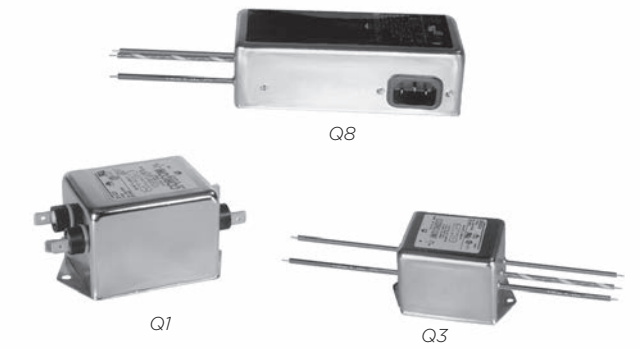
Highest Performance RFI Filters for Switching Power Supplies

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

6 E Q 8 M

- **Suffix**
  - M – Metric inserts *(style 8 only)*
  - Omit for standard or none
- **Input / Output Style**
  - 1 – .250 [6.3] spade terminals
  - 3 – Wire leads
  - 8 – IEC inlet* *(line side)*
    Wire leads *(load side)*
- **Q Series**
- **Leakage current designation**
  - E – Low leakage *(<0.5 mA)*
  - V – Standard
- **Current Rating**
  - 3, 6 or 20A

*IEC 60320-1 C14 inlet mates with C13 connector

Specifications

Maximum leakage current each Line to Ground:

3 & 20A	VQ Models	EQ Models
@120 VAC 60 Hz:	.73 mA	.22 mA
@250 VAC 50 Hz:	1.27 mA	.38 mA
6A		
@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

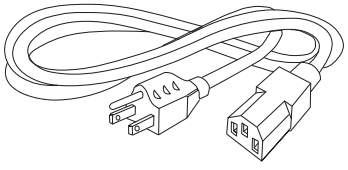
In an ambient temperature (T_a) higher than +40°C the maximum operating current (I_o) is calculated as follows: $I_o = I_r \sqrt{(85-Ta)/45}$

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



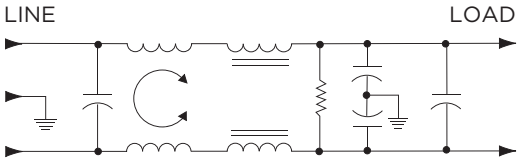
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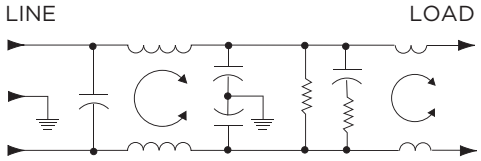
Q Series

Electrical Schematics

3A

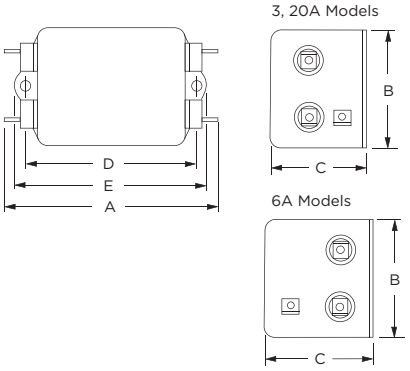


6, 20A



Case Styles

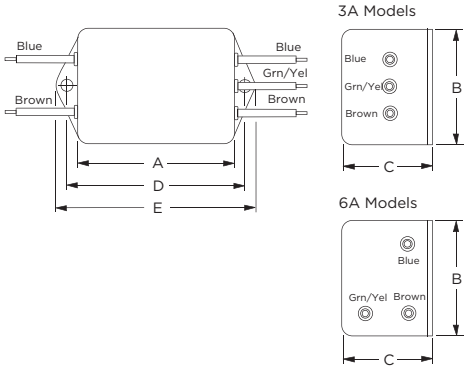
Q1



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.

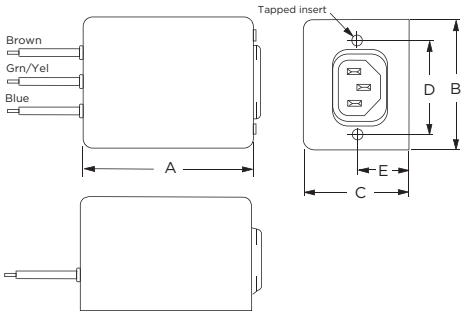
Q3



Typical Dimensions:

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

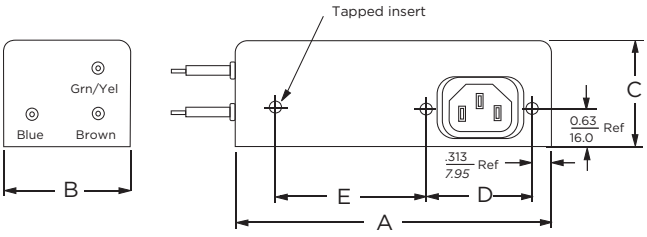
Q8, Q8M (3A)



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 ± .015 / ± .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**

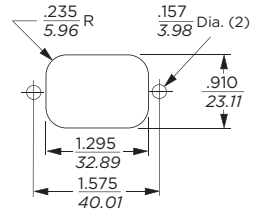
*±0.02 [*0.5*]

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Q Series

Recommended Panel Cutout



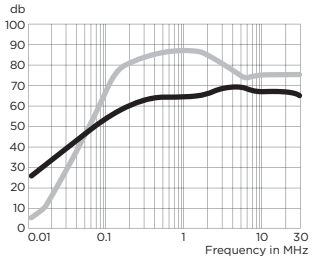
Tolerance ± .005 [0.13]

Performance Data

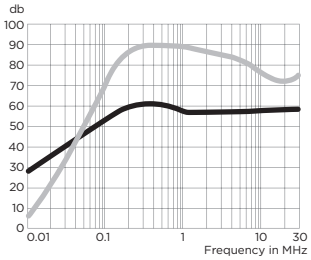
Typical Insertion Loss

Measured in closed 50 Ohm system

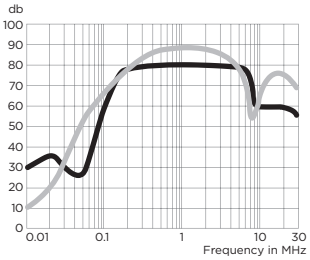
3VQ



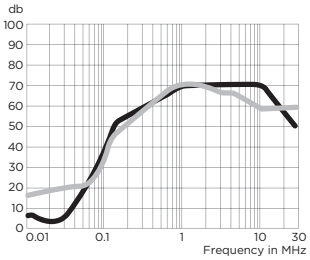
3EQ



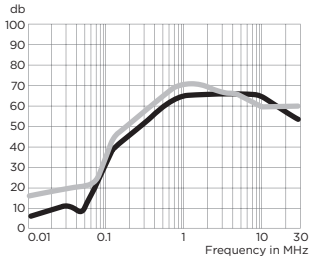
6EQ



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

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