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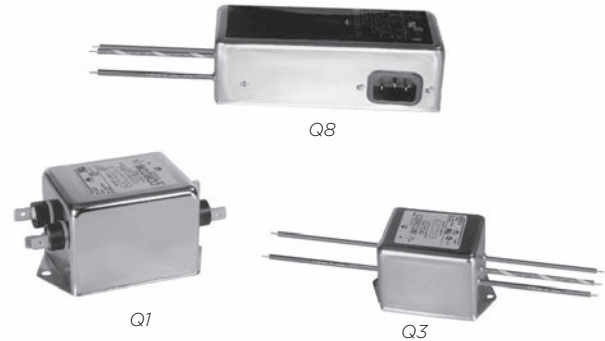


**Highest Performance RFI Filters for Switching Power Supplies**

# Q Series



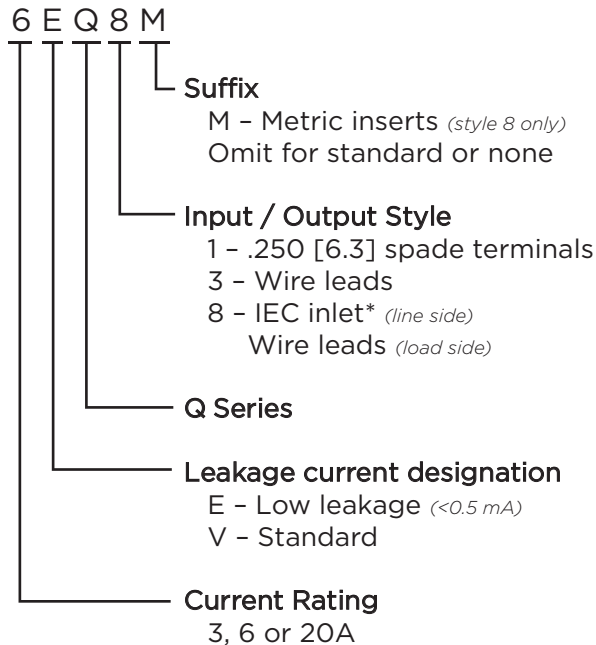
UL Recognized  
CSA Certified  
VDE Approved



## Q Series

- Specifically developed for switching power supplies
- High attenuation for common and differential mode interference
- Effective from 10kHz to 30MHz
- Optimized for attenuation and size
- 3 or 6A versions available with IEC inlet

## Ordering Information



\*IEC 60320-1 C14 inlet mates with C13 connector

## Specifications

**Maximum leakage current each Line to Ground:**

	VQ Models	EQ Models
<b>3 &amp; 20A</b>		
@120 VAC 60 Hz:	.73 mA	.22 mA
@250 VAC 50 Hz:	1.27 mA	.38 mA
<b>6A</b>		
@120 VAC 60 Hz:	—	.29 mA
@250 VAC 50 Hz:	—	.51 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:** 3 to 20A

**Operating Ambient Temperature Range**

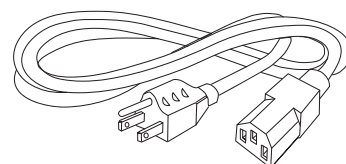
(at rated current  $I_r$ ): -10°C to +40°C  
In an ambient temperature ( $T_a$ ) higher than +40°C the maximum operating current ( $I_o$ ) is calculated as follows:  $I_o = I_r \sqrt{(85-T_a)/45}$

## Available Part Numbers

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

## Accessories

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

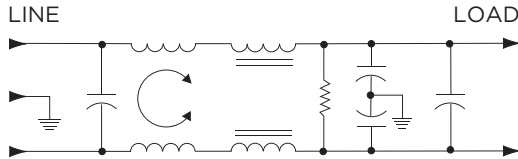


**Highest Performance RFI Filters for Switching Power Supplies** *(continued)*

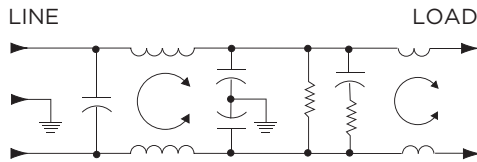
# Q Series

## Electrical Schematics

### 3A

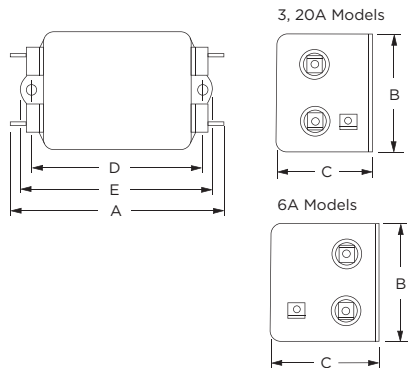


### 6, 20A



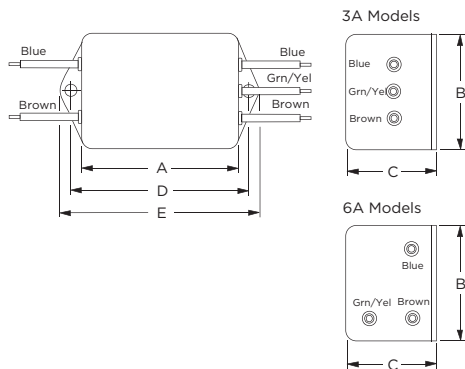
## Case Styles

### Q1



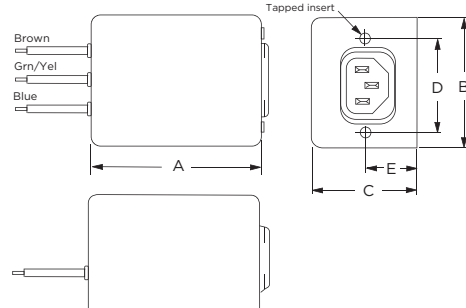
Typical Dimensions:  
 Line/Load Terminals (4): .250 [6.3] with .07 [1.8] Dia. hole  
 Ground Terminal (1): .250 [6.3] with .07 x .16 [1.8 x 3.8] slot  
 Mounting Holes (2): .188 [4.78] Dia.

### Q3



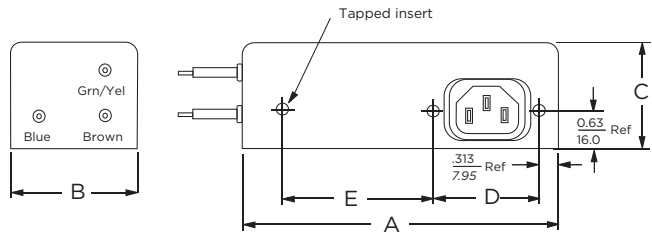
Typical Dimensions:  
 Wire Leads (5): 4.0 [101.6] Min., 18AWG  
 Mounting Holes (2): .188 [4.78] Dia.

### Q8, Q8M (3A)



Typical Dimensions:  
 Wire Leads (3): 6.0 [152.4] Min., 18AWG  
 Line Inlet (1): IEC 60320-1 C14  
 Q8 Tapped Inserts (2): 6-32 x 1/4  
 Q8M Tapped Inserts (2): M3 x .5

### Q8, Q8M (6A)



Typical Dimensions:  
 Wire Leads (3): 6.0 [152.4] Min., 18AWG  
 Line Inlet (1): IEC 60320-1 C14  
 Q8 Tapped Inserts (3): 6-32 x 1/4  
 Q8M Tapped Inserts (3): M3 x .5

## Case Dimensions

Part No.	A (max)	B (max)	C (max)	D $\pm .015$ $\pm .38$	E (max)
3VQ1, 3EQ1	3.85	2.07	1.78	2.938	3.34
	97.8	52.6	45.2	74.63	84.8
3VQ3, 3EQ3	2.56	2.07	1.78	2.938	3.34
	65.0	52.6	45.2	74.63	84.8
3VQ8/8M, 3EQ8/8M	3.07	2.25	1.78	1.575	0.63*
	78.0	57.2	45.2	40.01	16.0*
6EQ1	4.98	2.27	1.80	4.063	4.47
	126.5	57.7	45.7	103.2	113.5
6EQ3	3.69	2.27	1.80	4.063	4.47
	93.7	57.7	45.7	103.2	113.5
6EQ8/8M	5.47	2.07	1.78	1.575	2.70
	138.9	52.6	45.2	40.01	68.0
20EQ1, 20VQ1	6.66	2.07	2.28	5.625	6.03*
	168.1	52.6	57.9	142.9	153.2*

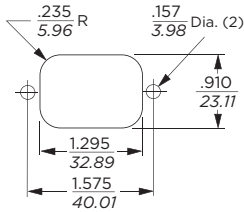
\*±0.02 [0.5]



**Highest Performance RFI Filters for Switching Power Supplies** *(continued)*

# Q Series

## Recommended Panel Cutout



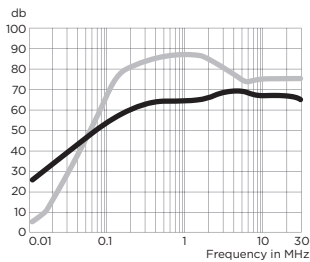
Tolerance  $\pm .005$  [0.13]

## Performance Data

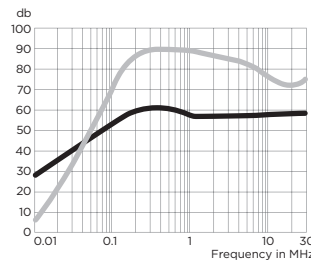
### Typical Insertion Loss

Measured in closed 50 Ohm system

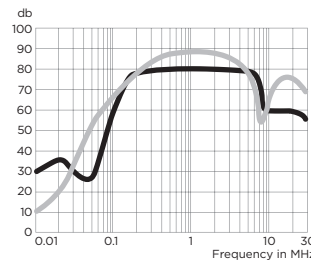
#### 3VQ



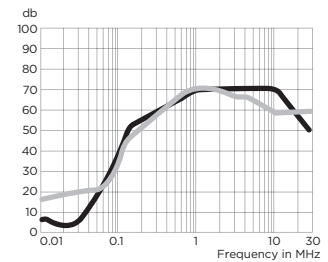
#### 3EQ



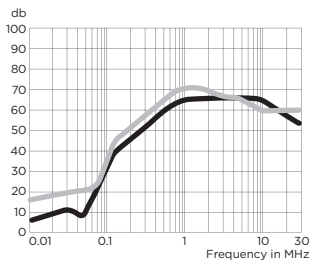
#### 6EQ



#### 20VQ



#### 20EQ



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

## Minimum Insertion Loss

Common Mode / Asymmetrical (Line to Ground)

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	65	65
20EQ	6	10	8	39	60	65	65	65	55
20VQ	6	3	17	52	65	70	70	70	70

Differential Mode / Symmetrical (Line to Line)

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
20EQ	15	20	20	46	65	70	65	60	60
20VQ	15	20	20	46	65	70	65	60	60