

The modular
and flexible
high voltage tester

W 454



Automotive

Transportation

Aerospace

Factory Automation



The **W 454** combines HIGH-END test parameters with an attractive cost/performance ratio. Cable assemblies and components in the aerospace, medical and transportation industries can be tested with remarkable voltages up to 2,250 Vdc/1,500 Vac and currents up to 3 A. Distribution of the test points in small, weight optimized matrix cases, random connection of the adapter cables equipped with ID chips at any output connector and modules for the functional test are available as an option.

■ Generators and Measuring Units

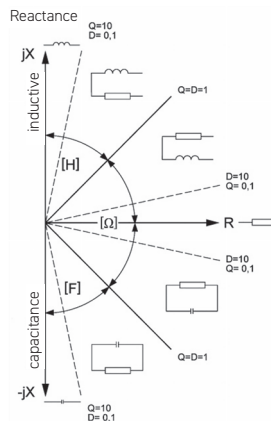
Continuity, Short and Component Test	LV-GEN	
	<ul style="list-style-type: none"> • Current • Current ranges • Voltage • Output rating • Connection/Resistor • Capacitance • Components • LV isolation • Voltage measurement 	0,5 mA up to 3 A 10 mA, 100 mA, 1 A, 3 A 0 up to 40 V 120 W 1 Ohm up to 10 MOhm, 3 mOhm to 100 Ohm, with Four Terminal Measurement (optional) Consideration of the power limits of resistive components 20 nF to 10,000 µF Diodes, Zener diodes, LEDs, Varistors Typically up to 100 MOhms 0 to ± 500 V, frequency DC to 1 kHz
Insulation, Hi-Pot, DC and AC ARC Test	HVG 2-5000 (optional)	
	<ul style="list-style-type: none"> • DC Voltage • AC Voltage • Current • Ramps • Measurement • Highly sensitive ARC detection with step detector (voltage drop), slew detector (slew rate) and programmable dIdt detector 	40 to 2,250 Vdc 40 to 1,500 Vac 0 to 100 mA, 0 to 70 mA _{eff} for voltages up to 1,500 Vdc/1,060 Vac 0 to 50 mA, 0 to 35 mA _{eff} for voltages up to 2,250 Vdc/1,500 Vac 500 V/s, 100 V/ms, 1,000 V/ms, programmable from 1,000 V/ms to 1 V/s Typically up to 10 GOhms, up to 500 MOhms ±1 %
Insulation, Hi-Pot and DC ARC Test	HV-DC	
	<ul style="list-style-type: none"> • DC Voltage • Current • Ramps • Measurement • ARC detection with unique voltage and slew rate recognition 	40 to 2,250 Vdc Touch safe generator, up to 1 mA 500 V/s, 20 V/ms, 200 V/ms, 2,000 V/ms Typically up to 10 GOhms, up to 500 MOhms ±1 %
Hi-Pot and AC ARC Test	HV-AC (optional)	
	<ul style="list-style-type: none"> • AC Voltage • Real current • Imaginary current • Ramps • ARC detection with unique voltage and slew rate recognition 	40 to 1,500 Vac Touch safe generator, up to 0.5 mA _{eff} Touch safe generator, up to 3.5 mA _{eff} 500 V/s, 20 V/ms, 2,000 V/ms
Attenuation and Polarity Test	GEN 1 MHz (optional)	
	<ul style="list-style-type: none"> • Frequency • Waveform • Attenuation measurement • Accuracy • Transmission level • Polarity check 	10 to 1,000 kHz Sine 0 to 40 dB in the range of 10 to 1,000 kHz 500 mVp at 50 Ohms/77 Ohms 3.97 dBm at 50 Ohms 2.10 dBm at 77 Ohms in phase/dephased

■ Generators and Measuring Units

Component, Twisted-Pair and Shield Test

RLC Meter (optional)

- Frequency DC to 100 kHz
- Capacitance 10 pF to 10,000 μ F
- Inductance 1 μ H to 1 H
- Checks pair inversion and shield integrity
- Fast impedance measurement with typically 70 ms
- RLC Measurement Functions



- Ω Ohmic range
- H Inductive range
- F Capacitive range
- |Z| Impedance
- θ Phase angle
- R Resistance (serial or parallel)
- C Capacitance (serial or parallel)
- L Inductance (serial or parallel)
- D Dissipation factor
- Q Quality factor

Typical values, valid at the front panel of the tester without adaptation at 25° C and a relative humidity less than 60 %

■ Functional Test

- Supply of the UUT with programmable voltages up to 125 Vdc/250 Vac
- Emulation of the switching processes
- Reproduction of the functional environment, e.g. by electronic loads, frequencies etc.
- Functional test of push buttons and switches
- Measurement of time dependent current/voltage wave forms
- Import of characteristic curves of external devices and display
- Integrated, programmable voltage/current source with up to 40 Vdc/3 A (GEN 40-3) or LAN/IEEE 488/GPIB controlled power supplies with higher performance

■ Switching Matrix

Modules for

Wiring Test

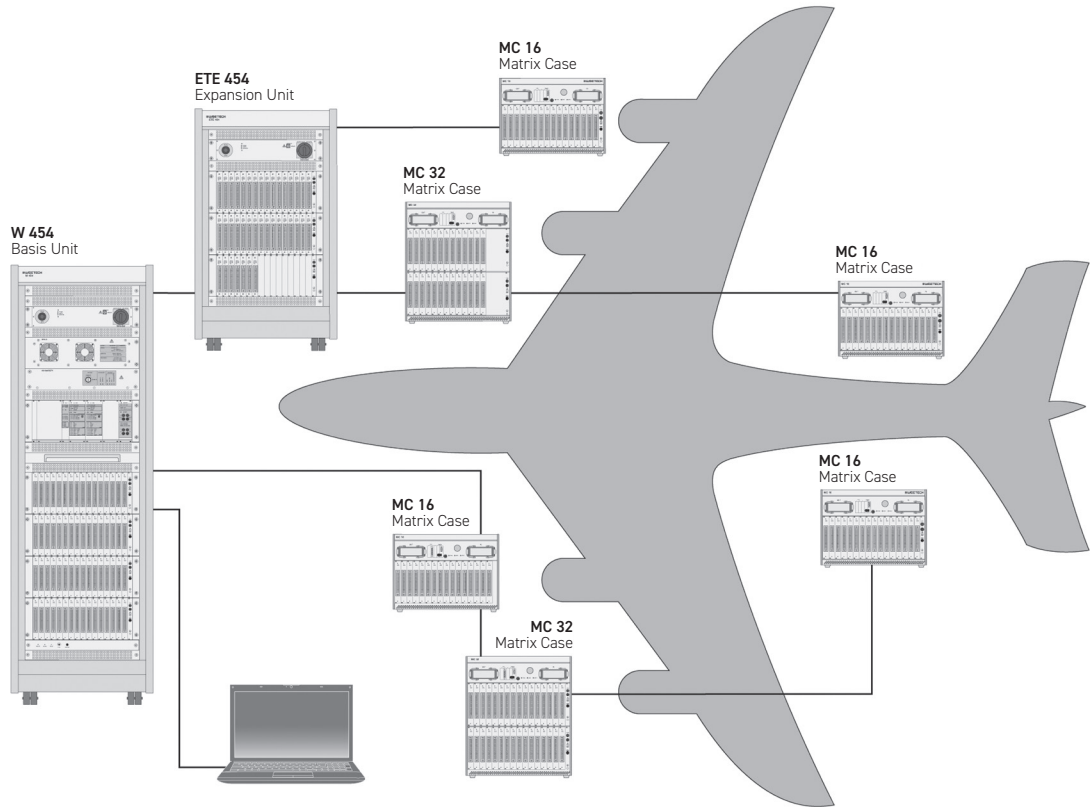
- Versions for voltages up to 2,250 Vdc/1,500 Vac
- Various output connectors available

Modules for

Functional Test

- Combi modules, equipped with test point cards for voltages up to 125 Vdc/250 Vac, current up to 3 A
- Measurement cards according to the application
- Power modules for voltages up to 60 Vdc/25 Vac, current up to 3 A
- Separate high-current module for current up to 25 A, voltages up to 25 Vdc/250 Vac

■ Distributed Matrix



Distributed matrix W 454 with different matrix cases and customized expansion units

■ Further Details

Interfaces	<ul style="list-style-type: none"> • Ethernet interface • Remote Control interface to trigger external devices, e.g. feeders and fixtures • Software controlled integration of external devices via LAN, IEEE 488/GPIB, RS 232, PC-Bus, CAN-Bus, CANOPEN-Bus, K-Line • Integration into customer specific ERP-Systems
Dimensions	<ul style="list-style-type: none"> • W 454, ETE 454: 19 inch rack system, height customized • MMC 16 with max. 1,024 test points, W x D x H (mm): 450 x 560 x 315 • MC 32 with max. 2,048 test points, W x D x H (mm): 450 x 560 x 495 • MC 16, MC 32: Weight optimized, portable 19 inch enclosure with retractable handles, stackable
Power Supply	<ul style="list-style-type: none"> • W 454, ETE 454 – 3-phase: 200 to 400 Vac, 50 to 60 Hz, max. 4,000 VA • W 454, ETE 454 – 1-phase: 100 to 230 Vac, 50 to 60 Hz, max. 1,600 VA