

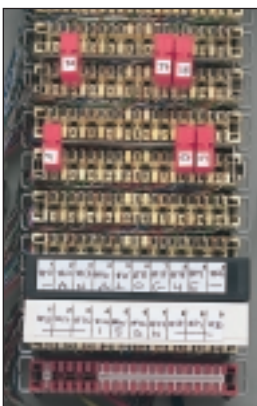
- ◆ Suitable for use on ten line LSA-PLUS disconnection modules.
- ◆ Protect individual twisted pair data or signal lines, in conjunction with the ESP KE10.

Application

Use these units to protect signal, data, control and instrumentation systems with LSA-PLUS disconnection modules.

Features and benefits

- ✓ Low cost protection for large numbers of data and signal lines.
- ✓ Low let-through voltage between all sets of conductors.
- ✓ Multiple strike protection, with the ability to protect against at least ten 5kA transients (test to ITU K20).
- ✓ Colour of housing distinguishes electrically different protectors to help avoid confusion when installed with other protectors (eg the ESP KT1/2) on the same distribution frame.
- ✓ Quick and easy plug-in installation.
- ✓ Protect only the lines you need.
- ✓ Ridged finger holds make it easy to obtain a firm grip for installation or removal.
- ✓ Use the ESP KE10 to provide trouble free earthing for up to ten protectors (per disconnection module).
- ✓ UK Ofel Approval NS/G/1235/W/100025.



Single line protectors installed on LSA-PLUS disconnection modules, via ESP KE10 earth bars, on all incoming signal and data lines.

For PSTN and U interface ISDN lines on LSA-PLUS modules, use the ESP KT1 or ESP K10T1. For S/T interface ISDN lines on LSA-PLUS modules, use the ESP KT2 or ESP K10T2. For individual twisted pair data or signal lines, use the D, E or H Series Lightning Barriers. The Q Series Lightning Barriers are suitable for high density data and signal lines.

Installation

Install protectors on all data communication and signal lines that enter or leave each building.

All protectors must be installed via the ESP KE10 earth bar. Identify the lines requiring protection and clip the ESP KE10 on to the disconnection modules' earth points. Plug the protector directly into each disconnection module requiring protection (ensuring the correct orientation) for a series connection.



Having pushed the ESP KE10 earth bar on to the disconnection modules' earth points, firmly push an ESP KS06 (or ESP KS15, ESP KS30 or ESP KS50) into each line/pair requiring protection.

If the protector's ratings are exceeded, it will sacrifice itself and fail short circuit, taking the line out of commission. In addition to indicating that the protector needs replacing, this will also prevent subsequent transients from damaging the equipment.

Data & signal lines with LSA-PLUS modules

Electrical specification

	ESP KS06	ESP KS15	ESP KS30	ESP KS50
Nominal voltage¹	6V	15V	30V	50V
Maximum working voltage²	7.78V	16.7V	33.4V	58V
Current rating (signal)	150mA	150mA	150mA	150mA
In-line resistance (±10%)	10Ω	22Ω	22Ω	22Ω
Bandwidth (-3dB 50Ω system)	2MHz	5MHz	5MHz	5MHz

1 Nominal voltage (DC or AC peak) at 200μA for ESP KS06 and at 5μA for ESP KS15, ESP KS30 and ESP KS50.

2 Maximum working voltage (DC or AC peak) at 10mA for ESP KS06, at 1mA for ESP KS15 and ESP KS30, and at 5μA for ESP KS50.

Transient specification

	ESP KS06	ESP KS15	ESP KS30	ESP KS50
Let-through voltage¹	12V	24.4V	48.8V	80V
5kV, 10/700μs test to: <i>BS 6651:1999 Appendix C, Cat C-High</i> <i>ITU (formerly CCITT) IX K17</i>				
Maximum surge current²				
- per signal wire	5kA	5kA	5kA	5kA
- per pair	10kA	10kA	10kA	10kA

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

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

Mechanical specification

	ESP KS06, ESP KS15, ESP KS30, ESP KS50	ESP KE10
Temperature range	-25°C to +70°C	-
Connection type	To LSA-PLUS disconnection modules (BT part number 237A)	-
Earth connection	Via ESP KE10 earth bar	-
Weight		
- unit	0.01kg	0.01kg
- packaged	0.12kg (per 10)	0.10kg (per 10)
Dimensions		