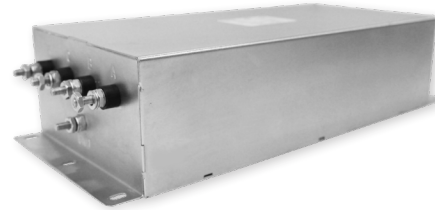


# 3F

## HIGH PERFORMANCE 3-PHASE SWITCH MODE EMI FILTER

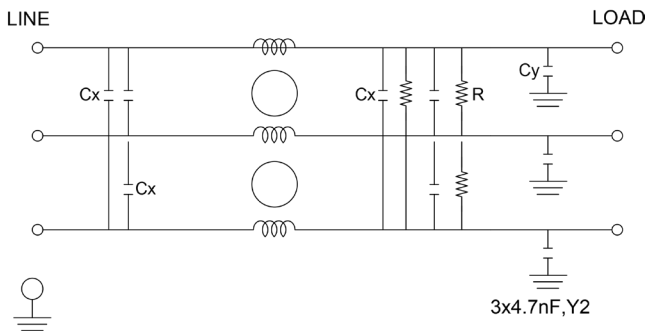
### FEATURES

- » Rated currents include **3A, 7.5A, 15A, 30A, 45A, 60A, 80A, 100A, and 150A**
- » Dual Stage Line Filter
- » Available with **QD** (tabs) and **S** (studs) option
- » Low Profile Case, End Mount Case & Flange Mount Available
- » Y-cap value can be adjusted to fit specification



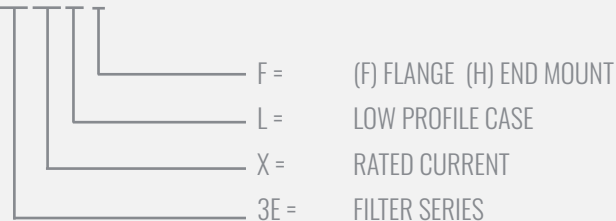
### ELECTRICAL SCHEMATIC

#### DELTA - SUFFIX "D"



### HOW TO ORDER

3F15 L F



**NOTE:** USE ANY COMBINATION OF -X (AMPS) WITH ANY -Y RATINGS  
E.G. **3F15 LF**(15 AMPS, LOW PROFILE CASE, FLANGE MOUNT)

### SPECIFICATIONS

|                         |  |
|-------------------------|--|
| OPERATING FREQUENCY     | 50/60HZ  |
| USABLE FREQUENCY        |  |
| MAX. OPERATING VOLTAGE* | 250VAC +10%  |
| AMBIENT TEMPERATURE     |  |
| CLIMATIC CATEGORY       |  |
| TERMINALS (-T)          | QD: 0.25 TABS<br>STUDS: 8-32 (7.5A),<br>10-32(15-45A), 1/4-20<br>(60A-100A), 3/16-18 (80A) |
| TYP. WEIGHT, LBS (KG)   | 1.3-32 (.589-14.515)   |

#### LEAKAGE CURRENT

@ 250 VAC 60 HZ 2.4 mA Max.

#### HIPOT RATINGS

LINE TO GROUND 2200 VDC - 3200 VDC

### TYPICAL APPLICATIONS

- ✓ High Power Rectifiers
- ✓ Uninterrupted Power Supplies
- ✓ Processing Equipment
- ✓ Alternative Energy (EV Charging & Solar)
- ✓ Factory Machinery

# 3F

## HIGH PERFORMANCE 3-PHASE SWITCH MODE EMI FILTER

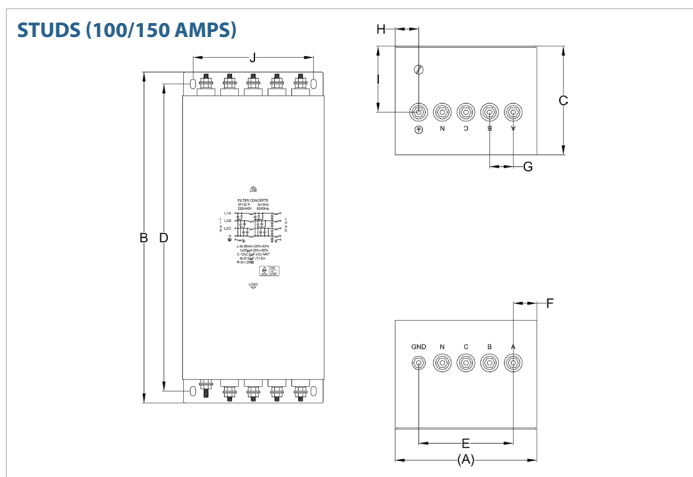
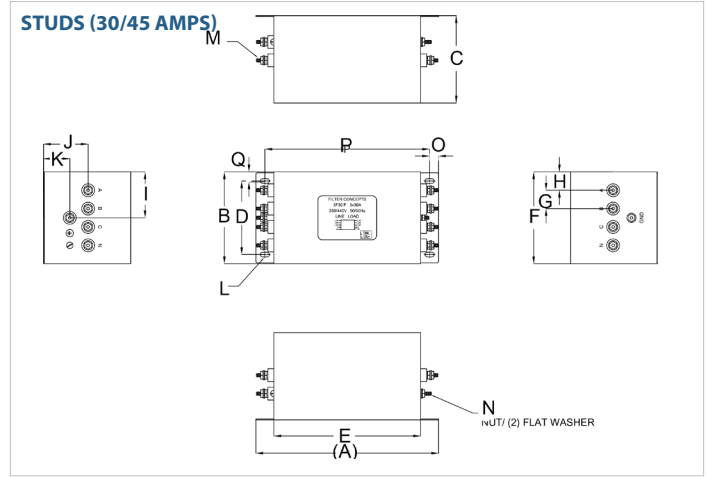
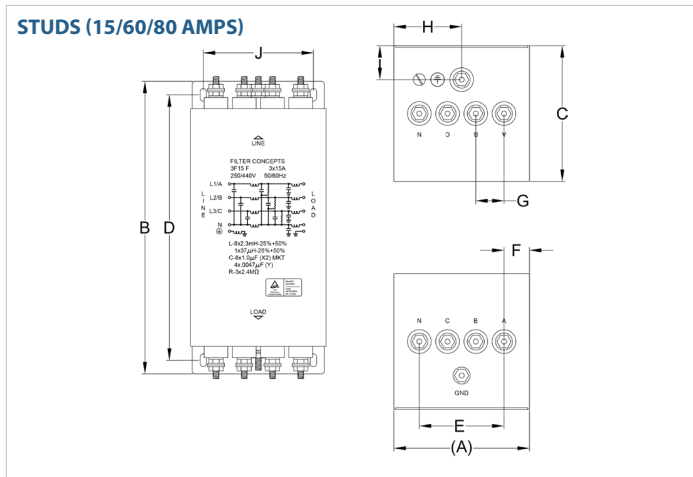
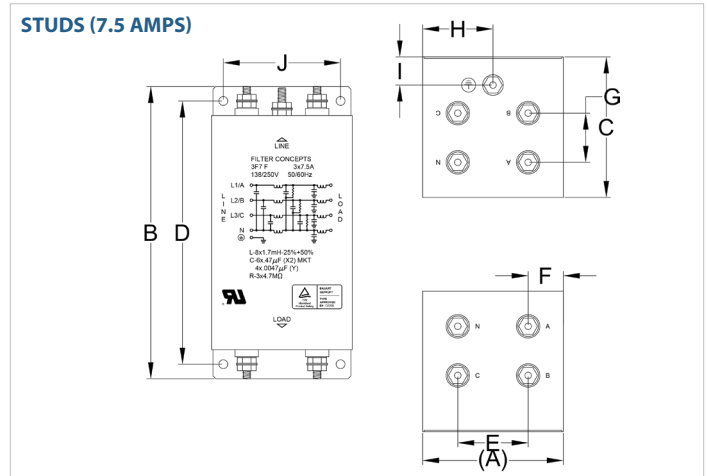
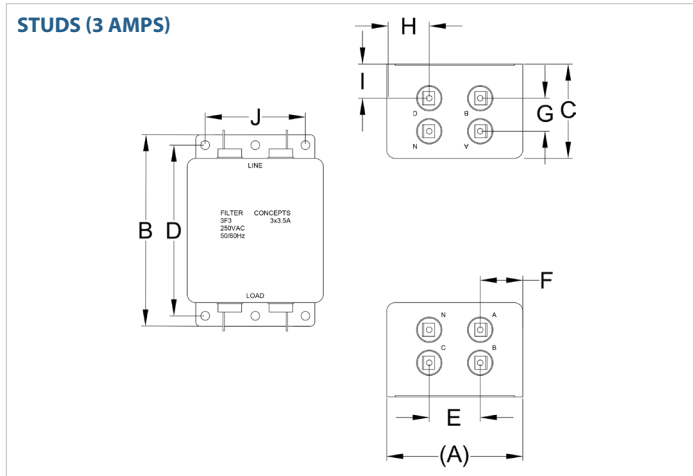
| MODEL NO. | RATED CURRENT (A) @ 40° C | Y-CAP, nF           | LEAKAGE CURRENT, mA @ 250V AC, 50 Hz | TERMINAL OPTIONS |                  | MAX. DIMENSIONS" (MM) |             |            |
|-----------|---------------------------|---------------------|--------------------------------------|------------------|------------------|-----------------------|-------------|------------|
|           |                           |                     |                                      | (QD)INPUT/OUTPUT | (S) INPUT/OUTPUT | WIDTH                 | (LENGTH)    | HEIGHT     |
| 3F3       | 3                         | 4x.0047µF           | .80                                  | ✓                |                  | 2.88"(73)             | 4.06"(103)  | 2.00"(51)  |
| 3F3D      | 3                         | 3x.0047µF           | .80                                  | ✓                |                  | 2.88"(73)             | 4.06"(103)  | 2.00"(51)  |
| 3F7       | 7.5                       | *                   | .80                                  | *                | *                | 3.00"(76)             | 6.24"(158)  | 3.00"(76)  |
| 3F7 F     | 7.5                       | 4x.0047µF           | .80                                  |                  | ✓                | 3.00"(76)             | 6.24"(158)  | 3.00"(76)  |
| 3F7 L     | 7.5                       | *                   | .80                                  | *                | *                | 3.00"(76)             | 6.24"(158)  | 3.00"(76)  |
| 3F7A H    | 7.5                       | 4x.0047µF/4x.0022µF | .80                                  |                  | ✓                | 3.00"(76)             | 6.24"(158)  | 3.00"(76)  |
| 3F7D F    | 7.5                       | 3x.0047µF           | .80                                  |                  | ✓                | 3.00"(76)             | 6.24"(158)  | 3.00"(76)  |
| 3F15      | 15                        | *                   | .80                                  | *                | *                | 4.00"(102)            | 8.62"(219)  | 4.00"(102) |
| 3F15 F    | 15                        | 4x.0047µF           | .80                                  |                  | ✓                | 4.00"(102)            | 8.62"(219)  | 4.00"(102) |
| 3F15 L    | 15                        | *                   | .80                                  | *                | *                | 4.00"(102)            | 8.62"(219)  | 4.00"(102) |
| 3F15 LF   | 15                        | 4x.0047µF           | .80                                  |                  | ✓                | 4.00"(102)            | 8.62"(219)  | 4.00"(102) |
| 3F15D F   | 15                        | 3x.0047µF           | .80                                  |                  | ✓                | 4.00"(102)            | 8.62"(219)  | 4.00"(102) |
| 3F30      | 30                        | *                   | 1.4                                  | *                | *                | 5.00"(127)            | 9.96"(253)  | 4.75"(121) |
| 3F30 F    | 30                        | 4x.01µF             | 1.4                                  |                  | ✓                | 5.00"(127)            | 9.96"(253)  | 4.75"(121) |
| 3F30 H    | 30                        | 4x.01µF             | 1.4                                  |                  | ✓                | 5.00"(127)            | 9.96"(253)  | 4.75"(121) |
| 3F30 L    | 30                        | *                   | 1.4                                  | *                | *                | 5.00"(127)            | 9.96"(253)  | 4.75"(121) |
| 3F30 LF   | 30                        | 4x.01µF             | 1.4                                  |                  | ✓                | 5.00"(127)            | 9.96"(253)  | 4.75"(121) |
| 3F30A F   | 30                        | 4x.01µF/4x.0047µF   | 2.1                                  |                  | ✓                | 5.00"(127)            | 9.96"(253)  | 4.75"(121) |
| 3F30A H   | 30                        | 4x.01µF/4x.0047µF   | 2.1                                  |                  | ✓                | 5.00"(127)            | 9.96"(253)  | 4.75"(121) |
| 3F30D LF  | 30                        | 3x.01µF             | 1.4                                  |                  | ✓                | 5.00"(127)            | 9.96"(253)  | 4.75"(121) |
| 3F30DA H  | 30                        | 3x.01µF/3x.0047µF   | 2.1                                  |                  | ✓                | 5.00"(127)            | 9.96"(253)  | 4.75"(121) |
| 3F45      | 45                        | *                   | 1.4                                  | *                | *                | 5.00"(127)            | 12.96"(329) | 4.74"(120) |
| 3F45 F    | 45                        | 4x.01µF             | 1.4                                  |                  | ✓                | 5.00"(127)            | 12.96"(329) | 4.74"(120) |
| 3F60      | 60                        | *                   | 1.6                                  | *                | *                | 6.50"(165)            | 14.00"(356) | 4.75"(121) |
| 3F60 F    | 60                        | 4x.01µF             | 1.6                                  |                  | ✓                | 6.50"(165)            | 14.00"(356) | 4.75"(121) |
| 3F60A H   | 60                        | 4x.01µF/4x.0047µF   | 1.6                                  |                  | ✓                | 6.50"(165)            | 14.00"(356) | 4.75"(121) |
| 3F60D F   | 60                        | 3x.01µF             | 1.2                                  |                  | ✓                | 6.50"(165)            | 14.00"(356) | 4.75"(121) |
| 3F80      | 80                        | *                   | 2.4                                  | *                | *                | 6.50"(165)            | 17.00"(432) | 4.75"(121) |
| 3F80D     | 80                        | *                   | 2.4                                  | *                | *                | 6.50"(165)            | 17.00"(432) | 4.75"(121) |
| 3F80D F   | 80                        | 3x.015µF            | 2.4                                  |                  | ✓                | 6.50"(165)            | 17.00"(432) | 4.75"(121) |
| 3F100     | 100                       | *                   | 2.4                                  | *                | *                | 7.50"(191)            | 17.50"(445) | 5.75"(146) |
| 3F100D    | 100                       | *                   | 2.4                                  | *                | *                | 7.50"(191)            | 17.50"(445) | 5.75"(146) |
| 3F100D H  | 100                       | 3x.022µF            | 2.4                                  |                  | ✓                | 7.50"(191)            | 17.50"(445) | 5.75"(146) |
| 3F150     | 150                       | *                   | .80                                  | *                | *                | 7.50"(191)            | 17.50"(445) | 5.75"(146) |

\*Contact factory for dimensions.

# 3F

## HIGH PERFORMANCE 3-PHASE SWITCH MODE EMI FILTER

### 3F MECHANICAL OUTLINES (MM)



# 3F

## HIGH PERFORMANCE 3-PHASE SWITCH MODE EMI FILTER

| SERIES              | (A)             | B               | C              | D               | E               | F              | G             | H             | I             | J              | K             | L               | M                     | N                   | O             | P               | Q             |
|---------------------|-----------------|-----------------|----------------|-----------------|-----------------|----------------|---------------|---------------|---------------|----------------|---------------|-----------------|-----------------------|---------------------|---------------|-----------------|---------------|
| <b>3 amps</b>       | 2.88"<br>(73)   | 4.06"<br>(103)  | 2.00"<br>(51)  | 3.62"<br>(92)   | 1.08"<br>(27)   | 0.90"<br>(23)  | 0.70"<br>(18) | 0.87"<br>(22) | 0.73"<br>(18) | 2.12"<br>(54)  | N/A           | N/A             | N/A                   | N/A                 | N/A           | N/A             | N/A           |
| <b>7.5 amps</b>     | 3.00"<br>(76)   | 6.24"<br>(158)  | 3.00"<br>(76)  | 5.62"<br>(143)  | 1.50"<br>(38)   | 0.75"<br>(19)  | 1.05"<br>(27) | 1.50"<br>(38) | 0.60"<br>(15) | 2.50"<br>(64)  | N/A           | N/A             | N/A                   | N/A                 | N/A           | N/A             | N/A           |
| <b>15 amps</b>      | 4.00"<br>(102)  | 8.62"<br>(219)  | 4.00"<br>(102) | 7.82"<br>(199)  | 2.50"<br>(64)   | 0.75"<br>(19)  | 0.83"<br>(21) | 2.00"<br>(51) | 1.00"<br>(25) | 3.25"<br>(83)  | N/A           | N/A             | N/A                   | N/A                 | N/A           | N/A             | N/A           |
| <b>30 amps</b>      | 9.96"<br>(253)  | 5.00"<br>(127)  | 4.75"<br>(121) | 4.00"<br>(102)  | 8.00"<br>(203)  | 5.00"<br>(127) | 1.00"<br>(25) | 1.00"<br>(25) | 2.50"<br>(64) | 2.43"<br>(62)  | 1.43"<br>(36) | Ø 12.7x6.4, 4x  | STUD,<br>10-32, 9x    | STUD, GND,<br>10-32 | 0.49"<br>(12) | 8.98"<br>(228)  | 0.55"<br>(14) |
| <b>45 amps</b>      | 12.96"<br>(329) | 5.00"<br>(127)  | 4.74"<br>(120) | 4.00"<br>(102)  | 10.90"<br>(277) | 5.00"<br>(127) | 1.00"<br>(25) | 1.00"<br>(25) | 2.50"<br>(64) | 2.43"<br>(62)  | 1.43"<br>(36) | Ø 0.25x0.50, 4x | STUD<br>#10-32,<br>9x | STUD GND<br>#10-32  | 0.49"<br>(12) | 11.89"<br>(302) | 0.50"<br>(13) |
| <b>60 amps</b>      | 6.50"<br>(165)  | 14.00"<br>(356) | 4.75"<br>(121) | 13.00"<br>(330) | 3.38"<br>(86)   | 1.56"<br>(40)  | 1.13"<br>(29) | 3.25"<br>(83) | 1.43"<br>(36) | 4.25"<br>(108) | N/A           | N/A             | N/A                   | N/A                 | N/A           | N/A             | N/A           |
| <b>80 amps</b>      | 6.50"<br>(165)  | 17.00"<br>(432) | 4.75"<br>(121) | 16.00"<br>(406) | 3.38"<br>(86)   | 1.56"<br>(40)  | 1.13"<br>(29) | 3.25"<br>(83) | 1.43"<br>(36) | 4.25"<br>(108) | N/A           | N/A             | N/A                   | N/A                 | N/A           | N/A             | N/A           |
| <b>100/150 amps</b> | 7.50"<br>(191)  | 17.50"<br>(445) | 5.75"<br>(146) | 16.24"<br>(412) | 5.00"<br>(127)  | 1.13"<br>(29)  | 1.13"<br>(29) | 1.25"<br>(32) | 3.50"<br>(89) | 6.37"<br>(162) | N/A           | N/A             | N/A                   | N/A                 | N/A           | N/A             | N/A           |

TYPICAL TOLERANCE: +/-0.02" (0.50MM)

### TYPICAL INSERTION LOSS, dB (50/50 Ohm)

| Amps       | Freq (MHz) | Insertion Loss (dB) |     |     |    |    |
|------------|------------|---------------------|-----|-----|----|----|
|            |            | 0.15                | 0.5 | 1.0 | 10 | 30 |
| <b>3</b>   | CM (dB)    | 35                  | 60  | 51  | 63 | 69 |
|            | DM (dB)    | 60                  | 60  | 53  | 69 | 77 |
| <b>7.5</b> | CM (dB)    | 50                  | 60  | 51  | 63 | 69 |
|            | DM (dB)    | 50                  | 65  | 53  | 69 | 77 |
| <b>15</b>  | CM (dB)    | 50                  | 60  | 51  | 63 | 69 |
|            | DM (dB)    | 50                  | 65  | 53  | 69 | 77 |
| <b>30</b>  | CM (dB)    | 45                  | 60  | 51  | 63 | 69 |
|            | DM (dB)    | 50                  | 65  | 53  | 69 | 77 |
| <b>45</b>  | CM (dB)    | 50                  | 60  | 51  | 63 | 69 |
|            | DM (dB)    | 50                  | 65  | 53  | 69 | 77 |
| <b>60</b>  | CM (dB)    | 50                  | 60  | 51  | 63 | 69 |
|            | DM (dB)    | 50                  | 65  | 53  | 69 | 77 |
| <b>80</b>  | CM (dB)    | 50                  | 60  | 51  | 63 | 69 |
|            | DM (dB)    | 50                  | 65  | 53  | 69 | 77 |

# 3F

## HIGH PERFORMANCE 3-PHASE SWITCH MODE EMI FILTER

| Amps       | Freq (MHz) | 0.15 | 0.5 | 1.0 | 10 | 30 |
|------------|------------|------|-----|-----|----|----|
| <b>100</b> | CM (dB)    | 50   | 60  | 51  | 63 | 69 |
|            | DM (dB)    | 50   | 65  | 53  | 69 | 77 |
| <b>150</b> | CM (dB)    | 50   | 60  | 51  | 63 | 69 |
|            | DM (dB)    | 50   | 65  | 53  | 69 | 77 |