



- ◆ Use on twisted pair signalling applications which require either a lower in-line resistance or an increased current than the D or E Series.
- ◆ Also suitable for DC power applications less than 4 amps.
- ◆ Available for working voltages of up to 6, 15, 30 or 50 volts.

### Application

Use these applications to protect resistance sensitive or higher running current systems, eg systems with long signal lines, or DC power applications.

### Features and benefits

- ✓ Low let-through voltage between all lines.
- ✓ Provides repeated protection in lightning intense environments.
- ✓ Ultra low (<0.05W ) in-line resistance allows resistance critical applications (eg alarm loops) to be protected.
- ✓ Very high (4A) maximum running current.
- ✓ Strong, flame retardant ABS housing.
- ✓ Supplied ready for flat mounting on base or side.
- ✓ Built-in DIN rail foot for simple clip-on mounting to top hat DIN rails.
- ✓ Colour coded terminals give a quick and easy installation check – grey for the dirty (line) end and green for clean.
- ✓ Screen terminal enables easy connection of cable screen to earth.
- ✓ Substantial earth stud to enable effective earthing.
- ✓ Integral earth plate enables enhanced connection to earth via CME kit.
- ✓ UK Of tel approval NS/G/1235/W/100025.

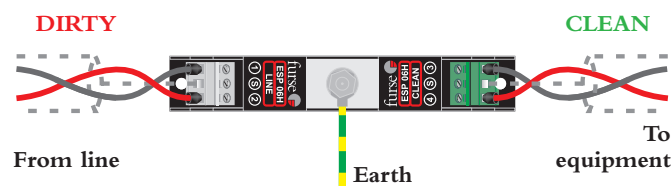


Two ESP 15H protectors mounted in a control cabinet and earthed via the cabinets' earthed chassis.

For some data and signal applications with lower current, higher in line resistance or higher bandwidth requirements, the D or E Series protectors may be more suitable. If the protector is to be mounted directly onto a PCB, use the ESP PCB/\*\*D or ESP PCB/\*\*E protectors.

### Installation

Connect in series with the data communication or signal line either near where it enters or leaves the building or close to the equipment being protected (eg within the control panel). Either way, it must be very close to the system's earth star point. Install protectors either within an existing cabinet/cubicle or in a separate enclosure.



Install in series (in line).

### Suitable accessories

Simultaneously mount and earth up to 4 of these protectors on a CME 4, up to 8 on a CME 8, up to 16 on a CME 16 or up to 32 on a CME 32. Enclosures suitable for up to two (WBX 2/G) or three (WBX 3/G) protectors, or a CME 8 and protectors (WBX 8) or one or two CME 16 kits and protectors (WBX 16/2/G) are available.

Electrical specification

	ESP 06H	ESP 15H	ESP 30H	ESP 50H
<b>Nominal voltage<sup>1</sup></b>	6V	15V	30V	50V
<b>Maximum working voltage<sup>2</sup></b>	7.79V	16.7V	36.7V	56.7V
<b>Current rating (signal)</b>	4A	4A	4A	4A
<b>In-line resistance</b> (per line ±10%)	<0.05W	<0.05W	<0.05W	<0.05W
<b>Bandwidth</b> (-3dB 50W system)	160kHz	140kHz	130kHz	120kHz

1 Nominal voltage (DC or AC peak) measured at <10µA (ESP 15H, ESP 30H, ESP 50H) and <200µA (ESP 06H).

2 Maximum working voltage (DC or AC peak) measured at <5mA leakage (ESP 15H, ESP 30H, ESP 50H) and <10mA (ESP 06H).

Transient specification

	ESP 06H	ESP 15H	ESP 30H	ESP 50H
<b>Let-through voltage (all conductors)<sup>1</sup></b> 5kV, 10/700µs test to: <i>BS 6651:1999 Appendix C, Cat C-High</i> <i>ITU (formerly CCITT) IX K17</i>	10.8V	26.2V	44.3V	65.8V
<b>Maximum surge current<sup>2</sup></b>				
- per signal wire	10kA	10kA	10kA	10kA
- per pair	20kA	20kA	20kA	20kA

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 06H	ESP 15H	ESP 30H	ESP 50H
<b>Temperature range</b>	-25 to +70°C	-25 to +70°C	-25 to +70°C	-25 to +70°C
<b>Connection type</b>	Screw terminal	Screw terminal	Screw terminal	Screw terminal
<b>Conductor size (stranded)</b>	1.5mm <sup>2</sup>	1.5mm <sup>2</sup>	1.5mm <sup>2</sup>	1.5mm <sup>2</sup>
<b>Earth connection</b>	M6 stud	M6 stud	M6 stud	M6 stud
<b>Weight</b>				
- unit	0.08kg	0.08kg	0.08kg	0.08kg
- packaged (per 10)	0.85kg	0.85kg	0.85kg	0.85kg
<b>Dimensions</b>				