

High Performance EMI Power Inlet Filter

EC Series



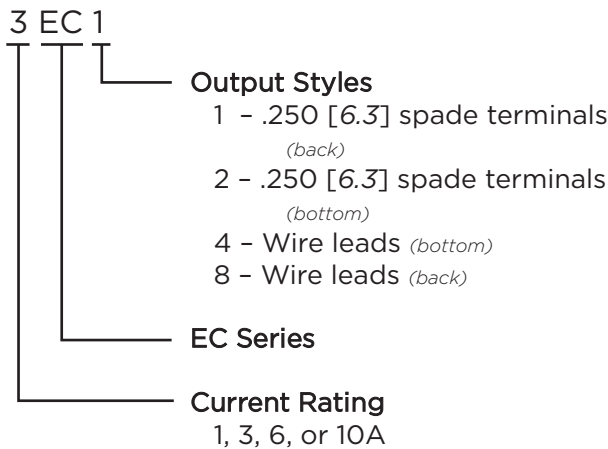
UL Recognized
CSA Certified
VDE Approved



EC Series

- Three element differential mode circuit provides the highest attenuation of any available standard inlet filter
- High common mode inductance
- High differential mode capacitance
- Effective attenuation of Line to Ground and Line to Line noise across the frequency range
- Performance and application similar to the ED series but with higher differential mode performance
- Includes several termination options

Ordering Information



Specifications

Maximum leakage current each Line to Ground:
 @ 120 VAC 60 Hz: .25 mA
 @ 250 VAC 50 Hz: .50 mA

Hipot rating (one minute):
 Line to Ground: 2250 VDC
 Line to Line: 1450 VDC

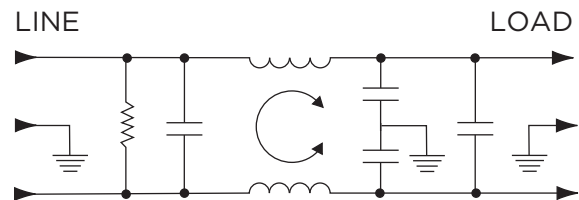
Rated Voltage (max.): 250 VAC

Operating Frequency: 50/60 Hz

Rated Current: 1 to 10A

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: $I_O = I_r \sqrt{(85-T_a)/45}$

Electrical Schematic



Available Part Numbers

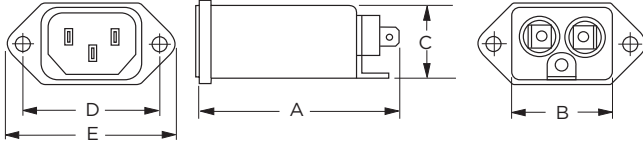
| | | | |
|-------|------|------|------|
| 1EC1 | 1EC2 | 1EC4 | 1EC8 |
| 3EC1 | 3EC2 | 3EC4 | 3EC8 |
| 6EC1 | 6EC2 | 6EC4 | 6EC8 |
| 10EC1 | | | |

High Performance EMI Power Inlet Filter *(continued)*

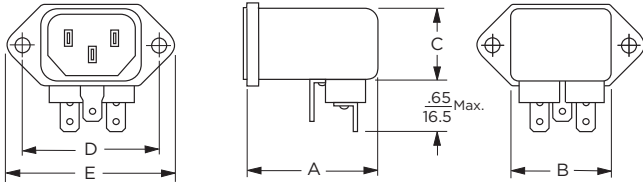
EC Series

Case Styles

EC1



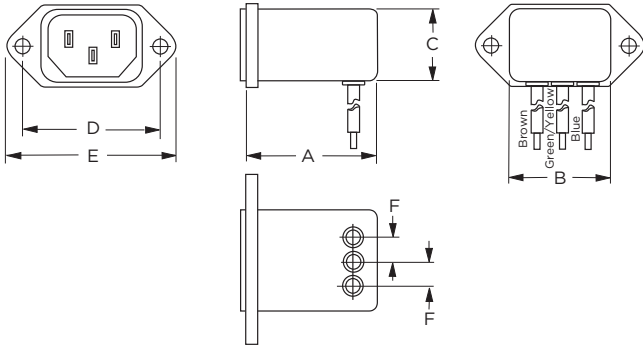
EC2



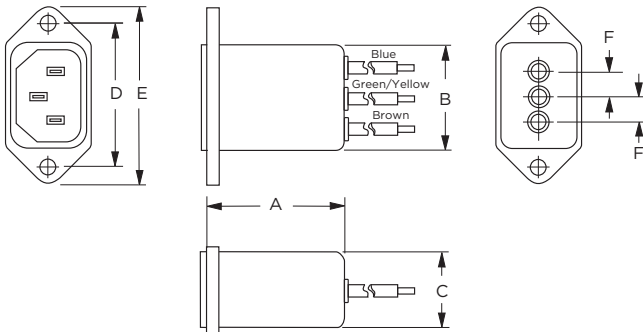
Typical Dimensions:

- Line Inlet (1): IEC 60320-1 C14
- Load Terminals (2): .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

EC4



EC8



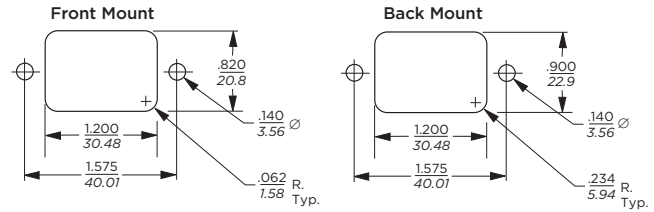
Typical Dimensions:

- Line Inlet (1): IEC 60320-1 C14
- Wire Leads: 4.0 [101.6] Min., 18AWG, UL1015

Case Dimensions

| Part No. | A (max.) | B (max.) | C (max.) | D $\pm .015$ $\pm .38$ | E (max.) | F (ref.) |
|----------|---------------------|---------------------|---------------------|---------------------------|---------------------|--------------------|
| EC1 | 2.62 66.5 | 1.19 30.2 | 0.81 20.6 | 1.575 40.01 | 1.98 50.3 | - |
| EC2 | 1.97 50.0 | 1.19 30.2 | 0.85 21.6 | 1.575 40.01 | 1.98 50.3 | - |
| EC4 | 1.97 50.0 | 1.19 30.2 | 0.85 21.6 | 1.575 40.01 | 1.98 50.3 | .295 7.5 |
| EC8 | 1.98 50.0 | 1.19 30.2 | 0.81 20.6 | 1.575 40.01 | 1.98 50.3 | .298 7.5 |

Recommended Panel Cutouts

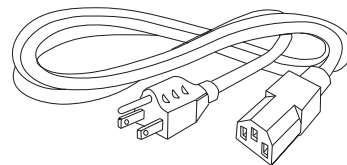


Tolerances $\pm .005$ [0.13] unless otherwise noted

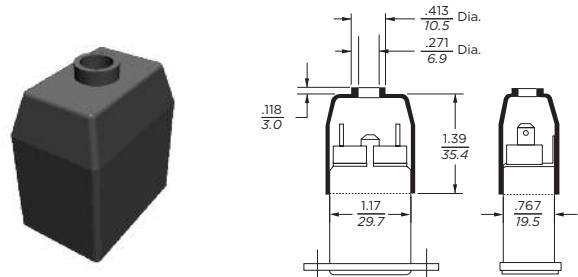
- Note 1: EC1 and EC8 allow for front or back mounting
- Note 2: EC2 and EC4 allow for back mounting only

Accessories

GA400: NEMA 5-15P to IEC 60320-1 C-13 line cord



FA601: Insulating Shroud



High Performance EMI Power Inlet Filter *(continued)*

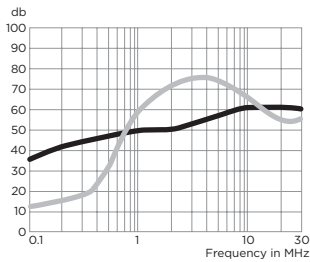
EC Series

Performance Data

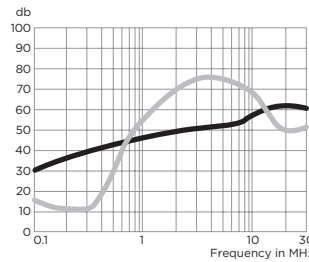
Typical Insertion Loss

Measured in closed 50 Ohm system

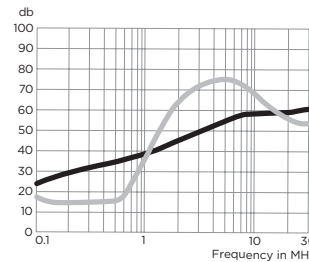
1EC



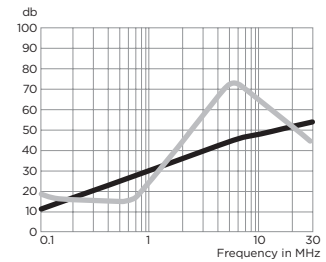
3EC



6EC



10EC



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

Minimum Insertion Loss

Measured in closed 50 Ohm system

Common Mode / Asymmetrical (Line to Ground)

| 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 |

Differential Mode / Symmetrical (Line to Line)

| 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 |