

# R Series

## Two-Stage General Purpose RFI Power Line Filter

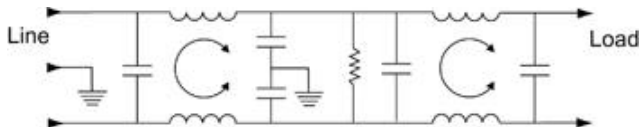


**UL Recognized  
CSA Certified  
VDE Approved**

### R Series

Corcom's dual T section RFI power line filters provide premium performance at moderate cost. They are well suited for low impedance loads where noisy RFI environments are present. They control pulsed, continuous and/or intermittent interference, insuring protection of your equipment from power line noise in addition to protecting the line from equipment noise. The R series dual T type provides low leakage current without deterioration of insertion loss characteristics and at a competitive cost. The ER models meet the very low leakage current requirements of VDE portable equipment, and (120 Volt) UL544 nonpatient medical equipment.

### Electrical Schematic

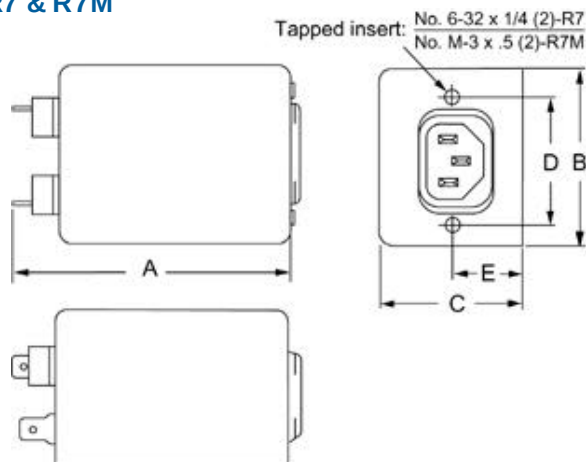


Resistor location for reference only.

### Case Style

Metric shown in italics.

### R7 & R7M



Typical dimensions

Terminals:  $\frac{.250}{6.35}$  Holes:  $\frac{.07}{1.8}$  Dia.(4) Slot:  $\frac{.07 \times .16}{1.8 \times 4.1}$



### Specifications

|                                              | VR Models       | ER Models        |
|----------------------------------------------|-----------------|------------------|
| Maximum leakage current, each line-to-ground |                 |                  |
| @ 120 VAC 60 Hz:                             | .4 mA           | .21 mA           |
| @ 250 VAC 50 Hz:                             | .7 mA           | .36 mA           |
| Hipot rating (one minute):                   |                 |                  |
| line-to-ground                               | 2250 VDC        |                  |
| line-to-line                                 | 1450 VDC        |                  |
| Operating frequency:                         | 50/60 Hz        |                  |
| Rated voltage:                               | 120/250 VAC     |                  |
| Rated current:                               | <b>@120 VAC</b> | <b>@ 250 VAC</b> |
| 1VR/1ER                                      | 1A              | 1A               |
| 2VR/2ER                                      | 2A              | 2A               |
| 3VR/3ER                                      | 3A              | 3A               |
| 5VR/5ER                                      | 5A              | 5A               |
| 10VR/10ER                                    | 10A             | 8A               |
| 20VR/20ER                                    | 20A             | 16A              |

**Minimum** insertion loss in dB:

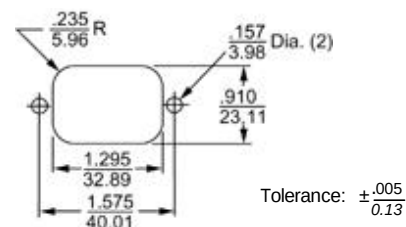
Line-to-ground in 50 ohm circuit

| Current<br>Rating | Frequency-MHz |    |    |    |    |    |
|-------------------|---------------|----|----|----|----|----|
|                   | .15           | .5 | 1  | 5  | 10 | 30 |
| <b>VR Models</b>  |               |    |    |    |    |    |
| 1A, 3A            | 30            | 65 | 65 | 65 | 65 | 65 |
| 2A, 5A, 10A, 20A  | 5             | 44 | 60 | 65 | 65 | 60 |
| <b>ER Models</b>  |               |    |    |    |    |    |
| 1A, 3A            | 25            | 60 | 65 | 65 | 65 | 65 |
| 2A, 5A, 10A, 20A  | 2             | 35 | 51 | 63 | 60 | 50 |

Line-to-line in 50 ohm circuit

| Current<br>Rating    | Frequency-MHz |    |    |    |    |    |
|----------------------|---------------|----|----|----|----|----|
|                      | .15           | .5 | 1  | 5  | 10 | 30 |
| <b>VR, ER Models</b> |               |    |    |    |    |    |
| 1A, 3A               | -             | -  | 65 | 60 | 54 | 46 |
| 2A, 5A, 10A, 20A     | -             | -  | 35 | 60 | 57 | 45 |

### Recommended Panel Cutout



Panel cutout (Back mount)

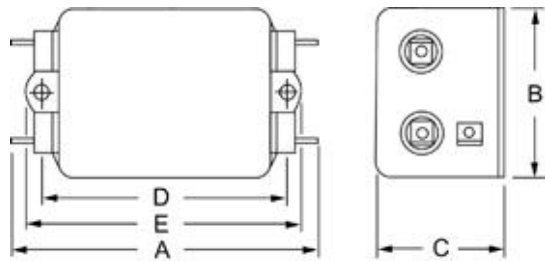
corcom

Libertyville, IL (847) 680-7400

## Case Styles

Metric shown in italics.

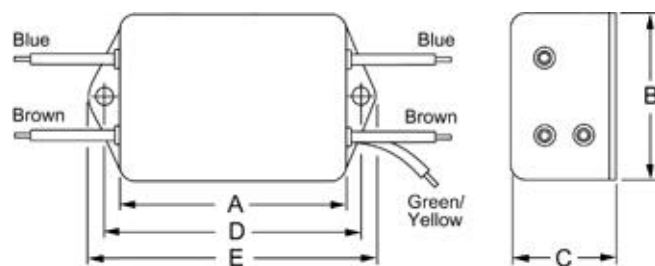
### R1 (Except 20 Amp)



Typical dimensions

Terminals:  $\frac{.250}{6.35}$  (5) Holes:  $\frac{.07}{1.8}$  Dia.(4) Slot:  $\frac{.07 \times .16}{1.8 \times 4.1}$  Mounting holes:  $\frac{.188}{4.78}$  Dia.(2)

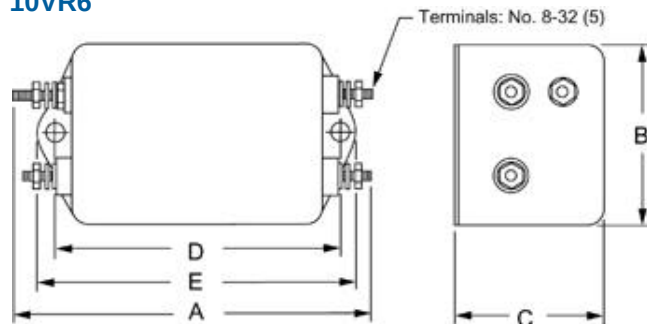
### R3



Typical dimensions

Wire leads:  $\frac{4.0}{101.6}$  Min. Mounting holes:  $\frac{.188}{4.78}$  Dia. (2)

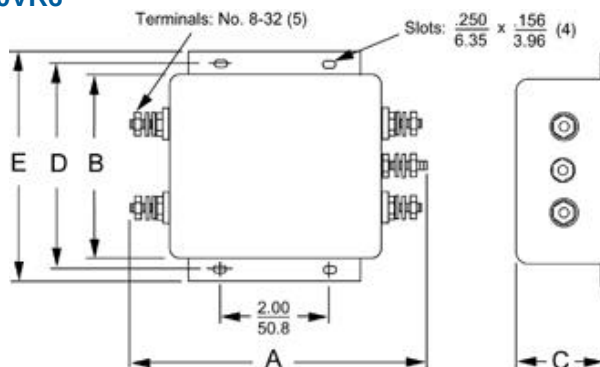
### 10VR6



Typical Dimensions

Mounting holes:  $\frac{.188}{4.78}$  Dia. (2) Torque  $18 \pm 2$  in.lb.

### 20VR6



Torque  $18 \pm 2$  in.lb.

Note: Same layout for 20VR1, except  $\frac{.250}{6.35}$  (5) Terminals replace screw terminals of 20VR6

## Case Dimensions

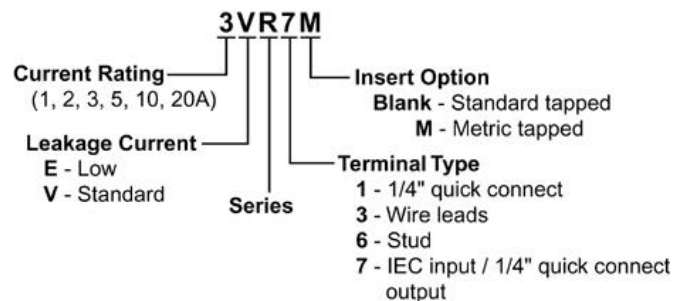
Metric shown in italics.

| Part No.      | A<br>(max) | B<br>(max) | C<br>(max) | D<br>$\pm .015$<br>$\pm .38$ | E<br>(max) |
|---------------|------------|------------|------------|------------------------------|------------|
| 1VR1, 1ER1    | 3.35       | 1.81       | 1.16       | 2.375                        | 2.78       |
| 2VR1, 2ER1    | 85.1       | 46.0       | 29.5       | 60.33                        | 70.6       |
| 1VR3, 1ER3    | 2.07       | 1.81       | 1.16       | 2.375                        | 2.78       |
| 2VR3, 2ER3    | 52.6       | 46.0       | 29.5       | 60.33                        | 70.6       |
| 3VR1, 3ER1    | 3.85       | 2.07       | 1.16       | 2.938                        | 3.35       |
| 5VR1, 5ER1    | 97.8       | 52.6       | 29.5       | 74.63                        | 85.1       |
| 3VR3, 3ER3    | 2.56       | 2.07       | 1.16       | 2.938                        | 3.35       |
| 5VR3, 5ER3    | 65.0       | 52.6       | 29.5       | 74.63                        | 85.1       |
| 3VR7, 3VR7M   | 4.33       | 2.25       | 1.28       | 1.575                        | 0.64 †     |
| 3ER7, 3ER7M   | 110.0      | 57.2       | 32.5       | 40.01                        | 16.3       |
| 5VR7, 5VR7M   | 4.33       | 2.25       | 1.28       | 1.575                        | 0.64 †     |
| 5ER7, 5ER7M   | 110.0      | 57.2       | 32.5       | 40.01                        | 16.3       |
| 10VR1, 10ER1  | 3.85       | 2.07       | 1.53       | 2.938                        | 3.35       |
|               | 97.8       | 52.6       | 38.9       | 74.63                        | 85.1       |
| 10VR3, 10ER3  | 2.56       | 2.07       | 1.53       | 2.938                        | 3.35       |
|               | 65.0       | 52.6       | 38.9       | 74.63                        | 85.1       |
| 10VR6         | 3.96       | 2.07       | 1.53       | 2.938                        | 3.35       |
|               | 100.6      | 52.6       | 38.9       | 74.63                        | 85.1       |
| 10VR7, 10VR7M | 4.33       | 2.25       | 1.53       | 1.575                        | 0.88 †     |
| 10ER7, 10ER7M | 110.0      | 57.2       | 38.9       | 40.01                        | 22.4       |
| 20VR1, 20ER1  | 5.23       | 3.37       | 1.53       | 3.75                         | 4.2        |
|               | 132.8      | 85.6       | 38.9       | 95.25                        | 106.7      |
| 20VR6         | 5.34       | 3.37       | 1.53       | 3.75                         | 4.2        |
|               | 135.6      | 85.6       | 38.9       | 95.25                        | 106.7      |

†  $\pm .02$   
 $\pm .5$

## Ordering Information

Consult your local Corcom sales representative for pricing.



## Available Part Numbers

|       |        |       |        |
|-------|--------|-------|--------|
| 1VR1  | 5VR7   | 1ER1  | 5ER3   |
| 1VR3  | 5VR7M  | 1ER3  | 5ER7   |
| 2VR1  | 10VR1  | 2ER1  | 5ER7M  |
| 2VR3  | 10VR3  | 2ER3  | 10ER1  |
| 3VR1  | 10VR6  | 3ER1  | 10ER3  |
| 3VR3  | 10VR7  | 3ER3  | 10ER7  |
| 3VR7  | 10VR7M | 3ER7  | 10ER7M |
| 3VR7M | 20VR1  | 3ER7M | 20ER1  |
| 5VR1  | 20VR6  | 5ER1  |        |
| 5VR3  |        |       |        |

## Line Cord

Line Cord No. GA400:

7 1/2 foot, 3-conductor line cord to mate with R7 models.