

RFI Power Line Filters for DC Applications

DC Series



UL Recognized
CSA Certified
TUV Certified



60DCF6B



15DCF10

DC Series

- General purpose line filters for DC applications up to 125VDC
- Available with or without a circuit breaker
- Available with feedthrough capacitors for added high frequency performance
- Available in both flange mound (DCF) and bulkhead mount (DCB) configuration

Ordering Information

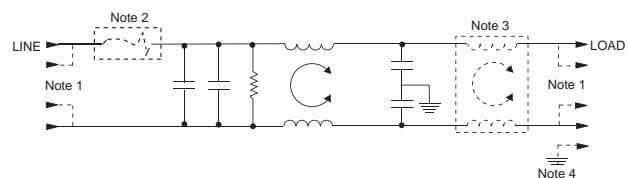


Specifications

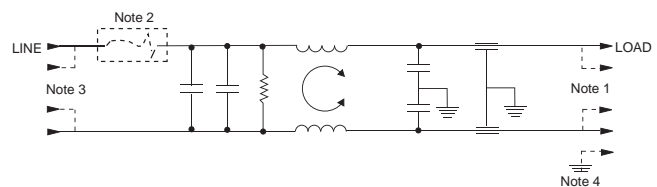
- Hipot rating (one minute):**
 Line to Ground: 2250 VDC
 Line to Line: 1450 VDC
- Rated Voltage (max):** 80 VDC
- Rated Current:** 15 to 125A
- Operating Ambient Temperature Range (at rated current I_r):** -10°C to +55°C
 In an ambient temperature (T_a) higher than +55°C the maximum operating current (I_o) is calculated as follows: $I_o = I_r \sqrt{(85-T_a)/30}$

Electrical Schematics

Standard Performance



High Frequency Performance (F & BF Styles)



- 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.

RFI Power Line Filters for DC Applications *(continued)*

DC Series

Available Part Numbers

| Standard Performance | | High Performance | |
|----------------------|-----------|------------------|----------|
| 15DCF6 | 15DCF10 | 15DCB10F | 15DCB6F |
| 30DCF6 | 30DCF10 | 30DCB10F | 30DCB6F |
| 60DCF6 | 60DCF10 | 60DCB10F | 60DCB6F |
| 100DCF6 | 100DCF10 | 100DCB10F | 100DCB6F |
| 125DCF6 | 125DCF10 | 125DCB10F | 125DCB6F |
| 15DCF6B | 15DCF10B | 15DCB6BF | |
| 30DCF6B | 30DCF10B | 30DCB6BF | |
| 60DCF6B | 60DCF10B | 60DCB6BF | |
| 100DCF6B | 100DCF10B | 100DCB6BF | |
| 125DCF6B | 125DCF10B | 125DCB6BF | |
| 15DCB6 | 15DCB10 | 15DCB10BF | |
| 30DCB6 | 30DCB10 | 30DCB10BF | |
| 60DCB6 | 60DCB10 | 60DCB10BF | |
| 100DCB6 | 100DCB10 | 100DCB10BF | |
| 125DCB6 | 125DCB10 | 125DCB10BF | |
| 15DCB6B | 15DCB10B | | |
| 30DCB6B | 30DCB10B | | |
| 60DCB6B | 60DCB10B | | |
| 100DCB6B | 100DCB10B | | |
| 125DCB6B | 125DCB10B | | |

Termination Options

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 specification: 27 ±3 in-lb.

Style 10 (15 & 30A)

- PHOENIX CONTACT* part number: VDFK4
- Accepts 12 AWG stranded wire
- Wire strip length: 0.315 [*8.0*]
- Torque specification: 5.5 – 7.0 in-lb.
- Ground stud: 8-32

Style 10 (100A)

- PHOENIX CONTACT* part number: HDFK 25-VP
- Accepts 4 AWG stranded wire
- Wire strip length: 0.748 [*19.0*]
- Torque specification: 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
- 1.00 [*25.4*] spacing opposing polarity
- Torque specification: 45 ±2 in-lb

Style 10 (60A)

- PHOENIX CONTACT* part number: HDFK 16-VP
- Accepts 6 AWG stranded wire
- Wire strip length: 0.630 [*16.0*]
- Torque specification: 17.7 – 21.2 in-lb.
- Ground stud: 10-32

Style 10 (125A)

- PHOENIX CONTACT* part number: HDFK 50-VP
- Accepts 1 AWG stranded wire
- Wire strip length: 0.945 [*24.0*]
- Torque specification: 35.4 – 39.9 in-lb.
- Ground stud: 1/4-20

*PHOENIX CONTACT is a trademark of Phoenix Contact GmbH & Co. KG.

RFI Power Line Filters for DC Applications *(continued)*

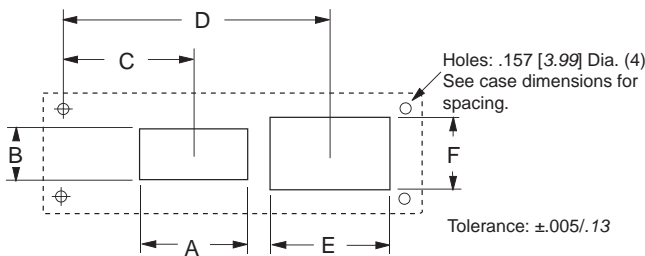
DC Series

Recommended Panel Cutouts

DCB6(F) & DCB10(F)



DCB6B(F) & DCB10B(F) 15 to 60A



DCB6B(F) & DCB10B(F) 100 to 125A



Cutout Dimensions

DCB6(F) & DCB10(F)

| Part No. | A | B | C |
|-------------|--------------|--------------|--------------|
| 15DCB6(F) | 1.375 | 1.249 | 3.472 |
| 30DCB6(F) | 34.93 | 31.72 | 88.19 |
| 15DCB10(F) | 1.250 | 1.000 | 3.472 |
| 30DCB10(F) | 31.75 | 25.40 | 88.19 |
| 60DCB6(F) | 1.375 | 1.249 | 3.472 |
| | 34.93 | 31.72 | 88.19 |
| 60DCB10(F) | 1.674 | 1.010 | 3.443 |
| | 42.52 | 25.65 | 87.45 |
| 100DCB6(F) | 1.700 | 1.549 | 3.472 |
| 125DCB6(F) | 43.18 | 39.34 | 88.19 |
| 100DCB10(F) | 1.954 | 1.500 | 2.830 |
| | 49.63 | 38.10 | 71.20 |
| 125DCB10(F) | 2.250 | 1.590 | 2.725 |
| | 57.15 | 40.39 | 69.22 |

DCB6B(F) & DCB10B(F) 15 to 60A

| Part No. | A | B | C | D | E | F |
|-------------|-------------|--------------|--------------|--------------|--------------|--------------|
| 15DCB6B(F) | 1.50 | 0.781 | 1.308 | 3.472 | 1.375 | 1.249 |
| 15DCF6B | 38.10 | 19.84 | 33.22 | 88.19 | 34.93 | 31.72 |
| 15DCB10B(F) | 1.50 | 0.781 | 1.308 | 3.472 | 1.250 | 1.00 |
| 15DCF10B | 38.10 | 19.84 | 33.22 | 88.19 | 31.75 | 25.40 |
| 30DCB6B(F) | 1.50 | 0.781 | 1.308 | 3.472 | 1.375 | 1.249 |
| 30DCF6B | 38.10 | 19.84 | 33.22 | 88.19 | 34.93 | 31.72 |
| 30DCB10B(F) | 1.50 | 0.781 | 1.308 | 3.472 | 1.250 | 1.00 |
| 30DCF10B | 38.10 | 19.84 | 33.22 | 88.19 | 31.75 | 25.40 |
| 60DCB10B(F) | 1.50 | 0.781 | 1.308 | 3.443 | 1.674 | 1.010 |
| 60DCF10B | 38.10 | 19.84 | 33.22 | 87.45 | 42.52 | 25.65 |
| 60DCF6B(F) | 1.50 | 0.781 | 1.308 | 3.472 | 1.375 | 1.249 |
| 60DCF6B | 38.10 | 19.84 | 33.22 | 88.19 | 34.93 | 31.72 |

DCB6B(F) & DCB10B(F) 100 to 125A

| Part No. | A | B | C |
|--------------|--------------|--------------|--------------|
| 100DCB6B(F) | 1.70 | 1.549 | 4.222 |
| 100DCF6B | | | |
| 125DCB6B(F) | 43.18 | 39.34 | 107.23 |
| 125DCF6B | | | |
| 100DCB10B(F) | 1.954 | 1.50 | 4.295 |
| 100DCF10B | 49.63 | 38.10 | 109.09 |
| 125DCB10B(F) | 2.25 | 1.59 | 4.147 |
| | 57.15 | 40.39 | 105.33 |
| 125DCF10B | 2.25 | 1.59 | 2.725 |
| | 57.15 | 40.39 | 105.33 |

RFI Power Line Filters for DC Applications *(continued)*

DC Series

Case Styles

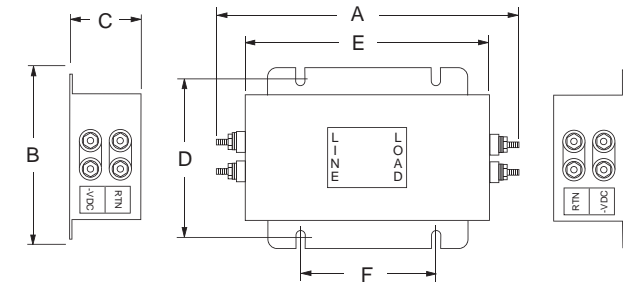
DCB6 & DCB6B



DCB10 & DCB10B (60 to 125A)

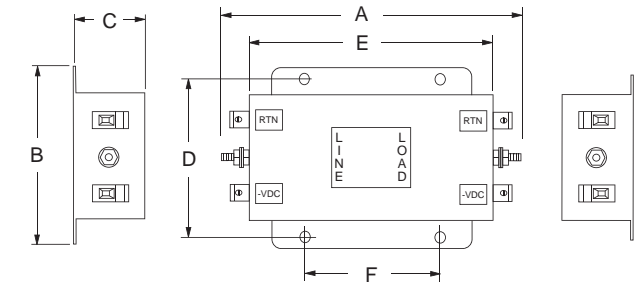


DCF6



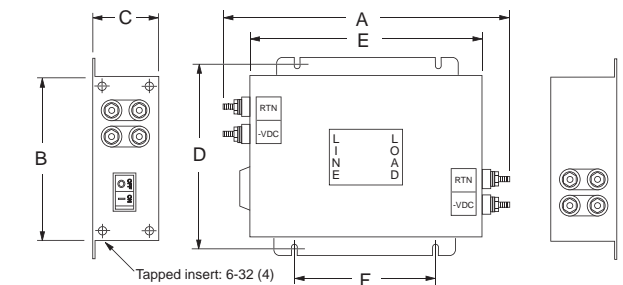
Typical Dimensions:
Mounting Slots (4): .260 x .39 [6.6 x 9.9] 60 to 125A versions
Mounting Holes (4): .203 x .156 [5.2 x 4.0] 15 & 30A versions

DCF10 (15 & 30A)



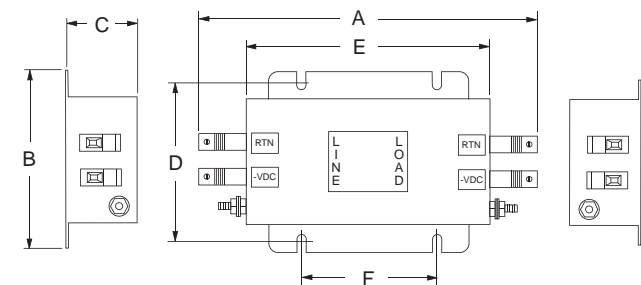
Typical Dimensions:
Mounting Holes (4): .203 x .156 [5.2 x 4.0]

DCF6B



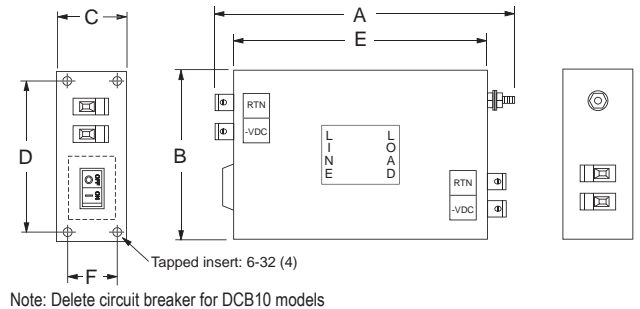
Typical Dimensions:
Mounting Slots (4): .260 x .39 [6.6 x 9.9]

DCF10 (60 to 125A)

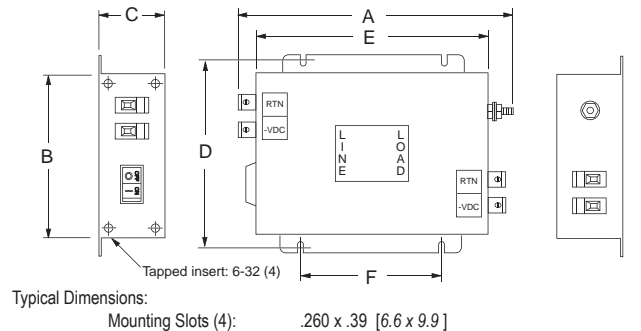


Typical Dimensions:
Mounting Slots (4): .260 x .39 [6.6 x 9.9]

DCB10 & DCB10B (15 to 30A)



DCF10B (15 & 30A)



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

RFI Power Line Filters for DC Applications *(continued)*

DC Series

Case Styles *(continued)*

DCF10B (60 TO 125A)



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

Case Dimensions

| Part No. | A (max) | B (max) | C (max) | D ± 0.20 $\pm .51$ | E (max) | F ± 0.20 $\pm .51$ |
|-------------|-------------|-------------|-------------|------------------------------|-------------|------------------------------|
| 15DCB6(F) | 5.69 | 5.06 | 1.48 | 4.50 | 4.06 | 0.950 |
| 15DCB6B(F) | 7.69 | 5.06 | 1.48 | 4.50 | 6.06 | 0.950 |
| 15DCB10(F) | 5.06 | 5.06 | 1.48 | 4.50 | 4.06 | 0.950 |
| 15DCB10B(F) | 7.06 | 5.06 | 1.48 | 4.50 | 6.06 | 0.950 |
| 15DCF6 | 5.33 | 3.10 | 1.78 | 2.677 | 3.70 | 2.00 |
| 15DCF6B(F) | 7.69 | 5.06 | 1.48 | 5.740 | 6.06 | 3.52 |
| 15DCF10 | 4.75 | 3.10 | 1.78 | 2.677 | 3.70 | 2.0 |
| 15DCF10B(F) | 7.06 | 5.06 | 1.48 | 5.740 | 6.06 | 3.520 |
| 30DCB6(F) | 7.69 | 5.06 | 1.48 | 4.50 | 6.06 | 0.95 |
| 30DCB6B(F) | 8.69 | 5.06 | 1.48 | 4.50 | 7.06 | 0.95 |
| 30DCB10(F) | 7.06 | 5.06 | 1.48 | 4.50 | 6.06 | 0.95 |
| 30DCB10B(F) | 8.06 | 5.06 | 1.48 | 4.50 | 7.06 | 0.95 |
| 30DCF6 | 6.19 | 3.96 | 2.18 | 3.50 | 4.56 | 2.00 |
| 30DCF6B | 8.69 | 5.0 | 1.48 | 5.74 | 7.06 | 4.52 |
| 30DCF10 | 5.56 | 3.96 | 2.18 | 3.5 | 4.56 | 2.0 |
| 30DCF10B | 8.06 | 5.06 | 1.48 | 5.74 | 7.06 | 4.52 |

Case Dimensions *(continued)*

| Part No. | A (max) | B (max) | C (max) | D ± 0.20 $\pm .51$ | E (max) | F ± 0.20 $\pm .51$ |
|--------------|--------------|-------------|-------------|------------------------------|--------------|------------------------------|
| 60DCB6(F) | 8.69 | 5.06 | 1.48 | 4.50 | 7.06 | 0.95 |
| 60DCB6B(F) | 10.69 | 5.06 | 1.48 | 4.50 | 9.06 | 0.95 |
| 60DCF6 | 7.56 | 5.48 | 2.55 | 4.92 | 5.94 | 2.756 |
| 60DCF6B | 10.69 | 5.06 | 1.48 | 5.74 | 9.06 | 6.52 |
| 60DCF10 | 8.56 | 5.48 | 2.55 | 4.92 | 5.94 | 2.576 |
| 60DCF10B | 11.75 | 5.06 | 1.48 | 5.74 | 9.06 | 6.52 |
| 100DCB6(F) | 10.31 | 5.06 | 1.78 | 4.50 | 8.06 | 1.25 |
| 100DCB6B(F) | 12.31 | 6.06 | 1.78 | 5.50 | 10.06 | 1.25 |
| 100DCB10(F) | 11.13 | 5.06 | 1.78 | 4.50 | 8.06 | 1.25 |
| 100DCB10B(F) | 13.13 | 6.06 | 1.78 | 5.50 | 10.06 | 1.25 |
| 100DCF6 | 10.60 | 6.30 | 2.52 | 5.70 | 8.46 | 4.52 |
| 100DCF6B | 12.31 | 6.06 | 1.78 | 6.74 | 10.06 | 7.52 |
| 100DCF10 | 11.50 | 6.30 | 2.52 | 5.70 | 8.46 | 4.52 |
| 100DCF10B | 13.13 | 6.06 | 1.78 | 6.74 | 10.06 | 7.52 |
| 125DCB6(F) | 10.31 | 5.06 | 1.78 | 4.50 | 8.06 | 1.25 |
| 125DCB6B(F) | 12.31 | 6.06 | 1.78 | 5.50 | 10.06 | 1.25 |
| 125DCB10(F) | 11.50 | 5.06 | 1.78 | 4.50 | 8.06 | 1.25 |
| 125DCB10B(F) | 13.50 | 6.06 | 1.78 | 5.50 | 10.06 | 1.25 |
| 125DCF6 | 10.60 | 6.30 | 2.52 | 5.70 | 8.46 | 4.52 |
| 125DCF6B | 12.31 | 6.06 | 1.78 | 6.74 | 10.06 | 7.52 |
| 125DCF10 | 11.86 | 6.30 | 2.52 | 5.70 | 8.46 | 4.52 |
| 125DCF10B | 13.50 | 6.06 | 1.78 | 6.74 | 10.06 | 7.52 |

4
DC Filters

Dimensions are in inches and millimeters unless otherwise specified. Values in italics are metric equivalents. Dimensions are shown for reference purposes only. Specifications subject to change.

For email, phone or live chat, please go to te.com/help
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RFI Power Line Filters for DC Applications *(continued)*

DC Series

Performance Data *(continued)*

Minimum Insertion Loss

Measured in closed 50 Ohm system

Standard Performance

Common Mode / Asymmetrical (Line to Ground)

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

Differential Mode / Symmetrical (Line to Line)

| 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 | 14 | 24 | 35 | 39 | 40 | 28 | 53 | 60 | 42 | 33 |

High Frequency Performance (F & BF Styles)

Common Mode / Asymmetrical (Line to Ground)

| Current Rating | Frequency – MHz | | | | | | | | | | | |
|----------------|-----------------|-----|----|-----|----|----|----|----|----|----|-----|------|
| | .01 | .05 | .1 | .15 | .5 | 1 | 3 | 5 | 10 | 20 | 300 | 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 |

Differential Mode / Symmetrical (Line to Line)

| Current Rating | Frequency – MHz | | | | | | | | | |
|----------------|-----------------|-----|----|-----|----|----|----|----|----|----|
| | .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 |