

Compact Low Current 3-phase WYE RFI Filters

AYO Series



UL Recognized
CSA Certified
VDE Approved



AYO Series

- For 3-phase, four wire, WYE applications
- Filters each of the three lines plus neutral
- Good for attenuation beginning at 100kHz
- Space saving design
- Low leakage current
- Easy to connect terminals

Ordering Information



Available Part Numbers

| | |
|--------|--------|
| 3AYO1 | 6AYO1 |
| 10AYO1 | 20AYO1 |

Specifications

Maximum leakage current each Line to Ground:

| | | |
|------------------|------------------|------------|
| | <u>3, 6, 10A</u> | <u>20A</u> |
| @ 120 VAC 60 Hz: | 2.0 mA | 3.5 mA |
| @ 250 VAC 50 Hz: | 3.0 mA | 5.5 mA |

Hipot rating (one minute):

| | |
|-----------------|----------|
| Line to Ground: | 1500 VAC |
| Line to Line: | 1450 VDC |

Rated Voltage (max):

| | |
|----------------------------|---------|
| Phase to Phase: | 440 VAC |
| Phase to Neutral / Ground: | 250 VAC |

Operating Frequency:

50/60 Hz

Rated Current:

3 to 20A

Operating Ambient Temperature Range

(at rated current I_r): -10°C to +40°C
In an ambient temperature (T_a) higher than +40°C the maximum operating current (I_o) is calculated as follows: $I_o = I_r \sqrt{(85-T_a)/45}$

Electrical Schematic



2
Three Phase Filters

Compact Low Current 3-phase WYE RFI Filters *(continued)*

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Case Style



Typical Dimensions:

- Line/Load Terminals (8): .250 [6.3] with .07 [1.8] Dia. hole
- Ground Terminal (1): .250 [6.3] with .07 x .16 [1.8 x 3.8] slot
- Mounting Holes (2): .188 [4.78] Dia.

Case Dimensions

| Part No. | A (max.) | B (max.) | C (max.) | D $\pm .015$ $\pm .38$ | E (max.) |
|------------|-------------|-------------|-------------|------------------------------|-------------|
| AYO Series | 3.37 | 2.07 | 1.53 | 2.938 | 3.35 |
| | 85.6 | 52.5 | 38.7 | 74.63 | 85.1 |

Performance Data

Typical Insertion Loss

Measured in closed 50 Ohm system

3AYO1



6AYO1



10AYO1



20AYO1



— Common Mode / Asymmetrical (L-G)
— Differential Mode / Symmetrical (L-L)

Minimum Insertion Loss

Measured in closed 50 Ohm system

Common Mode / Asymmetrical (Line to Ground)

| Current Rating | Frequency –MHz | | | | | |
|----------------|----------------|----|----|----|----|----|
| | .15 | .5 | 1 | 5 | 10 | 30 |
| 3A | 12 | 23 | 29 | 33 | 38 | 35 |
| 6A | 7 | 23 | 30 | 40 | 50 | 30 |
| 10A | - | - | 5 | 16 | 28 | 15 |
| 20A | - | 7 | 11 | 32 | 23 | 12 |

Differential Mode / Symmetrical (Line to Line)

| Current Rating | Frequency –MHz | | | | | |
|----------------|----------------|----|----|----|----|----|
| | .15 | .5 | 1 | 5 | 10 | 30 |
| 3A | - | 12 | 20 | 50 | 35 | 30 |
| 6A | 10 | 18 | 24 | 31 | 28 | 28 |
| 10A | 10 | 18 | 24 | 42 | 28 | 22 |
| 20A | 10 | 18 | 24 | 42 | 38 | 23 |