

## High Performance Power Line Filter for Medical Applications

# HZ Series



UL Recognized  
CSA Certified  
VDE Approved



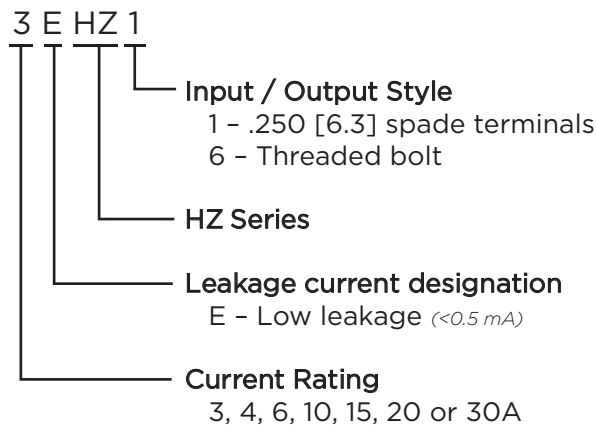
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RFI Power Line Filters

## HZ Series

- Designed to provide good attenuation to RFI noise in the frequency range from 10kHz to 30MHz
- Size and cost-effective
- Low leakage current
- New versions up to 30A

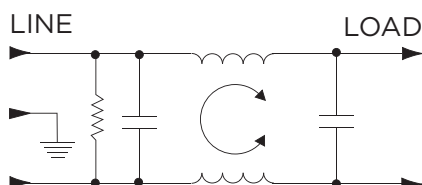
## Ordering Information



## Available Part Numbers

|        |        |
|--------|--------|
| 3EHZ1  | 4EHZ1  |
| 6EHZ1  | 10EHZ1 |
| 15EHZ1 | 20EHZ1 |
| 30EHZ6 |        |

## Electrical Schematic



## Specifications

### Maximum leakage current each Line to Ground:

|                  |                 |
|------------------|-----------------|
| @ 120 VAC 60 Hz: | 2 $\mu\text{A}$ |
| @ 250 VAC 50 Hz: | 5 $\mu\text{A}$ |

### Hipot rating (one minute):

|                 |          |
|-----------------|----------|
| Line to Ground: | 2250 VDC |
| Line to Line:   | 1450 VDC |

### Rated Voltage (max):

250 VAC

### Operating Frequency:

50/60 Hz

### Rated Current:

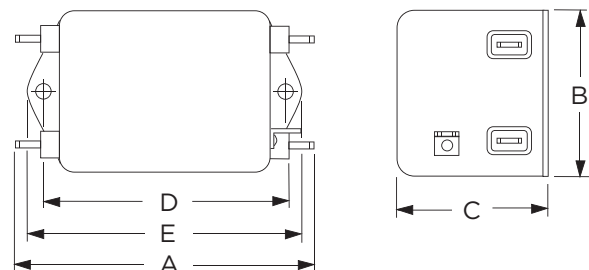
3 to 30A

### Operating Ambient Temperature Range

(at rated current  $I_r$ ): -10°C to +40°C  
In an ambient temperature ( $T_a$ ) higher than +40°C the maximum operating current ( $I_o$ ) is calculated as follows:  $I_o = I_r \sqrt{(85-T_a)/45}$

## Case Styles

### 3EHZ1



### Typical Dimensions:

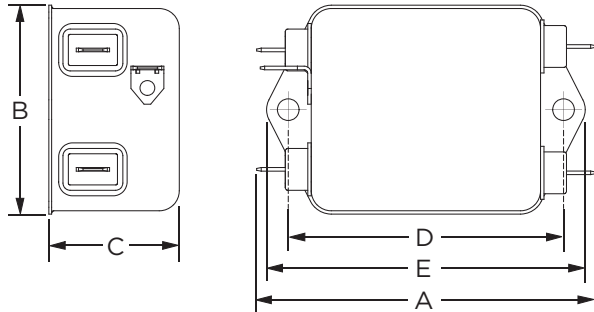
|                          |                                            |
|--------------------------|--------------------------------------------|
| Line/Load Terminals (4): | .250 [6.3] with .07 [1.8] Dia. hole        |
| Ground Terminal (1):     | .250 [6.3] with .07 x .16 [1.8 x 3.8] slot |
| Mounting Holes (2):      | .188 [4.78] Dia.                           |

## High Performance Power Line Filter for Medical Applications *(continued)*

# HZ Series

## Case Styles *(continued)*

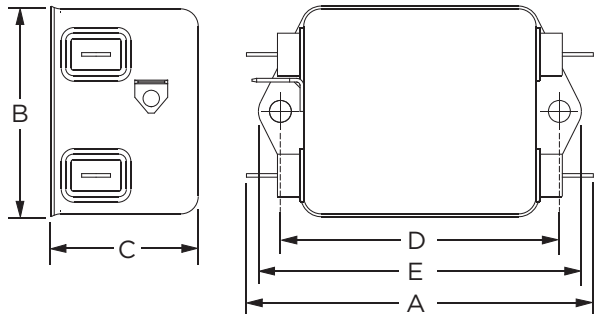
### 4EHZ1



Typical Dimensions:

Line/Load Terminals (4): .250 [6.3] with .07 [1.8] Dia. hole  
Ground Terminal (1): .250 [6.3] with .07 x .16 [1.8 x 3.8] slot  
Mounting Holes (2): .188 [4.78] Dia.

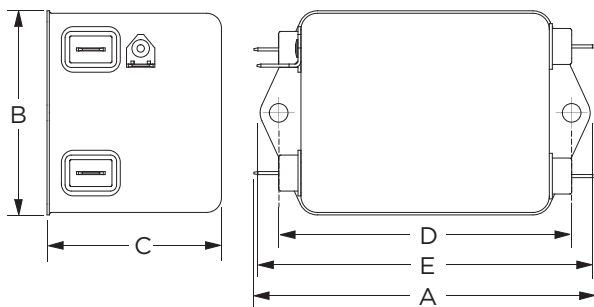
### 6EHZ1



Typical Dimensions:

Line/Load Terminals (4): .250 [6.3] with .07 [1.8] Dia. hole  
Ground Terminal (1): .250 [6.3] with .07 x .16 [1.8 x 3.8] slot  
Mounting Holes (2): .188 [4.78] Dia.

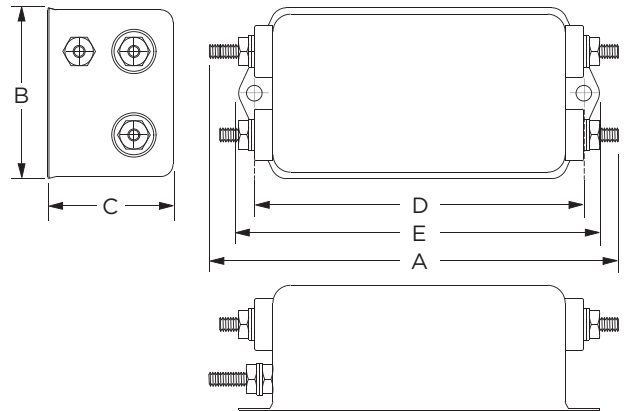
### 10, 15 & 20EHZ1



Typical Dimensions:

Line/Load Terminals (4): .250 [6.3] with .07 [1.8] Dia. hole  
Ground Terminal (1): .250 [6.3] with .07 x .16 [1.8 x 3.8] slot  
Mounting Holes (2): .188 [4.78] Dia.

### 30EHZ6



Typical Dimensions:

Terminals (5): 8-32, Torque 18 lbf-in. [2.03 N-m] max.  $\pm 2$  [2.2]  
Mounting Holes (4): .188 [4.75] Dia.

## Case Dimensions

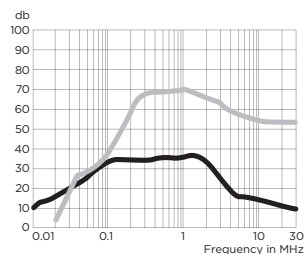
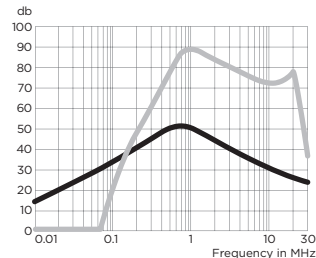
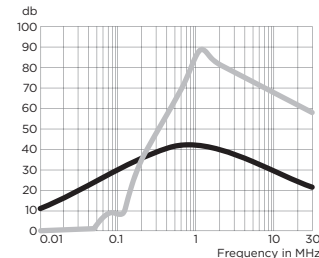
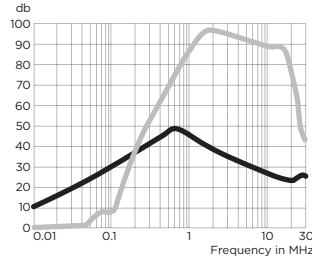
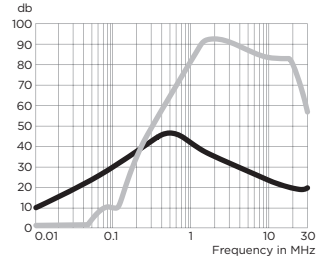
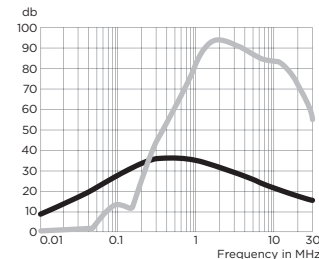
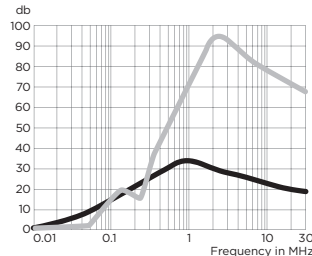
| Part No.                   | A<br>(max)            | B<br>(max)            | C<br>(max)            | D<br>$\pm .015$<br>$\pm .38$ | E<br>(max)            |
|----------------------------|-----------------------|-----------------------|-----------------------|------------------------------|-----------------------|
| 3EHZ1                      | <b>3.54</b><br>89.91  | <b>2.08</b><br>52.8   | <b>1.31</b><br>33.3   | <b>2.938</b><br>74.63        | <b>3.35</b><br>85.1   |
| 4EHZ1                      | <b>3.07</b><br>77.98  | <b>1.82</b><br>46.23  | <b>1.16</b><br>29.46  | <b>2.375</b><br>60.33        | <b>2.78</b><br>70.61  |
| 6EHZ1                      | <b>3.07</b><br>77.98  | <b>1.82</b><br>46.23  | <b>1.28</b><br>32.51  | <b>2.375</b><br>60.33        | <b>2.78</b><br>70.61  |
| 10EHZ1<br>15EHZ1<br>20EHZ1 | <b>3.54</b><br>89.92  | <b>2.047</b><br>51.99 | <b>1.805</b><br>45.85 | <b>2.938</b><br>74.63        | <b>3.54</b><br>89.92  |
| 30EHZ6                     | <b>4.92</b><br>124.97 | <b>2.07</b><br>52.58  | <b>1.53</b><br>38.86  | <b>3.947</b><br>100.25       | <b>4.33</b><br>109.98 |

## High Performance Power Line Filter for Medical Applications *(continued)*

### Performance Data

#### Typical Insertion Loss

Measured in closed 50 Ohm system

**3EHZ1**

**4EHZ1**

**6EHZ1**

**10EHZ1**

**15EHZ1**

**20EHZ1**

**30EHZ6**


— Common Mode / Asymmetrical (L-G)  
— Differential Mode / Symmetrical (L-L)

#### Minimum Insertion Loss

Common Mode / Asymmetrical (Line to Ground)

| Part No. | Frequency – MHz |     |    |     |    |    |    |    |    |
|----------|-----------------|-----|----|-----|----|----|----|----|----|
|          | .01             | .05 | .1 | .15 | .5 | 1  | 5  | 10 | 30 |
| 3EHZ1    | 10              | 24  | 30 | 34  | 34 | 35 | 15 | 10 | 5  |
| 4EHZ1    | 12              | 24  | 31 | 35  | 47 | 47 | 30 | 25 | 18 |
| 6EHZ1    | 9               | 21  | 27 | 30  | 36 | 34 | 27 | 22 | 16 |
| 10EHZ1   | 7               | 21  | 25 | 31  | 43 | 40 | 26 | 21 | 14 |
| 15EHZ1   | 7               | 27  | 27 | 30  | 43 | 37 | 24 | 17 | 12 |
| 20EHZ1   | 5               | 19  | 24 | 28  | 31 | 29 | 14 | 9  | 4  |
| 30EHZ6   | -               | 5   | 11 | 14  | 27 | 30 | 20 | 17 | 14 |

Differential Mode / Symmetrical (Line to Line)

| Part No. | Frequency – MHz |     |    |     |    |    |    |    |    |
|----------|-----------------|-----|----|-----|----|----|----|----|----|
|          | .01             | .05 | .1 | .15 | .5 | 1  | 5  | 10 | 30 |
| 3EHZ1    | 10              | 25  | 30 | 54  | 70 | 70 | 65 | 55 | 55 |
| 4EHZ1    | -               | -   | 14 | 32  | 72 | 83 | 68 | 63 | 30 |
| 6EHZ1    | -               | -   | 7  | 17  | 59 | 80 | 67 | 60 | 52 |
| 10EHZ1   | -               | -   | 4  | 21  | 63 | 80 | 80 | 74 | 36 |
| 15EHZ1   | -               | -   | 7  | 15  | 51 | 77 | 80 | 74 | 48 |
| 20EHZ1   | -               | -   | 11 | 9   | 54 | 77 | 74 | 69 | 47 |
| 30EHZ6   | -               | -   | 13 | 14  | 47 | 67 | 76 | 70 | 58 |