



## NSG 438/NSG 438A 30 kV ESD Simulator

Ergonomic design and advanced functionality. The NSG 438 ESD simulator is designed to sit comfortably in the operator's hand, with operating conditions constantly displayed and accessible on a bright, clear color touch display.

NSG 438 comprehensively fulfills virtually all international standard requirements. The simulator is simple, convenient and safe to use. The whole range of parameter settings including polarity selection, freely adjustable pulse repetition, counter functions and discharge detection is available up to the maximum discharge voltage. The simulator is re-calibrated and adjusted at every start.

Users can create and store test conditions in the instrument's memory for subsequent reuse. The menu with last settings does automatically come up again after shut-down of a test sequence. A list of saved test conditions can be called up at any time. A built in optical interface enables some external control of the simulator.

The NSG 438 simulator can only be activated as a result of a deliberate actions by the user. In all other cases, the instrument switches itself off automatically. An integral interlock system allows setting up accessibility and safety configurations even in combination with other test instruments. For extra safety an emergency stop switch is built in.

### MAIN FEATURES

- Air- and contact-discharge to 30 kV
- Battery tested to 30'000 discharges at 30 kV
- Color touch panel control
- Advanced voltage-hold feature
- Activity log
- Compliant with a huge range of OEM and international standards
- Built-in ISO self-calibration procedure
- Easily and quickly interchangeable discharge networks

### Scope of delivery

NSG 438A	-Discharge unit / gun -Base station incl. battery pack -Power mains adapter -AD / CD tip, discharge sphere 25 mm -Ground return cable 2 m -Discharge network 150 pF / 330 Ω -Cradle
NSG 438A-auto	-Same as NSG 438A + Discharge network 150 pF / 2000 Ω + Discharge network 330 pF / 330 Ω + Discharge network 330 pF / 2000 Ω
NSG 438	-Discharge unit / gun -Base station incl. battery pack -power mains adapter -AD / CD tip, discharge sphere 25 mm -Ground return cable 2 m -Discharge network 150 pF / 330 Ω -Cradle
NSG 438-auto	-Same as NSG 438 + Discharge network 150 pF / 2000 Ω + Discharge network 330 pF / 330 Ω + Discharge network 330 pF / 2000 Ω

**Specifications**

Parameter	NSG 438A	NSG 438
Air discharge voltage	200 ... 30'000 V ± 5 %	
Contact discharge voltage	200 ... 30'000 V ± 5 %	
Holding time	> 5 s (voltage drop max. -5%)	
Frequency / repetition	0.5, 1 ... 20 Hz in 1 Hz steps; 25 Hz (only air discharge) Free / period: 0.04 ... 300 s in 0.01 s steps	
Polarity	pos / neg / alternating	
Operating modes	single / continuous	
Counter	0 ... 9'999	
Threshold detection	Yes	
Discharge tips	exchangeable, ball and point according to ISO 10605, discharge sphere 25 mm	
Display	Color touch screen	
Power supply	NiHM battery, 2080mAh; power mains	
Number of discharge with battery	30'000 @ 30kV	
Built-in bleed off	Yes	No
External bleed off option	Yes, with INA 4430	
Remote interface	Yes, fiber optic link to USB	
Remote control software	Yes, esd.control (limited support)	
Interlock	Yes	
Remote Trigger	Yes	
EUT Fail	Yes	
Self calibration	Yes, after power up, at any time	
R/C module detection	Yes	
Storing user tests	Yes	
Power mains (base station)	Input: 100 ... 240 VAC, 1.4 A max. , 50 ... 60 Hz; Output: 24 VDC, 2.71 A	
Weight (base station)	approx. 6.5 kg	
Weight gun incl. discharge network	approx. 1'250 g	
Dimension	Base station: 170 x 360 x 140 mm; Discharge gun: 85 x 270 x 260 mm	
Operating temperature	+5 ... + 40°C	
Humidity	20 ... 80 %, non condensing	
Athmospheric pressure	860 ... 1'060 mbar	

**Accessories**

MD 102A	Calibration target 2 Ω
INA 102A	Calibration adapter for MD 102A
VCP	Vertical coupling plane
INA 4430	Charge remover, 30kV, base station with interface
EAS 30-xx	External grounding set, 2x 470 kΩ / 0.8, 1.5, 2 m
INA 4421	Tripod support, to adapt to camera tripods
INA 4420	H-field adapter
INA 4419	E-field adapter
CSL 200	Field coupling fixture
More discharge networks	Ask our sales for more available discharge networks