



TECHNICAL DATA SHEET

Safety and function tester **GLP2-BASIC**

Revision 10-3, valid from March 2023

Standard model GLP2-BASIC

ELECTRICAL SPECIFICATION		
Supply voltage	110 to 250 V AC	
Mains frequency	47 to 63 Hz	
No load current consumption	0.5 A, fuse T10A	
GENERAL SPECIFICATION		
Display	7"- color graphic display, resolution 800 x 480 pixels, display behind scratch-proof glass	
Data input	PCAP capacitive touch display behind scratch-proof glass	
Time & Date	clock with integrated calendar	
Test plan storage	10,000 test plans	
Test result storage	250,000 test results	
Test connections	test socket ¹⁾ on the front panel of the testers	
	test probe connection on the rear side of the tester	
	industrial plug connection $^{1,2)}$ on the rear side of the tester	
	high-voltage sockets on the rear side of the tester	
Safety	key lock ³⁾	
	access to the test parameters protected by password	
	CAT IV safety relay with 2 contacts (emergency stop, test cover)	
	input for release	
	CE-conform, corresponding to VDE 0104 / EN 50191 / EN 61010	
Interface (display)	HDMI port to operate an additional, large monitor screen / HDMI 1.0 800 x 480 and/or 800 x 600	
Interfaces (communication)	2 x USB on the front side of the tester	
	4 x USB on the rear side of the tester	
	LAN on the rear side of the tester	
	RS232 on the rear side of the tester	
Interfaces (standard)	outputs: result light, warning light	
	inputs: foot-switch on the rear side of the tester, control plug, optional: two-hand start	
Interface (PLC-I/O-remote control)	outputs: GO / NO GO, test is running, ready, HV on, I>min, disruptive discharge	
	16 x freely configurable outputs	
	inputs: start, foot-switch, 4 x freely configurable inputs, e.g., for digital test plan selection between 15 test plans	
Calibration	Adjustment via software without having to open the test device, remotely via SmartCalibration.	
Software operator convenience	All inputs are checked by plausibility check. Therefore, wrong inputs should be avoided.	
	The operator can display a detailed help text for any input option.	
Front panel languages	DE, EN	
Software languages	DE, EN, CS, ES, FR, IT, NL, PL	
Design and production	Made in Germany – True German Quality	

Variants	 desktop device in 19"-design incl. solid pedestals to put the tester into an inclined position 	
	 rack-mount device: optional mounting kit for installation in a 19"-cabinet 	
Working environment	working temperature 0° to 50° C / 32° to 104° F, designed for a relative humidity of 0 to 80 %rF without condensation!	
Storage	storage temperature -10° to 60° C / 14° to 140° F, designed for a relative humidity of 0 to 90 %rF	
Discourse of Color	without condensation!	
Dimension & Color	desktop device, ergonomically designed: 480 x 470 x 225 mm (W x D x H), red housing	
Moights	desktop device 19": 448 x 430 x 178 mm (W x D x H), RAL 7035	
Weights	BASIC 320 – 13.4 kg / 29.5 lbs. BASIC 330 – 18.6 kg / 41.0 lbs.	
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	BASIC 440 – 18.6 kg / 41.0 lbs. BASIC 530 – 18.6 kg / 41.0 lbs.	
	BASIC 820 – 11.2 kg / 24.7 lbs.	
	BASIC 920 – 11.2 kg / 24.7 lbs. BASIC 920 – 14.2 kg / 31.3 lbs.	
	BASIC 920 – 14.2 kg / 31.3 lbs. BASIC 930 – 19.4 kg / 42.8 lbs.	
	BASIC 940 – 18.6 kg / 41.0 lbs.	
	BASIC 1030 – 19.8 kg / 43.7 lbs.	
	BASIC 1030 – 13.0 kg / 43.7 lbs. BASIC 1040 – 27.7 kg / 61.1 lbs.	
	BASIC 1040 - 27.7 kg / 01.1 lbs.	
	BASIC 1130 – 17.6 kg / 38.8 lbs.	
	BASIC 1131 – 17.6 kg / 38.8 lbs.	
	BASIC 1220 – 20.6 kg / 45.4 lbs.	
	BASIC 1230 – 25.8 kg / 56.9 lbs.	
	BASIC 1231 – 25.8 kg / 56.9 lbs.	
	BASIC 1232 – 25.8 kg / 56.9 lbs.	
	BASIC 1240 – 25.0 kg / 55.1 lbs.	
	BASIC 1320 – 17.5 kg / 38.6 lbs.	
	BASIC 1322 – 17.5 kg / 38.6 lbs.	
	BASIC 1330 – 16.8 kg / 37.0 lbs.	
	BASIC 1420 – 17.5 kg / 38.6 lbs.	
	BASIC 1430 – 17.5 kg / 38.6 lbs.	
	BASIC 1520 – 20.5 kg / 45.2 lbs.	
	BASIC 1530 – 25.7 kg / 56.7 lbs.	
	BASIC 1540 – 19.8 kg / 43.7 lbs.	
	BASIC 1550 – 25.0 kg / 55.1 lbs.	
	BASIC 1620 – 20.5 kg / 45.2 lbs.	
	BASIC 1630 – 25.7 kg / 56.7 lbs.	
	BASIC 1640 – 20.5 kg / 45.2 lbs.	
	BASIC 1650 – 25.7 kg / 56.7 lbs.	
	BASIC 1720 – 18.3 kg / 40.3 lbs.	
	BASIC 1740 – 17.6 kg / 38.8 lbs.	
	BASIC 1820 – 18.3 kg / 40.3 lbs.	
	BASIC 1840 – 18.3 kg / 40.3 lbs.	
	BASIC 1920 – 21.3 kg / 47.0 lbs.	
	BASIC 1930 – 26.5 kg / 58.4 lbs.	
	BASIC 1930 – 26.5 kg / 58.4 lbs. BASIC 1931 – 26.4 kg / 58.2 lbs.	
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- 1) Design of the test connections is freely configurable when order is placed.
- 2) If industrial plug connection on the rear side of the tester is ordered, the test socket and/or connection for test probe are omitted.
- 3) Key lock only for testers with dangerous test voltages and/or dangerous test currents

Earth / Ground-bond resistance test AC GLP2-BASIC

TEST CURRENT AC		
Test current max.	30 A AC, beginning 1 A, adjustable in steps of 1 A	
Output Frequency	47 to 63 Hz, depending on mains supply	
Current control	Automatic electronic constant-current control with minimum-current control and sense-interruption detector	
Setting	default value + 0.5 A	
VOLTAGE		
Test voltage max.	6 / 12 V AC – selectable in the test plan operator, with automatic maximum voltage limitation	
RESISTANCE		
Accuracy	high-precision 4-wire resistance measurement	
Measuring range total	0 to 1200 m Ω , depending on the flowing test current and the permitted maximum voltage	
Resolution	$1~\text{m}\Omega$ or $10~\text{mV}$ AC	
Resistance measurement	0 to 1200 mΩ at 12 V and 10 A	
	0 to 600 m Ω at 6 V and 10 A	
	0 to 400 m Ω at 12 V and 30 A	
	0 to 200 m Ω at 6 V and 30 A	
Milliohm offset range	0 to 300 m Ω This value is subtracted from the measured value.	
	It is used to compensate fixed and unchanging contact resistances.	
Measuring accuracy	± 1.25 % of the measured value ± 1 digit	
EVALUATION		
Evaluation related to	resistance or voltage drop	
Upper resistance limit PE _{Rmax}	10 to 1200 m Ω freely definable, measured values equal to or under this limit are OK	
or	or alternately	
upper voltage limit PE∪max	0 to 12 V freely definable, measured values equal to or under this limit are OK	
Lower resistance limit PE _{Rmin}	freely definable, measured values under this limit are NOT OK	
or	This function serves for contact control. This function can be deactivated.	
lower voltage limit	The lower resistance limit is always smaller than the upper limit.	
Undercurrent	If the test current is smaller than the default value during test process, the test result is NO GO.	
GENERAL		
Test timer	0 to 180 s in steps of 0.1 s	
Measurement technique of U & I	high-precision true r.m.s measurement	
Test points	usual: PE/GB in the test socket ↔ test probe	
	special tester variant: test probe ↔ ground connection	

Insulation resistance test (IR) GLP2-BASIC

TEST VOLTAGE			
Test voltage	30 to 1000 V DC, adjustable in steps of 10 V		
Voltage control	automatic electronic constant voltage control with undervoltage control		
Setting	default value + 5 V		
CURRENT			
Test current max.	max. 6 mA DC, safety current limiting		
POWER			
Power max.	max. 0.5 W		
RESISTANCE			
Measuring range 1	100 kΩ to 99.9 MΩ		
Resolution	100 kΩ		
Measuring accuracy	$\pm1\%$ of the measure value, at a test voltage of min. 500 V		
Resistance-/voltage table	Resistance max. voltage / limited by maximum power		
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	100 kΩ 220 V		
	250 kΩ 250 V 500 kΩ 500 V		
	1 MΩ 700 V		
	2 MΩ 1000 V		
Measuring range 2	100 to 499.9 MΩ		
Resolution	1 ΜΩ		
Measuring accuracy	± 1.5 % of the measured value, at a test voltage of min. 500 V		
Measuring range 3	-		
Resolution	500 to 999.9 MΩ		
	1 MΩ		
Measuring accuracy	± 2.5 % of the measured value, at a test voltage of min. 500 V		
Measuring range 4	1 to 10 GΩ		
Resolution	10 MΩ		
Measuring accuracy	± 5 % of the measured value, at a test voltage of min. 500 V		
EVALUATION			
Lower resistance limit Iso _{Rmin}	100 k Ω to 10 G Ω freely definable, measured values equal to or above this limit are OK		
Upper resistance limit Iso _{Rmax}	500 k Ω to 10 G Ω freely definable, measured values above this limit are NOT OK		
	This function serves for contact control. This function can be deactivated.		
	The upper resistance limit is always greater than the lower limit.		
Undervoltage	If the test voltage is smaller than the default value during test process, the test result is NO GO.		
GENERAL			
Test timer manual measurement	0 to 600 s in steps of 0.1 s (0 = continuous operation without time limit)		
Ramp timer	·		
Delay time	0 s, 0.1 s, 0.2 s bis 60 s in steps of 0.1 s		
-	Delay of the evaluation, e.g., to prevent the effect of switch-on effects on measurements		
Measurement technique of U & I	Lowest measured value is used for evaluation		
Discharge	≤ 200 ms – for test objects with only ohmic load		
	provided that: after testing, the test connections still must be connected with the test object during discharge		
5: 1	process		
Discharge resistor	100 kΩ at IR with max. 1000 V test voltage		
Residual voltage test	The test (test step) is only finished when output voltage decreased under 60 V.		
Internal resistance	330 k Ω at IR with max. 1000 V test voltage		
	Charge time of test object depends on internal resistance.		
	min. charge time = internal resistance x capacity of test object [s]		
Test points	L&N ↔ PE, L ↔ PE, N ↔ PE, L ↔ N, L ↔ test probe, N ↔ test probe, L&N ↔ test probe, L&N ↔ PE& test probe,		
	PE ↔ PE		

High-Voltage test AC GLP2-BASIC

TEST VOLTAGE		
Test voltage and resolution	50 to 6000 V AC, <u>not</u> potential-free @ 3 mA safety current limiting, DUT must be set up isolated 50 to 6000 V AC, potential-free @ 100 mA	
Resolution	1 V	
Voltage adjustment	adjustable in steps of 10 V	
Voltage control	automatic electronic constant-voltage control with undervoltage monitoring	
Tolerance of setting	approx. 5 to 10 V higher than the default value, from no load to full load	
Voltage measurement	True r.m.s. value or peak value, selectable by operator	
Measuring accuracy	devices up to 6 kV: ± 0.25 % of measured value	
Output frequency	47 to 63 Hz, depending on mains supply, optionally adjustable: 50/60 Hz	
POWER		
Output power	 max. 25 VA at device with 3 mA safety current limiting max. 500 VA at device with 100 mA according to VDE-, EN- and IEC standards 	
CURRENT		
Test current, tester variant 1	3 mA safety current limiting with redundant overcurrent evaluation!	
Resolution Massuring accuracy	1 µA + 3 % of the measured value + 5 µA	
Measuring accuracy	± 2 % of the measured value ± 5 μA	
Test current, tester variant 2	100 mA $I_k \ge 100$ mA from ≥ 500 V, ≥ 500 VA according to VDE-, EN- and IEC-standards $I_k \ge 200$ mA from ≥ 1000 V, according to VDE-, EN- and IEC-standards	
Resolution	10 μΑ	
Measuring accuracy	± 2 % of the measured value ± 0,1 mA	
Current measuring and evaluation	true r.m.s value (TRMS) total current, active current or reactive current – selectable by operator	
EVALUATION		
Upper current limit / Imax	0 to max. test current (depending on tester variant), measured values equal to or under this limit are OK	
Lower current limit / Imin	0 to max. test current (depending on tester variant), measured values under this limit are NOT OK	
	This function serves for contact control. This function can be deactivated.	
	The lower current limit is always smaller than the upper limit.	
Undervoltage	If the test voltage is smaller than the default value during test process, the test result is NO GO.	
Error detector	optic and acoustic	
GENERAL		
Test timer	0 s to 200 h in steps of 0.1 s (0 = continuous operation without time limit)	
Ramp up timer	0 s to 24 h in steps of 0.1 s (0 = without ramp up)	
Ramp down timer	0 s to 4 h in steps of 0.1 s (0 = without ramp down)	
Operation modes	4	
Manual	Test is performed without timer. Shutdown at overcurrent.	
Automatic	The voltage is automatically adjusted. Test is performed with timer.	
	Shutdown at overcurrent or current outside the minimum / maximum limits.	
Burning	Test is performed without timer, manual measurement only.	
only at 100mA	No shutdown at overcurrent. Test current is electronically limited to max. 100 mA.	
Pulsing	Test is performed without timer, manual measurement only.	
not at 6 kV @ 3 mA	Shutdown for 0.5 s at overcurrent. Test current is electronically limited to max. 100 mA.	
Discharge	0 to 100 ms	
-	provided that: after testing, the test connections still have to be connected with the test object during discharg process	
Residual voltage test	The test (test step) is only finished when output voltage decreased under 60 V.	

High-voltage test DC GLP2-BASIC

TEST VOLTAGE		
Test voltage and resolution	50 to 6000 V DC, not potential-free, negative pole at PE (Earth - Ground)	
Resolution	1 V	
Ripple tester variant 1, 4 mA	< 4 % (6 kV @ 4 mA)	
Ripple tester variant 2, 100 mA	up to 100 %, rectifier bridge with 10 nF filter capacity	
Voltage adjustment	adjustable in steps of 10 V	
Voltage control	automatic electronic constant voltage control with undervoltage control	
Tolerance of setting	approx. 5 to 10 V higher than the default value, from no load to full load	
Voltage measurement	Type 1: average value	
	Type 2: peak value	
Measuring accuracy	± 1.5 % of measurement value	
CURRENT		
Test current, tester variant 1	4 mA, safety current limiting	
Resolution	1 µA	
Measuring accuracy	± 1 % of measuring range's final value	
Test current, tester variant 2	100 mA	
Resolution	100 μΑ	
Measuring accuracy	0 to 100 mA: ± 2 % of measuring range's final value	
Current measurement and evaluation	average value	
Power	Max. HV module power: 3 W	
INSULATION RESISTANCE		
Range	100 kΩ to 1 GΩ	
Resolution	100 kΩ	
Measuring accuracy	± 1 % of measuring range's final value at min. 500 V	
EVALUATION resistance		
Lower resistance limit Iso _{Rmin}	100 k Ω to 1 G Ω freely definable, measured values equal to or under this limit are OK	
Upper resistance limit Iso _{Rmax}	500 k Ω to 1 G Ω freely definable, measured values above this limit are ok	
- PP COLONIA - C	This function serves for contact control. This function can be deactivated.	
	The upper resistance limit is always larger than the lower.	
Undervoltage	If the test voltage is smaller than the default value, the test result is NO GO.	
EVALUATION current		
	Observation and the control of the c	
Upper current limit / Imax	U to max, test current (depending on tester variant), measured values edual to or under this limit are UK	
Upper current limit / Imax Lower current limit / Imin	0 to max. test current (depending on tester variant), measured values equal to or under this limit are OK 0 to max. test current (depending on tester variant measured values under this limit are OK	
Upper current limit / Imax Lower current limit / Imin	0 to max. test current (depending on tester variant measured values under this limit are OK	
• • •	0 to max. test current (depending on tester variant measured values under this limit are OK This function serves for contact control. This function can be deactivated.	
Lower current limit / Imin	0 to max. test current (depending on tester variant measured values under this limit are OK This function serves for contact control. This function can be deactivated. The lower current limit is always smaller than the upper limit.	
• •	0 to max. test current (depending on tester variant measured values under this limit are OK This function serves for contact control. This function can be deactivated.	
Lower current limit / Imin Undervoltage Error detector	O to max. test current (depending on tester variant measured values under this limit are OK This function serves for contact control. This function can be deactivated. The lower current limit is always smaller than the upper limit. If the test voltage is smaller than the default value during test process, the test result is NO GO.	
Lower current limit / Imin Undervoltage Error detector GENERAL	O to max. test current (depending on tester variant measured values under this limit are OK This function serves for contact control. This function can be deactivated. The lower current limit is always smaller than the upper limit. If the test voltage is smaller than the default value during test process, the test result is NO GO. optic and acoustic	
Lower current limit / Imin Undervoltage Error detector GENERAL Test timer	0 to max. test current (depending on tester variant measured values under this limit are OK This function serves for contact control. This function can be deactivated. The lower current limit is always smaller than the upper limit. If the test voltage is smaller than the default value during test process, the test result is NO GO. optic and acoustic 0 to 200 h in steps of 0.1 s (0 = continuous operation without time limit)	
Lower current limit / Imin Undervoltage Error detector GENERAL Test timer Ramp up timer	0 to max. test current (depending on tester variant measured values under this limit are OK This function serves for contact control. This function can be deactivated. The lower current limit is always smaller than the upper limit. If the test voltage is smaller than the default value during test process, the test result is NO GO. optic and acoustic 0 to 200 h in steps of 0.1 s (0 = continuous operation without time limit) 0 to 24 h in steps of 0.1 s (0 = ramp up off)	
Undervoltage Error detector GENERAL Test timer Ramp up timer Ramp down timer	0 to max. test current (depending on tester variant measured values under this limit are OK This function serves for contact control. This function can be deactivated. The lower current limit is always smaller than the upper limit. If the test voltage is smaller than the default value during test process, the test result is NO GO. optic and acoustic 0 to 200 h in steps of 0.1 s (0 = continuous operation without time limit) 0 to 24 h in steps of 0.1 s (0 = ramp up off) 0 to 24 h in steps of 0.1 s (0 = ramp down off) at ohmic load only!	
Lower current limit / Imin Undervoltage Error detector GENERAL Test timer Ramp up timer	0 to max. test current (depending on tester variant measured values under this limit are OK This function serves for contact control. This function can be deactivated. The lower current limit is always smaller than the upper limit. If the test voltage is smaller than the default value during test process, the test result is NO GO. optic and acoustic 0 to 200 h in steps of 0.1 s (0 = continuous operation without time limit) 0 to 24 h in steps of 0.1 s (0 = ramp up off) 0 to 24 h in steps of 0.1 s (0 = ramp down off) at ohmic load only! ≤ 200 ms	
Undervoltage Error detector GENERAL Test timer Ramp up timer Ramp down timer	0 to max. test current (depending on tester variant measured values under this limit are OK This function serves for contact control. This function can be deactivated. The lower current limit is always smaller than the upper limit. If the test voltage is smaller than the default value during test process, the test result is NO GO. optic and acoustic 0 to 200 h in steps of 0.1 s (0 = continuous operation without time limit) 0 to 24 h in steps of 0.1 s (0 = ramp up off) 0 to 24 h in steps of 0.1 s (0 = ramp down off) at ohmic load only! ≤ 200 ms provided that: after testing, the test connections still have to be connected with the test object during discharge	
Undervoltage Error detector GENERAL Test timer Ramp up timer Ramp down timer Discharge	0 to max. test current (depending on tester variant measured values under this limit are OK This function serves for contact control. This function can be deactivated. The lower current limit is always smaller than the upper limit. If the test voltage is smaller than the default value during test process, the test result is NO GO. optic and acoustic 0 to 200 h in steps of 0.1 s (0 = continuous operation without time limit) 0 to 24 h in steps of 0.1 s (0 = ramp up off) 0 to 24 h in steps of 0.1 s (0 = ramp down off) at ohmic load only! ≤ 200 ms provided that: after testing, the test connections still have to be connected with the test object during discharge process	
Undervoltage Error detector GENERAL Test timer Ramp up timer Ramp down timer	0 to max. test current (depending on tester variant measured values under this limit are OK This function serves for contact control. This function can be deactivated. The lower current limit is always smaller than the upper limit. If the test voltage is smaller than the default value during test process, the test result is NO GO. optic and acoustic 0 to 200 h in steps of 0.1 s (0 = continuous operation without time limit) 0 to 24 h in steps of 0.1 s (0 = ramp up off) 0 to 24 h in steps of 0.1 s (0 = ramp down off) at ohmic load only! ≤ 200 ms provided that: after testing, the test connections still have to be connected with the test object during discharge	

Continuity test and short-circuit test GLP2-BASIC

TEST VOLTAGE	
Test voltage	approx. 4.5 V DC
TEST CURRENT	
	10.14
Test current	max. 10 mA
RESISTANCE	
Measuring method	2-wire method
Measuring range 1	1 Ω to 99.9 Ω
Resolution	0,1 Ω
Measuring accuracy	\pm 1.5 % of the measured value \pm 1.5 Ω
Measuring range 2	100 Ω to 999.9 Ω
Resolution	0,1 Ω
Measuring accuracy	\pm 1.5 % of the measured value \pm 1.5 Ω
Measuring range 3	1 to 9.99 kΩ
Resolution	10 Ω
Measuring accuracy	\pm 1.5 % of the measured value \pm 10 Ω
Measuring range 4	10 to 100 kΩ
Resolution	100 Ω
Measuring accuracy	\pm 2.5 % of the measured value \pm 100 Ω
L ↔ N short-circuit test	•
Test points	L ↔ N, L ↔ PE, N ↔ PE, test probe ↔ PE
EVALUATION	
Upper & lower Limit	resistances within the tolerance limits are OK
tolerance in % of default value	
Upper limit	resistances under this limit are OK
Lower limit	resistances above this limit are OK

Function test 5 A GLP2-BASIC

TEST VOLTAGE		
Test voltage	12 to 260 V AC single-phase potential-free via an integrated isolating transformer	
Resolution	0.1 V	
Voltage adjustment	adjustable in steps of 1 V	
Voltage control	automatic electronic constant voltage control with undervoltage and overvoltage control	
Tolerance of setting	0 to ± 1 % of the default value, from no load to full load	
Voltage measurement	true r.m.s. value (TRMS)	
Measuring accuracy	± 1.5 % of measuring range's final value	
Output frequency	47 to 63 Hz, depending on mains supply, optionally adjustable: 50/60 Hz	
CURRENT		
Test current	max. 5 A AC continuous current at 230 V supply voltage with 12 to 230 V test voltage max. 5, reduced to 4.4 A continuous current AC at 230 V supply voltage with a proportional reduction to the test voltage from 230 V to 260 V max. 5 A AC continuous current at 110 V supply voltage and 110 V test voltage max. 5, reduced to 2.1 A AC continuous current at 110 V supply voltage with a proportional reduction to the	
Measuring range 1	test voltage from 110 V to 260 V 0.5 A	
Resolution	0.5 A 10 μA	
Measuring accuracy	± 1.5 % of measuring range's final value	
Measuring accuracy Measuring range 2	± 1.5 % of measuring range's final value	
Resolution	1 mA	
Measuring accuracy	1 MA ± 1.5 % of measuring range's final value	
Current measurement and evaluation	true r.m.s value (TRMS)	
DOMED in M. VA. coch		
POWER in W, VA, cosφ Power	1150 VA maximum normanent neuror at 220 V @ E A	
Power	1150 VA maximum permanent power at 230 V @ 5 A	
Manageria and and a	550 VA maximum permanent power at 110 V @ 5 A	
Measuring range 1	130 VA at 260 V @ 0.5 A	
Resolution	1 mVA	
Measuring range 2 Resolution	1300 VA at 260 V @ 5 A 0.1 VA	
Power measurement and evaluation	VA, W	
Tower measurement and evaluation	.,,	
EVALUATION		
Upper & lower Limit I	0 to 5 A, measured values within the tolerance limits are OK	
± tolerance in % of the default value		
Upper & lower Limit W ± tolerance in % of the default value	0 to 1300 W, measured values within the tolerance limits are OK	
Upper & lower Limit VA ± tolerance in % of the default value	0 to 1300 VA, measured values within the tolerance limits are OK	
Upper & lower Limit VAR ± tolerance in % of the default value	0 to 1300 VAR, measured values within the tolerance limits are OK	
Upper & lower Limit cosφ	0 to 1, measured values within the tolerance limits are OK	
± tolerance in % of the default value		
Undervoltage / Overvoltage	If test voltage is smaller than -1.5 % of the default value, test result is NO GO. If test voltage is greater than +1.5 % of the default value, test result is NO GO.	
Electronic short-circuit detection	continuously short-circuit proof with automatic electronic current limiting	
Error detector	optic and acoustic	
GENERAL		
Starting time	0 to 1 h in steps of 0.1 s (0 = off).	
	Bridging of a start process, start-up, etc. No evaluation of measurements during the starting time.	
Test timer	0 to 1 h in steps of 0.1 s	
Residual voltage test	The test (test step) is only finished when output voltage decreased under 60 V.	

Function test 16 A GIP2-BASIC

TEST VOLTAGE		
Test voltage	16 A tester: 0 to 260 V AC single-phase, externally supplied via separate connection	
Resolution	0,1 V	
Voltage adjustment	Voltage adjustment not possible	
Voltage control	externally controlled and supplied	
	with undervoltage and overvoltage control	
Tolerance of setting	No voltage setting	
Voltage measurement	true r.m.s value (TRMS)	
Measuring accuracy	±1.5 % of measuring range's final value	
Output frequency	50 or 60 Hz, depending on mains supply	
CURRENT		
Test current	16 A AC	
Resolution up to 9.9 A	1 mA	
Resolution 10 to 16 A	10 mA	
Current measurement and evaluation	true r.m.s value (TRMS)	
Measuring accuracy	16 A testers: ± 1.5 % measuring range's final value	
POWER W, VA, cosφ		
Power	4200 W, 4200 VA maximum permanent power at 260 V @ 16 A	
Resolution	1 VA, 1 W	
Power measurement and evaluation	VA, W	
EVALUATION		
Upper & lower limit I	0 to 16 A, measured values within the tolerance limits are OK	
± tolerance in % of the default value		
Upper & lower limit W	0 to 4200 W, measured values within the tolerance limits are OK	
± tolerance in % of the default value		
Upper & lower limit VA	0 to 4200 VA, measured values within the tolerance limits are OK	
± tolerance in % of the default value		
Upper & lower limit VAR	0 to 4200 VAR, measured values within the tolerance limits are OK	
± tolerance in % of the default value		
Upper & lower limit cosφ	0 to 1, measured values within the tolerance limits are OK	
± tolerance in % of the default value		
Undervoltage / Overvoltage	If test voltage is smaller than -1.5 % of the default value, test result is NO GO.	
	If test voltage is greater than +1.5 % of the default value, test result is NO GO.	
Electronic short-circuit detection	no electronic fuse, fuse protection via 2 x 16 A MCBs	
Error detector	optic and acoustic	
GENERAL		
Starting delay timer	0 to 200 h in steps of 0.1 s (0 = off).	
	Bridging of a start process, start-up, etc. No evaluation of measurements during the starting time.	
Test timer	0 to 200 h in steps of 0.1 s	
Residual voltage test	The test (test step) is only finished when output voltage decreased under 60 V.	

Leakage current test at testers with 5 A GLP2-BASIC

Test voltage 12 to 260 V AC single-phase potential-free via an integrated isolation transformer

Voltage supplied by function test

CURRENT

Supply current DUT max. 5 A AC continuous current at 230 V supply voltage with 12 to 230 V test voltage

max. 5, reduced to 4.4 A continuous current AC at 230 V supply voltage with a proportional reduction to the

test voltage from 230 V to 260 V

max. 5 A AC continuous current at 110 V supply voltage and 110 V test voltage

 $max.\ 5, reduced\ to\ 2.1\ A\ AC\ continuous\ current\ at\ 110\ V\ supply\ voltage\ with\ a\ proportional\ reduction\ to\ the$

test voltage from 110 V to 260 V

LEAKAGE CURRENT	
Leakage current I _{eff}	max. 30 mA
Measuring ranges	5 with automatic switchover of measuring ranges
Resolution	1 μΑ
Accuracy	\pm 1,5 % of the measured value + 1 μ A
Current measurement	ITRMS, IPeak, Idc-component, Iac-component
Measuring method	ground leakage current, housing leakage current
Standards	EN60990, EN60601
Measuring circuits	3 x MD for EN60990, 1 x MD for EN60601
Fault conditions	1 (PE interrupted), 2 (N interrupted), with normal and reverse polarity
Max. measurement frequency	500 Hz
Test points	L+N ↔ PE, L+N ↔ test probe

EVALUATION

Upper limit 0 to 30 mA

Substitute leakage current test at testers with 16 A GLP2-BASIC

TEST VOLTAGE		
Test voltage	approx. 40 V AC single-phase	
Calculated test voltage	25 to 300 V	

LEAKAGE CURRENT		
Leakage current leff	0 to 30 mA (calculated)	
Resolution	10 μΑ	
Accuracy	$1,5\%$ of the measured value + $10\mu A$	
Calculated test current	10 μA to 30 mA	
Measuring method	ground leakage current, housing leakage current	
Standards	EN 50678/50699 and VDE 0701/0702; touch current measurement – alternative method	
Test points	L+N ↔ PE, L+N ↔ test probe	

EVALUATION

Upper limit 30 mA

Glossary

Adjustment	Correction of a measurement value if the calibration showed too large a deviation.
Average value	The average value is calculated with direct voltages. It is the average of a number of test values.
Calibration	Regular annual inspection and documentation of the deviation compared to the reference value.
Condensation	Condensation means that moisture is produced at the inside or at the outside of the testing device. This must
	be avoided under all circumstances.
Current-interruption detector	Serves to check, whether the current is interrupted at the PE/GB-resistance test. In case of interruption and
	after the current is back, the test timer restarts automatically. This automatic process can be repeated up to
	three times.
DUT	Abbreviation for test object (Device Under Test)
DUT connection check	The DUT connection check serves to monitor, whether the DUT is correctly connected to the testing device.
GO	Short for "OK" (pass)
Limit (lower)	This is a value that must not be fallen below.
Limit (upper)	This is a value that must not be exceeded.
Measuring accuracy	The measuring accuracy refers to the measured value.
NO GO	Short for "not OK" (fail)
Peak value	The peak value of the sine wave is often relevant for the high-voltage test AC. Regardless of the positive or
	negative sign of the sine half wave, the indicated peak value is the highest measured.
RMS value	The RMS value is detected quickly and precisely following the exact mathematical definition. This is
	independent from the distortion of the sine signal. This is why SCHLEICH units always show the true RMS value.
Safety inputs	The device is released via two safety inputs. This function is defined as two-circuit.

Further information

Further information

For further information please visit our homepage www.schleich.com

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SCHLEICH – clean innovations

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