

Product Guide

Safety & Function Testers



Made in Germany



Single testers and complete production lines.

Everything from one source.

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Handheld

Mobile universal testing device

Universal testing devices for safety tests according to standards in workshops, production and for mobile applications like repair, maintenance and service.

The Handheld offers ideal features for mobile applications. For example, you can hang it around your neck with carrying straps, allowing you to work comfortably with both hands. Perfect operation is provided by start switches on both sides.

This tester offers a great variety of possible applications. For example, in the production of switchgear cabinets and in mechanical engineering. It can also be used for checking the lightning protection of wind-power stations.

- > 3 standard devices for individual test tasks
- > PE/GB-resistance AC 10 A
- > Insulation resistance DC 100 up to 1000 V
- > HiPot DC 100 up to 2500 V
- > Function max. 2 A
- > Internal test-result storage
- > RS232-interface



> www.schleich.com/en/handheld

GLP1-g single testers

HiPot, insulation and PE/GB-testers

With a finely balanced variety of products, these testing devices offer test currents or test voltages for almost any type of application.

Single testers are often used at manual work places, in laboratories, for the inspection of incoming goods, as well as in test systems and for special-purpose machinery manufacture. Owing to a multitude of interfaces, GLP1-g testers are well-suited to be used within industrial automation. Typical features are starting tests, storing and evaluating test results externally.

- › Manual and automatic tests
- › PE/GB-testers up to 75 A – AC/DC
- › Insulation-resistance testers up to 10 kV
- › HiPot testers AC up to 50 kV | DC up to 10 kV
- › Fully-electronic test generator
- › Two-circuit safety inputs
- › Interfaces for PC, PLC and barcode reader
- › Touch display
- › Internal and external storage of test results
- › PC-software for reading, storing and printing test results
- › Wide-voltage range – for world-wide applications



› www.schleich.com/en/glp1-g

GLP1-g combination testers

Universal safety and function testers

With a finely balanced variety of products, these testing devices offer combinations of test methods with test currents and test voltages for almost any type of application.

Combination testers are often used at manual work places, in laboratories, for the inspection of incoming goods, as well as in test systems and for special-purpose machinery manufacture.

Owing to a multitude of interfaces, GLP1-g testers are well-suited to be used within industrial automation. Typical features are starting tests, storing and evaluating test results externally.

- › Manual and automatic tests
- › PE/GB-test up to 30 A – AC/DC
- › Insulation-resistance test up to 6 kV and 10 GΩ
- › HiPot test AC up to 6 kV | DC up to 6 kV
- › Functional test up to 5 A
- › Fully-electronic test generator
- › Two-circuit safety inputs
- › Fully-automatic test-method switch over
- › Interfaces for PC, PLC and barcode reader
- › Touch display
- › Internal and external storage of test results
- › PC-software for reading, storing and printing test results
- › Wide-voltage range – for world-wide applications



Example: testing LEDs



› www.schleich.com/en/glp1-g

GLP2-BASIC single testers

HiPot, insulation, leakage current and PE/GB-testers

With a finely balanced variety of products, these testing devices offer combinations of test methods with test currents and test voltages for almost any type of application.

Single testers are often used at manual work places, in laboratories, as well as in test systems and for special-purpose machinery manufacture. Owing to a multitude of interfaces, the testers are well-suited to be used within industrial automation. Typical features are transmitting set values to the testing device, as well as starting tests and storing and evaluating test results externally.

- › Manual and automatic tests
- › PE/GB-testers up to 30 A – AC/DC
- › Insulation-resistance testers up to 6 kV
- › HiPot testers AC/DC up to 6 kV
- › Leakage-current testers
- › Two-circuit safety inputs
- › LAN, WLAN, USB and serial interfaces for PC and PLC
- › Interface for barcode reader
- › Internal and external storage of test results
- › Touch display
- › Network operation with or without additional PC
- › Wide-voltage range – for world-wide applications
- › Available as 19"-table-top unit or in 19"-enclosure for rack mounting



› www.schleich.com/en/basic

GLP2-BASIC combination testers

Universal safety and function testers

With a finely balanced variety of products, these testing devices offer combinations of test methods with test currents and test voltages for almost any type of application.

All testers made by SCHLEICH comply with national and international standards (IEC, EN, UL, VDE, etc.).

Owing to the integrated test-method switchover, it is not necessary to reconnect the test object during the test. The test process can be created intuitively and exactly as you require, offering maximum multi-functionality.

- › Manual and automatic tests
- › PE/GB-test up to 30 A – AC/DC
- › Insulation-resistance test up to 6 kV and 10 G Ω
- › Leakage-current test following typical international standards
- › HiPot test AC/DC up to 6 kV
- › Functional test up to 16 A (single-phase)
- › Fully-electronic test-voltage generator
- › Two-circuit safety inputs
- › Fully-automatic test-method switch over
- › LAN, WLAN, USB and serial interfaces for PC and PLC
- › Internal and external storage of test results
- › Touch display
- › Network operation with or without additional PC
- › Wide-voltage range – for world-wide applications



› www.schleich.com/en/basic

GLP2-ce MODULAR

Universal safety and function testers

The GLP2-ce MODULAR offers an almost endless number of possibilities to combine a great variety of safety and functional test methods. This multifunctional testing device sets the benchmark for testers of this category.

Based on the SCHLEICH MODULAR CONCEPT, the testing device can be configured as a complete test system. The GLP2-ce MODULAR, which can also be integrated into production lines, is remote-controllable and allows order processing. Scanners and label printers can be connected.

In addition to the hardware, the software is extremely flexible, as well. Due to the integrated script commands, you can also realize PLC-functions in the tester. For example, interrogate inputs, set outputs...

- › Fully-automatic, semi-automatic and manual testing
- › PE/GB-test up to 200 A
- › Insulation test up to 10 kV
- › HiPot test AC/DC up to 100 kV
- › Leakage-current test 30 mA – 1 MHz (complying with standards)
- › Functional test 1- and 3-phase up to 120 A
- › Resistance test
- › Internal and external switch-over matrices
- › Fully-automatic test-method switch-over
- › Multi stations with up to 3 test stations
- › LAN, WLAN, USB and serial interfaces for PC and PLC
- › Internal and external storage of test results
- › Touch display
- › Network operation with or without additional PC



Freely-configurable testers



› www.schleich.com/en/glp2-ce

HiPot testers

From 1 kV up to 100 kV AC/DC

Our HiPot testers provide test voltages for almost every type of application. We offer a finely balanced variety of testers from 1 kV up to 100 kV AC/DC with different currents and powers.

The testers are perfectly suited for fast and easy testing during repair and within production. The tests are performed either manually with safety test pistols or automatically.

- › Manual and automatic testing
- › HiPot AC/DC
- › Test current max. 1 A
- › Electronic test-voltage generator
- › Adjustable voltage profiles and test sequences
- › Graphic TFT display for digital and analog presentation
- › Two-circuit safety inputs
- › Interfaces for PC or PLC



≤ 100 kV

› www.schleich.com/en/highvoltage

HiPot testing facilities

From 1 kV up to 100 kV AC/DC

Our HiPot testers provide test voltages for almost every type of application. We offer a finely balanced variety of testers from 1 kV up to 100 kV AC/DC with different currents and powers.

The testers are perfectly suited for testing within production, in laboratories and for type tests. After the test object has been connected, the tests are normally performed fully automatically.

Typical fields of application:

- › Testing of electric tools and safety gloves
- › HiPot test with partial discharge
- › Inspection of insulators
- › Inspections of leads, cables, cable harnesses and more

- › Manual and automatic testing
- › HiPot AC/DC
- › Test current up to max. 10 A
- › Fully-automatic voltage regulation
- › Electronic test-voltage generator
- › Adjustable voltage profiles and test sequences
- › Upgrade with partial-discharge test according to standards
- › Two-circuit safety inputs
- › Interfaces for PC or PLC
- › Test covers and test cages



› www.schleich.com/en/highvoltage



Freely-configurable testers



GLP3

High-end tester for mass production

Manual or automatic single, dual or multiple test stations – with or without test cover or test table – or testing in automatic production lines, the GLP3 is the ideal solution for all complex test tasks.

The GLP3 provides visualized operator prompting for fault-free test processes. The test plans are subject to revision management – this is a precondition for traceable testing, for example in the automobile industry.

- › Safety tests of all kinds
- › Functional test 1-phase and 3-phase up to 1000 A
- › Testing of physical quantities: pressure, temperature, Leakage, r.p.m., vibration, noise...
- › Optical inspection systems
- › Up to 500 programmable test points
- › Multi stations with up to 50 test stations
- › Result storage e.g. in: SQL, XML, HTML, PDF, CSV
- › Controlling label printers
- › Interfaces for PLC, ERP- and MES-systems
- › Globally networked test systems with central database
- › Contactings, test adapters
- › Test covers, protection devices



Freely-configurable test systems

› www.schleich.com/en/glp3



Testing railroad vehicles

Mobile and stationary safety & function testers

We offer combined power and safety testers for workshops or test facilities, for the production of new railroad vehicles and for service purposes for preventive maintenance.

In addition to our standard program for testing according to standards, we provide individual solutions, for example testing train busbars at passenger cars or railway-switch drives and heaters.

We are a certified supplier of Deutsche Bahn (DB).

- › Contact resistances between railway track and railroad vehicle
- › Insulation tests
- › HiPot tests up to 100 kV
- › Functional and power tests, e.g. heaters, air conditioners, onboard kitchens, ...
- › Special contactings for railroad vehicle and railway tracks
- › Testing of traction drives with surge voltage
- › Surge voltage and HiPot with partial discharge
- › Storage of test plans referring to the vehicle
- › Storage and print-out of test results included vehicle number



Freely-configurable test systems

› sales@schleich.com | +49 2372 9498-9498

Automation

Test systems, test workstations, EOL-test stations

SCHLEICH develops, designs and manufactures complete test workstations and EOL-test stations with a great variety of testers according to your requirements.

With our know-how and the experience we have achieved in numerous projects, we can offer you tailor-made solutions for every possible task in quality assurance.

- › Customized test workstations, EOL-test stations
- › Integration of test stations into existing production lines
- › Test cells with rotary indexing table
- › Integration of robots incl. robot grippers
- › Integration of camera systems
- › Mechanical adaptation, contactings and test adapters
- › Interfaces for PLC, ERP- and MES-systems
- › Result evaluation according to statistical methods



Freely-configurable test systems



› www.schleich.com/en/automation

Automation

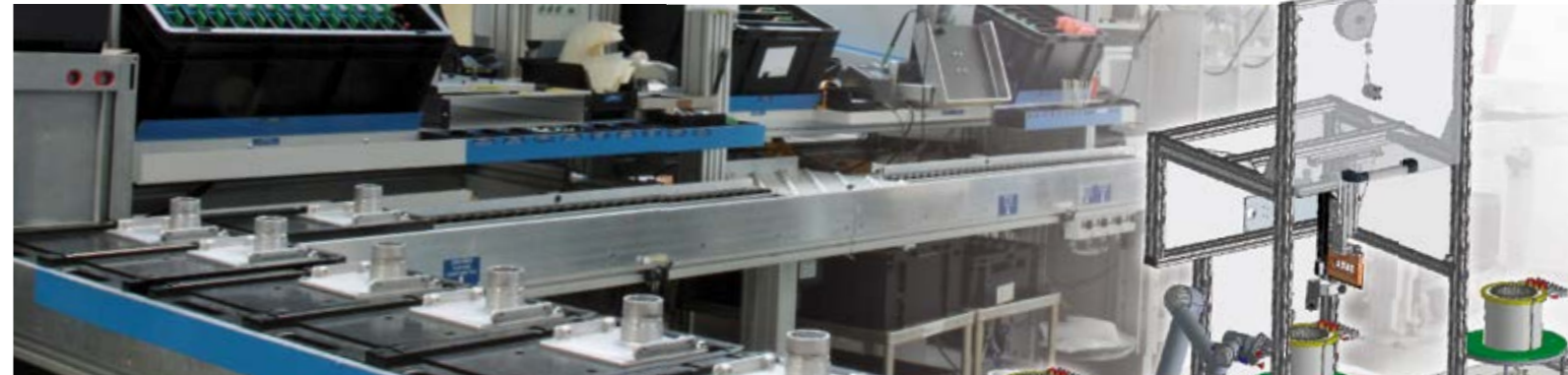
Turn-key production lines

SCHLEICH plans, develops and manufactures complete production lines with all manufacturing, processing and test stations including transfer system.

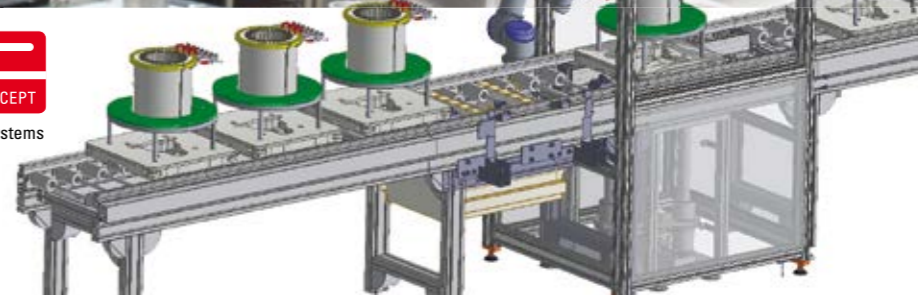
We offer decades of experience in manufacturing complete automation systems with an emphasis on economical production and ergonomic design of all components. We take care of everything: design, all connections and the integration into your system. In addition, we carry out the commissioning and offer specific training of your personnel on site.

This has the advantage that you receive the complete system on a turnkey basis from a single source and later in day-to-day production you have one contact only for any question on the production line.

- › Integration of all production and processing stations, transfer systems with product carriers and our high-performance test systems
- › Planning, design and production of the system
- › Assembly, connection and integration
- › Use of state-of-the-art technologies with scanners and camera systems
- › Turn-key delivery and commissioning of the system
- › Training of the personnel
- › Efficient after-sales service



Freely-configurable test systems



› www.schleich.com/en/automation

Data management

Global networking, statistical analysis and traceability

The philosophy behind SCHLEICH's data management is the collection of test data in a central database. The test data can be from different testing devices and the integration into an ERP-system is possible.

Global networking via the internet in connection with a great number of supported storage formats and transmission protocols ensures the highest possible flexibility and compatibility for common database systems (SQL, Access, Oracle, ...).

For the users of SCHLEICH testers this offers enormous benefits, e.g. for the evaluation of test results, for the joint use of test plans or for the traceability of products.

The statistical analyses of test results, possible with a great number of SCHLEICH testers, support you with your quality management. A multitude of possible test protocols allow you to document the tested quality to your customers.

The traceability enables you throughout the complete production process, and later, to obtain complete and clear information about the overall production process. Should there be quality problems in production or after delivery, the traceability puts you in the position to react in a prompt and targeted manner.



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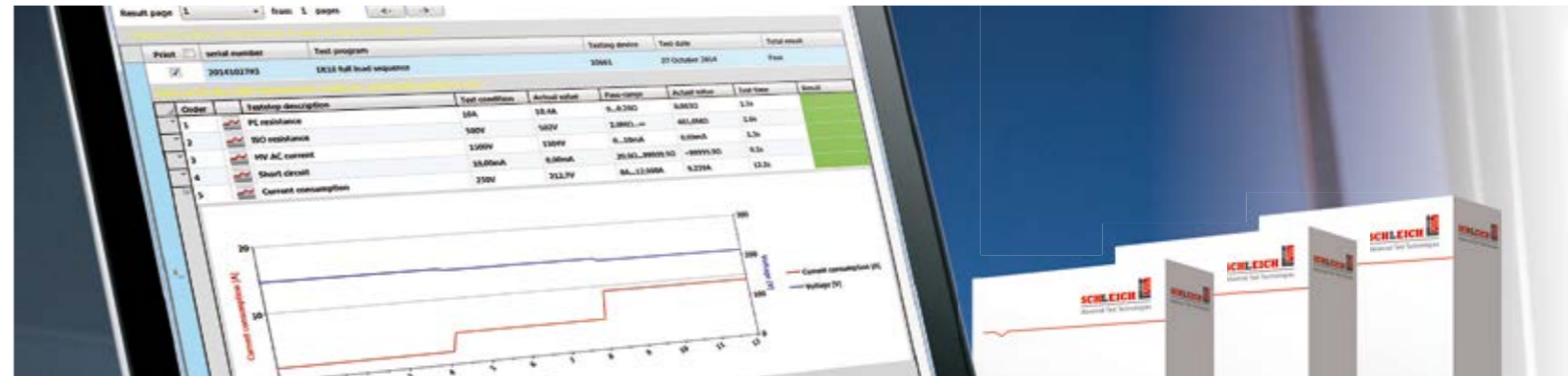
Accessories

PC-software – editing test plans, storing and printing test results

For our testing devices GLP1-g and GLP2, we offer various software packages with extensive functions for the management, processing and transmission of data.

The software packages come with varying functions and performance features. In order to find the optimum software for your application, we would be happy to advise you.

- › Comfortable generation and adaptation of test plans at the PC
- › Reading out test results during the test and from the interim storage of the testing device
- › Storage of test results in individual result databases on the PC or on the server in CSV- or EXCEL®-format
- › EXCEL®-protocol templates with your logo; ready-made or to be freely designed just as you wish
- › Connection between PC and testing device via RS232- and USB-interface or Ethernet in the company network
- › Personalized test protocols
- › Varying print protocols
- › Fast and effective Microsoft® SQL-Express database
- › Analysis software under Windows® with statistical evaluations and graphic presentation



› www.schleich.com/en/software



Accessories

Standard test covers and test tables

SCHLEICH test covers focus on the safety of the operator: according to standards, the operator is protected either by a touch guard or by a light curtain.

The basis of all test covers is a robust aluminum frame, suitable also for higher weights. The transparent components of the cover are made of shatter-proof Lexan.

Suitable contactings for a variety of test objects are, of course, also part of our scope of delivery.

- › Single test covers
- › Dual test covers
- › Test chambers
- › Test tables
- › Rolling tables
- › Test covers integrated in production lines
- ...



› www.schleich.com/en/accessories



Accessories

Customized test covers and test tables

In addition to an extensive range of standard test covers in different sizes, we supply customized versions tailored to your application.

Like the standard test covers, the basis of all test covers is a robust aluminum frame, suitable also for higher weights. The transparent components of the cover are made of shatter-proof Lexan.

From our pool of modules, we design a tailor-made test cover to match your application. For mobile use, we offer solid rolling tables in various designs.

- › Test covers, test chambers and test cages in varying sizes
- › Customized test tables and rolling tables
- › Test covers – stand-alone or integrated into production lines
- ...



› www.schleich.com/en/accessories

Accessories

Test pistols, test probes and safety equipment

We offer a large variety of ergonomic test probes for numerous test methods.

Our warning lights serve to inform the operator and others that the test object is connected to test voltage.

In cases, where no automatic protection against accidental contact is given, e.g. by a test cover, we offer various two-hand start variants for the protection of the operator.

- › HiPot-test pistols up to 15 kV
- › Resistance test probes in 4-wire technology
- › Warning lights in numerous designs
- › Two-hand start
- › ...



› www.schleich.com/en/accessories

Accessories

Connection boxes

For different types of contacting, we offer a variety of connection boxes. For example for the testing devices GLP1-g or GLP2-BASIC. This enables a comfortable and fast contacting even of connections that are not as common.

The connection leads of the connection boxes are connected at the rear side of the testing device.

There are different types of connection boxes offering different types of contacting. They are suitable for different test methods, like PE/GB-resistance test, insulation-resistance test, high-voltage test, leakage-current test and functional test.

Possible contactings:

- › Grounded socket with L, N and PE
- › 3-phase current plug for L1, L2, L3, N and PE
- › International standard sockets or socket combinations for many different countries
- › Pole sockets for L, N and PE, designed as Ø 4 mm-safety sockets
- › Pluggable quick-release terminal for connecting free cable ends (for 3 or 5 wires)
- › Metal pads for applying high-voltage test pistols



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Accessories

Standard contactings

One of SCHLEICH's strengths is the mechanical adaptation of test objects and the contacting.

Our "pool of modules" contains a large number of different contacting pins and clamps for various dimensions.

- › Kelvin clamps in numerous sizes
- › Kelvin clamps for a variety of applications
- › Modular contactings (terminal blocks)
- › Luster-terminal adapters
- › Spring-mounted contacts
- › Production of samples and final products in small quantities on state-of-the art 3D-printers
- ...



› www.schleich.com/en/accessories



Accessories

Special contactings

One of SCHLEICH's strengths is the mechanical adaptation of test objects and their special contactings. We manufacture and deliver customized contacting devices, designed with modern CAD-systems in 3D.

Latest CNC-machines in our mechanical department assure the professional and cost-effective production of individual components. For the assembly, we also avail ourselves of our pool of modules, which provides a multitude of different contact pins, Kelvin clamps and pneumatic components.

The result is a test system with test cover and mechanics perfectly matching your test task.

- › Durable and robust design
- › 2-wire or 4-wire contactings
- › High-current contactings
- › Special solutions for manual contacting
- › Special solutions for automatic production lines
- › Float-mounted Kelvin clamps for position-tolerant automatic contacting
- › Spring-mounted contact pins in 2-wire and 4-wire configuration
- › Fast exchange of wearing parts



› www.schleich.com/en/accessories

Accessories

Blackbox

In order to ensure the safe operation of SCHLEICH testing devices, they need to be checked on a regular basis with the so-called blackbox (test dummy). These blackbox tests serve to ensure correct test values for different test methods and should be performed at least once a day.

With the blackbox, you can indicate certain set values within narrow \pm -tolerances or simulate "GO/NOGO-results". The blackbox test is performed in an interactive mode with the operator, who gets instructions via the display of the testing device to carry out certain contactings or settings at the blackbox. SCHLEICH offers different blackbox models suited for checking a variety of test methods.

The following test methods can be tested with a blackbox:

- > Function / current consumption
- > Insulation-resistance test
- > HiPot-test
- > Leakage-current test
- > PE/GB-resistance test



> www.schleich.com/en/accessories

Accessories

HiPot-modules

For our testing devices with high voltage, SCHLEICH offers special accessories.

Our product range comprises all necessary HiPot-components with varying voltages and currents for building matrices (switch-over fields) for OEM-customers and manufacturers of automation systems.

It goes without saying that SCHLEICH also supplies Hi-Pot switch-over fields as turn-key solution together with our testing devices.

Our product range includes:

- › HiPot-cable up to 100 kV DC
- › HiPot-relays with contact voltages up to 6 kV AC / 10 kV DC
- › A great variety of HiPot plugs – and sockets
- › Fully assembled switch-over fields

...



› www.schleich.com/en/accessories

One source.
All test solutions.

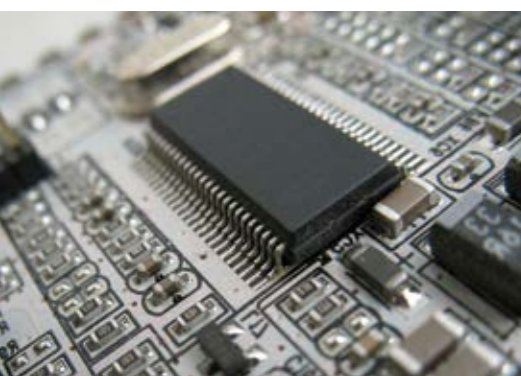


Whatever you want to test... ...SCHLEICH has the solution!

SCHLEICH is **the** system provider in the area of safety and functional testing. Our extensive range of products allows us to provide you with testers, test systems and complete production lines for almost every test task.

Decades of experience, listening to customers and taking on their wishes – facing individual tasks with technical creativity and realize them with a team of highly skilled engineers and designers – this is what we do. This is SCHLEICH.

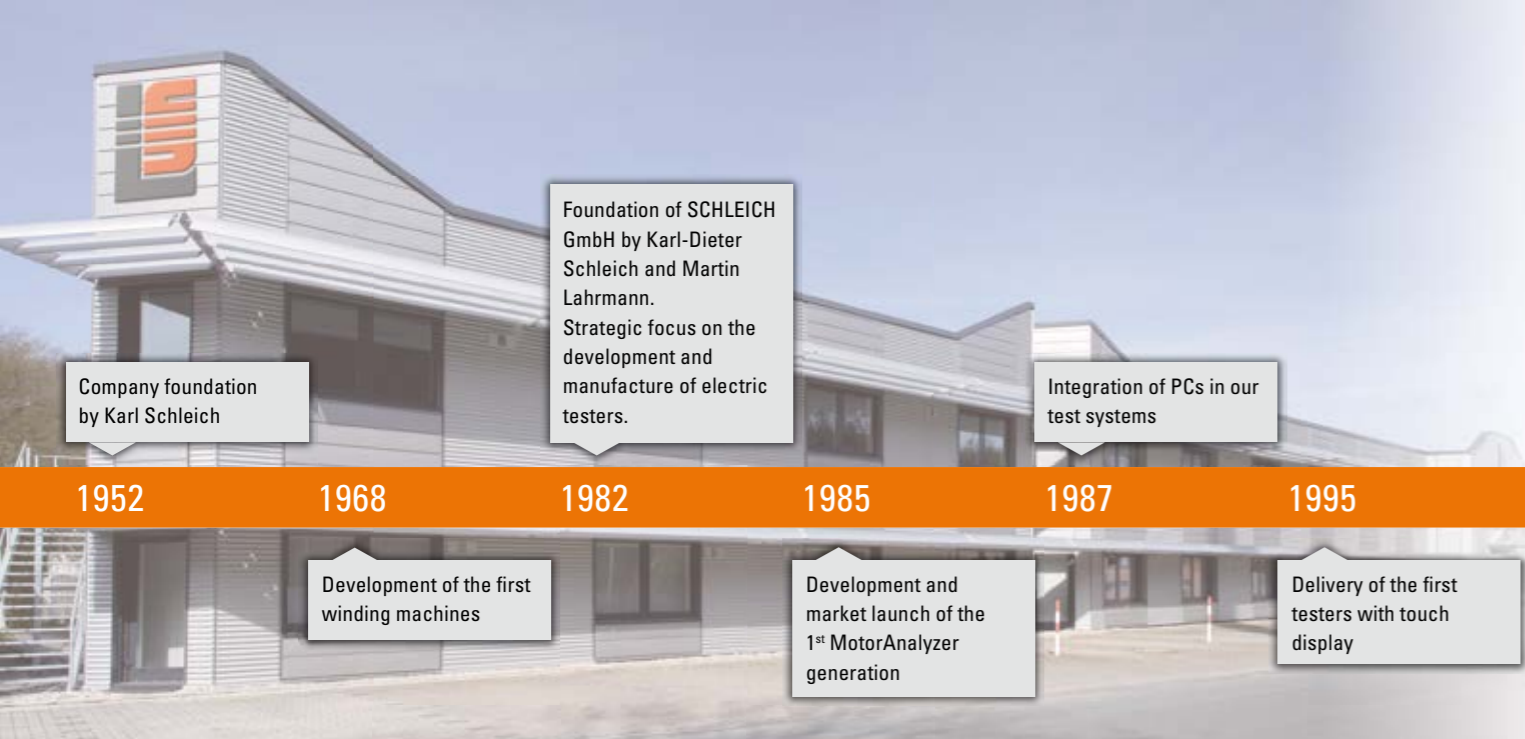
Every one of our more than 100 employees passionately works on guaranteeing and optimizing the high quality standard of our testers each and every day. Our customers, our sales department, our motivated engineers and manufacturing staff – with their ideas and suggestions for improvement they are all part of the innovation process.



Our test solutions are as manifold...

...as your applications.

- › Automotive
- › Railway technology
- › Battery testing
- › Electric devices
- › E-mobility
- › Electronic components
- › Household appliances
- › Industry electronics
- › Communication electronics
- › Consumer electronics
- › Lighting industry
- › Aviation
- › Medical devices
- › Motor technology
- › Transformers
- › Transportation technology
- › Material testing
- ...



60 years of expertise.

Technology for the future.





Another word for "Made in Germany": SCHLEICH

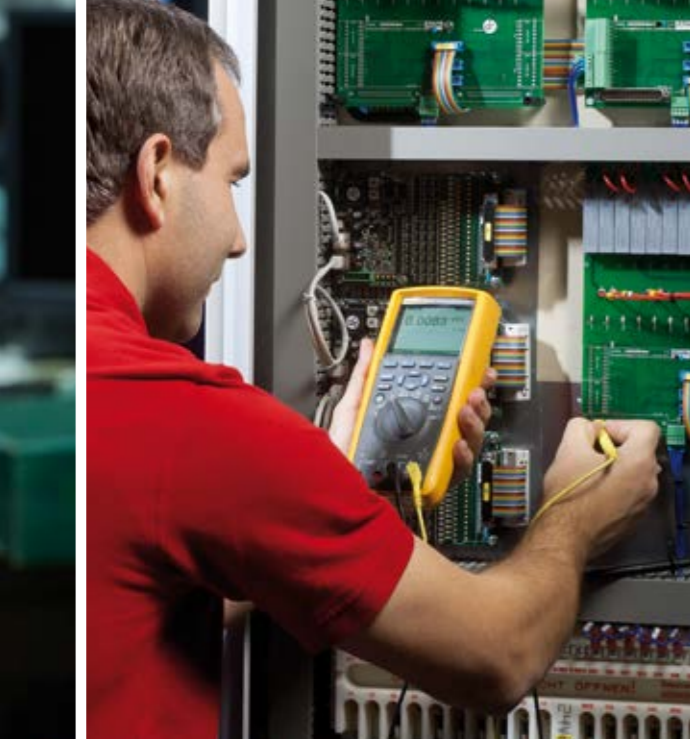
Comprehensive production facilities allow the design and manufacture of almost all tester components at our site in Hemer.

Our measuring and electronic cards are reliably produced with an ultra modern in-line-SMD-placement-technology which assures stable quality of our test systems.

Modern high-end processors in our testers process your test tasks in a fast, precise and reliable way.

Thanks to our modern CNC-machines we also design and manufacture diverse accessory components such as test covers, contacting, goods carriers with test-object holder or robot gripping tools as well as complete production lines.

SCHLEICH provides everything from under one roof –
Made in Germany.



Service and calibration around the world.

We are at your service – wherever you are.

First-class customer service is our top priority. From detailed consulting during the planning phase to training and After-Sales-Service – we support you during the entire process.

In training sessions adapted to your requirements, our technicians will teach you the necessary know-how allowing you to avail yourself of the functional variety of our testing devices to the full extent. Should there be questions or malfunctions, our technical support team will assist you by phone, on-line or on-site fast and reliably. Constant software updates and extensions make sure that you can always work with up-to-date test software.




The periodic calibration of test equipment is an essential precondition for quality assurance. We calibrate your test equipment according to standards – on-site or via remote maintenance, i.e. we calibrate your tester via the internet (remote calibration).

It goes without saying that we calibrate in accordance with national and international standards.

Our Service Centers support you around the world – with dedication, competence and reliability.

Sales and Service Centers



-  Production, management and sales centers in Germany
-  Sales & service centers
-  Sales centers



> www.schleich.com/de/international

Companies trust our products around the globe.

ABB	Becker Antriebstechnik	Deutsche Bahn	Festool	INA	Lufthansa	Opel	Saeco	Tecumseh	WAP-ALTO
ABM	Bernal Tore	DOM	Flygt	Indramat-Rexroth	Maiko	Osram	Salmson	TEE	WDR
AEG-Milwaukee	BMW	Dometic	Franklin Electric	inmotion	MAN	Papst	Salzgitter AG	Temic	Weidmüller
Arcelik	Bombardier	Dräxlmeier	Gildemeister	Kärcher	MDEXX	Partzsch	Sauer-Danfoss	Trilux	WEG
Airbus Industries	Bosch	E.G.O.	Grohe	KaVo	Mercedes	Philips	Schabmüller	Thyssen-Krupp	WILA
Alcatel	Braun	Electrolux	Grundfos	Kessler	Miele	Philips medical	Schorch	TÜV	WILO
Alstom	BSHG	ELNOR	Hanning	Kress	Motory International SRO	Phoenix Contact	Severin	UPS	Zanussi
AMK	Caterpillar	Embraco	Heidelberger Druck	KSB	Murr Elektronik	Preh Automation	SEW	USK	Zeiss
Ansorg	CERN	EMU	HEW	Leica	Nettelhof	Porsche	Siemens	VDE	ZF
ATB	Continental	Enercon	HILTI	Lenze Antriebstechnik	Nidec	Premiere	Siemens Wind Power	VDO	Ziehl-Abegg
Audi	Daimler	Engel	Hirschmann	LEONI	Nilfisk	Rexroth	Stahl	VEM	Zollner
BAG	Danfoss	ERCO	Hoffmeister-Leuchten	Leroy-Somer	Novoferm Tore	Rittal	Staff	Vestas	Zumtobel
Bals	DAL	Fagor	IFM	Liebherr Aerospace	Oase Pumpen	Rotomatika	Stöber	Vossloh-Schwabe	
Baumüller	Dematig Cranes	Fein	Ihne + Tesch	Loher	Ocean	SBB	TCM	VW	and more...



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