

3 to 75 KVA

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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.)
208 Volts - 208Y/120 Volts							
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
208 Volts – 480Y/277 Volts							
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
240 Volts – 208Y/120 Volts							
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
240 Volts – 480Y/277 Volts							
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
480 Volts – 208Y/120 Volts							
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
480 Volts – 240 Volts							
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



Version JE901.0411

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



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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.)
480 Volts - 480Y/277 Volts							
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
600 Volts - 208Y/120 Volts							
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
600 Volts – 480Y/277 Volts							
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
090	95	no shield
095	95	shield
070	70	no shield
075	70	shield

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

Check our website www.jeffersonelectric.com for details

** The OXX 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

Figure 4

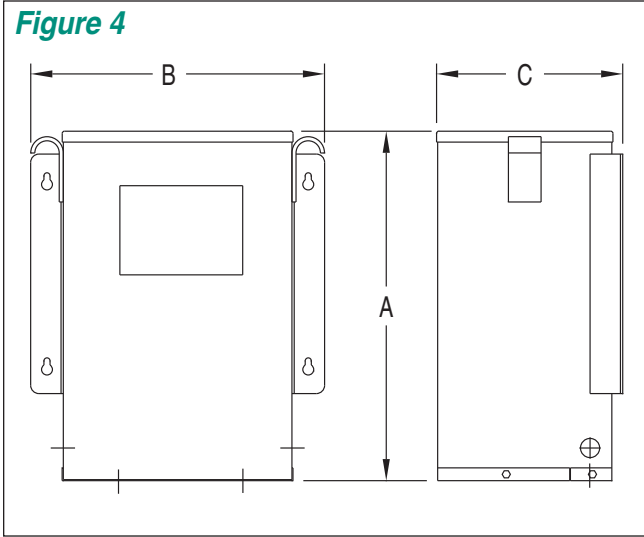
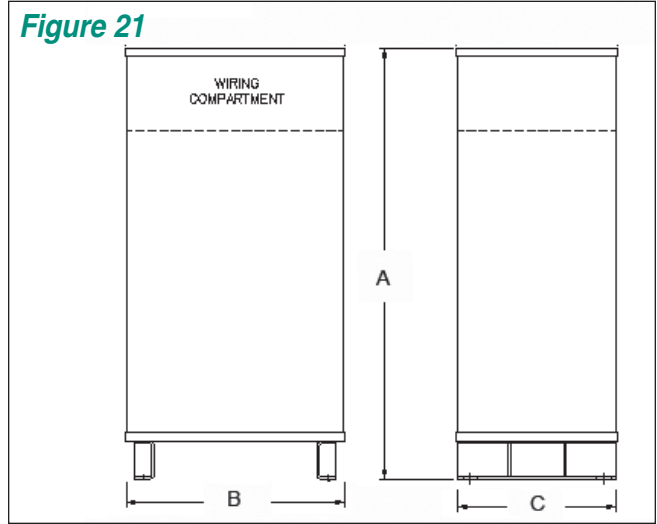


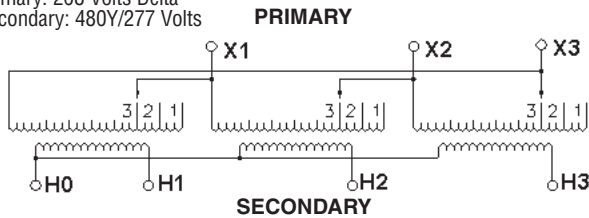
Figure 21



T208A Wiring Diagram & Connections*

Wiring Diagram

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



SECONDRY

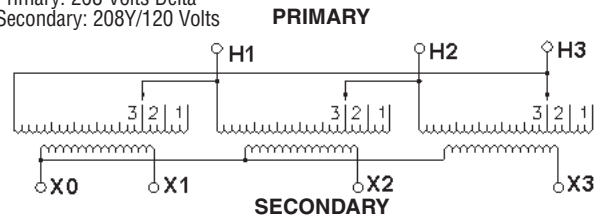
Connections

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



SECONDRY

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.

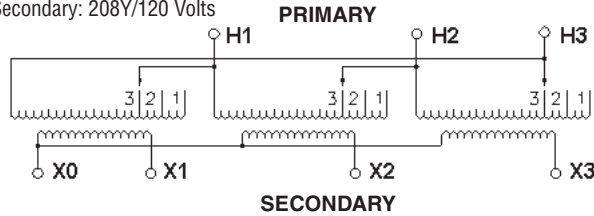
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Three-Phase Encapsulated

T240A Wiring Diagram & Connections*

Wiring Diagram

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

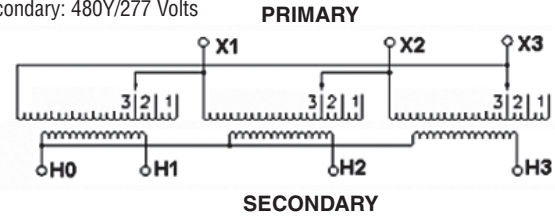


Connections		
Primary Volts	Jumper Taps To	Primary Lines Connect To
240	1	H1, H2, H3
228	2	H1, H2, H3
216	3	H1, H2, H3
Sec. Volts	Secondary Lines Connect To	
208	X1, X2, X3	
120	Between X0 and X1 or X2 or X3	
1 phase		

T240G Wiring Diagram & Connections*

Wiring Diagram

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

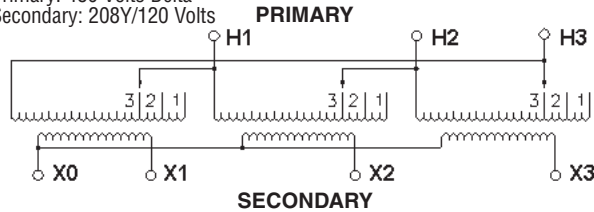


Connections		
Primary Volts	Jumper Taps To	Primary Lines Connect To
240	1	X1, X2, X3
228	2	X1, X2, X3
216	3	X1, X2, X3
Sec. Volts	Secondary Lines Connect To	
480	H1, H2, H3	
277	Between X0 and H1 or H2 or H3	
1 phase		

T480A Wiring Diagram & Connections*

Wiring Diagram

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

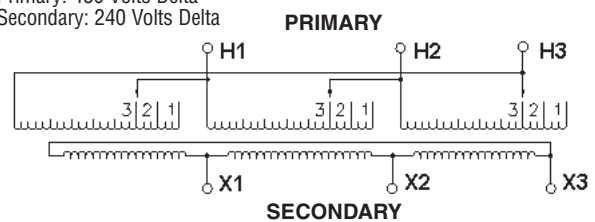


Connections		
Primary Volts	Jumper Taps To	Primary Lines Connect To
480	1	H1, H2, H3
456	2	H1, H2, H3
432	3	H1, H2, H3
Sec. Volts	Secondary Lines Connect To	
208	X1, X2, X3	
120	Between X0 and X1 or X2 or X3	
1 phase		

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	

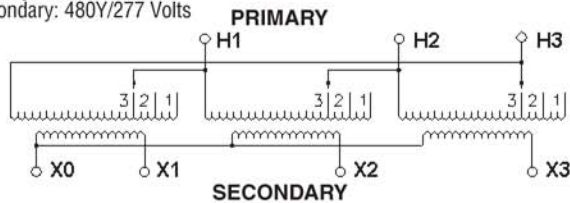
NOTE: Electrostatic shields are optionally available and not shown in all wiring diagrams. * Insulate unused taps individually.

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T480C Wiring Diagram & Connections*

Wiring Diagram

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



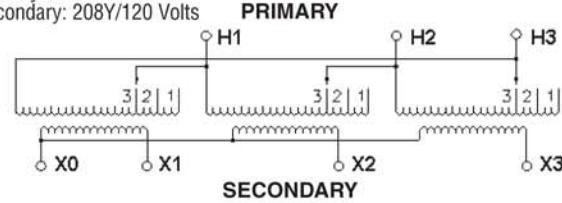
Connections

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



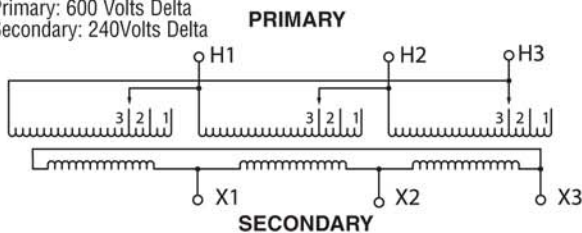
Connections

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



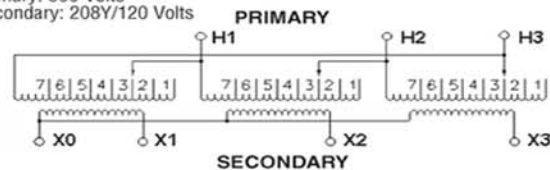
Connections

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	

T600 H Wiring Diagram & Connections*

Wiring Diagram

Primary: 600 Volts
Secondary: 208Y/120 Volts



Connections

Primary Volts	On Each Coil Jumper Taps To	Primary Lines Between Lines
630	1	H1, H2, H3
615	2	H1, H2, H3
600	3	H1, H2, H3
585	4	H1, H2, H3
570	5	H1, H2, H3
555	6	H1, H2, H3
540	7	H1, H2, H3
Sec. Volts	Secondary Lines Connect To	
480	X1, X2, X3	
277	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.

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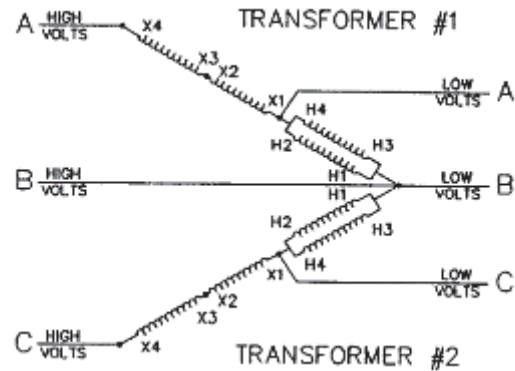
Three-Phase Encapsulated

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

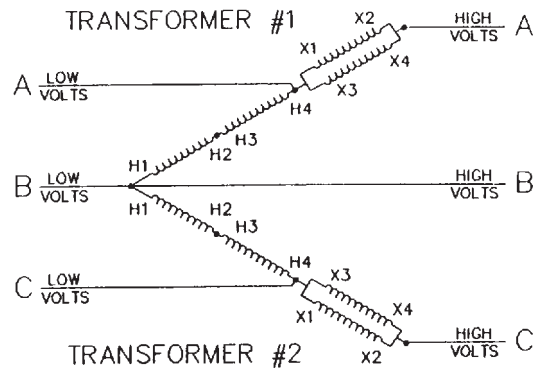
KVA*	High Volt Amps	Low Volt Amps	Qty.	Catalog Number	Catalog Number is for 1 transformer; 2 transformers are required
480 V Δ High V – 240 V Δ Low Volts (Open Delta)–3ϕ, 60 Hz					
0.8	1.04	2.08	2	411-0041-000	
1.7	2.08	4.16	2	411-0051-000	
2.6	3.13	6.25	2	411-0061-000	
3.4	4.17	8.33	2	411-0071-000	
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	Catalog Number is for 1 transformer; 2 transformers are required
600 V Δ High Volts – 480 V Δ Low Volts (Open Delta)–3ϕ, 60 Hz						
480 V Δ High Volts – 380 V Δ Low Volts (Open Delta)–3ϕ, 50/60 Hz						
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.