

EMI Power Inlet Filter

# EF Series



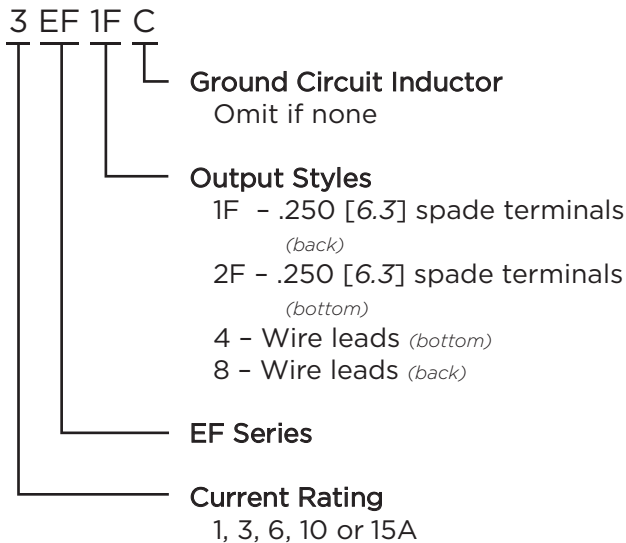
UL Recognized  
CSA Certified  
VDE Approved\*



## EF Series

- Compact single stage EMI filter with IEC 60320-1 C14 inlet
- Two element circuit provides basic attenuation
- Available with an internal ground-circuit inductor (C suffix versions) to isolate equipment chassis from power line ground at radio frequencies
- Superseded by the EEA Series

## Ordering Information



## Available Part Numbers

1EF1F	1EF2F	1EF4	1EF8
3EF1F	3EF2F	3EF4	3EF8
6EF1F	6EF2F	6EF4	6EF8
10EF1F			
15EF1F			
Ground Circuit Inductor Versions			
10EF1FC			

## Specifications

### Maximum leakage current each Line to Ground:

@ 120 VAC 60 Hz:	.21 mA
@ 250 VAC 50 Hz:	.36 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:

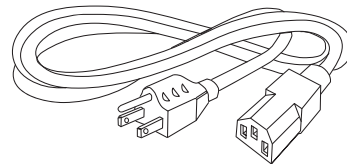
1 to 15A\*

### Operating Ambient Temperature Range

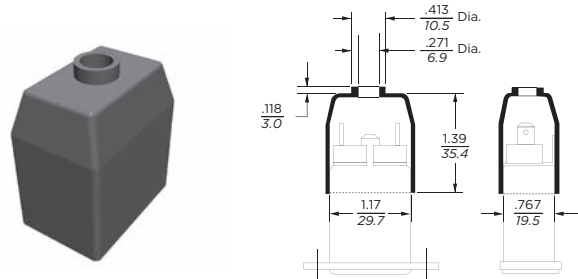
(at rated current  $I_r$ ): -10°C to +40°C  
In an ambient temperature ( $T_a$ ) higher than +40°C the maximum operating current ( $I_o$ ) is calculated as follows:  $I_o = I_r \sqrt{(85-T_a)/45}$

## Accessories

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



FA601: Insulating Shroud

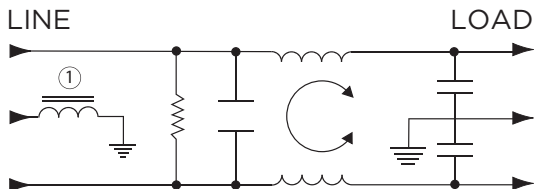


\*15A versions are tested by Underwriters Laboratories to US and Canadian requirements and are VDE approved at 10A, 250VAC

EMI Power Inlet Filter (continued)

# EF Series

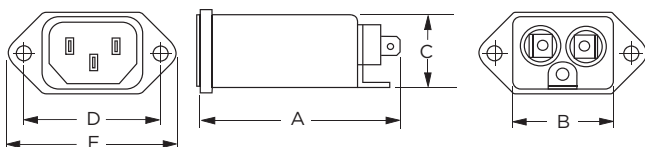
## Electrical Schematic



Note 1: C Suffix (ground choke) versions only

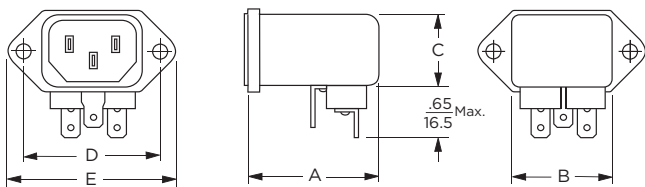
## Case Styles

### EF1F & EF1FC



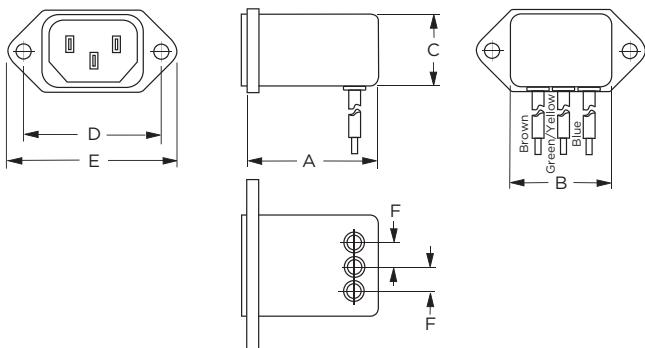
Typical Dimensions:  
Line Inlet (1): IEC 60320-1 C14  
Load Terminals (2): .250 [6.3] with .07 [1.8] Dia. hole  
Ground Terminal (1): .250 [6.3] with .07 x .16 [1.8 x 3.8] slot

### EF2F



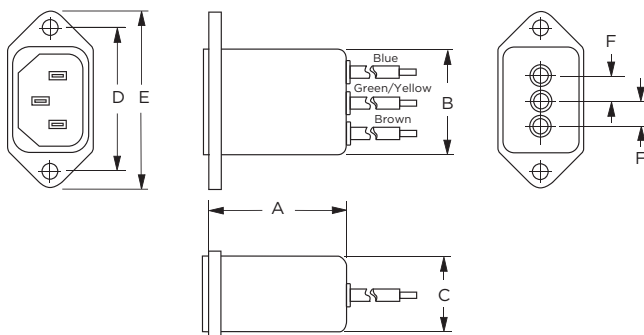
Typical Dimensions:  
Line Inlet (1): IEC 60320-1 C14  
Load Terminals (2): .250 [6.3] with .07 [1.8] Dia. hole  
Ground Terminal (1): .250 [6.3] with .07 x .16 [1.8 x 3.8] slot

### EF4



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

### EF8

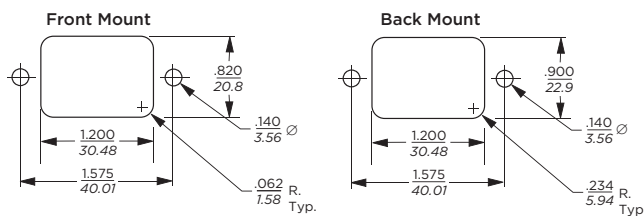


Typical Dimensions:  
Line Inlet (1): IEC 60320-1 C14  
Wire Leads: 4.0 [101.6] Min., 18AWG, UL1015

## Case Dimensions

Part No.	A (max.)	B (max.)	C (max.)	D $\pm .015$ $\pm .38$	E (max.)	F (ref.)
1EF1F, 3EF1F, 6EF1F	2.21	1.19	0.81	1.575	1.98	-
1EF2F, 3EF2F, 6EF2F	1.55	1.19	0.85	1.575	1.98	-
1EF4, 3EF4, 6EF4	1.55	1.19	0.85	1.575	1.98	.295
1EF8, 3EF8, 6EF8	1.55	1.19	0.81	1.575	1.98	.295
10EF1F, 10EF1FC	2.62	1.19	0.81	1.575	1.98	-
15EF1F	2.62	1.19	0.81	1.575	1.98	-

## Recommended Panel Cutouts



Note 1: EF1F, EF1FC and EF8 allow for front or back mounting  
Note 2: EF2F and EF4 allow for back mounting only



EMI Power Inlet Filter *(continued)*

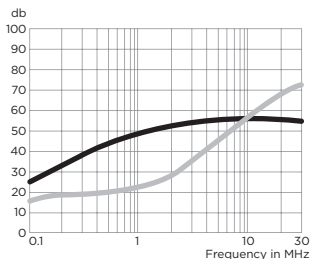
# EF Series

## Performance Data

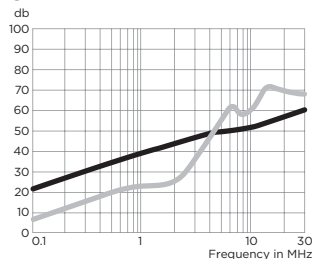
### Typical Insertion Loss

Measured in closed 50 Ohm system

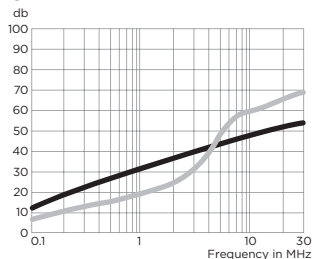
**1EF**



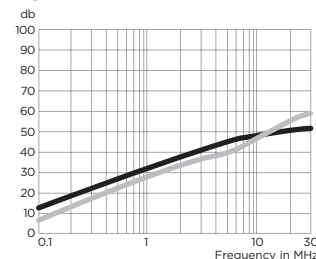
**3EF**



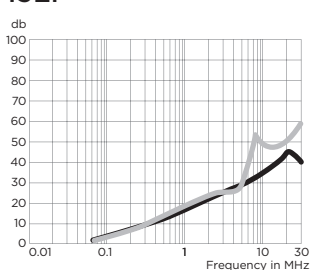
**6EF**



**10EF**



**15EF**



— 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
<b>EF1F, EF2F</b>						
1A	22	35	40	46	50	49
3A	15	25	30	45	50	54
6A	9	20	25	41	45	50
10A	8	15	20	34	39	44
15A	-	6	12	20	25	25
<b>EF4, EF8</b>						
1A	22	35	40	46	50	49
3A	15	25	30	45	50	54
6A	9	20	25	41	45	47
<b>EF1FC</b>						
10A	8	15	20	34	39	44