



MPE
Quality, Reliability, Performance

Company Bulletin

for EMC, EMP & TEMPEST Protection

Issue 2



A Barton Engineering TEMPEST rack with 10A MPE filter for filtering the electrical cable entering the cabinet



A small Barton Engineering rack showing a 10A MPE low-leakage, single-phase, powerline installation filter



16A MPE TEMPEST powerline installation filter, customised for mounting inside a Barton Engineering cabinet

Securing network communications

Since 1998 MPE has been a supplier to Barton Engineering & Export Ltd of 20 different types of custom powerline installation filters with high insertion loss performance, for TEMPEST-specification rack systems located in the screened areas of IT and communications, or command and control facilities, typically for the Ministry of Defence, Government agencies, Police and banks. Barton specifies MPE's resin-filled TEMPEST filters, with low earth leakage, in the range 10A to 63A, for filtering the electrical cable as it enters the cabinet. MPE supplies standard catalogue filters, as well as custom variants, to suit Barton's cabinet or other application-specific requirements such as for mounting and cable entry.

With a 20,000 sq ft metalworking, fabrication and finishing facility at Whitstable on the Kent coast, Barton Engineering is an engineering contractor who has specialised since 1958 in screened enclosures and 19in EMC equipment racks, TÜV tested as necessary and operating at frequencies of up to more than 10GHz, for defence and security customers.

In particular the company designs and manufactures TEMPEST rack systems to SDIP 29, generally incorporating a drilled attenuant (an EMI-shielded, metal honeycomb panel for air ventilation, mounted in a steel frame) and a powerline installation filter from MPE.

Barton's other products include purpose-built TEMPEST containers to house datacryptors, as well as bespoke prototype screened cabinets and containers with performance specifications ranging from 15dB to over 100dB at frequencies up to 20GHz. In order to be fit for purpose, all these systems require integral EMC filter solutions.

Combinations of designs, either flat-packed or fully welded-up, are shipped around the World for both new build and upgrade projects. Typically, cabinets are transported easily in flat-pack form, assembled and installed on site by security-cleared personnel.

As might be expected in the current climate of heightened network security, Barton Engineering (www.bartoneng.co.uk) is kept very busy fulfilling orders for its feature-rich screened enclosures and EMC racks. The company's recent contracts have included a large consignment of 18GHz TEMPEST specification cabinets of different sizes – incorporating MPE filters of different amperages and highly sophisticated Mark 8 dial-locks to prevent unauthorised access.