

## NSG 435 ESD SIMULATOR COMPACT AND COST EFFECTIVE



- **Programmable discharge voltage**  
200 V to 16.5 kV
- **Stabilized charging voltage**
- **Pre-programmed IEC/EN 61000-4-2 test settings**
- **True air-discharge breakdown voltage**
- **Battery powered**
- **Compact and lightweight design**
- **Comfortable use and convenient operation**

Ergonomic design and advanced functionality. The pistol-shaped NSG 435 simulator is designed to sit comfortably in the operator's hand, with current operating conditions constantly displayed and clearly visible.

NSG 435's microprocessor-based controller and multifunction keypad provide the operator with instant access to its comprehensive range of built-in functions. The LCD panel continuously displays the operating status and all user-selected test parameters.

NSG 435 has its own internal, battery operated high voltage generator. In addition to the pre-programmed, standard IEC pulses, the user can create custom tests using single or repetitive discharges with selectable rates and manual or automatic polarity switching. An optional mains supply is available for extended test operation or for use when the battery is being charged.

NSG 435 measures and displays true air breakdown voltages. It also detects real or valid air-discharges, thereby avoiding misleading discharge counts. This is especially important during long term tests and remote test setups.

A range of interchangeable discharge networks is available, including EN, ANSI-IEEE, and ISO. The unit comes with a standard 150 pF/330  $\Omega$  discharge network for tests to IEC/EN 61000-4-2.

NSG 435 is supplied with standard accessories, including interchangeable test tips, a grounding cable and battery charger - all in a durable carrying case. There is an optional fiber optic remote control trigger for operation inside a screened room or enclosure. The LCD panel gives the operator a clear, continuous indication of all the test parameters, the operational status of the instrument and the current function of each of the five softkeys.

**TEST**

Advanced Test Solutions for EMC

# NSG 435 ESD SIMULATOR

## COMPACT AND COST EFFECTIVE

### Technical specifications

|                               |  |
|-------------------------------|--|
| Basic set:                    | Carrying case with: electrostatic discharge simulator, battery pack, battery charger 100 to 240 VAC, discharge network 150 pF/330 $\Omega$ , air- and contact-discharge tips, grounding cable, tripod adapter, user manual |
| Pulse network:                | Network 150 pF/330 $\Omega$ as per IEC/EN 61000-4-2 (included)<br>Range of R/C networks for other standards:<br>R = 0 $\Omega$ to 10 k $\Omega$ ; C = 60 to 500 pF   |
| Discharge voltage:            | Air-discharge: 200 V to 16.5 kV (in 100 V steps)<br>Contact-discharge: 200 V to 9 kV (in 100 V steps)  |
| Discharge tips:               | Ball and point as per IEC  |
| Charging voltage measurement: | kV, accuracy better than $\pm 5\%$ (stabilized);<br>measurement and display of true air flashover voltage  |
| Discharge detection:          | Indicated by an oval around the kV symbol, also acoustically in the 'Single' operating mode (air-discharge only)   |
| Holding time:                 | >5 s (charging voltage ... $\pm 5\%$ )   |
| Polarity:                     | Positive / negative / automatic change   |
| Operating modes:              | Single / repetitive =<br>pulse counter: 0 to 9999, preselect counter 0 to 9999<br>Repetition: 0.5/1/5/10/20 or 25 Hz (air); 0.5/1/5 or 10 Hz (contact);<br>continuous operation  |
| Display:                      | LCD panel showing: charging voltage, discharge voltage, polarity, air-/contact-discharge, counter/preselect counter content, soft-key functions, battery monitor   |
| Weight:                       | NSG 435 with battery: 1.2 kg (2.6 lbs) approx.   |
| Ambient conditions:           | Operation:<br>+5 to +40°C, 20 to 80 % r.h. (non-condensing), 68 to 106 kPa   |

### Ordering information

|              |   |
|--------------|---|
| NSG 435      | NSG 435 ESD simulator - basic set as per technical specifications |
| Accessories: |   |
| INA 420      | Fast risetime test tip <400 ps                                    |
| INA 421      | Network and test tip for IEC 801-2 (1984), 150 pF/150 $\Omega$    |
| MD 101       | ESD measurement target conforming to IEC/EN 61000-4-2 (2001)      |
| MD 103       | ESD measurement target (ANSI and IEC draft)                       |
| INA 402-x    | Mains power supply (80 to 240 V, 50/60 Hz) incl. grip adapter     |
| INA 405      | Spare battery pack  |
| INA 415      | Remote triggering unit including 5 m opto-cable                   |
| INA xxx      | Special discharge networks (specify values of R and C)            |