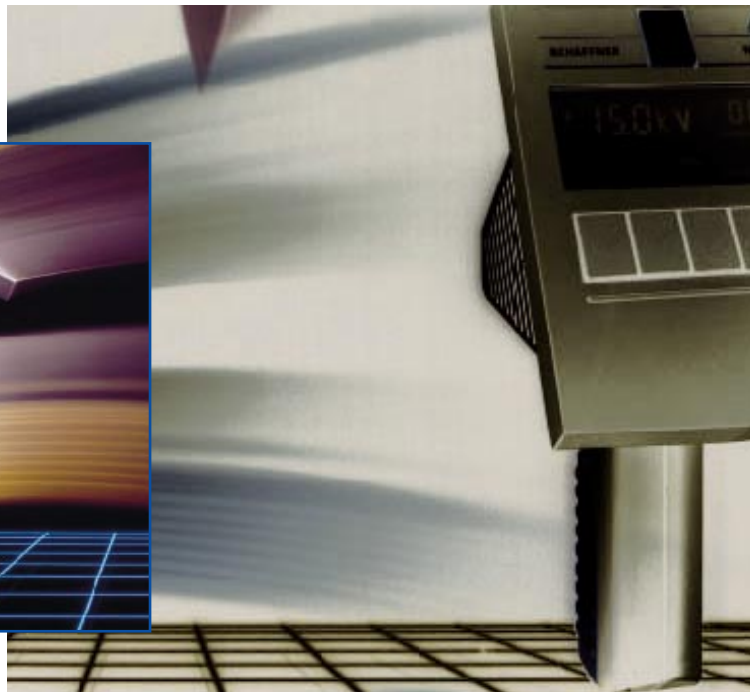
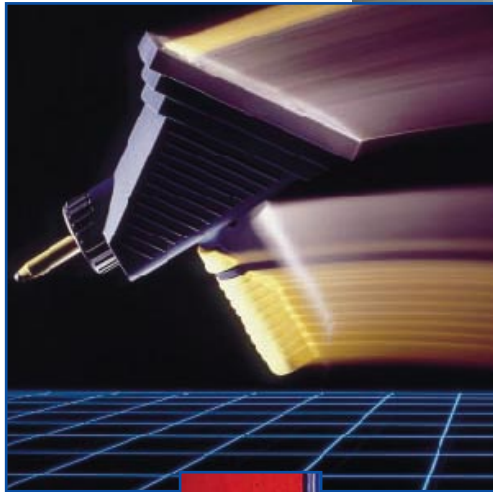


NSG 435



## NSG 435 ESD Simulator

*Advanced, compact  
ESD test system*



**SCHAFFNER**

Your number one name for EMC

## NSG 435: A new concept



Combining ease of operation and ergonomic design with exceptionally high functionality, the NSG 435 offers all the features of a comprehensive ESD test system in a compact, light-weight, hand-held instrument.

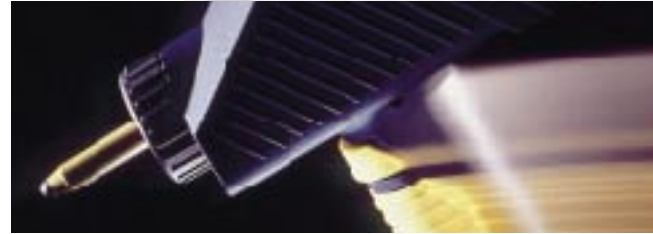


- *User programmable discharge voltage 200V to 16.5kV*
- *Built-in IEC 1000-4-2 test settings*
- *Battery powered*
- *Compact and lightweight design*

### **Ergonomic design and high functionality**

Careful attention has been paid to ergonomic design to ensure that the NSG 435 sits easily in the hand without being tiring or uncomfortable during long or repeated test procedures. The liquid crystal display panel is clearly visible at all times in the working position and all the controls are conveniently at the user's fingertips.

The NSG 435 is powered by a rechargeable battery supply, so there is no separate high voltage generator or stiff connecting cable to hinder access to the EUT. The battery, which lasts for several days under normal test usage, can be easily interchanged and recharged in just three hours.



Microprocessor-based control and a five-key pad give access to the comprehensive range of built-in functions. The liquid crystal display shows the operating status and all user-programmed test parameters continuously. A discharge pulse counter is incorporated and a further handy feature is the provision of a preset counter for long duration tests and remote use.

The NSG 435 has its own high voltage generator producing pulses up to 16.5kV. In addition to the pre-programmed, standard IEC pulses, the user can create custom tests, using single or repetitive discharges with selectable discharge rates and manual or automatic polarity switching. A unique feature is the detection of a real or valid discharge thereby avoiding misleading discharge counts. This is especially important during long term and remote test set up. The NSG 435 also measures and displays the real flash over voltage during air discharge testing.

The NSG 435 comes with a 150pF/330Ω discharge network for tests to IEC 1000-4-2, and a range of interchangeable discharge networks is available for other standards including EN, ANSI-IEEE, ISO, etc. The discharge voltage of up to 16.5kV for air discharges and up to 9kV for contact discharges ensures a comfortable margin over and above the values required for the standard tests.

# NSG435

Electrostatic discharge

ESD simulation

IEC 1000-4-2



## Basic kit

The standard basic NSG 435 simulator system consists of:

Carrying case 42x32x13.5cm (16.5 x 12.5 x 5.3ins)

NSG 435 electrostatic discharge generator

Battery pack

Discharge network for 150pF/330Ω test to IEC 1000-4-2

Test finger, air discharge

Test finger, contact discharge

Earthing cable

Battery re-charger

Operating instructions



## Optional extras

A range of optional extras is available for special applications:

Carrying case (options)

42 x 32 x 13.5cm (16.5 x 12.5x5.3ins)

Mains power supply unit

Spare battery pack

Remote triggering unit with 5m (16ft) fibre-optic cable

Discharge network for 150pF/150Ω test to IEC 801-2/1984

Special discharge networks

Test finger with fast leading edge <400ps

Coaxial measuring adapter



## A comprehensive test package

The simulator system is supplied with standard accessories, including interchangeable test fingers, an earthing cable and battery re-charger - all in a durable carrying case.

There is an optional fibre optic remote control trigger for operation inside a screened room or enclosure. The LC-display 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 software-controlled keys as well as:

- Discharge voltage - actual or pre-set voltage, with polarity indicator
- Counter - number of discharges, up-counter or preselection down-counter
- Battery status - low battery indicator

## Technical specifications

Pulse data - standard  
Pulse data - special  
Discharge network - standard  
Discharge network - special  
Discharge voltage - air  
Discharge voltage - contact  
Test finger - standard  
Test finger - special  
Voltage measurement  
Holding time  
Triggering  
Remote control  
Power supply

Polarity  
Operating modes  
Pulse counter  
Pre-set counter  
Display

Weight  
Environmental conditions during operation

As per IEC/EN 61000-4-2  
Interchangeable test fingers to conform with other standards  
150pF/330Ω as per IEC 61000-4-2  
Interchangeable networks to conform with other standards  
200V to 16.5kV (in 100V steps); tolerance ±5%, 1 to 16kV  
200V to 9kV (in 100V steps); tolerance ±5%, 1 to 9kV  
Ball and point as per IEC, interchangeable, screw fitting  
Special test finger for fast rise time pulse  
On HV side, dynamic; accuracy better than ±5%, 1 to 16kV > 5s  
Manual trigger button or optical remote input  
Optical interface for INA 415  
Rechargeable battery pack in hand-grip, interchangeable, 3hour re-charging time; mains power unit available as an accessory  
Positive, negative or automatic switching  
Single; repetitive at 0.5, 1, 5, 10, 20, or 25Hz; continuous  
0 to 9999  
0 to 9999  
LCD panel showing:  
discharge voltage • breakdown voltage • polarity • air/contact discharge • counter/preset counter • soft key functions • battery monitor  
NSG 435 with battery: 1.2kg (2.64lbs) approx.

5 to 40°C (40 to 105°F); 20 to 80% rh (non condensing); 68 to 106kPa

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This document has been carefully checked. However, Schaffner does not assume any liability for errors or inaccuracies.

Urs Uebelhart / Feb 2000

**NSG 435 ordering information****The Schaffner NSG 435 ESD simulator system range****NSG 435 ESD Simulator system basic kit**

NSG 435 ESD simulator with the following accessories:

- Carrying case
- Network for IEC 1000-4-2 (150pF/330Ω)
- Test fingers - ball and point
- Battery pack
- Earth cable
- Operating instructions

with:

- Charging unit, 115/230V, 50/60Hz, with Euro-connector

NSG 435 ESD simulator with all the accessories as listed above, and with:

- Charging unit, 115/230V, 50/60Hz, with US-connector

NSG 435 ESD simulator with all the accessories as listed above, and with:

- Charging unit, 100V, 50/60Hz, with US-connector

**NSG 435 ESD Simulator system options**

Carrying case (options)

Mains power supply, 80 to 240V, 50/60Hz,

inc. grip-adapter\*

Spare battery pack

Remote triggering unit including 5m opto-cable

IEC 801-2/1984 (150pF /150Ω) discharge network

Test finger for IEC 1000-4-2 with

fast leading edge < 400ps

Discharge networks, special versions

Measuring adapter IEC 1000-4-2

Order No.

Quantity

NSG 435-01

NSG 435-04

NSG 435-07

Order No.

Quantity

INA 410

INA 402

INA 405

INA 415

INA 421

INA 420

contact local

sales office

MD 101

\* Specify mains cable: - 01 SCHUKO; - 02 SEV 13; - 04 UL 498; - 05 BS 1363

Use a copy of this page as your order form by completing the right-hand column with the quantities required and returning it to your local sales office.

**The Schaffner guarantee**

The Schaffner name is synonymous with quality in the world of EMC test instrumentation. A long-standing commitment to research and development, and exceptionally high standards of manufacture, are your guarantee that every Schaffner product offers stability, reliability and repeatability of test over a long working life.