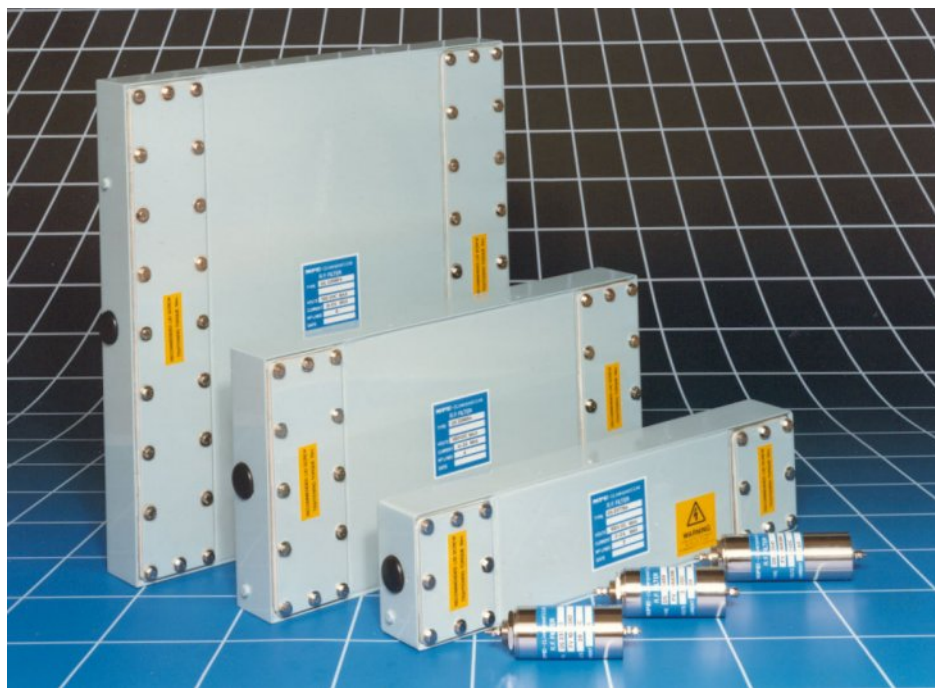


CONTROL LINE FILTERS



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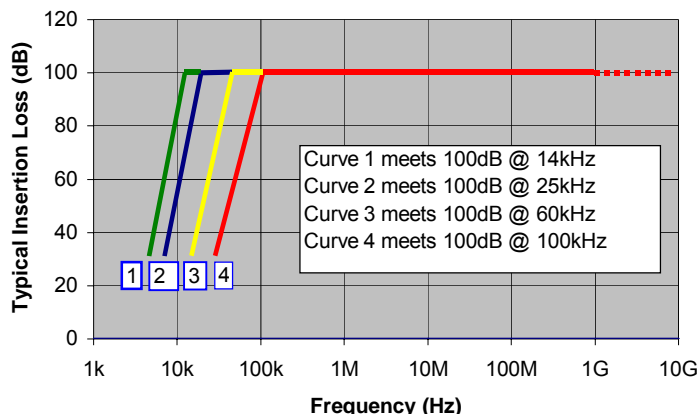


MPE Limited
Hammond Road
Knowsley Industrial Park
Liverpool L33 7UL, UK

MULTI-LINE AC CONTROL LINE FILTERS



www.mpe.co.uk



Description

A range of multi-line filters suitable for filtering ac control lines and low current power lines on shielded rooms and general installations. All versions are available with transient suppression (see page 4).

Features

- 250V ac with 1A - 10A current ratings (also suitable for 600Vdc)
- 2, 4, or 8 individually filtered lines
- Incorporate MPE self-healing feedthrough capacitors
-

Ratings and Characteristics

| | |
|---------------------------------------|--|
| Rated Voltage | 250V ac 50/60 Hz or 600Vdc |
| Test Voltage | 2250V dc (prior to fitting any transient suppressors) |
| Insulation Resistance | > 100MΩ (before fitting discharge resistors) |
| Discharge Resistors | 560kΩ each line to case |
| Discharge Time to Below 34V | <10s |
| Maximum Temperature Rise on Full Load | 25°C |
| Full Load Operating Temperature Range | -25°C to +50°C |

Product Range

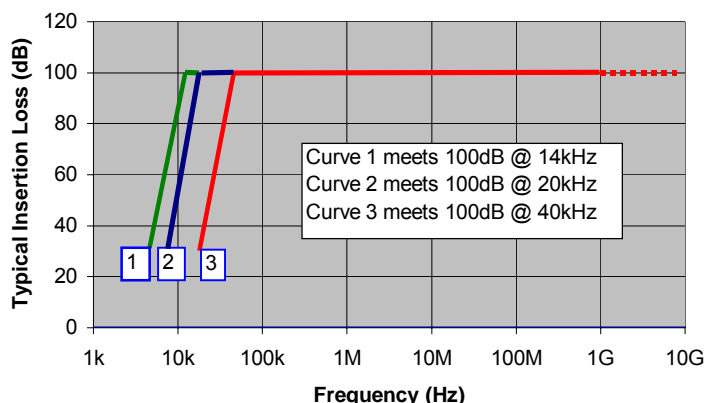
This range of capacitors is identical to the DS23778 – DS25796 range shown in previous catalogues

| Part Number | Current Rating (A) @50°C | No of Lines | Insertion Loss Curve | Maximum Leakage Current (mA) @ 250V 50Hz | DC Volt Drop per line (V) | Full Load Heat Dissipation per line (W) | Major Dimensions (see page 4 for full dimensions) | | | Weight (kg) |
|-------------|--------------------------|-------------|----------------------|--|---------------------------|---|---|---------|---------|-------------|
| | | | | | | | Length A | Width B | Depth C | |
| CF23778 | 1 | 2 | 1 | 285 | 2.7 | 2.7 | 350 | 90 | 45 | 2.5 |
| CF25791 | 2 | 2 | 2 | 285 | 1.3 | 2.6 | 350 | 90 | 45 | 2.5 |
| CF25260 | 5 | 2 | 3 | 285 | 1 | 5 | 350 | 90 | 45 | 2.5 |
| CF25794 | 10 | 2 | 4 | 285 | 0.7 | 7 | 350 | 90 | 45 | 2.5 |
| CF25263 | 1 | 4 | 1 | 285 | 2.7 | 2.7 | 350 | 180 | 45 | 5 |
| CF25792 | 2 | 4 | 2 | 285 | 1.3 | 2.6 | 350 | 180 | 45 | 5 |
| CF25261 | 5 | 4 | 3 | 285 | 1 | 5 | 350 | 180 | 45 | 5 |
| CF25795 | 10 | 4 | 4 | 285 | 0.7 | 7 | 350 | 180 | 45 | 5 |
| CF25264 | 1 | 8 | 1 | 285 | 2.7 | 2.7 | 350 | 360 | 45 | 10 |
| CF25793 | 2 | 8 | 2 | 285 | 1.3 | 2.6 | 350 | 360 | 45 | 10 |
| CF25262 | 5 | 8 | 3 | 285 | 1 | 5 | 350 | 360 | 45 | 10 |
| CF25796 | 10 | 8 | 4 | 285 | 0.7 | 7 | 350 | 360 | 45 | 10 |

MULTI-LINE DC CONTROL LINE FILTERS



www.mpe.co.uk



Description

A range of multi-line filters suitable for filtering dc control lines and low current dc supplies on shielded rooms and general installations. All versions are available with transient suppression (see page 4).

Features

- 100V dc with 1A - 10A current ratings
- 2, 4, or 8 individually filtered lines
- Incorporate MPE self-healing feedthrough capacitors

Ratings And Characteristics

| | |
|---------------------------------------|---|
| Rated Voltage | 100V dc |
| Test Voltage | 200V dc (prior to fitting any transient suppressors) |
| Insulation Resistance | > 100MΩ |
| Maximum Temperature Rise on Full Load | 25°C |
| Full Load Operating Temperature Range | -25°C to +50°C |

Product Range

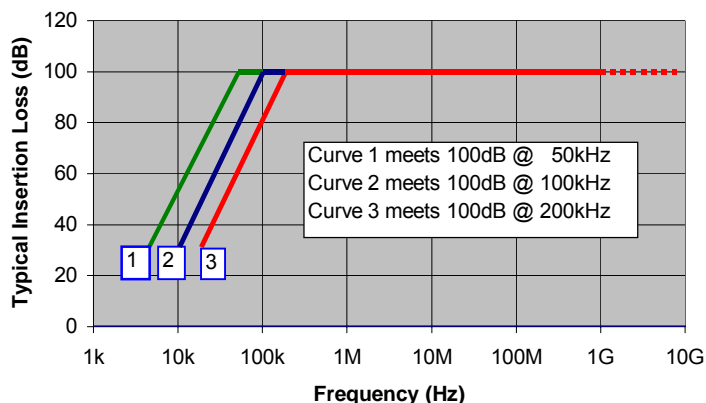
This range of capacitors is identical to the DS25797 – DS25790 range shown in previous catalogues

| Part Number | Current Rating (A) @50°C | No of Lines | Insertion Loss Curve | DC Volt Drop per line (V) | Full Load Heat Dissipation per line (W) | Major Dimensions (see page 4 for full dimensions) | | | Weight (kg) |
|-------------|--------------------------|-------------|----------------------|---------------------------|---|---|---------|---------|-------------|
| | | | | | | Length A | Width B | Depth C | |
| CF25797 | 1 | 2 | 1 | 0.25 | 0.25 | 350 | 90 | 45 | 2.5 |
| CF23776 | 2 | 2 | 1 | 0.5 | 1 | 350 | 90 | 45 | 2.5 |
| CF25269 | 5 | 2 | 2 | 1 | 5 | 350 | 90 | 45 | 2.5 |
| CF25788 | 10 | 2 | 3 | 0.7 | 7 | 350 | 90 | 45 | 2.5 |
| CF25798 | 1 | 4 | 1 | 0.5 | 0.5 | 350 | 180 | 45 | 5 |
| CF23985 | 2 | 4 | 1 | 0.5 | 1 | 350 | 180 | 45 | 5 |
| CF25270 | 5 | 4 | 2 | 1 | 5 | 350 | 180 | 45 | 5 |
| CF25789 | 10 | 4 | 3 | 0.7 | 7 | 350 | 180 | 45 | 5 |
| CF25799 | 1 | 8 | 1 | 0.5 | 0.5 | 350 | 360 | 45 | 10 |
| CF23986 | 2 | 8 | 1 | 0.5 | 1 | 350 | 360 | 45 | 10 |
| CF25271 | 5 | 8 | 2 | 1 | 5 | 350 | 360 | 45 | 10 |
| CF25790 | 10 | 8 | 3 | 0.7 | 7 | 350 | 360 | 45 | 10 |

SINGLE LINE DC CONTROL LINE FILTERS



www.mpe.co.uk



Description

A range of single-line dc feedthrough filters for control lines and low current dc power lines.

Features

- 28V dc at 1, 6, and 10A current ratings
- High performance in a small package size
- Incorporate MPE self healing feedthrough capacitors

Ratings And Characteristics

| | |
|---------------------------------------|----------------|
| Rated Voltage | 28V dc |
| Test Voltage | 100V dc |
| Insulation Resistance | > 100MΩ |
| Maximum Temperature Rise on Full Load | 25°C |
| Full Load Operating Temperature Range | -40°C to +50°C |

Product Range

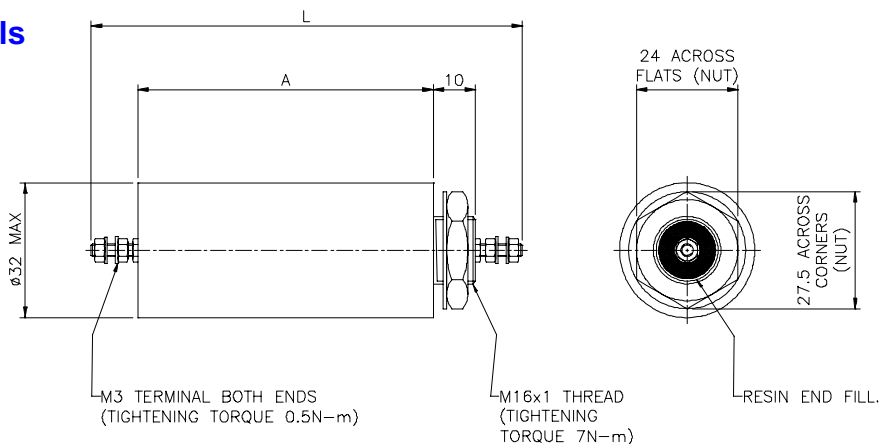
| Part Number | Current Rating (A) @50°C | Insertion Loss Curve | Volt Drop (mV) | Full Load Heat Dissipation (mW) | Dimensions (mm) | | Weight (g) |
|-------------|--------------------------|----------------------|----------------|---------------------------------|-----------------|-----------|------------|
| | | | | | Length A | Overall L | |
| DS23540 | 1 | 1 | 150 | 150 | 70 | 102 | 180 |
| DS23541 | 6 | 2 | 75 | 450 | 90 | 122 | 240 |
| DS23489 | 10 | 3 | 90 | 900 | 70 | 102 | 180 |

Dimensions & Mechanical Details

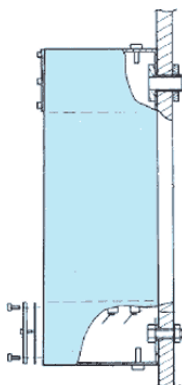
Dimensions in mm

Mounting hole size 16.5mm

(Ensure bulkhead mounting surface is clean and unpainted to ensure a good earth bond and RF seal)



Installation Details



Typical Installation of Multi-Line Filters

Mounting surface should be clean and unpainted to ensure a good earth bond and RF seal
Fixing screws and gland tubes can be supplied as an option

Recommended torque figures:

| | |
|--------------------|--------|
| M3 terminals: | 0.5N-m |
| M4 earth screw: | 1.2N-m |
| M4 lid fixings: | 1N-m |
| M6 mounting screw: | 2.5N-m |

Safety

Relevant safety standards have been adhered to in the design and manufacture of these products. However, all capacitors will store charge after power has been removed and must be treated with respect as this can be lethal when the voltage and charge are high enough.

In all cases, filters should always be shorted to earth prior to touching terminals to ensure they are fully discharged. The user should ensure he is familiar with restrictions on capacitance value, earth leakage current, test voltage, and safety labelling requirements, which may be applicable to his particular installation.

Filters must be solidly and permanently earthed, and terminals should be enclosed by the user where appropriate to avoid danger of electric shock.

Custom Designs

MPE offers a rapid design service for custom designs where special packaging, mounting, terminations, or multiple lines are required. Over 50% of the filters manufactured by MPE are custom designs and this can offer a very cost effective installation solution. Please ask to see examples of previously offered solutions.

Further Information

For more detailed technical background information, and application notes concerning the use or compatibility of control line filters, please visit our web site or contact the factory.

Filter Selection Guide

