



38999  
RHINO



## DATA SHEET

# High Power Filtered Assemblies

Amphenol now offer High Power EMI and EMP filter assemblies, suitable for EMC suppression and EMP protection of COTS (Commercial Off The Shelf) equipment on military vehicles. The assemblies are supplied with the Rhino connector interface, with the benefits of field proven MIL-DTL-38999 Series III circular connectors and hyperbolic contacts, extending the boundaries of high power connector technology.

The product has been developed in conjunction with MPE Limited, a world leading manufacturer of high performance EMC/EMP filters and capacitor products.

By combining MPE expertise in high power filtering and Amphenol expertise in connector technology, we offer a high performance, highly reliable, cost effective filter solution based on proven design and performance. The connectors are designed for a wide variety of applications and helps enable equipment to meet the requirements of military EMC specifications, such as; DEF STAN 59-411 and MIL-STD-461.

Assemblies can be supplied with C or Pi filter circuits and can also include high power Varistors, providing protection against EMP and lightning. The assemblies are supplied with pin contacts at one end and sockets at the other.

The use of RADSOK contacts creates an electrical interface that exceeds typical interconnect requirements via a hyperbolic socket contact construction, which distributes normal forces over a high percentage of the mating surface to ensure a smooth and even engagement force with exceptionally high performance under vibration. The large surface area of the socket contact also results in a very low contact resistance, enabling much higher current ratings compared to other power contact designs. Designed to meet the latest Military and Industrial specifications, Rhino 38999 Filtered connectors also meet stringent safety requirements.

### Key Features

- **Technology.** Current rating up to 500A, Operating voltage up to 100V, 6,500 A (8/20µs) varistors
- **Mechanical.** 38999 Series III connector interface, wall mount or jam-nut, 500+ mating cycle durability
- **Safety.** IP2X, plastic cap on pin contact to prevent shock
- **Environmental.**
  - RoHS compliant,
  - Black Zinc-Nickel plated.
  - Aluminium alloy connectors.
  - Black painted stainless steel housings.
  - Temperature range -55°C to +125°C, IP68 sealing, 500 Hrs Salt Spray

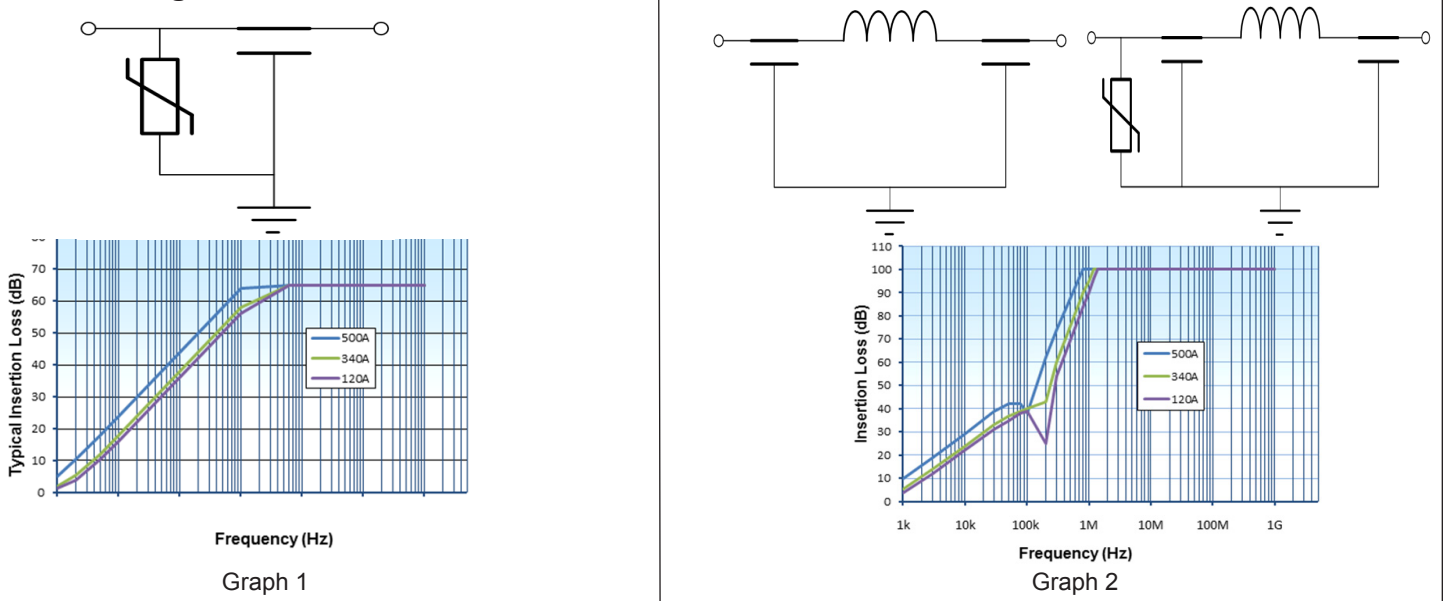


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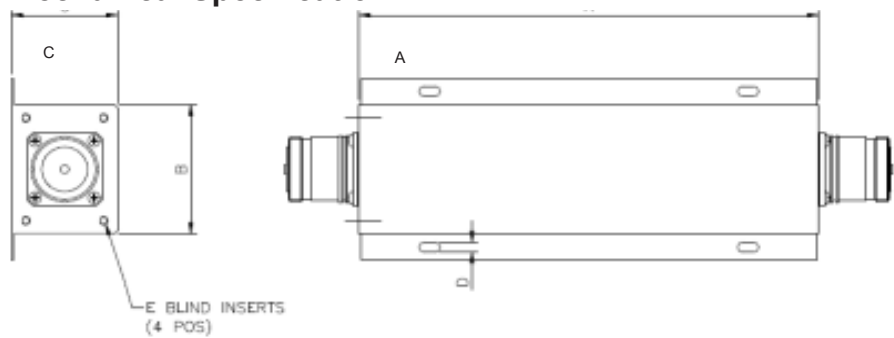
## Electrical Specification:

Connector Shell Size (male plus female)	23	21	15
Current Rating	500A@ 50°C	340A@ 50°C	120A@ 50°C
Voltage Rating	100Vdc	100Vdc	100Vdc
Test Voltage	200Vdc	200Vdc	200Vdc
Insulation Resistance	>500MΩ @100Vdc	>500MΩ @100Vdc	>500MΩ @100Vdc
Capacitance Value	10μF ± 20%	5μF ± 20%	4μF ± 20%
Performance 'C'	See graph 1	See graph 1	See graph 1
Performance 'Pi'	See graph 2	See graph 2	See graph 2
Varistor Rating	125Vdc, 6500A (8/20μs), 50J (2ms)		

## Circuit Diagram



## Mechanical Specification



All dimensions in mm

Shell Size	B	C	D	E
23	80	64	M5	M5
21	70	60	M5	M5
15	55	45	M4	M4

A Dimension

Shell Size	CE	PO	PE
23	170	260	330
21	160	240	300
15	150	210	270

## How To Order

Series	Shell Size	Class	Filtering Type	Contact style (At mounting face)	Keyway
WFPTV	15 21 23	ZN= Black Zinc Nickel	CE - C Filter with Varistor PO - Pi Filter PE - Pi Filter with Varistor	P = Pin Contact S = Socket Contact	N A B C D E

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