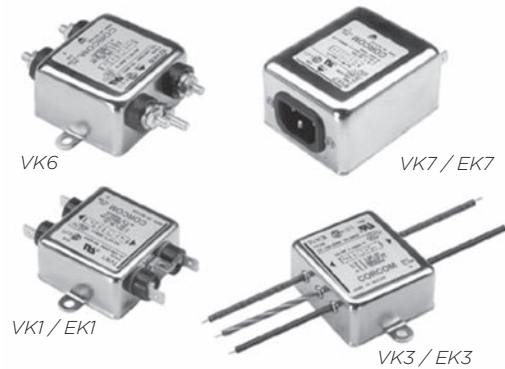


General Purpose RFI Power Line Filters – Ideal for High Impedance Load

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

10 E K 7 M

Suffix

- M – Metric inserts (*style 7 only*)
- Omit for standard or none
- C – Ground choke (*30, 40VK6 only*)

Input / Output Style

- 1 – .250 [6.3] spade terminals
- 3 – Wire leads
- 6 – Threaded bolt
- 7 – IEC inlet* (*line side*)
- .250 [6.3] spade terminals (*load side*)

K Series

Leakage current designation

- E – Low leakage (*<0.5 mA*)
- V – Standard

Current Rating

- 1, 2, 3, 5, 10, 20, 30, 40 or 60A

*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

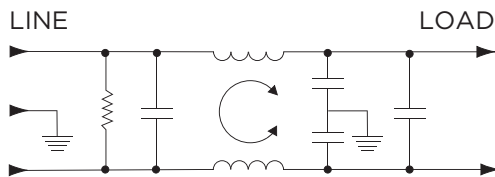
1

RFI Power Line Filters

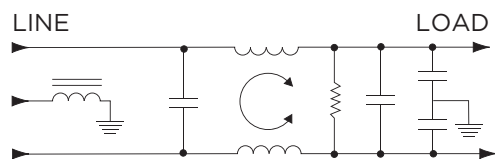
General Purpose RFI Power Line Filters *(continued)*

K Series

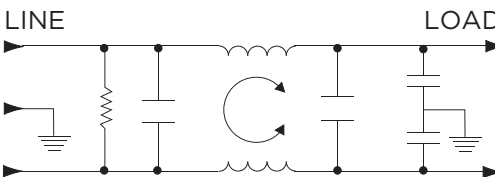
Electrical Schematics



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

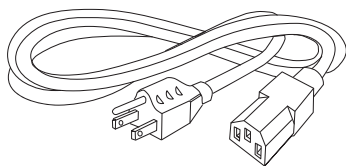


60VK6



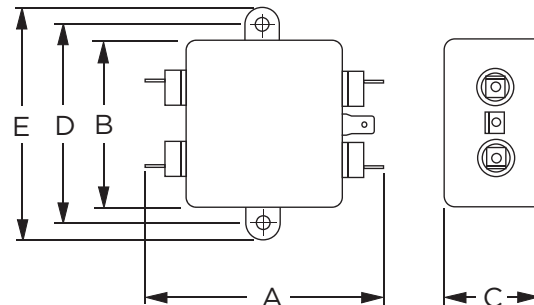
Accessories

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



Case Styles

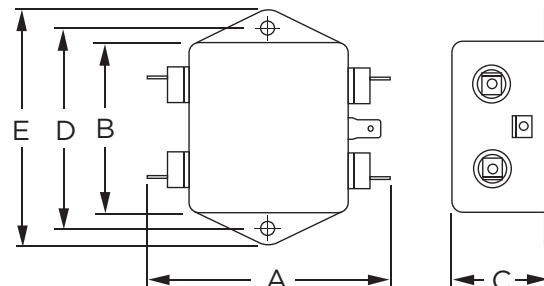
K1 (1, 2, 3, 6, 10A)



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.

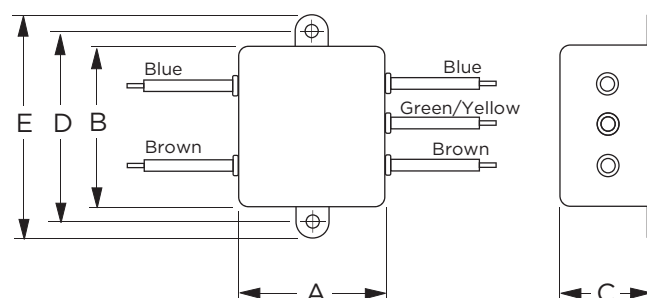
K1 (20A)



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:

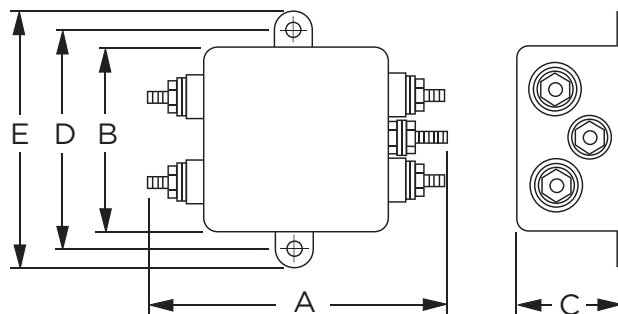
Wire Leads (5): 4.0 [101.6] Min., AWG18 (AWG16 for 10A)
Mounting Holes (2): .188 [4.78] Dia.

General Purpose RFI Power Line Filters (continued)

K Series

Case Styles (continued)

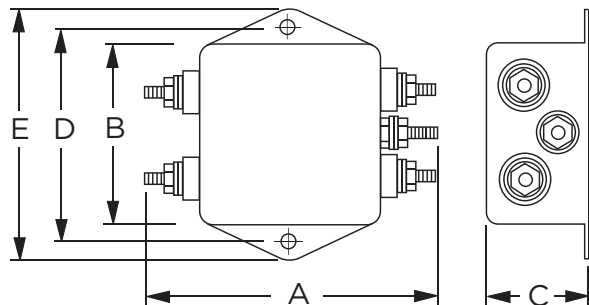
10VK6



Typical Dimensions:

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

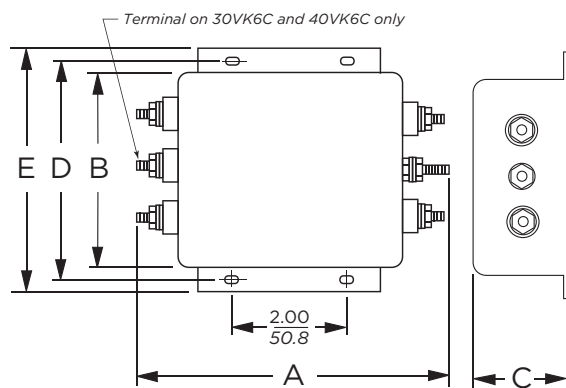
20VK6



Typical Dimensions:

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

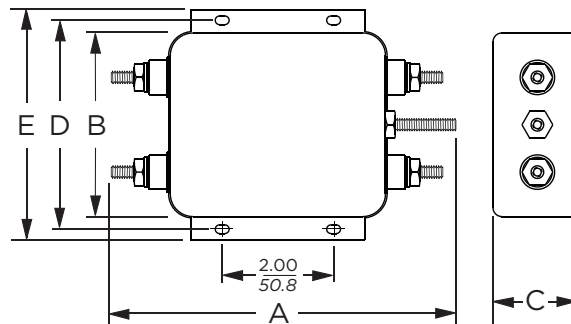
30VK6/6C & 40VK6/6C



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.

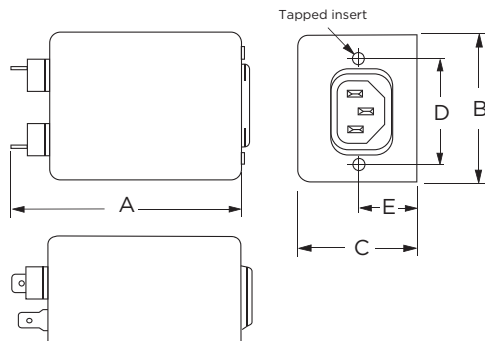
60VK6



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.

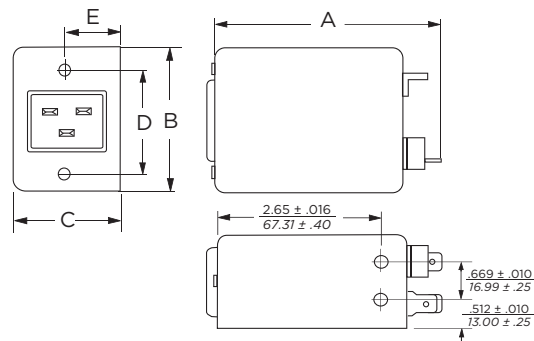
K7 & K7M (3, 5, 10A)



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

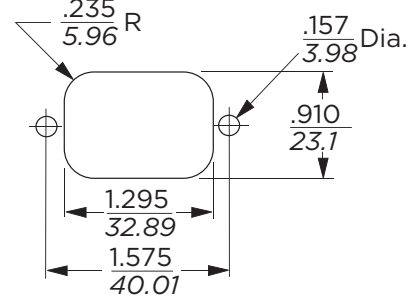
Case Dimensions

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

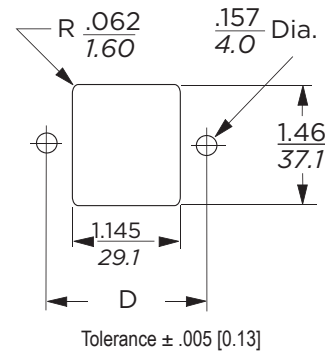
*±0.02 [0.5]
*±0.01 [0.25]

Recommended Panel Cutouts

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



20VK7 Cutout

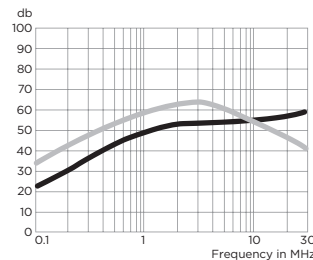


Performance Data

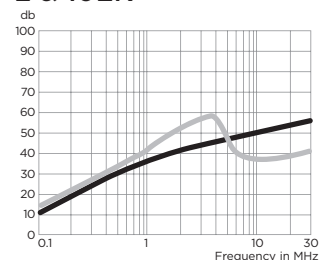
Typical Insertion Loss

Measured in closed 50 Ohm system

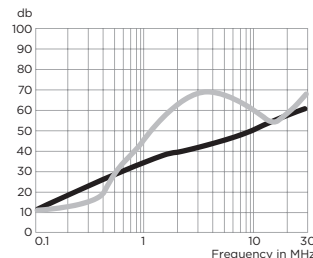
1 & 3EK



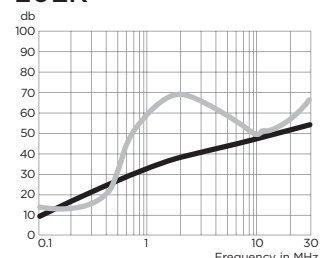
2 & 10EK



5EK



20EK



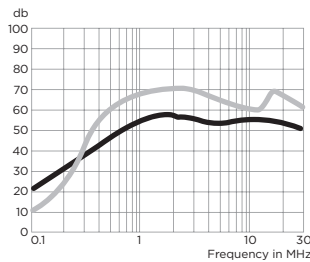
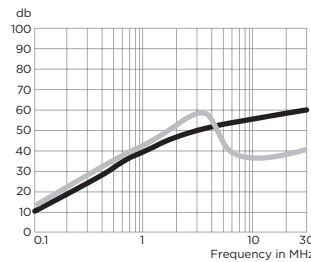
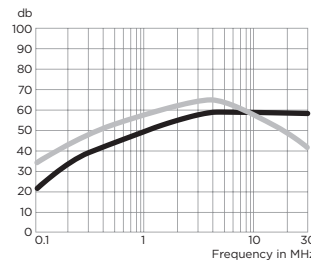
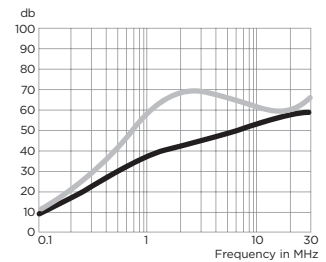
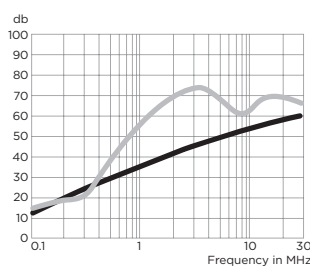
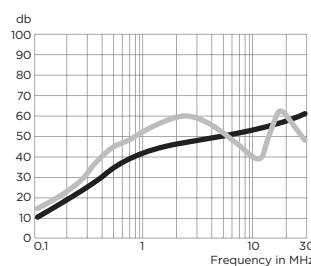
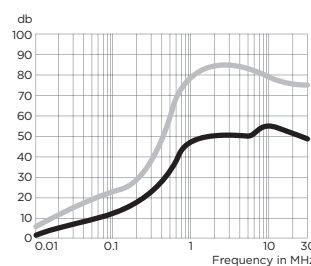
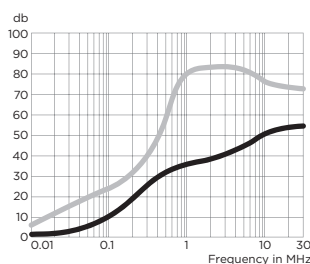
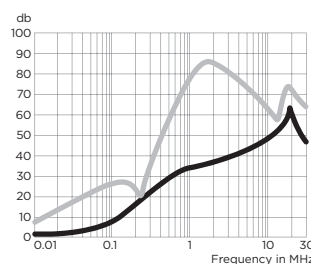
General Purpose RFI Power Line Filters *(continued)*

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
VK Models						
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
EK Models						
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
VK Models						
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
EK Models						
1A, 3A	-	-	48	55	50	35
2A, 5A, 10A	-	-	30	50	30	30
20A	6	6	30	50	30	30