

**Compact and Cost Effective Dual Stage RFI Power Line Filters**

# EMC Series



UL Recognized  
CSA Certified  
VDE Approved



EMC6



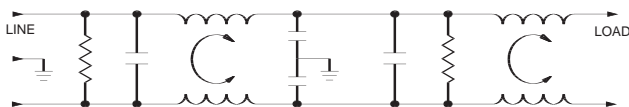
EMC1

## EMC Series

The EMC series of RFI filters has been developed to reduce conducted noise to acceptable limits for equipment that must comply with the requirements of CISPR in Europe and the FCC specifications in the USA.

The EMC series is the most compact dual stage filter available from Tyco Electronics. This cost effective design has a maximum current rating of 30 amps; higher than any similar catalog product. The EMC series was designed to address the need for more differential mode attenuation in the lower frequency range while still maintaining high common mode performance. This type of performance is typically needed for motor drives and switch mode power supplies with increased operating frequencies. The EMC series is ideal for applications that require a high level of performance in a compact, cost effective package.

## Electrical Schematic



Resistor location for reference only.

## Specifications

Maximum leakage current, each line-to-ground	<b>3, 6, 10 Amp</b>	<b>15, 20, 30 Amp</b>	
	@ 120 VAC 60 Hz:	.21 mA	.73 mA
	@ 250 VAC 50 Hz:	.43 mA	1.52 mA
Hipot rating (one minute):	line-to-ground	2250 VDC	
	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								
	.05	.07	.11	.15	1	2	10	20	30
3A	6	6	3	16	65	66	62	60	59
6A	6	6	2	15	65	67	65	62	63
10A	5	2	13	24	72	72	56	50	48
15A	3	1	12	22	70	68	57	54	53
20A	2	2	11	21	58	57	63	55	52
30A	2	2	14	22	47	52	60	48	43

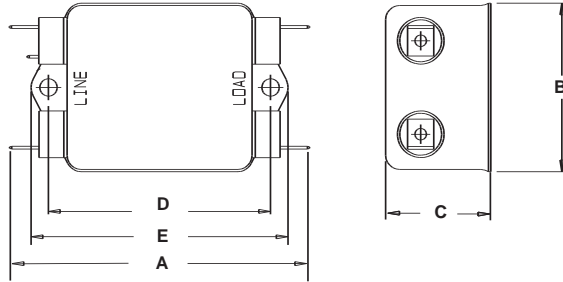
Line-to-line in 50 ohm circuit

Current Rating	Frequency-MHz								
	.05	.07	.11	.15	1	2	10	20	30
3A	12	13	7	18	64	69	65	60	52
6A	12	12	8	27	61	61	59	56	54
10A	14	15	12	33	54	58	47	34	36
15A	16	16	13	34	61	52	36	36	23
20A	17	19	15	37	67	62	36	32	30
30A	17	18	14	40	62	53	30	28	26

# EMC Series

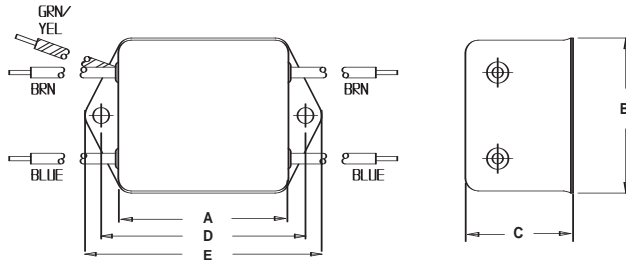
## Case Styles

### EMC1



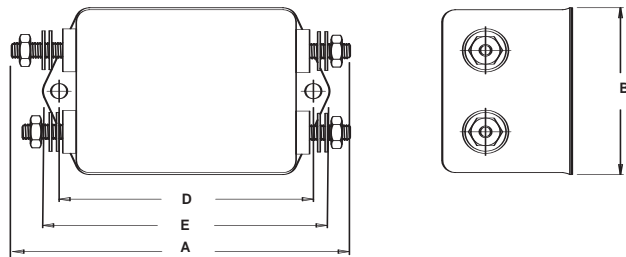
Typical dimensions:  
Terminals: .250 [6.35]      Mounting Holes: .187±.008 [4.75±.20] Dia.(2)

### EMC3



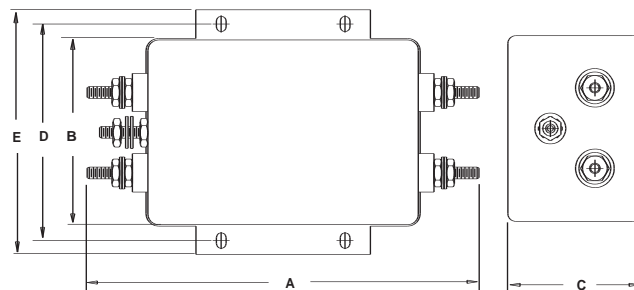
Typical dimensions:  
Wire leads: 4.0 [101.6] min.      3,6,10A:18 AWG / 15A: 16 AWG  
Mounting Holes: .187±.008 [4.75±.20] Dia.(2)

### EMC6



Typical dimensions:  
Terminals: 8-32 (5)      Mounting Holes: .187±.008 [4.75±.20] Dia.(2)

### 30EMC6



Typical dimensions:  
Terminals: 10-32 (5)      Slots: .203 x .156 [5.16 x 3.96] Dia.(4)

## Case Dimensions

Part No.	A (max)	B (max)	C (max)	D (max)	E (max)
3EMC1	<b>3.35</b> 85.1	<b>1.81</b> 46.0	<b>1.16</b> 29.5	<b>2.375</b> 60.3	<b>2.78</b> 70.6
6EMC1	<b>3.85</b> 97.8	<b>2.07</b> 52.6	<b>1.16</b> 29.5	<b>2.938</b> 74.6	<b>3.35</b> 85.1
10EMC1	<b>3.85</b> 97.8	<b>2.07</b> 52.6	<b>1.53</b> 38.91	<b>2.938</b> 74.6	<b>3.35</b> 85.1
15EMC1	<b>4.97</b>	<b>2.25</b>	<b>1.78</b>	<b>4.063</b>	<b>4.46</b>
20EMC1	126.2	57.2	45.2	103.2	113.3
3EMC3	<b>2.07</b> 52.6	<b>1.81</b> 46.0	<b>1.16</b> 29.5	<b>2.375</b> 60.3	<b>2.78</b> 70.6
6EMC3	<b>2.56</b> 65.0	<b>2.07</b> 52.6	<b>1.16</b> 29.5	<b>2.938</b> 74.6	<b>3.35</b> 85.1
10EMC3	<b>2.56</b> 65.0	<b>2.07</b> 52.6	<b>1.53</b> 38.9	<b>2.938</b> 74.6	<b>3.35</b> 85.1
15EMC3	<b>3.69</b> 93.7	<b>2.25</b> 57.2	<b>1.78</b> 45.2	<b>4.063</b> 103.2	<b>4.47</b> 113.5
10EMC6	<b>3.94</b> 99.9	<b>2.07</b> 52.6	<b>1.53</b> 38.9	<b>2.938</b> 74.6	<b>3.35</b> 85.1
15EMC6	<b>5.09</b>	<b>2.25</b>	<b>1.78</b>	<b>4.063</b>	<b>4.47</b>
20EMC6	129.3	57.2	45.2	103.2	113.5
30EMC6	<b>6.05</b> 153.7	<b>3.12</b> 79.2	<b>2.18</b> 55.4	<b>3.50</b> 88.9	<b>3.96</b> 100.6

## Part Numbers

3EMC1	10EMC3
6EMC1	15EMC3
10EMC1	10EMC6
15EMC1	15EMC6
20EMC1	20EMC6
3EMC3	30EMC6
6EMC3	