

A E F
solutions



AEF Solutions, part of the AEI UK Group of Companies, provide expert design and manufacture of bespoke filtered connector solutions for Electromagnetic Compatibility (EMC, EMI/RFI) and Transient Voltage Suppression (TVS) including lightning protection.

With over 100 years experience within the connector industry, we continue to build strong relationships with our customers ensuring a flexible, personal service that delivers the highest attention to detail.

Our expertise in delivering complete electronic solutions has proven a vital part in applications such as the

Eurofighter, Airbus A380, C130 and many more across a range of markets including: Defence, Military Aerospace, Commercial Avionics, Telecomm, Datacom and Industrial.

AEF Solutions is a founder member of the Electromagnetic Compatibility Industry Association – EMCIA

Why AEF?

✓ Experience

“AEF Solutions has been Designing and Manufacturing in the UK for the past 14 years. The staff of AEF has a combined experience of over 100 years of the Interconnect and Filter market...”

✓ Flexibility

“At AEF Solutions, we recognise that in the EMC world, change is often required, to provide the desired results. We work closely with our customers in order to support them through the process. Design change is generally effected in a short time frame and the impact upon product lead-times, minimised...”

✓ Response

In situations where a particular product or similar product has been previously produced, AEF Solution are able to provide a formal quotation within 24 hours and more often than not, same day. Where product development is required, AEF Solutions will always attempt to provide a quotation within 24 hours. If this is not possible due to complexity of design and/or a need for component costing, AEF Solutions will respond within 24 hours, indicating when a formal quotation can be supplied...”

✓ Small Volumes

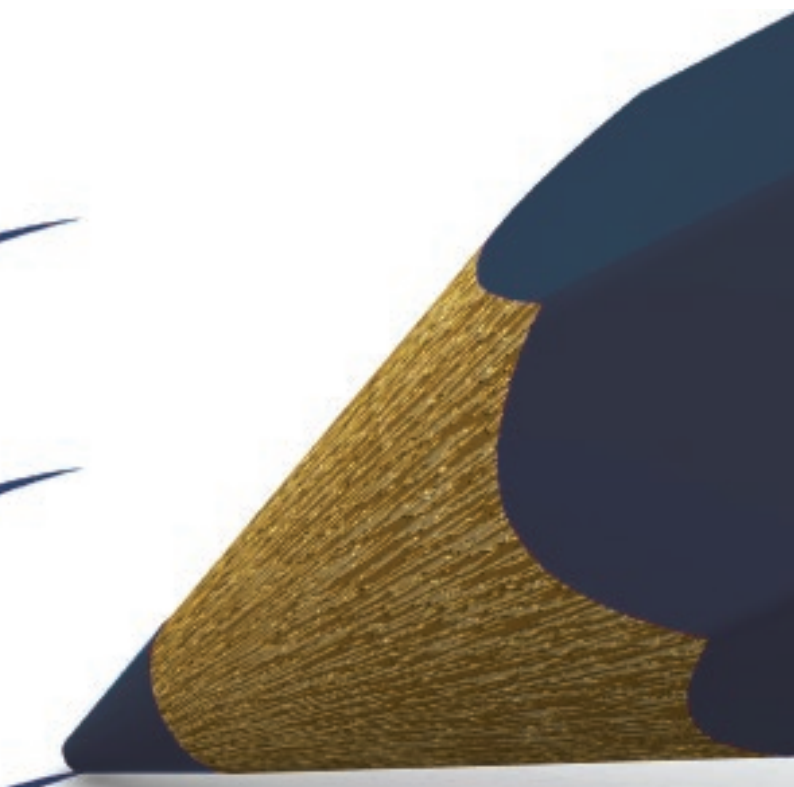
“Recognition of the fact that all projects and programs often start with low volumes, AEF Solutions are able and willing to support these demands. Whether it is for a 1 off or 5 off, AEF Solutions are here to help...”

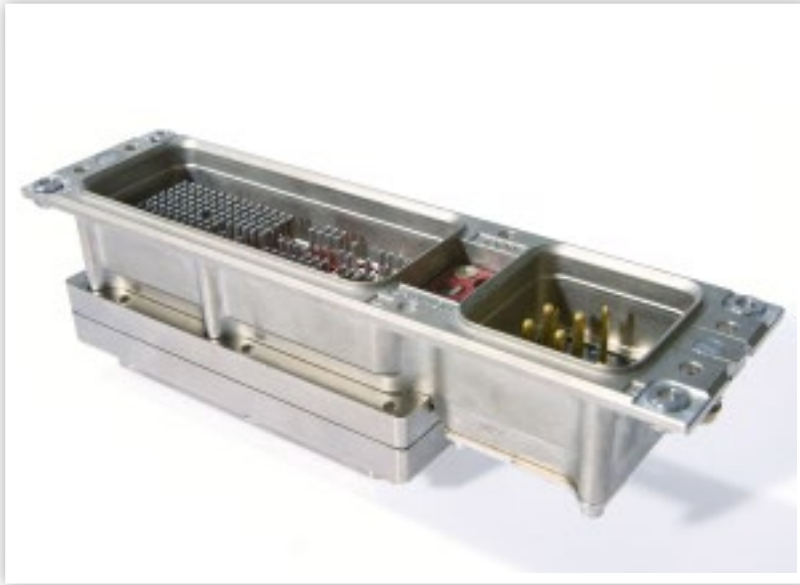
✓ Large Volumes

“The willingness of AEF Solutions to support low volume demand does not detract from the ability to support large volume programs. Weekly, monthly, quarterly and annual delivery schedules can be catered for...”

✓ ITARS Free

ITAR (International Traffic in Arms Regulations) has resulted in increased trading difficulties pertaining to the supply of US designed and manufactured military interconnect products. AEF Solutions, Design and Manufacture product in the UK, and subject to DTI legislation, are able to supply to the Euro zone and many other parts of the world, without restriction...”





Filter Connectors

AEF Solutions design and manufacture a large range of filter connector product. Our specialty is in the design of interconnect solutions addressing EMI/RFI filtering and EMP transient protection to meet demanding HIRF and Lightning requirements. AEF filter connectors use a number of different filtering and transient suppression technologies in order to achieve the most cost effective solutions, with the highest quality.

Not only do our solutions offer far greater reliability and vastly improved performance, they also enable the application of multi-stage filters,

with Electromagnetic Interference (EMI) and Electromagnetic Pulse (EMP) stages, Electro Static Discharge (ESD) protection devices as well as common and differential mode filtering.

Filter Connector Features

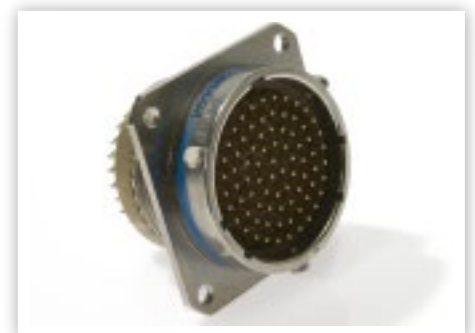
- Planar, Tubular, Discoidal or SMD on board capacitors,
- Interchangeable and intermateable with non-filtered connectors
- Multiple capacitance values, ground and feed-thru lines available in one capacitor array
- Space efficient packaging of EMI/RFI and EMP transient protection
- Voltage rating: 100 VDC – 1000 VRMS
- Capacitance range: 22pF– 2 uF
- Mixed capacitances 1000:1 ratio within same array
- Pi, C, CL, LC, T and combination filter circuits

AEF Solutions filter connectors are designed to meet or exceed all applicable requirements of military specifications. Our filter connectors are intermateable and interchangeable with standard non-filtered QPL connectors.

AEF Solutions are able to provide filter and transient protection modules and plates, utilising a number of differing technologies.

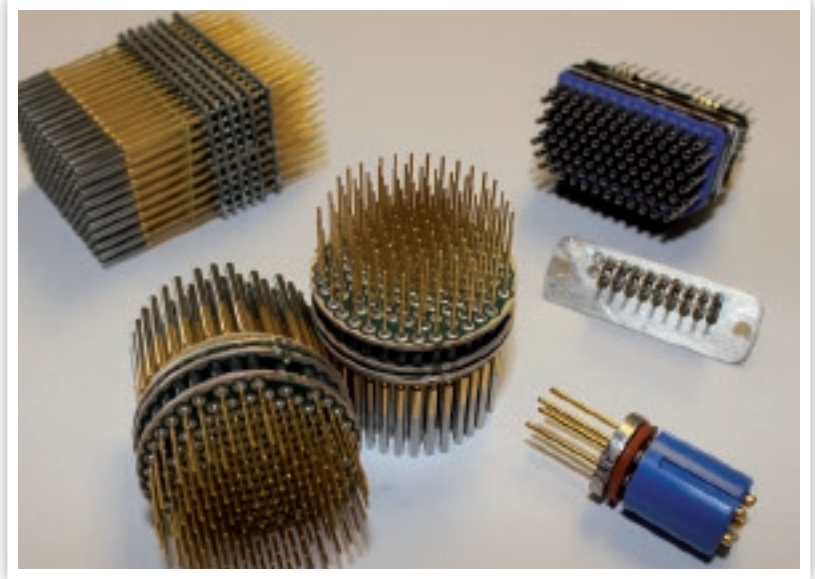
Filter Module Features

- Planar, Tubular, Discoidal or SMD on Board capacitors,
- Multiple capacitance values, ground and feed-thru lines available in one module array
- Space efficient packaging of EMI/RFI and EMP transient protection
- Voltage rating: 100 VDC – 1000 VRMS
- Capacitance range: 22pF– 2 uF
- Mixed capacitances 1000:1 ratio within same array.



Filter Plate Features

- Planar, Tubular, Discoidal or SMD on board capacitors,
- Multiple capacitance values, ground and feed-thru lines available in one module array
- Space efficient packaging of EMI/RFI and EMP transient protection
- Voltage rating: 100 VDC – 1000 VRMS
- Capacitance range: 22pF– 2 uF
- Mixed capacitances 1000:1 ratio within same array.



“Solutions exceeding expectations”

Solder Tail Connectors

AEF Solutions are able to offer practically all military circular and rectangular connectors with solder tail termination for use on printed circuit boards and flexible circuits.

Contact interface dimensions are designed and manufactured to comply with the relevant military specification. Tail dimensions are custom designed to suit the end users application and specification. Coaxial, triaxial and quadrx contacts also available.



Connector Types

- Mil-C-26482 series 1 and 2
- Mil-DTL-38999 series 1, 2, 3 & 5
- Mil-C-5015
- Mil-DTL-24308
- Arinc 404
- Arinc 600
- Mil-DTL 83527 & EN3682
- MIL-C-83733
- Special Application



Connector Protective Caps

AEF Solutions are able to supply a large range of connector protective caps in a range of materials and plating finishes. Caps are available for both receptacle and plug connectors and can be supplied with chain, plastic coated wire or nylon rope of the required length.

A variety of fixing terminals can also be offered.



Backshell Adaptors

A huge range of backshell fittings are on offer from AEF Solutions. Available to suit most military circular connector types, the backshells are able to accommodate many differing cable specifications including screened and un-screened.

A screen termination is provided by either “cone” or constant force spring and also provides provision for a heatshrink boot.



Features

Connector compatibility

- MIL-C-38999 (Series I, II, III and V)
- MIL-C-26482 (Series I and II)
- MIL-C-83723 (Series I and II)
- MIL-C-5015

Material

- Aluminium
- Aluminium Bronze
- Stainless Steel

Plating

- Cadmium Olive Drab
- Electroless Nickel
- Black Nickel
- Zinc Cobalt
- Black Anodized

TYPICAL APPLICATIONS



A400M



JSF



TIGER



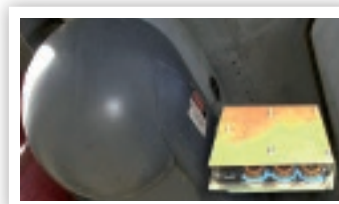
UAV's



TORNADO



GRIPEN



LITENING SE



**EUROFIGHTER
TYPHOON**

Flexible Circuit Assembly

AEF Solutions are able to design and build complete flexible assemblies. Connectors can be filtered or unfiltered. They will undertake procurement of the selected connectors, source the desired flexible circuit and perform the necessary build and test activities.



Cable Assembly

AEF Solutions undertake cable assembly solutions for many customers, incorporating both filtered or unfiltered connectors. Supported by our in-house design capability, AEF Solutions will undertake procurement of the selected connectors and backshells as required, source the desired cable and perform the necessary build and test activities.

Panel & Box Build

To compliment our work in the areas of filter connectors, flexible circuit assembly, cable assembly, wiring, PCB assembly and test, AEF Solutions are able to offer a complete turnkey solution for box and panel build. AEF Solutions will undertake complete project management.

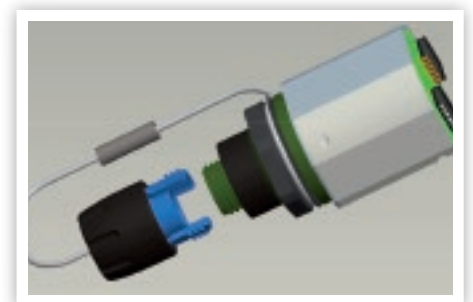


Special Application

AEF Solutions have developed many special application products in order to fulfil customer requests. These are varied and range from soldered assemblies, sealing of connectors to achieve IP67, filter adapters, filtered plug connectors (circular and rectangular) and hermetically (glass to metal) sealed filter connectors.

Fibre Optic and Media Conversion

AEF Solutions can design and manufacture media converters for fast ethernet 100Base-TX Electrical media to 100Base-FX Optical media and Gigabit ethernet 1000Base-T ethernet Electrical to 1000Base-SX ethernet Optical media to provide secure communication.



Features

- Mil-DTL-38999 Connector interface
- 100Base-TX/FX Media Conversion, multimode, 1310nm
- Optical Fibre Link up to 2.0 Kilometres
- 1000Base-T/SX Media Conversion, multimode, 850nm
- Optical Fibre Link up to 550 metres



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