

### DSP Series

- Use to protect Computer Workstation, Network Hub, Servers and Broadband Modems.
- Protects Internet Network System using RJ45 connector type meeting the requirements of Cat 3, 4, 5 and 5E from Surge Transient.
- Suitable for all kind of computer network and Ethernet system.
- Can be installed in Server cabinet, termination panels and equipment panels.
- Wide range of selection including 2 twisted pairs and 4 twisted pairs network systems, and Power Over Ethernet (POE).
- Protectors available for 6V, 16V, 32V, 54V and Telephone Line.

### Product Features

- Maintenance free.
- Series connection.
- Selection of 2 twisted pair, 4 twisted pair and POE.
- High current limit.
- Low in line resistance of 1 ohms allow maintains high signal strength.
- Low capacitance design.
- Meets requirement of Cat 3, 4, 5 and 5E.
- Allow high bandwidth of 100Mhz.
- Metallic Enclosure.
- DIN rail mounting or panel mount enable easy installation.
- Earthing via DIN Rails permitting easy installation.
- Low let-through or clamping voltage ( $V_p$ ).
- Full mode protection (L-L and both L-E).
- High Discharge Current.
- Continuous and repeated protection in intense environment.

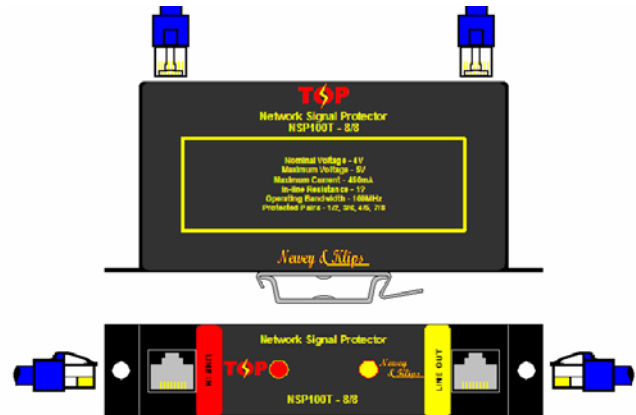
### Testing Specification

- Tested to 5kV 10/700 $\mu$ s, Accordance to:
  - \* BS6651:1999, Appendix C, Cats C-High
  - \* ITU IX K17 (CCITT)
- Meets requirement of:
  - \* TIA Cat 5 basic link
  - \* 10/100 base TX
  - \* TIA Cat 5 channel
  - \* IEEE 802.13.4-UTP
  - \* IEEE 802.3af

### Installation

To begin it is important to select the correct protector type based on the different system type (2 twisted pair 4 twisted pair and POE). The protector is installed in series using RJ45 connector type as indicated in the diagrams below. Install the protector near to the equipment that it is protected.

Ensure that the input (wires going away from the equipment) and output (wires going towards the equipment) are connected correctly to ensure protection. Arrange the incoming and outgoing wire correctly to ensure transient does not induce back into the system via induction. Ensure a good earth connection.



### Product Specification

Model	NSP100T-4/8	NSP100T-8/8	NSP100T-POE
Nominal Voltage	5V	5V	5V — 50V
Maximum Continuous Operating Voltage	7V	7V	7V — 58V
Maximum Load Current	250mA	250mA	250mA — 500mA
Clamping or Let-through Voltage $V_p$			
5kV 10/700 $\mu$ s, 125A ITU Standard (L-L)	24V	24V	24V — 72V
5kV 10/700 $\mu$ s, 125A ITU Standard (L-E)	<400V	<400V	<400V
Nominal In-Line Resistance (per line)	1 $\Omega$	1 $\Omega$	1 $\Omega$
Bandwidth (3dB, 50 $\Omega$ system)	100MHz	100MHz	100MHz
Attenuation			TIA Cat 5 basic link 10/100 base TX TIA Cat 5 channel IEEE 802.13.4-UTP IEEE 802.3af
Voltage Standing Wave Ratio (VSWR)	Meet requirement:		
Near End Cross Talk (NEXR)			
Leakage Current (Nominal Voltage)	30 $\mu$ A	30 $\mu$ A	30 $\mu$ A
Protection Pinning	1/2, 3/6	1/2, 3/6, 4/5, 7/8	1/2, 3/6 — 4/5, 7/8

Model	NSP100T-4/8	NSP100T-8/8	NSP100T-POE
Max. Discharge Current ( $I_{max}$ ) 8/20 $\mu$ s per mode	10kA	10kA	10kA

### Other Specification

Operation Temperature	-30 to 70°C	-30 to 70°C	-30 to 70°C
Conductor Size (mm <sup>2</sup> )		RJ45 Socket	
Mounting (Earth Connection)	DIN rail according to EN50022 or Screw mount (DIN rail is removable)		
Weight (g) (approximately)	250	250	250
Physical Dimension (mm)			

Note: The company reserve the right to make changes to the product design and specification without prior notice due to continuous product improvement policy