



## **NSG 437 ESD** **HIGH PERFORMANCE WITH BASIC FEATURES**



- **Air- and contact-discharge up to 30 kV**
- **Light version featuring uncompromised test performance**
- **Compliant with a wide range of standards (IEC, ANSI, SAE, ISO)**
- **Touch panel display controls**
- **Easily and quickly interchangeable network modules**
- **Wide range of accessories (HV networks, tips, adapters)**

The NSG 437 simulator is designed to sit comfortably in the operator's hand, with current operating conditions constantly displayed and clearly visible. The simulator is ergonomically designed to be held easily for long duration test procedures.

The touch panel display with its keypad for parameter settings shows the precise functional and test data at any moment. All essential functions and actual status are displayed, with user-selectable language for convenient and safe operation worldwide.

Pre-programmed settings for IEC/EN 61000-4-2 and ISO 10605 ensure that the simulator is automatically set up correctly. The menu with last settings automatically comes up again after shut-down of a test sequence.

Thanks to stabilized HV output the NSG 437 ESD simulator comprehensively fulfills virtually all international standard requirements. Based on over 20 optional discharge networks, the NSG 437 can also meet any of today's automotive manufacturers' standards.

NSG 437 generates pulses from 200 V to 30 kV, both in air- and contact-discharge operation. The simulator is simple, convenient and safe to use. The whole range of parameter setting possibilities, including polarity selection, counter functions and breakdown detection, remains fully available up to the maximum discharge voltage.

The simulator contains a threshold detector to eliminate faulty discharge counts over its wide operating voltage range. Only valid HV discharges are indicated. When discharges are detected, the counter or preset counter is incremented or decremented respectively – a particularly useful feature for long test runs. The detection feature can be switched off when testing EUT's with non-conductive surfaces, such as plastic housings.

A wide range of discharge networks and tips fulfills the high demand for different test applications and can be exchanged. Completed by a wide selection of rigid and flexible discharge tips, any application is possible. Molded HV discharge networks in solid cases eliminate internally ionization and leakage current effects. Selected combinations of RC components guarantee wave shape parameters to be within tolerances. Discharge network modules with resistance values from zero ohms combined with capacitances up to the nF-range can be simply pushed into place.

Automatic self-calibration of the NSG 437 simulator is performed at every start-up. This procedure runs up to max. voltage in either polarity, thus giving confidence, that test levels are maintained within tolerances.

**TESEO**

Advanced Test Solutions for EMC

# NSG 437 ESD

## HIGH PERFORMANCE WITH BASIC FEATURES

### Technical specifications

|                               |  |
|-------------------------------|--|
| Description:                  | Compact ESD simulator with microprocessor based, large touch-sensitive LCD panel, built-in HV relay for contact-discharge, mains operation   |
| Basics:                       | Discharge pistol, high voltage base unit, mains power supply adapter, (100 to 250 VAC), discharge network 150 pF/330 $\Omega$ , air- and contact-discharge tips, grounding cable, user manual  |
| Pulse data:                   | Standard: Conforms to IEC/EN 61000-4-2 (2001)<br>Special: Interchangeable networks for other standards   |
| Pulse networks:               | Network 150 pF/330 $\Omega$ as per IEC/EN 61000-4-2 (included)<br>Optional ISO 10605 networks 150 pF/2 k $\Omega$ and 330 pF/2 k $\Omega$<br>Range of RC-networks for other standards:<br>R = 0 $\Omega$ to 20 k $\Omega$<br>C = 50 to 2000 pF |
| Discharge:                    | Air-discharge: 200 V to 30 kV (in 100 V steps)<br>Contact-discharge: 200 V to 30 kV (in 100 V steps)   |
| Discharge tips:               | Ball and point as per IEC and specials; exchangeable by threaded cap   |
| Charging voltage measurement: | kV, accuracy better than $\pm 5\%$ (stabilized)  |
| Discharge detection:          | Air-discharge only: indicated by the kV symbol being displayed in inverse, also acoustically in the single's operating mode.<br>Threshold level on/off.  |
| Holding time:                 | > 5 s (charging voltage $\pm 5\%$ )  |
| Charge resistor:              | 50 M $\Omega$  |
| Triggering:                   | Trigger button in hand-grip  |
| Operation:                    | Via touch panel and microprocessor   |
| Discharge modes:              | Air-discharge/contact-discharge  |
| Polarity:                     | Positive, negative/automatic change  |
| Operating modes:              | Single/repetitive; Pulse counter 0 to 9999;<br>Pre-select counter 0 to 9999;<br>Repetition:<br>- 0.5/1/5/10/20 or 25 Hz (air)<br>- 0.5/1/5/10 or 20 Hz (contact)<br>- Continuous operation   |
| Auto-shut-off:                | After 15 minutes idle time (without loss of the test parameters)   |
| Display:                      | LCD panel showing: charging voltage, breakdown event, polarity, air-/contact-discharge, counter/preselect counter content  |
| Weight:                       | Discharge pistol (w/o cable): 1.2 kg (2.6 lbs) approx.<br>Base unit: 5.7 kg (12.6 lbs) approx.   |
| Ambient conditions:           | Operation:<br>+5 to +40°C<br>20 to 80% r.h. (non-condensing)<br>68 to 106 kPa  |