5 kV					■
Insulation resistance to	200 GΩ	200 GΩ	200 GΩ	200 GΩ	200 GΩ	200 GΩ
	PI, DAR and timed		■	■	■	■
	Lock on	■	■	■	■	■
	Guard terminal					■
Continuity	0.01 Ω to 10 MΩ	100 Ω	■	■	■	■
	Auto reverse polarity		■	■	■	■
	Test lead null	> 10 Ω	> 10 Ω	> 10 Ω	> 10 Ω	> 10 Ω
Voltage measurement	600 V AC / DC	■	■	■	■	■
	mV AC / DC	■	■	■	■	■
	Frequency measurement		45 – 450 Hz	45 – 450 Hz	45 – 450 Hz	15 – 450 Hz
Capacitance	Capacitance 1nF -10 μF			■	■	■
Additional benefits	PASS / FAIL limit alarm		■	■	■	■
	Auto power down	■	■	■	■	■
	Can be powered by AA alkaline or NiMH batteries	■	■	■	■	■
	Recharger ready				■	■
	On-board memory			■	■	■
	Bluetooth® downloading and software				■	■
	2-wire silicone lead set	■	■	■	■	3 -wire sets
	Probe incorporating test button				■	■
	Safety	CAT IV 600 V	CAT IV 600 V	CAT IV 600 V	CAT IV 600 V	CAT IV 600 V
	Dust and weather-proof to IP54	■	■	■	■	■
	FREE calibration certificate	■	■	■	■	■
	Warranty upgradeable to 3 years FREE	■	■	■	■	■

2-wire non-tripping loop testers

LTW series

2 wire testing

The loop test is performed with only 2 test leads. This can be either:

- Phase to Earth
- Phase to Neutral
- Phase to Phase (depending on model)

Testing is simple. There is no need for a third wire which could cause confusion in identifying the part of the circuit under test.

Non-trip loop testing

LTW series testers do not trip working RCDs or RCBOs of 30 mA or greater, using the non-trip loop test.

Noise detection on non-trip tests

LTW uses sophisticated noise detection circuitry which continually monitors the supply during a loop test to ensure the accuracy of the result has not been affected by electrical noise from plant and services.

Two operational modes are available:

- Performs a 10 second test and if noise is detected a warning is displayed.
- Automatically extends a test to improve the accuracy.

High current loop testing

For supplies that are not RCD protected the high current test can be used, as there is no risk of tripping the RCD.

Auto start

An auto-start function will start the test as soon as the circuit voltage is detected, removing the need of a third hand and allowing for much faster testing.

Three-phase safe

The instruments will operate from 50 V phase to earth, up to 440 V phase to phase with the exception of the LTW315 which operates between 110 V and 280 V.

High resolution test

LTW425 offers a high current, high resolution loop test to three decimal places (0.001 Ω).

PFC Display

All instruments can calculate PFC and PSCC up to 20 kA and the LTW425 can calculate up to 40 kA using the 0.001 high current, resolution test range.

Packed with features

- Uses only two wires to loop test
- Will not trip RCDs while loop testing
- Will not take out 6 A MCBs
- Clear easy to read display
- 3-phase safe
- 50 V to 480 V operation
- PFC display
- Stable test results
- USB downloading on LTW335
- Max Z facility, not on LTW315
- Calculated R1 + R2, not on LTW315



The popular LTW325 comes complete, ready for work

Take a closer look
uk.megger.com/LTW300
and
uk.megger.com/LTW400

High current loop tester

LT300

The LT300 offers high current loop testing over a wide range of frequencies and supply voltages with simple, fast, two wire operation.

Frequency range

Supply frequency is indicated upon connection and the LT300 will automatically set to the supply frequency either 16 Hz, 33 Hz, 50/60 Hz, 125 Hz or 400 Hz. Testing will commence automatically.

Loop measurement

Two loop impedance ranges are provided.

20 Ω - Resolution to 0.01 Ω

200 Ω - Resolution to 0.1 Ω

Supply voltage

Operational supply range extends from 50 V to 550 V

(400 V @ 16 Hz), with a warning for voltages over 330 V highlighting accidental phase to phase connections on a nominal 230 V system.

Special features

- High current loop testing
- Wide range of frequencies
- Wide range of supply voltages
- CATIV 300 V



LT300 series accessories



1003-132
2 wire test lead set



1004-323
UK mains test lead set



1001-977
2-wire 10 A fused test lead set

Take a closer look
uk.megger.com/LT300

		LTW315	LTW325	LTW335	LTW425	LT300
Loop testing	2-wire non-tripping loop testing	■	■	■	■	
	2-wire high current, fast, loop testing	■	■	■	■	■
	Operating range 110 V to 280 V	■	■	■	■	■
	Operating range 50 V to 440 V		■	■	■	■
	Operating range 50 V to 550 V			■	■	■
	Phase to phase testing		■	■	■	■
	PFC range 20 kA	■	■	■	■	■
	PFC range 40 kA				■	■
	Resolution 0.01 ohm	■	■	■	■	■
	Resolution 0.001 ohm				■	■
	Automatic noise detection	■	■	■	■	
	Automatic test start	■	■	■	■	■
	Frequency measurement	■	■	■	■	■
	16 Hz to 400 Hz operation					■
	Max Zs display		■	■	■	
Calculated R1 + R2 display		■	■	■		
Features	Back lit display	■	■	■	■	
	Built-in fold away cover	■	■	■	■	■
	Quick start guide in cover	■	■	■	■	■
	Test result storage			■		
	Downloading of test results			■		
Included accessories	Accepts rechargeable batteries	■	■	■	■	■
	Storage and carry case	■	■	■	■	■
	2-wire lead set complete with crock clips	■	■	■	■	Optional
	Mains socket lead set	■	■	■	■	Optional
Standards	Free calibration certificate	■	■	■	■	
	IEC61010-1 CATIV 300 V	■	■	■	■	■
	EN61557	■	■	■	■	■
	Weather- and dust-proof to IP54	■	■	■	■	■
Warranty upgradeable to 3 years FREE	■	■	■	■	■	

1000 A loop impedance meter

NIM1000

With a selectable test current up to 1000 A, the NIM1000 at last provides the commissioning engineer with the ability to accurately measure the loop impedance of a circuit, even close to the source of supply.

The impedance meter triggers load-sensitive as well as neutral faults, allowing detection of weak contacts and other hidden flaws. Depending on the earthing conditions of the test grid, it is possible to carry out multi-phase measurements to calculate the impedance of the neutral conductor to detect defects that can cause severe safety issues.

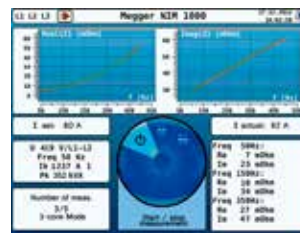
Given the complexity of the measurements the NIM1000 is capable of taking, it remains a versatile, easy to use device, measuring current capacity under real-life conditions, determining voltage dips from given loads and performing tests on cables, supply lines as well as bus bars. It can be used to confirm design parameters when commissioning as well as a routine preventative maintenance tool.



Features

- Automatic single and three phase testing
- High resolution to 0.001 Ω for loop testing close to transformer CATIV systems
- Absolute impedance measurement or separate Resistance and Reactance
- Measures both phase and neutral conductors – up to the 10th harmonic
- Variable test current up to 1000 Amps
- Result storage and download to USB stick
- Simple to operate with numerical and graphical results on a colour display

Test current	80 A to 1000 A (input voltage dependant)	≥ 1000 A at 400 V ≥ 600 A at 230 V	
Operational accuracy	3% ± 1 digit (at sufficient test current)	Between 10 mΩ and 5 Ω	
Test parameters	Z	Impedance (value and phase)	
	R	Resistance (real part)	
	X	Reactance (imaginary part)	
	Z _{PEN}	Impedance value PEN (calculated)	
	U _{rms}	RMS voltage	
	I _{max}	Maximum test current	
	I _s	Short circuit current	
	S _{kv}	Continuous short circuit power	
	f	Network frequency	
	V _D	Voltage drop at nominal connected power (in %)	
	P _{max}	Maximum connected power at nominal voltage drop	
			Z, R, X and Z _{PEN} are displayed for the power frequency up to the 10th harmonic (phase-N, phase-phase)
	Safety rating	CAT IV 300 V	
Dust and weather proof	IP53		



The NIM1000 gives a clear display of the real (Re) and imaginary (Im) components of the measured loop impedance.

Take a closer look

uk.megger.com/NIM1000

Combined loop and RCD testers

LRC200 series

The LRC200 series is a combined non-tripping loop test and RCD test instruments. It provides simple, affordable and flexible test tools for electrical contractors testing energised circuits. The instruments are supplied with a full Megger calibration certificate.

- Safety interlock to prevent unsafe connection of the test leads
- PFC calculation and display
- 3 phase safe – even when connected across phases, both you and the tester will remain safe
- Touch voltage limits and indication

Both LRC210 and LRC220 testers offer

Loop testing

- Non-tripping 3 wire low current loop test provides measurements from 0.01 Ω to 2 k Ω
- RCDs and RCBOs rated at 30 mA or less are not tripped when loop impedance testing
- High current 2-wire fast loop test (LRDC220 only)
- 415 V Phase to phase loop measurement (LRC220 only)
- Auto-ranging tests
- PFC button shows calculated PFC/PSCC result without re-testing
- Supply voltage displayed on connection to circuit
- Supply frequency measurement

RCD testing

- 10 mA to 500 mA RCD testing, 1000 mA on LRC220
- 1/2 I, 1 x I, 5 x I RCD test
- Tests Type A, A Selective, Type AC & AC Selective
- 0°/180° selection
- Ramp testing
- 25 V or 50 V Touch voltage selection
- Optional Touch voltage display

Take a closer look

uk.megger.com/LRC200

	LRC210	LRC220
Loop test		
Non tripping loop test	■	■
PFC calculation and display	■	■
Single phase testing	■	■
Phase to phase testing		■
High current loop test		■
3 phase safe	■	■
Voltmeter	■	■
RCD test		
1/2 x I test	■	■
1 x I test	■	■
5 x I test	■	■
Touch / contact voltage display	■	■
Selectable 25/50 V touch voltage	■	■
10, 30, 100, 300, 500 mA ranges	■	■
1000 mA		■
A, A selective, AC and AC selective		■
RCD test	■	■
Automatic RCD testing		■
Selectable phase 0/180	■	■
Ramp test (20 % to 110 %)	■	■
Other features		
Frequency	■	■
Phase rotation		■
Backlight		■
Working voltage 230 V	■	■
Working voltage 110 V and 230 V		■
Free calibration certificate	■	■
Dust and weather proof to IP54	■	■
Warranty upgradeable to 3 years FREE	■	■

LRC200 series accessories



1001-883
3-wire in to 1 plug test lead set



1001-977
2-wire 10 A fused test lead set



6231-601
UK mains test lead set



1003-132
2 wire test lead set



RCD testers

RCDT300 series

The Megger RCD testers provide the full solution to RCD testing

The RCDT tests not only Type A and Type AC RCDs, but also the selective (time-delayed) variants of both types, performing $\frac{1}{2}I$, $1I$ and $5I$ tests on RCDs rated at 30 mA, 100 mA, 300 mA and 500 mA tested at 0° or 180° .

The RCDT320 offers additional tests for RCDs rated at 10 mA and 1000 mA.

Touch voltage is measured at the start of a test, and will automatically inhibit if it exceeds the preset level.

Touch voltage inhibit is selectable from 25 V to 50 V.

Save your valuable time

RCDT320 offers additional time saving features.

Auto RCD testing – RCDT320 will automatically cycle through the $\frac{1}{2}I$, $1I$ and $5I$ tests at 0° or 180° recording the results, so you can stay with and reset the RCD. This means the job gets done faster, saving not only your time but your legs as well!

Ramp testing to measure the trip current of an RCD – the test current is slowly increased from $\frac{1}{2}I$ to $1I+10\%$. The trip current is held on the display, making it quicker and easier to diagnose nuisance tripping.

RCDs on 110 V (55 V - 0 - 55 V) centre tapped site supplies can be tested by the Megger RCDT320 due to its wide operating voltage range of 50 V to 280 V.

Your safety is Megger's number one concern

These RCD testers have built in safety features to look after you and the tester –

- **Safety interlock to prevent unsafe connection of the test leads**
- **Test inhibit, if the supply voltage exceeds 280 V**
- **3 phase safe – even when connected across phases, both you and the tester will remain safe**
- **LED connection indicators display correct test lead connection, making sure it is right first time**

Megger RCD testers are so easy to use and quick to learn

- **There are no buried functions, so they are easy to use**
- **Ramp test to quickly identify oversensitive RCDs**
- **The quick start guide in the lid keeps all the basic information at hand when you need it**

Megger RCD testers will take the bashing that testers receive when they are on site

They are rubber armoured and have an integral solid lid to cover the display.

The lid has a heavy-duty hinge that locks away underneath when in use, making it easy to use and impossible to lose.

And you don't need to pull out the test leads to shut the lid.

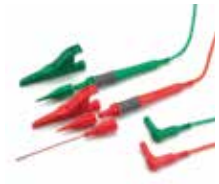
Special features

- **Thick rubber armoured case**
- **Clear LED polarity indicator**
- **Large, easy to read display**
- **Super grip test-leads with lock on croc clips**
- **Tough**
- **Easy to use**
- **Safe**
- **Weatherproof to IP54**
- **Hands free auto-RCD testing**
- **USB downloading on RCDT330**



Learn more
uk.megger.com/RCDT300

RCDT300 series accessories



1003-132
2 wire test lead set



6231-601
UK mains test lead



1002-490
Red, blue and green probes and clips



1001-977 2-wire 10 A fused test lead set



RCDT testers come complete with calibration certificate in a tough carry case

Features



Heavy duty hinge locks away underneath



Clear range selector for poor light conditions



Clear LED polarity indicators help you get the right wiring and test lead connection



Shutter mechanism makes it easy to use the right leads

Use the 'Ramp Test'

Use the 'ramp test' to identify nuisance tripping RCDs.

An overly current sensitive or faulty RCD can cause nuisance tripping of the RCD, which can be very difficult to locate. A current clamp meter is not fast enough. By testing with a ramp test, the test current is slowly increased until the RCD trips. The tester displays the trip current in milliamperes (not the trip time). If this is too low, replace the RCD.



		RCDT310	RCDT320	RCDT330
RCD testing	1/2I, 1I, 5I RCD trip time test	■	■	■
	Selective breakers	■	■	■
	Type A and AC breakers (1/2I, 1I, 5I)	■	■	■
	Programmable RCD			■
	30, 100, 300, 500 mA RCDs	■	■	■
	10, 1000 mA RCDs		■	■
	RCD trip current test (RAMP)		■	■
	Auto RCD test		■	■
	0°/180° polarity selection	■	■	■
	Touch voltage selectable	■	■	■
	Max touch voltage (25 V/50 V)	■	■	■
	Operating range 100 to 280 V	■		
	Operating range 50 to 280 V		■	■
Features	3-Phase safe	■	■	
	Large clear display	■	■	■
	Backlight		■	■
	Battery status indication	■	■	■
	Auto power down	■	■	■
	Fuse blown indication	■	■	
	Data storage		■	■
	Download via USB port		■	■
	IP54 weatherproof	■	■	■
	IEC61010-1 CATIII 300 V	■	■	■
	EN61557	■	■	■
Accessories included	UK mains test lead	■	■	■
	2 wire test lead with probes and clips	■	■	■
	Warranty upgradeable to 3 years FREE	■	■	■
	Free calibration certificate	■	■	■

Accessories

Volt finder with torch

VF2 and VF3



VF2 offers a simple means of identifying live conductors, and blown fuses, combined with a bright torch.

VF3 offers a more accurate sensor and an even brighter torch.

Voltage tester

TPT320



Features

- AC / DC voltage from 12 to 690 V
- Continuity
- Phase rotation
- LCD / LED display
- CAT IV 600 V rating

The TPT320 features LED and LCD displays that provide both AC and DC voltage measurement from 12 to 690 volts and a continuity buzzer operating between 0 to 500 kOhm.

Designed to be used on RCD and RCBO protected circuits without causing tripping, the unit also has the ability to indicate phase rotation, has an audible sounder to

confirm continuity as well as the presence of voltage. With a built-in high power LED torch, IP64 case and CAT IV 600 V safety rating, the TPT320 is the ideal site tool to conform with current safe isolation procedures. An additional safety feature is the ability to indicate the presence of voltage even in the event of the internal battery being exhausted.

Proving unit

MPU690

Good practice demands that a two-pole tester is proved on a known live source or proving unit both before and after use.

The Megger MPU690 is a convenient method to prove the safe operation of all two-pole testers and Drummond test lamps.

- Capable of testing two-pole voltage detectors and test lamps due to 10 W output
- Step voltage LEDs indicate voltage being generated. 50 V, 100 V, 230 V, 400 V and 690 V



- Generates a.c. waveform for a true test
- Compact design that has an integral magnet for attaching to the cabinet encourages routine safety checks

To take a closer look at these products

uk.megger.com/VF3

uk.megger.com/tpt320

UK.megger.com/mpu690

uk.megger.com/MST210

Socket tester

MST210

Simple and effective means of identifying faulty wiring of sockets using 2 green and 1 red LED for fault diagnosis. MST210 is tough and reliable and identifies 17 missing wire and wrong connection combinations.



Accessories



Phase sequence indicator

PSI410

Commercial and industrial installations often require working on motors with three phase supplies. Correct sequence of the phases is important as damage to brakes and valves will occur rapidly if incorrect phased.

PSI410 phase rotation indicator provides indication of correct phase sequence using a three bicoloured LED display and a specific audible tone. Clockwise rotation is indicated by clockwise rotating green LEDs with a continuous tone and counter clockwise rotation has counter-clockwise rotating red LEDs and a warbling tone.

Dual phase colour coding has been adopted for the PSI410 to allow ease of use on both Brown / Black / Grey and Red / Yellow / Blue colour coded supplies.

The PSI410 indicates that all three phases are present.

A green LED indicates the phase is present while a red LED shows a missing phase connection. The unit is tough and is supplied with long fused test leads with croc-clips and prods.

Features

- LED clockwise and counter clockwise phase rotation indication
- Audible indication of direction
- Phase connection condition LEDs
- Fused test leads
- Dual phase colour identification
- CAT IV 600 V
- Warranty upgradeable to 3 years FREE

Take a closer look

uk.megger.com/PSI410

Socket interface adaptor

SIA10

Sometimes known as a breakout lead, the SIA10 allows sockets to be tested without disassembly.

- Prevents damage to connections and leaves decoration intact
- Colour coded for simplicity of use
- Makes testing easy where access to socket is limited
- Remains safe if left inadvertently connected to live supply



Learn more

uk.megger.com/SIA10

Extension test lead

XTL30 and XTL50

In 30 metre and 50 metre versions

- Suitable for direct R2 measurements
- Easy to re-wind cable with tangle-free cable guide
- Compact and light design

Compact extension test lead for direct R2 measurements so eliminating the need for crossover connections. The furthest point in the circuit can be easily verified, and every earth point on the circuit checked for integrity prior to energising.



For more information go to

uk.megger.com/XTL30_XTL50

1500 A TRMS AC / DC clamp multimeter

DCM1500

- DC and AC current measurement up to 1500 A
- True RMS measurement for greater accuracy
- Large jaw size improves safety when working with uninsulated conductors
- 750 V AC and 1000 V DC
- Resistance, continuity and frequency measurement
- Peak, minimum, maximum and data-hold functions

The DCM1500 is the perfect clamp multimeter for electrical engineers working in the industrial, solar and power sectors. It is supplied ready for use with a pouch and test leads.



Find out more go to uk.megger.com/DCM1500

400 A AC clamp multimeter

DCM320

- 20 M Ω resistance range
- Continuity buzzer
- Auto-ranging
- Auto off to conserve batteries

The DCM320 is a low cost data hold current clamp and multimeter. It is supplied blister packed complete with test leads, batteries and carry case.



Find out more go to uk.megger.com/DCM320

200 A AC open jaw clamp multimeter

DCM330

- 200 A AC open-jaw current measurement
- 0.1 V to 1000 V auto-ranging AC and DC voltage measurement
- 0.1 Ω to 20.00 M Ω Resistance range
- Continuity buzzer and diode check
- Non-contact detection of AC voltage
- CATIV 600 V

The Megger DCM330 is suitable for use anywhere where there is a requirement to measure a.c. current in single unshielded conductors less than 16mm diameter, AC / DC voltages up to 1000 V, or resistances up to 20 M Ω .



Find out more go to uk.megger.com/DCM330

600 A AC / DC, 600 V AC / DC clamp multimeter

DCM340

- DC current range
- Frequency counter
- Analogue bar graph
- Back light
- Large jaws
- Auto off to conserve batteries

The DCM340 is an AC and DC current clamp and multimeter that offers exceptional value and is particularly suited to solar PV commissioning. It is supplied blister packed complete with test leads, batteries, user guide and carry case.



Find out more go to uk.megger.com/DCM340

Earth leakage and diagnostic clamp

DCM300E

- Versatile high resolution a.c. current clamp, ideal for identifying nuisance tripping RCDs and locating problem circuits
- 4 ranges: 30 mA range (0.01 mA resolution), 300 mA, 30 A and 300 A
- 3½ digit LCD with analogue bar graph
- Data hold

DCM300E is perfect for measuring earth leakage current in a circuit where the RCD repeatedly trips out. The measured result will quickly identify whether the tripping is caused by excessive leakage current, or if the RCD itself is faulty. With its high noise rejection, it can measure leakage differentials. So when clamped around the live and neutral simultaneously of each circuit in a distribution board the problem circuit is easily identified for remedial action



Find out more go to uk.megger.com/DCM300E

400 A AC clampmeter

DCM310

- Easy to read
- Manual operation
- Low cost
- Tough

This easy to use clampmeter is ideal to rapidly check the current flowing with the minimum of fuss.



Accessories



1002-001
2 wire test lead set



1002-015
2-wire 500 mA fused test lead set

		DCM300 E	DCM310	DCM320	DCM330	DCM340	DCM1500
Current ranges	A AC	30 mA, 300 mA 30 A 300 A	20 A, 200 A, 400 A	20 A, 200 A, 400 A	200 A	60 A, 400 A, 600 A	400 A, 1000 A, 1500 A
	True rms						■
	A DC					60 A, 400 A, 600 A	400 A, 1000 A, 1500 A
Voltage ranges	V AC			200 V, 600 V	200 V, 1000 V	400 V, 600 V	400 V, 750 V
	True rms						■
	V DC			200 V, 600 V	200 V, 1000 V	400 V, 600 V	400 V, 1000 V
Resistance ranges	Ω			200, 2 k, 200 k, 2M 20 M	200, 2 k, 200 k, 2M 20 M	400	400
Continuity buzzer				■	■	■	■
Frequency measurement					■	■	
Diode check					■		
Capacitance					■		
Other features	Auto-ranging			■	■	■	■
	Backlight					■	■
	Data hold	■	■			■	■
	Max / min hold		■			■	■
	Conductor size	40 mm	27 mm	27 mm	16 mm	35 mm	51 mm
	Safety rating	CAT III 300 V	CAT III 600 V	CAT III 600 V	CAT IV 600 V	CAT III 600 V	CAT IV 600 V

Multimeters for electrical engineers

AVO800 series

- Voltage and current, with TRMS, resistance, conductance, capacitance, frequency and temperature measurement
- Choice of input impedance without changing test ranges for fast and safe detection of unintentionally coupled voltages
- Integrated non-contact live circuit detection with high and low sensitivity settings
- Reading capture tools including minimum, maximum, average, manual and auto hold, smoothing and low pass filtering to ensure you get the measurement you need.
- Phase sequence detection
- CAT IV 600 V and CATII 1000 V
- Dust and weather proof to IP64

Specifically designed for the electrical engineer and profession electrician, this range of tough, high quality multimeters offers the perfect selection of functions required. Useful innovations such as the high and low impedance switching allow a quick and safe method to identify capacitive coupled, ghost voltages. The introduction of the dual sensitivity non-contact voltage detector helps you identify a live circuit at a distance and then to pinpoint the exact conductor or circuit.

Exceptionally the AVO830 series multimeters offer phase sequence detection to prevent miss connection and the consequent damage to motors and generators.

These functions are in addition to the fact that this range offers a 10,000 count display with a basic accuracy of 0.01% accuracy, and shuttered 4mm inputs to ensure that the right connections are made every time.

Available March 2017



Accessories



1002-001
2 wire test lead set



1002-015
2-wire 500 mA fused test lead set



TRMS electrician's multimeter

AVO410

- Voltage and current, with TRMS, resistance capacitance and frequency
- Auto ranging with the option for manual range selection
- Max and min measurement with data hold
- Tough rubber holster
- CAT IV 600 V safety rating

Basic CATIII multimeter

AVO210

- Small light and easy-to-use
- Auto ranging with manual over-ride
- Non-contact voltage sensor
- Max and min measurement and data hold function



For more information go to bit.ly/AVO410

		AVO835	AVO830	AVO410	AVO210
Current measurement	A ac (Overrange 20s)	10 (15)	10 (15)	10	10
	TRMS	■	■	■	
Voltage measurement	A dc (Overrange 20s)	10 (15)	10 (15)	10	10
	V ac	1000	600	750	750
	TRMS	■	■	■	
Basic accuracy	V dc	1000	600	1000	1000
		0.10%	0.10%	0.50%	1.00%
Resistance measurement		0.01 Ω to 50 MΩ	0.01 Ω to 50 MΩ	0.1 Ω to 60 MΩ	0.1 Ω to 20 MΩ
Continuity	Buzzer	■	■	■	■
Conductance measurement		0.1 nS to 60 nS	0.1 nS to 60 nS		
Diode measurement		1 mV to 2.8 V	1 mV to 2.8 V	10 mV to 3 V	10 mV to 2 V
Capacitance measurement		1 nF to 10,000 μF	1 nF to 10,000 μF	2.0 nF to 6,000 μF	2.0 nF to 2,000 μF
Frequency measurement		5Hz to 100kHz	5Hz - 100kHz	100 to 60 MHz	100 to 20 MHz
Phase rotation		■	■		
Temperature		■			
Non contact live circuit detection		hi/lo sensitivity	hi/lo sensitivity		■
Input impedance		10 MΩ or 3 kΩ	10 MΩ or 3 kΩ	10 MΩ	10 MΩ
Additional features	Display	10,000 count	10,000 count	6,000 count	2,000 count
	Analogue arc	■	■		
	Backlight	■	■	■	
	Ranging				
Ranging	Auto	■	■	■	■
	Manual	■	■	■	■
Data capture	Max min hold	■	■	■	
	Average	■	■		
	Manual and auto hold			■	
	Noise suppression	■	■		
	Smoothing	■	■		
	Low pass filter	■	■		
	Relative	■	■		
	Relative (%)	■	■		
	Low Z Capacitance	■	■		
	Terminals	Shuttered	■	■	
Weight	g	520	520	522	320
Warranty upgradeable to 3 years FREE		■	■	■	■
Ingress protection		IP 64	IP64		
Safety rating		CAT IV 600 V & CAT III 1000 V	CAT IV 600 V	CAT IV 600 V	CAT III 600 V

Photovoltaic kits

PVK300 series

PVK300 kits supply all the instrumentation you require – in addition to your MFT – to site, commission and test a solar PV installation to IEC62446, packed in a single pouch.

PVK320 includes the PVM210 and an auto-ranging, CAT IV, 10 A d.c. AVO410 multimeter that allows the short circuit current of a panel to be read directly.

PVK330 includes the PVM210 and a DCM340 a 600 A a.c./d.c clamp multimeter which speeds the measurement of array strings without the need for disconnection. It can also measure d.c. voltages to 600 V.



Learn more

[uk.megger.com/
PVK300](http://uk.megger.com/PVK300)

	PVK320	PVK330
AVO410 CAT IV multimeter	■	■
DCM340 Clamp multimeter		■
PVM210 Irradiance meter	■	■
MC3 to MC4 adaptor testleads	■	■
MC4 to 4 mm plug testleads	■	■

Features

- Single unit for one handed use increasing safety on ladders and roofs
- Perfect for measurement of incident light for PV panel short circuit current calculation
- 1999 W/m² range on 3¾ digit LCD display
- Camera mount fixing for accurate placement

Solar PV testing

Irradiance meter PVM210

The pocket-size PVM210 is perfect for use on sloping roofs or at the top of ladders because it has the solar detector built in to the top. This is enhanced by its large clear display and hold function.

It is used for initially choosing optimum position for a PV installation and for measuring the solar power for the calculation of short circuit current to confirm the performance of the PV panel for certification.

On the rear of the meter is a universal camera thread that allows the PVM210 to be mounted on a tripod for precise readings if required. A protective pouch is included with each instrument.



For more information go to
uk.megger.com/PVM210

Professional calibration check box

MTB7671/2

Works with all makes of testers actively measuring the output of the meter and confirming it is within the limits prescribed as well as checking the readings

Certification bodies like the NICEIC, ELECSA, NAPIT, ECA and others now request evidence of your tester's accuracy and consistency.

The MTB7671 makes that an easy job.

- Tests the full range of a tester's capability
- Does not trip RCD protected circuits
- Tests to the regulations BS7671, BS EN61557 and IEE On-Site Guide
- Checks insulation, continuity, loop, PFC and RCD functions
- Confirms tester's continued performance
- Colour coded test functions



Spot a problem before it happens

Checking your testers on a regular basis is vital. You can spot a problem before it happens, making sure your meter is ready for use when you want it. But it is important that you check what the tester is putting out. If the test voltage or current is low it doesn't stress the system you're testing properly so you're not testing to the Wiring Regulations.

Take a closer look

uk.megger.com/MTB7671-2

	BS7671, BS EN61557 and IEE On-Site Guide tester requirements	MTB7671 parameters tested
Continuity short circuit test current	>200 mA	>200 mA Pass / fail indication
Continuity test voltage range	4 V - 24 V	4 V - 24 V Pass / fail indication
Continuity resistance		0.5 Ω 5.0 Ω
Insulation test current	1 mA	1 mA Pass / fail indication
Insulation test voltages	250 V +25% max 500 V +25% max 1 kV +25% max	250 V +25% max 500 V +25% max 1k V +25% max Pass / fail Indication
Insulation test resistances	0.25 MΩ min 0.5 MΩ min 1 MΩ min	0.25 MΩ 0.5 MΩ 1 MΩ 9 MΩ 90 MΩ
Loop		Local mains impedance
Loop + 10 Ω		Loop + 10 Ω
Loop + 180 Ω (IEE On-Site Guide 10.3.5 Earth Electrode Resistance)	200 Ω max	Loop + 180 Ω
RCD currents (I)		10 mA, 30 mA and 100 mA
RCD no trip (½I)	No trip	>1999 mS
RCD (I)	<200 mS	40 mS @ 0° 50 mS @180°
RCD (5 x I)	<40 mS	10 mS @ 0° 20 mS @ 180°

Portable appliance testers

PAT 400 series

Packed with features

- 10,000 asset on-board data storage
- Large easy-to-read colour screen
- Instant re-start
- 25 A, 10 A and 200 mA "soft" bond test
- Test lead null
- Repeated high current bond testing possible
- Insulation testing at 250 V and 500 V
- Functional VA load test for 110 V and 230 V appliances
- Extension and IEC lead testing including polarity, earth continuity, L-N continuity and L-N-E insulation
- Standard differential leakage test plus
- Protective conductor or touch current leakage test
- Substitute earth leakage test at 40 V a.c.
- Simple RCD test or full 30 mA RCD testing $\frac{1}{2} \times I_n$
- I, 5 x I
- Integral fuse checker

Independent tests* show the Megger PAT400 is at least 8% more productive

*Testing conducted by Redford Charles Ltd, Rochester, see details at www.redfordcharles.com/resources/PAT_tester_analysis.pdf

The PAT 400 series introduces a new level of convenience and speed to PAT testing using on-board test results storage.

With a large, bright and intuitive colour display, the PAT400 series offer sufficient memory for the storage of up to 10,000 assets. The proven long duty cycle, the simplicity of operation and the independently verified speed of test make for the best selling PAT Megger has ever produced.

The menus have been simplified to make operation quicker. Five soft-keys give direct access to frequently used functions making navigation through the menus quick and the tester more productive, offering a greater return on investment. A new feature is the expert and novice modes making testing even faster for experienced user.

For corporate users, the PAT400 series now has an optional security log-in for controlling access to test parameters and limits, while

logging the active user within the results database.

Using a standard USB memory stick, results can be quickly backed up for downloading. The asset database is accessible from the tester and with a full QWERTY keyboard, rapid data entry or adjustment is possible.

PAT410 is perfect for those happy to bond test solely at 200 mA. The smallest and lightest of the PAT400 series weighs only 2.7 kg.

PAT420 tests both 100 V and 230 V appliances, as well as offering bond testing at all three test currents, 200 mA, 10 A and 25 A. This is the tester of choice for full-time industrial or commercial PAT testers.

PAT450 adds in the ability to carry out high voltage flash testing at 1.5 kV or 3.0 kV, making it the preferred choice for tool hire companies and service and repair workshops.

Special Features

- Expert mode to speed up testing
- Secure user log-in option
- Vast on-board memory to keep you on the job longer
- Continuous operation, no need to stop and wait for the tester to cool down
- Instant re-start as you move from room to room
- Soft keys to speed you through the testing process
- Automatic asset number generation
- Quick test for instant access to single test functions

**For PAT420
Business in a box
see page 29**



		PAT410	PAT420	PAT450
Supply	230 V	■	■	■
	110 V			
Earth bond/continuity	Supply measurement	■	■	■
	200 mA	■	■	■
	10 A		■	■
	25 A		■	■
Insulation test	Bond lead null	■	■	■
	250 V	■	■	■
	500 V	■	■	■
Alternative leakage tests	Substitute	■	■	■
	Differential	■	■	■
	Touch current	■	■	■
Functional test	VA measurement	■	■	■
Extension lead tests	Earth bond	■	■	■
	Insulation	■	■	■
	Polarity	■	■	■
	Portable RCD tests	■	■	■
Flash test	1.5 kV and 3.0 kV			■
Other features	Low-profile light weight	■		
	110 V test connection		■	■
	Auto test routine	■	■	■
	Manual testing	■	■	■
	Configurable tests times	■	■	■
	Selectable pass limits	■	■	■
	Fuse check	■	■	■
	Large colour display	■	■	■
Data handling	10,000 record on-board storage	■	■	■
	Download to USB memory stick	■	■	■
	PowerSuite compatible	■	■	■
Supplied accessories	Carry case with lead storage pouch	■	■	■
	Combined continuity, earth bond and insulation test lead	■	■	■
	Red extension lead adaptor	■	■	■
	Flash test lead			■
	FREE calibration certificate	■	■	■



Scan to see a demonstration of the PAT400 series or for more information go to

megger.co.uk/PAT400

PAT400 series accessories



1005-423 Pass / fail barcode printer



1000-770 415 V 5 pin adaptor lead to BS1363 (16 A)



1001-047 Barcode scanner



6220-639 110 V extension lead adaptor



1000-766 110 V mains lead adaptor



1000-767 415 V 4 pin adaptor lead to BS1363



1001-971 Pass label roll of 1000

1001-227 Fail label roll of 1000

See how to PAT test the Megger way with

PAT testing and inspection DVD

order no 1002-384

Battery powered portable appliance tester

PAT100 series



Packed with features

- Simple tick or cross, pass or fail indication with measurement display
- Safe testing of IT and surge protected devices
- Battery powered with rechargeable option
- Plus many additional features on PAT150



Scan to see a demonstration of the PAT100 series

PAT120 is the toughest, simplest and most economical PAT tester available that gives results that conform to the 4th Edition of the Code of Practice for In-service Inspection and Testing of Electrical Equipment.

Organising tests in to three test groups, Class I, Class II and Power and Extension leads, enables the correct sequence of tests to be performed automatically without the user's intervention, keeping testing simple and reducing test times. Pass limits are fixed. The default insulation test is 500 V d.c. but when testing IT or surge protected equipment 250 V d.c. can be selected at the start of the test.

To make testing easier, the connections required for each test are shown in the lid of the PAT120. Another key difference from ordinary testers is the detachable neck strap that makes testing simpler when there is no convenient surface on which to work and makes the tester easier to carry with the test leads, report books etc.

PAT150: For those jobs that may not warrant investing in a downloadable tester, like the PAT420, the PAT150 and PAT150R can't be bettered. Like all Megger products they are built to be really tough and the complete kit is supplied in a hard protective case which will occupy minimal space.

The PAT150s offer the functionality of testers that are almost twice the price. They will test both 10 mA and 30 mA portable RCDs as well as Class I, Class II and extension leads and power cords. Surge protected devices and IT equipment are safe-guarded by insulation testing at 250 V and leakage testing at 40 V. The quick test function allows individual testing of continuity, insulation and mains powered leakage tests as well as checking the output of SELV circuits. Performing a mains powered differential leakage test has the benefit that the equipment will function during the test sequence.

The mains supply can be checked for voltage and for socket polarity by the PAT150s. You can configure the test durations and pass limits to suit your applications, and the bond lead resistance can be nulled out to reduce measurement errors. The PAT150 is powered by standard 1.5 V AA cells while the PAT150R incorporates internal charging NiMH cells.



PAT100 series accessories

1005-739
Accessory kit

For more information go to uk.megger.com/PAT100



		PAT120	PAT150	PAT150R
Insulation test	500 V	■	■	■
	250 V	■	■	■
Earth bond test	200 mA	■	■	■
Earth leakage options	250 V	■	■	■
	500 V	■	■	■
Alternative leakage	Substitute	■	■	■
	Differential		■	■
	Touch current		■	■
Functional test	240 V		■	■
Test socket	BS1363	■	■	■
Test lead null			■	■
Automatic test sequence	Class I (earthed)	■	■	■
	Class II (double insulated)	■	■	■
	Extension lead and power cords	■	■	■
	Portable RCD		■	■
Manual tests	Continuity		■	■
	Insulation		■	■
	Main powered leakage		■	■
	SELV measurements		■	■
Combined continuity, earth bond and insulation test lead		■	■	■
On-board battery re-charging				■
FREE calibration certificate		■	■	■

Why diversify your business into PAT Testing?

Business in a box

Because the PAT testing market is driven by the “Electricity at Work” regulations and not by the economy, there is an excellent opportunity to boost your turnover by introducing a PAT testing and repair service.

To make it easier for you to change direction, Megger has introduced the “Business in a box”. This is a new concept in electrical test products, not just selling you the tester but helping you find business.

Many customers have found these pre-packed businesses useful in generating income as either a primary or secondary service to their customers.

There are two potential businesses in a box, the PAT320 manual version, and the PAT420 computerised version.

In the box you will find everything you need to diversify the direction of your business and boost your income.

1. Tough PAT tester that will give you years of service
2. Leads and adaptors you need to do the job successfully
- 3.1 The PAT320 comes with duplicate test report book for users to certify results and issue to their customer
- 3.2 The PAT420 come with PowerSuite Contractor PAT certification software to manage:

Customers

- Arrange appointments
- Diary management
- Billing

Assets

- Automatic testing
- Printing certificates
- Repairs estimates

4. Roll of 1000 pass labels
5. A guide to PAT testing – clear step by step instructions on how to do it
6. A guide to identifying customers and selling to them. This includes
 - Where to find and how to approach clients
 - Details of who, and why they need to be testing their electrical assets
 - Guidelines on what to charge
 - Pre-designed advert and brochure for you to customise
 - Pre-written press releases for you to generate interest
 - Pre-written letters for you to send to your potential customers



Scan to see a presentation of the PAT business in the box or for more information go to
uk.megger.com/PAT320_BIAB
uk.megger.com/PAT420_BIAB

		PAT320	PAT350	PAT320 Business in a box	PAT420 Business in a box
Earth bond test	25 A	■	■	■	■
	10 A	■	■	■	■
	200 mA	■	■	■	■
Insulation test	500 V	■	■	■	■
	250 V	■	■	■	■
Earth leakage test	Differential	■	■	■	■
	Touch current	■	■	■	■
	Substitute	■	■	■	■
Operation test	110 V	■	■	■	■
	230 V	■	■	■	■
Flash			■		
Automatic tests sequence	Class I	■	■	■	■
	Class II	■	■	■	■
	Extension test lead	■	■	■	■
	Portable RCD	■	■	■	■
Fuse test		■	■	■	■
Test lead null		■	■	■	■
Operates at	110 V	■	■	■	■
	230 V	■	■	■	■
Functional test VA measurement	110 V	■	■	■	■
	230 V	■	■	■	■
Test sockets	BS1362	■	■	■	■
	BS4343	■	■	■	■
On-board client/locations results database				■	
Download to USB memory stick					■
Display	3.5 inch colour	■	■	■	
	5 inch colour				■
Combined continuity, earth bond and insulation test lead		■	■	■	■
230 V extension lead adaptor		■	■	■	■
FREE calibration certificate		■	■	■	■
PC power supply to IEC adaptor				■	■
Pass labels				■	■
Portable appliance test report book				■	
PowerSuite Professional Contractor PAT certification software with client and asset management and billing					■
Megger guide to PAT testing				■	■
Megger guide to marketing a PAT business				■	■
Barcode reader					optional
Barcode printer					optional

Portable appliance testers

PAT300 series



A choice of two fast PAT testers which offer the operator manual and automatic operation without the complexity of data storage. The PAT300 series allows the user to select a range of tests, such as those for a CLASS I asset, simply by pressing the "CLASS I" button, and then initiate the test by pressing the "TEST" button. When the results are displayed they are coded green for a pass and red for a fail. However, if a particular test needs to be repeated, there are direct access buttons dedicated to specific tests. The instant-restart feature speeds testing when moving from one room to another, re-starting in exactly the same menu location where it was left.

PAT320 is the PAT tester for those electricians who occasionally do testing and don't want the complexity of database management and are happy to write out certificates by hand.

PAT350 is similar to the PAT320 but with the added benefit of flash testing. Because of its high through-put capabilities and the speed at which it gives results, it is ideal for applications such as tool hire companies and service centres.

Of particular interest to tool hire companies, as well as service and repair organisations, is the PAT300 series ability to run high current bond tests virtually continuously, without the fear of the tester over heating.

- Instant re-start
- 200 mA "soft" bond test and the option of high current 25 A and 10 A bond tests
- Test lead null
- Flash testing at 1.5 kV or 3 kV (PAT350 only)
- Repeated high current bond testing possible
- Insulation testing at 250 V and 500 V
- Fully tests 230 V and 110 V appliances
- Extension and IEC lead testing, including polarity, earth continuity, L-N continuity and L-N-E insulation
- Standard differential leakage test
- Protective conductor or touch current leakage test
- Substitute earth leakage test at 40 V a.c.
- Full plug-in 30 mA RCD testing $\frac{1}{2} \times I$, I, 5 x I
- Integral fuse checker

Packed with features

- Full PAT functionality with the option of flash test
- Automatic or manual testing
- Continuous operation
- Full plug-in or lead mounted RCD testing
- Simple push button control

For specification table see page 29



Watch a Demonstration
bit.ly/PAT300

Accessories



1000-766
110 V mains
lead adaptor



PATR210 Portable appliance
test report book

1001-227
Fail label
roll of
1000



1000-971
Pass label
roll of
1000



1000-767
415 V 4 pin adaptor
lead to BS1363

Test certification software

PowerSuite Professional

Developed over many years and with lots of research into your requirements of a software system, PowerSuite is hugely flexible. The application you purchase today can readily be up-graded, so even misjudging how much you will come to rely on computerisation for your certification is not a risk. As your company grows, so can your system.

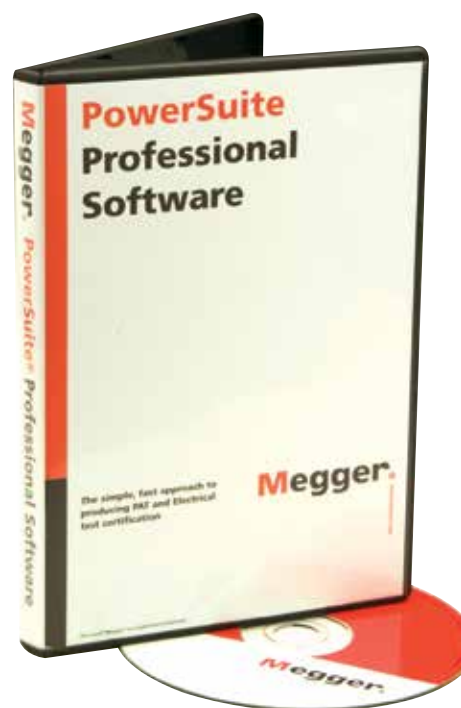
PowerSuite Lite package is the ideal starting point for a company using computerised certification. With minimal complication and maximum impact. The benefits can be experienced for little cost.

PowerSuite Contractor package will give you everything you need to schedule and invoice electrical inspection and PAT testing certification.

PowerSuite Power package gives added breadth to your certification client base by offering more specialised electrical inspection certificates, such as filling stations and security, and for general maintenance by adding ladder, air compressor, fire extinguisher and many other certificates.

PowerSuite SME is the networking solution for those with a business of sufficient size to need multiple simultaneous access to the client and certificate database. It is fully flexible with four levels of security, messaging, data entry options, multi-concurrent user access, etc.

Our market leading help-desk is already looking forward to assisting you. We are there to help you select the version of PowerSuite that is ideal for your business. Call today on 01304 502 106.



Take a closer look

uk.megger.com/PowerSuite

	Lite	Contractor	Power	SME
Certificate manager including the latest 17 th Edition 3 rd Amendment IET forms	■	■	■	■
Certificate audit trail	■	■	■	■
Client manager	■	■	■	■
Wizard and menu functions	■	■	■	■
Company logo import	■	■	■	■
Document storage including Word, Excel, pdf and many more	■	■	■	
Photo import	■	■	■	■
Image management		■	■	■
Organiser		■	■	■
Identify missing assets		■	■	■
Reports		■	■	■
Billing		■	■	■
Additional certificates		■	■	■
Maintenance certificates			■	■
Document design			■	■
Viewer CD			■	■
Networkable with multi-user access				■
Multiple data paths				■
Megger PAT data down and up load	■	■	■	■
Megger 17th data down load	■	■	■	■
3rd party instrument support		■	■	■
Real-time Bluetooth results capture	■	■	■	■
Enabled for PowerSuite Ultramobile	■	■	■	■
Drag and drop editing	■	■	■	■
Manual data entry	■	■	■	■
Direct data entry	■	■	■	■
Imports, exports to PowerSuite Professional				
E-mails certificates between mobile device and PowerSuite Professional				■
Additional user licences	■	■	■	
Additional network licences				■
FREE support	30 days	30 days	30 days	30 days

* PowerSuite Ultramobile can only be used in conjunction with one of the other PowerSuite Professional products and is included in the On-site packages.

Two channel cable fault locators

TDR2000/3 and TDR2010

When chasing faults on paired metallic cables in applications such as telephony and CATV you can't do better than the TDR2000 series. It is a highly portable, high resolution, compact, dual channel TDR with a large colour screen making fault location easier by allowing trace comparison.

With a best resolution of 0.1m the TDR2000 series has a 20km maximum range, depending on the velocity factor selected and the cable type. Five output impedances are available (25, 50, 75, 100 and 125 ohms). There is an Auto Impedance matching feature and velocity factor can be adjusted from 0.2 to 0.99. TDR2000 series maximises the use of its large colour display, 800 px x 480 px, to help you locate your fault faster and identify it more accurately.



Packed with features

- Comprehensive dual channel capability with dual aspect display.
- Ultra-fast pulse for near end fault identification.
- Guidance to potential fault.
- IP54 rating offers real life working.
- Designed for use on all metallic paired cables.
- Trace tagging a label or description to be added to saved traces (TDR2010 only).

For more information go to

uk.megger.com/TDR20003-TDR2010

Two channel fault locator for power cables

TDR2050

Offering a CATIV 600 V safety rating, the TDR 2050 is perfect for chasing down fault on power circuits such as street lighting. Its IP54 rating means that it is perfectly at home working in the wind and rain of the real world. The step function trace improves the near-end performance of the TDR2050 as it prevents the trailing edge of the pulse masking faults. Auto find takes you to the first major event on the cable, press the button again and you are taken to the next disturbance. The find end function identifies the end of the cable and measures its length.

Distance dependant gain is useful if you are working with longer cables as the gain is increased along the returning signal to compensate for the attenuation due to distance. This means that a far-end fault has similar amplitude as if it were a near-end fault.



For more information go to

uk.megger.com/TDR2050

Single channel cable fault locators

TDR500/3 and TDR1000/3 series

Using a Time Domain Reflectometer (TDR) is a well-established method for finding the location of faults in metallic power or data cables. In the past TDRs have had a reputation of being expensive and difficult to use but now, the Megger TDR1000/3 series has put paid to that.

An AUTO selection option, fast pulse and built in blocking filter ensures that the most effective selection depending on the range required, helping rapid diagnosis of the TDR trace. In addition on the TDR1000/3 and TDR1000/3P, dual cursors allow complete flexibility, giving the operator full control and instant indication of distance between two points.



Special features

- AUTO set up mode for instant use.
- Ultra-fast pulse for near end fault identification.
- Built-in power blocking filter.
- Weather and dust proof to IP54.

For greater detail on these products go to

uk.megger.com/TDR500-3 or
uk.megger.com/TDR1000-3

		TDR500/3	TDR1000/3	TDR1000/3P	TDR2000/3	TDR2000/3P	TDR2010	TDR2050
Range capability		0.2 m to 5 km	0.2 m to 5 km	0.2 m to 5 km	0.2 m to 20 km	0.2 m to 20 km	0.2 m to 20 km	0.2 m to 20 km
Shortest pulse width		2 ns	2 ns	2 ns	2 ns	2 ns	2 ns	2 ns
Number of channels		1	1	1	2	2	2	2
Built-in blocking filter		■	■	■	■	■	■	■
Memory function	Trace hold	■	■	■	■	■	■	■
	Live trace overlay		■	■	■	■	■	■
	100 trace memory downloading				■	■	■	■
Auto fault find				■	■	■	■	
Auto end find							■	
Trace tagging						■	■	
Step function							■	
Distance dependant gain							■	
Rechargeable					■	■	■	■
Auto power off	User set	■	■	■	■	■	■	■
Test lead type		Miniature clip	Miniature clip	10 A fused standard clip	Miniature clip	10 A fused standard clip	Miniature clip	10 A fused standard clip
Safety rating		CAT III 300 V	CAT III 300 V	CAT III 300 V	CAT III 300 V	CAT III 300 V	CAT III 300 V	CAT IV 600 V
Dust and weatherproof to IP54		■	■	■	■	■	■	■

Insulation and continuity testers for communications engineers

MIT480/2 Series

Features

- Designed for the Telecommunications, Cable TV and electrical markets
- Three terminal testing for Telecommunications (A-B-E) and 3 phase electrical measurement, 3 terminal switching – no need to disconnect test leads
- Stabilized insulation test to -0% +2% of selected test voltage
- Variable insulation test voltage from 10 V to 500 V in 1 V steps
- mA measurement for low current measurement applications
- Single range, faster continuity testing from 0.01 Ω to 1 MΩ
- Insulation testing up to 500 V and 100 GΩ in a hand held instrument
- 500 V gated test to prevent accidental testing of lower voltage networks at high voltage.
- 600 V Trms AC and DC voltage measurement
- Test result storage and Bluetooth® downloading
- Live circuit detection and protection
- CATIV 600V application and IP54 environmental protection
- Rechargeable options for mains and car charging

A range of insulation and continuity testers designed for the communications markets and electrical installations. Developed to an ergonomic design with the latest measurement techniques and live circuit protection; the MIT480/2 has faster continuity testing and stabilized insulation test voltages for more accurate and productive installation testing.

Insulation testing has the addition of feedback control to stabilize the test voltage to less than +2% (+2V) over-voltage, for safer and more accurate measurement.

As well as offering all the functionality of the standard MIT400/2 models, the MIT480/2 series is now fitted with three terminal connection to allow the connections to be made simultaneously and tests switched between the 3 pairs A-B, A-E or B-E. All measurements, except mA, are possible across all three pairs.

Variable test voltage is also available from 10 V to 500 V in 1V steps.

Continuity testing is now fully automatic from 0.01 ohms to 1 MΩ with fast contact detection whilst continuously protecting against accidental contact with live circuits.



Find out more go to uk.megger.com/MIT480-2

		MIT481/2	MIT485/2
Insulation test ranges	50 V, 100 V, 250 V and 500 V	■	■
	500 V gated operation	■	■
	Variable 10 V to 500 V	■	■
	µA button (leakage)	■	■
	Lock button on MΩ	■	■
	REN telephone count (discharge)	■	■
Ohms range	Continuity 0.01 Ω to 10 MΩ	■	■
	Test current 200 mA R ≤ 4 Ω	■	■
	Or battery saving 20 mA	■	■
	Difference measurement [REL]	■	■
Voltage range	Lead null (< 10 Ω)	■	■
	AC / DC to 600 V	■	■
	mV AC / DC range	■	■
	True RMS	■	■
Capacitance	Frequency measurement 15 – 400 Hz	■	■
	Input impedance	10 MΩ	10 MΩ
	Capacitances 0.1 nF – 10 µF	■	■
Other features	Distributor by µF (open loop)	■	■
	REN calculation	■	■
	Current measurement mA AC / DC 0 to 400 mA	■	■
	Pass or fail on limit alarms	■	■
	Number of terminals	3	3
	A – B – E switching	■	■
	On-board memory	■	■
	Bluetooth downloading and software	■	■
	Recharger ready	■	■
	Accepts Alkaline and NiMH batteries	both	both
Included accessories	Dust and weather proof to IP54	■	■
	Safety rated to CATIV 600 V	■	■
	Switched test probe	■	■

Digital earth testers

DET3TD and DET3TC

DET3TD

Three pole earth testing kit

- 2 and 3 pole testing
- Selectable 25 V or 50 V output

DET3TD offers a complete kit for customers wishing to conduct earth electrode testing using the 2 and 3 pole techniques.

DET3TC

ART or selective three pole earth testing kit

- 2 and 3 pole testing
- Selectable 25 V or 50 V output

When used with the optional ICLAMP, allows fall of potential testing without the need to disconnect the electrode under test.



DET3TC with optional clamp

For more information go to uk.megger.com/DET3TD or uk.megger.com/DET3TC

All models include these features

- Extra large selector switch
- Large, clear display for easy operation in outdoor conditions
- Simple one button operation
- Battery powered with a bar graph indicator
- Noise reduction up to 40 V peak to peak
- IP54 rated (water/dust ingress) for extra protection in harsh conditions
- Come complete with batteries, calibration certificate and rugged polypropylene carry case. DET3 also include test leads and stakes

Earth resistance clamp testers

DET14C and DET24C

- For testing installations such as buildings, pylons and RF transmitter sites and lightning protection systems.
- Elliptical clamp shape improves access to earth cables and straps up to 50 mm
- Low maintenance flat jaw interface
- Automatically self calibrates and Auto ranging
- CAT IV 600 V safety rating



Learn more uk.megger.com/DET14C-DET24C



	DET3TD	DET3TC	DET14C	DET24C
Stakeless testing			■	■
3-wire testing	■	■		
2-wire testing	■	■		
ART (Attached Rod Technique) enabled		■		
Resistance range Ω	0.01 to 2000	0.01 to 2000	0.05 to 1500	0.05 to 1500
Earth Voltage range	0 to 100 V	0 to 100 V		
Earth Current range (with optional clamp)		0.5 mA to 19.9 A	0.5 mA to 35 A	0.5 mA to 35 A
Display	Digital	Digital	Digital	Digital
Datalogging			■	■
Downloading				■
Dust and weatherproof to IP54	■	■	■	■

Utility detection and location system

EasyLoc

The Easyloc system is the fast, reliable method to detect and trace underground utility cable runs and pipe networks. It is simple to operate, with features designed to avoid potentially dangerous power cables and other services as effectively as possible.

The Easyloc receiver displays the signal level detected with a maximum marker for easy location. The operator works with both the audio signal and the visual confirmation at all times. Depth measurement is possible at the push of a button, even when using Power Mode.

- Passive location of power and radio signals

EasyLoc Receiver

- Active location of 33 kHz transmitted signals
- Semi-automatic sensitivity control
- Depth measurements in active and passive modes
- Continuous signal strength display
- Peak indicator "Easy Locate"
- Large display with auto backlight
- Trace tagging a label or description to be added to saved traces (TDR2010 only).

EasyLoc TX Transmitter/Generator

- 33 kHz continuous or pulsed
- Class leading power output
- High (0.5 W) and low (0.1 W) power settings
- Simple push-button control
- Induction or direct connection
- Induction in two planes of antenna orientation



Function	Basic	Standard
Passive: power network 50 Hz	■	■
Radio	■	■
Active: 33 kHz	■	■
Line location	■	■
Probe location	x (33 kHz)	x (33 kHz)
Depth measurement with transmitter		■
Depth measurement without transmitter		■
Maximum Marker	■	■
Dimensions (W x H x D)	10 x 67 26 cm	
Weight	2.5 kg	
Operating time	> 40 hours	
Power supply	10 x IEC R6 1.5 V	

For more information go to
uk.megger.com/EasyLoc

Easyloc Tx transmitter

Transmitted power	0.1 W/0.5 W (switchable)
Frequency	33 kHz
Operating time	> 40 hours
Power supply	6 x IEC R20 1.5 V
Weight	2.6 kg
Dimensions (w x H x D)	14 x 26 25.5 cm

Price list

Price £
exclusive of VAT



Pages 4 and 5	MFT1711	Single -phase multifunction tester	849.00
	MFT1721	3-phase multifunction tester with phase sequence indication	1,169.00
	MFT1731	3-phase multifunction tester with rechargeable cells, downloading and full earth electrode functionality	1,379.00
Includes	1004-323	Socket interface adaptor	40.00
	1001-991	3-wire lead set red, blue and green with prods and croc clips	59.00
	1007-161	MFT neck strap	9.50
	1007-157	Test probe incorporating test button - MFT1711 and MFT1721 only	67.00
	1004-319	Hard carry case - MFT1721 and MFT1731 only	30.00
	1007-463	Large soft-sided carry case - MFT1731 only	50.00
Accessories	1002-736	Mains charger - MFT1731 only	30.00
	1001-975	3-wire 10 A fused lead set, red, blue and green with prods and croc clips	69.00
	1002-490	Spare probes and clips, red, blue and green	30.00
	1001-810	3-wire earth electrode test set - MFT1731 only	61.00
	1001-012	ICLAMP for current measurement and ART and stakeless earth electrode testing - MFT1731 and MFT1721 for current measurement	269.00
	1001-013	VCLAMP for stakeless earth electrode testing - MFT1731 only	269.00
	1004-183	Charging lead for 12 V vehicle power outlets - MFT1731 only	19.50
	1006-408	Test and carry waist pouch	45.00
	1000-631	PowerSuite Lite certification software	



Page 6	MFT1731 On-site	Multifunction tester with rechargeable cells, downloading, earth electrode functionality and Certification software	1,544.00
Includes	1004-323	Socket interface adaptor	40.00
	1001-991	3-wire lead set red, blue and green with prods and croc clips	59.00
	1007-161	MFT neck strap	9.50
	1007-157	Test probe incorporating test button	67.00
	1001-810	3-wire earth electrode test set	61.00
	1007-463	Large soft-sided carry case	50.00
	1002-736	Mains charger	30.00
Accessories	1000-631	PowerSuite Lite certification software	
	1001-975	3-wire 10 A fused lead set, red, blue and green with prods and croc clips	69.00
	1002-490	Spare probes and clips, red, blue and green	30.00
	1001-012	ICLAMP for current measurement and ART and stakeless earth electrode testing	269.00
	1001-013	VCLAMP for stakeless earth electrode testing	269.00
	1004-183	Charging lead for 12 V vehicle power outlets	19.50
	1006-408	Test and carry waist pouch	46.00
1004-319	Hard carry case	30.00	



Page 7	MIT220	Pocket-sized insulation and continuity tester, 250 V and 500 V test voltages	305.00
	MIT230	Pocket-sized insulation and continuity tester, 250 V, 500 V and 1 kV test voltages	380.00
Includes	1002-001	2-wire lead set red and black with prods and croc clips	39.00
	1007-168	Hard carry case	19.50
Accessories	1002-015	2-wire 500 mA fused lead set red and black with prods and croc clips	65.00
	1007-166	Protective rubber holster	22.50
	1002-491	Spare probes and clips, red and black	30.00



Pages 8 and 9	MIT300	Insulation and continuity tester, 250 V and 500 V test voltages	340.00
	MIT310	Insulation and continuity tester, 250 V, 500 V and 1 kV test voltages and 600 V voltmeter	445.00
	MIT310A	Insulation and continuity tester with analogue display	405.00
	MIT320	Insulation and continuity tester as MIT310 with resistance measurement and backlight	490.00
	MIT330	Insulation and continuity tester as MIT320 with data storage and downloading	550.00
Includes	1002-001	2-wire lead set red and black with prods and croc clips	39.00
	1007-156	Test probe incorporating test button - MIT320 and MIT330 only	67.00
	1007-167	Hard carry case	19.50
Accessories	1002-015	2-wire 500 mA fused lead set red and black with prods and croc clips	65.00
	1002-491	Spare probes and clips, red and black	30.00

Price list

Price £
exclusive of VAT



Pages 10 and 11	MIT400/2	Insulation and continuity tester, 250 V, 500 V and 1 kV test voltages	369.00
	MIT410/2	Insulation and continuity tester, as MIT400/2 with 50 V and 100 V test, PI, DAR and timed test	435.00
	MIT420/2	Insulation and continuity tester, as MIT410/2 with variable test voltage, storage and recall	489.00
	MIT430/2	Insulation and continuity tester, as MIT420/2 with Bluetooth® downloading and recharge ready	569.00
Includes	1002-001	2-wire lead set red and black with prods and croc clips	39.00
	1007-157	Test probe incorporating test button - MIT410/2, MIT420/2 and MIT430/2 only	67.00
	1007-886	Hard carry case	19.50
Accessories	1002-015	2-wire 500 mA fused lead set red and black with prods and croc clips	65.00
	1002-491	Spare probes and clips, red and black	30.00
	1007-887	Carry pouch	49.00
	1007-464	Mains charger kit	57.00
Includes	MIT2500	Insulation and continuity tester, up to 2500 V test voltages with variable voltage	725.00
	1007-781	1000 V 3-wire lead set red, blue and black with prods and croc clips	59.00
	1007-637	2500 V 3 wire lead set red, blue and black with clips	69.00
	1007-157	Test probe incorporating test button	67.00
	1007-464	Mains charger kit	57.00
	1007-169	Hard carry case	19.00
Accessories	1002-015	2-wire 500 mA fused lead set red and black with prods and croc clips	65.00
	1002-491	Spare probes and clips, red and black	30.00
	1007-160	Carry pouch	49.00



Pages 12 and 13	LTW315	Non-trip 2-wire loop impedance tester 100 V to 280 V	520.00
	LTW325	Non-trip 2-wire loop impedance tester 50 V to 440 V with frequency measurement	540.00
	LTW335	Non-trip 2-wire loop impedance tester as LTW325 with results storage and downloading	695.00
	LTW425	High resolution non-trip 2-wire loop impedance tester 50 V to 440 V	575.00
Included	1004-323	Socket interface adaptor	39.00
	1003-132	2-wire lead set red and green with prods and croc clips	39.00
	1007-167	Hard carry case	19.50



Accessories	1001-977	2-wire 10 A fused lead set red and green with prods and croc clips	65.00
	LT300-EN-00	High current loop impedance tester with 2-wire test lead set	415.00
	Included	1003-132	2-wire lead set red and green with prods and croc clips
1007-167		Hard carry case	19.50
Included	LT300-EN-BS	High current loop impedance tester with UK mains test lead	415.00
	1004-323	Socket interface adaptor	39.00
	1007-167	Hard carry case	19.50
Included	LT300-EN-FS	High current loop impedance tester with 10 A fused 2-wire test lead set	435.00
	1001-977	2-wire 10 A fused lead set red and green with prods and croc clips	65.00
	1007-167	Hard carry case	19.50








Pages 14 and 15	NIM1000	Network impedance meter	POA
	LRCD210	Combined non-trip loop impedance and RCD tester single-phase	570.00
	LRCD220	Combined non-trip loop impedance and RCD tester up to 1000 mA RCDs 3-phase	665.00
Included	6231-601	UK mains test lead set	18.00
	1001-883	3-wire test lead set with prods and croc clips	51.00
	1007-167	Hard carry case	19.50



Pages 16 and 17	RCDT310	RCD tester 100 V to 280 V	400.00
	RCDT320	RCD tester 50 V to 280 V with auto RCD test	460.00
	RCDT330	RCD tester as RCDT320 with results storage and downloading	500.00
Included	6231-601	UK mains test lead set	18.00
	1003-132	2-wire lead set red and green with prods and croc clips	39.00
	1007-167	Hard carry case	19.50
Accessories	1001-977	2-wire 10 A fused lead set red and green with prods and croc clips	65.00

Price list

Price £
exclusive of VAT

	Pages 18 and 19	VF3	Non-contact AC voltage detector with buzzer	20.00	
		VF2	Non-contact AC voltage detector with buzzer	19.00	
		TPT320	Two-pole voltage detector with dual LED and LCB display	79.00	
		MPU690	Proving unit for two-pole testers and drummond lamps	105.00	
		MST210	BS1363 socket tester	16.50	
		PSI410	Phase rotation unit CAT IV 600 V	145.00	
		SIA10	Socket interface adaptor or break out lead	40.00	
		XTL30	30 m extension test lead on spool	89.00	
		XTL50	50 m extension test lead on spool	99.00	
	Pages 20 and 21	DCM300E	Earth leakage and diagnostic clampmeter	389.00	
		DCM310	400 A AC clampmeter	95.00	
		DCM320	400 A AC, 600 V AC and DC clamp multimeter	110.00	
		DCM330	CAT IV 600 V fork multimeter	115.00	
		DCM340	400 A AC and DC, 600 V AC and DC clamp multimeter	155.00	
		DCM1500	1500 A AC and DC clamp multimeter	285.00	
	Included			2-wire leads set with probes - not DCM310	
Accessories	1002-001		2-wire lead set red and black with prods and croc clips	39.00	
	1002-015		2-wire 500 mA fused lead set red and black with prods and croc clips	65.00	
	Pages 22 and 23	AVO210	Basic multimeter CATIII 600 V	79.00	
		AVO410	True RMS multimeter CATIV 600 V	159.00	
	Included			2-wire leads set with probes	
	Accessories	1002-001		2-wire lead set red and black with prods and croc clips	39.00
		1002-015		2-wire 500 mA fused lead set red and black with prods and croc clips	65.00
		AVO830	Specialist electricians' multimeter 600 V with phase sequence detection	TBA	
		AVO835	Specialist electricians' multimeter 1000 V CATIII 1000 V CATIV 600 V with temperature measurement	TBA	
	Includes	1002-001		2-wire lead set red and black with prods and croc clips	39.00
	Accessories	1002-015		2-wire 500 mA fused lead set red and black with prods and croc clips	65.00
	Pages 24 and 25	PVM210	Irradiance meter	135.00	
		PVK320	Photovoltaic kit with PVM210 irradiance meter and AVO410 multimeter	265.00	
		PVK320	Photovoltaic kit with PVM210 irradiance meter and DCM340 clamp multimeter	265.00	
		MTB7671/2	Meter test box	480.00	
	Included	1007-162		Test record card and label set	21.50
			MTB7671/2 lead set	19.50	
	Pages 26 and 27	PAT410	Downloading PAT tester with 200 mA bond test only	1,245.00	
		PAT420	Downloading PAT tester with 25 A, 10 A and 200 mA bond	1,425.00	
		PAT450	Downloading PAT tester with 25 A, 10 A and 200 mA bond and flash testing	1,540.00	
	Included	1001-233		Continuity, earth bond and insulation test lead	32.00
		1001-234		230 V extension lead test adaptor	16.50
		1001-232		PC power supply lead test adaptor	15.50
		1007-165		Flash test lead - PAT450 only	36.00
		1006-225		Carry case and document lead pouch	59.00
		Accessories	1000-633		PowerSuite professional Contractor software
	1000-971			Pass labels, roll of 1000	30.00
	1001-227			Fail labels, roll of 1000	30.00
	1000-766			110 V mains supply adaptor	36.00
	6220-639			110 V extension lead test adaptor	21.50
	1000-767			415 V 4-pin adaptor lead	67.00
	1000-770			415 V 5-pin adaptor lead	67.00
	PATR210			PAT test duplicate record book	27.00
	1001-047			Opticon OPR3201 bar code scanner	305.00
	1005-423			Brother PT-P700 USB pass/fail barcode label printer	225.00
	2001-044			Side mounted pouch for 1006-225	63.00

Price list

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exclusive of VAT

	Page 28 and 29	PAT120	Simple PAT tester with IT capability	440.00	
	Included	PAT150	Full function hand-held PAT tester	570.00	
		PAT150R	Rechargeable full function hand-held PAT tester	610.00	
		1001-233	Continuity, earth bond and insulation test lead	32.00	
		1001-234	230 V extension lead test adaptor	16.50	
		1005-077	SELV and mains voltage test lead, red - PAT150 and PAT150R only	32.00	
		6231-601	Mains plug test lead, black - PAT150 and PAT150R only	18.50	
		1003-436	Mains charger - PAT150R only	51.00	
	1005-075	Hard carry case	27.00		
	Accessories	1005-739	Starter kit including report book, 1000 pass labels, 100 fail labels, adaptor IEC C6-C133 and PAT testing guide book	73.00	
PAT320 Business in a box					
Manual and automatic, dual voltage PAT tester with report book, PAT testing and marketing guide			1,655.00		
 	Included	PAT420 Business in a box			
		Downloading PAT tester with PowerSuite Professional Contractor PAT software, PAT testing and marketing guide		73.00	
		1001-233	Continuity, earth bond and insulation test lead	32.00	
		1001-234	230 V extension lead test adaptor	16.50	
		1000-971	Pass labels, roll of 1000	30.00	
		1001-232	PC power supply lead test adaptor	15.50	
		1006-225	Carry case and document lead pouch	59.00	
	Accessories	PATR210	PAT test duplicate record book - PAT320 Biab only PowerSuite professional Contractor PAT software - PAT420 Biab only	27.00	
		1000-766	110 V mains supply adaptor	36.00	
		6220-639	110 V extension lead test adaptor	21.50	
	Page 30	PAT320	PAT320 Manual and automatic, dual voltage PAT tester	955.00	
	Included	PAT350	PAT320 Manual and automatic, dual voltage PAT tester with flash testing	1,135.00	
		1001-233	Continuity, earth bond and insulation test lead	32.00	
		1001-234	230 V extension lead test adaptor	16.50	
		1007-165	Flash test lead - PAT350 only	36.00	
		1006-225	Carry case and document lead pouch	59.00	
		Accessories	1000-766	110 V mains supply adaptor	36.00
			6220-639	110 V extension lead test adaptor	21.50
1000-767	415 V 4-pin adaptor lead		67.00		
	Page 31	PowerSuite Lite	Basic certification software of 17 Edition and PAT testing	275.00	
	PowerSuite Professional Contractor Certification software of 17 Edition and PAT testing with client management database, billing and 3rd party tester download			540.00	
		PowerSuite Professional Power PowerSuite contractor with additional features such as document design and maintenance certificates		930.00	
			PowerSuite Professional SME PowerSuite network solution		1,195.00

Price list

Price £
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Pages 32 to 33	TDR500/3	Basic hand-held time domain reflectometer	580.00
	TDR1000/3	Single channel time domain reflectometer	895.00
	TDR1000/3P	Single channel time domain reflectometer for power applications	915.00
Included	6231-652	2-wire lead set with miniature clips - TDR500/3 and TDR1000/3 only	35.00
	1006-511	2-wire 500 mA fused lead set red and black with retractable sheath and prods and croc clips - TDR1000/3P only	77.00
	1007-169	Hard carry case	19.50



Included	TDR2000/3	Dual channel time domain reflectometer	2,165.00
	TDR2010	Dual channel time domain reflectometer with trace tagging	2,425.00
	TDR2000/3P	Dual channel time domain reflectometer for power applications	2,225.00
	TDR2050	CAT IV 600 V dual channel time domain reflectometer for power applications	2,995.00
	6231-654	4-wire lead set with miniature clips - TDR2000/3 and TDR2010 only	67.00
Included	1006-511 2 off	2-wire 500 mA fused lead set red and black with retractable sheath and prods and croc clips - TDR2000/3P and TDR2050 only	77.00
	1003-352	Mains charger	61.00
	1008-017	BS 1363 Power lead	20.50
	1003-217	Carry case, web hand strap and cover	57.00



Page 34	MIT481/2	Insulation and continuity tester for communications engineers with A-B-E switching	649.00
	MIT485/2	Insulation and continuity tester for communications engineers with A-B-E switching and downloading	725.00
Includes	1007-780	3-wire lead set red, black and green with prods and croc clips	59.00
	1007-157	Test probe incorporating test button	67.00
	1007-169	Hard carry case	19.00
Accessories	1002-015	2-wire 500 mA fused lead set red and black with prods and croc clips	65.00
	1007-887	Carry pouch	49.00
	1007-464	Mains charger - MIT485/2 only	55.00



Page 35	DET3TD	3-wire earth electrode resistance tester	520.00
	DET3TC	3-wire earth electrode resistance tester enabled for attached rod technique	580.00
Includes	1000-525	3-wire earth electrode test set	61.00
	1000-527	Hard carry case	36.00
Accessories	1001-012	ICLAMP for current measurement and ART and stakeless earth electrode testing - DET3TC only	269.00
	6220-803	Right angled adaptors 4 off	30.00



Page 36	EasyLoc set	EasyLoc Standard receiver, EasyLoc Tx transmitter, earthing kit earthing spike and location system	POA
	EasyLoc Standard	Utilities detection and location system with depth measurement	POA
	EasyLoc Basic	Utilities detection and location system	POA
	EasyLoc Tx set	EasyLoc Tx transmitter, earthing kit earthing spike and location system	POA
Accessories	Headphones	For using the EasyLoc in a noisy environment	POA
	Easy clamp	100 mm clamp to transmit a signal in to powered cables	POA
	House connection set	Comprising connection leads for direct connection to power supply, cable TV and telephone lines	POA

These prices may be subject to variation without notice.

Other Megger products you may find useful



MIT515 5 kV insulation resistance tester

- Tests insulation resistance up to 5 T Ω . MIT515 is easy to operate and very tough. It can perform automatic IR tests.

The built-in timer and high test ranges allow simple and quick evaluation of the condition of the insulation under test. Now upgraded to CATIV 600 V, giving you even better operator safety. Other products in the range permit testing at 10 kV and 15 kV.



CI cable identifier

- This cable identifier can identify a particular cable by means of a transmitter and receiver. The transmitter sends pulsed signals which are received by the receiver, by use of either a flexible CT or a pad style detector. The receiver flashes green for the correct cable and if interconnected, red for others. This is useful if there are several cables in a hole or trench for example.



EZ-Thump cable fault locator

- A practical and efficient solution for cable fault location. The EZ thump finds the distance to the fault and can pinpoint the exact location using an acoustic/magnetic device, a digiphone. The EZ-Thump is the compact and light weight, battery or mains powered solution for the fault location in MV or LV cables.



PQA1000 power quality analysis systems

- Available in 3 versions these tough testers offer, at the entry level, load analysis, datalogging and online network analysis. The mid-range system records a wider range of parameters including harmonics and interharmonics as well as generating automatic reports to EN50160, IEC 61000-2-2 or IEC 61000-2-4. The top of the range product adds fast oscilloscope traces and 10 ms r.m.s. recordings with advanced trigger functions.



DLRO10x and DLRO200 and DLRO600 digital low resistance ohmmeter

- Tests for earths and bonding in telecommunications towers, rail, aircraft, anything bimetal, switchgear (including lv switchgear), breakers, etc. Automatically detects continuity in potential and current connections. Gives accurate results in under three seconds, with auto current reversal. Fuse protected to 600 V. NiMH battery reduces weight. Fully automatic. Select the most suitable test current, up to 10 A dc to measure resistance from 0.1 $\mu\Omega$ to 2000 Ω on one of seven ranges.



Programma Torkel 840 battery load unit

- Batteries are becoming an increasingly important part of modern life with their use in standby power and maintained supply units. Megger has added to its BITE range of battery impedance testers with the Programma Torkel range of battery load units which allow the batteries to be tested in service, by adjusting to include the load current in the test parameters.



SVERKER series relay testing units

- For testing protection relays and small overcurrent devices, this secondary current injection test set is ideal. It has a current output of over 100A and there are controls for the variation of other parameters like voltage and frequency for more complex applications. If a higher current is required, for testing circuit breakers for instance, the CSU 600 primary current injection set is available.



BITE3 battery impedance test equipment

- The BITE3 allows you to test your battery bank on line, without disconnection. It measures the internal impedance of each battery cell and compares the results with a baseline value to identify faulty cells within the battery bank. This test is complimentary to the load test and allows the operation time between load tests to be extended.

About Megger

Made in UK

All the 17th Edition and PAT products shown in this catalogue are engineered and made at our factory in Dover. If you've ever caught a ferry to France, you've probably seen our building – there's a big Megger logo on our car park, next to the roundabout as you enter Dover. Everyone hears about the decline in British manufacturing, but Megger employs hundreds of people at this site. As a professional electrician, you have a right to demand the very best electrical test equipment. By specifying Megger, not only will you get the best, but you'll also be supporting a great British success story.

Engineered for electrical contractors

Many of our engineers sit on UK and international technical committees, and we have regular meetings with all the big trade associations in England and Scotland. We also have close contacts with training organisations, scheme providers for self-certification schemes for installers, and government organisations. If anyone knows how important it is to understand the needs of electrical contractors in the UK, it's Megger. So when new legislation or rules are introduced – whether it's Part P of the Building Regulations, RoHS, the WEEE Directive or BS 7671, you can count on Megger to put your interests first.

Established originally in the late 1800s, the company has been manufacturing test and measurement instruments designed to perform preventive maintenance and troubleshooting for decades. Megger products help customers all over the world improve their efficiency, reduce costs, and meet standards.

It operates globally with dedicated field sales teams and distributors located all over the world and manufacturing plants in Germany, United States, Sweden and the United Kingdom.

The commitment of Megger to industry is reflected in its technical leadership and in being the first to design and introduce many key products.



Calibration and repair service

Megger offers a full Repair and Calibration accredited to ISO9001:2008. Our trained repair technicians use only production spare parts and the latest test equipment to ensure that we give customers the highest standard of service for any instrument.

For information on having your instrument calibrated or repaired and to obtain a Returns Authorisation number please call 01304 502101.

Certified to ISO 9001:2008 and ISO14001:2004

Megger's manufacturing plant in Dover is certified to the full operational requirements of ISO 9001:2008 and the manufacturing process strictly adheres to the highest standards for quality, reliability and safety. It is also certified to ISO14001:2004, the standard for environmental management systems.



Technical specifications are subject to change without notice.

Megger[®]

Power on



Multifunction installation testers MFT1701 series

- The tough all-in-one tester that offers even more convenience.

See page 4



High voltage insulation and continuity tester MIT2500

- 2.5 kV test voltage and it really is hand-held and weighs less than 1 kg.

See Page 11



Multimeters for electrical engineers AVO800 series

- High end specialist multimeters that offer the features you will use.

See page 22



Insulation and continuity meters MIT400/2 series

- Available in 4 versions, these tough testers specifically designed for electrical and industrial maintenance, won't over-stress the installation.

See page 10

Contact Megger

Sales desk: 01304 502 101

Technical desk: 01304 502 102

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