

ZERO SEQUENCE FILTER TRANSFORMERS

Economical solution to triplen harmonics!

Our zero sequence filter transformers offer a simple and cost effective solution to facility power quality problems associated with triplen harmonics (3rd, 9th, etc). ZST Series transformers are specially to reduce the harmonics associated with single phase non-linear loads supplied form a 4-wire power system. Connect these at a 4-wire distribution panel that feeds non-linear line to neutral connected single phase loads. Our transformers help to improve your productivity while keeping tight controls on costs.

The standard features that you want!

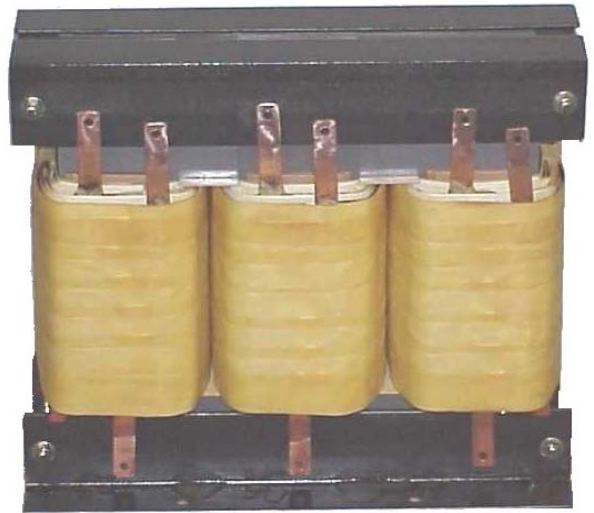
Weight and cost are both minimized by our efficient use of aluminum winding conductors. Your installation costs are kept to a minimum through our use of finger-safe terminations on units rated less than 150 amps. Transformers with higher current ratings have solid copper tab type terminals. The UL200C temperature rating of our insulation materials are economically utilized while maintaining adequate operating safety margins.

Optional features available when needed!

There is no sense paying for features you don't need. That's why we've designed our standard ZST Series transformers to include the features you must have, but to leave all others as options for you to choose only when you need them. You can specify thermal switches, enclosure types and many other options to your order when you need them.

Enclosures that meet your needs!

While many transformer companies only offer enclosed transformers, because they use the cabinet walls as the transformer mounting brackets, you'll be pleased to know that we'll accommodate your needs for the enclosure and mounting method you want. Whether you need open core & coil construction or enclosures for Nema 1, Nema 12 or Nema 3R applications. We'll even provide Nema 12 potted construction for maximum protection and minimum audible noise.



Up to 600 volts
50hz or 60hz
Three phase, 4 - wire

Broad range of ratings available!

Standard ratings range form 15 amps (phase current) up to 300 amps (phase current). Higher current ratings are no problem either – simply contact the factory any time you need a different rating. We'll be happy to quote the part that meets your exact needs. All transformers manufactured by Controlled Magnetics are available in both low voltage and medium voltage ratings.



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Selection: Zero Sequence Filter Transformers

Easy to select & Install

Our Zero sequence filter transformers are easy to select. Simply size them for the phase current (circuit breaker rating). All of our standard units are constructed with neutrals that will handle three times the phase current. Our ZST series transformers are normally used on four wire power systems, but they can be used on three wire systems to attenuate triplen harmonics caused by the unbalanced distribution of loads.

Open Style (enclosure is optional)

208 Volts, 60hz

| Phase Amps | Catalog No. | A (height) | B (width) | C Depth | Weight (lbs) | Cabinet (optional) | Cabinet A x B x C |
|------------|-------------|------------|-----------|---------|--------------|--------------------|-------------------|
| 15 | ZST15G6 | 8.5 | 11 | 5 | 45 | A | 20x16x16 |
| 20 | ZST20G6 | 8.5 | 11 | 7 | 65 | A | 20x16x16 |
| 25 | ZST25G6 | 8.5 | 11 | 7.5 | 75 | A | 20x16x16 |
| 30 | ZST30G6 | 8.5 | 11 | 8.5 | 95 | A | 20x16x16 |
| 40 | ZST40G6 | 11 | 14.5 | 7 | 125 | B | 24x23x20 |
| 50 | ZST50G6 | 11 | 14.5 | 7.5 | 130 | B | 24x23x20 |
| 60 | ZST60G6 | 11 | 14.5 | 8 | 140 | B | 24x23x20 |
| 75 | ZST75G6 | 13 | 15.5 | 8 | 170 | B | 24x23x20 |
| 100 | ZST100G6 | 15 | 19 | 8 | 220 | C | 34x28x22 |
| 150 | ZST150G6 | 15 | 19 | 12 | 275 | C | 34x28x22 |
| 200 | ZST200G6 | 15 | 20 | 10 | 450 | C | 34x28x22 |
| 300 | ZST300G6 | 17 | 21.5 | 14 | 575 | D | 40x32x24 |

380 Volts, 50hz

| Phase Amps | Catalog No. | A (height) | B (width) | C Depth | Weight (lbs) | Cabinet (Optional) | Cabinet A x B x C |
|------------|-------------|------------|-----------|---------|--------------|--------------------|-------------------|
| 15 | ZST15C5 | 8.5 | 11 | 9 | 105 | A | 20x16x16 |
| 20 | ZST20C5 | 11 | 14.5 | 7 | 125 | B | 24x23x20 |
| 25 | ZST25C5 | 11 | 14.5 | 8 | 140 | B | 24x23x20 |
| 30 | ZST30C5 | 11 | 14.5 | 9 | 175 | B | 24x23x20 |
| 40 | ZST40C5 | 13 | 15.5 | 9 | 210 | B | 24x23x20 |
| 50 | ZST50C5 | 15 | 19 | 9 | 235 | C | 34x28x22 |
| 60 | ZST60C5 | 15 | 19 | 10 | 270 | C | 34x28x22 |
| 75 | ZST75C5 | 15 | 19 | 12 | 290 | C | 34x28x22 |
| 100 | ZST10C5 | 15 | 20 | 11 | 500 | C | 34x28x22 |
| 150 | ZST150C5 | 17 | 21.5 | 13 | 600 | C | 34x28x22 |
| 200 | ZST200C5 | 22 | 22.25 | 15 | 775 | D | 40x32x24 |
| 300 | ZST300C5 | 25 | 27 | 15 | 900 | E | 46x36x24 |

415 Volts, 50hz

| Phase Amps | Catalog No. | A (height) | B (width) | C Depth | Weight (lbs) | Cabinet (Optional) | Cabinet A x B x C |
|------------|-------------|------------|-----------|---------|--------------|--------------------|-------------------|
| 15 | ZST15D5 | 8.5 | 11 | 10 | 110 | A | 20x16x16 |
| 20 | ZST20D5 | 11 | 14.5 | 8 | 140 | B | 24x23x20 |
| 25 | ZST25D5 | 11 | 14.5 | 9 | 150 | B | 24x23x20 |
| 30 | ZST30D5 | 11 | 14.5 | 9 | 185 | B | 24x23x20 |
| 40 | ZST40D5 | 13 | 15.5 | 9 | 220 | B | 24x23x20 |
| 50 | ZST50D5 | 13 | 19 | 9 | 250 | C | 34x28x22 |
| 60 | ZST60D5 | 15 | 19 | 10 | 295 | C | 34x28x22 |
| 75 | ZST75D5 | 15 | 19 | 13 | 320 | C | 34x28x22 |
| 100 | ZST100D5 | 15 | 20 | 11 | 520 | C | 34x28x22 |
| 150 | ZST150D5 | 17 | 21.5 | 15 | 660 | D | 40x32x24 |
| 200 | ZST200D5 | 22 | 22.25 | 14 | 775 | D | 40x32x24 |
| 300 | ZST300D5 | 25 | 27 | 16 | 1025 | E | 46x36x24 |

480 Volts, 60hz

| Phase Amps | Catalog No. | A (height) | B (width) | C (depth) | Weight (lbs) | Cabinet (Optional) | Cabinet A x B x C |
|------------|-------------|------------|-----------|-----------|--------------|--------------------|-------------------|
| 15 | ZST15A6 | 8.5 | 11 | 10 | 105 | A | 20x16x16 |
| 20 | ZST20A6 | 11 | 14.5 | 9 | 125 | B | 24x23x20 |
| 25 | ZST25A6 | 11 | 14.5 | 9 | 155 | B | 24x23x20 |
| 30 | ZST30A6 | 13 | 15.5 | 9 | 175 | B | 24x23x20 |
| 40 | ZST40A6 | 15 | 19 | 9 | 210 | C | 34x28x22 |
| 50 | ZST50A6 | 15 | 19 | 11 | 260 | C | 34x28x22 |
| 60 | ZST60A6 | 15 | 19 | 13 | 275 | C | 34x28x22 |
| 75 | ZST75A6 | 15 | 20 | 9 | 415 | C | 34x28x22 |
| 100 | ZST100A6 | 16 | 21.5 | 13 | 520 | D | 40x32x24 |
| 150 | ZST150A6 | 22 | 22.25 | 14 | 650 | D | 40x32x24 |
| 200 | ZST200A6 | 25 | 30 | 15 | 850 | E | 46x36x24 |
| 300 | ZST300A6 | 25 | 30 | 17 | 1275 | E | 46x36x24 |

600 Volts, 60hz

| Phase Amps | Catalog No. | A (height) | B (width) | C Depth | Weight (lbs) | Cabinet (Optional) | Cabinet A x B x C |
|------------|-------------|------------|-----------|---------|--------------|--------------------|-------------------|
| 15 | ZST15E6 | 11 | 14.5 | 7.5 | 120 | B | 24x23x20 |
| 20 | ZST20E6 | 11 | 14.5 | 7.5 | 155 | B | 24x23x20 |
| 25 | ZST25E6 | 13 | 15.5 | 8 | 175 | B | 24x23x20 |
| 30 | ZST30E6 | 15 | 19 | 7 | 200 | C | 34x28x22 |
| 40 | ZST40E6 | 15 | 19 | 9 | 250 | C | 34x28x22 |
| 50 | ZST50E6 | 15 | 19 | 12 | 275 | C | 34x28x22 |
| 60 | ZST60E6 | 15 | 20 | 9 | 425 | C | 34x28x22 |
| 75 | ZST75E6 | 15 | 20 | 10 | 500 | C | 34x28x22 |
| 100 | ZST100E6 | 17 | 21.5 | 14 | 550 | D | 40x32x24 |
| 150 | ZST150E6 | 25 | 27 | 12 | 725 | E | 46x36x24 |
| 200 | ZST200E6 | 25 | 27 | 14 | 895 | E | 46x36x24 |
| 300 | ZST300E6 | 25 | 30 | 16 | 1425 | E | 46x36x24 |

Nema 1 Enclosed - Zero Sequence Filter Transformers

| Amps | 208V-60hz | 380V-50hz | 415V-50hz | 480V-60hz | 600V-60hz |
|------|------------|------------|------------|------------|------------|
| 15 | ZST15G6N1 | ZST15C5N1 | ZST15D5N1 | ZST15A6N1 | ZST15E6N1 |
| 20 | ZST20G6N1 | ZST20C5N1 | ZST20D5N1 | ZST20A6N1 | ZST20E6N1 |
| 25 | ZST25G6N1 | ZST25C5N1 | ZST25D5N1 | ZST25A6N1 | ZST25E6N1 |
| 30 | ZST30G6N1 | ZST30C5N1 | ZST30D5N1 | ZST30A6N1 | ZST30E6N1 |
| 40 | ZST40G6N1 | ZST40C5N1 | ZST40D5N1 | ZST40A6N1 | ZST40E6N1 |
| 50 | ZST50G6N1 | ZST50C5N1 | ZST50D5N1 | ZST50A6N1 | ZST50E6N1 |
| 60 | ZST60G6N1 | ZST60C5N1 | ZST60D5N1 | ZST60A6N1 | ZST60E6N1 |
| 75 | ZST75G6N1 | ZST75C5N1 | ZST75D5N1 | ZST75A6N1 | ZST75E6N1 |
| 100 | ZST100G6N1 | ZST100C5N1 | ZST100D5N1 | ZST100A6N1 | ZST100E6N1 |
| 150 | ZST150G6N1 | ZST150C5N1 | ZST150D5N1 | ZST150A6N1 | ZST150E6N1 |
| 200 | ZST200G6N1 | ZST200C5N1 | ZST200D5N1 | ZST200A6N1 | ZST200E6N1 |
| 300 | ZST300G6N1 | ZST300C5N1 | ZST300D5N1 | ZST300A6N1 | ZST300E6N1 |

Cabinets for Zero Sequence Filter Transformers



| Dimensions & Weight | | | | |
|---------------------|-----------------|----------------|----------------|--------------|
| Cabinet | Height (inches) | Width (inches) | Depth (inches) | Weight (lbs) |
| A | 20 | 16 | 16 | 50 |
| B | 24 | 23 | 20 | 85 |
| C | 34 | 28 | 22 | 125 |
| D | 40 | 32 | 24 | 150 |
| E | 46 | 36 | 24 | 170 |
| F | 65 | 45 | 35 | 375 |

SPECIFICATIONS: Zero Sequence Filter Transformers

| | |
|-------------------------------|--|
| Power phases: | Three phase, 4-wire |
| Voltage ratings: | (Specify voltage on order) |
| Low Voltage | 600 volts or less |
| Medium Voltage | 5000 volts or less |
| Winding configuration: | Wye, zig-zag phase shifted windings |
| Voltage taps: | None supplied as standard |
| Frequency: | |
| Standard | 60 hertz |
| Optional | 50 hertz |
| Windings: | |
| Standard | Aluminum with copper terminals |
| Optional | Copper with copper terminals |
| Insulation system: | Class H (200°C) UL recognized insulation system |
| Temperature: | |
| Ambient | 40°C maximum |
| Rise | 155°C standard |
| Thermal switch: | Optional all units |
| Terminations: | |
| ≤ 150 amps | Touchproof copper terminals |
| > 150 amps | Copper tab terminals |
| Enclosures: | Open core & coil Nema type 1 (Floor standing) Nema type 12 (Floor standing) Nema type 12 potted |

We will custom build any transformer to your exact specifications!

