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

K Series

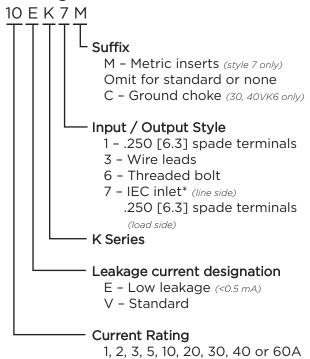


UL Recognized CSA Certified VDE Approved**

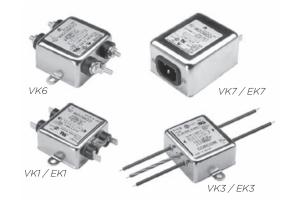
K Series

- 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 | <u>EK Models</u> | | | | |
|-------------------------------------|-----------|------------------|--|--|--|--|
| @ 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 Ir): | - | -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: $I_o = I_r \sqrt{(85-Ta)/45}$

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 | | | |
|---|-------|--------|--------|
| 2VK1 10VK7M 3EK3 2VK3 20VK1 3EK7 3VK1 20VK6 3EK7M 3VK3 20VK7* 5EK1 3VK7 30VK6 5EK3 3VK7 30VK6C 5EK7 5VK1 40VK6 5EK7M 5VK3 40VK6C 10EK1 5VK7 60VK6 10EK3 5VK7M 1EK1 10EK7 10VK1 1EK3 10EK7M | 1VK1 | 10VK6 | 2EK3 |
| 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 | 1VK3 | 10VK7 | 3EK1 |
| 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 | 2VK1 | 10VK7M | 3EK3 |
| 3VK3 20VK7* 5EK1 3VK7 30VK6 5EK3 3VK7M 30VK6C 5EK7 5VK1 40VK6 5EK7M 5VK3 40VK6C 10EK1 5VK7 60VK6 10EK3 5VK7M 1EK1 10EK7 10VK1 1EK3 10EK7M | 2VK3 | 20VK1 | 3EK7 |
| 3VK7 3OVK6 5EK3 3VK7M 3OVK6C 5EK7 5VK1 4OVK6 5EK7M 5VK3 4OVK6C 10EK1 5VK7 6OVK6 10EK3 5VK7M 1EK1 10EK7 10VK1 1EK3 10EK7M | 3VK1 | 20VK6 | 3EK7M |
| 3VK7M 30VK6C 5EK7 5VK1 40VK6 5EK7M 5VK3 40VK6C 10EK1 5VK7 60VK6 10EK3 5VK7M 1EK1 10EK7 10VK1 1EK3 10EK7M | 3VK3 | 20VK7* | 5EK1 |
| 5VK1 40VK6 5EK7M 5VK3 40VK6C 10EK1 5VK7 60VK6 10EK3 5VK7M 1EK1 10EK7 10VK1 1EK3 10EK7M | 3VK7 | 30VK6 | 5EK3 |
| 5VK3 40VK6C 10EK1 5VK7 60VK6 10EK3 5VK7M 1EK1 10EK7 10VK1 1EK3 10EK7M | 3VK7M | 30VK6C | 5EK7 |
| 5VK7 60VK6 10EK3 5VK7M 1EK1 10EK7 10VK1 1EK3 10EK7M | 5VK1 | 40VK6 | 5EK7M |
| 5VK7M 1EK1 10EK7 10VK1 1EK3 10EK7M | 5VK3 | 40VK6C | 10EK1 |
| 10VK1 1EK3 10EK7M | 5VK7 | 60VK6 | 10EK3 |
| | 5VK7M | 1EK1 | 10EK7 |
| | 10VK1 | 1EK3 | 10EK7M |
| 10VK3 2EK1 20EK1 | 10VK3 | 2EK1 | 20EK1 |

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

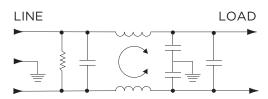
Dimensions are in inches and millimeters unless otherwise specified. Values in italics are metric equivalents. Dimensions are shown for reference purposes only. Specifications subject to change.



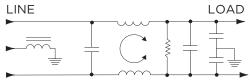
General Purpose RFI Power Line Filters (continued)

K Series

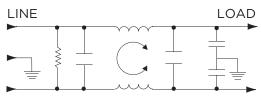
Electrical Schematics



30 & 40VK6C (Inductor in Ground Line)

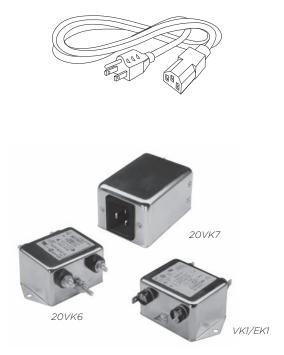


60VK6

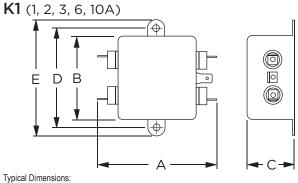


Accessories

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

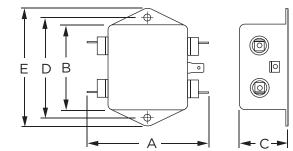


Case Styles



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

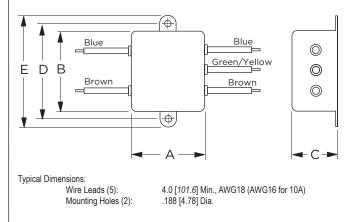
K1 (20A)



Typical Dimensions:

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

K3



50

Dimensions are in inches and millimeters unless otherwise specified. Values in italics are metric equivalents. Dimensions are shown for reference purposes only. Specifications subject to change.

For email, phone or live chat, please go to te.com/help corcom.com



 \odot

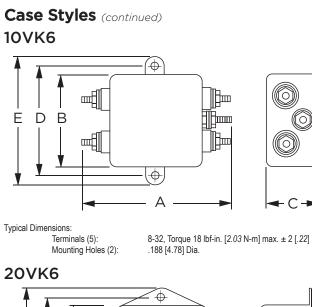
 $\langle \mathfrak{o} \rangle$

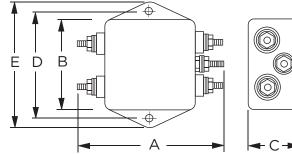
 \bigcirc

General Purpose RFI Power Line Filters (continued)

60VK6

K Series



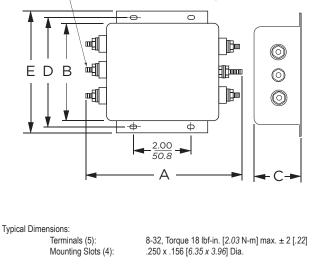


Typical Dimensions: Terminals (5): Mounting Holes (2):

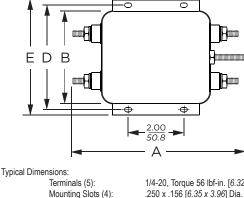
8-32, Torque 18 lbf-in. [2.03 N-m] max. ± 2 [.22] .188 [4.78] Dia.

30VK6/6C & 40VK6/6C

Terminal on 30VK6C and 40VK6C only

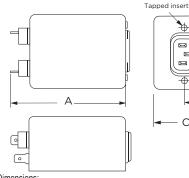


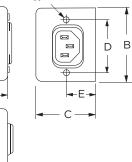
Dimensions are in inches and millimeters unless otherwise specified. Values in italics are metric equivalents. Dimensions are shown for reference purposes only. Specifications subject to change.





K7 & K7M (3, 5, 10A)





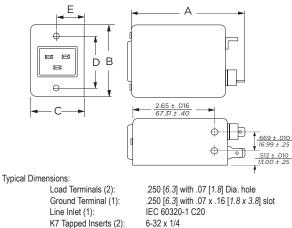
Typical Dimensions:

Load Terminals (2): Ground Terminal (1): Line Inlet (1): K7 Tapped Inserts (2): K7M Tapped Inserts (2):

K7M Tapped Inserts (2):

.250 [6.3] with .07 [1.8] Dia. hole .250 [6.3] with .07 x .16 [1.8 x 3.8] slot IEC 60320-1 C14 6-32 x 1/4 M3 x .5

20VK7



M3 x .5

Downloaded From Oneyac.com



General Purpose RFI Power Line Filters (continued)

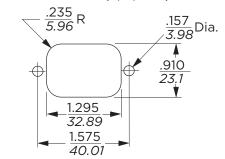
K Series

Case Dimensions

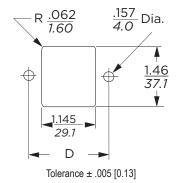
| Part No. | Α | В | С | D | Е |
|-------------|-------|-------|-------|------------------------|-------|
| Fait NO. | (max) | (max) | (max) | <u>± .015</u> ± .38 | (max) |
| 1VK1, 1EK1, | 3.1 | 2.07 | 0.91 | 2.375 | 2.81 |
| 2VK1, 2EK1 | 78.7 | 52.6 | 23.1 | 60.33 | 74.1 |
| 1VK3, 1EK3, | 1.81 | 2.07 | 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 |
| 10 V KO | 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 |
| 201/// | 3.46 | 2.56 | 1.53 | 2.938 | 3.35 |
| 20VK6 | 87.9 | 65.0 | 38.9 | 74.63 | 85.1 |
| 201/1/7 | 3.8 | 2.28 | 1.78 | 1.575 | .846 |
| 20VK7 | 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 |
| | | | | | |

Recommended Panel Cutouts

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



20VK7 Cutout



Performance Data

Typical Insertion Loss

Measured in closed 50 Ohm system

10 30

Frequency in MHz

10 30 Frequency in MHz

1 & 3EK db 100 90 80 70 60 50 40 30 20



10

0

5EK

db 100

90

80

70

60

50

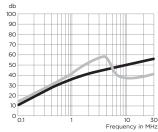
40

30

20

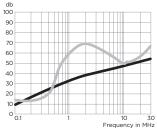
10

0 [_____



20EK

2 & 10EK



Dimensions are in inches and millimeters unless otherwise specified. Values in italics are metric equivalents. Dimensions are shown for reference purposes only. Specifications subject to change.

For email, phone or live chat, please go to te.com/help corcom.com



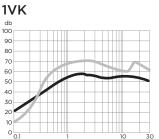
General Purpose RFI Power Line Filters (continued)

K Series

Performance Data (continued)

Typical Insertion Loss

Measured in closed 50 Ohm system



10VK

db 100

90

80

70

60

50

40

30

20

10

db 100

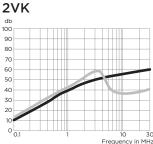
90

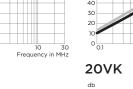
80

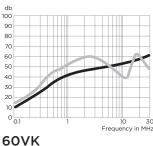
70

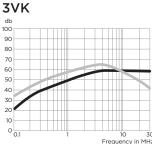
60

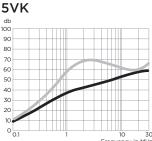
0 _____

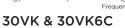


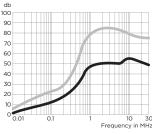


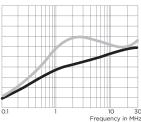




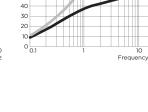








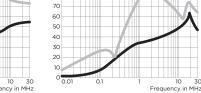




Common Mode / Asymmetrical (L-G) Differential Mode / Symmetrical (L-L)

50 40 30 20 10 0.1 Freque

40VK & 40VK6C



db 100

90

80

Minimum Insertion Loss

Frequency in MHz

Measured in closed 50 Ohm system Common Mode / Asymmetrical (Line to Ground)

| Current | Frequency – MHz | | | | | |
|-------------|-----------------|----|----|----|----|----|
| Rating | .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 | | Frequency – MHz | | | | | |
|-------------|-----|-----------------|----|----|----|----|--|
| Rating | .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 | |

Dimensions are in inches and millimeters unless otherwise specified. Values in italics are metric equivalents. Dimensions are shown for reference purposes only. Specifications subject to change.

53

30

单击下面可查看定价,库存,交付和生命周期等信息

>>TE Connectivity(泰科)