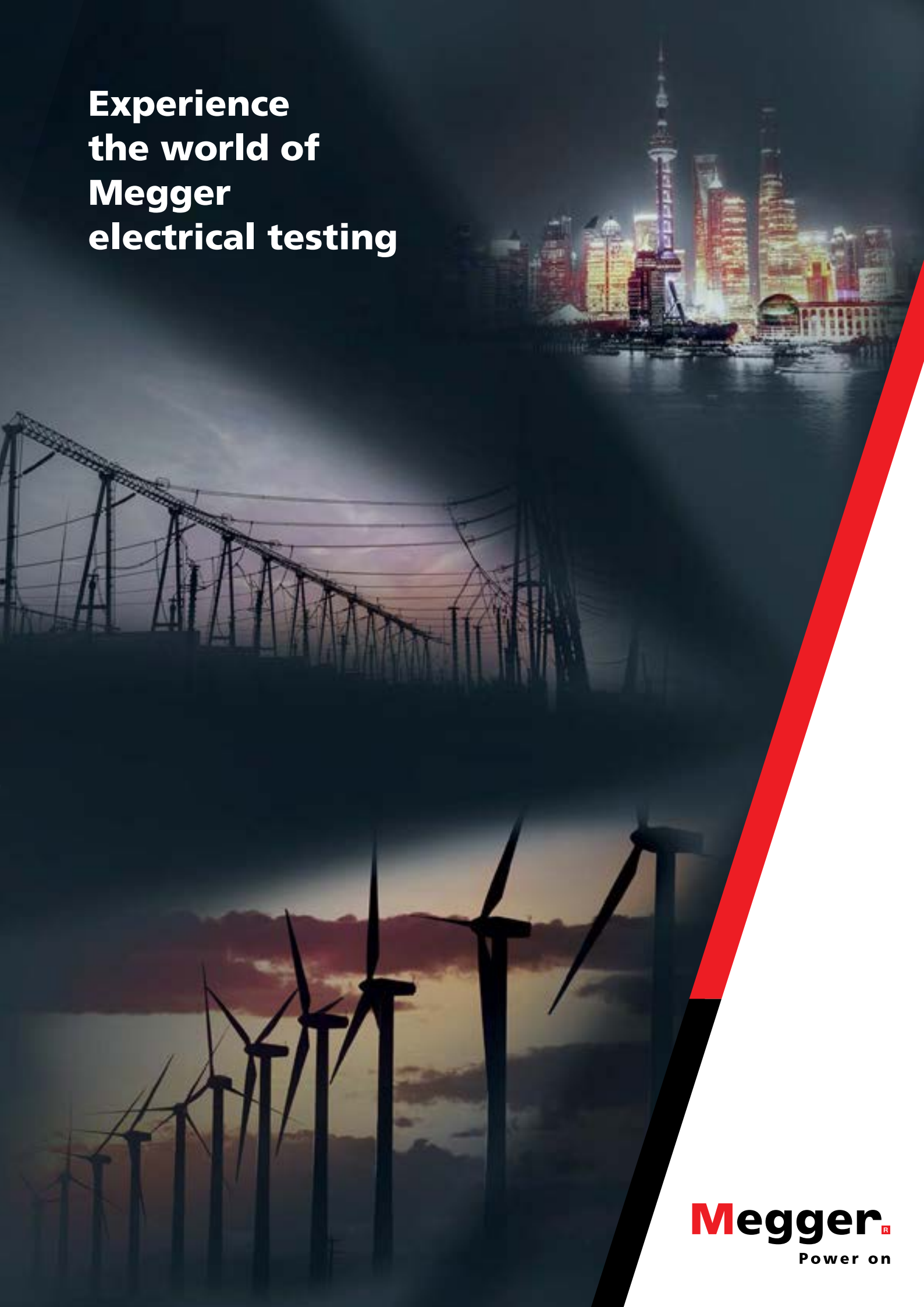


**Experience
the world of
Megger
electrical testing**



Megger[®]
Power on

Power on

At Megger, we understand that keeping the power on is essential for the success of your business. That is why we are dedicated to creating, designing and manufacturing safe, reliable, easy-to-use portable test equipment backed by world-leading support and expertise.

We can assist your acceptance, commissioning and maintenance testing for predictive, diagnostic or routine purposes. By working closely with electrical utilities, standards bodies and technical institutions, we contribute to the dependability and advancement of the electrical supply industry.

Power on with Megger!

Our mission

Our mission is to help you keep your Power on. We focus our expertise in developing innovative testing solutions that are world class in safety, performance, reliability and ease-of-use.

We are committed to providing you with measurement results and insight to make informed decisions about your assets, increasing uptime and safety.



Yesterday, today and tomorrow

For over a century, we have led the field in developing electrical test equipment. As early as 1903, the company was addressing urgent requirements among electrical engineers by developing the world's first practical insulation tester. Ever since, Megger has continued to support its customers with tough, reliable products backed up by our investment in high quality technical support.

At present, we employ over 1,300 people worldwide. We have development and manufacturing facilities in Germany, Sweden, UK and the USA, as well as sales and support organisations that cover almost every country in the world.

Megger has developed over the years by acquiring companies with complementary expertise, such as circuit breaker test expert Programma (Sweden) in 2007, and the world leader in cable test technology SebaKMT (Germany) in 2012.

As a result, products have been sold in the past under a variety of brands, including not only Programma and SebaKMT but also many others such as Biddle, PAX, Multi-Amp and AVO. Today, these are merged into the single Megger brand, so that you know immediately that you are investing in products backed by our outstanding reputation for quality, expertise and support.

We are privately owned with strong financial backing and wholehearted support for our ambitions for continued growth, both by expanding current operations and by acquiring businesses that complement and further extend our capabilities.



▲ Sydney Evershed



▲ Checking DC motor 1930



Expertise

We continually invest in people and technology to ensure our equipment provides the best, most reliable results. Our engineers are recognised as authorities in their fields; many sit on standards committees operating under the auspices of CIGRÉ, IET, IEEE, VDE and other respected national and international organisations. Megger's engineers can also be found working with research institutions and universities.

We choose our engineers not only on the basis of their qualifications and achievements, but also for their practical experience. When you have a problem, you can rely on Megger engineers to devise a practical and effective solution.

You can expect extensive support when you deal with our engineers, who share their expertise enthusiastically. They provide informal training and support, and also deliver a wide range of formal training sessions that address real issues and feature practical application content.



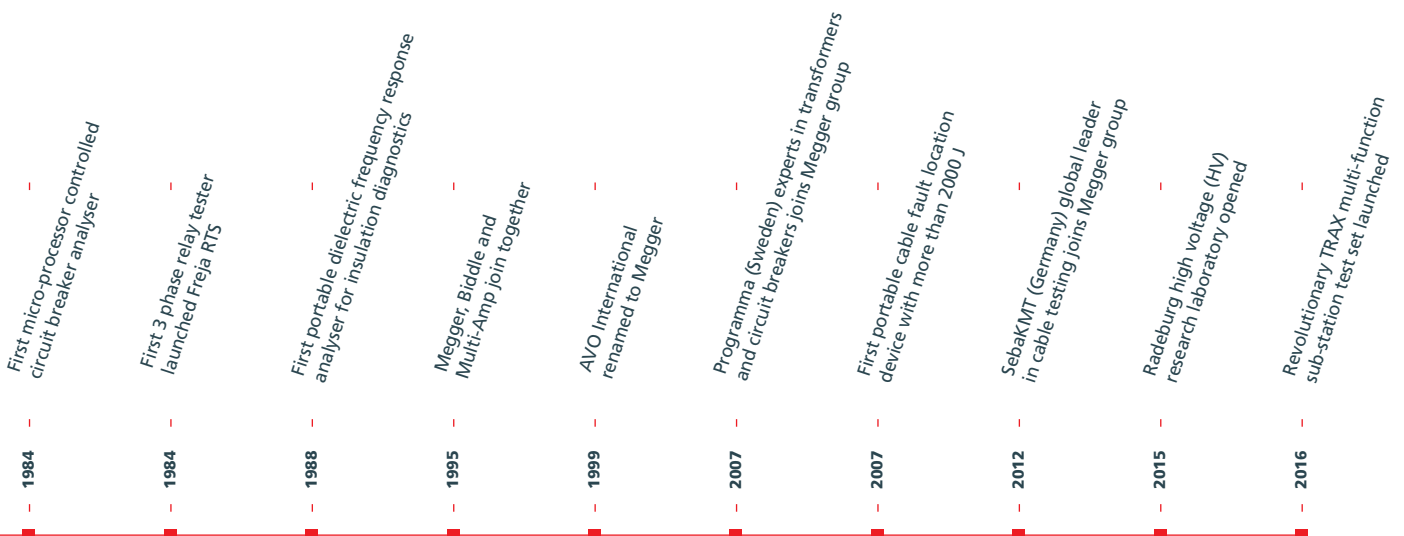
Products

Megger products cover almost every application in the electrical supply industry, from power generation to the power outlets in your home, office or factory. Yet all of these diverse products share four key characteristics to ensure you are receiving the highest quality:

- **Safety:** to provide you and your equipment with world leading protection.
- **Rugged design and construction:** to ensure that you get long, dependable service, especially in tough operating conditions.
- **Ease of use:** to increase your productivity and adoption while reducing the risk of errors.
- **Accuracy and reliability:** to consistently deliver dependable results.

Support

Dependable technical support is key to transforming a good product into your next great solution. We offer readily accessible technical support and expert training which covers all products and application areas. Our policy is to provide local calibration and repair services so that support is available wherever and whenever you need it.



The world of Megger

Applications for electrical test instruments

We understand each aspect of the electricity network, from generation and transmission, to distribution and consumption, and we want to share this experience with you. Megger is organised so as to provide you with focused technical and sales support in each application segment.



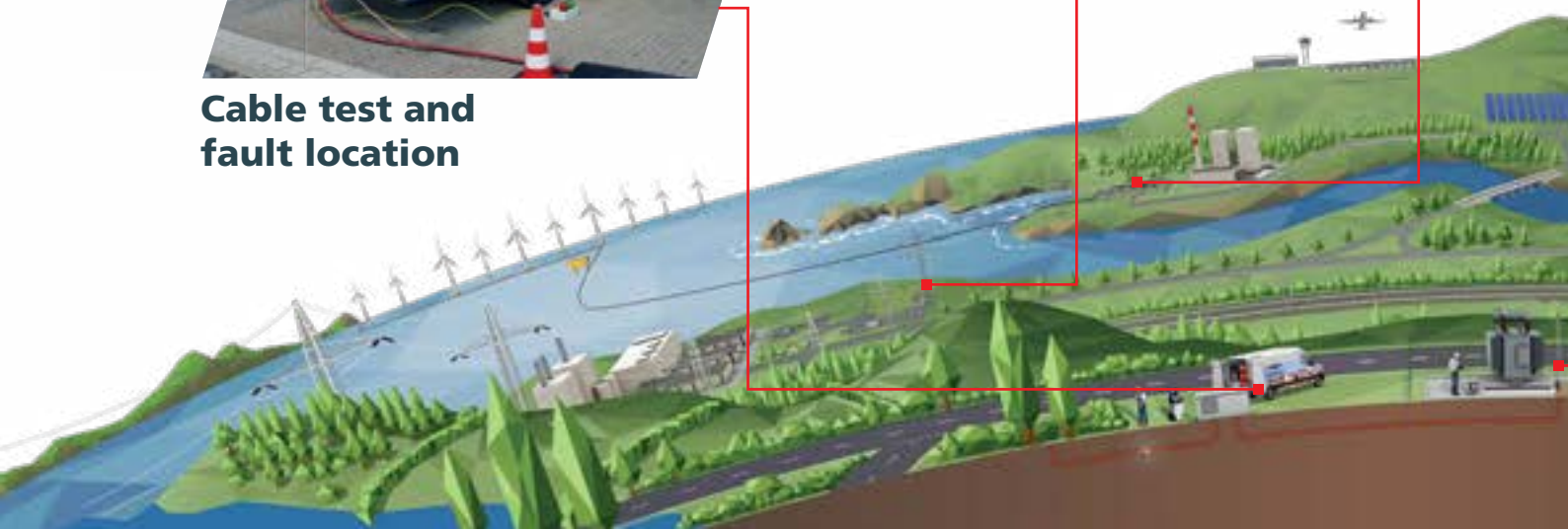
Circuit breakers



Protection relays and systems



Cable test and fault location





Transformer test and diagnostics

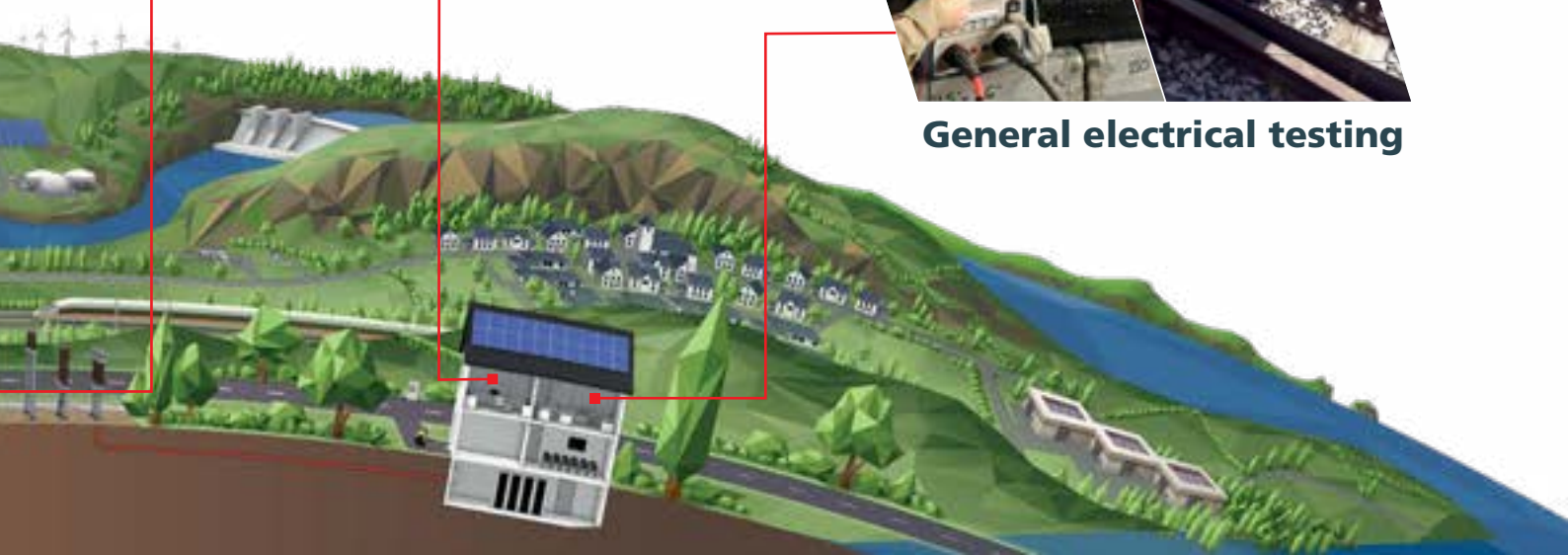
We have organised our business into six distinct application segments, to ensure we remain focused on our customers' needs across the electricity value chain from generation and transmission to distribution and consumption. We want to pass our combined experience across these application segments and our focused technical and sales support on to you.



Low-voltage installations



General electrical testing



Cable test and fault location

The world leader

We are the world leader in cable test, diagnostic and fault location solutions. Featuring groundbreaking performance, robustness and ease of use, our cable test products are designed to give you faster, more accurate results. They find cable faults that other instruments cannot, maximising uptime and driving your costs down.

Cable Fault

The world's electrical utilities depend on our products to minimise customer minutes lost by locating faults quickly and accurately. In short, they depend on Megger to keep the Power on.

Cable test and diagnostics

Proof testing and cable condition diagnostics are now widely accepted as part of commissioning or acceptance testing. These methods are also found as part of in-service condition assessment to manage the replacement of appropriate cables sections. We offer a range of industry leading diagnostic solutions from withstand testing to partial discharge and tan delta/power factor diagnostics.



Why Megger?

- We have been renowned as a world expert in cable testing, diagnostics and fault location since 1946.
- Your productivity is at the forefront of our product development: Megger products find difficult faults with high accuracy, reducing power outage time.
- A range of technology solutions for low, medium and high voltage cables: our products are designed to protect your operators and minimise the risk of damage to the cable.
- We offer equipment for DC and AC insulation testing, sheath testing, partial discharge analysis and time domain reflectometry.
- Our products support damped AC (DAC), sinusoidal AC and cosine-rectangular test technologies.
- Megger is the expert in cable test, diagnostics and fault location, supporting you with in-house knowledge and well-trained application engineers.



Protection relays and systems

Simplifying complex protection relay tests

The world's electrical power grids carry enormous power; they must maximise reliability while optimising spare transmission capacity. To do so, the protection relay systems that oversee these power grids have evolved into integrated, complex "Smart" systems. Validating and testing the protection relay scheme's operation is mandatory to ensuring network reliability and safety.

We have over 50 years of protection relay testing experience, and have concentrated that experience into making your complex protection relay testing challenges easier. We accomplish this by combining intuitive operation with robust, reliable solutions.

Our solutions are also flexible enough to test whatever power grid protection scheme you are faced with. Simplified, flexible solutions speed up the testing process, reducing the operator's errors, the customer's downtime, and your costs.



Why Megger?

- Learning to use our equipment is simple thanks to our intuitive touch screen user interface (UI).
- You do not need to rely on an external laptop because our equipment's comprehensive interface is built-in.
- You can rely on our wealth of experience accumulated as the industry leaders in protection relay testing.
- Whether you are testing legacy electro-mechanical or modern IEC 61850 networked devices, our products output the high power you need while still being portable for real world testing.
- Megger relay test sets have the flexibility to address the multitude of different protection schemes that ensure electrical grid reliability.
- Real-world testing requires tough equipment; we offer a rugged line of relay test sets including single-phase and three-phase equipment with integrated displays. The test sets can be used for both manual and automatic testing.
- The best solution should also be cost effective: the software required to test most relays is included with the test set so you won't incur additional expenses.
- We are here to help you wherever you are thanks to our worldwide support engineers who have extensive relay testing expertise.



Circuit breakers

Benefit from Megger's experience

When it comes to testing circuit breakers, Megger is the most experienced company in the world. We have the most comprehensive and versatile range of products for testing these critical assets. Our mission is to make sure you can determine a circuit breaker's mechanical and electrical condition without the need for costly and disruptive dismantling.

Our equipment is capable of evaluating every aspect of circuit breaker performance, and is designed specifically to be safe and easy to use, while delivering reliable results.



Why Megger?

- Megger test equipment covers circuit breakers of all types, from low voltage (LV) to high voltage (HV).
- Your safety is our priority; our advanced dual ground technology lets you test circuit breakers with both sides grounded, saving time without compromising on measurement quality. All circuit breakers may be tested in this way (GIS, GCB, etc).
- Our products perform standard tests such as contact timing, as well as advanced methods including dynamic resistance and online testing.
- Record and analyse your results easily with our supporting software.
- We gained our extensive experience by partnering with circuit breaker manufacturers and service companies. We offer a wide range of accessories and expert technical support to ensure accurate results
- Wide range of accessories and expert technical support to ensure accurate results across all types of breaker
- Our configurable test products provide bespoke solutions to your testing requirements.



Transformer test and diagnostics

The industry's widest range

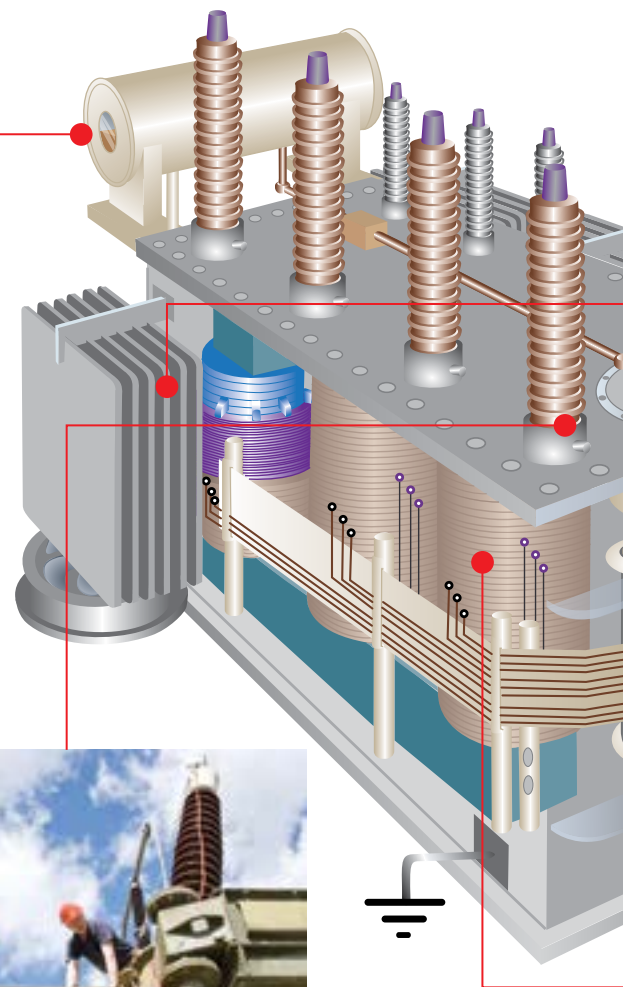
Transformers are a substation's most costly assets. Understanding their condition is vital for minimising the risk of failure, identifying faults when they do occur, maximising lifespan and for making the most cost-effective maintenance and operational decisions.

There are several facets to your transformer's overall health, so a full assessment requires a number of tests. We offer the broadest range of transformer test equipment in the industry, capable of delivering the most comprehensive picture of a transformer's health. Complementing the equipment is an accessible team who are eager to provide you with support. Our team has exceptional industry knowledge, including expertise in commissioning, testing, diagnostics and failure modes.



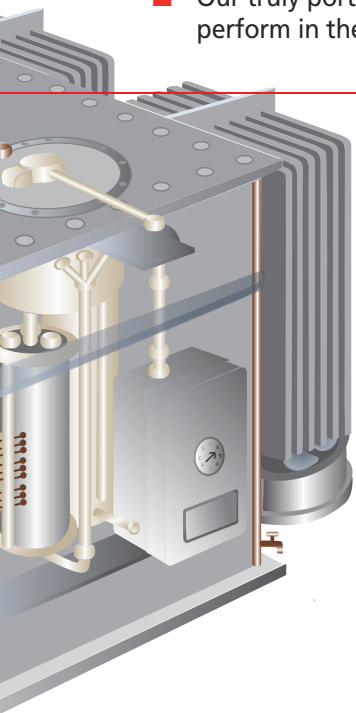
◀ Insulating oil absorbs moisture over time leading to potentially catastrophic failure. Routine measurement of the dielectric strength is critical

▼ Bushing deterioration of the insulated conductor can be detected by power factor or capacitance tests



Why Megger?

- We offer the widest range of transformer testing solutions, from standard tests such as winding resistance, turns ratio measurements and oil condition tests; to advanced methods such as dynamic resistance tests, sweep frequency response analysis and dielectric frequency response (SFRA/DFRA) measurements.
- Our equipment tests power transformers, bushings, tap changers and instrument transformers.
- You receive unparalleled value through our patented features, covering: individual temperature correction (ITC), automatic voltage dependency detection (VDD) and dynamic resistance measurements of load tap-changer diverter resistors.
- Our truly portable instruments are designed to perform in the field and increase productivity.
- Choose the best way to test with a user interface that works for you, either via built-in computer or externally controlled.
- Streamline your test program with a transformer test van; Productivity and safety gains from minimal set-up time with automated procedures for standardized measurements.



Failure of winding insulation can lead to reduced performance or catastrophic failure. Winding resistance, turns ratio and SFRA are common diagnostic techniques

The core's steel laminations must be insulated and grounded for safe operation. Exciting current and DC insulation resistance detect most problems



Low-voltage installations

Solutions for the real world

Megger was founded on its insulation testing products and has always produced low voltage testing solutions that address real-world requirements. We pride ourselves on the development of safe, reliable and robust test solutions, with low lifetime costs that do not compromise on accuracy or performance.

You test in tough conditions every day, and our equipment will stand up to those challenging environments, operating quickly and intuitively to save you time and money.

Although the potential hazards are less than high voltage systems in impact, the location of these hazards are potentially just as lethal. For these reasons, our low voltage test equipment is designed to the highest standards in the industry to ensure safety when testing and locating faults.



Why Megger?

- We produce a range of products to meet your needs, including: continuity, insulation test, loop impedance, RCD protection, ground test and PAT testing.
- We have unmatched experience and expertise in low voltage testing.
- You can rely on the excellent track record our installation and appliance test equipment enjoys for reliability, accuracy and performance.
- Megger products incorporate class-leading safety features to protect both users and assets.
- Our instruments combine versatility with intuitive operation to improve productivity and protect both asset and user.
- Thanks to our involvement in the development of testing and safety standards, we offer you a deep pool of industry knowledge.
- We meet the highest protection levels available as demanded by progressive professionals globally.
- Our instruments are designed to minimise damage to the equipment under test and the end-user, in case of mishaps like touching live circuits or connecting across phases.



General electrical testing

Test anywhere, anytime

Megger also offer a large catalogue of general purpose test instruments that cross a wide range of industries and applications. The ever-changing electrical and industrial environments have increased the demand for instruments such as;

- 5, 10 and 15 kV insulation resistance testers
- Digital low resistance ohmmeters
- Standby battery test instruments
- Power quality analysers

Each instrument in this family has been designed to work where and when the end user works. Testing is often done in the field in harsh, difficult environments, not in laboratories. Snow, dust, rain, humidity, altitude and electrical noise are among the common conditions that end users face on a daily basis. Result accuracy and repeatability are critical for each measurement made, as is the ultimate safety of the user.

Megger draws on over a century of development experience in these test areas to deliver the most advanced families of testers available anywhere in the world. Megger's test instruments are engineered to maximize both performance and safety. Unique features in each instrument result in peak measurement accuracy and repeatability, while ensuring the highest level of user protection.



Why Megger?

- Over a century of continuous experience developing and manufacturing general purpose test instruments for the electrical industry.
- Instrument designs that meet and often exceed the requirements of standards like IEC61010-1, ensuring the highest level of operator safety.
- Industry leading IP rating, noise rejection, impact resistance and temperature specifications allow operation in the widest range of environments.
- Designed with unique capabilities based on our application experience to ensure world-best operating performance.
- Intuitive product interfaces to reduce training time and ease product use.
- Exceptional technical and application support based on years of field experience across many industries.



Manufacturing and technology

Megger pioneers new technologies to deliver genuine benefits for its customers. The company is rigorous in its evaluation of these technologies to ensure that the high standards of safety, reliability and durability for which its products are renowned are always maintained.

We have a strong focus on research and development, and look to reinvest a high proportion of our income in these activities. This investment has attracted some of the worlds most talented and creative test-equipment design engineers. To ensure that our products reflect real world needs, we have collaborative arrangements with major manufacturers of equipment used in all areas of the electrical energy supply industry.



Corporate social responsibility

At all of our facilities around the world, and in every area of its operations, we are committed to being a good employer and a good neighbour, as well as to safeguarding the environment. Megger has a comprehensive safety policy supported by regular risk assessments covering all areas of its business. The company holds ISO9001 approval or the equivalent at all of its locations and it enforces strong environmental protection procedures.



Power on, it's essential

In today's ever advancing world the grid has never faced so many challenges and all this is supported through an aging electrical infrastructure.

We recognize your needs to deal with the complexity in commissioning, reduced outage time for maintenance and the high performance demands to keep the flow of power available

Our passion, our spirit and our pride is to support you with the right instruments and expertise enabling you to perform that challenging duty day after day. We continuously strive to improve speed of testing and provide reliable and accurate results. We dedicate our creative talents to ensure your safety when hooking up to perform testing.

Each Megger test solution is an expression of this passion, this spirit, pride and commitment. It is an extension of your determination to keep the world connected, to keep the Power on.



So why not talk to us and
discover how Megger can
help you to Power on.

Megger[®]

Power on

Megger around the world

Dallas,

USA – Development and manufacture of protection relay, CT/VT and high current switchgear test equipment.

Valley Forge,

USA – Development and manufacture of cable fault, transformer, battery impedance and power quality test equipment.

Baunach and Radeburg,

Germany – Research, development and manufacture of cable test, diagnostic and fault location systems.

Dover,

UK – Corporate headquarters.

Development and manufacture of insulation testers, low-voltage installation test equipment, oil tester and low resistance testers.

Danderyd,

Sweden – Development and manufacture of circuit breaker, transformer, primary injection, battery discharge and protection relay test equipment.

In addition to these major manufacturing sites, Megger has 25 sales offices and distributors in over 100 countries around the world.



Megger Group Ltd

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▼ Manufacturing Sites ▼ Sales Sites