

# S Series

## Multipurpose Power Line RFI Filter for Emission Control and High-Noise Industrial Environments



UL Recognized  
CSA Certified  
VDE Approved

### S Series

The S series filters combine Corcom's successful line-to-ground interference rejection filters with additional circuitry designed to reduce line-to-line noise and transients.

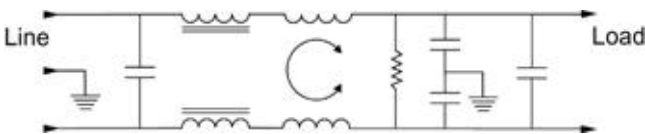
These filters feature an N = 2 ("L") line-to-ground impedance to common mode noise and an N = 3 ("Pi") differential mode impedance line-to-line. This series is designed for use when equipment impedance at RF frequencies is high.

These filters will protect equipment from malfunctions due to conducted interference coming into the equipment from the line, especially line-to-line noise and transients. They will also provide needed noise suppression to allow most equipment (including switch-mode power supplies) to meet FCC specifications for conducted emissions.

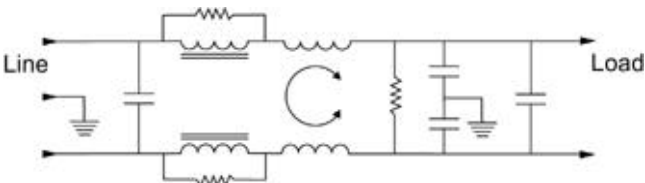
The S series is also effective to control emissions in equipment using SCR and T<sup>2</sup>L circuits, for compliance with FCC Part 15, Subpart J, and EN55022, Level A, down to 150kHz.

### Electrical Schematics

#### 3A, 6A, 10A



#### 20A



Resistor location for reference only.



20VS1



3A, 6A, 10A

### Specifications

Maximum leakage current, each  
line-to-ground @ 120 VAC 60 Hz: .4 mA  
@ 250 VAC 50 Hz: .7 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:	@ 120 VAC	@ 250 VAC
3VS	3A	2.5A
6VS	6A	5A
10VS	10A	8A
20VS	20A	16A

**Minimum** insertion loss in dB:  
Line-to-ground in 50 ohm circuit

Current Rating	Frequency—MHz							
	.15	.5	1	2	5	10	20	30
3A	15	27	35	40	32	44	47	47
6A	15	27	35	40	32	44	47	47
10A	15	27	35	40	32	44	47	47
20A	15	30	38	38	32	43	42	40

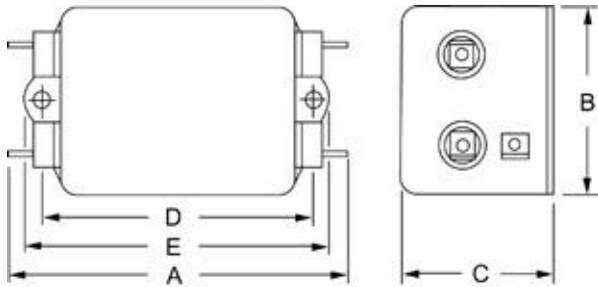
Line-to-line in 50 ohm circuit

Current Rating	Frequency—MHz								
	.15	.3	.5	1	2	5	10	20	30
3A	35	50	65	65	65	60	50	40	45
6A	35	50	65	65	65	60	45	48	48
10A	35	50	65	65	65	60	50	40	45
20A	35	50	65	65	65	60	45	48	48

## Case Styles

Metric shown in italics.

### 3A, 6A, 10A

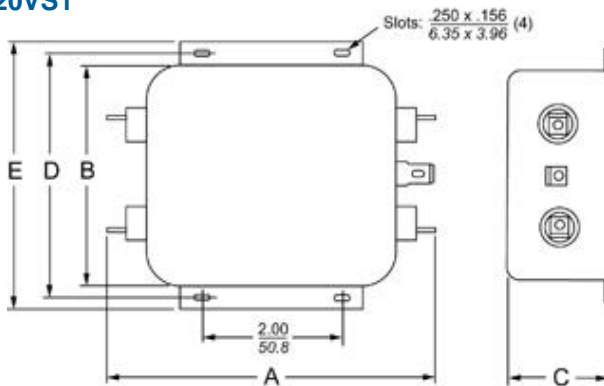


Typical dimensions

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)

### 20VS1

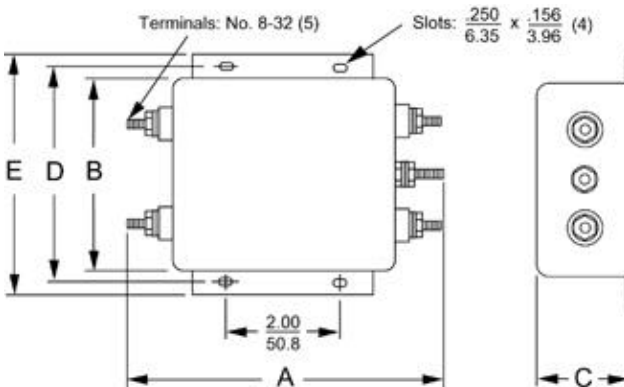


Typical dimensions

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:  $\frac{.25 \times .156}{6.35 \times 3.96}$  Dia. (4)

### 20VS6



Terminals: No. 8-32 (5) Mounting holes:  $\frac{.25 \times .156}{6.35 \times 3.96}$  (4)

Torque  $18 \pm 2$  in.lb.

## Case Dimensions

Metric shown in italics.

Part No.	A (max)	B (max)	C (max)	D $\pm .015$ $\pm .38$	E (max)
3VS1	$\frac{3.36}{85.3}$	$\frac{1.82}{46.2}$	$\frac{1.16}{29.5}$	$\frac{2.375}{60.33}$	$\frac{2.78}{70.6}$
6VS1	$\frac{3.86}{98.0}$	$\frac{2.08}{52.8}$	$\frac{1.53}{38.9}$	$\frac{2.938}{74.63}$	$\frac{3.34}{84.8}$
10VS1	$\frac{3.86}{98.0}$	$\frac{2.08}{52.8}$	$\frac{1.53}{38.9}$	$\frac{2.938}{74.63}$	$\frac{3.34}{84.8}$
20VS1	$\frac{5.23}{132.8}$	$\frac{3.38}{85.9}$	$\frac{1.53}{38.9}$	$\frac{3.75}{95.25}$	$\frac{4.2}{106.7}$
20VS6	$\frac{5.34}{135.6}$	$\frac{3.38}{85.9}$	$\frac{1.53}{38.9}$	$\frac{3.75}{95.25}$	$\frac{4.2}{106.7}$

## Ordering Information

Consult your local Corcom sales representative for pricing.

## Available Part Numbers

3VS1	10VS1
6VS1	20VS1
	20VS6