

MIL-STD Performance Control Line Filters

EEP Filters EMC/RFI Control Line Filter product range have been designed for maximum performance for Shielded Room applications. Shielded Rooms require high levels of attenuation to ensure no conducted / radiated emissions are either imported or exported from the room.

The filters come in 2, 4, 8, 10 & 12-line formats, or as requested, and have a current rating of 500mA -3 Amps. They are housed in painted stainless-steel enclosures for protection and can be used in AC applications and DC up to 300V DC.

All filters are designed in accordance with MIL-STD-125-1.

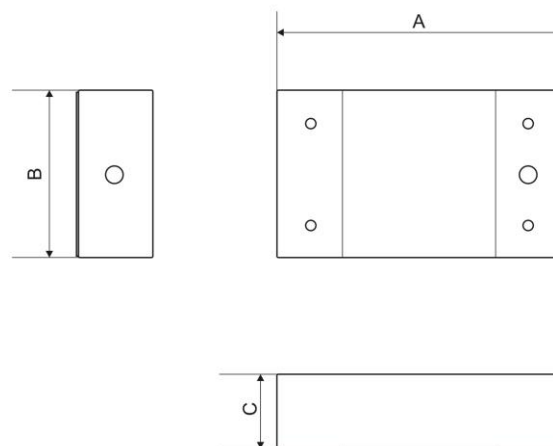
General Specification

Rated Voltage AC:	250V AC, 50/60Hz
Rated Voltage DC:	300V DC
Rated Current & Insertion Loss:	See table below
Maximum Temperature Rise on Full Load:	25°C
Operating Temperature:	- 20°C - + 50°C
Storage Temperature:	- 25°C + 85°C
Insulation Resistance:	>100MΩ
Discharge Resistors:	Internally fitted from line to case
Discharge Time to Below 34V:	<10 seconds
Maximum Leakage Current Per Line:	0.05A
Termination Types:	Din Rail/Spindle



Technical Specifications

Number of Lines	Part Number	Current Rating (A)	Rated Voltage (Max V)	L mm (A)	W mm (B)	H mm (C)	Weight
2	EEPF-2-CLF	3.0	300 DC / 250 AC	515	100	80	3kg
4	EEPF-4-CLF	2.0	300 DC / 250 AC	515	200	80	4kg
8	EEPF-8-CLF	2.0	300 DC / 250 AC	515	400	80	8kg
10	EEPF-10-CLF	2.0	300 DC / 250 AC	515	500	80	10kg
12	EEPF-12-CLF	2.0	300 DC / 250 AC	515	600	80	12kg



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Insertion Loss

The higher the insertion loss the greater the filter performance. Insertion loss, generally expressed in Decibels, is the ratio of the power received before the insertion of the EMC Filter to the power received after the insertion of the EMC Filter. The insertion loss is measured in the frequency domain and for most applications the spectrum is usually between 50Hz and 1GHz, however frequencies outside of this spectrum can be tested.

Insertion loss testing is generally measured in the asymmetric (common) mode in a balanced 50 Ohm impedance system. The main specifications for filter testing are BS613 and MIL STD 220A. If the filters supplied use toroidal current compensating inductor technology the tests can be conducted without full load current being passed through the filter at the time of tests. This is because current compensating filter inductors do not saturate and therefore the performance does not alter as the load current changes.

The measurements are taken by using a tracking/signal generator and spectrum analyser. The signal sweeps across the frequency range and is passed through the test leads, which are coupled directly, and received by the spectrum analyser. This signal is then 'normalised' to the 0dB. The filter is then inserted in the circuit and the test repeated. As the signal has been normalised to 0dB prior to the filter being added in series the true Attenuation or Insertion Loss of the filter is directly displayed.

By sweeping continuously across the frequency spectrum, and not at discrete frequencies, any resonant frequencies or manufacturing imperfections which can cause a reduction in filter performance can be identified.

Frequency (MHz)	0.01	0.1	1	10	100	200	400	800	1000
Insertion Loss (dB)	20	40	60	80	80	80	80	80	80

Regulations

All electrical/electronic apparatus - with few exceptions - sold or taken into service within the European Community must comply with the essential requirements of the EMC Directive 2004/108/EC.

Standards

Our range of filters are built in accordance with the relevant BS, VDE, UL, CE & CSA safety standards. This range also conforms to MIL-STD 220A and the electrical characteristics of Mil-F-15733.

In addition, all our filters and power supplies are designed to meet the latest requirements for Health and Safety, in particular EN60939-2-2005.

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European EMC Products

Product Datasheet

About Us

Established in 1996, European EMC Products (EEP) are an established British company whose experience and understanding of the science of shielding makes it an ideal partner in whom you can place your trust with confidence.

The purpose of installing EEP shielding systems is to protect people and equipment against the threats posed by electromagnetic and radio frequency (RF) interference, radiation, magnetic fields and electromagnetic pulses. Our diverse range of turnkey products and services, including design, project management, testing and consultancy are delivered across multiple sectors to an international client base.

Quality

European EMC Products Limited are registered to BS EN ISO 9001:2015, Certificate Number FS38901.

Registered Scope: The design, assembly, installation, servicing and testing of RF Shielded Structures and equipment including EMI Shielding, Blast Doors, Gas Tight Doors and specialised mobile Electromagnetic Pulse Protection (EMPP) containers.

Radio Frequency, Magnetic Shielding and Quench systems for MRI (Magnetic Resonance Imaging) scanners.

The design, assembly and installation of Ionising Radiation Protection facilities.

The design, manufacture and installation of LED lighting systems for medical applications.

EEP Filters Limited are registered to BS EN ISO 9001:2015, Certificate Number FS38901.

Registered Scope: The design, manufacture, management of installation and testing of high performance EMC and EMP Power and Data Line Filters.

Disclaimer

NB: All the information provided within this datasheet is for reference only. Product specifications are subject to change without notice.