TEST AT ITS BEST

SCHLEICH
Advanced Test Technologies

TECHNICAL DATA SHEET

Safety and Function Tester
HandHeld

Revision 1.6, May 2026.

Basic unit

ELECTRICAL SPECIFICATIONS	
Supply voltage	230 V AC ±10 %
Mains frequency	50 Hz / optional 60 Hz
Current consumption no-load	0.2 A, fuse T2A
GENERAL SPECIFICATIONS	
Display	7 segment, 4 digit
Signal-LEDs	Four test-method LEDs at front panel / PE, IR, LKC, FCT Four measuring-unit LEDs at front panel / s, V, A, Ω Three condition LEDs at front panel / yellow = test in progress, green = result GO, red = result NO GO
Acoustic message	Signaling device for acoustic messages Short signal = result GO, three short signals = result NO GO
Input	Via push buttons at the front panel of the device
Test-result storage	128 test results incl. all default values, measured values, per test step
Test connections	Test socket[1)] on top of the device Two test tips inlets at the rear panel of the device
Communication interface	At the rear panel of the device RS232
Adjustment	Adjustment via software; no need to open the testing device
Software usability	To avoid incorrect entries, all inputs are subject to a plausibility check.
Language on front panel	EN
Development and production	Made in Germany
MECHANICAL SPECIFICATIONS	
Mechanical designs	Table-top unit with rubber feet Incl. attachment points for carrying straps Optional: solid mounting feet allowing to tilt the testing device Optional: carrying straps
Operating environment	Operating temperature 0 – 50 °C / 32 – 104 °F, designed for a relative humidity of 0 – 80 %rH without condensation!
Storage	Storing temperature -10 – 60 °C / 14 – 140 °F, designed for a relative humidity of 0 – 90 %rH without condensation!
Dimensions, if only PE/GB and IR	195 x 195 x 70 mm (7.68“ x 7.68“ x 2.76“) (W x D x H)
Dimensions, if additional HVDC, function or leakage current	195 x 295 x 70 mm (7.68“ x 11.61“ x 2.76“) (W x D x H)
Weight	3 kg (6.61 lbs)
Housing color	black

1) The layout of the test connections depends on the device variant.

PE/GB resistance test AC

TEST CURRENT AC	
Test current	10 A AC
Frequency	50 Hz, depending on the mains supply / optional 60 Hz
Current regulation	Automatic electronic constant-current regulation with minimum-current monitoring and power-failure detector
Adjustment	Default current approx. + 0.5 A
VOLTAGE	
Test voltage max.	12 V AC
RESISTANCE	
Precision	Accurate 4-wire resistance measurement
Total measuring range	0 – 700 mΩ, depending on the flowing test current and the allowed maximum test voltage 0 – 20 Ω especially for measurements on wind-power stations
resolution	1 mΩ or 1 mV
Resistance measurement from - to	0 – 700 mΩ at 12 V and 10 A 0 – 20 Ω at 12 V and 0.6 A
Measurement accuracy	±1 % of final value, ±10 mΩ
EVALUATION	
Evaluation related to	Resistance or voltage drop
Upper resistance limit PE_{Rmax} Or alternatively upper voltage limit PE_{Umax}	0 – 700 mΩ freely definable, test values equal to or smaller than this limit are GO 0 – 7 V freely definable, test values equal to or smaller than this limit are GO
Undercurrent	If the test current is smaller than the default value during the test, the test result is NO GO.
GENERAL INFORMATION	
Test timer	0.1 – 1.5 s in steps of 0.1 s
Measurement technology for U & I	RMS-measurement (true RMS value)
Test points	PE probe 1 ↔ PE/GB in the test socket or PE/GB probe 1 ↔ PE/GB probe 2

Insulation resistance test

TEST VOLTAGE	
Test voltage	100 – 1000 V DC, adjustable in steps of 10 V
Voltage regulation	Automatic electronic constant-voltage regulation with undervoltage monitoring
Adjustment	Default value +10 V
Measurement accuracy	±1 % of the measurement range end value
CURRENT	
Test current max.	5 mA DC – safety current limitation
Test-current measuring range	Measurable and evaluable up to 1 mA
Output power	Max. 0.5 W
RESISTANCE	
Measuring range	200 kΩ – 30 MΩ
Resolution	10 kΩ
Measurement accuracy	±1 % of the measurement range end value, ±10 kΩ at a test voltage of at least 500 V
EVALUATION	
Resistance limit IR_{Rmax}	1 – 20 MΩ freely selectable, test values equal to or larger than this limit are GO
Undervoltage	If the test voltage is smaller than the default value, the test result is NO GO.
GENERAL INFORMATION	
Test timer	0.5 – 60 s in steps of 0.1 s
Measurement technology for U & I	Average measurement
Discharge	≤200 ms – at a DUT with pure ohmic load Precondition: after the test, the test leads still need to be connected to the DUT during the discharge process.
Internal resistance	330 kΩ for IR with max. 1000 V test voltage The internal resistance determines the charging time of your DUT. Min. charging time = internal resistance x DUT capacity [s]
Test points	L&N ↔ PE in the test socket or L&N ↔ test tip 1

High-voltage test DC

TEST VOLTAGE	
Test voltage	100 – 2500 V DC, adjustable in steps of 10 V
Voltage regulation	Automatic electronic constant-voltage regulation with under-voltage monitoring
Adjustment	Default value +10 V
Measurement accuracy	±1 % of the measurement range end value
CURRENT	
Test current max.	5 mA DC – safety current limited
Output power	Max. 0.5 W
Measurement accuracy	±1 % of the measurement range end value, in the range up to 1 mA
RESISTANCE	
Measuring range	200 kΩ – 30 MΩ Test voltage 500 V >> resistance measurement starting at 1 MΩ Test voltage 1000 V >> resistance measurement starting at 2 MΩ Test voltage 2000 V >> resistance measurement starting at 8 MΩ Test voltage 2500 V >> resistance measurement starting at 12.5 MΩ
Resolution	10 kΩ
Measurement accuracy	±2 % of final value ±10 kΩ at a test voltage of at least 500 V
EVALUATION	
Resistance limit IR_{Rmax}	1 MΩ – 20 MΩ freely definable, test values equal to or larger than this limit are GO
Undervoltage	If the test voltage is smaller than the default value, the test result is NO GO.
GENERAL INFORMATION	
Test timer	0.5 s, 0.6 s, 0.7 s … 160 s in steps of 0.1 s
Measurement technology for U & I	Average measurement
Discharge	≤200 ms – at a DUT with pure ohmic load Precondition: after the test, the test leads still need to be connected to the DUT during the discharge process.
Internal resistance	330 kΩ for IR with max. 1000 V test voltage The internal resistance determines the charging time of your DUT. Min. charging time = internal resistance x DUT capacity [s]
Test points	L&N ↔ PE in the test socket or L&N ↔ test tip 1

Function test

TEST VOLTAGE	
Test voltage	230 V AC single-phase, voltage directly from mains supply
Voltage measurement	No voltage measurement
CURRENT	
Test current	2 A AC maximum continuous current
resolution	1 mA
Current measurement and evaluation	True RMS
Measurement accuracy	±1 % of the measurement range end value, ±10 mA
EVALUATION	
Upper & lower limit ±tolerance in % from default value	Current: 0 – 2 A, test values within the tolerance limits are GO
Short-circuit detection	Integrated fuse accessible from the bottom
Fault detector	Optically and acoustically
GENERAL INFORMATION	
Test timer	0.5 – 10 s in steps of 0.1 s

Alternative method (Substitute leakage current test)

TEST VOLTAGE	
Test voltage	approx. 40 – 60 V AC single-phase
Calculated test voltage	230 V
Measurement accuracy	±1 % of the measurement range end value, based on 100 V
LEAKAGE CURRENT	
Leakage current I_{eff}	max. 20 mA
Resolution	1 mA
Accuracy	±1 % of the measurement range end value, ±1 mA
Calculated test current	1 mA – 20 mA
Test method	Ground leakage current, enclosure leakage current
Standards	DIN VDE 0701-0702
Test points	L+N ↔ PE, L+N ↔ test tip 1
EVALUATION	
Upper limit	0 – 20 mA

More information

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

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