

DC Series

RFI Power Line Filters Line Filters for DC Applications



UL Recognized*
CSA Certified*
TUV Approved*

* Approvals pending

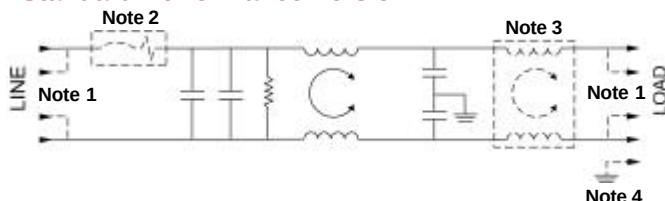
DC Series

The DC series filters were designed as general purpose line filters for DC applications. They are available with or without circuit breakers for extra protection. They will also be available soon with feed-through capacitors for added performance (contact factory for more information). The DC series is designed to comply with UL 1283, CSA 22.2 No. 8 and EN60950.

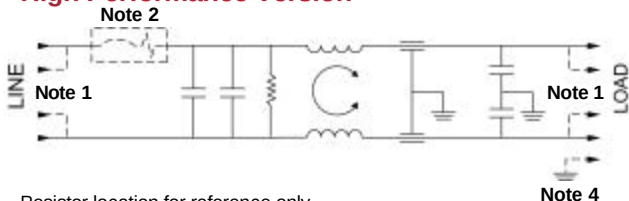
The DC series was developed in response to the increasing demand for DC filtering in the telecom-datacom market. These filters are generally used in central office equipment like switches, routers, and hubs to clean up the 48 VDC power, but are not exclusive to that equipment. They can also be used at the primary input of the DC power supply.

Electrical Schematics

Standard Performance Version



High Performance Version



Resistor location for reference only.

Note 1: Depicts style 6 terminals are redundant.

Note 2: Depicts optional circuit breaker.

Note 3: For 100 & 125A versions delete second coil.

Note 4: Depicts style 10 terminal versions have separate ground stud.



Specifications

Hipot rating (one minute):

line-to-ground 2250VDC

line-to-line 1450VDC

Operating Voltage (max): 80VDC

Operating ambient temp. range: -10°C to 55°C

In an ambient, T_o , higher than 55°C, the maximum operating current, I_o , is as follows:

$$I_o = I_r \sqrt{\frac{85 - T_o}{30}}$$

Minimum insertion loss in dB.*

Line-to-line in 50 ohm circuit

Current Rating	Frequency-MHz									
	.01	.05	.1	.15	.5	1	3	5	10	30
15A	-	1	12	20	41	45	61	63	47	39
30A	-	4	15	23	47	59	64	56	44	36
60A	-	-	9	17	29	40	59	50	39	34
100A	-	-	10	18	38	39	53	50	35	21
125A	-	1	12	20	41	45	61	63	47	39

Line-to-ground in 50 ohm circuit

Current Rating	Frequency-MHz									
	.01	.05	.1	.15	.5	1	3	5	10	30
15A	7	22	27	30	30	36	56	49	38	31
30A	7	22	28	31	32	59	56	51	41	28
60A	15	30	36	40	40	35	60	51	39	32
100A	14	29	35	39	33	30	53	53	41	30
125A	7	22	27	30	30	36	56	49	38	31

* Contact factory for insertion loss data on high performance versions.

Series DC

Terminations

Style 6 (15, 30 & 60A)

Supplied with #10-32 redundant studs - 0.625" spacing.

Style 6 (100 & 125A)

Supplied with 1/4-20 redundant studs - 0.75" spacing

Style 10 (15 & 30A)

Phoenix Contact P/N VDFK4

Accepts 12 AWG stranded wire

Torque Spec: 5.5 - 7.0 in-lb.

Ground Stud 8-32

Style 10 (60A)

Phoenix Contact P/N HDFK 16-VP

Accepts 6 AWG stranded wire

Torque Spec: 17.7 - 21.2 in-lb.

Ground Stud 10-32

Style 10 (100A)

Phoenix Contact P/N HDFK 25-VP

Accepts 4 AWG stranded wire

Torque Spec: 35.4 - 39.9 in-lb.

Ground Stud 1/4 - 20

Style 10 (125A)

Phoenix Contact P/N HDFK 50-VP

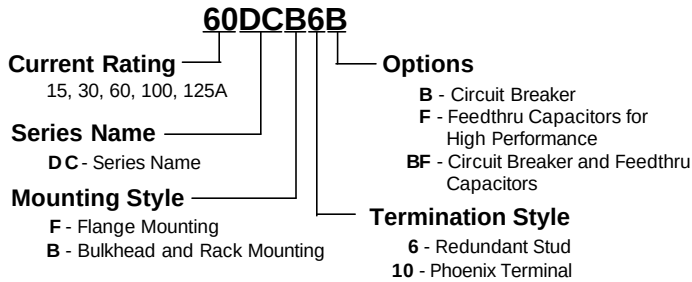
Accepts 1 AWG stranded wire

Torque Spec: 35.4 - 39.9 in-lb.

Ground Stud 1/4 - 20

Ordering Information

Consult your local Corcom sales representative for pricing



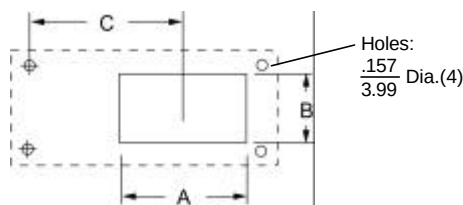
Available Part Numbers

15DCF6	15DCB6B	15DCF10	15DCB10B
30DCF6	30DCB6B	30DCF10	30DCB10B
60DCF6	60DCB6B	60DCF10	60DCB10B
100DCF6	15DCB6F	100DCF10	15DCB10F
125DCF6	30DCB6F	125DCF10	30DCB10F
15DCF6B	60DCB6F	15DCF10B	60DCB10F
30DCF6B	100DCB6F	30DCF10B	100DCB10F
60DCF6B	125DCB6F	60DCF10B	125DCB10F
15DCB6	15DCB6BF	15DCB10	15DCB10BF
30DCB6	30DCB6BF	30DCB10	30DCB10BF
60DCB6	60DCB6BF	60DCB10	60DCB10BF
100DCB6		100DCB10	
125DCB6		125DCB10	

Contact factory for availability of 100 & 125 amp circuit breaker versions.

Recommended Panel Cutouts

Fig. 1



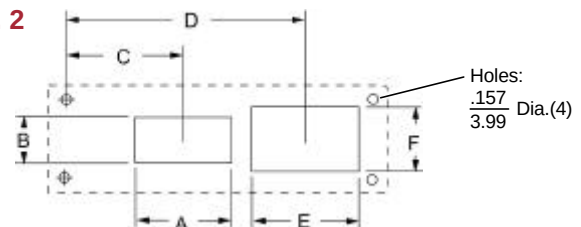
Cutout Dimensions

Metric shown in italics.

Part Number	A	B	C	D	E	F	Fig.
15DCB6	1.375 34.93	1.249 31.72	3.472 88.19				1
15DCB6B	1.449 36.80	0.756 19.20	1.308 33.22	3.472 88.19	1.375 34.93	1.249 31.72	2
15DCB10	0.781 19.84	1.218 30.94	3.472 88.19				1
15DCB10B	1.449 36.80	0.756 19.20	1.308 33.22	3.472 88.19	1.218 30.94	0.781 19.84	2
15DCF6B	1.449 36.80	0.756 19.20	1.308 33.22	3.472 88.19	1.375 34.93	1.249 31.72	2
15DCF10B	1.449 36.80	0.756 19.20	1.308 33.22	3.472 88.19	1.218 30.94	0.781 19.84	2
30DCB6	1.375 34.93	1.249 31.72	3.472 88.19				1
30DCB6B	1.449 36.80	0.756 19.20	1.308 33.22	3.472 88.19	1.375 34.93	1.249 31.72	2
30DCB10	0.781 19.84	1.218 30.94	3.472 88.19				1
30DCB10B	1.449 36.80	0.756 19.20	1.308 33.22	3.472 88.19	1.218 30.94	0.781 19.84	2
30DCF6B	1.449 36.80	0.756 19.20	1.308 33.22	3.472 88.19	1.375 34.93	1.249 31.72	2
30DCF10B	1.449 36.80	0.756 19.20	1.308 33.22	3.472 88.19	1.218 30.94	0.781 19.84	2
60DCB6	1.375 34.93	1.249 31.72	3.472 88.19				1
60DCB6B	1.449 36.80	0.756 19.20	1.308 33.22	3.472 88.19	1.375 34.93	1.249 31.72	2
60DCB10	1.005 25.53	1.635 41.53	3.462 87.93				1
60DCB10B	1.449 36.80	0.756 19.20	1.308 33.22	3.462 87.93	1.005 25.53	1.635 41.53	2
60DCF6B	1.449 36.80	0.756 19.20	1.308 33.22	3.472 88.19	1.375 34.93	1.249 31.72	2
60DCF10B	1.449 36.80	0.756 19.20	1.308 33.22	3.462 87.93	1.005 25.53	1.635 41.53	2
100DCB6	1.700 43.18	1.549 39.34	3.221 81.81				1
100DCB10	1.281 32.54	2.000 50.80	2.244 57.00				1
125DCB6	1.700 43.18	1.549 39.34	3.221 81.81				1
125DCB10	1.562 39.67	2.188 55.58	2.180 55.37				1

Recommended Panel Cutouts

Fig. 2

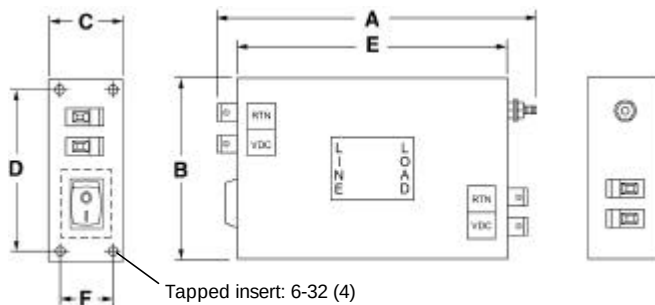


DC Series

Case Style

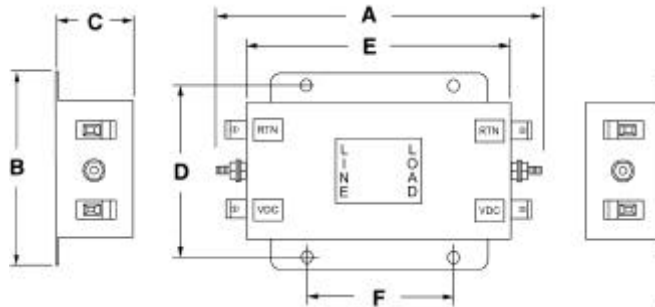
Metric shown in italics.

Fig. 3



Note: Delete circuit breaker for DCB10 models

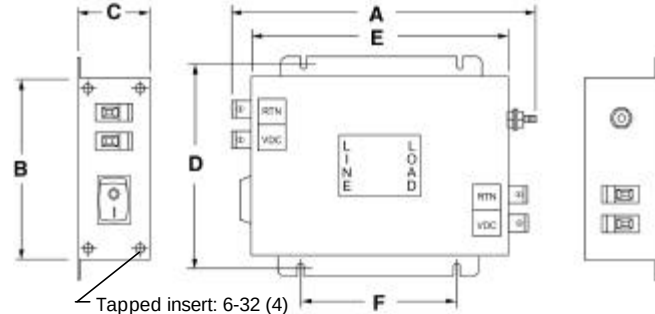
Fig. 4



Typical dimensions

Mounting holes: $\frac{.156 \times .203}{4.0 \times 5.2}$ (4)

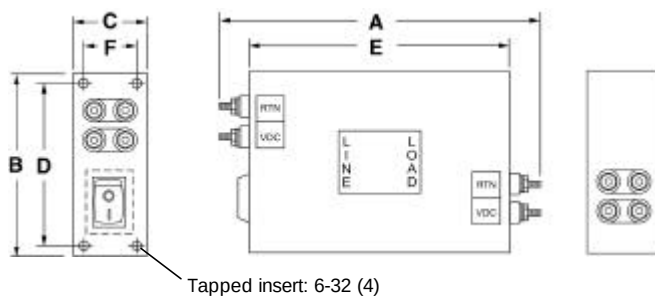
Fig. 5



Typical dimensions

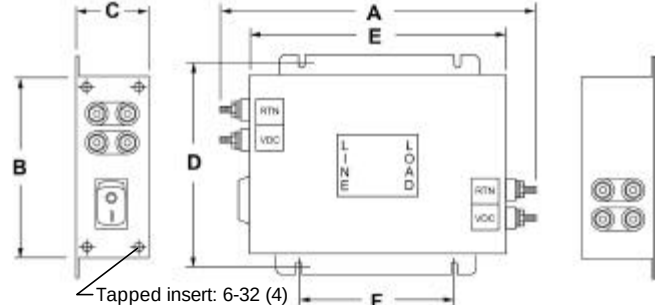
Mounting slots: $\frac{.260 \times .39}{6.6 \times 9.9}$ (4)

Fig. 6



Note: Delete circuit breaker for DCB6 models

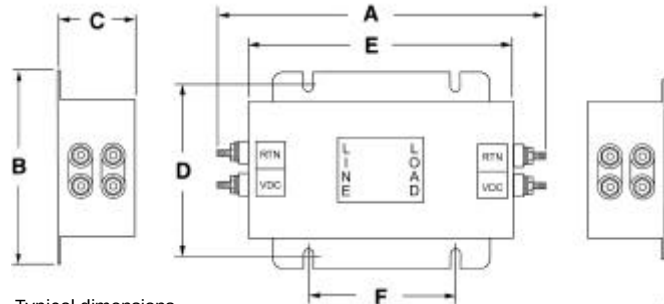
Fig. 7



Typical dimensions

Mounting slots: $\frac{.260 \times .39}{6.6 \times 9.9}$ (4)

Fig. 8

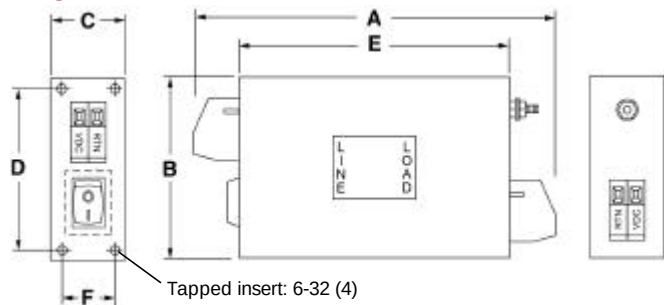


Typical dimensions

Mounting slots: $\frac{.260 \times .39}{6.6 \times 9.9}$ (4)

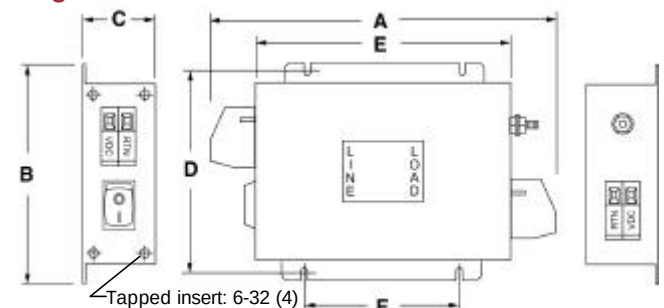
Note: 15DCF6 & 30DCF6 versions come with mounting holes in place of mounting slots.

Fig. 9



Note: Delete circuit breaker for DCB10 models

Fig. 10



Typical dimensions

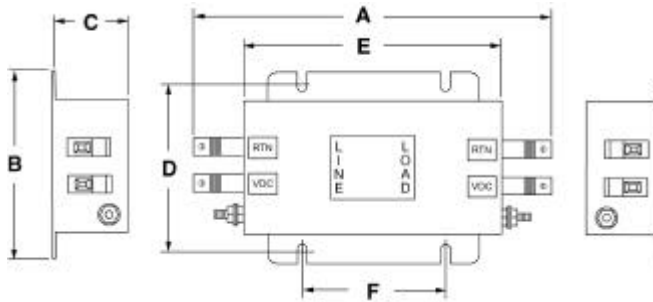
Mounting slots: $\frac{.260 \times .39}{6.6 \times 9.9}$ (4)

Series DC

Case Style

Metric shown in italics.

Fig. 11



Typical dimensions

Mounting slots: $\frac{260}{6.6} \times \frac{39}{9.9}$ (4)

Case Dimensions

Metric shown in italics.

Part Number	A (max)	B (max)	C (max)	D (max)	E (max)	F (max)	Fig.
15DCB6	<u>5.66</u> 143.8	<u>5.06</u> 128.5	<u>1.46</u> 37.0	<u>4.500</u> 114.30	<u>4.06</u> 103.1	<u>0.950</u> 24.13	6
15DCB6B	<u>7.82</u> 198.6	<u>5.06</u> 128.5	<u>1.46</u> 37.0	<u>4.500</u> 114.30	<u>6.06</u> 153.9	<u>0.950</u> 24.13	6
15DCB10	<u>4.88</u> 123.8	<u>5.06</u> 128.5	<u>1.46</u> 37.0	<u>4.500</u> 114.30	<u>4.06</u> 103.1	<u>0.950</u> 24.13	3
15DCB10B	<u>7.06</u> 179.3	<u>5.06</u> 128.5	<u>1.46</u> 37.0	<u>4.500</u> 114.30	<u>6.06</u> 153.9	<u>0.950</u> 24.13	3
15DCF6	<u>5.33</u> 135.4	<u>3.10</u> 78.7	<u>1.78</u> 45.2	<u>2.677</u> 68.00	<u>3.70</u> 94.0	<u>2.000</u> 50.80	8
15DCF6B	<u>7.69</u> 195.3	<u>5.06</u> 128.5	<u>1.46</u> 37.0	<u>5.740</u> 145.80	<u>6.06</u> 153.9	<u>3.520</u> 89.41	7
15DCF10	<u>4.60</u> 116.8	<u>3.10</u> 78.7	<u>1.78</u> 45.2	<u>2.677</u> 68.0	<u>3.70</u> 94.0	<u>2.000</u> 50.80	4
15DCF10B	<u>7.06</u> 179.3	<u>5.06</u> 128.5	<u>1.46</u> 37.0	<u>5.740</u> 145.80	<u>6.06</u> 153.9	<u>3.520</u> 89.41	5
30DCB6	<u>7.69</u> 195.3	<u>5.06</u> 128.5	<u>1.46</u> 37.0	<u>4.500</u> 114.30	<u>6.06</u> 153.9	<u>0.950</u> 24.13	6
30DCB6B	<u>8.69</u> 220.7	<u>5.06</u> 128.5	<u>1.46</u> 37.0	<u>4.500</u> 114.30	<u>7.06</u> 179.3	<u>0.950</u> 24.13	6
30DCB10	<u>6.88</u> 174.6	<u>5.06</u> 128.5	<u>1.46</u> 37.0	<u>4.500</u> 114.30	<u>6.06</u> 153.9	<u>0.950</u> 24.13	3
30DCB10B	<u>8.06</u> 204.7	<u>5.06</u> 128.5	<u>1.46</u> 37.0	<u>4.500</u> 114.30	<u>7.06</u> 179.3	<u>0.950</u> 24.13	3
30DCF6	<u>6.19</u> 157.2	<u>3.96</u> 100.6	<u>2.18</u> 55.4	<u>3.500</u> 88.90	<u>4.56</u> 115.8	<u>2.000</u> 50.80	8
30DCF6B	<u>8.69</u> 220.7	<u>5.00</u> 127.0	<u>1.46</u> 37.0	<u>5.740</u> 145.80	<u>7.06</u> 179.3	<u>4.520</u> 114.81	7
30DCF10	<u>5.95</u> 151.1	<u>3.96</u> 100.6	<u>2.18</u> 55.4	<u>3.500</u> 88.90	<u>4.56</u> 115.8	<u>2.000</u> 50.80	4
30DCF10B	<u>8.06</u> 204.7	<u>5.06</u> 128.5	<u>1.46</u> 37.0	<u>5.740</u> 145.80	<u>7.06</u> 179.3	<u>4.520</u> 114.81	5
60DCB6	<u>8.69</u> 220.73	<u>5.06</u> 128.5	<u>1.46</u> 37.0	<u>4.500</u> 114.30	<u>7.06</u> 179.3	<u>0.950</u> 24.13	6
60DCB6B	<u>10.69</u> 271.5	<u>5.06</u> 128.5	<u>1.46</u> 37.0	<u>4.500</u> 114.30	<u>9.06</u> 230.1	<u>0.950</u> 24.13	6
60DCB10	<u>9.75</u> 247.7	<u>5.06</u> 128.5	<u>1.46</u> 37.0	<u>4.500</u> 114.30	<u>7.06</u> 179.3	<u>0.950</u> 24.13	9
60DCB10B	<u>11.75</u> 298.5	<u>5.06</u> 128.5	<u>1.46</u> 37.0	<u>4.500</u> 114.30	<u>9.06</u> 230.1	<u>0.950</u> 24.13	9
60DCF6	<u>7.56</u> 192.0	<u>5.48</u> 139.2	<u>2.55</u> 64.8	<u>4.920</u> 124.97	<u>5.94</u> 150.9	<u>2.756</u> 70.00	8
60DCF6B	<u>10.69</u> 271.5	<u>5.06</u> 128.5	<u>1.46</u> 37.0	<u>5.740</u> 145.80	<u>9.06</u> 230.1	<u>6.520</u> 165.61	7
60DCF10	<u>8.50</u> 215.9	<u>5.48</u> 139.2	<u>2.55</u> 64.8	<u>4.920</u> 124.97	<u>5.94</u> 150.9	<u>2.576</u> 65.43	11
60DCF10B	<u>11.75</u> 298.5	<u>5.06</u> 128.5	<u>1.46</u> 37.0	<u>5.740</u> 145.80	<u>9.06</u> 230.1	<u>6.520</u> 165.61	10
100DCB6, 125DCB6	<u>10.31</u> 261.9	<u>5.06</u> 128.5	<u>1.78</u> 45.2	<u>4.500</u> 114.30	<u>8.06</u> 204.7	<u>0.950</u> 24.13	6
100DCF6, 125DCF6	<u>10.60</u> 269.2	<u>6.30</u> 160.0	<u>2.52</u> 64.0	<u>5.700</u> 144.78	<u>8.46</u> 214.9	<u>4.583</u> 116.41	8
100DCB10	<u>11.13</u> 282.6	<u>5.06</u> 128.5	<u>1.78</u> 45.2	<u>4.500</u> 114.30	<u>8.06</u> 204.7	<u>0.950</u> 24.13	9
100DCF10	<u>11.50</u> 292.1	<u>6.30</u> 160.0	<u>2.52</u> 64.0	<u>5.700</u> 144.78	<u>8.46</u> 214.9	<u>4.583</u> 116.41	11
125DCB10	<u>11.50</u> 292.1	<u>5.06</u> 128.5	<u>1.78</u> 45.2	<u>4.500</u> 114.30	<u>8.06</u> 204.7	<u>0.950</u> 24.13	9
125DCF10	<u>11.75</u> 298.5	<u>6.30</u> 160.0	<u>2.52</u> 64.0	<u>5.700</u> 144.78	<u>8.46</u> 214.9	<u>4.583</u> 116.41	10