DC Series

RFI Power Line Filters
Line Filters for DC Applications

UL Recognized*
CSA Certified*
TUV Approved*

* Approvals pending

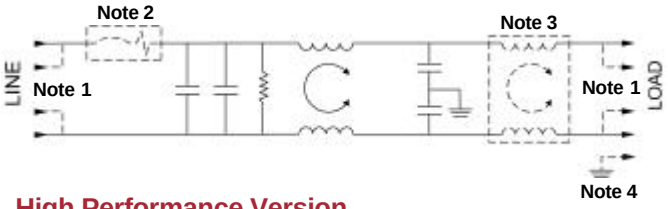
DC Series

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.

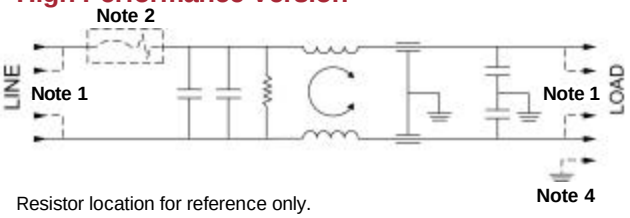
The DC series was developed in response to the increasing demand for DC filtering in the telecom-datacom market. These filters are generally used in central office equipment like switches, routers, and hubs to clean up the 48 VDC power, but are not exclusive to that equipment. They can also be used at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

Specifications

Hipot rating (one minute):
- line-to-ground: 2250VDC
- line-to-line: 1450VDC

Operating Voltage (max): 80VDC

Operating ambient temp. range: -10ºC to 55ºC

In an ambient, T_o, higher than 55ºC, 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	Frequency-MHz									
Rating	.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	Frequency-MHz									
Rating	.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.

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

60DCB6B

Current Rating
15, 30, 60, 100, 125A

Series Name
DC - Series Name

Mounting Style
F - Flange Mounting
B - Bulkhead and Rack Mounting

Options
B - Circuit Breaker
F - Feedthru Capacitors for High Performance
BF - Circuit Breaker and Feedthru Capacitors

Termination Style
6 - Redundant Stud
10 - Phoenix Terminal

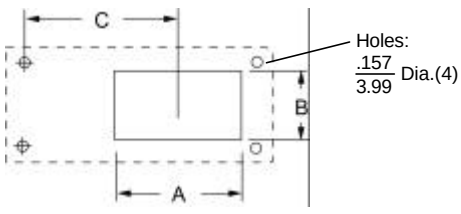
Available Part Numbers

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



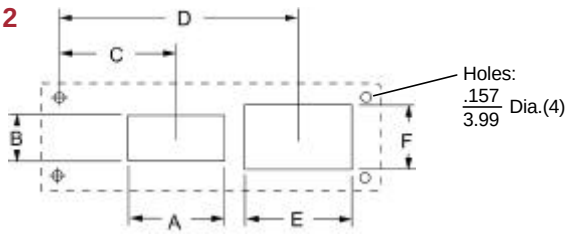
Cutout Dimensions

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

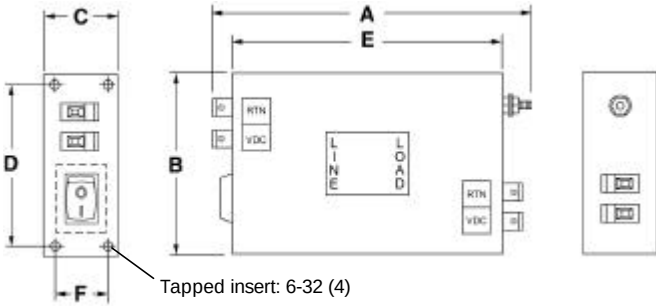


DC Series

Case Style

Metric shown in italics.

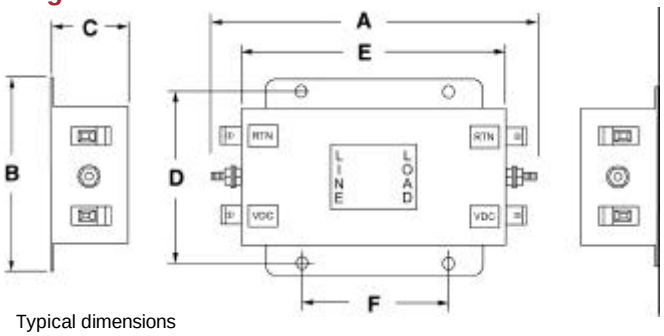
Fig. 3



Tapped insert: 6-32 (4)

Note: Delete circuit breaker for DCB10 models

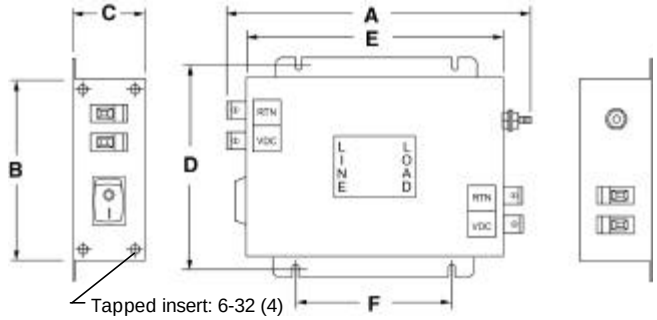
Fig. 4



Typical dimensions

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

Fig. 5

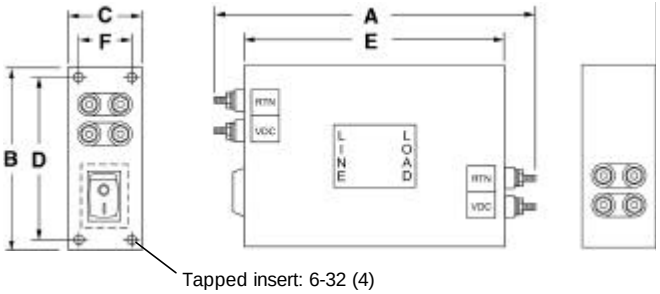


Tapped insert: 6-32 (4)

Typical dimensions

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

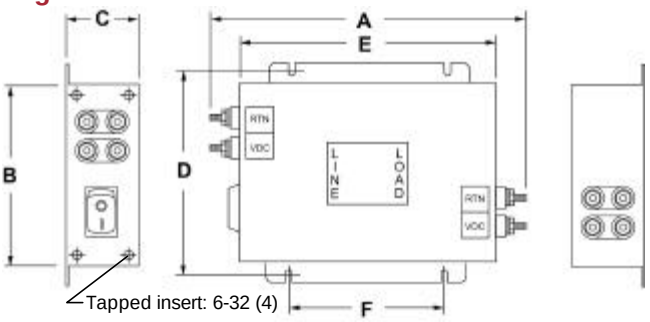
Fig 6



Tapped insert: 6-32 (4)

Note: Delete circuit breaker for DCB6 models

Fig. 7

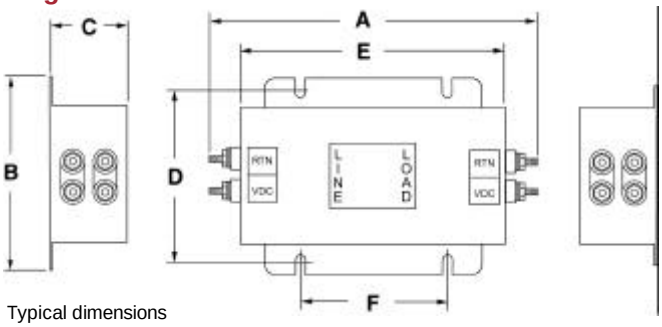


Tapped insert: 6-32 (4)

Typical dimensions

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

Fig. 8

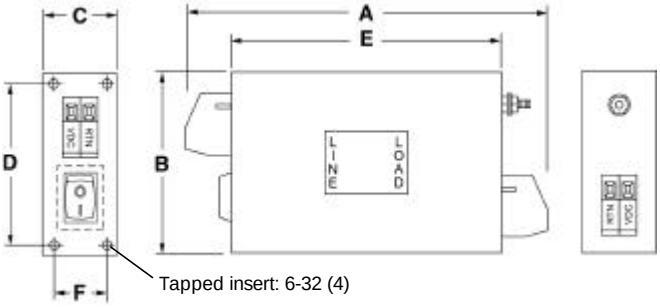


Typical dimensions

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.

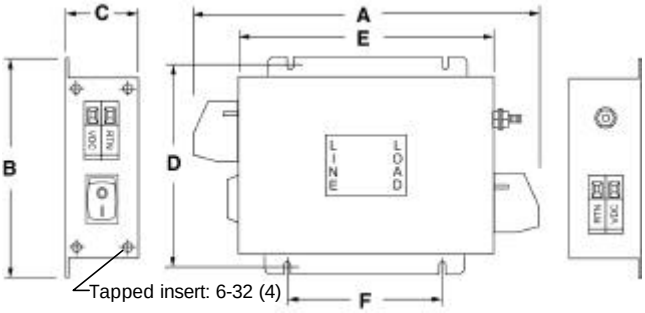
Fig. 9



Tapped insert: 6-32 (4)

Note: Delete circuit breaker for DCB10 models

Fig. 10



Tapped insert: 6-32 (4)

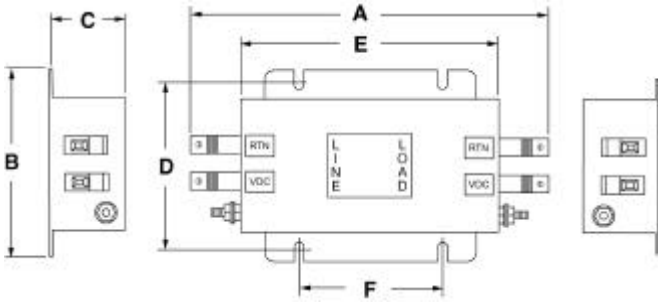
Typical dimensions

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

Case Style

Metric shown in italics.

Fig. 11



Typical dimensions

Mounting slots: .260 x .39 / *6.6 x 9.9* (4)

Case Dimensions

Metric shown in italics.

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