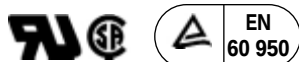


DC Series



**UL Recognized
CSA Certified
TUV Approved**

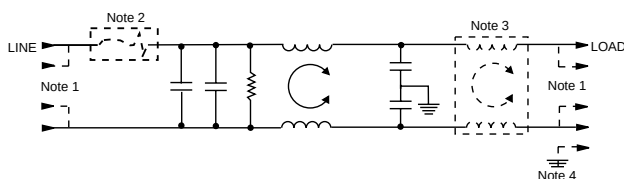
DC Series

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 are available with feed-through capacitors for added high frequency performance. The DC series is designed to comply with UL 1283, CSA 22.2 No. 8 and EN60950.

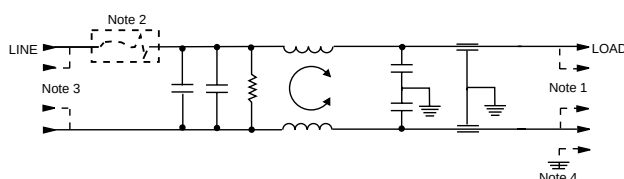
The DC series was developed in response to the increasing demand for DC filtering in the telecom-datacom market. These filters are generally used in central office equipment like switches, routers, and hubs to clean up the 48 VDC power, but are not exclusive to that equipment. They can also be used at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

Electrical Schematics

Standard Performance Version



High Frequency Performance Version



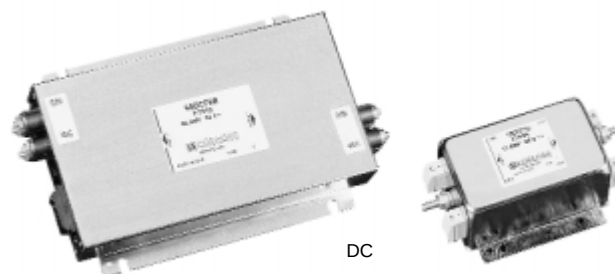
Resistor location for reference only.

Note 1: Depicts redundant style 6 terminals.

Note 2: Depicts optional circuit breaker.

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

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



Specifications

Hipot rating (one minute):

line-to-ground	2250 VDC
line-to-line	1450 VDC

Operating Voltage (max):

80 VDC

Operating Ambient Temperature Range: (@ rated current I_r)

-10°C to +55°C

In an ambient, T_a , higher than +55°C, the maximum operating current, I_o , is as follows: $I_o = I_r \sqrt{\frac{85 - T_a}{30}}$

Minimum insertion loss in dB:

Standard Performance

Line-to-ground in 50 ohm circuit

Current 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	38	40	59	50	39	34
100A	-	-	10	18	38	39	53	50	35	21
125A	-	-	12	18	30	32	44	49	29	18

Line-to-line in 50 ohm circuit

Current 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	14	24	35	39	40	28	53	60	42	33

High Frequency Performance ("F" & "BF" Styles)

Line-to-ground in 50 ohm circuit

Current Rating	.01	.05	.1	.15	.5	1	3	5	10	20	300 to 3000
15A	-	1	12	20	41	45	55	50	45	25	50 30
30A	-	4	15	20	46	58	60	60	48	35	50 30
60A	-	-	9	16	38	42	52	60	48	26	40 30
100A	-	-	9	16	38	42	52	60	42	26	40 30
125A	-	-	9	16	28	34	46	54	34	34	40 30

Line-to-line in 50 ohm circuit

Current Rating	.01	.05	.1	.15	.5	1	3	5	10	20
15A	7	22	27	30	30	50	60	60	60	36
30A	7	22	27	30	33	56	60	60	60	40
60A	15	30	36	40	37	26	46	54	48	30
100A	14	29	35	39	33	30	56	53	41	30
125A	14	29	35	39	40	28	53	60	42	33

DC Series

Cutout Dimensions

Part Number	A ±.005 ±.13	B ±.005 ±.13	C ±.005 ±.13	D ±.005 ±.13	E ±.005 ±.13	F ±.005 ±.13	Fig.
15DCB6(F)	1.375 34.93	1.249 31.72	3.472 88.19	—	—	—	1
15DCB6B(F)	1.500	0.781	1.308	3.472	1.375	1.249	2
15DCF6B	38.10	19.84	33.22	88.19	34.93	31.72	
15DCB10(F)	1.250 31.75	1.000 25.40	3.472 88.19	—	—	—	1
15DCB10B(F)	1.500	0.781	1.308	3.472	1.250	1.000	2
15DCF10B	38.10	19.84	33.22	88.19	31.75	25.40	
30DCB6(F)	1.375 34.93	1.249 31.72	3.472 88.19	—	—	—	1
30DCB6B(F)	1.500	0.781	1.308	3.472	1.375	1.249	2
30DCF6B	38.10	19.84	33.22	88.19	34.93	31.72	
30DCB10(F)	1.250 31.75	1.000 25.40	3.472 88.19	—	—	—	1
30DCB10B(F)	1.500	0.781	1.308	3.472	1.250	1.000	2
30DCF10B	38.10	19.84	33.22	88.19	31.75	25.40	
60DCB6(F)	1.375 34.93	1.249 31.72	3.472 88.19	—	—	—	1
60DCB6B(F)	1.500	0.781	1.308	3.472	1.375	1.249	2
60DCF6B	38.10	19.84	33.22	88.19	34.93	31.72	
60DCB10(F)	1.674 42.52	1.010 25.65	3.443 87.45	—	—	—	1
60DCB10B(F)	1.500	0.781	1.308	3.443	1.674	1.010	2
60DCF10B	38.10	19.84	33.22	87.45	42.52	25.65	
100DCB6(F)	1.700 43.18	1.549 39.34	3.472 88.19	—	—	—	1
100DCB6B(F)	1.700	1.549	4.222	—	—	—	3
100DCB10(F)	1.954 49.63	1.500 38.10	2.803 71.20	—	—	—	1
100DCB10B(F)	1.954	1.500	4.295	—	—	—	3
100DCF6B	1.700	1.549	4.222	—	—	—	3
100DCF10B	1.954	1.500	4.295	—	—	—	3
125DCB6(F)	1.700 43.18	1.549 39.34	3.472 88.19	—	—	—	1
125DCB6B(F)	1.700	1.549	4.222	—	—	—	3
125DCB10(F)	2.250 57.15	1.590 40.39	2.725 69.22	—	—	—	1
125DCB10B(F)	2.250	1.590	4.147	—	—	—	3
125DCF6B	1.700	1.549	4.222	—	—	—	3
125DCF10B	2.250	1.590	2.725	—	—	—	3

Recommended Panel Cutouts

Fig. 1 (Viewed from filter side)

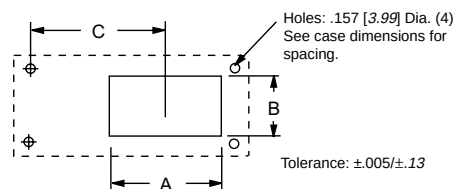


Fig. 2 (Viewed from filter side)

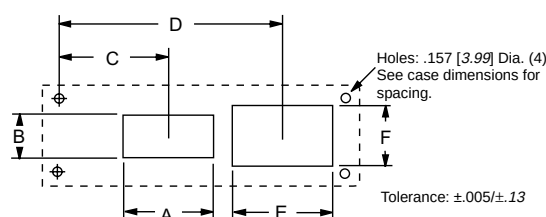
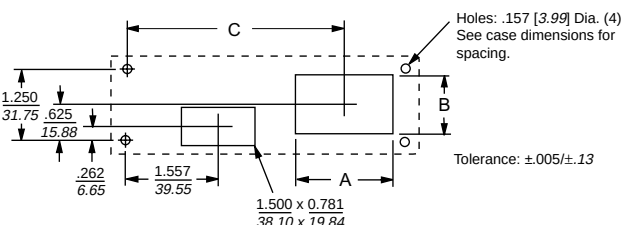


Fig.3 (Viewed from filter side)



Ordering Information

Current Rating (15, 30, 60, 100, 125A)	Series Name DC = Series Name	Mounting Style F = Flange B = Bulkhead and Rack	Option B - Circuit Breaker F - Feedthru Capacitors for High Performance (bulkhead mtg. only) BF - Circuit Breaker and Feedthru Capacitors for High Frequency Performance (bulkhead mtg. only)	Termination Style 6 - Redundant Stud 10 - Phoenix Terminal
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Part Numbers

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

DC Series

Terminations

Style 6 (15, 30 & 60A)

Supplied with #10-32 redundant studs - 0.625 [15.88] spacing like polarity, 0.750 [19.05] spacing opposing polarity.

Torque Spec: 27±3 in-lb.

Style 10 (15 & 30A)

PHOENIX CONTACT
P/N VDFK4

Accepts 12 AWG stranded wire

Wire Strip Length: 0.315 [8.0]

Torque Spec: 5.5 - 7.0 in-lb.

Ground Stud 8-32

Style 10 (100A)

PHOENIX CONTACT
P/N HDFK 25-VP

Accepts 4 AWG stranded wire

Wire Strip Length: 0.748 [19.0]

Torque Spec: 35.4 - 39.9 in-lb.

Ground Stud 1/4 - 20

Style 6 (100 & 125A)

Supplied with 1/4-20 redundant studs - 0.750 [19.05] spacing like polarity, 1.000 [25.4] spacing opposing polarity.

Torque Spec: 56±2 in-lb.

Style 10 (60A)

PHOENIX CONTACT
P/N HDFK 16-VP

Accepts 6 AWG stranded wire

Wire Strip Length: 0.630 [16.0]

Torque Spec: 17.7 - 21.2 in-lb.

Ground Stud 10-32

Style 10 (125A)

PHOENIX CONTACT
P/N HDFK-50-VP

Accepts 1 AWG stranded wire

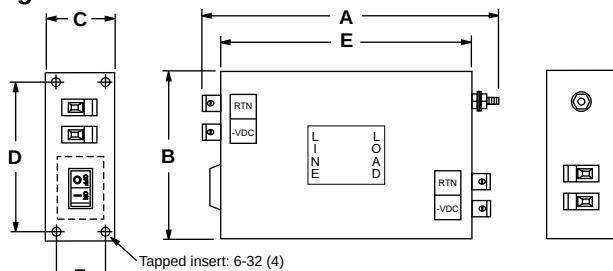
Wire Strip Length: 0.945 [24.0]

Torque Spec: 35.4 - 39.9 in-lb.

Ground Stud 1/4 - 20

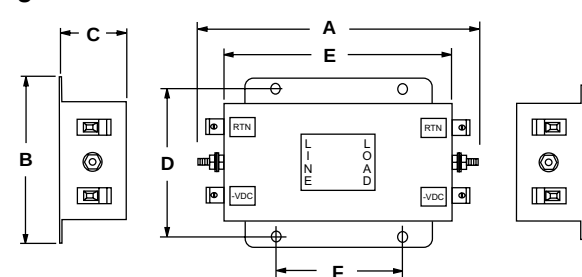
Case Styles

Figure 4



Note: Delete circuit breaker for DCB10 models.

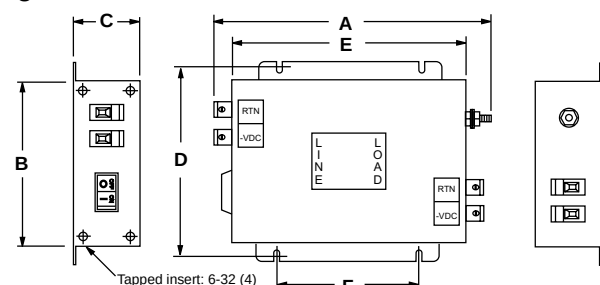
Figure 5



Typical dimensions:

Mounting Holes: .156 x .203 [4.0 x 5.2] Dia. (4)

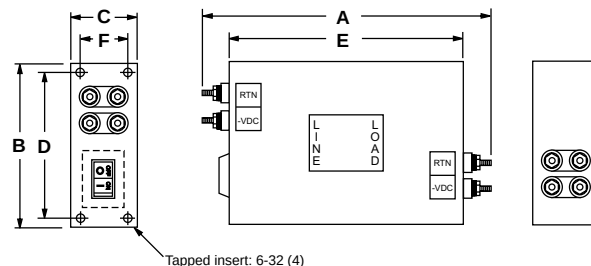
Figure 6



Typical dimensions:

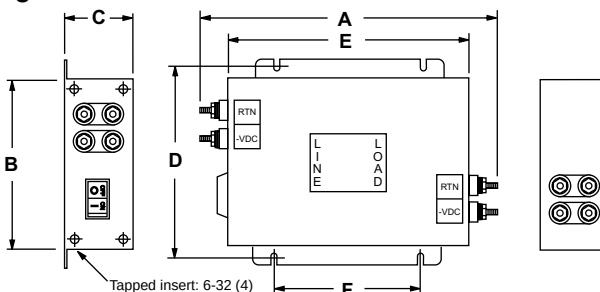
Mounting Slots: .260 x .39 [6.6 x 9.9] (4)

Figure 7



Note: Delete circuit breaker for DCB6 models.

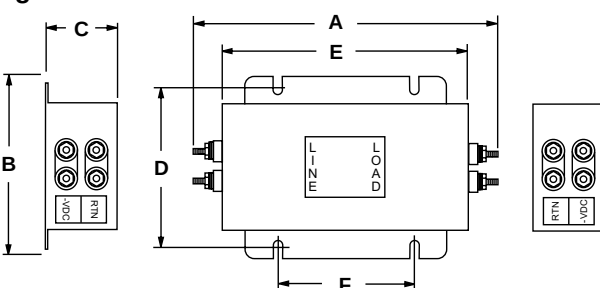
Figure 8



Typical dimensions:

Mounting Slots: .260 x .39 [6.6 x 9.9] (4)

Figure 9



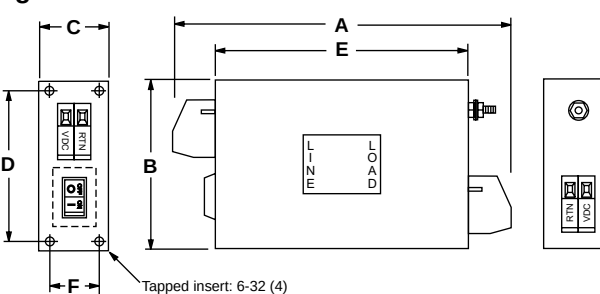
Typical dimensions:

Mounting Slots: .260 x .39 [6.6 x 9.9] (4)

Mounting Holes: .203x.156 [5.2 x 4.0] (4)

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

Figure 10



Note: Delete circuit breaker for DCB10 models

DC Series

Figure 11

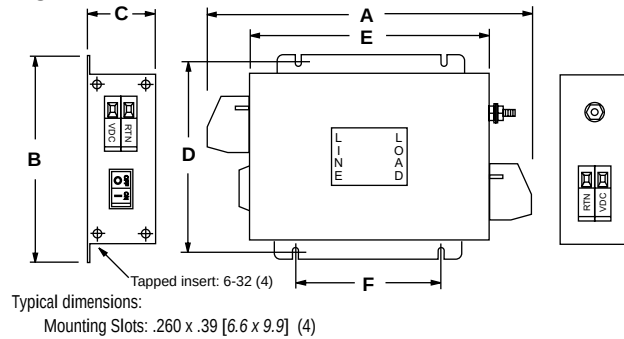
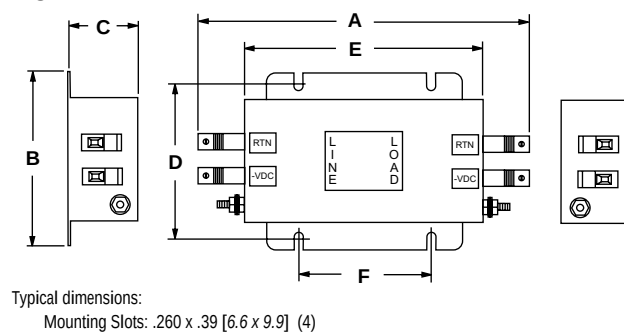


Figure 12



Case Dimensions

Part Number	A (max)	B (max)	C (max)	D $\pm.020$ $\pm.51$	E (max)	F $\pm.020$ $\pm.51$	Fig.
15DCB6(F)	5.69 144.5	5.06 128.5	1.48 37.6	4.500 114.30	4.06 103.1	0.950 24.13	7
15DCB6B(F)	7.69 195.3	5.06 128.5	1.48 37.6	4.500 114.30	6.06 153.9	0.950 24.13	7
15DCB10(F)	5.06 128.5	5.06 128.5	1.48 37.6	4.500 114.30	4.06 103.1	0.950 24.13	4
15DCB10B(F)	7.06 179.3	5.06 128.5	1.48 37.6	4.500 114.30	6.06 153.9	0.950 24.13	4
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	9
15DCF6B(F)	7.69 195.3	5.06 128.5	1.48 37.6	5.740 145.80	6.06 153.9	3.520 89.41	8
15DCF10	4.75 120.7	3.10 78.7	1.78 45.2	2.677 68.0	3.70 94.0	2.000 50.80	5
15DCF10B(F)	7.06 179.3	5.06 128.5	1.48 37.6	5.740 145.80	6.06 153.9	3.520 89.41	6
30DCB6(F)	7.69 195.3	5.06 128.5	1.48 37.6	4.500 114.30	6.06 153.9	0.950 24.13	7
30DCB6B(F)	8.69 220.7	5.06 128.5	1.48 37.6	4.500 114.30	7.06 179.3	0.950 24.13	7
30DCB10(F)	7.06 179.3	5.06 128.5	1.48 37.6	4.500 114.30	6.06 153.9	0.950 24.13	4
30DCB10B(F)	8.06 204.7	5.06 128.5	1.48 37.6	4.500 114.30	7.06 179.3	0.950 24.13	4
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	9

Case Dimensions (cont'd)

Part Number	A (max)	B (max)	C (max)	D $\pm.020$ $\pm.51$	E (max)	F $\pm.020$ $\pm.51$	Fig.
30DCF6B	8.690 220.73	5.000 127.00	1.480 37.6	5.740 145.80	7.060 179.3	4.520 114.81	8
30DCF10	5.560 141.2	3.960 100.58	2.180 55.4	3.500 88.90	4.560 115.8	2.000 50.80	5
30DCF10B	8.060 204.7	5.060 128.52	1.480 37.6	5.740 145.80	7.060 179.3	4.520 114.81	6
60DCB6(F)	8.690 220.73	5.060 128.52	1.480 37.6	4.500 114.30	7.060 179.3	0.950 24.13	7
60DCB6B(F)	10.690 271.5	5.060 128.52	1.480 37.6	4.500 114.30	9.060 230.1	0.950 24.13	7
60DCB10(F)	9.750 247.7	5.060 128.52	1.480 37.6	4.500 114.30	7.060 179.3	0.950 24.13	10
60DCB10B(F)	11.750 298.5	5.060 128.52	1.480 37.6	4.500 114.30	9.060 230.1	0.950 24.13	10
60DCF6	7.560 192.0	5.480 139.2	2.550 64.8	4.920 124.97	5.940 150.9	2.756 70.00	9
60DCF6B	10.690 271.5	5.060 128.52	1.480 37.6	5.740 145.80	9.060 230.1	6.520 165.61	8
60DCF10	8.560 217.4	5.480 139.2	2.550 64.8	4.920 124.97	5.940 150.9	2.576 65.43	12
60DCF10B	11.750 298.5	5.060 128.5	1.480 37.6	5.740 145.80	9.060 230.1	6.520 165.61	11
100DCB6(F)	10.310 261.9	5.060 128.5	1.780 45.2	4.500 114.30	8.060 204.7	1.250 31.75	7
100DCB6B(F)	12.310 312.7	6.060 153.9	1.780 45.2	5.500 139.7	10.060 255.5	1.250 31.75	7
100DCB10(F)	11.130 282.6	5.060 128.5	1.780 45.2	4.500 114.30	8.060 204.7	1.250 31.75	10
100DCB10B(F)	13.130 333.5	6.060 153.9	1.780 45.2	5.500 139.7	10.060 255.5	1.250 31.75	10
100DCF6	10.600 269.2	6.300 160.0	2.520 64.0	5.700 144.78	8.460 214.9	4.520 114.81	9
100DCF6B	12.310 312.7	6.060 153.9	1.780 45.2	6.740 171.2	10.060 255.5	7.520 191.01	8
100DCF10	11.500 292.1	6.300 160.0	2.520 64.0	5.700 144.78	8.460 214.9	4.520 114.81	12
100DCF10B	13.130 333.5	6.060 153.9	1.780 45.2	6.740 171.2	10.060 255.5	7.520 191.01	11
125DCB6(F)	10.310 261.9	5.060 128.5	1.780 45.2	4.500 114.30	8.060 204.7	1.250 31.75	7
125DCB6B(F)	12.310 312.7	6.060 153.9	1.780 45.2	5.500 139.7	10.060 255.5	1.250 31.75	7
125DCB10(F)	11.500 292.1	5.060 128.5	1.780 45.2	4.500 114.30	8.060 204.7	1.250 31.75	10
125DCB10B(F)	13.500 342.9	6.060 153.9	1.780 45.2	5.500 139.7	10.060 255.5	1.250 31.75	10
125DCF6	10.600 269.2	6.300 160.0	2.520 64.0	5.700 144.78	8.460 214.9	4.520 114.81	9
125DCF6B	12.310 312.7	6.060 153.9	1.780 45.2	6.740 171.2	10.060 255.5	7.520 191.01	8
125DCF10	11.860 301.2	6.300 160.0	2.520 64.0	5.700 144.78	8.460 214.9	4.520 114.81	12
125DCF10B	13.500 342.9	6.060 153.9	1.780 45.2	6.740 171.2	10.060 255.5	7.520 191.01	11