



*For coaxial Ethernet cables running external to the building, use the ESP ThinNet or ESP ThickNet. The ESP Net-100 is suitable for Cat 3, 4 or 5 cabling with RJ45 connections (running external to the building). Protectors giving local protection for PCs and computer communications with D connectors (cables running within a building), are also available.*

- ◆ Use on lines running within buildings.
- ◆ Use to protect twisted pair applications using Cat 3, 4 or 5 wiring with RJ45 connectors.
- ◆ Suitable for systems signalling on up to 8 wires of unshielded twisted pair cable.
- ◆ Use to protect 1, 4, 8 or 16 lines.
- ◆ Suitable for RS 422/423, 10 Base-T, 100 Base-T, Token Ring and Fast Ethernet systems.
- ◆ Available for individual connections or for multiport applications.
- ◆ Free standing or 19" rack mounted versions available for multiport applications.

### Application

Use on network cables running within a building to protect systems locally from transients induced onto data cables from the magnetic field caused by a lightning strike. Suitable for internal cabling Cat 3, 4, or 5.

### Features and benefits

- ✓ Let-through voltage below equipment susceptibility levels.
- ✓ Protects twisted pair lines operating at speeds up to 100Mbps.
- ✓ Protects all 8 pins in each line.
- ✓ Protect the network connection to individual pieces of equipment with the ESP LN.

\* Note - ESP LN-4 and ESP LN-8 are not shown.



*ESP LN installed on the network connection to a PC.  
Note the black earth lead connection to the chassis of the PC.*

- ✓ Protect multiport applications such as hubs, switches and patch panels with the ESP LN-4\*, ESP LN-8\*, ESP LN-8/16 or ESP LN-16/16.
- ✓ Available as 4 or 8 port free standing versions (ESP LN-4\* and ESP LN-8\*) and 8 or 16 port 19" rack mounted panels (ESP LN-8/16 and ESP LN-16/16).
- ✓ Negligible in-line resistance.
- ✓ Sturdy housing.
- ✓ Simple plug in installation.
- ✓ Simple earthing via single braided metal strap.

### Installation

Plug in connection between incoming data cables and equipment to be protected. Make suitable attachment to earth.

### Technical Note

ESP LN... range of protectors are designed only for use on cables running within a building, and, therefore, will not be able to handle the higher level transients that occur when lines between buildings are protected. They should not be used in such an application. If they are used in lines between buildings, there is a high risk of the protector being overloaded and destroyed during transient activity. Connected equipment will, in most cases, still be protected, but there is a small risk that equipment will suffer damage in such circumstances.

Electrical specification

	ESP LN	ESP LN-4	ESP LN-8	ESP LN-8/16	ESP LN-16/16
Maximum working voltage <sup>1</sup>	4V	4V	4V	4V	4V
Current rating	300mA	300mA	300mA	300mA	300mA
In-line resistance	~0Ω	~0Ω	~0Ω	~0Ω	~0Ω
Data rate (TIA Cat 5)	100Mbps	100Mbps	100Mbps	100Mbps	100Mbps

<sup>1</sup> Maximum working voltage (DC or AC peak) measured at 1mA leakage.

Transient specification

	ESP LN	ESP LN-4	ESP LN-8	ESP LN-8/16	ESP LN-16/16
Let-through voltage (all conductors) <sup>1</sup>					
1.5kV, 10/700μs test to: BS 6651:1999 Appendix C, Cat C-Low ITU (formerly CCITT) IX K17	12.5V	12.5V	12.5V	12.5V	12.5V
Maximum surge current <sup>2</sup>	350A	350A	350A	350A	350A

<sup>1</sup> The maximum transient voltage let-through the protector throughout the test (±10%), line to line & line to earth. Response time <10ns.

<sup>2</sup> Tested with 8/20μs waveshape to ITU (formerly CCITT), BS 6651:1999 Appendix C.

Mechanical specification

	ESP LN	ESP LN-4	ESP LN-8	ESP LN-8/16	ESP LN-16/16
Temperature range	-25°C to +70°C	-25°C to +70°C	-25°C to +70°C	-25°C to +70°C	-25°C to +70°C
Connection type	RJ45 sockets	RJ45 sockets	RJ45 sockets	RJ45 sockets	RJ45 sockets
Earth connection	External earth strap	External earth strap on front fascia panel	External earth strap on front fascia panel	External earth strap through mounting screws	External earth strap through mounting screws
Weight - unit	0.05kg	0.29kg	0.32kg	0.75kg	1kg
- packaged	0.09kg	0.58kg	0.61kg	1.1kg	1.35kg
Dimensions	<p>The diagram shows three mechanical drawings of the protectors. The first drawing is for the ESP LN protector, which is a square with a width of 43mm and a height of 52mm. It has a depth of 21mm. A note below it states '(ESP LN supplied with 120mm Cat 5 UTP cable)'. The second drawing is for the ESP LN-8/16 and ESP LN-16/16 protectors, which are rectangular with a width of 492.6mm (19 inches) and a height of 88.3mm (2U). They have a depth of 67mm. The third drawing is for the ESP LN-4 and ESP LN-8 protectors, which are rectangular with a width of 185mm and a height of 87mm. They have a depth of 41mm.</p>				