## RF Signal Line Filters for Secure Communications over Telephone and Signal Lines

BULKHEAD STYLE: CABINET MOUNTING PENETRATION STYLE: INDEPENDANT MOUNTING

(DIMENSIONS IN INCHES)

| Part No | Current <br> $($ AMP $)$ | Voltage | Freq <br> $(\mathrm{Hz})$ | A | B | C |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| FC-209 | $2 \times 0.16$ | 600VDC | $0-60$ | 4.75 | 2.50 | 1.25 |
| FC-663 | $2 \times 0.15$ | 250VAC | $0-60$ | 4.00 | 2.50 | 1.25 |
| FC-1270 | $2 \times 1.0$ | 120VAC | $0-60$ | 7.25 | 3.50 | 1.50 |
| FC-1273 | $2 \times 0.5$ | 120VAC | $0-60$ | 7.25 | 3.50 | 1.50 |
| FC-1273 | $4 \times 0.5$ | 120VAC | $0-60$ | 7.25 | 7.00 | 1.50 |
| FC-1273 | $8 \times 0.5$ | 120VAC | $0-60$ | 7.25 | 14.00 | 1.50 |


| Part No | Current <br> (AMP) | Voltage | Freq <br> (Hz) | A | B | C |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| FC-1280 | $2 \times 0.16$ | 600VDC | $0-60$ | 6.81 | 3.50 | 2.50 |
| FC-1193 | $2 \times 0.15$ | 250VAC | $0-60$ | 6.81 | 3.50 | 2.50 |
| FC-754A | $2 \times 1.0$ | 120VDAC | $0-60$ | 9.00 | 3.50 | 2.50 |
| FC-754A | $2 \times 1.0$ | 220 VAC | $0-60$ | 9.00 | 3.50 | 2.50 |
| FC-754A | $4 \times 1.0$ | 120VAC | $0-60$ | 9.00 | 7.00 | 2.50 |
| FC-754A | $4 \times 1.0$ | 220 VAC | $0-60$ | 9.00 | 7.00 | 2.50 |
| FC-754A | $8 \times 1.0$ | 120 VAC | $0-60$ | 9.00 | 14.00 | 2.50 |
| FC-754A | $8 \times 1.0$ | 220 VAC | $0-60$ | 9.00 | 14.00 | 2.50 |
| FC-200A | $2 \times 0.5$ | 120 VAC | $0-60$ | 6.81 | 3.50 | 2.50 |
| FC-2930P | $2 \times 0.15$ | 500 VDC | $0-60$ | 4.00 | 2.50 | 1.25 |

Telephone Filters FC-209, -1280:

- Attenuation: 60 dB at $14 \mathrm{kHz}, 100 \mathrm{~dB}$ from 25 kHz to 10 GHz
- Impedance: $300 \Omega \mathrm{~L} / \mathrm{G}, 600 \Omega \mathrm{~L} / \mathrm{L}$ balanced

High Current Telephone Filters FC-1273, -200A:

- Attenuation: 100 dB min from 25 kHz to 10 GHz
- Impedance: $300 \Omega \mathrm{~L} / \mathrm{G}, 600 \Omega \mathrm{~L} / \mathrm{L}$ balanced
- Pass Band: $0-3 \mathrm{kHz}$

High Data Rate Filters FC-663, -1193:

- Attenuation: 100 dB min from 100 kHz to 10 GHz
- Impedance: $300 \Omega \mathrm{~L} / \mathrm{G}, 600 \Omega \mathrm{~L} / \mathrm{L}$ balanced


Fire Alarm Filters FC-1270, -754A:

- Attenuation: 100 dB min from 14 kHz to 10 GHz
- Inductive input and output

Fire Alarm Filters FC-2930P

- Attenuation: $0-500 \mathrm{kHz}-0.3 \mathrm{~dB}$ max
- Attenuation: $2.5 \mathrm{MHz}-1 \mathrm{GHz}-100 \mathrm{~dB}$ min


## Performance

Filters meet or exceed the following criteria: MIL-F-15733, MIL-STD-220C, UL1283

## Digital Line Filters

| Part No | Curren <br> t <br> $(\mathrm{AMP})$ | Insertio <br> n Loss <br> $(\mathrm{dB})$ | Pass Band <br> $(\mathrm{kHz})$ | Stop Band <br> $(\mathrm{MHz})$ | Voltage | A | B | C |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| FC-3099B-9.6kB/s | $2 \times 0.15$ | 80 | $0-100$ | $0.4-10000$ | 240 VAC | 4.75 | 2.50 | 1.25 |
| $\mathrm{FC}-3099 \mathrm{~B}-19.2 \mathrm{kB} / \mathrm{s}$ | $2 \times 0.15$ | 80 | $0-200$ | $0.8-10000$ | 240 VAC | 4.00 | 2.50 | 1.25 |
| $\mathrm{FC}-3099 \mathrm{~B}-64 \mathrm{kB} / \mathrm{s}$ | $2 \times 0.15$ | 80 | $0-640$ | $2.5-10000$ | 240 VAC | 7.25 | 3.50 | 1.50 |
| $\mathrm{FC}-3099 \mathrm{~B}-200 \mathrm{kB} / \mathrm{s}$ | $2 \times 0.15$ | 80 | $0-2000$ | $8.0-10000$ | 240 VAC | 7.25 | 3.50 | 1.50 |
| FC-3099B-10MB/s | $2 \times 0.15$ | 80 | $0-10000$ | $40-10000$ | 240 VAC | 7.25 | 3.50 | 1.50 |

## RF Signal Line Filters for Secure Communications over Telephone and Signal Lines

These filters are designed for 600 ohm signal and telephone circuit applications and cover broad frequency spectrum for advanced communication systems.
Three groups of filters are available:
a. Individual cylindrical type for "bulkhead mounting"
b. Dual filters for chassis mounting or for shielded rooms
c. Prewired multi-circuit box assemblies, up to 600 filters wired to terminal boards

## Individual Circuit Tubular Filters

FC00-100xx Series
FC-100xx Series



FCOO-IOO SAME AS FCOO-IOOA EXCEPT NOT
-IUPPLIED WITH MTG. BRACKET

(ALL DIMENSIONS IN INCHES)



Fil-Coil FC Inc, 98 Lincoln Avenue, $\square$

## RF Signal Line Filters for Secure Communications over Telephone and Signal Lines

## Individual Circuit Rectangular Filters



FC00-9x Series


FCOO-SO


DMENSIONS
IN INCHES


FC-10038


All units are hermetically sealed and housed in plated metal cases provided with mounting flanges and/or threaded necks for convenient mounting. Terminals are compression-type glass, solder sealed. Duty cycle is continuous for all units. When installed on a shield-room wall, the filters remove spurious high-frequency energy, while providing a continuous RF-tight shield for the filtered signal. Fil-Coil also supplies assemblies of any combination of filters, completely pre-wired to terminal strips and enclosed in RF-tight cabinet. All filters fabricated, tested and installed in accordance with military specification MIL-F15733 and in accordance with the following detail requirements

Telephone type filters are installed and wired in a metallic shielded enclosure. The enclosures used to house the individual filters are constructed so that the input and output circuits of the filter are shielded from each other to provide the required attenuation. The shielded compartment of the filter enclosure incorporates a removable cover to provide easy access for installation. This shielded compartment has a RF gasket between the cover and the cover mounting surface to maintain the RF integrity of the filter. All filter enclosures are fabricated from sheet steel, no less than .075 inches thick ( 14 gauge), suitably primed and painted. Each filter enclosure is provided with mounting brackets whose surfaces shall be clean, free of paint, and plated in order to provide a lowimpedance ground. The surfaces to which these filters mount will be clean, unpainted, suitably plated surfaces.
$\square$

## RF Signal Line Filters for Secure Communications over Telephone and Signal Lines

## FC-1274 SERIES

Cabinets designed to
accommodate FC-1270 or FC-
1273 filters. Cabinets may be ordered without filters or with up to a maximum amount of filters indicated in the table. When less than maximum number of filters are ordered, the empty spaces will be R.F. plugged.



|  |  |  |  | MAX. NO. <br> OF | WEIGHT WI <br> FILTERS |
| :--- | :---: | :---: | :---: | :---: | :---: |
| PART NO. | A | B | C | OFs.) <br> FILTERS | (lbs. |
| FC-1274E | 24 | 14 | 44 | 50 | 240 |
| FC-1274K | 26 | 16 | 44 | 66 | 255 |
| FC-1274L | 30 | 16 | 44 | 78 | 325 |
| FC-1274F | 26 | .18 | 44 | 88 | 340 |
| FC-1274G | 44 | 14 | 44 | 100 | 415 |
| FC-1274H | 44 | 18 | 44 | 152 | $52 "$ |
| FC-1274A | 45 | 18 | 44 | 176 | 510 |
| FC-1274J | 44 | 24 | 44 | 200 | 650 |

FC-560 SERIES
Cabinets designed to accommodate FC-209 or FC-663 filters. (See page 23 for description of filters.)
Cabinets may be ordered without filters or with up to the max. number of filters indicated in the table. When less than the maximum
number of filters are ordered, the
empty spaces will be R.F. plugged.

|  |  |  |  | MAX. NO. | WEIGHT WI |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | A | B | C | OF <br> FILTERS |  |
|  |  |  |  |  | FILTERS |
| (Ibs.) |  |  |  |  |  |


| PART NO | A | B | C | MAX. NO OF FILTERS | WEIGHT WI FILTERS (lbs.) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| FC-560F | 18.50 | 5 | 40 | 26 | 120 |
| FC-560G | 18.50 | 8 | 40 | 50 | 170 |
| FC-560H | 36 | 6.50 | 40 | 76 | 260 |
| FC-560D | 36 | 8 | 40 | 100 | 320 |
| FC-560B | 54 | 8 | 40 | 150 | 450 |
| FC-560E | 28.44 | 17.61 | 40 | 200 | 500 |
| FC-560M | 39.50 | 16 | 40 | 252 | 620 |
| FC-560P | 54 | 18 | 40 | 300 | 785 |
| FC-560A | 36 | 20 | 40 | 338 | 850 |
| FC-560L | 72 | 16 | 40 | 400 | 1000 |

