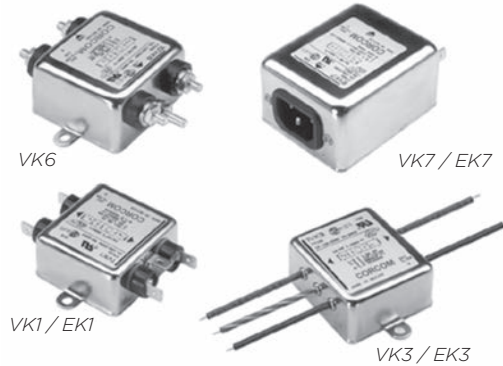


**General Purpose RFI Power Line Filters - Ideal for High Impedance Load**

# K Series



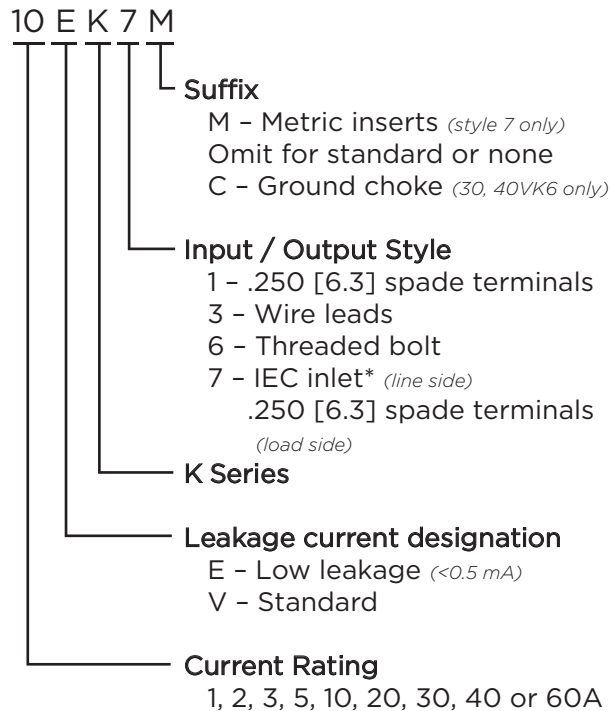
UL Recognized  
CSA Certified  
VDE Approved\*\*



## K Series

- Suitable for high impedance loads
- Well suited to applications where pulsed, continuous and/or intermittent RFI interference is present
- EK models meet the very low leakage current requirements for VDE portable equipment and non-patient care medical equipment
- Available with ground line inductor (choke)

## Ordering Information



\*1-15A: IEC 60320-1 C14 inlet mates with C13 connector  
20VK7: C20 inlet mates with C19 connector

## Specifications

**Maximum leakage current each Line to Ground:**

	VK Models	EK Models
@ 120 VAC 60 Hz:	.5 mA	.21 mA
@ 250 VAC 50 Hz:	1.0 mA	.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 60A\*

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

## Available Part Numbers

1VK1	10VK6	2EK3
1VK3	10VK7	3EK1
2VK1	10VK7M	3EK3
2VK3	20VK1	3EK7
3VK1	20VK6	3EK7M
3VK3	20VK7*	5EK1
3VK7	30VK6	5EK3
3VK7M	30VK6C	5EK7
5VK1	40VK6	5EK7M
5VK3	40VK6C	10EK1
5VK7	60VK6	10EK3
5VK7M	1EK1	10EK7
10VK1	1EK3	10EK7M
10VK3	2EK1	20EK1

\*\*20VK7, 20A model tested by Underwriters Laboratories to US and Canadian requirements and is VDE approved at 16A, 250VAC

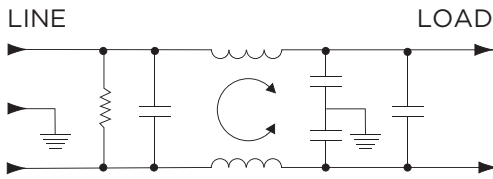
1

RFI Power Line Filters

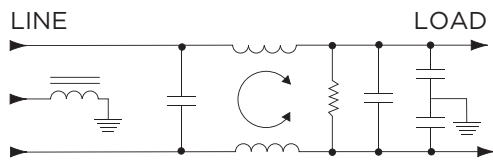
**General Purpose RFI Power Line Filters** *(continued)*

# K Series

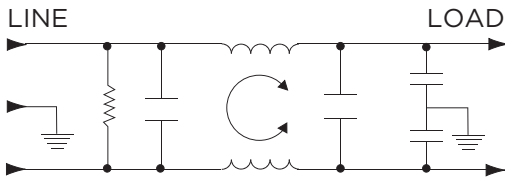
## Electrical Schematics



### 30 & 40VK6C *(Inductor in Ground Line)*

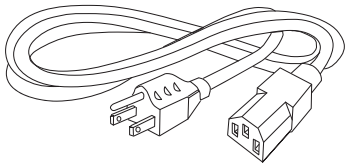


### 60VK6



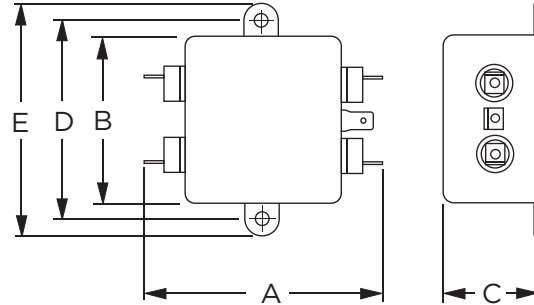
## Accessories

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



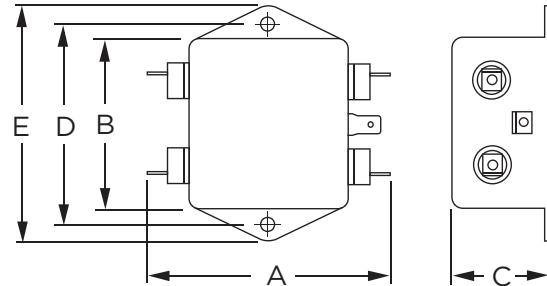
## Case Styles

### K1 (1, 2, 3, 6, 10A)



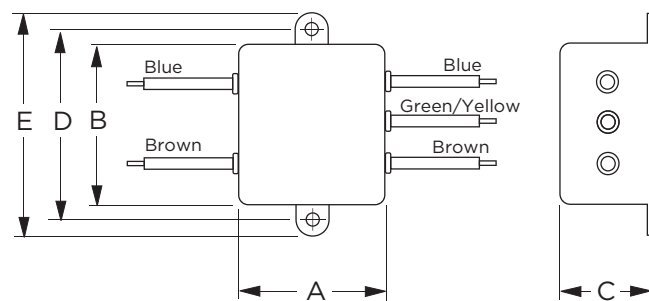
Typical Dimensions:  
Line/Load Terminals (4): .250 [6.3] with .07 [1.8] Dia. hole  
Ground Terminal (1): .250 [6.3] with .07 x .16 [1.8 x 3.8] slot  
Mounting Holes (2): .188 [4.78] Dia.

### K1 (20A)



Typical Dimensions:  
Line/Load Terminals (4): .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  
Mounting Holes (2): .188 [4.78] Dia.

### K3



Typical Dimensions:  
Wire Leads (5): 4.0 [101.6] Min., AWG18 (AWG16 for 10A)  
Mounting Holes (2): .188 [4.78] Dia.

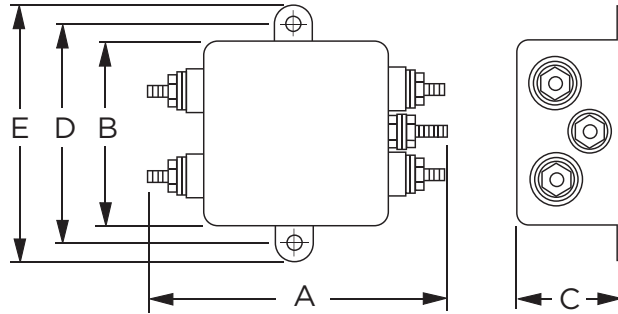
General Purpose RFI Power Line Filters (continued)



# K Series

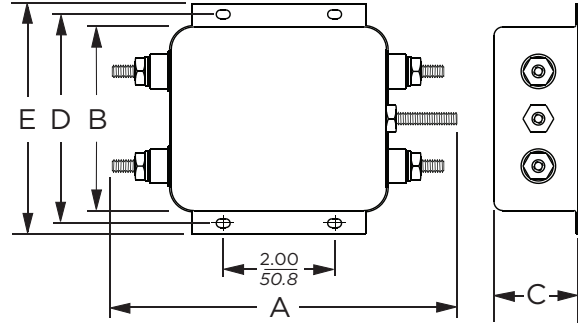
## Case Styles (continued)

### 10VK6



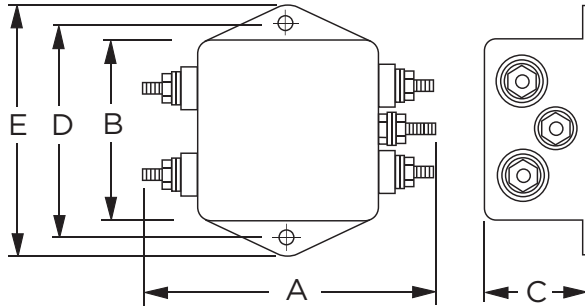
Typical Dimensions:  
 Terminals (5): 8-32, Torque 18 lbf-in. [2.03 N-m] max. ± 2 [.22]  
 Mounting Holes (2): .188 [4.78] Dia.

### 60VK6



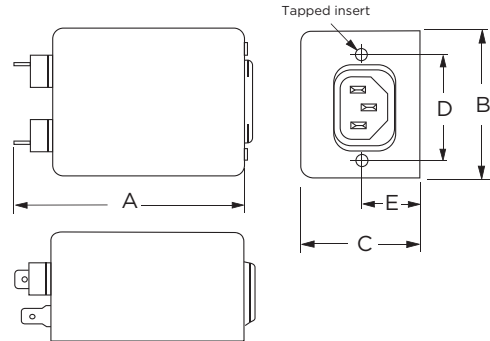
Typical Dimensions:  
 Terminals (5): 1/4-20, Torque 56 lbf-in. [6.32 N-m] max. ± 2 [.22]  
 Mounting Slots (4): .250 x .156 [6.35 x 3.96] Dia.

### 20VK6



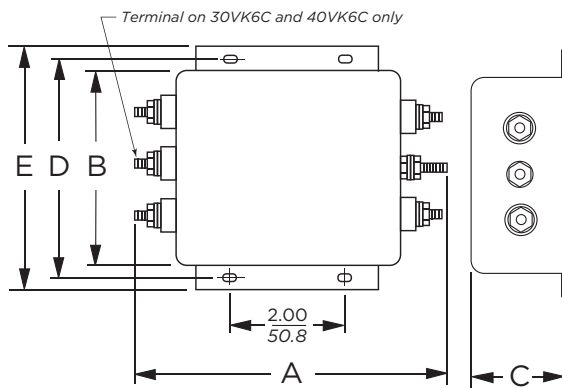
Typical Dimensions:  
 Terminals (5): 8-32, Torque 18 lbf-in. [2.03 N-m] max. ± 2 [.22]  
 Mounting Holes (2): .188 [4.78] Dia.

### K7 & K7M (3, 5, 10A)



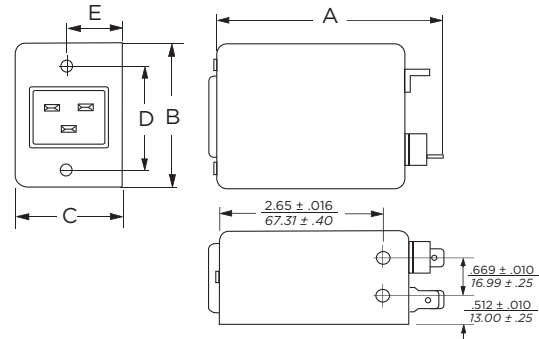
Typical Dimensions:  
 Load Terminals (2): .250 [6.3] with .07 [1.8] Dia. hole  
 Ground Terminal (1): .250 [6.3] with .07 x .16 [1.8 x 3.8] slot  
 Line Inlet (1): IEC 60320-1 C14  
 K7 Tapped Inserts (2): 6-32 x 1/4  
 K7M Tapped Inserts (2): M3 x .5

### 30VK6/6C & 40VK6/6C



Typical Dimensions:  
 Terminals (5): 8-32, Torque 18 lbf-in. [2.03 N-m] max. ± 2 [.22]  
 Mounting Slots (4): .250 x .156 [6.35 x 3.96] Dia.

### 20VK7



Typical Dimensions:  
 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  
 Line Inlet (1): IEC 60320-1 C20  
 K7 Tapped Inserts (2): 6-32 x 1/4  
 K7M Tapped Inserts (2): M3 x .5

General Purpose RFI Power Line Filters (continued)

# K Series

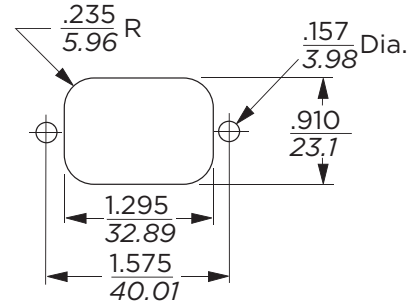
## Case Dimensions

Part No.	A (max)	B (max)	C (max)	D $\pm .015$ $\pm .38$	E (max)
1VK1, 1EK1,	<b>3.1</b>	<b>2.07</b>	<b>0.91</b>	<b>2.375</b>	<b>2.81</b>
2VK1, 2EK1	78.7	52.6	23.1	60.33	74.1
1VK3, 1EK3,	<b>1.81</b>	<b>2.07</b>	<b>0.91</b>	<b>2.375</b>	<b>2.81</b>
2VK3, 2EK3	46.0	52.6	23.1	60.33	74.1
3VK1, 3EK1,	<b>3.10</b>	<b>2.07</b>	<b>1.16</b>	<b>2.375</b>	<b>2.81</b>
5VK1, 5EK1	78.7	52.6	29.5	60.33	74.1
3VK3, 3EK3,	<b>1.81</b>	<b>2.07</b>	<b>1.16</b>	<b>2.375</b>	<b>2.81</b>
5VK5, 5EK3	46.0	52.6	29.5	60.33	74.4
3VK7/7M,	<b>3.21</b>	<b>2.25</b>	<b>1.28</b>	<b>1.575</b>	<b>0.63*</b>
3EK7/7M	81.5	57.2	32.5	40.01	16.0'
5VK7/7M,	<b>3.21</b>	<b>2.25</b>	<b>1.28</b>	<b>1.575</b>	<b>0.63*</b>
5EK7/7M	81.5	57.2	32.5	40.01	16.0'
10VK1,	<b>3.35</b>	<b>2.07</b>	<b>1.16</b>	<b>2.375</b>	<b>2.81</b>
10EK1	85.1	52.6	29.5	60.33	71.4
10VK3,	<b>2.07</b>	<b>2.07</b>	<b>1.16</b>	<b>2.375</b>	<b>2.81</b>
10EK3	52.6	52.6	29.5	60.33	71.4
10VK6	<b>3.46</b>	<b>2.07</b>	<b>1.16</b>	<b>2.375</b>	<b>2.81</b>
	87.9	52.6	29.5	60.33	71.4
10VK7/7M,	<b>3.71</b>	<b>2.25</b>	<b>1.28</b>	<b>1.575</b>	<b>0.63*</b>
10EK7/7M	94.2	57.2	32.5	40.01	16.0'
20VK1,	<b>3.35</b>	<b>2.56</b>	<b>1.53</b>	<b>2.938</b>	<b>3.35</b>
20EK1	85.1	65.0	38.9	74.63	85.1
20VK6	<b>3.46</b>	<b>2.56</b>	<b>1.53</b>	<b>2.938</b>	<b>3.35</b>
	87.9	65.0	38.9	74.63	85.1
20VK7	<b>3.8</b>	<b>2.28</b>	<b>1.78</b>	<b>1.575</b>	<b>.846'</b>
	90.4	54.6	39.6	74.63	85.8'
30VK6,	<b>5.34</b>	<b>3.38</b>	<b>1.53</b>	<b>3.75</b>	<b>4.20</b>
30VK6C	135.6	85.9	38.9	95.25	106.7
40VK6,	<b>5.34</b>	<b>3.38</b>	<b>1.53</b>	<b>3.75</b>	<b>4.20</b>
40VK6C	135.6	85.9	38.9	95.25	106.7
60VK6	<b>6.0</b>	<b>3.38</b>	<b>1.53</b>	<b>3.75</b>	<b>4.20</b>
	152.4	85.9	38.9	95.25	106.7

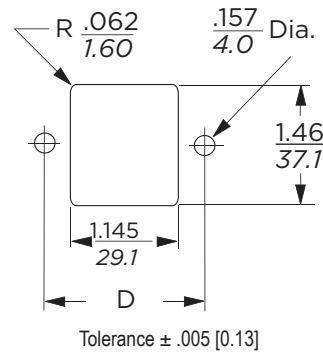
\*±0.02 [0.5]  
'±0.01 [0.25]

## Recommended Panel Cutouts

### K7 & K7M Cutout (3, 5, 10A)



### 20VK7 Cutout

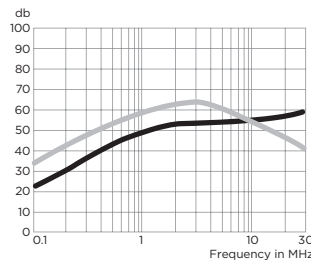


## Performance Data

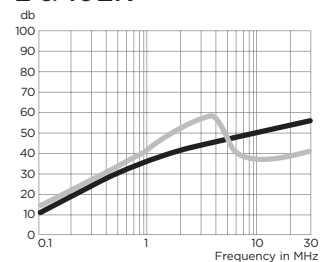
### Typical Insertion Loss

Measured in closed 50 Ohm system

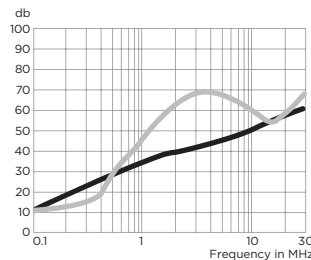
#### 1 & 3EK



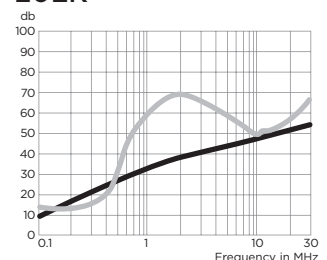
#### 2 & 10EK



#### 5EK



#### 20EK



General Purpose RFI Power Line Filters (continued)

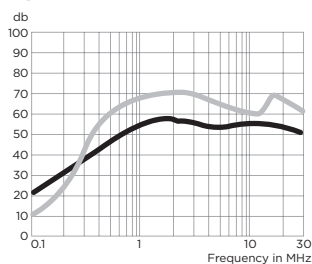
# K Series

## Performance Data (continued)

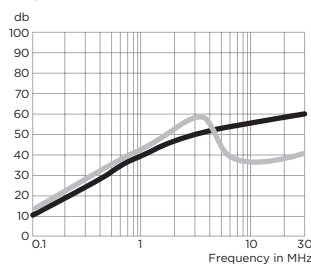
### Typical Insertion Loss

Measured in closed 50 Ohm system

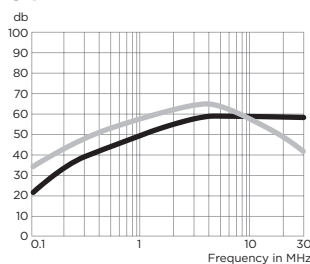
1VK



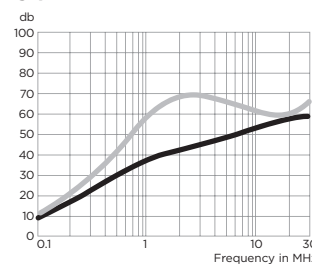
2VK



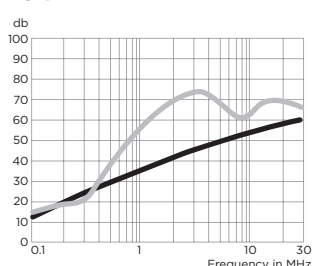
3VK



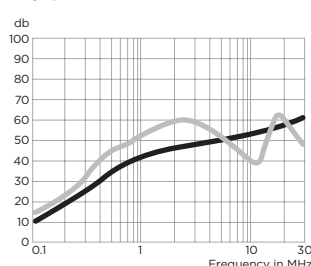
5VK



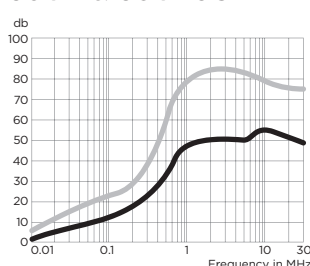
10VK



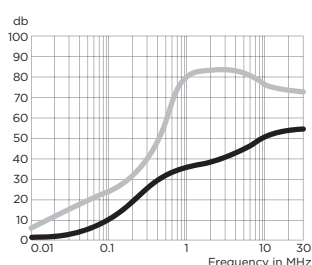
20VK



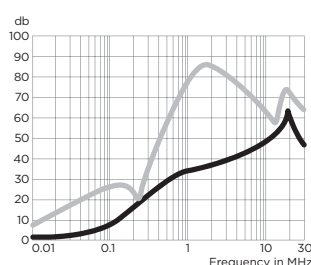
30VK & 30VK6C



40VK & 40VK6C



60VK



— 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>VK Models</b>						
1A, 3A	15	30	38	50	50	50
2A, 5A, 10A	6	19	28	42	45	50
20A	6	19	28	42	45	50
30A, 40A	6	19	28	42	45	50
60A	6	22	28	32	39	35
<b>EK Models</b>						
1A, 3A	15	29	35	45	45	50
2A, 5A, 10A	8	19	25	38	40	45
20A	8	19	25	38	40	45

Differential Mode / Symmetrical (Line to Line)

Current Rating	Frequency – MHz					
	.15	.5	1	5	10	30
<b>VK Models</b>						
1A, 3A	-	-	48	55	50	35
2A, 5A, 10A	-	-	30	50	30	30
20A	6	6	30	50	30	30
30A, 40A	2	40	60	65	57	55
60A	13	49	67	57	53	53
<b>EK Models</b>						
1A, 3A	-	-	48	55	50	35
2A, 5A, 10A	-	-	30	50	30	30
20A	6	6	30	50	30	30