

**Highest Performance RFI Filters for Medical Equipment**

# HQ Series



**UL Recognized  
CSA Certified  
VDE Approved**



## HQ Series

The HQ series power line filters provide the highest available common-mode and differential-mode attenuation to RFI noise in the frequency range from 10kHz to 30MHz, for IEC 60601 and UL2601 patient-connected equipment, as well as all other electronic equipment that cannot tolerate any leakage current.

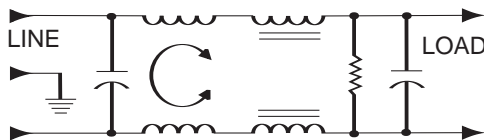
They are a size- and more cost-effective solution to the problem of meeting both medical leakage current limits and conducted emissions limits in equipment with high noise sources (such as switching power supplies). HQ series filters can help meet the following Conducted Emissions standards:

- European Normalized Standards based on EN55022, Level B
- FCC Part 15, Computing Devices, Class B.
- FCC Part 18, ISM Equipment, Industrial and Consumer.

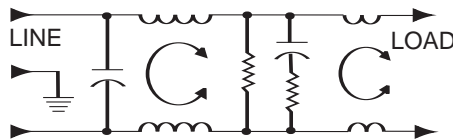
For more information on UL2601, see Appendix C.

## Electrical Schematics

### 3 Amp Models



### 6 Amp Models



Resistor location for reference only.

## Specifications

<b>Maximum leakage current,each line-to-ground</b>	
@ 120 VAC 60 Hz:	2μA
@ 250 VAC 50 Hz:	5μA
<b>Hipot rating (one minute):</b>	
line-to-ground	2250 VDC
line-to-line	1450 VDC
<b>Operating frequency:</b>	50/60 Hz
<b>Rated voltage (max.):</b>	250 VAC
<b>Rated current:</b>	
3EHQ	3A
6EHQ	6A
<b>Maximum rated current peaks:</b>	
3EHQ	10A
6EHQ	18A
<b>Minimum insertion loss in dB:</b>	
Line-to-ground in 50 ohm circuit	

Current Rating	Frequency—MHz											
	.01	.02	.05	.15	.5	1	2	5	7	10	20	30
3A	19	24	32	44	44	40	38	28	25	22	13	10
6A	24	29	39	42	28	35	36	30	30	24	16	15

Line-to-line in 50 ohm circuit

Current Rating	Frequency—MHz											
	.01	.02	.05	.15	.5	1	2	5	7	10	20	30
3A	1	18	43	68	75	75	72	70	66	65	60	60
6A	6	10	43	70	75	75	75	65	50	55	50	40

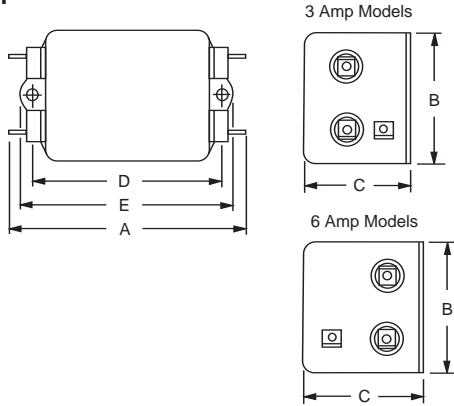
## Line Cord

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

# HQ Series

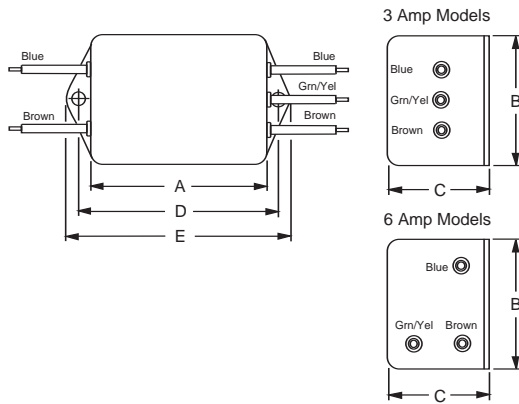
## Case Styles

### HQ1



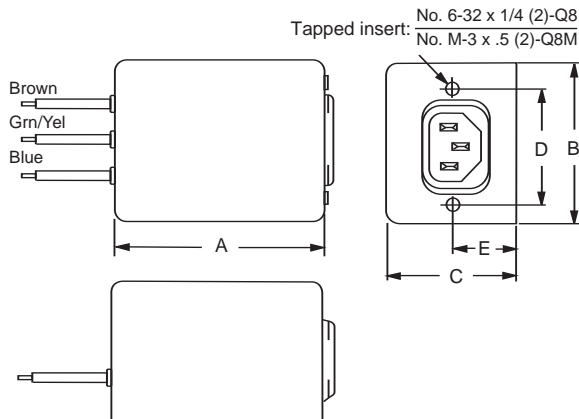
Typical dimensions:  
 Terminals: .250 [6.35] (5) Holes: .07 [1.8] Dia.(4) Slot: .07 x .16 [1.8 x 4.1]  
 Mounting holes: .188 [4.78] Dia. (2)

### HQ3



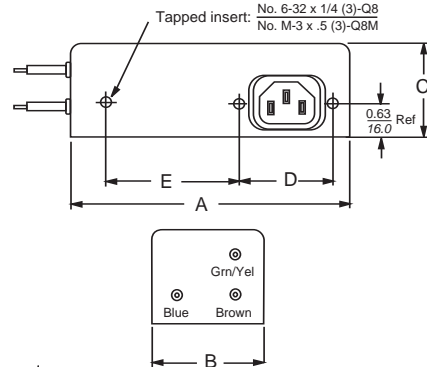
Typical dimensions:  
 Wire leads: 4.0 [101.6] Min. Mounting holes: .188 [4.78] Dia. (2)

### 3EHQ8 & 3EHQ8M (with metric insert)



Typical dimensions:  
 Wire leads: 6.0 [152.4] Min.

### 6EHQ8 & 6EHQ8M (with metric insert)



Typical dimensions:  
 Wire leads: 6.0 [152.4] Min.

## Case Dimensions

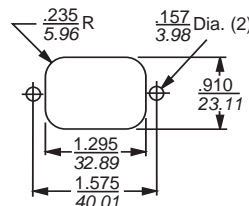
Part No.	A (max)	B (max)	C (max)	D $\pm .015$ $\pm .38$	E (max)
3EHQ1	<b>3.85</b> 97.8	<b>2.07</b> 52.6	<b>1.78</b> 45.2	<b>2.938</b> 74.63	<b>3.34</b> 84.8
3EHQ3	<b>2.56</b> 65.0	<b>2.07</b> 52.6	<b>1.78</b> 45.2	<b>2.938</b> 74.63	<b>3.34</b> 84.8
3EHQ8, 3EHQ8M	<b>3.07</b> 78.0	<b>2.25</b> 57.2	<b>1.78</b> 45.2	<b>1.575</b> 40.01	<b>0.63</b> 16.0 †
6EHQ1	<b>4.98</b> 126.5	<b>2.27</b> 57.7	<b>1.8</b> 45.7	<b>4.063</b> 103.2	<b>4.47</b> 113.5
6EHQ3	<b>3.69</b> 93.7	<b>2.27</b> 57.7	<b>1.8</b> 45.7	<b>4.063</b> 103.2	<b>4.47</b> 113.5
6EHQ8, 6EHQ8M	<b>5.47</b> 138.9	<b>2.07</b> 52.6	<b>1.78</b> 45.2	<b>1.575</b> 40.01	<b>2.7</b> 68.6 †

†  $\pm .02$  [ $\pm .5$ ]

## Part Numbers

3EHQ1 3EHQ3 3EHQ8 3EHQ8M	6EHQ1 6EHQ3 6EHQ8 6EHQ8M
Line Cord No.	GA400

## Recommended Panel Cutouts



Panel Cutout (back mount)  
 Tolerance  $\pm .005$  [0.13]