

**ELECTRICAL TESTING**  
Industrial maintenance catalogue

**Megger**®



# Keeping the Power on

Megger designs and manufactures more than 300 electrical test instruments and related software for testing a wide range of electrical assets. Our products contain many additional safety features to protect the user, the assets being tested, and to fail safely in the event of improper use. We use touch screen, prompts and automated routines to make testing easy and fast. We recognise that equipment can get tough treatment in the field, so all our products have high IP ratings and robust enclosures.

Megger's comprehensive range of electrical test equipment is ideal for solving problems encountered in industrial environments, including:

Insulation testing from low to high voltage AC and DC

Motor and generator on-line and off-line testing

Cable fault location and diagnostics

Instrument and power transformer testing

Protection, relay and circuit breaker testing

Water leak detection and monitoring

We have a long history of innovation that comes from working closely with our customers to solve the problems of today and tomorrow. Indeed, Megger was founded in 1889 when the British engineer Sidney Evershed invented the first megohmmeter. Megger continued to pioneer electrical testing inventions and by the early 1900's, had invented the AVO, the first analogue multimeter testing amps, volts and ohms and the origin of the AVO International company name.

Since these early days, Megger has continued to adapt to changing technology and industry demands with many inventions and patents along the way. We have also expanded the range of applications we support through acquisitions. These include:

Progamma (Sweden) in 2005 for transformer and protection testing

SebaKMT (Germany) in 2012 for cable fault location and diagnostics

Baker Instruments (USA) in 2018 for motor and generator testing

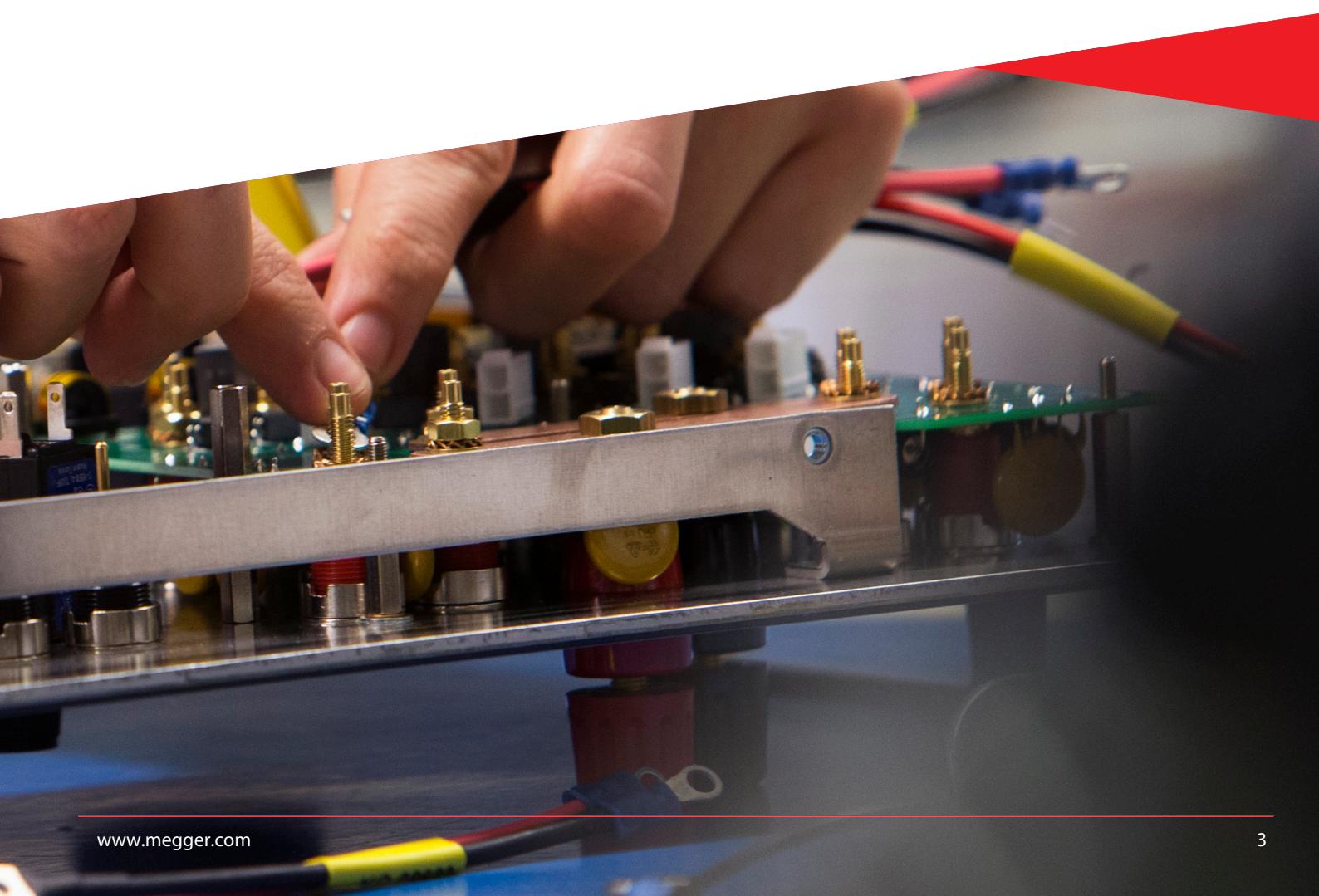
Power Diagnostics (Germany) in 2019 for partial discharge testing

Megger's highly skilled application engineers, along with our global network of distributors and authorised service and repair centres, are there to help you with your buying decisions and to offer technical support during operation. We also offer a wide range of training opportunities, from introductory to advanced levels (visit [www.megger.com](http://www.megger.com) for more details) to help you keep the Power on.



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# Insulation testing

Insulation testers are Megger's best known products worldwide. In the 19th century, when the first cities became electrified in the course of the industrial revolution, Megger constructed the world's first 'hand dynamo'. This patented product generated enough voltage to measure resistances in the megohm range. Today, you can experience the exceptional accuracy, repeatability and reliability of Megger's insulation testers. Indeed, thanks to Megger's advanced guard terminal technology, you can avoid leakage currents that can distort results, giving you accurate insulation measurements quickly and efficiently.



Insulation measurement up to 1 kV/200 GΩ

Stabilised insulation test voltage

Faster single range continuity check  
0.01 Ω to 1 MΩ

Test voltage continuously adjustable from 10 V to 1000 V

600 V TRMS AC and DC voltage measurement

Optional rechargeable batteries with mains or 12 V charging option

Test category CAT IV 600 V

Protection class IP54

Ideal for energy suppliers

**Included accessories:** Red/black silicone test leads with probes and clamps, SP5 remote probe, information CD, 6 x AA batteries, hard case

MIT400/2



Insulation testing up to 2.5 kV and 200 GΩ range in a hand held instrument

Guard terminal for high resistance accuracy

Adjustable insulation test voltage from 50 V to 2500 V

Stabilised insulation test voltage

Rechargeable options for mains and car charging

Single range, faster continuity testing from 0.01 Ω to 1 MΩ

Polarisation Index (PI) and Dielectric Absorption Ratio (DAR)

CAT IV 600 V applications

Includes new test voltage feedback control, which maintains the output test voltage to within 2% of the selected range, even when under test

**Included accessories:** Red/black/blue silicone test leads with prods and clips, 2.5 kV red/black/blue silicone test leads with clips, owner's information CD, batteries 6 x AA alkaline, carry case

MIT2500

# Insulation testing

Insulation measurement up to 5 kV DC  
Measuring range to 10 TΩ  
Diagnostic function PI, DAR (MIT515)  
plus DD, SV and Ramp (MIT525)  
Li-ion battery, high capacity, fast  
charging  
Test category CAT IV 600 V

Robust, impact-resistant outdoor carry  
case, protection class IP65  
Operational up to 3000 m above  
sea level  
Light and compact only 4.5 kg  
Measurement with discharged battery -  
with simultaneous charging at the mains



MIT515

MIT525

Insulation measurement 100 V to 10 kV  
DC (MIT1025)  
Measuring range to 20 TΩ (MIT1025)  
PI, DAR, DD, SV and ramp test  
Battery and mains operation (while the  
battery is charging)

Li-ion battery, high capacity, fast  
charging  
Quick charge function  
Automatic date function  
CAT IV 600 V  
Internal memory with data logger  
at 5-second intervals or real-time  
transmission via USB interface  
with one measurement per second



MIT1025

Insulation measurement 40 V to  
15 kV DC (MIT1525)  
Measuring range to 30 TΩ  
(MIT1525)  
PI, DAR, DD, SV and ramp test  
Battery and mains operation  
(while the battery is charging)  
Li-ion battery, high capacity,  
fast charging

Quick charge function  
Automatic date function  
CAT IV 600 V  
Internal memory with data logger  
at 5-second intervals or real-time  
transmission via USB interface  
with one measurement per second



MIT1525

# Insulation test range

■ Function      □ Option      ▲ rechargeable batteries possible

	MIT400/2	MIT410/2	MIT410/2	MIT430/2	MIT481/2	MIT485/2	MIT2500	MIT515	MIT525	MIT1025	MIT1525
<b>Test voltages</b>											
10 kV/15 kV										■	■
5 kV								■	■	■	■
2.5 kV							■	■	■	■	■
1000 V	■	■	■	■	■	■	■	■	■	■	■
500 V	■	■	■	■	■	■	■	■	■	■	■
250 V	■	■	■	■	■	■	■	■	■		
50 V/100 V		■	■	■	■	■	■				
<b>Insulation - Test methods</b>											
Polarisation index		■	■	■	■	■	■	■	■	■	■
Dielectric absorption ratio			■	■	■	■	■		■	■	■
Step voltage/ramp									■	■	■
Dielectric discharge									■	■	■
<b>Further tests</b>											
Continuity check	■	■	■	■	■	■	■				
Frequency measurement		■	■	■	■	■	■				
Capacitance measurement			■	■	■	■	■	■	■	■	■
Voltage measurement	■	■	■	■	■	■	■	■	■	■	■
<b>Memory and interfaces</b>											
Data memory			■	■	■	■	■	■	■	■	■
USB interface									■	■	■
Bluetooth interface				■		■	■				
<b>Supply</b>											
Power supply									■	■	■
Rechargeable batteries	▲	▲	▲	▲	▲	▲	▲	▲	■	■	■
<b>Security</b>											
CAT IV/600 V	■	■	■	■	■	■	■	■	■	■	■
Calibration certificate included	■	■	■	■	■	■	■	■	■	■	■
Software included				■			■				
Power DB Lite									■	■	■
Power DB									□	□	□
Download manager				■	■		■		■	■	■
Guard technology							■	■	■	■	■

## Low resistance testing

### 10 A micro-ohmmeter with test results storage and downloading

The DLRO10X offers a  $0.1 \mu\Omega$  resolution with a maximum capability of  $2 k\Omega$ . Fast testing ability means users can achieve results in less than 3 seconds. At only 2.5 kg, it is the smallest, lightest and most sophisticated 10 A low resistance ohmmeter available, making it convenient for general testing.

The DLRO10X has the capability of measuring inductive loads such as transformers and motor windings. The DLRO10X has on-board memory, RS232 download capability, maximum setting and manual or automatic range control to the features of the DLRO10. Uses easily interchangeable batteries. DLRO10X can download results in real time and has on-board storage for later download to a PC.

DLRO10X



### Dual power 10 A micro-ohmmeter with IP65 rating

DLRO10HD is a tough low resistance ohmmeter designed to withstand the inclement conditions of real world testing. Rated at IP65 when the lid is closed and IP45 when operating under battery power, the DLRO10HD has a resolution of  $0.1 \mu\Omega$ . There are also 2 power output levels to assist with condition diagnosis. One is limited to avoid heating the test sample, while the other maintains a set high power output. The DLRO10HDX also has the benefit of having results storage and downloading capabilities.

DLRO10HD

DLRO10HDX



DLRO2 TO FEATURE IN PRINT VERSION



## Low resistance testing

### 10 A Micro-ohmmeter

The DLRO10 series offers a 0.1  $\mu\Omega$  resolution with a maximum capability of 2 k $\Omega$ . Fast testing ability means users can achieve results in less than 3 seconds. At only 2.5 kg, it is the smallest, lightest and simplest-to-use 10 A low resistance ohmmeter available. Uses easily interchangeable batteries.

DLRO10



### 2 A bond tester

0-20.00 m $\Omega$  and 0-2000 m $\Omega$

Test current is 2 A

The BT51 low resistance ohmmeter makes measurements by passing a current through the conductor under test and also monitoring the voltage across it. The test current is limited by a simple current limiting circuit and is measured by monitoring the voltage across a resistor. The test current is maintained at a nominal 2 A and, as the measurement is ratiometric, the reading is unaffected by any current variations. Four terminal method of measurement ranges.



BT51

	DLRO2	DLRO10HDX	DLRO10HD	DLRO10X	DLRO10	BT51
Nominal current	Up to 10 A	Up to 10 A	Up to 10 A	Up to 10 A	Up to 10 A	Up to 2 A
No of ranges with power limited to 0.25 W	6	6	6	6	6	
No of higher power ranges	2	2				2
Display	LCD Backlit	LCD Backlit	LCD Backlit	LCD Backlit		
Results storage and download						
Power supply	Mains			optional	optional	
	Rechargeable battery					
Weight		6.7 kg	6.7 kg	2.6 kg	2.6 kg	4.5 kg

## Low resistance testing

Megger has launched a new range of duplex test leads to give you more flexibility. Get one set of tester end leads and attach any of the selection of probes and clips to the tough duplex connector, one of which can house an LED indicator. Used with the DLRO10 series, the indicator will warn you about connections to hazardous live voltages, will indicate continuity and will let you know when the test is completed and if it passed or failed the pre-set test limit.



FAR END	TESTER END	USED WITH	TEST CURRENT	SPECIAL FEATURE	LENGTH	PART NO.
Male duplex connector	2 hooks and plug	DLRO10 DLRO10X, DLRO10HD				
	10 A					
	Indicator LED in connection	1.5 m	1006-456	Indicator LED in connection	3 m	1006-458
				Indicator LED in connection	6 m	1006-459
	2 hooks	DLRO10 DLRO10X, DLRO10HD				
	10 A		1.5 m	1006-452		
					3 m	1006-454
					6 m	1006-455
		BT51			3 m	1007-023
					6 m	1007-024
	Female duplex connector with locking ring	DLRO10 DLRO10X, DLRO10HD	10 A	Lead extension	6 m	1006-460
Duplex probe	Female duplex connector with locking ring	DLRO10 DLRO10X, DLRO10HD, BT51	10 A	P and C probe spacing 6 mm	0.4 m	1006-450
Right angle duplex probe				P and C probe spacing 10 mm	0.4 m	1006-449
Concentric duplex probe				P and C probe spacing 3.8 mm	0.4 m	1006-448
Kelvin clip				Clip capacity 40 mm	0.4 m	1006-447
Kelvin clip touch proof insulated				Clip capacity 52 to 75 mm	0.4 m	1006-451
Right angle duplex probe	2 hooks	BT51	10 A	In-line duplex locking connectors	3 m	1006-442
				In-line duplex locking connector	6 m	1006-443
Duplex probe	1 off 2 hooks and plug 1 off 2 hooks	DLRO10 DLRO10X, DLRO10HD	10 A	In-line duplex locking connectors, 1 with indicator LED	1.5 m	1006-444
Kelvin clip				In-line duplex locking connectors, 1 with indicator LED	3 m	1006-462
Kelvin clip touch proof insulated				In-line duplex locking connectors, 1 with indicator LED	3 m	1006-461
Heavy duty Kelvin 10 cm g-clamp	2 spades		100 A		5 m	242104-2-16
					8 m	242104-2-16
HD 60 mm current clips and 22 mm potential clips	2 hooks	DLRO100, DLRO200, DLRO600				
	600 A	25 mm 2 csa	5 m	1008-029		
				50 mm <sup>2</sup> csa	5 m	1008-028
				70 mm <sup>2</sup> csa	10 m	6220-756
				95 mm <sup>2</sup> csa	15 m	6220-757



## Motor and generator testing

Megger Baker Instruments are designed and manufactured with the purpose of testing and maintaining rotating machinery. They deliver predictive maintenance results with trending information that enables industrial maintenance teams to monitor plant and predict motor failures ahead of time to avert costly downtime.

### Static motor analyser

Available models: 2 kV, 4 kV, 6 kV, 12 kV and 12 kV high output

Test types: resistance, megohm, DA, PI, DC step voltage, DC HiPot

Surge (IEEE and IEC compliant)

The Baker AWA-IV automatically performs repeatable, user-programmable tests to thoroughly assess the strength of a motor's insulation and circuit. In fact, it is the only high voltage test instrument that a user can program to perform specific sets of insulation tests prior to being in the field, and then use as programmed in the field. The AWA-IV is also used to assure the quality of motor rebuilds or new production motors before they are placed into service.



Baker AWA-IV

Available models: 4 kV, 6 kV, 6 kV High Output, 12 kV, 12 kV high output, 15 kV and DX15A armature tester

Test types (some tests require optional upgrades): resistance, capacitance, inductance, megohm, DA, PI, DC step voltage, DC HiPot, surge (IEEE and IEC compliant), partial discharge (PD) on surge

The Baker DX can find early indications of insulation weaknesses and faults in windings, between phases, coil-to-coil and in groundwall insulation. It can identify if contamination is impacting insulation strength and detect motor circuit problems such as feed cable insulation weakness, motor imbalance, open circuits or high resistance.



Baker DX

## Rotating machinery testing

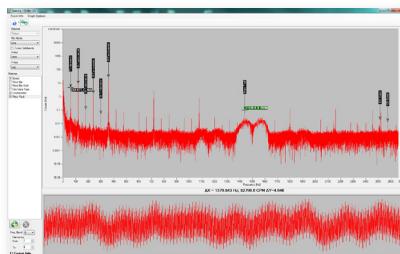


### Dynamic motor analysis system

The Baker EXP4000 monitors many different parameters calculated from an in-service motor's voltages and currents to separate mechanical and electrical issues that may be present in a motor-machine system. Using advanced software algorithms, the EXP4000 is designed to pinpoint challenges across the system, including those with the power supply, the variable-frequency drive, the motor, and the load placed on the motor.

Test domains: Power quality, machine performance, current, spectrum, torque, variable-frequency drives, continuous monitoring, transient analysis (e.g. startup), motor efficiency.

The Baker EP1000 Dynamic Motor Link can be installed in motor control cabinets (MCC) to provide a permanent, rapid-hookup port for the EXP4000.



**Baker EXP4000**

Part No:

99-EXP4000RC

### Power packs



Available models: PPX30 (30 kV) - PPX40 (40 kV)  
- PPX30A (30 kV with armature testing capability)

For high voltage motors and generators and large form-wound coils, the Baker PPX series extends HiPot and surge test voltages up to 40 kV. The Power Packs are designed to be used in conjunction with a Baker AWA-IV (6 kV or 12 kV), or a Baker DX.

**Baker PPX Power packs**

# Rotating machinery testing

## Hand-held static motor tester

Full colour graphic display	Continuity testing and diode testing
3-phase insulation resistance	Motor direction of rotation
Measurement and correction for insulation resistance	Capacitance and inductance
Guard terminal	CAT III 600 V up to 3000 m
DLRO four-wire (Kelvin measurement)	Protection class IP54

The MTR105 is a dedicated static motor tester with Megger's tried and trusted suite of insulation resistance tests (IR), plus all the great traditional features and reliability of Megger's testers. The MTR105 takes the test abilities of Megger's proven IR test instruments and adds the DLRO four-wire Kelvin low resistance test and inductance and capacitance tests to provide a versatile motor tester packaged into a robust, hand-held instrument, which up to now has not been available. Additionally, the MTR105 incorporates temperature measurement and compensation (for IR tests), motor direction of rotation plus supply phase rotation tests. These new test abilities make the MTR105 a real-world, versatile, hand-held motor test instrument. The MTR105 comes in an over-moulded case, providing increased protection and robustness and achieving an IP54 weatherproof rating.



MTR105

Part No:

1010-361

## Online motor analyser

The Baker NetEP is a permanently installed, fully automated machine system monitoring solution. It continuously acquires health and performance data on up to 32 electric motors and the rotating machine systems they operate. With the Baker NetEP, maintenance professionals can safely gather performance data on critical motors around the clock, 365 days a year, from the convenience and safety of a central office. The system helps reduce costly unplanned downtime by providing information that improves maintenance decision making and planning. The dashboard display of the NetEP's associated software indicates motors that are in an alarm condition.



Baker NetEP

Part No:

## Power Diagnostix

As leaders in the development and manufacture of high voltage diagnostic equipment, Power Diagnostix are experts in the provision of diagnostic services for MV and HV electrical assets. Partial discharge testing allows for early warning of potential failure, allowing time to plan maintenance. Tests can be conducted on-line, on a continuous basis or during maintenance to provide all-round condition monitoring of the asset.

### Advanced Partial Discharge Detector

The ICM system Generation 5 is part of the Power Diagnostix ICM series of digital partial discharge detectors. The ICM system is a powerful, versatile instrument for evaluating the condition of medium and high voltage insulation. The ICM system is usable over a range of frequencies of applied voltage, including power system frequency (50/60 Hz) and VLF (0.1 Hz). The ICM system Generation 5 provides high-resolution digital PD patterns for classification of defects in high voltage insulation systems.



#### ICM system Generation 5

### Portable Partial Discharge Monitoring Device

The ICM monitor Portable is part of the Power Diagnostix ICM series of digital partial discharge detectors. It is a compact, stand-alone instrument for evaluating the condition of medium and high voltage insulation. A built-in four- or eight-channel multiplexer offers scanning of three-phase systems or multiple sensors.

The ICM monitor Portable is an autonomous instrument, which can be used as stand-alone monitoring device. However, it is equipped with a serial computer interface for download of trending data and remote access e. g. by LAN network (TCP/IP) or telephone modem. The system can be adapted to utilize all commonly used types of couplers and sensors.



#### ICM monitor Portable



## Medium voltage switchgear substation surveying system

The PD Scan is a handheld, pre-screening tool suitable for on-line detection of PD activity in MV cables and plant. PD activity is widely regarded as an indication of incipient faults in the insulation and seen as one of the best 'early warning' indicators of the deterioration of medium and high voltage insulation. Faults in MV plant are, in most cases, cost expensive. A breakdown in, say, a termination, can lead to damage of the entire cubicle. In addition, faults in MV plant can lead to long outage times. With help from the PD Scan, such faults can be prevented.

The intuitive operating system and the large touchscreen colour display makes it one of the most user-friendly hand-held online PD units on the market.

PD Scan



Component failure in a substation has serious repercussions. It has the potential to cause injury, damage and unplanned outages, which result in significant disruption and cost. Predictive condition assessment aims to identify faults developing in electrical equipment so that they can be addressed before failure.

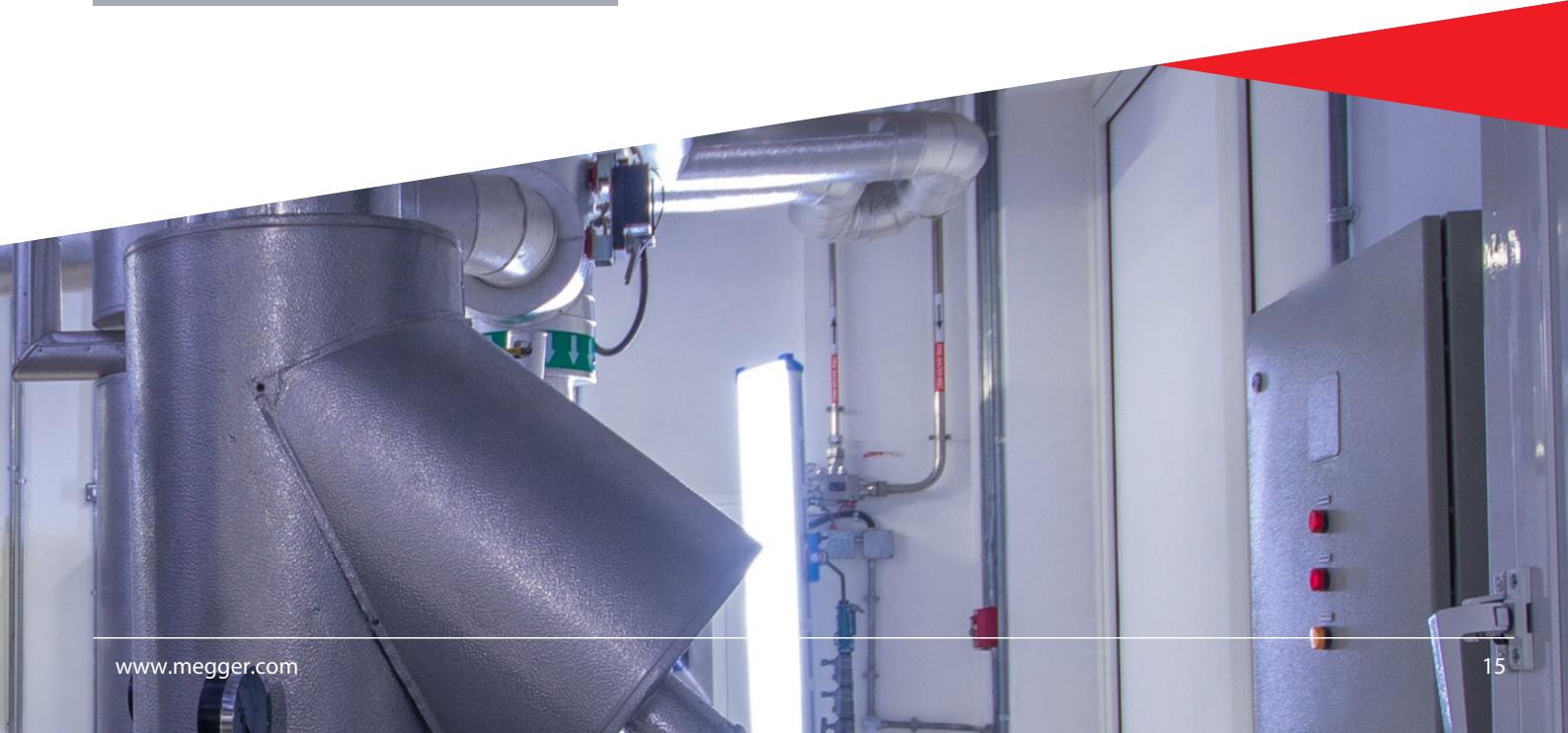
The UHF PD Detector is the ideal tool for quick, non-invasive surveys in MV and HV substations and should be part of the toolkit for all maintenance and service teams. Due to its high measurement bandwidth, the UHF method provides accurate local online partial discharge (PD) measurements on HV components such as cable end-terminations, surge arrestors, voltage transformers and isolators.



UHF PDD

Part No:

1007290



# Time domain reflectometry

## Dualchannel LV cable fault locator

Offering a CAT IV 600 V safety rating, the TDR2050 is perfect for chasing down faults on power circuits such as street lighting. It is IP54 rated and the step function trace improves the near-end performance of the TDR2050 by preventing the trailing edge of the pulse masking faults. Other features include 'Auto-find', which takes you to the major events on the cable, and the 'Find-end' function, which identifies the end of the cable and measures its length. Distance dependant gain is a major benefit in long cable performance.



TDR2050

## Singlechannel LV cable fault locator

A very capable TDR for identifying and locating faults on metallic cables. The TDR1000 is suitable for use on both dead and live cables without a blocking filter, up to CAT III 150 V phase-to-earth. Using a 2 ns pulse, the TDR1000/3P's near end performance is exceptional while offering a maximum range of 5 km.



TDR1000/3

Minimum resolution of only 0.1 m for troubleshooting very close to the cable end

Maximum measuring range up to 5 km

Output resistances of 25, 50, 75 and 100 Ω and a shortening factor between 0.2 and 0.99

Trace hold function allows you to save a route on the screen

High-resolution display

Very easy operation with joystick

Auto selection of gain and pulse width

Ultra-fast pulse for near end fault identification

Ideal for all copper data cables

IP54 protection class for harsh environments

CAT IV 600 V input protection

Auto set-up mode for instant, easy use

'Auto-find' and 'Find-end' functions help find the fault fast

Trace tagging facility that allows a name to be saved with the trace

Distance dependent gain to counteract signal attenuation

Step function to improve detection of near end faults



TDR500/3

# Cable fault location system

## Highlyportablefaultlocationsystem

Weighing less than 33 kg, the EZ-Thump12 is the most portable fault location systems on the market. It utilises the 'Easy Go' test system, which is easy to operate, interprets the results and requires minimal training to find faults. On-board is a TDR with a 7.6 km range and arc reflection at 12 kV for pre-locating. For pinpointing, the EZ-Thump offers a surge energy of 500 J, DC testing for breakdown detection and insulation resistance measurement. The unit is operated from line or the internal battery. It can also fit in the boot of a car, making it ideal for a flexible, quick response fault-finding strategy.

EZ-Thump12



The new dual-stage 3 kV EZ-Thump is the first of its kind in the entire market. It's portable, compact, lightweight and battery and AC line operated. In cable fault location systems, it's specifically designed for fault locating in shielded and unshielded low voltage power cables. Due to its portable, robust and (waterproof) outdoor-capable enclosure, the 3 kV EZ-Thump is ideally suited for all typical fault locating operations on LV cables, whether for industrial applications up to 3 kV, street light fault locating or for fault locating on LV power circuits in the utility industry.

The EZT3DV2 model is the only dual-stage 3 kV unit in the market that addresses LV cables with either 600 V or 1000 V ratings and a max permissible test level of 3 U° (1.8 kV or 3 kV).

EZ-Thump3



## Surge wave receiver for acoustic and electromagnetic fault pinpointing

This instrument sets the standard by integrating audio and electro-magnetic functionality in to one simple-to-understand, colour display. Combining two new technologies for efficient noise suppression, it offers exceptional acoustic performance which lets pass only the fault noise. This means it is possible to lower the surge energy and to find faults in noisy environments. The operator's hearing is protected by auto proximity mute, turning off the headset as a hand approaches the sensor handle and turning it on again once mechanical oscillations have ceased, and by limiting the earphone output to 84 dB(A).

Cable tracing is simplified using the left/right indicator, keeping the sensor over the cable while the compass indicates the direction to the fault and the digital readout displays the distance to the fault.

digiPHONE+



# Cable route tracing and identification

## Utility services detection and location system



A fast and easy-to-use system for the detection and tracing of underground cable runs and pipe networks. The receiver unit displays the signal level and has a max marker to help with location. The operator is given both aural and visual confirmation of location. EasyLoc also gives an approximate depth measurement.

EasyLoc

## Cable identifier

The system identifies a particular cable by means of a current impulse generator and receiver. The receiver is connected to a flexible CT or a pad style detector to receive the identification signal. The pulse generator transmits single sawtooth pulses with a peak current up to 100 A into the cable being identified.

CI



## Power quality

With the increased sophistication of electrical and electronic equipment, and the new micro generation systems being added to the grid, there is now more attention being paid to the quality of supply. Power quality surveys on electrical noise, lampflicker, load balancing, power factor correction and motor in-rush studies can all be carried out with Megger power quality analysers.



### Power quality analysis system

The MPQ1000 hand-held power quality analyser has features that make it ideal for troubleshooting, compliance testing and energy audits. Auto CT identification eliminates potential errors due to the wrong CT range settings. The analyser will automatically identify the CT and verify it is connected correctly. This means you can be confident you will have the correct data.

Auto CT identifies the current clamp that is connected to the analyser as well as the range to which the CT is set.

Configuration verification identifies and notifies you if the product has been connected incorrectly.

On-board data analysis can compare results against canned or custom standards. Create your own templates for your internal company standards.

It has SD card support, USB card support and USB communications, as well as Ethernet connections, making it versatile.

MPQ1000



The MPQ2000 portable power quality analyser has features that make it ideal for testing power quality in any environment, including rugged, weatherproof hardware, and the ability to power off Phase A or auxiliary power.

But the hardware is not all that it's about. Behind the sturdy exterior is an intelligence that is focused on minimising errors and making your testing more efficient, with industry-leading software that enables you to quickly and easily analyse your results.

MPQ2000

	MPQ1000	MPQ2000
Voltage inputs	4 with common neutral	4 isolated channels
Current inputs	4	5
Battery powered	■	■
Powered off of A phase		■
Case type	Hand-held	Weatherproof
Weight in kg	1.8	2.3

### Impedance meter

With a test current of up to 1 kA, the NIM1000 measures the network impedance of the phase and neutral conductors to the 10th harmonic. It highlights load-sensitive and neutral faults and detects poor contacts and unseen problems. It is also useful for measuring the earth loop impedance close to the source of supply. Given the complexity of the measurements, the NIM1000 is capable of making itself easy to use. It can measure current capacity under real life conditions, determine voltage dips from given loads and perform tests on cables, supply lines and busbars.

NIM1000

Part No:

1003373



# Earth or ground testers

**Earth or ground resistance testing** - One of the most important considerations in an electrical system is the resistance of the earth for reliable operation and safety. Whether you are doing a ground resistivity survey to plan the location of a substation or testing an earth electrode, Megger has an earth tester suitable for the job. Megger has more than 50 years' experience in designing and building earth resistance testers. The latest generation are CATIV rated, and have tough molded cases. Variable test frequency keeps noise down, reliability up.



## Advanced earth tester

The DET2/3 is a robust and compact automatic earth (ground) test instrument designed to measure earth electrode resistance and soil resistivity. For use on large or more complex earth systems, which include communications earth systems and difficult test environments, it can be used to test in accordance with BS 7430 (earthing/grounding), BS-EN-62305 (lightning protection), BS-EN-50122-1 (railway applications), and IEEE Standard 81.

The DET2/3 can provide a live trace of its measurements, which graphically shows the amount of noise from the system under test - a powerful diagnostic tool for the expert earth (ground) test engineer. Test frequency, test current and filtering can be quickly and easily adjusted so that adverse conditions, which can influence the test, can be overcome, and a wide band of test current frequencies, with a resolution of 0.5 Hz, can

be used to eliminate errors caused by noise in the earth.

The DET2/3 also includes an automatic frequency selection feature that scans for frequencies with the lowest noise level and then runs a test at that frequency. The selected test current frequency, test current level and the increased filtering option are stored in memory for use in subsequent tests. Use of the latest processors and a large internal memory allows for immediate calculations of resistivity (Wenner or Schlumberger method) and the ability to save a complete day's worth of test results. Test result data can be downloaded directly through a USB flash drive or straight to a Windows PC running PowerDB™ software.

DET2/3



## Earth test kit

The Megger Earth Test Kit (ETK models) are designed to be as practical as possible. Housed in a holdall, the kits are stored neatly, well protected and easy to transport. Much care has been taken to produce a variety of kits to meet needs. In use, the test leads are fitted and retained on reels with smooth action.

ETK

# Earth or ground testers

## Earth ground testers

All models include these features:

- Extra large selector switch
- Extra large, clear display for easier operation in outdoor conditions
- Simple one-button operation
- Battery powered with a bar graph that updates battery strength
- Noise reduction up to 40 V peak to peak
- Safety rating of CAT IV 100 V
- IP54 rated (water/dust ingress) for extra protection in harsh conditions



**DET3TD** - offers a complete kit for customers wishing to conduct earth electrode testing using the two- and three-pole techniques.

**DET3TC** - when used with the optional ICLAMP, it allows fall of potential testing using the ART technique without needing to disconnect the electrode under test.

**DET4TD2** - is a complete earth testing kit for users needing the flexibility to use either the two- and three-pole electrode techniques or the four-pole soil resistivity test.

**DET4TR2** - is similar to DET4TD2, with the added advantage of using rechargeable batteries. You can also get an adaptor to charge your tester from your vehicle.

**DET4TC2** - is a four-pole tester with extended resistance range and variable test frequency. Use it for ART testing, two- or three-pole testing, four-pole resistivity testing and stake-less testing.

**DET4TCR2** - is similar to DET4TC2, with the added advantage of using rechargeable batteries. You can also get an adaptor to charge your tester from your vehicle.

**Each instrument includes everything you need to test:**  
Comes complete with test leads, stakes, batteries, calibration certificate and rugged polypropylene carry case.

**DET3 & 4 Series**

Contact us for more info

## Earth resistance clamp testers

Earth resistance clamp testers are suitable for measuring the earth resistance of installations such as buildings, pylons and RF transmitter sites and for inspection of lightning protection systems.

Elliptical clamp shape improves access to earth cables and straps up to 50 mm

Low maintenance flat jaw interface

Measures ground resistance from 0.05 Ω to 1500 Ω

Measures true RMS ground leakage current from 0.5 mA RMS to 35 A RMS

Automatically self calibrates

High and low alarms

Memory and Bluetooth downloading

CAT IV 600 V safety rating



**DET14C**

Part No:

1000-761

**DET24C**

Part No:

1007-331

# Battery testing

With the increasing dependency of back-up systems on battery strings, and the escalating cost of replacing batteries, instrumentation and software systems that can measure, trend and manage the life-cycle of cells is a cost effective option. There are two methodologies for testing batteries. The first, impedance testing, is a non-line test that can be performed frequently to identify individual weak cells before they fail. The second, battery discharge test, is normally an off-line test and tests the actual output of the whole battery under load conditions. This will show what will actually happen if the battery is required to take the load. Most battery systems are floating and have earth leakage monitors and trips if there is an earth fault. The Battery Ground Fault Tracer allows you to trace a faulty circuit easily in a complex floating system.

## Battery impedance test equipment

The BITE3 battery impedance tester determines the health of lead-acid batteries by taking measurements of the most important battery parameters: cell impedance, an internal ohmic test, cell voltage, intercell connection resistance and ripple current.

For the first time in a battery test instrument, the BITE3 measures float current and the harmonic content of the ripple current. There is a built-in spectrum analyser to show the harmonic content of the ripple current.

**BITE3**

Part No:

BITE3



## Battery voltage monitoring

BVM is a battery voltage measurement device that is used for the capacity testing of large battery banks. When used in conjunction with TORKEL™ unit, and test data management software, the BVM enables the user to perform a completely automated battery bank capacity test, according to IEC test method. The test also meet NERC/FERC requirements.

**BVM series**



## DC earth fault locator

For fault location in isolated, earth free DC battery systems as used in railway signalling, hospitals and power plants etc. the GL660 directly connects to the faulty line with live voltages up to 660 V, and generates a low frequent pulsed signal that allows it to be traced by a specific receiver along the faulty line to the fault position.

A single earth fault will cause no service interruption, however with the occurrence of a second earth fault, there is a high risk of partial or complete breakdown of the installation. Consequently, any earth fault must be located and repaired as fast as possible. The GL660-1 can locate faults up to 150 kΩ, even in noisy environments, and without the need to switch off the system.

**Geolux GL660-1**

Part No:

813178



## Battery testing

### Battery load units

The TORKEL™900 series is used to perform load or discharge testing, which is the only way to determine a battery systems actual capacity. Together with the optional cell voltage logger, BVM, connected directly to the TORKEL™900, it becomes a complete, stand-alone, discharge test system.

The TORKEL™930 is used for battery systems ranging from 12 to 300 V, and the TORKEL™950 is used for those ranging up to 500 V, often encountered in switchgear and similar equipment. The high discharge capacity of the TORKEL™ gives you the opportunity to shorten the test time. Discharging can take place at up to 220 A, and if a higher current is needed, two or more TORKEL™ units or extra load units, TXL, can be linked together. Tests can be conducted at constant current, constant power, constant resistance or in accordance with a pre-selected load profile. Testing can also be carried out without disconnecting the battery from the equipment it serves. Via a DC clamp-on probe, the TORKEL™ measures the total battery current while regulating it at a constant level. Battery systems can be plus or minus grounded or free floating.

TORKEL™910 is very much the same as the TORKEL™930 but has lower discharge current and some limitations (see the table below).

TORKEL™910	
Part No:	CS-19191
TORKEL™930	
Part No:	CS-19391
TORKEL™950	
Part No:	CS-19591

	TORKEL™950	TORKEL™930	TORKEL™910
Maximum discharge current	220 A	220 A	110 A
Voltage	500 V	300 V	300 V
BVM functionality	2 strings of 120	2 strings of 120	
Charging measurement	■	■	
Full report functionality	■	■	

### Battery Ground Fault Simulator

The BGFT is a demonstration/training tool for the Megger Ground Fault Tracer (BGFT) and the Megger Battery Ground Locator (BGL). The instrument provides a simple and easy method for simulating different characteristic ground faults. It is capable of simulating positive or negative earth grounds, resistive and phantom capacitive grounds as well as single or multiple grounds. The Battery Ground Fault Simulator provides the ideal training platform for learning to characterize and locate battery ground faults.

BGFT	
Part No:	246100C-47



# PowerDB data management software

## Do you have problems managing test data?

Once tests have been done on site, there is the issue of recording and managing the data. This may have been recorded by a number of field engineers or third party contractors. How do you correlate all this data and store it so that it can be used efficiently for maintenance or referenced for auditing?

PowerDB software allows the user to manually enter test results into specifically designed forms for testing substation assets such as transformers, CTs, batteries and relays. It allows the user to quickly and easily enter the test results straight into a unique test data form on a laptop.

This form can then be sent over the internet to be synchronised with the PowerDB database, which stores and manages the data so that it can be easily referenced.

PowerDB is specifically designed for storing and managing data from commissioning and maintenance, including analysis and trending of test results.

PowerDB can then quickly create entire test documentation packages that include test reports, comments and deficiency summaries, table of contents and field service reports.

If IT implementation is a problem, PowerDB can even host your data on a dedicated server, to reduce reliance on company IT systems.

This economic software package has been designed for utilities, OEMs, HV contractors, maintenance, service and commissioning companies. In fact, anyone involved in substation asset testing!

## PowerDB's test forms are designed to be used with each of the following assets:

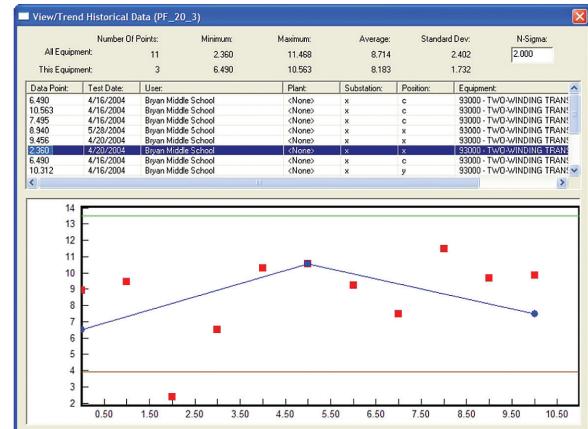
Batteries	Switchboards
Insulation fluids	Ground fault tests
Cables	Transfer switches
Loadbreak switches	Ground mat/grid tests
Circuit breakers	Watthour meters
Motor control	Instrument transformers
Coordination data	Transducers
Power factor tests	Power transformers
Disconnects	
Relays	
Generators	

## Easier management of test data

PowerDB offers a straightforward approach to data management. The basic step in creating this user-friendly package was to make test data entry screens and printed forms identical, so what you see on the screen is what you will get in the printed version.

PowerDB simplifies testing and data management by allowing you to deliver reports electronically. The software will execute several tasks including equation calculations, temperature, correction factors and charting.

The screenshot shows a Windows application window titled 'Transformer Turns Ratio Test'. At the top, there are fields for 'Customer' (XY2 Electrical Testing), 'Address' (89254 36th Street, Omaha NE 68147), 'User' (JJ Sobecky High School, 9332 42nd Street, Omaha NE 68147), 'Owner Representative' (Tom Osborne), 'Date' (10/18/2005), 'Temperature' (64.4 °F), 'Humidity' (85 %), 'Egpt. Location' (SAN JACINTO), and 'Substation' (OUTDOOR). Below these are sections for 'NAMEPLATE DATA' (including oil volume, oil temp, tank type, and phases), 'TESTING' (including primary and secondary tap settings), and 'TAP VOLTAGE ROUNDING' (with a table for primary and secondary taps). At the bottom, there is a table for 'TRANSFORMER TURNS RATIO TESTS' showing various test results for different equipment.



PowerDB helps predict possible equipment failure by trending results, which can be stored in PowerDB or imported from other software. This makes transitions to PowerDB easy.

Industry standard test forms are not always what a company needs, so PowerDB software allows you to customise forms using a 'drag and drop' feature that anyone, even those without database experience, can use. You can create a customised form simply by dragging and dropping in tables, text boxes, images, charts and more. And, with VBScript, calculations can be defined, tables looked up, and it can even interact with other applications.

# Power db data management software



automatically update every form that the common item is used in.

The 'one time definition of common items' feature can be used to put logos, headers and footers on every page, or in multiple forms. This means that one change will

## Built-in report flexibility

PowerDB can create reports in one step, with customisable sorting of the order of test forms. Forms can be removed, and page numbering will be automatically adjusted. In a single print job, supplementary reports can also be printed at the same time as the primary report. The supplementary reports, including comment and deficiency summary reports, open up the data and information for all of the equipment tested on one job. Finally, all of the information can be generated for the on-demand world using the optional PowerDB web server. All the important information is published to the web and can be accessed from anywhere in the world.

## Computerised maintenance management system support

Many electrical utilities and other company operations have invested in sophisticated CMMS systems, such as Digital Inspection's Cascade and MRO Software's MAXIMO. However, due to test instrument specific software packages and handwritten test results, these firms often struggle to get test data into their systems. One electric utility even referred to getting data into the CMMS as "feeding the monster".

## PowerDB's speciality is "feeding the monster"!

PowerDB allows you to link easily with the CMMS system so that the system can pre-populate the PowerDB equipment database, send PowerDB all work orders, add forms based on the job plans, and even return the measurement points obtained from a multitude of test sets back to the CMMS system.

**Furthermore, Megger will work directly with your CMMS personnel to integrate your data into your internal CMMS system.**

There are three ways to document testing using the PowerDB software. First and foremost, data fields can be filled in using manual entry, standardising the reporting of test results. Secondly, forms can be filled in using other applications, including Megger's AVTS, entering data into the fields using information stored in the other applications. Finally, the software can communicate directly with test and measurement equipment produced by Megger.

## Simplifying the compilation and reporting process

The new PowerDB software package eliminates many common paperwork and recording problems. With the software, the number of man hours devoted to preparing reports will be minimal. The user can customise the reports to be what a job requires, but will not have to write the report, which is instead automatically generated by the software. Included in the reports are a table of contents, data sheets and comment and deficiency summaries. PowerDB even comes with a built-in spell check.

Automatically generated professional reports mean that a testing company, for instance, is able to complete jobs faster and in a more efficient manner. PowerDB is ideal for technicians who prefer to spend a minimum amount of time writing reports and want a more concise way to process data.

Electronic records of test data can create a couple of different problems for companies and utilities. Many electronic records are hard to locate due to the vast amount of records kept on one system, however PowerDB makes it simpler. Due to its relational database, it is much easier to find present and past records and, because it has multiple safe guards, PowerDB prevents lost data. Indeed, by saving documents that are in progress to multiple places, the problem of lost data is eliminated. PowerDB also synchronises the data to several machines, meaning that a single crash does not create a costly loss of data.

Power DB

## Insulation testers

MIT230 Series is one of the smallest insulation testers available



MIT230

### 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 MΩ 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

### 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 standard as well as fused test leads

Input voltage detection on all ranges

Continuity buzzer provides a means of rapid cable testing and circuit identification

The buzzer operates at a 5 Ω threshold



MIT300

### Your safety is Megger's number one concern. These safety features look after you and the instrument:

Safety interlock to prevent unsafe connection of the test leads

Safe contact detector keeps you and your instrument 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

- Prevent continuity testing on live circuits
- Prevent insulation testing when circuit voltage is greater than 50 V

Hands-free operation

# Earth loop impedance testers

## High current earth loop impedance tester

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

### Frequency range

Supply frequency is indicated upon connection and the LT300 will automatically set to one of these supply frequencies: 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.



## 2-wire non-tripping earth loop impedance testers

The 2-wire non-tripping earth loop impedance testers verify the loop impedance of a live electrical circuit, i.e. without the need to disconnect the electrical supply. The new LTW300 series instruments offer a 2-wire loop testing solution that does not trip 30 mA RCDs and can be used on a wide range of voltages.

The new LTW300's offer a range of features to make earth loop testing safer and easier.

The range consists of:

LTW315 - 2-wire loop impedance measurement

LTW325 - 2-wire + maxZ + (R1+R2)

LTW335 - 2-wire + maxZ + (R1+R2) + download



# Residual current device testers



The RCDT tests not only type A and type AC RCDs, but also the selective (time-delayed) variants of both types, performing  $\frac{1}{2}I$ , I $I$  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  $\frac{1}{2}I$ , I $I$  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 I $I+10\%$ . 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 safety features look after you and the instrument:**

Safety interlock to prevent unsafe connection of the test leads

Test inhibit, if the supply voltage exceeds 280 V

3-phase safe, so even when connected across phases, both you and the instrument will remain safe

LED connection indicators display the correct test lead connection, making sure it is right first time

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

There are no buried functions, so they are easy to use

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 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!

RCDT

## Multimeters



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 CAT II 1000 V

Dust and weather proof to IP64

Specifically designed for the electrical engineer and professional 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 of identifying capacitive coupled, ghost and voltage. The introduction of the dual sensitivity non-contact voltage detector helps you identify a live circuit at a distance and then pinpoint the exact conductor or circuit.

The AVO®830 series multimeters also offer phase sequence detection to prevent misconnection and the consequent damage to motors and generators.

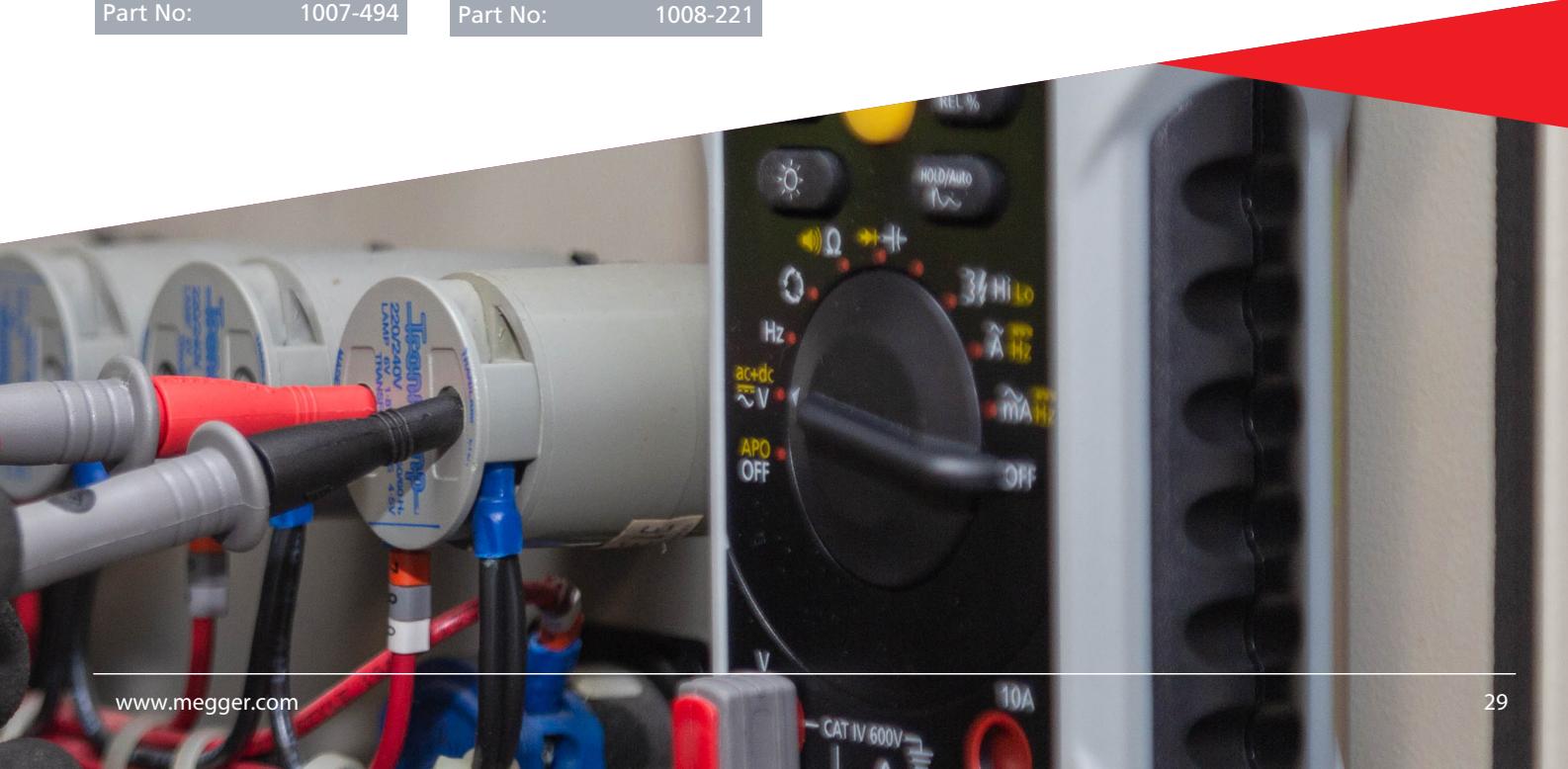
These functions are in addition to the fact that this range offers a 10 000 count display, with a basic accuracy of 0.01% and shuttered 4 mm inputs to ensure that the right connections are made every time.

AVO®830

Part No: 1007-494

AVO®835

Part No: 1008-221



## Clamp meters



### 200 A AC open jaw clamp multimeter

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 MΩ resistance range

Continuity buzzer and diode check  
Non-contact detection of AC voltage  
CAT IV 600 V

**DCM320**

Part No: 1000-304



### 400 A AC clamp multimeter

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

**DCM330**

Part No: 1000-219



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

DC current range  
Frequency counter  
Analogue bar graph  
Back light

Large jaws  
Auto off to conserve batteries

**DCM340**

Part No: 1000-305

## Clamp meters

### 1500 A TRMS clamp multimeter

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

**DCM1500**

Part No:

1005-572

Resistance, continuity and frequency measurement

Peak, minimum, maximum and data-hold functions



### Leakage current clamp

Measuring ranges: 6 mA, 60 mA, 600 mA, 6 A, 60 A, 100 A

Automatic or manual measuring range

0.001 mA Resolution

Up to 100 A range for standard AC current measurements

TRMS value reading

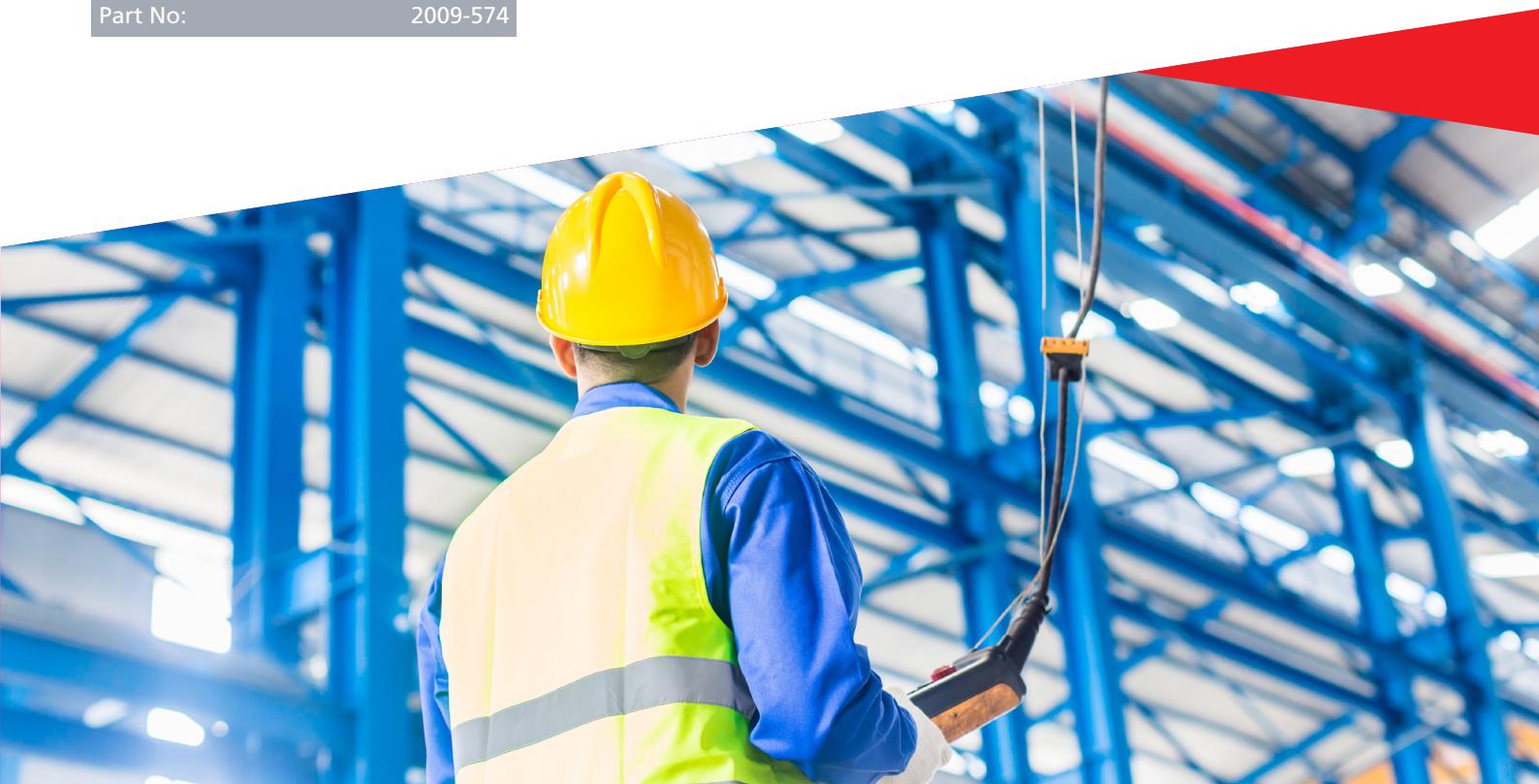
**DCM305E**

Part No:

Low pass filter to aid stability of readings

Auto-hold, data-hold and peak-hold

40 mm clamping jaw



# Thermal camera and isolation test kits

## Thermal imaging camera



Image acquisition frequency 9 Hz

Thermal sensitivity (NETD)  $\leq$ 150 mK

Hot and cold spot measurement and tracking

6000 image memory

Date and time stamp saved on images

Li-Ion battery, rechargeable

Standard camera mount

**TC3231**

Part No:

1012-514

USB interface for downloading images from SD memory

Automatic shutdown (10 minutes inactivity)

32x31 pixels 2.2 inch ( 55.88mm) TFT-LCD colour screen

Selectable colour palette

Image blending function

Visible and infrared image can be mixed 0 to 100%

Supplied Micro-SD memory card

## Two-pole tester



Voltage measurement 12 to 690 V AC/DC

Continuity check

2-pole phase rotation field display

Digital LC display, LED array

Bright white LED flashlight

Measurement category CAT IV/600 V, CAT III/1000 V

**TPT320**

Part No:

1004-304

Rotary field display can also be operated with safety gloves

Continuity range the from 0 to 500 k $\Omega$

Voltage measurements are accompanied by an acoustic signal

Systems protected by residual current circuit breakers (RCD/Fl), does not trip RCD/Fl breakers



Zertifikat Nr. S 50282391

## Test unit for two-pole tester



Tests two-pole testers

Step LED indicate test voltages 50 V, 100 V, 230 V, 400 V, 690 V

Simulates AC voltage with 50 Hz

The compact housing contains a magnetic holder

Automatic switch-on and switch-off for energy-saving operation

Battery level warning

**MPU690**

Part No:

1001-561

# Portable appliance testers

## Hand-held appliance tester

- Simple 'tick or cross,' 'pass or fail' indication plus measurement
- Tough, rubber armour with built-in front cover, hardened, scratch-proof display window
- Includes 250 V insulation and leakage testing for safe IT testing and surge protected devices
- Testing portable and fixed electrical equipment
- 10 mA and 30 mA portable RCD lead testing (PAT150)
- Adjustable PASS test limits (PAT150)
- Substitute and mains-powered leakage testing (PAT150)
- Battery powered with rechargeable options

**Included accessories PAT120:** Test leads with test probe and clamp, adapter for extension cable, hard-shell case

**Included accessories PAT150:** Test leads with test probe and clamp, adapter for extension cable, mains connection lead, hard carry case



## Full database driven portable appliance testers

- Large, illuminated, coloured display with pass/fail indication
- Customer database - up to 100 customers with 2000 locations possible for each customer
- Test item database - up to 10 000 tests results
- Bidirectional database exchange with PC software Megger dokuSTORE 4.0
- Adjustable limit values and test times
- Login to the test device with a user name and personal PIN and for legally compliant documentation, a distinction is made here between 'Supervisor' (all rights) or 'User' (restricted rights)
- Complete database backup and, if necessary, restoration via USB memory stick
- PAT420: 200 mA+10 A+25 A Protective conductor current
- PAT450: 200 mA+10 A+25 A protective conductor current and insulation test with 1500 V and 3000 V
- Barcode scanner/RFID reader and printer can be connected to the PAT via USB
- Five soft keys for quick access to frequently used functions



# MFT1800 Series

MFT1815



- Voltage TRMS up to 600 V
- Phase rotation indication
- Frequency 15 Hz to 400 Hz
- Continuity 15/200 mA with limit alarm
- Insulation 100 V, 250 V, 500 V, 1000 V
- Loop impedance with True Loop™
- 3-wire no-trip test

The MFT1800 series complies with all standards for testing low-voltage electrical installations, including DIN VDE 0100, ÖVE E 8001, NIN/NIV, and offers you all the test features needed for the mandatory testing of electrical systems. The MFT1800 series provides safety input protection across all terminals and warns the user of any dangerous voltages on both single and three-phase circuits. The MFT1800 series of testers are light, compact and easy-to-use and the MFT1845+ includes the very latest, patented, True Loop™ technology for unrivaled earth loop measurements, even in high noise environments. This makes the MFT1845+ future-proof and meets all the requirements of DIN VDE 0100-600, NIV/NIN, ÖVE E 8001 or HD 60364. All models feature two- and three-wire loop resistance testing without RCD tripping for

MFT1825



MFT1845+



- 2-wire no trip (no neutral required)
- True Loop™ with visible measurement analysis (MFT1845+)
- Programmable Fi/RCD test current
- Measured value memory 1000 results (MFT1835 and 1845+)
- Bluetooth interface (MFT1845+)

fast, repeatable results, comprehensive testing of RCDs including type B, as well as the latest current clamp measuring methods for stake-less earth testing. Furthermore, we provide an internal memory with Bluetooth communication (model dependent) for easy creation of test reports.

MFT1815

MFT1825

MFT1845+

MFT1845+

While stocks last  
price on application

Limited edition Black version





MFT1815



MFT1825



MFT1845+

MFT1845+  
limited black edition

Insulation measurement				
100 V				
250 V	■	■	■	■
500 V	■	■	■	■
1000 V	■	■	■	■
Test voltage display	■	■	■	■
Acoustic signal adjustable	■	■	■	■
Continuity and resistance measurement				
200 mA test current	■	■	■	■
15 mA test				
Measurement line compensation	■	■	■	■
Acoustic signal adjustable	■	■	■	■
Continuity test with automatic polarity reversal	■	■	■	■
Loop impedance measurement				
Fast loop measurement				
3-wire test without FI/RCD tripping (L-N-PE)	■	■	■	■
2-wire test without FI/RCD tripping (L-PE)	■	■	■	■
2-wire test with high current (L-L and L-N)	■	■	■	■
2-wire test outer conductor-outer conductor (L-L)	■	■	■	■
Display Short circuit current up to 20 kA	■	■	■	■
FI/RCD audit				
1/2 x IΔN FI/RCD examination	■	■	■	■
1 x IΔN FI/RCD examination	■	■	■	■
2 x IΔN FI/RCD audit				
5 x IΔN FI/RCD audit	■	■	■	■
Auto FI/RCD check	■	■	■	■
Increasing current (ramp test)	■	■	■	■
Type AC (standard) FI/RCDs	■	■	■	■
Type A (DC pulse) FI/RCDs	■	■	■	■
Type S (selective) FI/RCDs	■	■	■	■
Type B/B+ (sensitive to universal current) FI/RCD		■	■	■
EV RCD			■	■
Programmable FI/RCD test current			■	■
Display of the touch voltage	■	■	■	■
Contact voltage limit value sett. 25/50 V	■	■	■	■
FI/RCD tests 2-pole without N or PE	■	■	■	■
Testing with reversed polarity possible	■	■	■	■
10 mA FI/RCD	■	■	■	■
30 mA FI/RCD	■	■	■	■
100 mA FI/RCD	■	■	■	■
300 mA FI/RCD	■	■	■	■
500 mA FI/RCD	■	■	■	■
1000 mA FI/RCD	■	■	■	■
Earth measurements				
Earth measurements 2-pole or 3-pole			■	■
Earth measurements with 1 current clamp (ART)			■	■
Earthing measurements with 2 current clamp (ground loop)			■	■
Measuring voltage limit value sett. 25/50 V			■	■
Earth fault voltage test			■	■
Other functions				
Voltage measurement (L-N, L-PE, N-PE)	■	■	■	■
Frequency measurement	■	■	■	■
Current measurement with I Clamp			■	■
Phase rotation indication	■	■	■	■
Temperature measurement with external sensor, mV input			■	■
Illuminated LC display	■	■	■	■
Automatic switch-off (Auto-Power-Off)	■	■	■	■
Calibration certificate included in delivery	■	■	■	■
Operation with batteries or accumulators (NiMH)	■	■	■	■
Batteries included	■	■	■	
Batteries and charger included			■	■
Internal measured value memory, Bluetooth® download			■	■
Optional software (dokuSTORE 2.0 and 4.0, PROTOCOL manager, ELEKTROmanager)			■	■



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United Kingdom

[www.megger.com](http://www.megger.com)

IndustrialMaintenance\_CAT\_en\_V01J

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