SCHLEICH
Advanced Test Technologies

GLP1-g

Safety, function and high-voltage testers

9-in-1

Made in Germany

〉Expect more.

The GLP1-g –
Innovative, versatile, compact

Thanks to SCHLEICH's advanced test technology, all kinds of electrical and electronic products can be inspected with the single or multi tester GLP1-g. More than 50 GLP1-g-variants promise perfect solutions for various testing tasks and your individual requirements.

Our GLP1-g testers are perfectly suited for use in production, laboratory, quality assurance, automation and several other applications. With a wide range of standardized function combinations, your testing task can be performed easily and safely.

With this tester class you can achieve an unrivaled level of performance! The advancement of the popular and reliable GLP1-g tester enables the operator to create test sequences, to save the test results, and is incredibly easy to handle. A multitude of new features including the large graphical touch display makes it unique within this tester class.

In accordance with our corporate philosophy, almost all of the hardware and software is developed and produced at our facilities in Germany. SCHLEICH's innovations raise the bar in the modern testing of high-voltage, safety and device functionality.

- Single or multi tester
- Safety and function tests
- High-voltage test up to 50 kV AC
- Great flexibility for your applications

KEY FEATURES

- Up to 9 test methods in one single tester
- Measurement of active and apparent current
- Measurement of active and apparent power
- Automatic test method switchover
- Automatic test process with pass/fail comparison
- Manual testing in laboratories and production
- Intuitive operation (touch display)
- Integrated memory for test sequences and test results
- Integration with your network and data systems
- Ideally suited for OEMs

Content

Application fields 4
Housing | Standard equipment 6
High-voltage tests 8
Testing – everything at a glance 10
The menu – simply intuitive 12
Product overview 14
Test methods 20
Test method switchover 24
PC software 26
Accessories 30

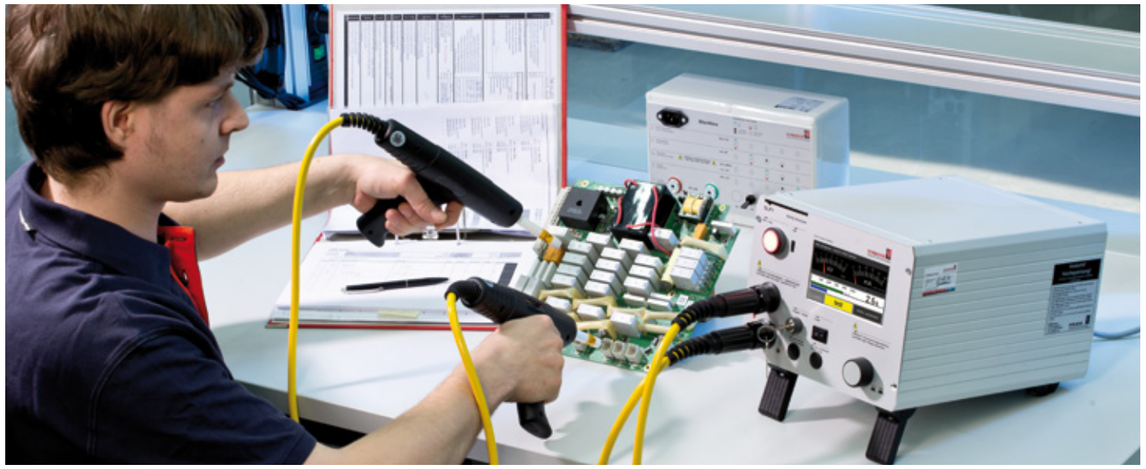
Application fields

Laboratory | manual testing

The GLP1-g is ready for immediate use to perform your measurements. In manual mode, any test method integrated in the tester can be started immediately. Preparations of test sequences are not necessary. You can directly select the desired test method, and start testing.

Similar to a multimeter, the display always indicates the current measured values. Your DUT (Device Under Test) is evaluated in all details and with instant feedback.

Also long-run analyses, lasting for hours, can also be performed within this operation mode.



Production | semi-automated testing

During production, typical tests are performed either manually with test probes and/or semi-automatically integrated with a sequence controller. The GLP1-g offers perfect features for these applications due to its convenient operator guidance.

To test different test objects, the GLP1-g can save up to 1,000 test sequences which can be easily selected and started via touch display.

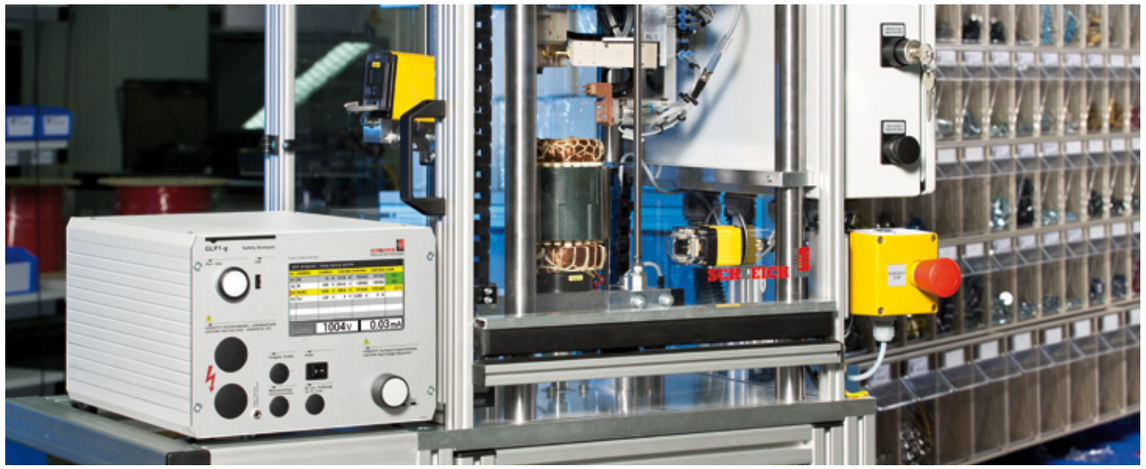
Mass production | automatic testing

The GLP1-g can be easily integrated into your production line. It's based on a half-wide 19"- or 19"-standard rack package for simple mechanical integration into your system. Additional interfaces enable a complete remote control and the connection to a master PC or a PLC.

Up to 1,000 test sequences can be stored in the GLP1-g. Via interface, they can be directly selected and started.

By using the interface, the test results can be called up and stored in a central data base (via master PC). Optionally, the test results can be saved internally on the tester or in your network data environment.

For even more flexibility in automation or complex control processes, we offer testers in the GLP2 class.



Outstanding technology in a robust housing

ROBUST INDUSTRIAL STANDARD

Made in Germany

The robust housing and compact design of the GLP1-g ensures high efficiency and reliability. As workspace costs money, the GLP1-g has low space requirements. Our technology is integrated in a standard-sized, robust industrial housing which has been designed especially for SCHLEICH.

For ideal working conditions the position of the GLP1-g can be individually adapted by using its adjustable feet. No matter if the operator is small or tall, standing or sitting – the view on the display, the handling of the tester and connecting the DUT (Device Under Test) is always ideally suited for the respective operator.

Up to 9 test methods in one tester

The integration of up to 9 test methods in one single tester is unique in this tester class. The GLP1-g provides a clear presentation of the tests. The simple, intuitive operating concept facilitates your day-to-day work.

The brilliant, clear, touch display is perfectly integrated in the tester's front panel. It offers functionality and usability which are normally found only in high-end testers.

The GLP1-g's test method combinations are as various as the many different requirements of the industry and of testing institutes. Our equipment line includes 50 tester variants with typical test method combinations to choose from.

But regardless of the different features of each tester, the GLP1-g is always delivered in a standard-sized housing.

The outstanding technology, intuitive operation concept combined with great versatility – this is the new standard of reliable and safe advanced test technology.

Standard equipment

Design

- Brilliant, high contrast 5" TFT color display 480 x 272 pixels
- Color marked test steps
- Color marked test results
- Test socket on the front panel (tester-dependent)
- Additional test connections on the rear side on request

Function and technology

- Manual, semi-automatic and full-automatic test processes
- Built-in test sequence data base for up to 1,000 settings
- Built-in test result data base for up to 790 test steps
- Wide range of language options

Communication

- USB service interface on the front panel
- RS232, USB and LAN automation interface
- 6 x 24 V DC inputs/control inputs
- 7 x 24 V DC output/signal output
- RS232, USB or LAN communication with SCHLEICH PC-software PrintComG2
- RS232 or USB communication with SCHLEICH PC-software PrintCom7
- Communication with third-party software possible
- Communication via LabView-Driver

Safety

- Dual circuit safety inputs according to EN50191
- Warning light connection
- Result light connection
- Safety and warning messages
- Key switch at test testers without safety current limiting
- Integrated plausibility check
- Integrated help texts

High-voltage tests

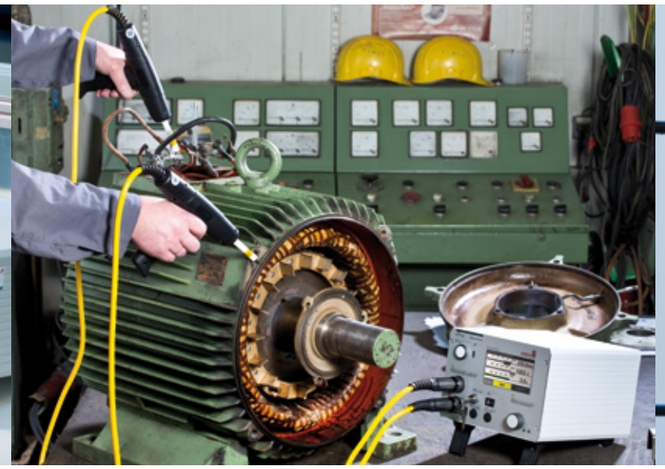
The GLP1-g high-voltage testers serve for testing the insulation capability and the dielectric strength of electric components or assemblies.

These testers are perfectly suitable for fast and simple tests during repair or production. The tests can be performed either manually using safety test pistols, or automatically. The tester provides the programming of time sequences, other monitoring functions or the detection of insulation faults by “burning”.

The high voltage is generated electronically. The manual voltage setting is accomplished by activating the rotary button on the front panel of the tester. The automatic voltage setting with ramp profiles is done electronically.

The testers provide not only a standardized test voltage for single tests, but also provide adequate test voltage for type tests and material tests.

- High voltage AC up to 50 kV
- High voltage DC up to 10 kV
- Test current max. 200 mA
- Electronic voltage setting
- Freely definable voltage ramps



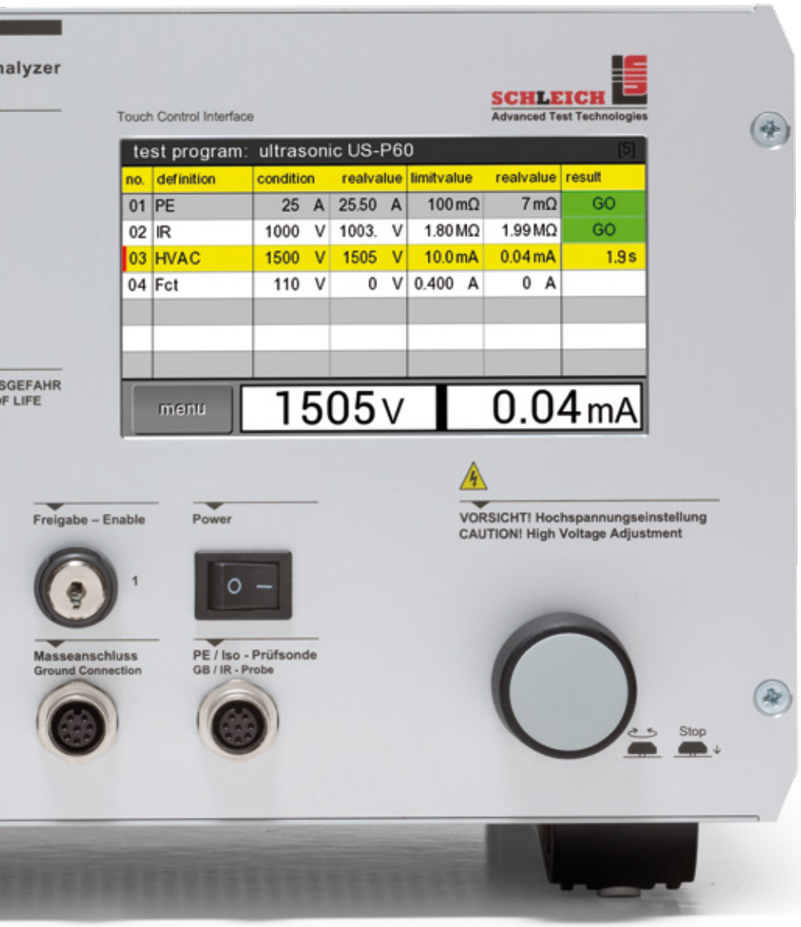
KEY FEATURES

- High-voltage test up to 50 kV AC
- High-voltage test up to 10 kV DC with low ripple
- Electronic high-voltage generation
- High voltage AC with ramp up/ramp down
- High voltage DC with ramp up and discharge
- Three high-voltage modes: manual, automatic with time sequence and burning
- Voltage feedback (4-wire technique)
- Manual voltage setting via rotary button
- Start-up sequence according to VDE 0104
- Dual circuit safety inputs, two-hand control
- Safety circuits with forcibly guided safety relays

≤ 50 kV

Testing – everything at a glance

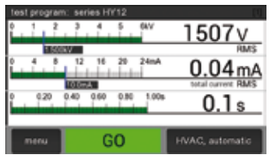
The GLP1-g provides you a complete and clear overview of all relevant measured values. The clear presentation of test results enables an organized and efficient work process. This facilitates later analyses of the different tests.



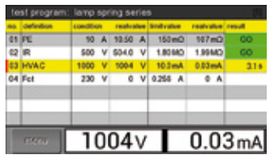
Display options

Depending on the tester variant, there are generally two different display options during testing:

- For testers with only one test method, a numeric display and a bar graph is shown.
- For testers with more test methods the result is indicated on the display showing the test sequence and the different test steps.



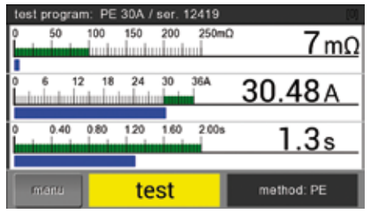
Display single tester



Display multi tester

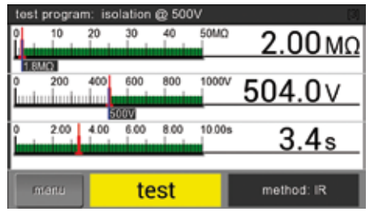
› Perfectly optimized for your work process
› Clearly arranged and informative
› Efficiently testing and working

PE/GB-resistance tester



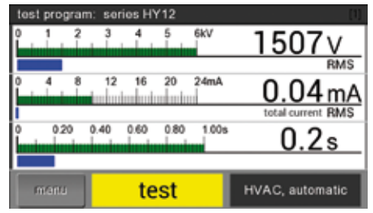
During testing, the display indicates the measured values, the test current and the test time.

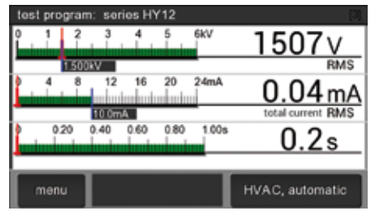
Insulation resistance tester



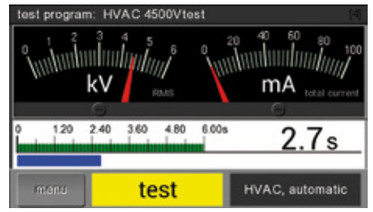
The display shows a bar graph with additional tolerance limits and numerics. The insulation resistance, the test voltage and the test time are indicated.

High-voltage tester



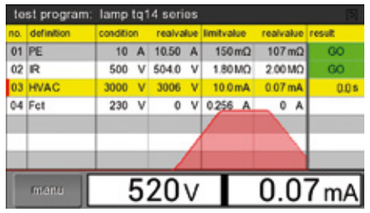


The display shows a bar graph with additional tolerance limits and numerics. The test voltage, the current flowing and the test time are indicated.

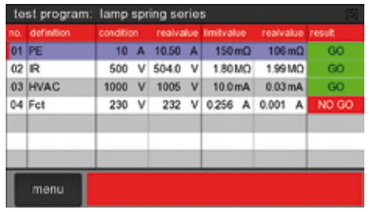


Alternatively, it can be switched to "analog display". For some operators, this may be a benefit due to the very clear screen information.

Multi tester



With multi testers, all test steps are listed one below the other. During testing, a yellow horizontal bar indicates which test step is currently active. Completed test steps are marked either green (=pass) or red (=fail). For high-voltage tests, the ramp up/down are also graphically indicated.

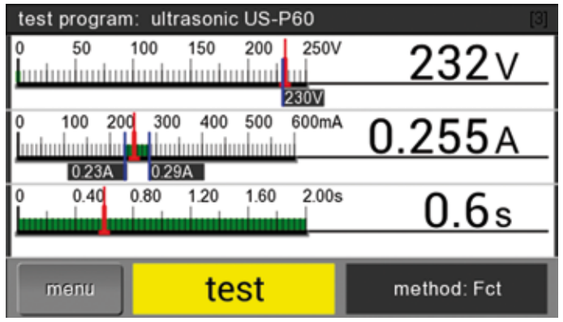


After the test is finished, the total result is indicated by a red or green square on the display. The result of each test step is also individually indicated.

The menu – simply intuitive

- Intuitive handling
- Plausibility check of all entries
- Explanations of test parameters

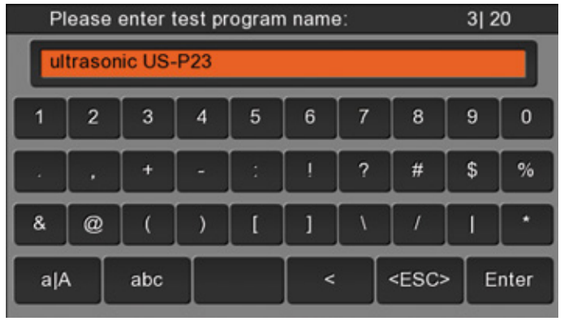
For optimal working, a high-quality display with precise user guidance is essential. Therefore, the GLP1-g is equipped with a multi-function TFT color display. With its high contrast and wide viewing angle, all necessary information is clearly displayed – this is true both of dark environments or if there is bright sunlight.



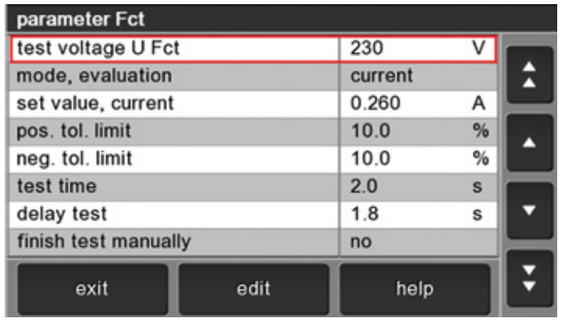
By activating the menu button on the touch screen you can change between the different menu options.

In the main menu all relevant functions can be activated. Test sequences can be loaded and edited, test parameters can be set, basic settings can be made or statistics can be activated.

Here, test sequences can be named, saved, loaded or deleted. By activating the “parameter”-button, the different settings and options are shown.



The name of the test sequence can be entered by using the keyboard.



By means of the red marked line, the parameter to be adjusted can be selected. The button “edit” has to be activated to enable any changes.

For example: The test time can be entered in seconds, minutes or hours.

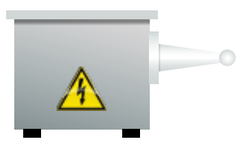
Product overview

High-voltage testers

Model	Tester type	High-voltage AC	HV-sockets, 1-pole, front panel	HV-sockets, 2-pole, front panel*	Industrial plug connection rear side	Key switch	Separate HV-transformer	Rotary button for HV-setting	Article number
GLP1-g 320	1	HVAC 6/3	●	–	○	–	–	●	4018720
GLP1-g 321	1	HVAC 6/3	–	●	–	–	–	●	4018796
GLP1-g 330	2	HVAC 6/100	●	–	○	●	–	●	4018721
GLP1-g 331	2	HVAC 6/100	–	●	–	●	–	●	4018797
GLP1-g 340	3	HVAC 6/200	●	–	○	●	–	●	4018722
GLP1-g 341	3	HVAC 6/200	–	●	–	●	–	●	4018798
GLP1-g 350	4	HVAC 12/100	●	–	–	●	–	●	4018723
GLP1-g 360	5	HVAC 15/50	–	–	●	●	●	●	4018724
GLP1-g 370	6	HVAC 30/30	–	–	●	●	●	●	4018725
GLP1-g 380	7	HVAC 50/25	–	–	●	●	●	●	4018726

1 2 3 4

5 6 7



Alternative design
available on request

HVAC 6/3: High-voltage test AC 50-6000 V, 3 mA
HVAC 6/100: High-voltage test AC 50-6000 V, 100 mA
HVAC 6/200: High-voltage test AC 50-6000 V, 200 mA
HVAC 12/100: High-voltage test AC 100-12000 V, 100 mA
HVAC 15/50: High-voltage test AC 125-15000 V, 50 mA
HVAC 30/30: High-voltage test AC 250-30000 V, 30 mA
HVAC 50/25: High-voltage test AC 400-50000 V, 25 mA

› Please find more high-voltage testers under:
www.schleich.com/en/highvoltagetest

*for test pistols with push button in the test probe tip

PE/GB-resistance testers

Model	Tester type	PE/GB-resistance	Test socket front panel	Industrial plug connection rear side	Test probe connection front panel	Article number
GLP1-g 120	8	GB 10AC	●	○	●	4018716
GLP1-g 130	8	GB 30AC	●	○	●	4018734
GLP1-g 140	9	GB 40AC	–	●	–	4018758
GLP1-g 141	9	GB 40DC	–	●	–	4018759
GLP1-g 160	9	GB 75AC	–	●	–	4018760

8 9

GB 10AC: PE/GB-resistance test 10 A AC
GB 30AC: PE/GB-resistance test 30 A AC
GB 40AC: PE/GB-resistance test 40 A AC
GB 40DC: PE/GB-resistance test 40 A DC
GB 75AC: PE/GB-resistance test 75 A AC

Insulation resistance tester

Model	Tester type	Insulation	Test socket front panel	Industrial plug connection rear side	Test probe connection front panel	Article number
GLP1-g 220	8	IR 1000	●	○	●	4018717

8

IR 1000: Insulation resistance test max. 1000 V DC

● Standard configuration ○ Extras – Not available

Technical data

Product overview

Safety testers

Model	Tester type	PE/GB	Insulation	High-voltage AC	High-voltage DC	Test socket front panel	Industrial plug connection rear side	HV-sockets, 1-pole, front panel	HV-sockets, 2-pole, front panel*	Test probe connection front panel	Key switch front panel	Two-hand control	Rotary button for HV-setting	Article number
GLP1-g 620	8	GB 10AC	IR 1000			●	○	–	–	●	–	–	–	4018718
GLP1-g 630	8	GB 30AC	IR 1000			●	○	–	–	●	–	–	–	4018735
GLP1-g 720	1		IR 1000	HVAC 6/3		–	○	●	–	–	–	–	●	4018824
GLP1-g 730	2		IR 1000	HVAC 6/100		–	○	●	–	–	●	–	●	4018823
GLP1-g 820	1		IR 4000		HVDC 4/10	–	○	●	–	–	–	–	●	4018727
GLP1-g 830	1		IR 6000		HVDC 6/10	–	○	●	–	–	–	–	●	4018761
GLP1-g 831	3		IR 6000		HVDC 6/20	–	○	●	–	–	●	+	●	4018790
GLP1-g 840	10		IR 10000		HVDC 10/6	–	○	●	–	–	–	–	●	4018762
GLP1-g 920	1		IR 4000	HVAC 6/3	HVDC 4/10	–	○	●	–	–	–	–	●	4018773
GLP1-g 930	2		IR 4000	HVAC 6/20	HVDC 4/10	–	○	●	–	–	●	–	●	4018768
GLP1-g 1011	12	GB 10AC	IR 1000	HVAC 6/3		–	–	●	–	●	–	–	●	4018832
GLP1-g 1012	12	GB 10AC	IR 1000	HVAC 6/3		–	–	–	●	●	–	–	●	4018833
GLP1-g 1020	13	GB 10AC	IR 1000	HVAC 6/100		–	●	–	–	–	●	+	●	4018792
GLP1-g 1021	12	GB 10AC	IR 1000	HVAC 6/100		–	–	●	–	●	●	–	●	4018793
GLP1-g 1022	12	GB 10AC	IR 1000	HVAC 6/100		–	–	–	●	●	●	–	●	4018808
GLP1-g 1030	11	GB 30AC	IR 1000	HVAC 6/3		●	○	–	–	●	–	○	–	4018729
GLP1-g 1031	16	GB 30AC	IR 1000	HVAC 6/3		–	–	●	–	●	–	–	●	4018836
GLP1-g 1032	16	GB 30AC	IR 1000	HVAC 6/3		–	–	–	●	●	–	–	●	4018837
GLP1-g 1040	13	GB 30AC	IR 1000	HVAC 6/100		–	●	–	–	–	●	+	●	4018770
GLP1-g 1041	14	GB 30AC	IR 1000	HVAC 6/100		–	–	●	–	●	●	–	●	4018728
GLP1-g 1042	14	GB 30AC	IR 1000	HVAC 6/100		–	–	–	●	●	●	–	●	4018809
GLP1-g 1122	12	GB 10AC	IR 4000		HVDC 4/10	–	–	–	●	●	–	–	●	4018827
GLP1-g 1130	8	GB 30AC	IR 4000		HVDC 4/10	●	○	–	–	●	–	○	–	4018730
GLP1-g 1220	15	GB 30AC	IR 4000	HVAC 6/3	HVDC 4/10	–	●	–	–	–	–	○	●	4018780
GLP1-g 1221	16	GB 30AC	IR 1000	HVAC 6/3	HVDC 4/10	–	–	●	–	●	–	–	●	4018776
GLP1-g 1222	16	GB 30AC	IR 1000	HVAC 6/3	HVDC 4/10	–	–	–	●	●	–	–	●	4018810
GLP1-g 1224	13	GB 30AC	IR 4000	HVAC 6/20	HVDC 4/10	–	●	–	–	–	●	+	●	4018781
GLP1-g 1225	14	GB 30AC	IR 1000	HVAC 6/20	HVDC 4/10	–	–	●	–	●	●	–	●	4018782
GLP1-g 1226	14	GB 30AC	IR 1000	HVAC 6/20	HVDC 4/10	–	–	–	●	●	●	–	●	4018811
GLP1-g 1230	13	GB 30AC	IR 4000	HVAC 6/100	HVDC 4/10	–	●	–	–	–	●	+	●	4018783
GLP1-g 1231	14	GB 30AC	IR 1000	HVAC 6/100	HVDC 4/10	–	–	●	–	●	●	–	●	4018784
GLP1-g 1232	14	GB 30AC	IR 1000	HVAC 6/100	HVDC 4/10	–	–	–	●	●	●	–	●	4018812

● Standard configuration ○ Extras – Not available + Required for tests without protective device

GB 10AC:
PE/GB-resistance test
10 A AC

GB 30AC:
PE/GB-resistance test
30 A AC

IR 1000:
Insulation resistance
test max. 1000 V DC

IR 4000:
Insulation resistance
test max. 4000 V

IR 6000:
Insulation resistance
test max. 6000 V

IR 10000:
Insulation resistance
test max. 10000 V

HVAC 6/3:
High-voltage test
AC 50-6000 V, 3 mA,
safety current limiting

HVAC 6/20:
High-voltage test
AC 50-6000 V, 20 mA

HVAC 6/100:
High-voltage test AC
50-6000 V, 100 mA

HVDC 4/10:
High-voltage test
DC 50-4000 V, 10 mA

HVDC 6/10:
High-voltage test
DC 50-6000 V, 10 mA

HVDC 6/20:
High-voltage test
DC 50-6000 V, 20 mA

HVDC 10/6:
High-voltage test
DC 100-10000 V, 6 mA

*for test pistols with push button in the test probe tip

Technical data

Product overview

Safety and function testers

Model	Tester type	PE/GB	Insulation	High-voltage AC	High-voltage DC	Function	Test socket front panel	Industrial plug connection rear side	Test probe connection front panel	Key switch front panel	Two-hand control	Article number
GLP1-g 1320	⑧	GB 30AC	IR 1000			Fct 5	●	○	●	–	–	4018731
GLP1-g 1520	⑪	GB 30AC	IR 1000	HVAC 6/3		Fct 5	●	○	●	–	○	4018732
GLP1-g 1530	⑰	GB 30AC	IR 1000	HVAC 6/100		Fct 5	–	●	–	●	+	4018736
GLP1-g 1720	⑧	GB 30AC	IR 1000		HVDC 4/10	Fct 5	●	○	●	–	○	4018733

⑧ ⑪ ⑰

● Standard configuration ○ Extras – Not available + Required for tests without protective device

GB 30AC: PE/GB-resistance test 30 A AC
IR 1000: Insulation resistance test max. 1000 V DC, 3 mA, safety current limiting
HVAC 6/3: High-voltage test AC 50-6000 V, 3 mA, safety current limiting
HVAC 6/100: High-voltage test AC 50-6000 V, 100 mA
HVDC 4/10: High-voltage test DC 50-4000 V, 10 mA
Fct 5: Function test 5 A AC, 10-250 V

Technical data

Test methods

PE/GB-resistance

The PE/GB-resistance test is performed with electronically controlled, stabilized test current. By measuring the voltage drop and the current the tester calculates the PE/GB- resistance. The PE/GB resistance must not exceed the maximum resistance defined within the standards. The operator contacts the DUT's (Device Under Test) PE/GB-connections one after another with a test probe.

Resistance measurement	4-wire technology
Measuring ranges based on the test current and the maximum permitted test voltage	0-1.2 Ω
Resolution	1 mΩ
Test voltage	6 V or 12 V
Frequency	50 Hz or 60 Hz
Test voltage (tester dependent)	1-10 A AC | in 1 A steps 1-30 A AC | in 1 A steps 1-40 A AC | in 1 A steps 1-40 A DC | in 1 A steps 1-75 A AC | in 1 A steps
Dwell time	0.1 s-1 h
Automatic test start when test probe is activated	•
Measuring points	PE test socket or optional industrial plug connector ↔ test probe or testprobe 1 ↔ test probe 2

• Standard configuration

Insulation resistance

The insulation resistance test is done with electronically controlled, stabilized test voltage. By measuring the voltage drop across the insulation and the current, the tester calculates the insulation resistance. The insulation resistance must not exceed the minimum resistance defined within the standards. The insulation resistance can be measured either between all electric conductors (for devices of protection class I) or between electric conductors and insulated housing (for devices of protection class II). The operator contacts the housing parts to be tested one after another with a test probe. The DUT (Device Under Test) is discharged at the end of the test.

Measuring range	100 kΩ-1 GΩ
Resolution	0.1 MΩ | 1 MΩ
Test voltage isolated	50-1000 V | in 10 V steps
Ramp time (ramp up)	without and 0.1 s-1 h
Dwell time	0,1 s-1 h
Test current	max. 3 mA with safety current limiting
Measuring points	L+N ↔ PE, L+N ↔ test probe or optional industrial plug connector

High-voltage with DC

The insulation is tested with electronically controlled, stable high voltage. During the test, the current must not exceed a defined maximum value. In case the current exceeds this default value the test is cancelled automatically. The DUT (Device Under Test) is discharged at the end of the test.

Test V_{DC}	max. test current I_{DC}	isolated
50-4000 V	10 mA	no
50-6000 V	10 mA	no
50-6000 V	20 mA	no
100-10000 V	6 mA	no

Average value measurement U_{AVG}	•
Insulation resistance measurement	•
Electronic high-voltage generator	•
Ramp time (ramp up)	without and 0.1 s-100 h
Dwell time	without and 0.1 s-100 h
Average value measurement I_{AVG}	•
Energy	max. 360 mJ
Discharge control	•
Burning	•
Measuring points	L+N ↔ PE or test pistols*1 or HV-test leads or optional industrial plug connector

*1 1 HV-test pistols are only optionally available for high-voltage testers

• Standard configuration

› Please find more detailed information on our website!

Technical data

Test methods

High-voltage with AC

The insulation is tested with electronically controlled, stable high voltage. During the test, the current must not exceed a defined maximum value. In case the current exceeds this default value, the test is cancelled automatically. The DUT (Device Under Test) is discharged at the end of the test (if the test leads are still connected with the DUT).

Test V_{RMS}	max. test current I_{RMS}	max. power	isolated
50-6000 V	3 mA	25 VA	yes
50-6000 V	100 mA	500 VA	yes
50-6000 V	200 mA	1200 VA	yes
100-12000 V	100 mA	1200 VA	yes
125-15000 V	50 mA	750 VA	no
250-30000 V	30 mA	900 VA	no
400-50000 V	25 mA	1250 VA	no

True RMS measurement V_{RMS}	•
Peak value measurement Û	•
Electronic high-voltage generator	•
High-voltage frequency	50 Hz or 60 Hz (like power supply)
Ramp time (ramp up/ramp down)	without and 0.1 s-100 h
True RMS current measurement I_{TRMS}	•
Peak value measurement Î	•
Apparent, active or reactive current evaluation	•
Discharge control	•
Burning	•
Measuring points	L+N ↔ PE or test pistols*1 or HV-test leads or optional industrial plug connector

*1 HV-test pistols are only optionally available for high-voltage testers

• Standard configuration

〉Please find more detailed information on our website!

Function

The functional testing of your DUT is done with operating voltage based on the current consumption, power factor and/or the DUT's power consumption. For each measured value you can define set values and ± tolerance limits. If the measured value is within those tolerance limits the test result is GO (=pass). The test voltage for the function test is electronically generated within the tester.

Test voltage U_{RMS}	12-250 V electronic regulation
Resolution	1 V
True RMS measurement U_{TRMS}	•
Phases	single phase L&N
Test voltage frequency	50 Hz or 60 Hz (like power supply)
Test continuous current I_{RMS}	0-5 A
Resolution	1 mA
True RMS current measurement I_{TRMS}	•
Apparent, active and reactive current evaluation	•
Power factor (cos φ) measurement	0-1
Active power	0-1300 W
Apparent power	0-1300 VA
Resolution	1 W
Dwell time	0.1 s-1 h
Overcurrent protection	•
Measuring points	L ↔ N

• Standard configuration

Further technical data

5"-TFT color display, 480 x 272 pixels	•
Internal clock with calendar	•
Acoustic signals	•
Dimension half-wide 19" desktop device, 4HU* (W x D x H)	236 mm x 320 mm x 178 mm
Dimension 19" desktop device, 4HU* (W x D x H)	448 mm x 320 mm x 178 mm
Including calibration certificate	•

* HU = 19"-rack hight units

• Standard configuration

Test method switchover

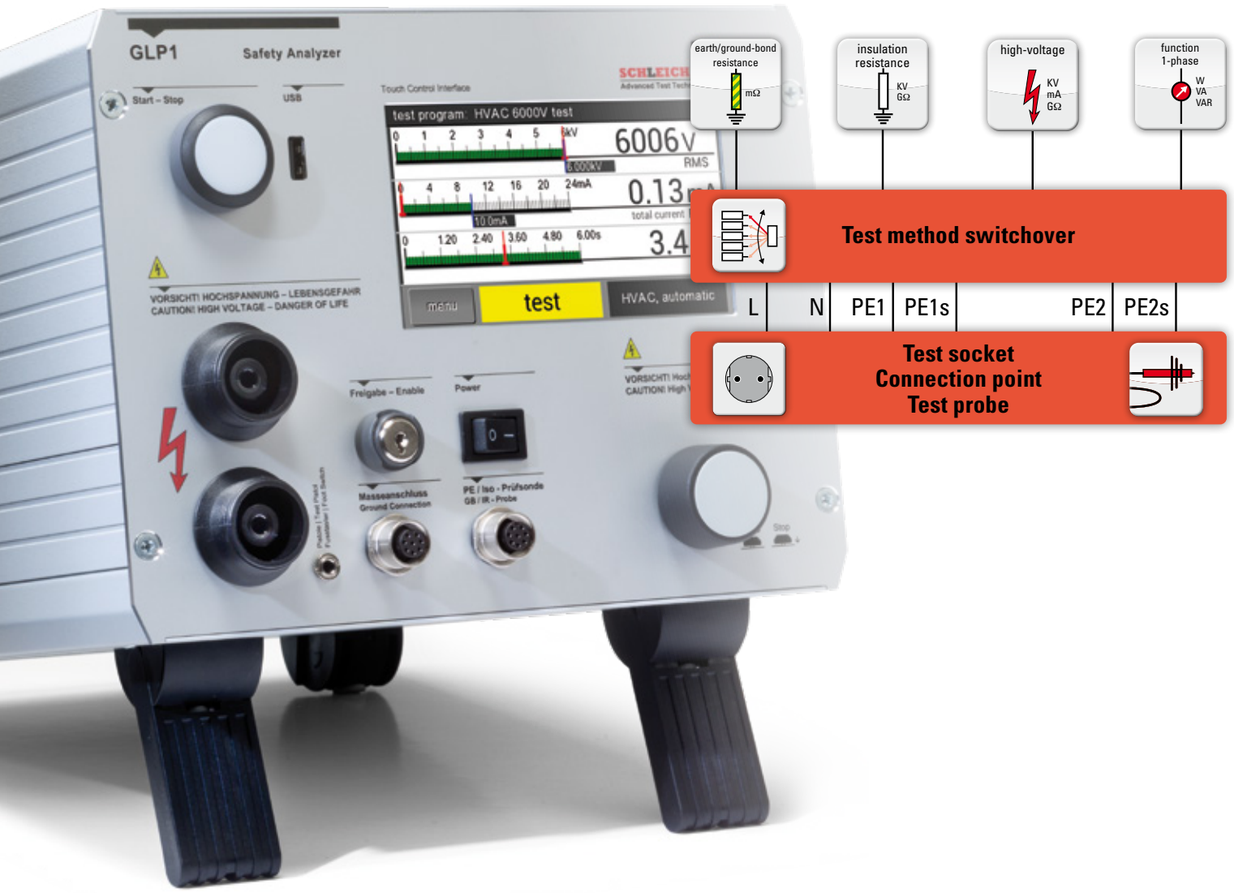
Test technology from SCHLEICH has been proven thousands of times in day-to-day work. It is among the most reliable technology on the market and provides outstanding performance and accuracy. Our aim is to test as fast and efficiently as possible. This focus offers our customers a considerable benefit.

To save time, all DUT connections are connected to the test socket. Then the tester automatically performs the tests between all connections without re-connecting single leads. DUTs which are typically tested with the GLP1-g have line power cables with L, N and PE.

With the automatic SCHLEICH test method switchover sequencing, the different test methods are automatically switched to the appropriate connection leads and the test probes via a matrix switch.

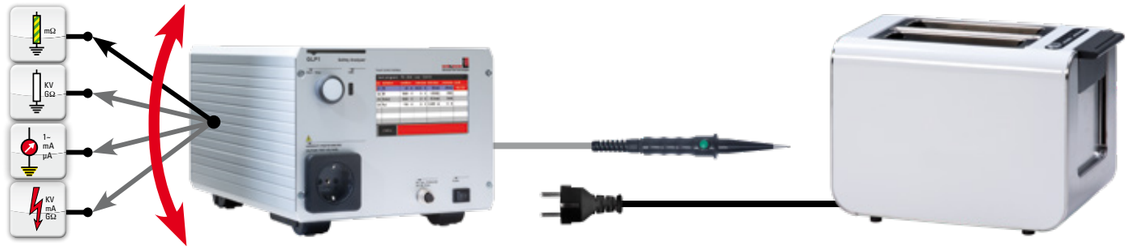
Safety is our top priority – especially for test method switchovers with large voltage differences. The PE/GB-resistance test with 12 Volt has to be applied as reliably as the high-voltage test with 6000 Volt to the DUT (Device Under Test). Not only to protect your DUT but also to protect the operator. There is no room for compromises here!

Therefore, we only use approved, high-quality components for our switching matrices. These components are mainly produced in-house at SCHLEICH or from well-known German partners.



Test method switchover by using the test socket

Depending on the customer's requirements, the GLP1-g tester integrates appropriate switching. The different test methods are switched to the test probe and/or the test socket.



Test method switchover by using a test cover

Depending on the customer's requirements, the GLP1-g tester integrates appropriate switching. It assures the fast and automatic switchover between the different test methods.

Test method switchover by using test probes and test pistols

Depending on the customer's requirements, the GLP1-g tester integrates appropriate switching to apply the different test methods to the active test and ground probes.

PC software PrintCom7

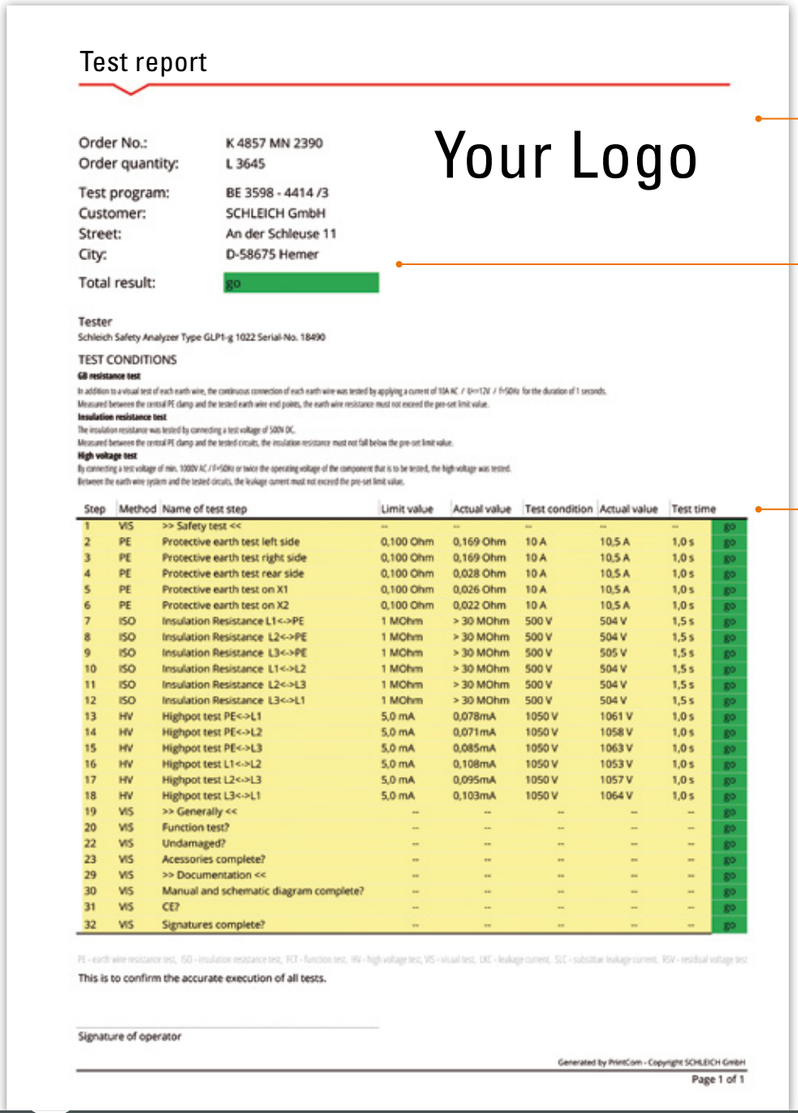
Print and archive test results

With PrintCom7, test results can be saved in Excel®-format. We provide a wide selection of test report templates in Excel®.

With our software PrintCom7 you can adapt the templates according to your requirements, e.g. by adding further information or by individual design of the test report (for example with your corporate logo). Of course, you can also create completely new test reports using the standard Excel template mechanisms.

KEY FEATURES

- Saving the test results in Excel®-format
- Printout of test reports
- Including several templates of test reports
- Customizable Excel®-test report templates
- OpenOffice®-MS Excel® compatible software



Test report

Order No.: K 4857 MN 2390
Order quantity: L 3645

Your Logo

Test program: BE 3598 - 4414 /3
Customer: SCHLEICH GmbH
Street: An der Schleuse 11
City: D-58675 Hemer

Total result: go

Tester
Schleich Safety Analyzer Type GLP1-g 1022 Serial-No. 18490

TEST CONDITIONS

GB resistance test
In addition to a visual test of each earth wire, the continuous connection of each earth wire was tested by applying a current of 10A AC / f/=12V / f=50Hz for the duration of 1 seconds.
Measured between the central PE clamp and the tested earth wire end points, the earth wire resistance must not exceed the pre-set limit value.

Insulation resistance test
The insulation resistance was tested by connecting a test voltage of 500V DC.
Measured between the central PE clamp and the tested circuits, the insulation resistance must not fall below the pre-set limit value.

High voltage test
By connecting a test voltage of min. 1000V AC / f=50Hz or twice the operating voltage of the component that is to be tested, the high voltage was tested.
Between the earth wire system and the tested circuits, the leakage current must not exceed the pre-set limit value.

Step	Method	Name of test step	Limit value	Actual value	Test condition	Actual value	Test time	
1	VIS	>> Safety test <<	--	--	--	--	--	go
2	PE	Protective earth test left side	0,100 Ohm	0,169 Ohm	10 A	10,5 A	1,0 s	go
3	PE	Protective earth test right side	0,100 Ohm	0,169 Ohm	10 A	10,5 A	1,0 s	go
4	PE	Protective earth test rear side	0,100 Ohm	0,028 Ohm	10 A	10,5 A	1,0 s	go
5	PE	Protective earth test on X1	0,100 Ohm	0,026 Ohm	10 A	10,5 A	1,0 s	go
6	PE	Protective earth test on X2	0,100 Ohm	0,022 Ohm	10 A	10,5 A	1,0 s	go
7	ISO	Insulation Resistance L1<->PE	1 MOhm	> 30 MOhm	500 V	504 V	1,5 s	go
8	ISO	Insulation Resistance L2<->PE	1 MOhm	> 30 MOhm	500 V	504 V	1,5 s	go
9	ISO	Insulation Resistance L3<->PE	1 MOhm	> 30 MOhm	500 V	505 V	1,5 s	go
10	ISO	Insulation Resistance L1<->L2	1 MOhm	> 30 MOhm	500 V	504 V	1,5 s	go
11	ISO	Insulation Resistance L2<->L3	1 MOhm	> 30 MOhm	500 V	504 V	1,5 s	go
12	ISO	Insulation Resistance L3<->L1	1 MOhm	> 30 MOhm	500 V	504 V	1,5 s	go
13	HV	Highpot test PE<->L1	5,0 mA	0,078mA	1050 V	1061 V	1,0 s	go
14	HV	Highpot test PE<->L2	5,0 mA	0,071mA	1050 V	1058 V	1,0 s	go
15	HV	Highpot test PE<->L3	5,0 mA	0,085mA	1050 V	1063 V	1,0 s	go
16	HV	Highpot test L1<->L2	5,0 mA	0,108mA	1050 V	1053 V	1,0 s	go
17	HV	Highpot test L2<->L3	5,0 mA	0,095mA	1050 V	1057 V	1,0 s	go
18	HV	Highpot test L3<->L1	5,0 mA	0,103mA	1050 V	1064 V	1,0 s	go
19	VIS	>> Generally <<	--	--	--	--	--	go
20	VIS	Function test?	--	--	--	--	--	go
22	VIS	Undamaged?	--	--	--	--	--	go
23	VIS	Acessories complete?	--	--	--	--	--	go
29	VIS	>> Documentation <<	--	--	--	--	--	go
30	VIS	Manual and schematic diagram complete?	--	--	--	--	--	go
31	VIS	CE?	--	--	--	--	--	go
32	VIS	Signatures complete?	--	--	--	--	--	go

PE - earth wire resistance test, ISO - insulation resistance test, FCT - function test, HV - high voltage test, VIS - visual test, LKC - leakage current, SLC - substitue leakage current, RSV - residual voltage test

This is to confirm the accurate execution of all tests.

Signature of operator

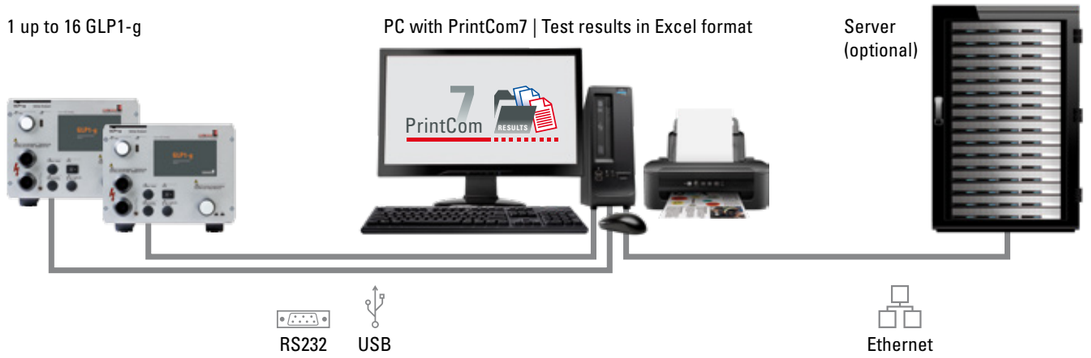
Generated by PrintCom - Copyright SCHLEICH GmbH
Page 1 of 1

Customizable section to add your corporate logo and address

General information regarding the test sequence, DUT, date and time etc.

Overview of measurements

The GLP1-g in your network via USB and RS232



PC software PrintComG2

The test report

KEY FEATURES

- Test report to customize with your company information and corporate logo
- Direct printout on a Windows-compatible printer
- Generating a pdf file
- Test report in different languages

The PrintComG2 software transfers all test results from the GLP1-g to a PC and saves them as CSV-files. The test results can be either output directly after end of the test or within a modern standard test report later on.

With PrintComG2 you can create test reports with all required information fast and easily.

Customizable section to add your corporate logo and address

General information regarding the test sequence, DUT, date and time etc.

Overview of measurements

Test report

Sample Company Ltd
Sample Street 89
12345 Sample City

Your Logo

Serialnumber Tester	13694
Test program	wbz34 76
Serialnumber Test Object	-
Total result	Pass
Test date	06 April 2016 16:55:25

Summary

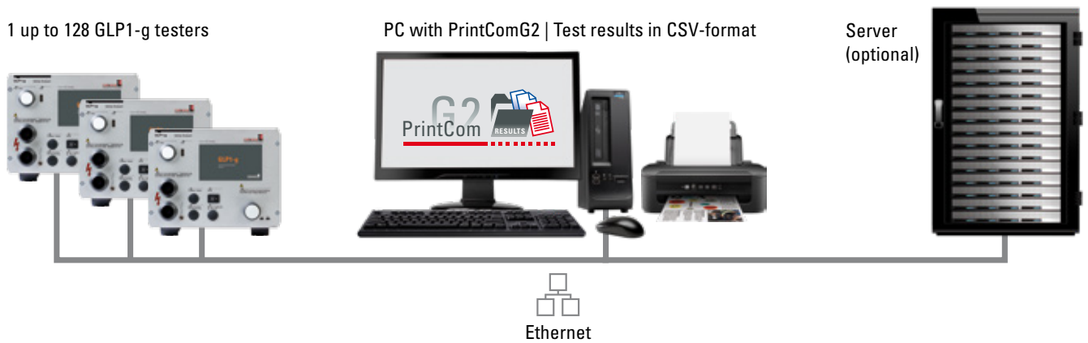
GB Resistance	0.025 Ω	Pass
GB Resistance	0.019 Ω	Pass
IR resistance	>10.0 GΩ	Pass
IR resistance	>1.0 GΩ	Pass

Details

Test step	Test condition	Actual Value	Pass-range	Actual Value	Test time	
GB Resistance	10 A	10.5 A	0 – 0.20 Ω	0.025 Ω	1.3 s	Pass
GB Resistance	15 A	15.4 A	0 – 0.20 Ω	0.019 Ω	1.2 s	Pass
IR resistance	500 V	508 V	2.0 MΩ – ∞	>10.0 GΩ	1.4 s	Pass
IR resistance	900 V	911 V	2.0 MΩ – ∞	>1.0 GΩ	1.5 s	Pass

The GLP1-g in your network via USB and RS232

The GLP1-g in your ethernet network



Accessories

19”-mounting material | Housing variants

	Article number
Mounting material for half-wide 19” testers	4018821
Mounting material for 19” testers	4018822
Carrying handle for half-wide 19”testers	401879
Cable winder for half-wide 19” testers	4018207
GLP1-g in a mobile caddy[1]	4018132
GLP1-g in a transport case[2]	4018698

[1] Only available for half-wide 19” testers with all test connections at the front:
GLP1-g 120, 130, 220, 320, 321, 330, 331, 620, 630, 720, 730, 820, 830, 920, 1011, 1012, 1021, 1022, 1122, 1130, 1320, 1720

[2] Available only for the following devices: GLP1-g 120, 130, 220, 1130

Interface driver

	Article number
LabView	40108852

Test connections

The test socket on the front panel can be ordered to country-specific requirements.
In case the test socket on the front panel is not sufficient for all necessary types of contacting, a separate connection box can be used. It contains various types of contacting and can be connected on the rear side of the tester. Then, the front socket is omitted.

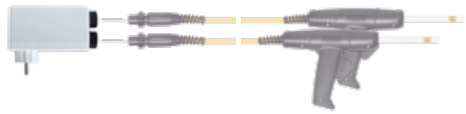
		Article number
test socket on the front panel BE/FR/CZ/SK/PL	HV max. 2000 V AC, 2800 V DC	40108800
test socket on the front panel IT	10/16A | HV max. 2000 V AC, 2800 V DC	40108802
test socket on the front panel CH	Typ 13 | HV max. 2000 V AC, 2800 V DC	40108803
test socket on the front panel UK	HV max. 2000 V AC, 2800 V DC	40108804
test socket on the front panel DK	HV max. 2000 V AC, 2800 V DC	40108805
test socket on the front panel Franco-American	HV max. 2000 V AC, 2800 V DC	40108806
test socket on the front panel US/CAN	HV max. 3000 V AC, 3000 V DC	40108807
test socket on the front panel AUS/JPN	HV max. 2000 V AC, 2800 V DC	40108808
Industrial plug connection on the rear side e. g. for connection box / delivery incl. mating plug*		40108809

* When industrial plug connection on the rear side is used, the test socket on the front panel is omitted.

Connection boxes up to 16 A

Model 2 | Model 4 | Model 5 | Model 6

HV-adapter for earthed test socket



In case the test socket on the front panel is not needed or not sufficient for all requested types of contacting, a separate connection box can be ordered. It contains various types of contacting and can be connected on the rear side of the tester. Then, the front socket is omitted.

	PE/GB, IR, Fct	HV	LC	Article number
Connection box model 2 with 1 earthed test socket (SCHUKO)[1], 4 kV		•		400145
Connection box model 2 with 1 earthed test socket (SCHUKO), 6 kV		•		40104327
Connection box model 4 with 1 earthed test socket (SCHUKO)[1] suitable for	•			40108820
Connection box model 4 with 1 earthed test socket (SCHUKO)[1] suitable for	•		•	40108821
Connection box model 4 with 1 earthed test socket (SCHUKO)[1] suitable for	•	•		40108822
Connection box model 4 with 1 earthed test socket (SCHUKO)[1] suitable for	•	•	•	40108823
Connection box model 4 with contacting pads for high-voltage test pistols		•		40108890
Connection box model 5 with 4 earthed test sockets (SCHUKO)[1,2] suitable for	•			40108825
Connection box model 5 with 4 earthed test sockets (SCHUKO)[1,2] suitable for	•		•	40108882
Connection box model 5 with 4 earthed test sockets (SCHUKO)[1,2] suitable for	•	•		40108883
Connection box model 5 with 4 earthed test sockets (SCHUKO)[1,2] suitable for	•	•	•	40108878
Connection box model 5 with contacting pads for high-voltage test pistols		•		40108891
Connection box model 6 with 3 earthed test sockets (SCHUKO)[1,3] suitable for	•			40108879
Connection box model 6 with 3 earthed test sockets (SCHUKO)[1,3] suitable for	•		•	40108824
Connection box model 6 with 3 earthed test sockets (SCHUKO)[1,3] suitable for	•	•		40108887
Connection box model 6 with 3 earthed test sockets (SCHUKO)[1,3] suitable for	•	•	•	40108888
Connection box model 6 with contacting pads for high-voltage test pistols		•		40108892
Test socket (SCHUKO) up to 6 kV				40108880
Test socket BE/FR/CZ/SK/PL				40108869
Test socket IT 10/16A				40108871
Test socket CH Typ 13				40108872
Test socket UK				40108873
Test socket DK				40108874
Test socket Franco-American				40108875
Test socket USA/CAN				40108876
Test socket AUS/JPN				40108877
Adapter of earthed test sockets (SCHUKO) on high-voltage test pistol				40002134

[1] These test sockets can be ordered in other versions / to country-specific requirements. All available test socket versions are separately shown in the list below the connection boxes.

[2] 4 test sockets as standard configuration: SCHUKO, B/F/CR/CR/PL, UK, IT10/16A

[3] 3 test sockets as standard configuration: SCHUKO, IT10/16A, CEE16A

PE/GB: PE/GB-resistance | IR: Insulation resistance | Fct: Function/Power input | HV: High-voltage | LC: Leakage current

Accessories

High-voltage test pistols and high-voltage cables

The high-voltage test pistols are used to manually contact the DUT during a high-voltage test. The high-voltage test pistols can be connected on the rear side of the tester. These connections are only available for certain variants.

	Article number
1 High-voltage test pistol, max. 10 kV DC, max. 8 kV AC, lead length: 2 m/6.6 ft	400121
1 High-voltage test pistol, max. 10 kV DC, max. 8 kV AC, lead length: 4 m/13.1 ft	40001179
1 High-voltage test pistol, max. 10 kV DC, max. 8 kV AC, lead length: 6 m/19.7 ft	4001103
1 High-voltage test pistol, max. 10 kV DC, max. 8 kV AC, lead length: 10 m/32.8 ft	4001102
2 High-voltage test pistol 2-pole, max. 10 kV DC, max. 8 kV AC, lead length: 2 m/6.6 ft	4000310
2 High-voltage test pistol 2-pole, max. 10 kV DC, max. 8 kV AC, lead length: 4 m/13.1 ft	4000311
3 High-voltage test pistol with integrated start button, max. 8 kV DC, max. 6 kV AC, lead length: 2 m/6.6 ft	40048
3 High-voltage test pistol without start button, max. 8 kV DC, max. 6 kV AC, lead length: 2 m/6.6 ft	4000993
3 High-voltage test pistol with integrated start button, max. 8 kV DC, max. 6 kV AC, lead length: 5 m/16.4 ft	4000299
3 High-voltage test pistol without start button, max. 8 kV DC, max. 6 kV AC, lead length: 5 m /16.4 ft	4000994
3 High-voltage test pistol with integrated start button, max. 8 kV DC, max. 6 kV AC, lead length: 10 m/32.8 ft	4000233
3 High-voltage test pistol without start button, max. 8 kV DC, max. 6 kV AC, lead length: 10 m/32.8 ft	40001972
4 High-voltage cable, max. 10 kV DC, max. 8 kV AC, lead length: 2 m/6.6 ft	40101775
4 High-voltage cable, max. 10 kV DC, max. 8 kV AC, lead length: 4 m/13.1 ft	40101776
4 High-voltage cable, max. 10 kV DC, max. 8 kV AC, lead length. 6 m/19.7 ft	4010229
4 High-voltage cable, max. 10 kV DC, max. 8 kV AC, lead length. 10 m/32.8 ft	40101777

Test probes

PE/GB-resistance: Test probes serve for manually contacting the different PE/GB test points.
The test lead with alligator clip 6 serves for contacting the PE/GB connection.
Insulation resistance: Test probes serve to manually contact isolated housing parts for DUTs with protection class II.
Leakage current (housing): Test probes serve to manually contact isolated housing parts for DUTs with protection class II

	Article number
1 Test probe without start button, lead length: 1.85 m/6.1 ft	40001945
1 Test probe without start button, lead length: 5 m/16.4 ft	40001959
1 Test probe without start button, lead length: 10 m/32,8 ft	40001982
2 Test probe with integrated start button, lead length: 1.85 m/6.1 ft	40001946
2 Test probe with integrated start button, lead length: 5 m/16.4 ft	40001960
2 Test probe with integrated start button, lead length: 10 m/32,8 ft	40001983
3 Test probe PE/GB + IR for the standard EN 60204 with cap, lead length: 5 m/16.4 ft	40001985

Test probes

	Article number
4 PE/GB-Test probe with two spring-loaded probes and integrated start button, lead length: 1.85 m/6.1 ft	40002171
4 PE/GB-Test probe with two spring-loaded probes and integrated start button, lead length: 5 m/16.4 ft	40002173
4 PE/GB-Test probe with two spring-loaded probes and integrated start button, lead length: 10 m/32,8 ft	40002176
5 PE/GB-Kelvin clamp, lead length: 1.85 m/6.1 ft	40002172
5 PE/GB-Kelvin clamp, lead length: 5 m/16.4 ft	40002174
5 PE/GB-Kelvin clamp, lead length: 10 m/32,8 ft	40002177
6 Connection lead with alligator clip, lead length: 2 m/6.6 ft	40001947
6 Connection lead with alligator clip, lead length: 5 m/16.4 ft	40001961
6 Connection lead with alligator clip, lead length: 10 m/32,8 ft	40001981

Black boxes

Model 10 Model 20 Model 30 Model 40

The daily checking of your tester by means of a black box (simulation of Go and NO GO conditions) ensures that your tester is properly working and that only safe, technically validated products leave your company.

Set value test dummy for simulation of tests
When the tester is checked with this black box, the tester measures the set value of the respective test method within a very tight ± tolerance. If the test result is out of the tolerance limits, a fault exists.

The GO/NO GO black box simulates tests with and without faulty conditions. For each test method a GO and NO GO test result is simulated.

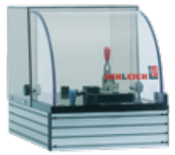
SCHLEICH black boxes can be used as set value dummies or GO/NO GO test dummies.

	Article number
Black box model 10: insulation, high voltage DC, high voltage AC to connect with a test socket	40001902
Black box model 20: earth/ground bond*, insulation, high voltage DC, high voltage AC to connect with a test socket	40001903
Black box model 30: earth/ground bond*, insulation, high voltage DC, high voltage AC, function to connect with a test socket	40001905
Black box model 40: earth/ground bond*, insulation, high voltage DC, high voltage AC for testing with high-voltage pistols or earth/ground bond test probe	40001904

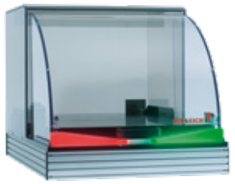
* Earth/ground bond has to be tested with test probes.

Accessories

Test covers



Model 0



Model 1

SCHLEICH test covers conform to the latest standards and are equipped with dual-circuit safety switches. The test covers are made of solid and dimensionally stable aluminum to support DUTs weights easily and provide enough space to integrate connectors or special components. The transparent parts of the cover are made of break-proof LEXAN.

	Article number
Test cover model 0* | outer dimensions 260 x 400 x 280 mm/10.2 x 15.7 x 11 inch	40108853
Test cover model 1* | outer dimensions 546 x 775 x 520 mm/21.5 x 30.5 x 20.5 inch	40108854

* including connection lead and connector within the test cover

› Note: Please find other test covers on our website or ask for our quotation.

Control options

	Article number
Foot switch to start and stop test process, lead length: 2 m/6.6 ft	4010611
Two-hand control in 2-hand housing incl. emergency stop, lead length: 2m /6.6 ft	4018802

Barcode scanner

Before testing, the barcode of a type plate or order data from order documents can be scanned. The barcode often contains information of the DUT (Device Under Test) and its serial number. The data can be provided as barcode or 2D data matrix code. The scanned data enable automatic loading of a test sequence and to save the test results together with the serial number and other manufacturing data.

	Article number
Barcode-evaluation software	40103104
Barcode scanner, USB, lead length: 2 m/6.6 ft	40103105
Barcode scanner, radio transmission	40103107
Barcode scanner for barcode and data matrix code, USB, lead length: 2 m/6.6 ft	40103106

Warning and result lights

horizontal

vertical

Warning lights indicate if the DUT is connected to voltage or if danger to life exists.
red= DUT is connected to voltage – danger to life! | green = no voltage – no danger

Alternately, the warning light function according to EN 50191 may also be set so that it is activated as soon as the tester is ready for operation.
red = tester ready for operation – danger to life! | green = tester is not ready for operation – no danger

Result lights indicate if the test result is GO or NO GO. red = test result is NO GO (fail) | green = test result go (pass)

	Article number
Warning lights, horizontal, lead length: 2 m/6.6 ft	400184
Warning lights, vertical, lead length: 2 m/6.6 ft	4000224
Warning lights, vertical, red flash light, lead length: 2 m/6.6 ft	40001639
Result lights, horizontal, lead length: 2 m/6.6 ft	4000222
Result lights, vertical, lead length: 2 m/6.6 ft	4000225

PC Software

PrintCom 7 RESULTS PrintCom G2 RESULTS

The optionally available SCHLEICH software enables managing test results on a local PC or in a plant network. All test results can be saved for consistent documentation and traceability. Searching and printing test results and the statistical evaluation are further features of this software. The test results can also be exported to other programs.

	Article number
PrintCom7 | Saving test results	4018182
PrinComG2 | Saving and reporting test results	4018712

SCHLEICH.Care for international customers

CARE CARE PREMIUM

SCHLEICH testers stand for perfect test technology, durability and fulfill the highest quality standards. The German warranty includes a comprehensive “carefree-package”. For SCHLEICH testers which are purchased and used abroad, we recommend our additional SCHLEICH.Care warranty.

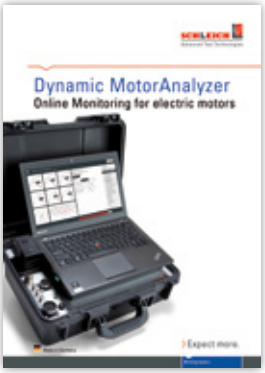
	Article number
SCHLEICH.Care | Europe	4018707
SCHLEICH.Care Premium | Europe	4018708
SCHLEICH.Care | Worldwide	4018709
SCHLEICH.Care Premium | Worldwide	4018710

Expect more!

Whatever you want to test, SCHLEICH has the solution! As a leading supplier of electric safety and function test systems as well as motor and winding testers we offer solutions for any task in this sector. Our owner-managed company, founded more than 50 years ago, is present in over 40 markets all around the globe.

Electrical safety- and function testers

Testers for electric motors and windings



SCHLEICH®
Advanced Test Technologies

SCHLEICH GmbH
An der Schleuse 11
58675 Hemer | Germany
Phone +49 (0) 2372 9498-94 98
Fax +49 (0) 2372 9498-99
info@schleich.com
www.schleich.com

Presented by:

› Expect more.