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High Performance EMI Power Inlet Filter

# EC Series



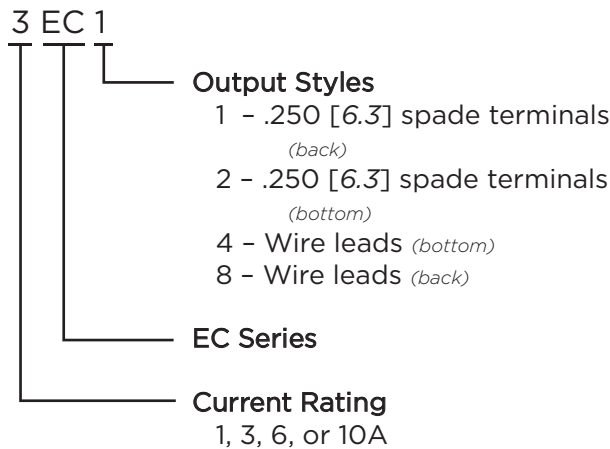
UL Recognized  
CSA Certified  
VDE Approved



## 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

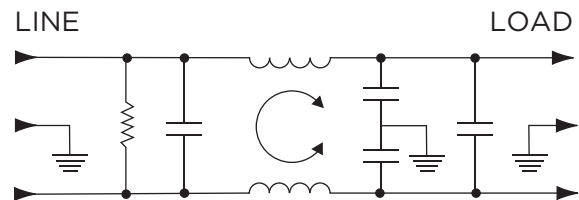
## Ordering Information



## 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<sub>r</sub>):** -10°C to +40°C  
 In an ambient temperature (T<sub>a</sub>) higher than +40°C the maximum operating current (I<sub>O</sub>) is calculated as follows:  $I_O = I_r \sqrt{(85-T_a)/45}$

## Electrical Schematic



## Available Part Numbers

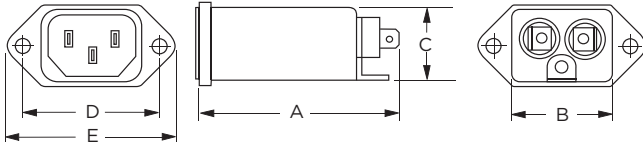
1EC1	1EC2	1EC4	1EC8
3EC1	3EC2	3EC4	3EC8
6EC1	6EC2	6EC4	6EC8
10EC1			

High Performance EMI Power Inlet Filter (continued)

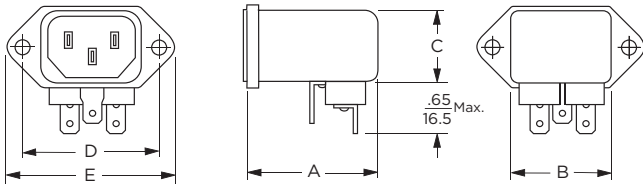
# EC Series

## Case Styles

### EC1



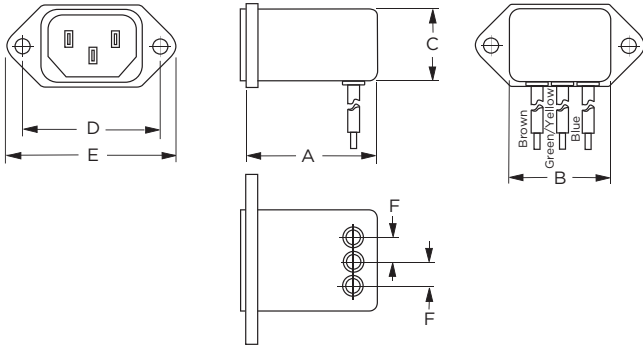
### EC2



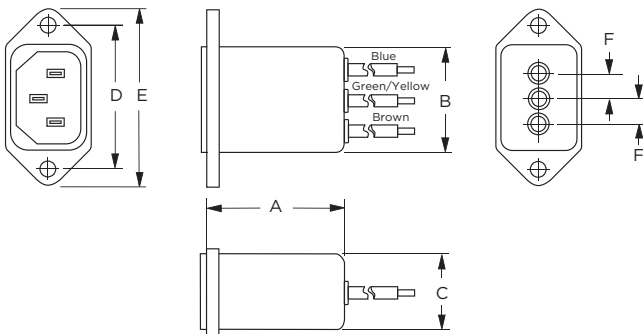
Typical Dimensions:

- 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



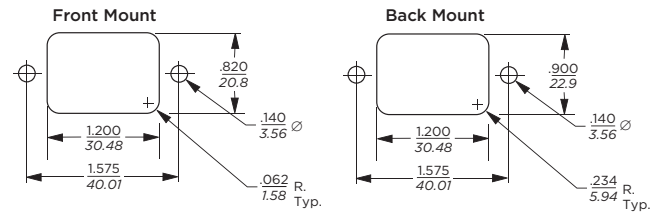
Typical Dimensions:

- 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

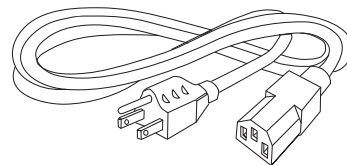


Tolerances  $\pm .005$  [0.13] unless otherwise noted

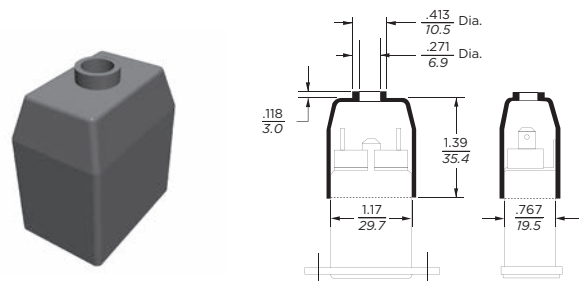
- Note 1: EC1 and EC8 allow for front or back mounting
- Note 2: EC2 and EC4 allow for back mounting only

## Accessories

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



FA601: Insulating Shroud



**High Performance EMI Power Inlet Filter** *(continued)*

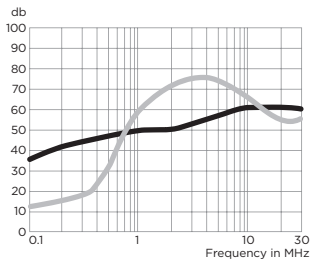
# EC Series

## Performance Data

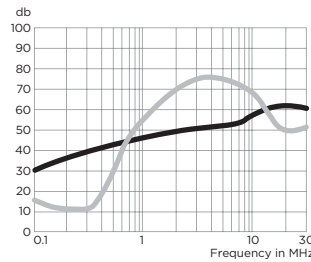
### Typical Insertion Loss

Measured in closed 50 Ohm system

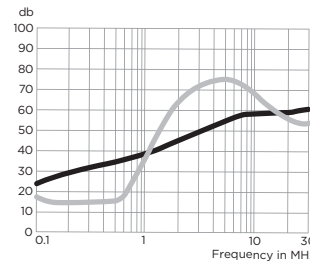
**1EC**



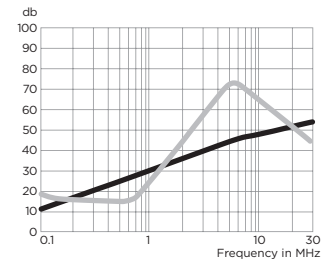
**3EC**



**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
<b>EC1, EC2 &amp; EC8</b>							
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
<b>EC4</b>							
1A	5	35	50	60	60	33	33
3A	5	30	45	60	55	34	34
6A	10	10	40	65	60	33	33