

3 to 75 KVA

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# 4

## Three-Phase Encapsulated

### Products

- *General Purpose: 3 KVA through 75 KVA\**

### Applications

- *For all general loads in rugged environments including refineries, factories, chemical plants, marine duty, ship docks, and grain mills*

### Specifications

- *Encapsulated with electrical grade resin*
- *Cores of high quality electrical steel*
- *NEMA 3R-rated enclosures*
- *60 Hz operation*
- *180°C insulation class standard*
- *Heat-cured ASA-61 gray powder coat finish*

### Features, Functions, Benefits

- *Large connection compartment with knockouts for ease of wiring and installation*
- *Quiet operation for installation flexibility*
- *Slotted mounting holes for quick and easy mounting*
- *Convenient wall mount design with lifting hooks – 3 to 15 KVA*
- *30 to 75 KVA floor mount design*
- *Permanently affixed wiring diagram*

### Standards

- *Built in accordance with NEMA, ANSI, UL and CSA standards*

### \*Options and Accessories

- *CE Marked units available as custom*
- *Other sizes and voltages available as custom*

## Three-Phase Encapsulated

### General Purpose

Three-Phase • 600V Class • Standard Application Voltages • Encapsulated  
Taps: 2 – 5% FCBN • 135°C Temperature Rise with 25° Ambient

| KVA                               | Catalog Number | Fig. | Height A (in.) | Width B (in.) | Depth C (in.) | Wiring Diagram | Est. Ship Wgt. (lbs.) |
|-----------------------------------|----------------|------|----------------|---------------|---------------|----------------|-----------------------|
| <b>208 Volts - 208Y/120 Volts</b> |                |      |                |               |               |                |                       |
| 3                                 | 413-1108-000   | 4    | 13.12          | 15.12         | 8.06          | T208H          | 110                   |
| 6                                 | 413-1128-000   | 4    | 13.12          | 15.12         | 8.06          |                | 140                   |
| 9                                 | 413-1148-000   | 4    | 15.12          | 19            | 9.06          |                | 190                   |
| 15                                | 413-1168-000   | 4    | 15.12          | 19            | 9.06          |                | 245                   |
| 30                                | 413-1198-000   | 21   | 37             | 25            | 12.5          |                | 890                   |
| 45                                | 413-1218-000   | 21   | 37             | 25            | 12.5          |                | 790                   |
| 75                                | 413-1238-000   | 21   | 37             | 25            | 12.5          |                | 1050                  |
| <b>208 Volts – 480Y/277 Volts</b> |                |      |                |               |               |                |                       |
| 3                                 | 413-1101-000   | 4    | 13.12          | 15.12         | 8.06          | T208A          | 110                   |
| 6                                 | 413-1121-000   | 4    | 13.12          | 15.12         | 8.06          |                | 140                   |
| 9                                 | 413-1141-000   | 4    | 15.12          | 19            | 9.06          |                | 190                   |
| 15                                | 413-1161-000   | 4    | 15.12          | 19            | 9.06          |                | 245                   |
| 30                                | 413-1191-000   | 21   | 37             | 25            | 12.5          |                | 890                   |
| 45                                | 413-1211-000   | 21   | 37             | 25            | 12.5          |                | 790                   |
| 75                                | 413-1231-000   | 21   | 37             | 25            | 12.5          |                | 1050                  |
| <b>240 Volts – 208Y/120 Volts</b> |                |      |                |               |               |                |                       |
| 3                                 | 413-1102-000   | 4    | 13.12          | 15.12         | 8.06          | T240A          | 110                   |
| 6                                 | 413-1122-000   | 4    | 13.12          | 15.12         | 8.06          |                | 140                   |
| 9                                 | 413-1142-000   | 4    | 15.12          | 19            | 9.06          |                | 190                   |
| 15                                | 413-1162-000   | 4    | 15.12          | 19            | 9.06          |                | 245                   |
| 30                                | 413-1192-000   | 21   | 37             | 25            | 12.5          |                | 890                   |
| 45                                | 413-1212-000   | 21   | 37             | 25            | 12.5          |                | 790                   |
| 75                                | 413-1232-000   | 21   | 37             | 25            | 12.5          |                | 1050                  |
| <b>240 Volts – 480Y/277 Volts</b> |                |      |                |               |               |                |                       |
| 3                                 | 413-1103-000   | 4    | 13.12          | 15.12         | 8.06          | T240G          | 110                   |
| 6                                 | 413-1123-000   | 4    | 13.12          | 15.12         | 8.06          |                | 140                   |
| 9                                 | 413-1143-000   | 4    | 15.12          | 19            | 9.06          |                | 190                   |
| 15                                | 413-1163-000   | 4    | 15.12          | 19            | 9.06          |                | 245                   |
| 30                                | 413-1193-000   | 21   | 37             | 25            | 12.5          |                | 890                   |
| 45                                | 413-1213-000   | 21   | 37             | 25            | 12.5          |                | 790                   |
| 75                                | 413-1233-000   | 21   | 37             | 25            | 12.5          |                | 1050                  |
| <b>480 Volts – 208Y/120 Volts</b> |                |      |                |               |               |                |                       |
| 3                                 | 413-1104-000   | 4    | 13.12          | 15.12         | 8.06          | T480A          | 110                   |
| 6                                 | 413-1124-000   | 4    | 13.12          | 15.12         | 8.06          |                | 140                   |
| 9                                 | 413-1144-000   | 4    | 15.12          | 19            | 9.06          |                | 190                   |
| 15                                | 413-1164-000   | 4    | 15.12          | 19            | 9.06          |                | 245                   |
| 30                                | 413-1194-000   | 21   | 37             | 25            | 12.5          |                | 890                   |
| 45                                | 413-1214-000   | 21   | 37             | 25            | 12.5          |                | 790                   |
| 75                                | 413-1234-000   | 21   | 37             | 25            | 12.5          |                | 1050                  |
| <b>480 Volts – 240 Volts</b>      |                |      |                |               |               |                |                       |
| 3                                 | 413-1107-000   | 4    | 13.12          | 15.12         | 8.06          | T480B          | 110                   |
| 6                                 | 413-1127-000   | 4    | 13.12          | 15.12         | 8.06          |                | 140                   |
| 9                                 | 413-1147-000   | 4    | 15.12          | 19            | 9.06          |                | 190                   |
| 15                                | 413-1167-000   | 4    | 15.12          | 19            | 9.06          |                | 245                   |
| 30                                | 413-1197-000   | 21   | 37             | 25            | 12.5          |                | 890                   |
| 45                                | 413-1217-000   | 21   | 37             | 25            | 12.5          |                | 790                   |
| 75                                | 413-1237-000   | 21   | 37             | 25            | 12.5          |                | 1050                  |

\* For units with an electrostatic shield, copper windings, and/or low temp rise requirements see suffix chart on page 4.4



**Note:** Housing dimensions subject to change without notice. Consult website or factory where dimensions are critical.

Version JE901 0411



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## Three-Phase Encapsulated

### General Purpose

Three-Phase • 600V Class • Standard Application Voltages • Encapsulated  
Taps: 2 – 5% FCBN • 135°C Temperature Rise with 25° Ambient

| KVA                               | Catalog Number | Fig. | Height A (in.) | Width B (in.) | Depth C (in.) | Wiring Diagram | Est. Ship Wgt. (lbs.) |
|-----------------------------------|----------------|------|----------------|---------------|---------------|----------------|-----------------------|
| <b>480 Volts - 480Y/277 Volts</b> |                |      |                |               |               |                |                       |
| 3                                 | 413-1105-000   | 4    | 13.12          | 15.12         | 8.06          | T480C          | 110                   |
| 6                                 | 413-1125-000   | 4    | 13.12          | 15.12         | 8.06          |                | 140                   |
| 9                                 | 413-1145-000   | 4    | 15.12          | 19            | 9.06          |                | 190                   |
| 15                                | 413-1165-000   | 4    | 15.12          | 19            | 9.06          |                | 245                   |
| 30                                | 413-1195-000   | 21   | 37             | 25            | 12.5          |                | 890                   |
| 45                                | 413-1215-000   | 21   | 37             | 25            | 12.5          |                | 790                   |
| 75                                | 413-1235-000   | 21   | 37             | 25            | 12.5          |                | 1050                  |
| <b>600 Volts - 208Y/120 Volts</b> |                |      |                |               |               |                |                       |
| 3                                 | 413-1109-000   | 4    | 13.12          | 15.12         | 8.06          | T600A          | 110                   |
| 6                                 | 413-1129-000   | 4    | 13.12          | 15.12         | 8.06          |                | 140                   |
| 9                                 | 413-1149-000   | 4    | 15.12          | 19            | 9.06          |                | 190                   |
| 15                                | 413-1169-000   | 4    | 15.12          | 19            | 9.06          |                | 245                   |
| 30                                | 413-1199-000   | 21   | 37             | 25            | 12.5          |                | 890                   |
| 45                                | 413-1219-000   | 21   | 37             | 25            | 12.5          |                | 790                   |
| 75                                | 413-1239-000   | 21   | 37             | 25            | 12.5          |                | 1050                  |
| <b>600 Volts – 480Y/277 Volts</b> |                |      |                |               |               |                |                       |
| 3                                 | 413-110B-000   | 4    | 13.12          | 15.12         | 8.06          | T600H          | 110                   |
| 6                                 | 413-112B-000   | 4    | 13.12          | 15.12         | 8.06          |                | 140                   |
| 9                                 | 413-114B-000   | 4    | 15.12          | 19            | 9.06          |                | 190                   |
| 15                                | 413-116B-000   | 4    | 15.12          | 19            | 9.06          |                | 245                   |
| 30                                | 413-119B-000   | 21   | 37             | 25            | 12.5          |                | 890                   |
| 45                                | 413-121B-000   | 21   | 37             | 25            | 12.5          |                | 790                   |
| 75                                | 413-123B-000   | 21   | 37             | 25            | 12.5          |                | 1050                  |

\* For units with an electrostatic shield, copper windings, and/or low temp rise requirements see suffix chart on page 4.4



### Suffix Chart \*\*

The catalog number on the standard product has a suffix of -000

To order alternate version transformers choose the suffix to match the desired features.

| Suffix | Temperature Rise | Electrostatic Shield |
|--------|------------------|----------------------|
| 000    | 135              | no shield            |
| 005    | 135              | shield               |
| 010    | 115              | no shield            |
| 015    | 115              | shield               |
| 080    | 80               | no shield            |
| 085    | 80               | shield               |

**Note:** The weight, dimensions, weather shield and mounting brackets may be different than the standard (-000) version.

Check our website [www.jeffersonelectric.com](http://www.jeffersonelectric.com) for details

\*\* The 0XX suffix defines default winding which could be aluminum or aluminum and copper.

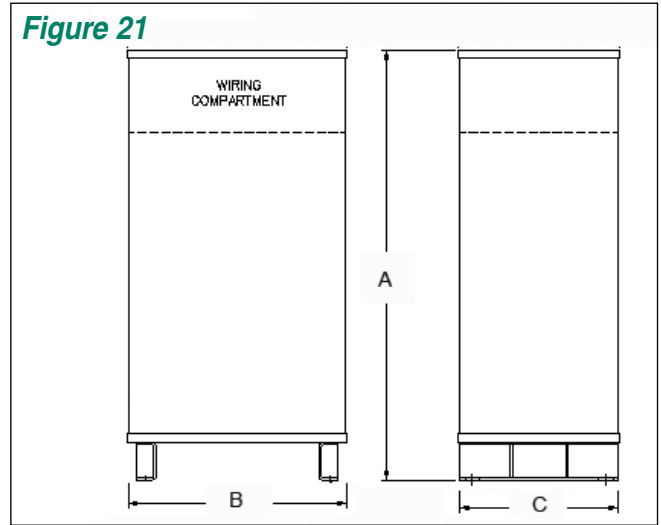
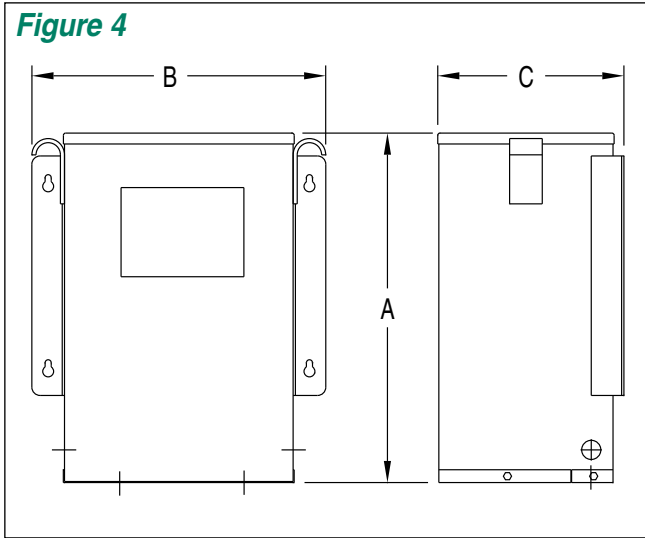
- If all copper is required order -8XX Models.

### Floor Mount (Fig 21)



**NOTE:** Electrostatic shields are optionally available and not shown in all wiring diagrams. \* Insulate unused taps individually.

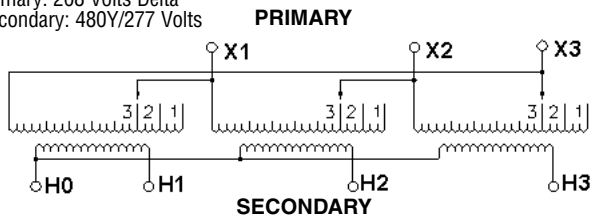
## Three-Phase Encapsulated



### T208A Wiring Diagram & Connections\*

#### Wiring Diagram

Primary: 208 Volts Delta  
Secondary: 480Y/277 Volts



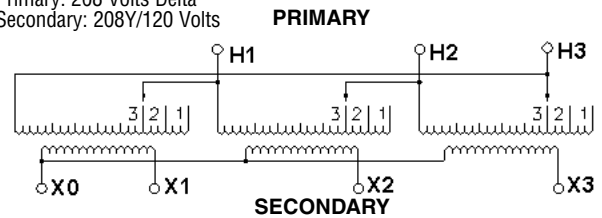
#### Connections

| Primary Volts | Jumper Taps To                | Primary Lines Connect To |
|---------------|-------------------------------|--------------------------|
| 208           | 1                             | X1, X2, X3               |
| 198           | 2                             | X1, X2, X3               |
| 187           | 3                             | X1, X2, X3               |
| Sec. Volts    | Secondary Lines Connect To    |                          |
| 480           | H1, H2, H3                    |                          |
| 277           | Between H0 and H1 or H2 or H3 |                          |
| 1 Phase       |                               |                          |

### T208H Wiring Diagram & Connections\*

#### Wiring Diagram

Primary: 208 Volts Delta  
Secondary: 208Y/120 Volts



#### Connections

| Primary Volts | Jumper Taps To                | Primary Lines Connect To |
|---------------|-------------------------------|--------------------------|
| 208           | 1                             | H1, H2, H3               |
| 198           | 2                             | H1, H2, H3               |
| 187           | 3                             | H1, H2, H3               |
| Sec. Volts    | Secondary Lines Connect To    |                          |
| 208           | X1, X2, X3                    |                          |
| 120           | Between X0 and X1 or X2 or X3 |                          |
| 1 Phase       |                               |                          |

NOTE: Electrostatic shields are optionally available and not shown in all wiring diagrams. \* Insulate unused taps individually.

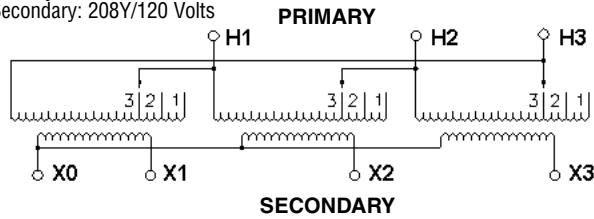
# 4

## Three-Phase Encapsulated

### T240A Wiring Diagram & Connections\*

#### Wiring Diagram

Primary: 240 Volts Delta  
Secondary: 208Y/120 Volts



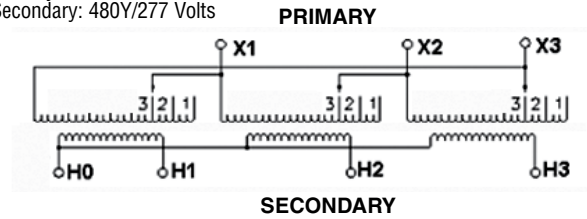
#### Connections

| Primary Volts | Jumper Taps To                | Primary Lines Connect To |
|---------------|-------------------------------|--------------------------|
| 240           | 1                             | H1, H2, H3               |
| 228           | 2                             | H1, H2, H3               |
| 216           | 3                             | H1, H2, H3               |
| Sec. Volts    | Secondary Lines Connect To    |                          |
| 208           | X1, X2, X3                    |                          |
| 120           | Between X0 and X1 or X2 or X3 |                          |
| 1 phase       |                               |                          |

### T240G Wiring Diagram & Connections\*

#### Wiring Diagram

Primary: 240 Volts Delta  
Secondary: 480Y/277 Volts



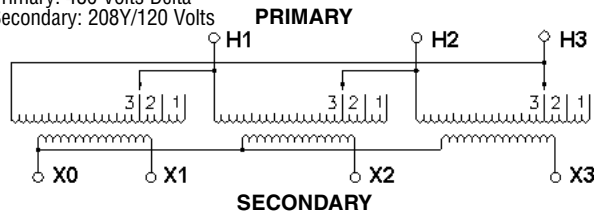
#### Connections

| Primary Volts | Jumper Taps To                | Primary Lines Connect To |
|---------------|-------------------------------|--------------------------|
| 240           | 1                             | X1, X2, X3               |
| 228           | 2                             | X1, X2, X3               |
| 216           | 3                             | X1, X2, X3               |
| Sec. Volts    | Secondary Lines Connect To    |                          |
| 480           | H1, H2, H3                    |                          |
| 277           | Between X0 and H1 or H2 or H3 |                          |
| 1 phase       |                               |                          |

### T480A Wiring Diagram & Connections\*

#### Wiring Diagram

Primary: 480 Volts Delta  
Secondary: 208Y/120 Volts



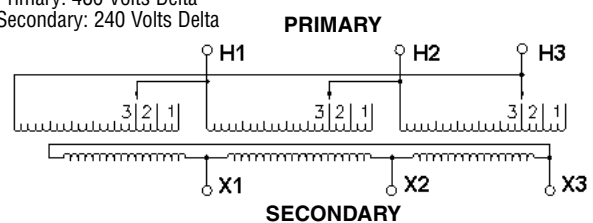
#### Connections

| Primary Volts | Jumper Taps To                | Primary Lines Connect To |
|---------------|-------------------------------|--------------------------|
| 480           | 1                             | H1, H2, H3               |
| 456           | 2                             | H1, H2, H3               |
| 432           | 3                             | H1, H2, H3               |
| Sec. Volts    | Secondary Lines Connect To    |                          |
| 208           | X1, X2, X3                    |                          |
| 120           | Between X0 and X1 or X2 or X3 |                          |
| 1 phase       |                               |                          |

### T480B Wiring Diagram & Connections\*

#### Wiring Diagram

Primary: 480 Volts Delta  
Secondary: 240 Volts Delta



#### Connections

| Primary Volts | Jumper Taps To             | Primary Lines Connect To |
|---------------|----------------------------|--------------------------|
| 480           | 1                          | H1, H2, H3               |
| 456           | 2                          | H1, H2, H3               |
| 432           | 3                          | H1, H2, H3               |
| Sec. Volts    | Secondary Lines Connect To |                          |
| 240           | X1, X2, X3                 |                          |

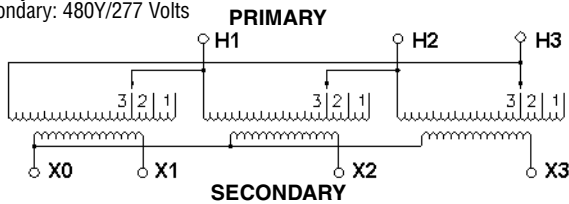
NOTE: Electrostatic shields are optionally available and not shown in all wiring diagrams. \* Insulate unused taps individually.

## Three-Phase Encapsulated

### T480C Wiring Diagram & Connections\*

#### Wiring Diagram

Primary: 480 Volts Delta  
Secondary: 480Y/277 Volts



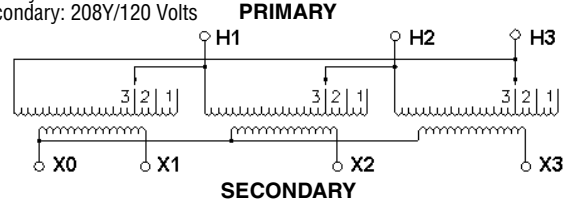
#### Connections

| Primary Volts | Jumper Taps To                | Primary Lines Connect To |
|---------------|-------------------------------|--------------------------|
| 480           | 1                             | H1, H2, H3               |
| 456           | 2                             | H1, H2, H3               |
| 432           | 3                             | H1, H2, H3               |
| Sec. Volts    | Secondary Lines Connect To    |                          |
| 480           | X1, X2, X3                    |                          |
| 277           | Between X0 and X1 or X2 or X3 |                          |
| 1 phase       |                               |                          |

### T600A Wiring Diagram & Connections\*

#### Wiring Diagram

Primary: 600 Volts Delta  
Secondary: 208Y/120 Volts



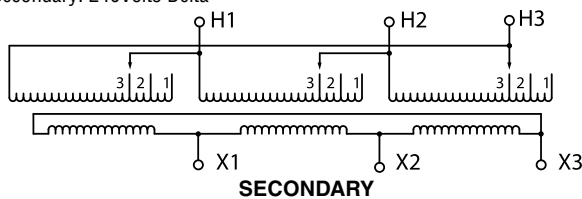
#### Connections

| Primary Volts | Jumper Taps To                | Primary Lines Connect To |
|---------------|-------------------------------|--------------------------|
| 600           | 1                             | H1, H2, H3               |
| 570           | 2                             | H1, H2, H3               |
| 540           | 3                             | H1, H2, H3               |
| Sec. Volts    | Secondary Lines Connect To    |                          |
| 208           | X1, X2, X3                    |                          |
| 120           | Between X0 and X1 or X2 or X3 |                          |
| 1 phase       |                               |                          |

### T600E Wiring Diagram & Connections\*

#### Wiring Diagram

Primary: 600 Volts Delta  
Secondary: 240 Volts Delta



#### Connections

| Primary Volts | Jumper Taps To             | Primary Lines Connect To |
|---------------|----------------------------|--------------------------|
| 600           | 1                          | H1, H2, H3               |
| 570           | 2                          | H1, H2, H3               |
| 540           | 3                          | H1, H2, H3               |
| Sec. Volts    | Secondary Lines Connect To |                          |
| 240           | X1, X2, X3                 |                          |

NOTE: Electrostatic shields are optionally available and not shown in all wiring diagrams. \* Insulate unused taps individually.

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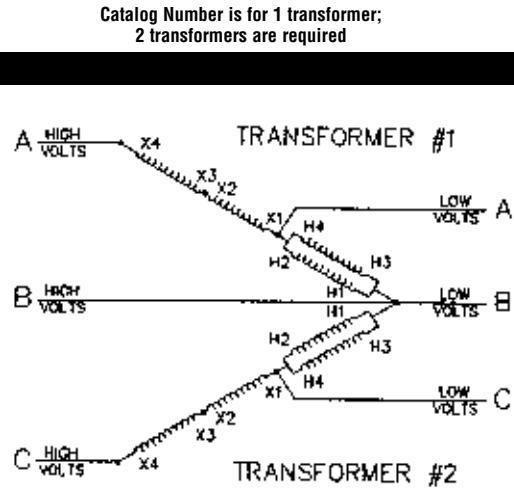
## Three-Phase Encapsulated

### Economical Auto Connections (Open Delta) for 411 Series

#### Three-Phase Using Two Single-Phase (Stock) Transformers

For proper overcurrent protection, refer to Article 450-4 of NEC

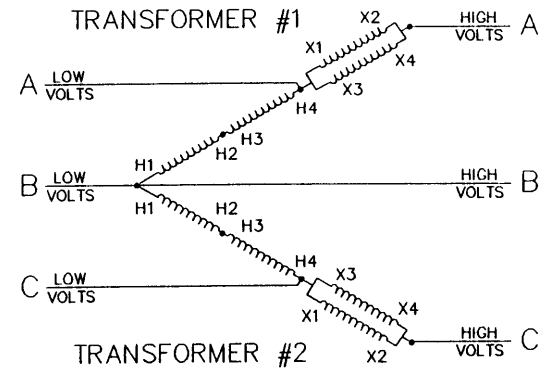
| KVA*   | High Volt Amps | Low Volt Amps | Qty. | Catalog Number |
|--|----------------|---------------|------|----------------|
| <b>480 V <math>\Delta</math> High V – 240 V <math>\Delta</math> Low Volts (Open Delta)–3<math>\phi</math>, 60 Hz</b> |                |               |      |                |
| 0.8  | 1.04           | 2.08          | 2    | 411-0041-000   |
| 1.7  | 2.08           | 4.16          | 2    | 411-0051-000   |
| 2.6  | 3.13           | 6.25          | 2    | 411-0061-000   |
| 3.4  | 4.17           | 8.33          | 2    | 411-0071-000   |
| 5.2  | 6.25           | 12.50         | 2    | 411-0081-000   |
| 6.9  | 8.33           | 16.66         | 2    | 411-0091-000   |
| 10.4   | 12.50          | 25.00         | 2    | 411-0101-000   |
| 17.3   | 20.83          | 41.66         | 2    | 411-0111-000   |
| 26.0   | 31.25          | 62.50         | 2    | 411-0131-000   |
| 34.6   | 41.66          | 83.33         | 2    | 411-0151-000   |
| 52.0   | 62.49          | 124.50        | 2    | 411-0161-000   |
| 86.6   | 104.15         | 208.33        | 2    | 411-0181-000   |



#### Three-Phase Using Two Single-Phase (Stock) Transformers

For proper overcurrent protection, refer to Article 450-4 of NEC

| High Volt 600 Low Volt 480 KVA*   | High Volt 480 Low Volt 380 KVA* | High Volt Amps | Low Volt Amps | Qty. | Catalog Number |
|---|---------------------------------|----------------|---------------|------|----------------|
| <b>600 V <math>\Delta</math> High Volts – 480 V <math>\Delta</math> Low Volts (Open Delta)–3<math>\phi</math>, 60 Hz</b>    |                                 |                |               |      |                |
| <b>480 V <math>\Delta</math> High Volts – 380 V <math>\Delta</math> Low Volts (Open Delta)–3<math>\phi</math>, 50/60 Hz</b> |                                 |                |               |      |                |
| 2.1   | 1.7                             | 2.09           | 2.60          | 2    | 411-0041-000   |
| 4.3   | 3.4                             | 4.17           | 5.20          | 2    | 411-0051-000   |
| 6.5   | 5.1                             | 6.25           | 7.81          | 2    | 411-0061-000   |
| 8.6   | 6.9                             | 8.33           | 10.41         | 2    | 411-0071-000   |
| 13.0  | 10.4                            | 12.50          | 15.62         | 2    | 411-0081-000   |
| 17.3  | 13.9                            | 16.67          | 20.83         | 2    | 411-0091-000   |
| 26.0  | 20.8                            | 25.00          | 31.25         | 2    | 411-0101-000   |
| 43.3  | 34.6                            | 41.67          | 52.08         | 2    | 411-0111-000   |
| 65.0  | 52.0                            | 62.50          | 78.12         | 2    | 411-0131-000   |
| 86.6  | 69.2                            | 83.33          | 104.17        | 2    | 411-0151-000   |
| 130.0   | 103.9                           | 125.0          | 156.35        | 2    | 411-0161-000   |
| 216.5   | 173.2                           | 208.3          | 260.4         | 2    | 411-0181-000   |



\*KVA capacity of three-phase autotransformer bank, using two single-phase, 60 Hz transformers connected in open delta. Note: Can be reverse connected with no change in KVA. Fuse input side per current NEC requirements. Refer to tables in single phase sections for dimensions and weights.