The compact entry
into the
high voltage test

W 444

Automotive | **Transportation** | **Aerospace** | **Factory automation**

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Wired for Success: Testing Innovations.

The **W 444** enables high-end test features at a value price for the test of safety-related cable harnesses in the aerospace, transportation and automotive industries. As a result of the clever combination of powerful measurement technology, constant current sources up to 3 A and high voltage sources up to 2,250 Vdc/1,500 Vac, the W 444 can be used without any restriction for high voltage test stations according to EN 50191.

Generators and Measuring Units

Continuity, Short and Component Test	**LV-GEN**	
	• Current	0,5 mA 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 with Four Terminal Measurement (optional) 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- and DC ARC Test	**HV-DC**	
	• DC Voltage	40 to 2.250 Vdc
	• Current	Touch safe generator, up to 1 mA
	• Ramps	500 V/s, 20 V/ms, 200 V/ms, 2.000 V/ms
	• Measurement	Typically up to 10 GOhms, up to 500 MOhms ±1 %
	• ARC detection with unique voltage and slew rate recognition	
Hi-Pot and AC ARC Test	**HV-AC (optional)**	
	• AC Voltage	• 40 to 1.500 Vac
	• Real current	• Touch safe generator, up to 0.5 mA_{rms}
	• Imaginary current	• Touch safe generator, up to 3,2 mA_{rms}
	• Ramps	• 500 V/s, 20 V/ms, 2.000 V/ms
	• ARC detection with unique voltage and slew rate recognition	
Attenuation and Polarity Test	**GEN 1 MHz (optional)**	
	• Frequency	10 to 1.000 kHz
	• Waveform	Sine
	• Attenuation measurement	0 bis 40 dB
	• Accuracy	in the range of 10 to 200 kHz in the range of 200 to 1,000 kHz
	• 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
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 ±2 %
	• Checks pair inversion and shield integrity	
	• Fast impendance measurement with typically 70 ms	
	• RLC Measurement Functions	

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

Generators and Measuring Units

Time-/Pulse Measurement	• Minimum Resolution 20 µs • Maximum Resolution 65 s • Maximum 32,768 samples

Functional Test

	• Supply of the UUT with programmable voltages up to 60 Vdc/25 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 • Import of characteristic curves of external devices and display/interpretation by CEETIS software • 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
Software	• CEETIS smart or CEETIS as option for functional test

Switching Matrix

Modules for Wiring Test	• Versions for voltages up to 2,250 Vdc/1,500 Vac • Various output connectors availabler
Modules for Functional Test	• Combination modules equipped with test point and power cards for voltages up to 60 Vdc/25 Vac, currents up to 3 A • 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/25 Vac

Safety

	• Non-hazardous output voltage of the high voltage generators due to certified current limitation to 1 mA_{dc}, 3 mA_{rms} (according to EN 50191 max. 12 mA_{dc}, 3 mA_{rms})

Further Details

Interfaces	• Ethernet interface for control computer • Control interface (optional) 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, CANO PEN-Bus, K-Line • Integration into customer specific ERP-Systems • Remote control with handheld-PC (W-LAN) or via LAN
Dimensions	• Portable 19 inch enclosure • W 444-2: 5 U with max. 256 test points, W x D x H (mm): 450 x 550 x 235 • W 444-3: 9 U with max. 1,280 test points, W x D x H (mm): 450 x 550 x 410
Power Supply	• 100 to 230 Vac/50 to 60 Hz, max. 800 VA

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