

## 15 to 500 kVA

### Applications

- To meet the demands of non-linear loads caused by modern office equipment

### Specifications

- K-4, K-13, and K-20 rated units standard
- Meets DOE-2016 and C802 standards for energy efficiency
- 60 Hz operation
- Aluminum windings
- 150°C temperature rise
- 220°C insulation class units
- NEMA3R rated enclosures
- Heat-cured ASA-61 gray powder coat finish
- Cores of high quality electrical steel
- Electrostatic shield
- Primary taps
- Lugs provided for units up to and including 75 kVA on catalog items

### Features, Functions, Benefits

- Large connection compartment for ease of wiring and installation
- Many sizes in stock and available for immediate shipment
- Quiet operation for installation flexibility
- Seismic certification for all units



### Standards

- Meets DOE-2016 standard Part 431, Subpart K for energy efficiency
- Built in accordance with NEMA, ANSI, UL and CSA standards

### Options and Accessories

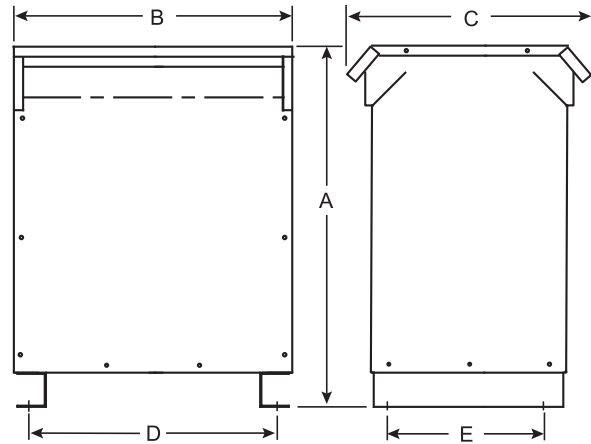
- Other sizes, voltages and temperature rises available
- Copper windings
- CE Marked units available as custom
- Wall brackets available for units up to 75 kVA

### Approvals



**Enclosure Figure**

**Figure 24**



**K-factor**

K-factor is a rating devised by Underwriters Laboratories to provide a uniform standard for transformers designed to handle non-linear loads. The more harmonic currents present, the higher the K-factor specified in sizing the transformer.

To calculate the K-factor, multiply the square of the percentage of harmonic current by the square of the harmonic order and add the results. For example, if a load is 60% of the fundamental, 65% of the third harmonic, 30% of the fifth harmonic, and 35% of the seventh harmonic, the resulting K-factor would be 12.42:

$$(.6)^2 1 + (.65)^2(3)^2 + (.30)^2(5)^2 + (.35)^2(7)^2 = 12.42$$

In this example, a transformer with a K-factor of 13 should be specified. The K-factor rating defines the transformer's ability to withstand odd-harmonic currents while operating within its insulation class.

For more information, see catalog Section 13 on Power Quality.

See Lug and Mounting Bracket information on page 3-4.

**Model Numbers Defined**

**424-TXXY-ABC**

<b>3 Phase Ventilated Non-Linear Floor Mount</b>		All models with electrostatic shield	
		<b>Type</b>	
C802 compliant		2	
DOE compliant		9	
<b>kVA Rating / XX</b>	<b>kVA Rating / XX</b>		
15.0	16	150	26
20	17	167	27
25	18	200	28
30	19	225	29
37.5	20	250	30
45	21	300	31
50	22	333	32
75	23	400	33
100	24	500	34
112.5	25		
<b>Primary</b>	<b>Secondary</b>		
208	480Y/277	1	
240	208Y/120	2	
240	480Y/277	3	
480	208Y/120	4	
480	480Y/277	5	
Specials*		6	
Not assigned		7	
208	208Y/120	8	
600	208Y/120	9	
		<b>Wiring</b>	
		Aluminum	0
		Copper	8
		<b>Temperature Rise</b>	
		150°C Rise	0
		115°C Rise	1
		80°C Rise	8
		<b>K-Factor</b>	
		K=4	1
		K=13	2
		K=20	3

\* Suffix defined incrementally

**Three-Phase General Purpose Non-Linear Transformers – DOE Compliant**

Standard Application Voltages • K-13 • Electrostatic Shield  
 150°C Temperature Rise • Aluminum Windings • NEMA3R Enclosures

<b>480V Delta — 208Y/120V • Taps: 2 @ 2.5% FCAN &amp; 4 @ 2.5% FBCN</b>											
kVA	Catalog Number	Enclosure Figure	Height (A) inches	Width (B) inches	Depth (C) inches	(D) inches	(E) inches	Est Ship Wgt	Wall Mounting Bracket Kit	Wiring Diagram	
15	424-9164-002	24	25	22	22	18.2	13	310	223-7008-030	T480E	
30	424-9194-002	24	28	25	23.5	19.1	14.5	400	223-7008-075	T480E	
45	424-9214-002	24	32	27	26	23.5	16	585	223-7008-075	T480E	
75	424-9234-002	24	38	29	29	25.5	18	775	n/a	T480E	
112.5	424-9254-002	24	42	33	32.5	30.0	21	1,000	n/a	T480E	
150	424-9264-002	24	46	35	37	30.8	25	1,530	n/a	T480E	
225	424-9294-002	24	52	35	37	30.8	25	1,660	n/a	T480E	
300	424-9314-002	24	60	48	43.5	42	27	2,460	n/a	T480E	
<b>600V Delta — 208Y/120V • Taps: 2 @ 2.5% FCAN &amp; 2 @ 2.5% FBCN</b>											
15	424-9169-002	24	25	22	22	18.2	13	310	223-7008-030	T600G	
30	424-9199-002	24	28	25	23.5	19.1	14.5	400	223-7008-075	T600G	
45	424-9219-002	24	32	27	26	23.5	16	585	223-7008-075	T600G	
75	424-9239-002	24	38	29	29	25.5	18	775	n/a	T600G	
112.5	424-9259-002	24	42	33	32.5	30.0	21	1,000	n/a	T600G	
150	424-9269-002	24	46	35	37	30.8	25	1,530	n/a	T600G	
225	424-9299-002	24	52	35	37	30.8	25	1,660	n/a	T600G	
300	424-9319-002	24	60	48	43.5	42	27	2,460	n/a	T600G	

**Three-Phase General Purpose Non-Linear Transformers – C802 Compliant**

Standard Application Voltages • K-13 • Electrostatic Shield  
 150°C Temperature Rise • Aluminum Windings • NEMA3R Enclosures

<b>480V Delta — 208Y/120V • Taps: 2 @ 2.5% FCAN &amp; 4 @ 2.5% FBCN</b>											
kVA	Catalog Number	Enclosure Figure	Height (A) inches	Width (B) inches	Depth (C) inches	(D) inches	(E) inches	Est Ship Wgt	Mounting Kit	Wiring Diagram	
15	424-2164-002	24	25	22	22	18.2	13	310	223-7008-030	T480E	
30	424-2194-002	24	28	25	23.5	19.1	14.5	400	223-7008-075	T480E	
45	424-2214-002	24	32	27	26	23.5	16	585	223-7008-075	T480E	
75	424-2234-002	24	38	29	29	25.5	18	775	n/a	T480E	
112.5	424-2254-002	24	42	33	32.5	30.0	21	1,000	n/a	T480E	
150	424-2264-002	24	46	35	37	30.8	25	1,530	n/a	T480E	
225	424-2294-002	24	52	35	37	30.8	25	1,660	n/a	T480E	
300	424-2314-002	24	60	48	43.5	42	27	2,460	n/a	T480E	
<b>600V Delta — 208Y/120V • Taps: 2 @ 2.5% FCAN &amp; 2 @ 2.5% FBCN</b>											
15	424-2169-002	24	25	22	22	18.2	13	310	223-7008-030	T600G	
30	424-2199-002	24	28	25	23.5	19.1	14.5	400	223-7008-075	T600G	
45	424-2219-002	24	32	27	26	23.5	16	585	223-7008-075	T600G	
75	424-2239-002	24	38	29	29	25.5	18	775	n/a	T600G	
112.5	424-2259-002	24	42	33	32.5	30.0	21	1,000	n/a	T600G	
150	424-2269-002	24	46	35	37	30.8	25	1,530	n/a	T600G	
225	424-2299-002	24	52	35	37	30.8	25	1,660	n/a	T600G	
300	424-2319-002	24	60	48	43.5	42	27	2,460	n/a	T600G	

See website for additional kVA, copper windings and temperature options.  
 Housing dimensions subject to change without notice. Consult website or factory where dimensions are critical.  
 Use the "Find a Product" tool for detailed specification sheets.  
 For further information, contact an Application Engineer at 800-892-3755, [technical\\_services@jeffersonelectric.com](mailto:technical_services@jeffersonelectric.com)

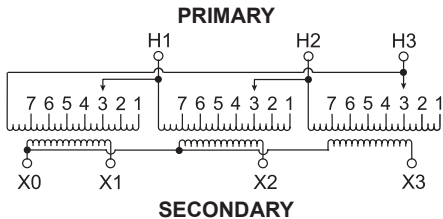


**Enclosure Figures**

**T480E Wiring Diagram & Connections**

**Wiring Diagram**

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



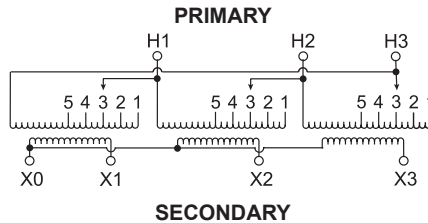
**Connections**

Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To
504	1	H1, H2, H3
492	2	H1, H2, H3
480	3	H1, H2, H3
468	4	H1, H2, H3
456	5	H1, H2, H3
444	6	H1, H2, H3
432	7	H1, H2, H3
Secondary Volts	Secondary Lines Connect To	
208	X1, X2, X3	
120 1 phase	Between X0 and X1 or X2 or X3	

**T600G Wiring Diagram & Connections**

**Wiring Diagram**

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



**Connections**

Primary Volts	On Each Coil Jumper Taps To	Primary Lines Connect To
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
Secondary Volts	Secondary Lines Connect To	
208	X1, X2, X3	
120 1 phase	Between X0 and X1 or X2 or X3	

More wiring diagrams can be found in catalog's appendix, section 15.

Use the "Find a Product" tool on our website for detailed specification sheets.

For further information, contact an Application Engineer at 800-892-3755, [technical\\_services@jeffersonelectric.com](mailto:technical_services@jeffersonelectric.com)

**Lugs**

Part Number	kVA	Primary Lug	Qty	Secondary Lug	Qty
4PT-2007-LUG	15	#14 - 2	2	#2/0 - 6	2
4PT-2017-LUG	25	#14 - 2	2	250MCM - 6	2
4PT-2008-LUG	37.5	#14 - 2	2	350MCM - 6	2
4PT-2009-LUG	50	#2/0 - 6	2	600MCM - 6	2
4PT-2018-LUG*	75	#2/0 - 6	2	600MCM - 6	4

\* Must be ordered, not included on stock units

**Wall Mounting Bracket Kits**

Part Number	Description	Max Unit Wgt (lbs)
223-7008-030	For 15 kVA units, 150°C rise	250
223-7008-075	For 16 to 45 kVA units, 150°C rise	750

**Wall Mounting Bracket Kits with Drip Pans**

400-4701-226	For Three Phase units, 19" width	750
400-4701-227	For Three Phase units, 22" width	750
400-4701-228	For Three Phase units, 25" width	750
400-4701-229	For Three Phase units, 27" width	750