

High Performance Compact RFI Power Line Filters with IEC Connectors

# EC Series



**UL Recognized**  
**CSA Certified**  
**VDE Approved**

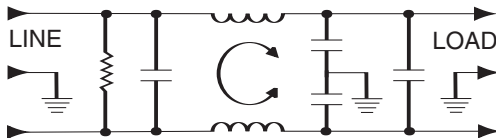


## EC Series

The EC series RFI power line filters provide the highest attenuation of any standard filter available in a package size limited by the dimensions of the integral IEC connector. These filters combine high common-mode inductance with high differential-mode capacitance and minimal parasitic elements, for effective attenuation of line-to-ground and line-to-line noise across the frequency range.

Performance and applications are similar to those of the ED series, but with higher differential-mode performance in most applications, due to an additional capacitor on the load side.

## Electrical Schematic



Resistor location for reference only.

## Specifications

### Maximum leakage current, each line-to-ground

|                  |        |
|------------------|--------|
| @ 120 VAC 60 Hz: | .22 mA |
| @ 250 VAC 50 Hz: | .38 mA |

### Hipot rating (one minute):

|                |          |
|----------------|----------|
| line-to-ground | 1500 VAC |
| line-to-line   | 1450 VDC |

### Operating frequency:

50/60 Hz

### Rated voltage (max.):

250 VAC

### Minimum insertion loss in dB:

Line-to-ground in 50 ohm circuit

| Current Rating | Frequency-MHz |    |    |    |    |    |
|----------------|---------------|----|----|----|----|----|
|                | .15           | .5 | 1  | 5  | 10 | 30 |
| 1A             | 25            | 35 | 40 | 50 | 50 | 50 |
| 3A             | 20            | 30 | 37 | 47 | 48 | 50 |
| 6A             | 15            | 22 | 25 | 40 | 45 | 50 |
| 10A            | 7             | 14 | 20 | 35 | 39 | 48 |

Line-to-line in 50 ohm circuit

| Current Rating | Frequency-MHz |    |    |    |    |    |    |
|----------------|---------------|----|----|----|----|----|----|
|                | .15           | .5 | 1  | 5  | 10 | 20 | 30 |
| EC1, EC2, EC8  |               |    |    |    |    |    |    |
| 1A             | 5             | 35 | 50 | 60 | 60 | 40 | 40 |
| 3A             | 5             | 25 | 45 | 60 | 55 | 34 | 34 |
| 6A             | 10            | 10 | 40 | 65 | 60 | 40 | 40 |
| 10A            | 10            | 10 | 27 | 65 | 56 | 38 | 38 |

### EC4

|    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|
| 1A | 5  | 35 | 50 | 60 | 60 | 33 | 33 |
| 3A | 5  | 30 | 45 | 60 | 55 | 34 | 34 |
| 6A | 10 | 10 | 40 | 65 | 60 | 33 | 33 |

## Line Cord

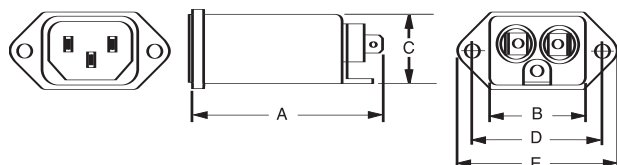
Line Cord No. GA400:

7 1/2 foot, 3-conductor line cord to mate with EC series.

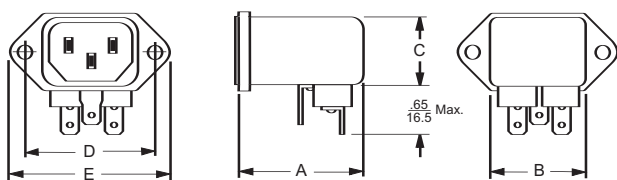
# EC Series

## Case Styles

### EC1



### EC2

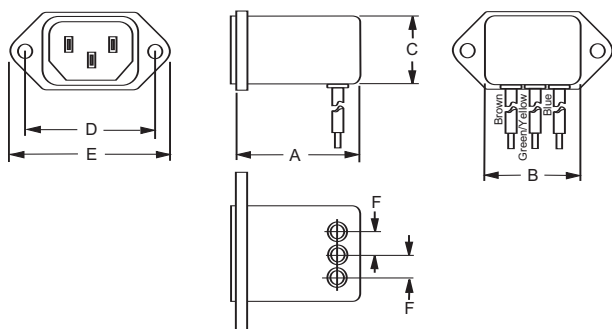


Typical dimensions:

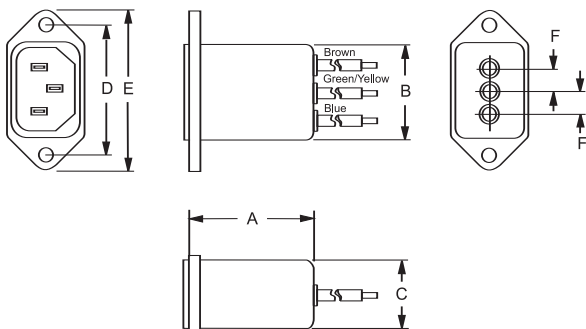
Terminals: .250 [6.35] (3)  
Slot: .07 x .16 [1.8 x 4.1]

Holes: .07 [1.8] Dia. (2)

### EC4



### EC8



Typical dimensions:

Wire Leads: 4.0 [101.6] Min. 18 AWG

Mounting holes: .132 [3.35] Dia. (2)

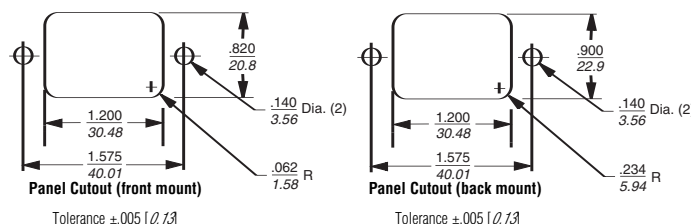
## Case Dimensions

| Part No. | A<br>(max)   | B<br>(max)   | C<br>(max)   | D<br>$\pm .015$<br>$\pm .38$ | E<br>(max)   | F<br>(ref)  |
|----------|--------------|--------------|--------------|------------------------------|--------------|-------------|
| 1EC1     | 2.62<br>66.5 | 1.19<br>30.2 | 0.81<br>20.6 | 1.575<br>40.01               | 1.98<br>50.3 | —           |
| 1EC2     | 1.97<br>50.0 | 1.19<br>30.2 | 0.85<br>21.6 | 1.575<br>40.01               | 1.98<br>50.3 | —           |
| 1EC4     | 1.97<br>50.0 | 1.19<br>30.2 | 0.85<br>21.6 | 1.575<br>40.01               | 1.98<br>50.3 | .295<br>7.5 |
| 1EC8     | 1.98<br>50.3 | 1.19<br>30.2 | 0.81<br>20.6 | 1.575<br>40.01               | 1.98<br>50.3 | .295<br>7.5 |
| 3EC1     | 2.62<br>66.5 | 1.19<br>30.2 | 0.81<br>20.6 | 1.575<br>40.01               | 1.98<br>50.3 | —           |
| 3EC2     | 1.97<br>50.0 | 1.19<br>30.2 | 0.85<br>21.6 | 1.575<br>40.01               | 1.98<br>50.3 | —           |
| 3EC4     | 1.97<br>50.0 | 1.19<br>30.2 | 0.85<br>21.6 | 1.575<br>40.01               | 1.98<br>50.3 | .295<br>7.5 |
| 3EC8     | 1.98<br>50.3 | 1.19<br>30.2 | 0.81<br>20.6 | 1.575<br>40.01               | 1.98<br>50.3 | .295<br>7.5 |
| 6EC1     | 2.62<br>66.5 | 1.19<br>30.2 | 0.81<br>20.6 | 1.575<br>40.01               | 1.98<br>50.3 | —           |
| 6EC2     | 1.97<br>50.0 | 1.19<br>30.2 | 0.85<br>21.6 | 1.575<br>40.01               | 1.98<br>50.3 | —           |
| 6EC4     | 1.97<br>50.0 | 1.19<br>30.2 | 0.85<br>21.6 | 1.575<br>40.01               | 1.98<br>50.3 | .295<br>7.5 |
| 6EC8     | 1.98<br>50.3 | 1.19<br>30.2 | 0.81<br>20.6 | 1.575<br>40.01               | 1.98<br>50.3 | .295<br>7.5 |
| 10EC1    | 2.62<br>66.5 | 1.19<br>30.2 | 0.81<br>20.6 | 1.575<br>40.01               | 1.98<br>50.3 | —           |

## Part Numbers

|                     |       |
|---------------------|-------|
| 1EC1                | 6EC1  |
| 1EC2                | 6EC2  |
| 1EC4                | 6EC4  |
| 1EC8                | 6EC8  |
| 3EC1                | 10EC1 |
| 3EC2                |       |
| 3EC4                |       |
| 3EC8                |       |
| Line Cord No.       | GA400 |
| Insulating Boot No. | FA601 |

## Recommended Panel Cutouts



Note 1: EC1 and EC8 allow front or back mounting.

Note 2: EC2 and EC4 allow back mounting only.