

# Chassis Mount Filters

## F.BK-F.BR-F.BS series

### Single phase – Multi-stage

A comprehensive family of multi-stage filters with general, high and very high performance characteristics across the frequency spectrum. Throughout each compact range, the various styles of metal enclosure offer a choice of termination styles and have medical options available.

Designed to provide cost effective solutions for a wide range of applications where space is limited but high performance is required.

- Current ratings from 1A to 30A
- Multi-stage, general, high and very high performance designs
- Good low and high frequency performance
- Optional termination styles
- Medical versions available



### Mechanical Specifications

Manufacture: metal case and cover, internal components sealed with self-extinguishing resin.

Connections: faston 6.3 x 0.8 mm (< 16A), flexible leads, screws M4; ground terminal connected to case.

### General Performance Multi-stage Filter Range – F.BK

| Code            | I <sub>R</sub><br>(A) | L <sub>1</sub><br>(mH) | L <sub>2</sub><br>(mH) | C <sub>x</sub><br>(μF) | C <sub>y</sub><br>(pF) | I <sub>L</sub><br>(mA) | R<br>(MΩ) | Case | Circ<br>Diag |
|-----------------|-----------------------|------------------------|------------------------|------------------------|------------------------|------------------------|-----------|------|--------------|
| F.BK.D-.3940.ZG | 10                    | 2x0.8                  | 2x0.8                  | 2x0.47                 | 2x4700                 | 2x0.43                 | 0.47      | C1   | A            |
| F.BK.D-.3940.ZH | 12                    | 2x0.58                 | 2x0.58                 | 2x0.47                 | 2x4700                 | 2x0.43                 | 0.47      | C1   | A            |
| F.BK.D-.3660.ZJ | 16                    | 2x0.65                 | 2x0.65                 | 2x0.33                 | 2x4700                 | 2x0.43                 | 1         | C2   | A            |
| F.BK.D-.4200.ZK | 20                    | 2x0.6                  | 2x0.6                  | 2x1                    | 2x4700                 | 2x0.43                 | 0.22      | G*   | A            |
| F.BK.D-.4200.ZM | 30                    | 2x0.6                  | 2x0.6                  | 2x1                    | 2x10000                | 2x0.91                 | 0.22      | J*   | A            |

### High Performance Multi-stage Filter Range – F.BR

| Code            | I <sub>R</sub><br>(A) | L <sub>1</sub><br>(mH) | L <sub>2</sub><br>(mH) | C <sub>x</sub><br>(μF) | C <sub>y</sub><br>(pF) | I <sub>L</sub><br>(mA) | R<br>(MΩ) | Case | Circ<br>Diag |
|-----------------|-----------------------|------------------------|------------------------|------------------------|------------------------|------------------------|-----------|------|--------------|
| F.BR.D-.3660.ZB | 1                     | 2x22                   | 2x22                   | 2x0.33                 | 2x4700                 | 2x0.43                 | 1         | C1   | A            |
| F.BR.D-.3940.ZD | 3                     | 2x9.8                  | 2x9.8                  | 2x0.47                 | 2x4700                 | 2x0.43                 | 0.47      | C2   | A            |
| F.BR.D-.4200.ZF | 6                     | 2x7.8                  | 2x7.8                  | 2x1                    | 2x4700                 | 2x0.43                 | 0.22      | G*   | A            |
| F.BR.D-.4200.ZG | 10                    | 2x4.5                  | 2x4.5                  | 2x1                    | 2x4700                 | 2x0.43                 | 0.22      | H*   | A            |
| F.BR.D-.4200.ZH | 12                    | 2x3.25                 | 2x3.25                 | 2x1                    | 2x4700                 | 2x0.43                 | 0.22      | H*   | A            |
| F.BR.D-.4200.ZJ | 16                    | 2x2.8                  | 2x2.8                  | 2x1                    | 2x4700                 | 2x0.43                 | 0.22      | J*   | A            |

### Very High Performance Multi-stage Filter Range – F.BS

| Code            | I <sub>R</sub><br>(A) | L <sub>1</sub><br>(mH) | L <sub>2</sub><br>(mH) | C <sub>x</sub><br>(μF) | C <sub>y</sub><br>(pF) | I <sub>L</sub><br>(mA) | R<br>(MΩ) | Case | Circ<br>Diag |
|-----------------|-----------------------|------------------------|------------------------|------------------------|------------------------|------------------------|-----------|------|--------------|
| F.BS.D-.3660.ZB | 1                     | 2x22                   | 2x0.5                  | 2x0.33                 | 4700                   | 2x0.43                 | 1         | C1   | B            |
| F.BS.D-.3940.ZD | 3                     | 2x9.8                  | 2x0.16                 | 2x0.47                 | 4700                   | 2x0.43                 | 0.47      | C2   | B            |
| F.BS.D-.4200.ZF | 6                     | 2x7.8                  | 2x0.11                 | 2x1                    | 4700                   | 2x0.43                 | 0.22      | G*   | B            |
| F.BS.D-.4200.ZG | 10                    | 2x4.5                  | 2x0.06                 | 2x1                    | 4700                   | 2x0.43                 | 0.22      | H*   | B            |
| F.BS.D-.4200.ZH | 12                    | 2x3.25                 | 2x0.05                 | 2x1                    | 4700                   | 2x0.43                 | 0.22      | H*   | B            |
| F.BS.D-.4200.ZJ | 16                    | 2x2.8                  | 2x0.043                | 2x1                    | 4700                   | 2x0.43                 | 0.22      | J*   | B            |

D = Flexible leads  
B = Faston 6.3x0.8 mm  
I = Screws M4

\* Available in low cost option, case 'D' as illustrated on page 34.  
Part No ends with .010 eg F.BS.DB4200ZJ.010

### Electrical Specifications

Rated voltage (V<sub>R</sub>): max 250V, 50/60Hz

Rated current (I<sub>R</sub>): referred to room temperature = 40°C

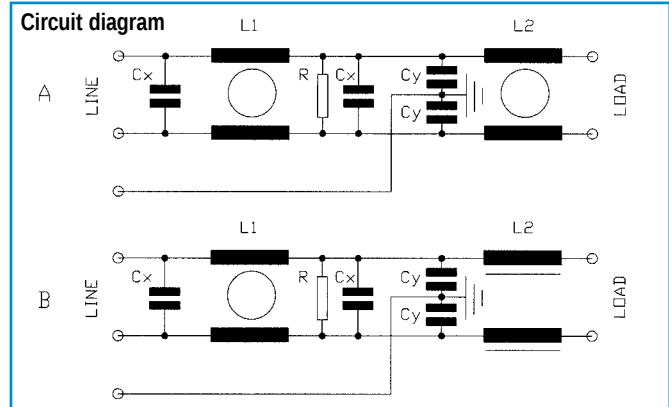
Leakage current (I<sub>L</sub>): at 220V 50Hz, max value

Voltage test (2s.): line to ground 3000Vdc or 1800Vac  
line to line 1700Vdc

Climatic category: HPF (25/085/21);

Temperature range: -25°C to +85°C

### Circuit diagram

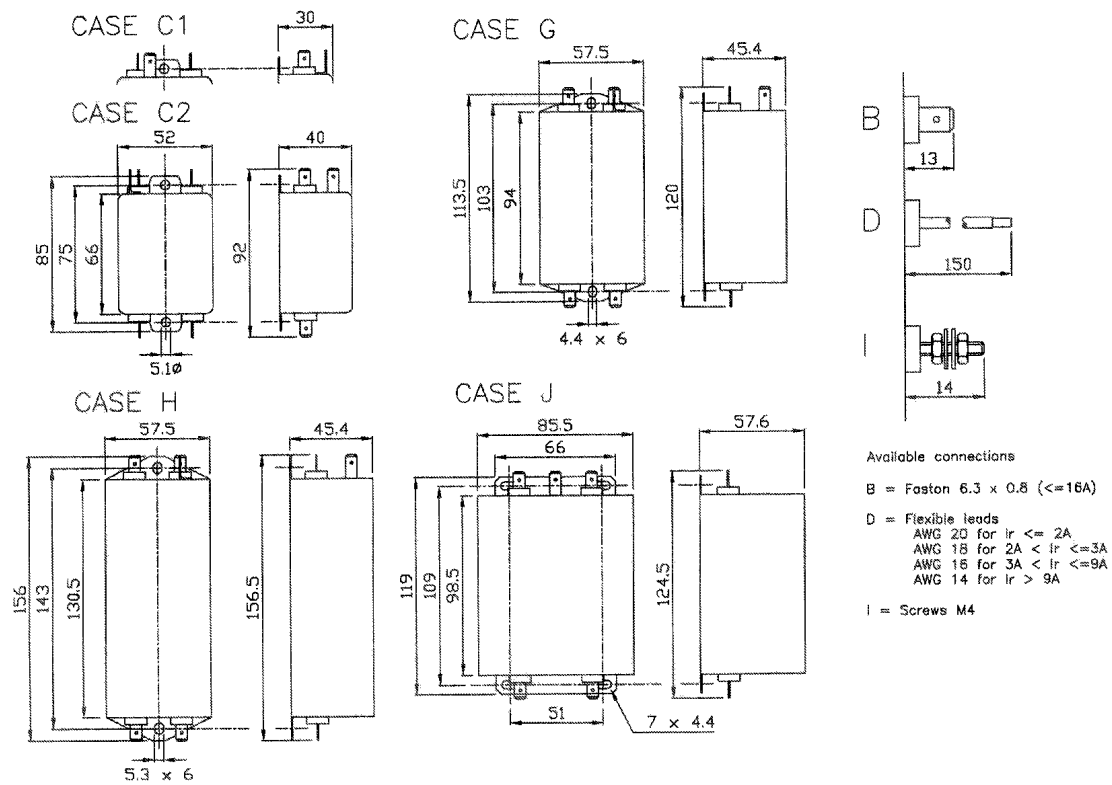


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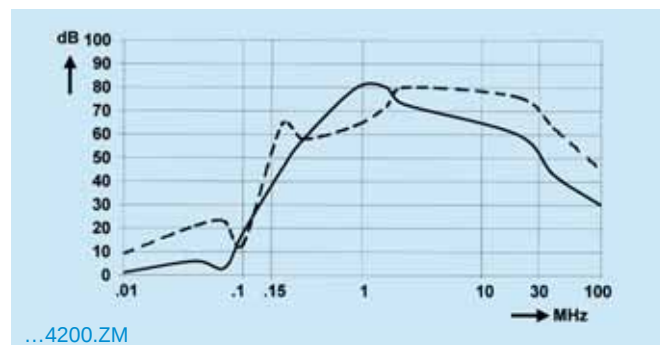
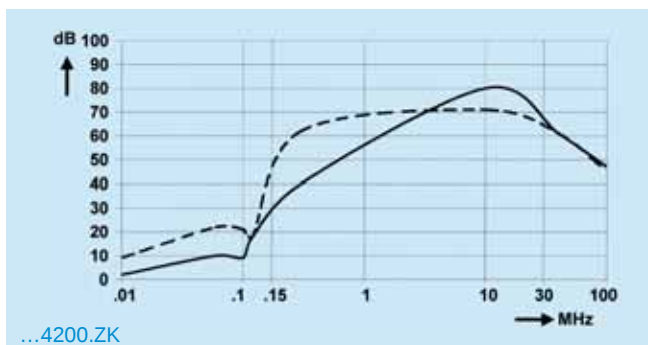
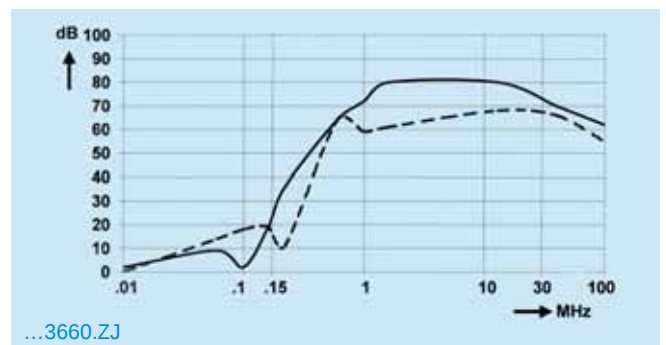
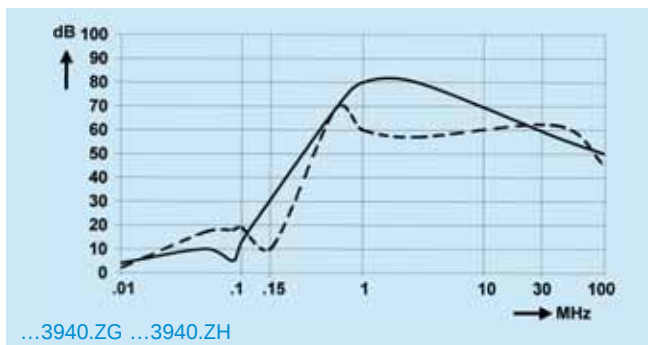
## F.BK-F.BR-F.BS series

Insertion loss (typical): — Asymmetrical (line to ground) - - - Symmetrical (line to line)

### Dimensions (mm) and connections

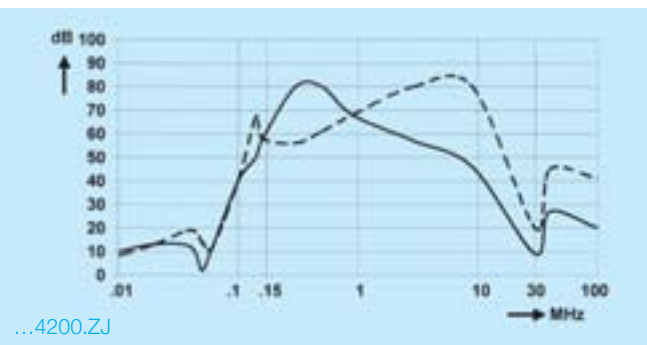
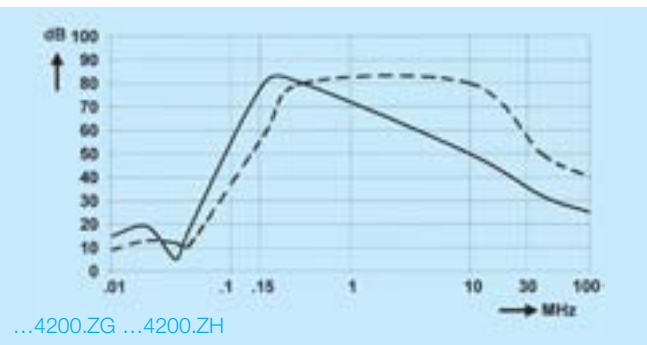
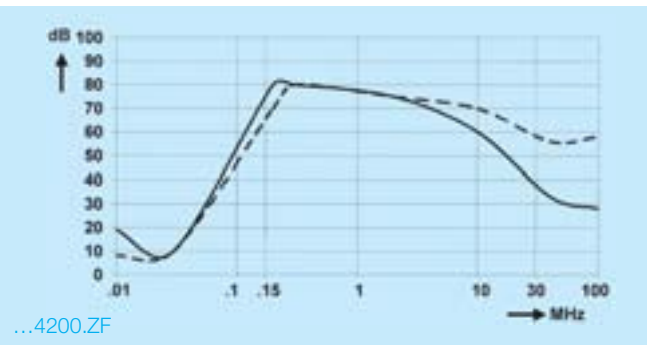
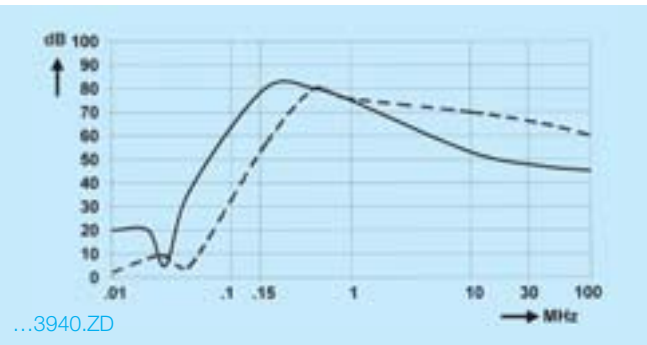
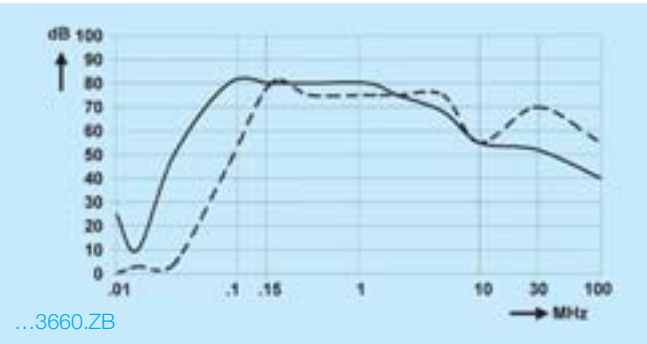


## F.BK



Insertion loss (typical): — Asymmetrical (line to ground)    - - - Symmetrical (line to line)

F.BR



F.BS

