

## Schaffner NSG 500B/11



### Schaffner NSG 500B/11 Interference Simulator for Automotive Electronic Equipments

Electronic equipment connected to automobile electrical systems can also be susceptible to the interference which is generated by switching of various inductive loads. This causes surge voltages to appear on the supply lines of the vehicle of various amplitudes, energy and rise times. Specifically, when the inductive loads are disconnected from the battery with a mechanical switch, high energy in the form of interference pulses or groups of pulses are created. The NSG 500B/11 allows the simulation of this interference in the laboratory to enable the design engineer to determine if their products will fall prey to these power line faults. If they do, he can design out the problems before their company tries to market the design. To avoid interference pulses generated by the NSG 500B/11 affecting the battery, a power line filter has been incorporated.

All of the pulse outputs are protected against short circuits. The input and output sockets are floating, so that they can be connected to any desired potential. The following pulse types can be generated by the NSG 500B/11:

- Pulse Type 1  $\pm 30V / 300V$   
Pulse Width:  $2ms \pm 0.2ms$   
Rise Time:  $1\mu s \pm 0.3\mu s$   
Period: 5s  
Impedance:  $10\Omega$  or  $30\Omega$   
(by changing the resistance in the front panel)
- Pulse Type 2  $\pm 30V / 300V$   
Pulse Width:  $50\mu s \pm 15\mu s$   
Rise Time:  $0.3\mu s \pm 0.1\mu s$   
Period: 5s  
Impedance:  $10\Omega$  or  $30\Omega$   
(by changing the resistance in the front panel)
- Pulse Type 3  $-40V / -200V$ , continuously variable  
(ISO 3a Pulse) Pulse Width:  $100ns + 100ms - 0ns$   
Rise Time:  $5ns + 3ns - 0ns$   
Period:  $100\mu s, 10\mu s$   
Single pulses per pulse sequence:  $100, \pm 15$   
Impedance:  $50\Omega$
- Pulse Type 4  $\pm 40V / +200V$  continuously variable  
(ISO 3b Pulse) Pulse Width:  $100ns + 100ms - 0ns$   
Rise Time:  $5ns + 3ns - 0ns$   
Period:  $100\mu s, 10\mu s$   
Single pulses per pulse sequence:  $100, \pm 15$   
Impedance:  $50\Omega$

Pulse Type 5 (ISO Pulse 6)	$\pm 30V / 300V$ Pulse Width: $300\mu s \pm 30\mu s$ Rise Time: $60\mu s \pm 15\mu s$ Period: 15s Impedance: $10\Omega$ or $30\Omega$ (by changing the resistance in the front panel)
Pulse Type 6 (load dump) with <a href="#">NSG 506</a> (ISO Pulse 5)	$0 / +200V \pm 10\%$ , continuously variable Pulse Width: $150 / 500ms \pm 10\%$ by some 50ms steps Rise Time: $70\mu / 30\%$ Period: 5s Impedance: $2\Omega \pm 10\%$

Please [contact us](#) for more information on the Schaffner NSG 500B/11