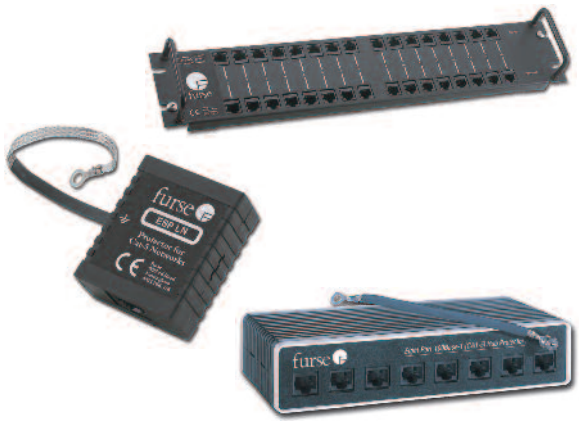
ESP LN Series



LPZ 2→3	**FULL MODE** Bonding + Equipment Protection
SIGNAL/ TELECOM TEST CAT C + B	**e ENHANCED** Low let-through voltage
CURRENT 300mA RATING	**LOW INLINE ~0Ω RESISTANCE**

Combined Category C, B tested protector (to BS EN 61643-21) suitable to protect equipment on twisted pair applications using Cat-5 wiring with RJ45 connectors. For use on lines running within buildings at boundaries up to LPZ 2 through to LPZ 3 to protect sensitive electronic equipment.

Features and benefits

- ✔ Suitable for systems signalling on up to 8 wires of unshielded twisted pair cable – protects all 8 pins in each line
- ✔ Use to protect 1, 4, 8 or 16 lines
- ✔ Suitable for RS 422/423, 10baseT, 100baseT, 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
- ✔ Let-through voltage below equipment susceptibility levels
- ✔ Protects twisted pair lines operating at speeds up to 100Mbps
- ✔ 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 and simple plug-in installation
- ✔ Simple earthing via single braided metal strap

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-5.

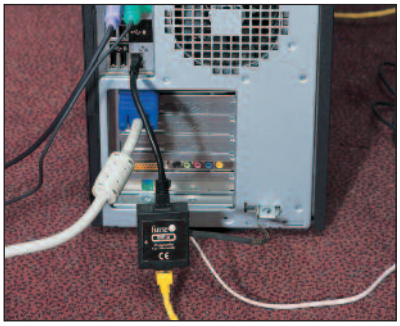
- ✔ Protect the network connection to individual pieces of equipment with the ESP LN
- ✔ Protect multiport applications such as hubs, switches and patch panels with the ESP LN-4, ESP LN-8, ESP LN-8/16 or ESP LN-16/16

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 (typically LPZ 2) to offer local protection to equipment. They therefore will not be able to handle the higher level transients that occur when lines between buildings are protected. ESP LN... range of protectors should not be used in such an application (up to LPZ 0_A) where high energy ESP lightning barriers (such as ESP E and ESP Cat-5 Series) should be employed. 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.



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

For coaxial Ethernet cables running external to the building, use the ESP ThinNet and ESP ThickNet. Protectors for up to Cat-5e cabling with RJ45 connections running external to the building and local protection for PCs and computer communications with D connectors (cables running within a building), are also available. Contact Furse.

TSC-0808

Electrical specification	ESP LN	ESP LN-4	ESP LN-8	ESP LN-8/16	ESP LN-16/16
Maximum working voltage *Uc*[1]			4V		
Current rating			300mA		
In-line resistance			~0Ω		
Data rate (TIA Cat-5)			100Mbps		

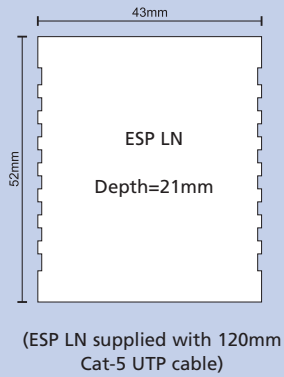
[1] Maximum working voltage (DC or AC peak) measured at 1mA leakage.

Transient specification	ESP LN	ESP LN-4	ESP LN-8	ESP LN-8/16	ESP LN-16/16
Let-through voltage[1] *Up*					
C1 test 0.5kV, 1.2/50µs, 0.25kA 8/20µs to BS EN/EN/IEC 61643-21			13.5V		
B2 test 1kV 10/700µs to BS EN/EN/IEC 61643-21			12.0V		
1.5kV, 10/700µs[2]			12.5V		
Maximum surge current					
8/20µs to ITU (formerly CCITT), BS 6651:1999 Appendix C			350A		

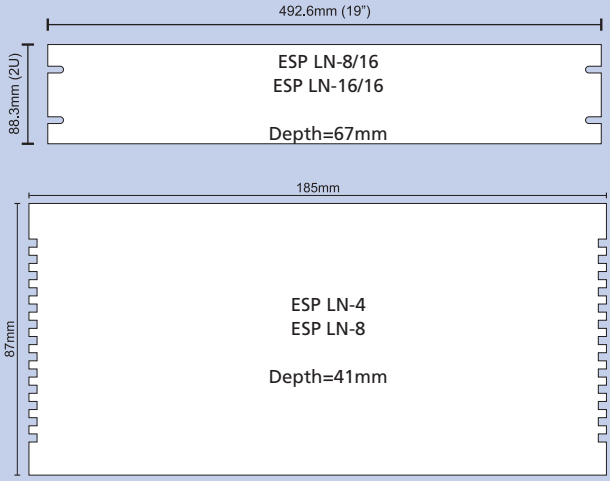
[1] The maximum transient voltage let-through the protector throughout the test (±10%). Response time <10ns.
[2] Test to BS 6651:1999 Appendix C, Cat C-Low, IEC 61000-4-5:1995, ITU-T (formerly CCITT) K.20, K.21 and K.45,Telcordia GR-1089-CORE, Issue 2:2002, ANSI TIA/EIA/IS-968-A:2002 (formerly FCC Part 68).

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		
Connection type			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
Casing material	ABS UL94 V-0	ABS UL94 V-0	ABS UL94 V-0	Steel	Steel
Weight – unit	0.05kg	0.29kg	0.32kg	0.75kg	1kg
– packaged	0.09kg	0.58kg	0.61kg	1.1kg	1.35kg

Dimensions



(ESP LN supplied with 120mm Cat-5 UTP cable)



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