

## EMC FILTER SOLUTIONS FOR RAIL & TRAIN APPLICATIONS

### TO SUPPORT COMPLIANCE WITH EN50121

Electromagnetic interference (EMI) and electromagnetic compatibility (EMC) are major concerns for the rail industry due to the increasing use of complex power electronics, switching devices & microelectronics used in rolling stock, equipment, & rail infrastructure.

The mandatory requirement that all new rail applications must comply with the relevant aspects of directive EN50121 regarding EMC results in the potential need for EMC filter & capacitor solutions specific to the rail industry.

MPE are specialists in the design & manufacture of high performance EMC filters and capacitors suitable for use in high reliability applications such as railways, military vehicles, defence, IT & telecoms.

With more than 80 years proven heritage in this specialist field, MPE are the first choice for companies who require the most cost effective solution, quality product & technical support.

MPE's comprehensive standard products range from high performance feedthrough capacitors to high current power filters, with wide frequency spectrum characteristics in a choice of enclosure styles.

As all key components are manufactured in-house, MPE have the capability to design & manufacture optimum cost-effective solutions to suit the specific application.

MPE can provide solutions that deal with the three main aspects of the directive: the effect of the railway system on the surrounding environment, on signalling & communications equipment & the apparatus operating within the environment. These include.....



**EQUIPMENT FILTERS** : Particularly suitable for apparatus used within rolling stock are the MPE range of equipment filters. For applications up to 15A, several ranges are available, including a series specifically designed to suppress equipments powered by a switch mode power supply, which in themselves require particular filter circuitry to deal with the emc issues. Detailed explanation can be found in the product catalogue.

**HIGHER CURRENT FILTERS** : For rail applications that require higher current solutions, MPE manufacture standard ranges of equipment filters in single & three phase series up to 100A. These filters incorporate feedthrough capacitors to give excellent high frequency performance, with bulkhead or chassis mounting for optimum mounting flexibility.



**FEEDTHROUGH FILTERS & CAPACITORS** : For rail equipments or applications that may only require this type of solution - MPE manufacture a vast standard range starting from 0.5A to 500A, with various performance levels & covering the higher frequency spectrum (above 1GHz) that EN50121 requires.

**INSTALLATION FILTERS** : For protection of rail infrastructure, communication installations, substations, & other power related applications – MPE manufacture an extensive range of single & three phase filters as well as signal, telecoms, and data filters to offer total protection to the related environment.

