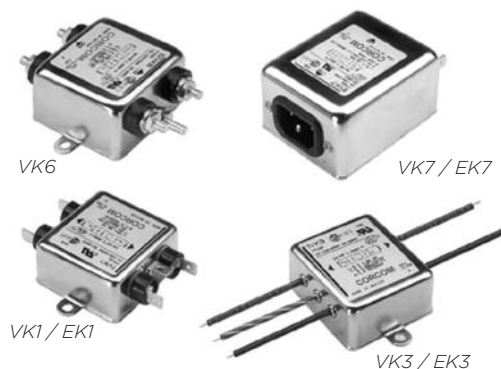


**General Purpose RFI Power Line Filters – Ideal for High Impedance Load**

# K Series



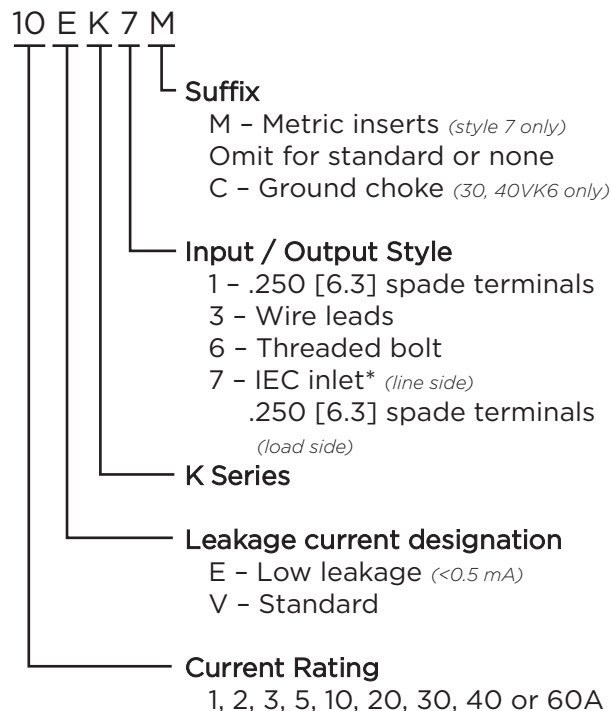
UL Recognized  
CSA Certified  
VDE Approved\*



## 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

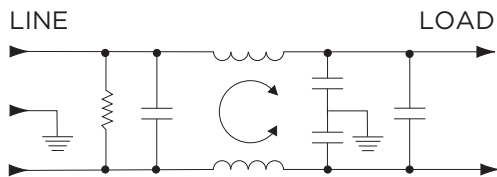
1VK1	10VK6	2EK3
1VK3	10VK7	3EK1
2VK1	10VK7M	3EK3
2VK3	20VK1	3EK7
3VK1	20VK6	3EK7M
3VK3	20VK7*	5EK1
3VK7	30VK6	5EK3
3VK7M	30VK6C	5EK7
5VK1	40VK6	5EK7M
5VK3	40VK6C	10EK1
5VK7	60VK6	10EK3
5VK7M	1EK1	10EK7
10VK1	1EK3	10EK7M
10VK3	2EK1	20EK1

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

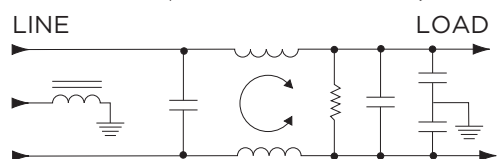
**General Purpose RFI Power Line Filters** *(continued)*

# K Series

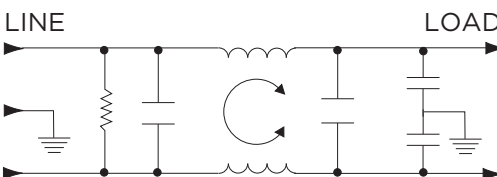
## Electrical Schematics



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

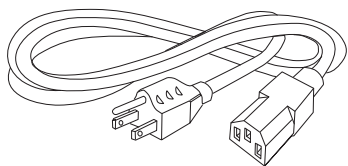


### 60VK6



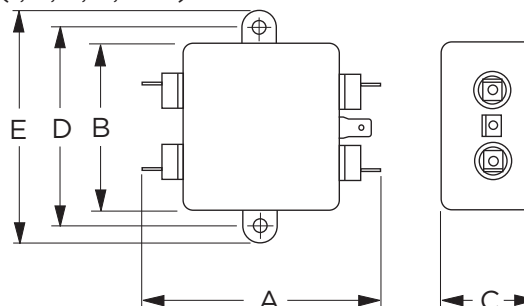
## Accessories

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



## Case Styles

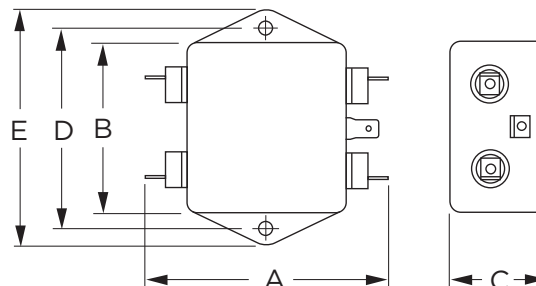
### K1 (1, 2, 3, 6, 10A)



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.

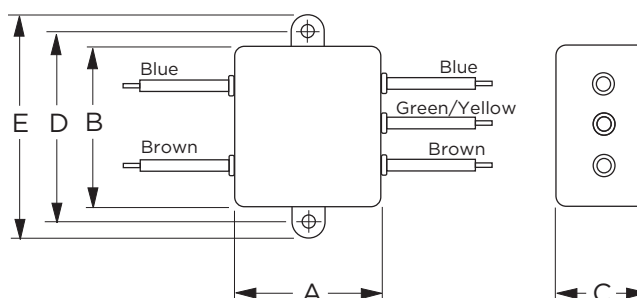
### K1 (20A)



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:

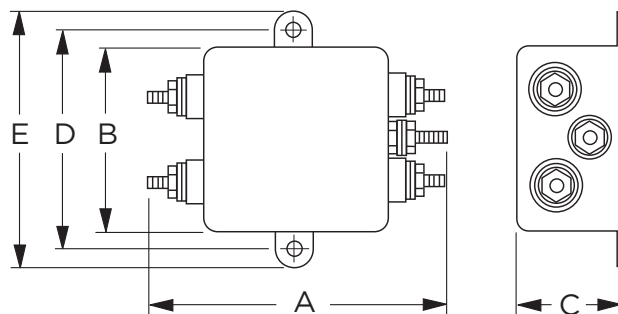
Wire Leads (5): 4.0 [101.6] Min., AWG18 (AWG16 for 10A)  
Mounting Holes (2): .188 [4.78] Dia.

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

# K Series

## Case Styles *(continued)*

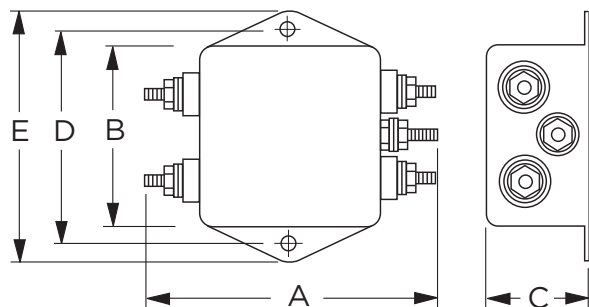
### 10VK6



Typical Dimensions:

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

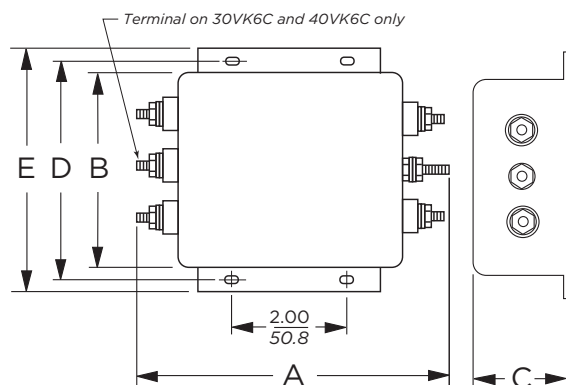
### 20VK6



Typical Dimensions:

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

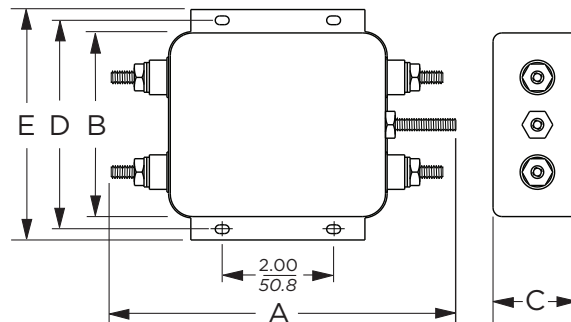
### 30VK6/6C & 40VK6/6C



Typical Dimensions:

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

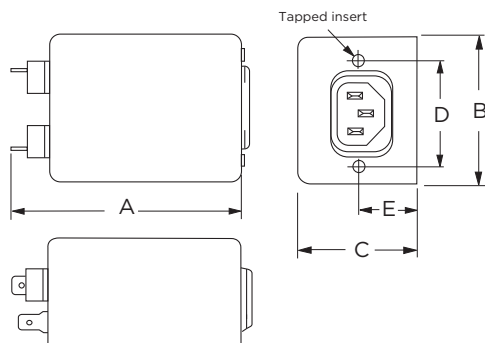
### 60VK6



Typical Dimensions:

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

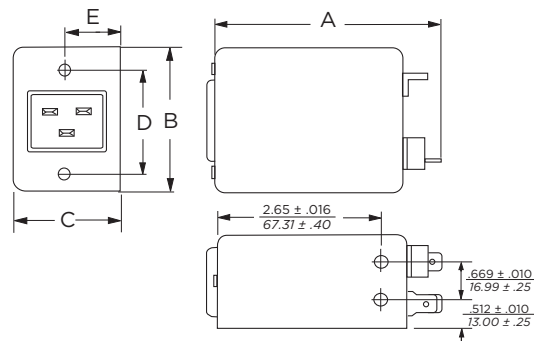
### K7 & K7M (3, 5, 10A)



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

### 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

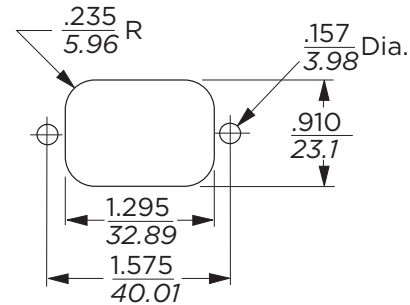
## Case Dimensions

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

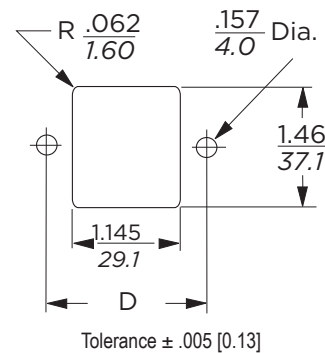
\* $\pm 0.02$  [0.5]  
<sup>1</sup> $\pm 0.01$  [0.25]

## Recommended Panel Cutouts

### K7 Cutout



### 20VK7 Cutout

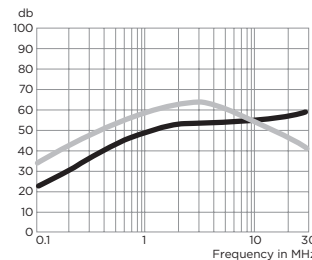


## Performance Data

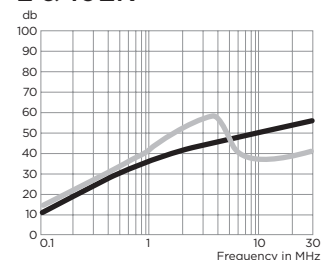
### Typical Insertion Loss

Measured in closed 50 Ohm system

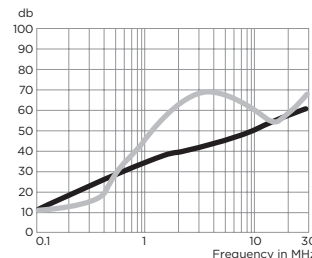
#### 1 & 3EK



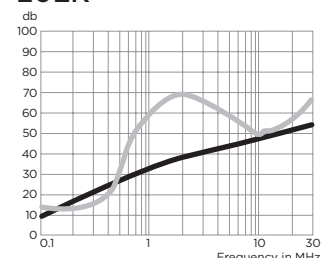
#### 2 & 10EK



#### 5EK



#### 20EK



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

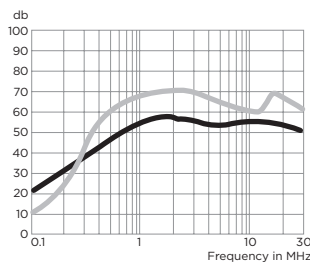
# K Series

## Performance Data *(continued)*

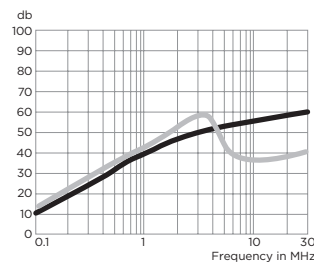
### Typical Insertion Loss

Measured in closed 50 Ohm system

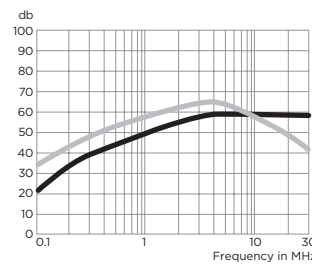
#### 1VK



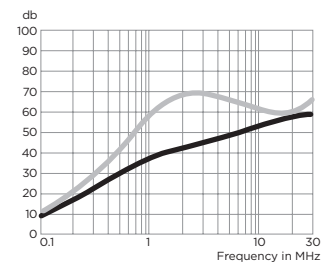
#### 2VK



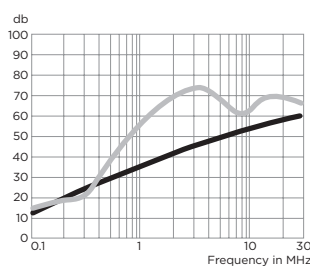
#### 3VK



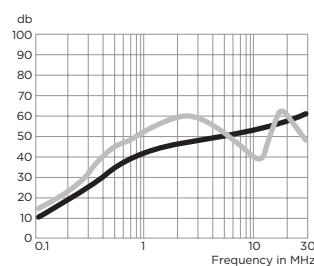
#### 5VK



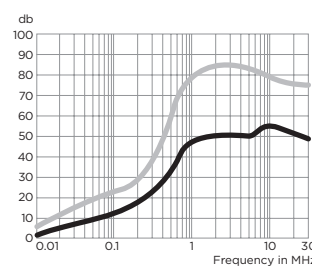
#### 10VK



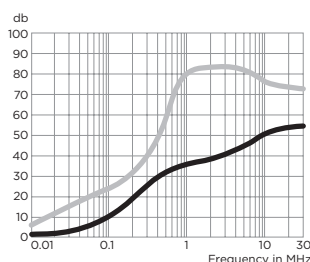
#### 20VK



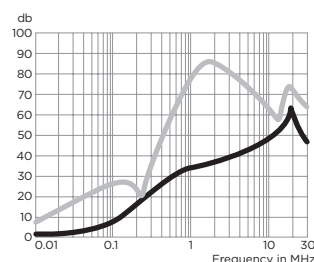
#### 30VK & 30VK6C



#### 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