Q Series

Highest Performance RFI Filters for Switching Power Supply Emissions down to 10kHz

UL Recognized
CSA Certified
VDE Approved
SEV Approved*

Q Series

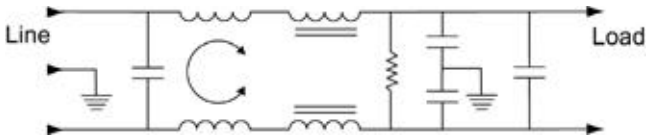
This series of RFI power line filters has been developed specifically for switching power supplies and is designed to be all the power line filtering needed to control conducted emissions *all the way down to 10kHz.* High attenuation is provided for both common mode and differential mode interference throughout the frequency range with no degradation of performance due to the large peak currents drawn by switching power supplies.

These filters are an ideal choice for applications that must meet emission limits below 150kHz, as well as the mandated limits above 150kHz. In most cases they will bring such equipment into compliance with the B-level limits of CISPR 22. They are also well suited for bringing ISM equipment (such as ultrasonic cleaners) into compliance with the limits of FCC Part 18, from 10kHz to 30MHz.

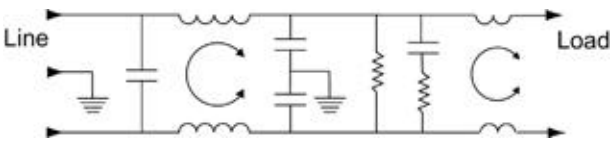
The EQ models meet the very low leakage current requirements of SEV, VDE portable equipment, and (120 Volt) UL544 nonpatient medical equipment. The VQ models offer higher common mode performance at the expense of higher leakage current, but still meet the leakage current limits of UL, CSA, and VDE nonportable equipment.

Electrical Schematics

3EQ & 3VQ Models

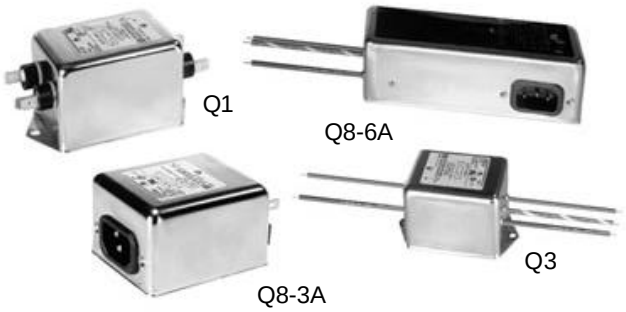


6EQ & 20EQ Models



Resistor location for reference only.

*Except 20A



Specifications

	VQ Models	EQ Models
Maximum leakage current, each line-to-ground		
@ 120 VAC 60 Hz (3A,20A):	.73 mA	.22 mA
@ 120 VAC 60 Hz (6A):	—	.29 mA
@ 250 VAC 50 Hz (3A,20A):	1.27 mA	.38 mA
@ 250 VAC 50 Hz (6A):	—	.51 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
3VQ/3EQ	3A	2A
6EQ	6A	5A
20EQ1/20VQ1	20A	20A

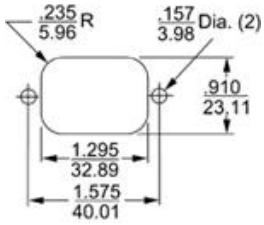
Minimum insertion loss in dB:
Line-to-ground in 50 ohm circuit

Current Rating	Frequency–MHz .01	.02	.05	.15	.5	1	5	10	30
3VQ	22	27	37	50	55	55	55	50	55
3EQ	22	27	36	47	47	43	45	45	45
6EQ	26	31	20	68	72	72	65	55	45
20EQ1	6	10	8	39	60	65	65	65	55
20VQ1	6	3	17	52	65	70	70	70	50

Line-to-line in 50 ohm circuit

Current Rating	Frequency–MHz .01	.02	.05	.15	.5	1	5	10	30
3VQ	1	17	42	65	75	75	60	65	65
3EQ	1	17	42	65	75	75	65	65	60
6EQ	6	10	43	70	75	75	65	55	55
20EQ1	15	20	20	46	65	70	65	60	60
20VQ1	15	20	20	46	65	70	65	60	60

Recommended Panel Cutout

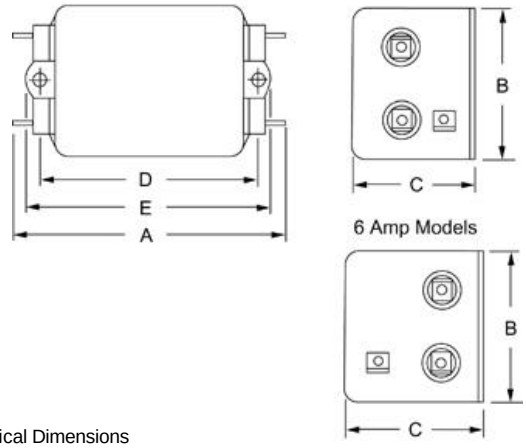


Panel cutout (Back mount)
Tolerance: $\pm \frac{.005}{.013}$

Case Styles

Metric shown in italics.

Q1

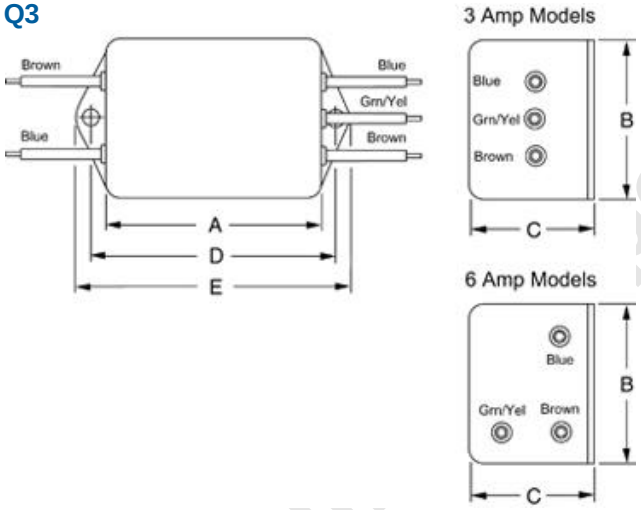


Typical Dimensions

Terminals: .250 / *6.35* (5) Holes: .07 / *1.8* Dia.(4) Slot: .07 x .16 / *1.8 x 4.1*

Mounting holes: .188 / *4.78* Dia.(2)

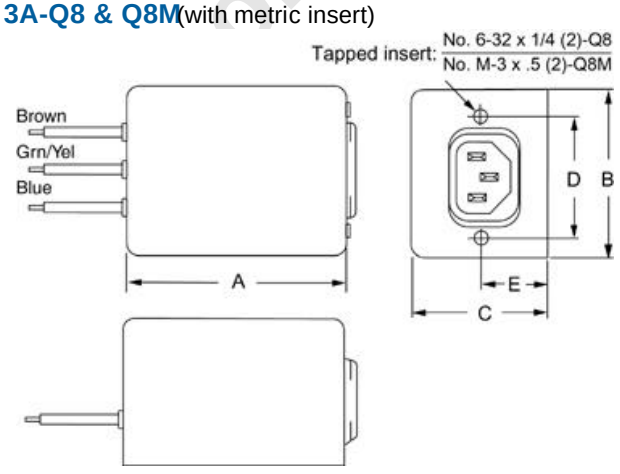
Q3



Typical Dimensions

Wire Leads: 4.0 / *101.6* Min. Mounting holes: .188 / *4.78* Dia.(2)

3A-Q8 & Q8M (with metric insert)



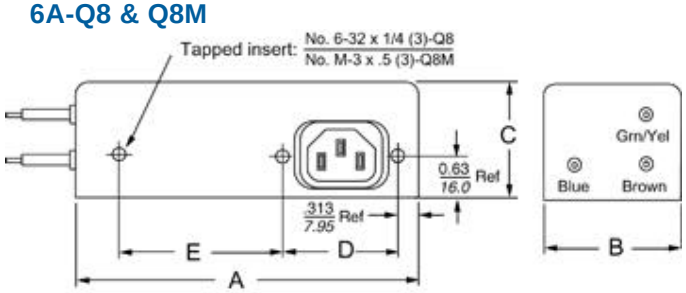
Typical dimensions

Wire leads: 6.0 / *152.4* Min.

Case Style

Metric shown in italics.

6A-Q8 & Q8M



Case Dimensions

Metric shown in italics.

Part No.	A (max)	B (max)	C (max)	D ± .015 / ± .38	E (max)
3VQ1, 3EQ1	3.85 / *97.8*	2.07 / *52.6*	1.78 / *45.2*	2.938 / *74.63*	3.34 / *84.8*
3VQ3, 3EQ3	2.56 / *65.0*	2.07 / *52.6*	1.78 / *45.2*	2.983 / *74.63*	3.34 / *84.8*
3VQ8, 3VQ8M 3EQ8, 3EQ8M	3.07 / *78.0*	2.25 / *57.2*	1.78 / *45.2*	1.575 / *40.01*	0.63 / *16.0* †
6EQ1	4.98 / *126.5*	2.27 / *57.7*	1.8 / *45.7*	4.063 / *103.2*	4.47 / *113.5*
6EQ3	3.69 / *93.7*	2.27 / *57.7*	1.8 / *45.7*	4.063 / *103.2*	4.47 / *113.5*
6EQ8, 6EQ8M	5.47 / *138.9*	2.07 / *52.6*	1.78 / *45.2*	1.575 / *40.01*	2.7 / *68.6*
20EQ1,20VQ1	6.66 / *168.1*	2.07 / *52.6*	2.28 / *57.9*	5.625 / *142.9*	6.03 / *153.2* †

† ±.02 / ±.5

Ordering Information

Consult your local Corcom sales representative for pricing.

Available Part Numbers

3EQ1	6EQ1	3VQ1
3EQ3	6EQ3	3VQ3
3EQ8	6EQ8	3VQ8
3EQ8M	6EQ8M	3VQ8M
	20EQ1	20VQ1

Line Cord

Line Cord No. GA400:
7 1/2 foot, 3-conductor line cord to mate with Q8 models.