

Excellent in testing

W 454 HV
W 454 SHV



Automotive

Transportation

Aerospace

Factory Automation



The **W 454 HV/W 454 SHV** can supply test voltages up to 5,100 Vdc/3,600 Vac with currents up to 100 mA for insulation and hi-pot test. The test system is built up according to EN 13849-1 Cat 3. Therefore the high voltage can safely be switched off and a low voltage test can be executed without any safety measures. Test point modules can be installed either in a rack system or distributed in small portable 19 inch enclosures. Different types of test point modules for the functional test and customized output connectors are available. The W 454 HV/W 454 SHV is the best choice for the electrical test of operator panels, switch boards, cable assemblies and complete trains.

■ Generators and Measuring Units

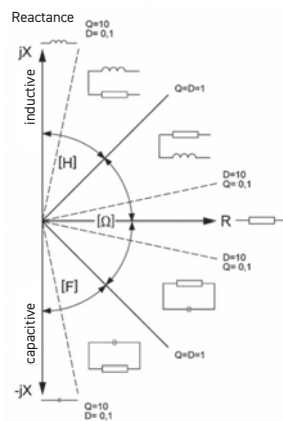
Continuity, Short and Component Test	LV-GEN	<ul style="list-style-type: none"> • Current 0,5 mA up to 3 A • Current ranges 10 mA, 100 mA, 1 A, 3 A • Voltage 0 to 40 V • Output rating 120 W • Connection/Resistor 1 Ohm up to 10 MOhms 3 mOhms to 100 Ohms, (Four Terminal Measurement) Consideration of the power limits of resistive components • Capacitance 20 nF to 10.000 µF • Components Diodes, Zener diodes, LEDs, Varistors • LV isolation Typically up to 100 MOhms • Voltage measurement 0 to ± 500 V, frequency DC to 1 kHz
Insulation, Hi-Pot, DC and AC ARC Test	HVG 2-5000	<ul style="list-style-type: none"> • DC Voltage 40 to 4.400 Vdc (W 454 HV)/40 to 5.100 Vdc (W 454 SHV) • AC Voltage 40 to 3.200 Vac (W 454 HV)/40 to 3.600 Vac (W 454 SHV) • Current 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 0 to 25 mA, 0 to 17 mA_{eff} for voltages up to 4.400 Vdc/3.200 Vac (W 454 HV) to 5.100 Vdc/3.600 Vac (W 454 SHV) • Ramps 500 V/s, 100 V/ms, 1.000 V/ms, programmable from 1.000 V/ms to 1 V/s • Measurement Typically up to 10 GOhms, up to 500 MOhms ± 1 % • Highly sensitive ARC detection with step detector (voltage drop), slew detector (slew rate) and programmable dIdt detector • Additional High-voltages generators up to 5,100 Vdc/3,600 Vac with current up to 700 mA are available as an option
Attenuation and Polarity Test	GEN 1 MHz (optional)	<ul style="list-style-type: none"> • Frequency 10 to 1.000 kHz • Waveform Sine • Attenuation measurement 0 to 40 dB • Accuracy in the range of 10 to 200 kHz ± 0.5 dB in the range of 200 to 1,000 kHz ±1 dB • Transmission level 500 mVp at 50 Ohms/77 Ohms 3,97 dBm at 50 Ohms 2,10 dBm at 77 Ohms • Polarity check 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 µF
- Inductance 1 µH 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 %

■ Funktional 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 and IEEE 488/GPIB controlled power supplies with higher performance

■ Switching Matrix

Modules for Wiring Test

- Versions for voltages up to 4,400 Vdc/3,200 Vac (W 454 HV), resp. up to 5,100 Vdc/3,600 Vac (W 454 SHV)
- Various output connectors available

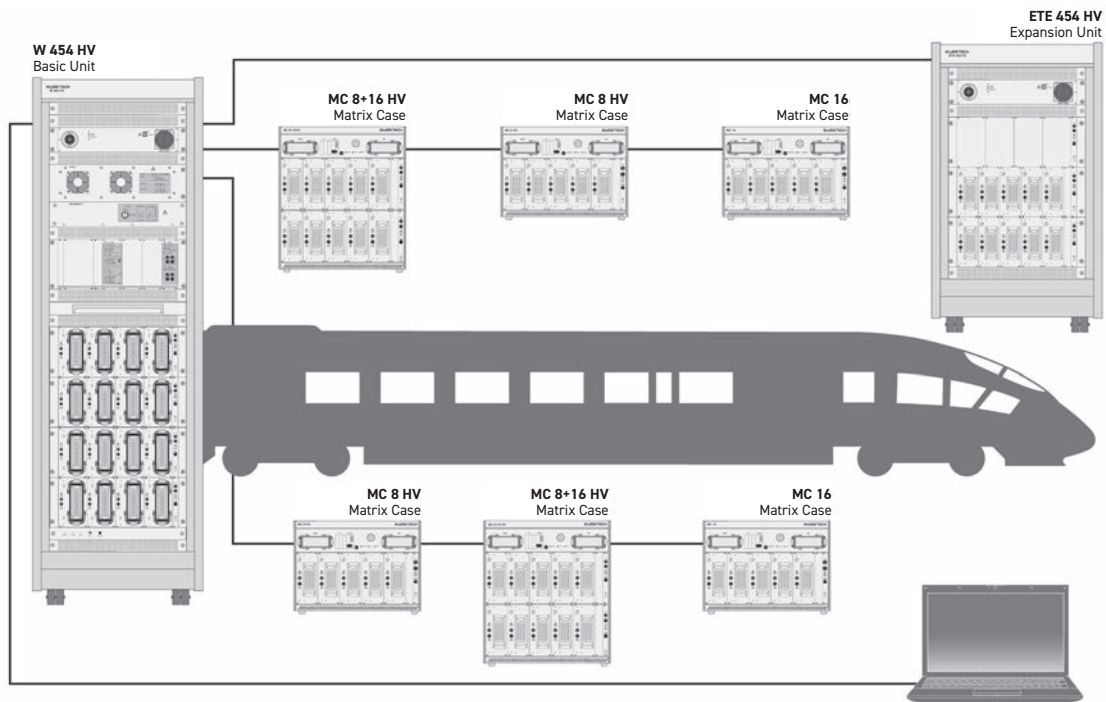
Modules for Functional Test

- 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

Safety

- HV-SAFETY according to EN 13849-1 Cat 3 for a safe switch-off of the generators with the Emergency-Stop push-button or key switch

■ Distributed Matrix



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

■ Further Details

Interfaces

- Ethernet interface with optical decoupling of the control PC
- 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

- W 454 HV/W 454 SHV, ETE 454 HV: 19 inch rack system, height customized
- MC 8 HV with max 128 test points, W x D x H (mm): 450 x 650 x 315
- MC 16 HV with max 256 test points, W x D x H (mm): 450 x 650 x 490
- MC 8+16 HV with max 128 test points up to 4,400 Vdc/3,200 Vac and/or max. 512 test points up to 2,250 Vdc/1,500 Vac or max. 1,024 test points up to 1,500 Vdc/1,060 Vac, W x D x H (mm): 450 x 650 x 490
- MC 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
- All MCs: Weight optimized, portable 19 inch enclosure with retractable handles, stackable

Power Supply

- 454 HV/W 454 SHV, ETE 454 HV – 3-phase: 200 to 400 Vac, 50 to 60 Hz, max. 4,000 VA
- W 454 HV, ETE 454 HV – 1-phase: 100 to 230 Vac, 50 to 60 Hz, max. 1,600 VA