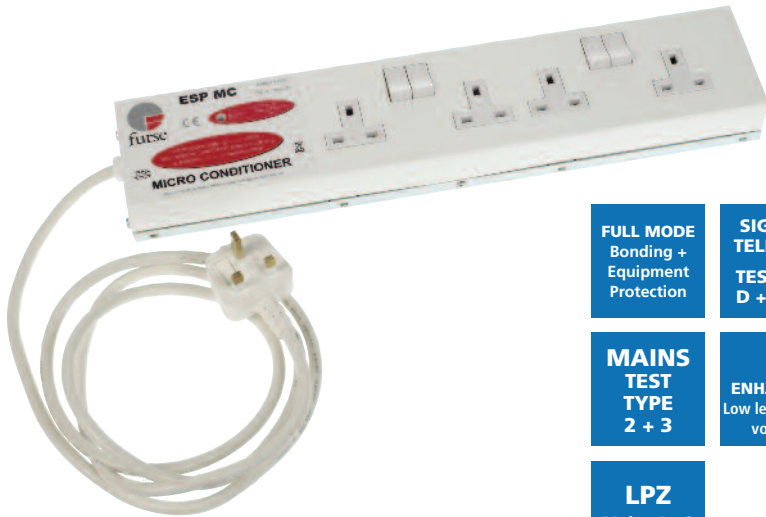


ESP MC Series



- FULL MODE**
Bonding +
Equipment
Protection
- SIGNAL/
TELECOM**
TEST CAT
D + C + B
- MAINS
TEST
TYPE
2 + 3**
- e**
ENHANCED
Low let-through
voltage
- LPZ**
Mains 1→3
Data 0_B→3

Combined Type 2 and 3 tested protector (to BS EN 61643-11) with telecom or network protection options. Suitable for use on 220/230/240 volts supplies. Available with British style (three square pin) plugs and sockets with double-pole action. For use at boundaries LPZ 1 through to LPZ 3 to protect sensitive electronic equipment.

Features and benefits

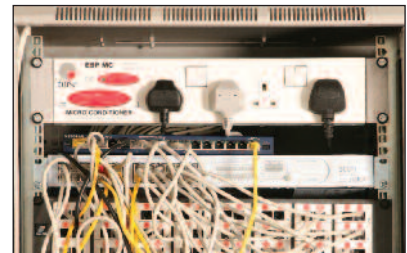
- ✓ Low let-through voltage between all sets of conductors
- ✓ Three way visual indication of protection status
- ✓ Protects against radio frequency interference
- ✓ TN and Cat-5e versions can conveniently protect both mains and telecom/data lines in one unit
- ✓ Rugged, heavy duty construction
- ✓ Bracket kit ESP MC/19BK available for rear or 19" rack mounting
- ✓ Maintenance free

Application

ESP MC series can be used to protect all sorts of plug-in equipment, including hospital laboratory equipment, modems, fax machines and PCs.

Installation

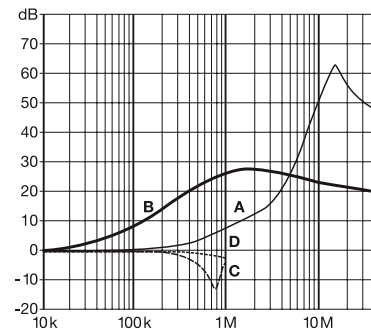
Simply plug the ESP MC series into the mains and your equipment into the ESP MC.



ESP MC installed within a network rack, protecting the externally-fed network switch

RFI performance

Per CISPR 17:
A = 50Ω/50Ω sym, B = 50Ω/50Ω asym, C = 0.1Ω/100Ω sym, D = 100Ω/0.1Ω sym



Accessories

ESP MC/19BK bracket kit can be used for rear mounting, or reversed for use in 19" cabinets. All fixings supplied.

For wire-in applications up to 16 amps, the 16A/BX Series may be more suitable. For all other supplies, consider the M1 Series.

Electrical specification – mains

	ESP MC	NEW ESP MC/TN/RJ11-4/6	NEW ESP MC/Cat-5e
Nominal voltage - Phase - Neutral U_o (RMS)		220/230/240V	
Maximum voltage - Phase-Neutral U_c (RMS)		280V	
Frequency range		47-63Hz	
Current rating (supply)		13A	
Leakage current (to earth)		<0.5mA	

Electrical specification – telecom/data

	ESP MC	ESP MC/TN/RJ11-4/6	ESP MC/Cat-5e
Nominal voltage	–	296V	5V
Maximum working voltage U_c^1	–	296V	5V ²
Current rating (signal)	–	300mA	300mA
In-line resistance (per line $\pm 10\%$)	–	4.4 Ω	1 Ω
Bandwidth (–3dB 50 Ω system)	–	20MHz	–
Maximum data rate	–	–	100Mbps

¹ Maximum working voltage (DC or AC peak) of telecom/data protection measured at <10 μ A leakage for ESP MC/TN/RJ11-4/6 and 1mA for ESP MC/Cat-5e.

² Maximum working voltage is 5V for data pairs 1/2 & 3/6.

Transient specification – mains

	ESP MC	ESP MC/TN/RJ11-4/6	ESP MC/Cat-5e
Type 2 (BS/EN), Class II (IEC)			
Nominal discharge current 8/20 μ s (per mode) I_n		5kA	
Let-through voltage U_p at I_n^1		850V	
Maximum discharge current I_{max} (per mode) ²		10kA	
Type 3 (BS/EN), Class III (IEC)			
Let-through voltage at U_{oc} of 6kV 1.2/50 and I_{sc} of 3kA 8/20 (per mode) ³		680V	
Let-through voltage at U_{oc} of 6kV 1.2/50 and I_{sc} of 500A 8/20 (per mode) ⁴		555V	

¹ The maximum transient voltage let-through of the protector throughout the test ($\pm 5\%$), phase to neutral, phase to earth and neutral to earth.

² The electrical system, external to the unit, may constrain the actual current rating achieved in a particular installation.

³ Combination wave test within BS 6651:1999 App. C, Cats C-Low & B-High, IEEE C62.41-2002 Location Cats C1 & B3, SS CP 33:1996 App. F, AS 1768-1991 App. B, Cat B, UL1449 mains wire-in

⁴ To BS 6651:1999 Appendix C, Category A-High, UL1449 mains plug-in

Transient specification – telecom/data

	ESP MC	ESP MC/TN/RJ11-4/6	ESP MC/Cat-5e
Let-through voltage (all conductors)¹ U_p			
C2 test 4kV 1.2/50 μ s, 2kA 8/20 μ s to BS/EN/IEC 61643-21 – line to line / line to earth	–	390V / 390V	120V / 700V ³
C1 test 1kV, 1.2/50 μ s, 0.5kA 8/20 μ s to BS/EN/IEC 61643-21 – line to line / line to earth	–	395V / 395V	74V / 600V ³
B2 test 4kV 10/700 μ s to BS/EN/IEC 61643-21 – line to line / line to earth	–	295V / 295V	21V / 550V ³
5kV, 10/700 μ s ² – line to line / line to earth	–	300V / 300V	25V / 600V ³
Maximum surge current⁴			
D1 test 10/350 μ s to BS/EN/IEC 61643-21	–	1kA	1kA
8/20 μ s to ITU (formerly CCITT), BS 6651:1999 Appendix C	–	10kA	10kA

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

² Test to BS 6651:1999 Appendix C, Cat C-High, 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).

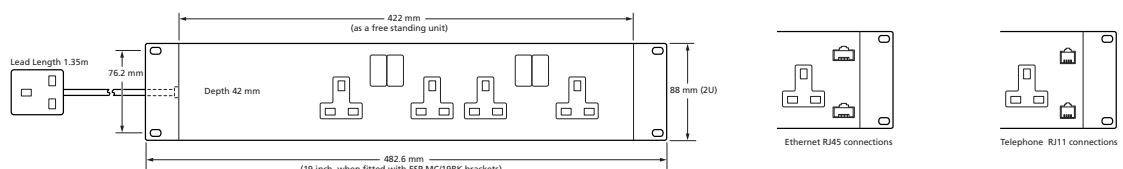
³ The interfaces used in Cat-5/5e systems incorporate an isolation transformer that inherently provides an inbuilt immunity to transients between line and earth of 1,500 volts or more.

⁴ The installation and connectors external to the protector may limit the capability of the protector.

Mechanical specification

	ESP MC	ESP MC/TN/RJ11-4/6	ESP MC/Cat-5e
Temperature range		–25°C to +70°C	
Connection type		Via British style three square pin plug and socket to BS 1363	
Connection type – telecom/data	–	RJ11	RJ45
Earth connection		Via plug and socket	
Case material		Steel	
Weight – unit	1.70kg	1.75kg	1.75kg
– packaged	1.75kg	1.8kg	1.8kg

Dimensions





Thank you for reading this data sheet.

For pricing or for further information, please contact us at our UK Office, using the details below.



UK Office

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Please note - Product designs and specifications are subject to change without notice. The user is responsible for determining the suitability of this product.