

Dry Type Distribution Transformers

General Purpose

Energy efficient dry-type SolaHD General Purpose Transformers 600 Volt Class, isolation type, single and three phase, 15 kVA through 500 kVA. Indoor and outdoor models available. For catalog numbers outside of the standard Selection Tables, fill out the *Configured Transformer Quotation Request Form*. Contact Technical Support.



Energy Verified
Rendement Énergétique Vérifié

Accessories and Optional Design Styles

- Electrostatic shield for quality power
- Wall mounting brackets
- Weather Shields (UL Listed/NEMA Type 3R)
- Stainless Steel Enclosures
- Open core and coil designs (UL Recognized)
- Copper Wound designs

Features:

- Energy Efficient Compliant to DOE 2016/NRCAN 2019 as applicable ¹
- UL Listed/NEMA Type 3R ventilated outdoor enclosures when used with optional weather shields (order separately)
- UL Class 220°C insulation system, 150°C temperature rise under full load
- Quiet operation with sound levels below the NEMA ST-20 requirements
- Terminal board connections and spacious wiring compartment
- Panel enclosure design reduces labor time. Wiring diagram on inside front cover

- High efficiency for low cost operation
- Single and three phase availability
- Fast delivery
- Meets transit test requirements for ISTA (International Safe Transit Association) – Test Procedure 1E for packaged-product
- 10 year limited warranty
- Made in the USA

Enhanced Enclosures features:

- Lower Center of Gravity with line of site mounting feet – easily lifted by a forklift for placement from base.
- Replaceable panels: L, R, F, B and top
- Enhanced Fasteners – Cage - Nuts with hex – star interface
- Adequate Wiring compartment
- Packaging tested to ISTA3B standards

Selection Tables: Single Phase

Group 1: 240 x 480 Volt Primary, 120/240 Secondary, 60 Hz

kVA	Catalog Number	Type 3R Weather Shield ²	Height in (mm)	Width in (mm)	Depth in (mm)	Approx. Ship Weight lbs (kg)	Design Style ³	Elec Conn ³	Primary Amps	Secondary Amps
15	ES5H15S	WS-15	28 (711)	16 (406)	16 (406)	210 (95)	1	1	62.5/31.3	125/62.5
25	ES5H25S	WS-15	28 (711)	16 (406)	16 (406)	245 (111)	1	1	104/52.1	208/104
37.5	ES5H37S	WS-17	31 (787)	18 (457)	18 (457)	340 (154)	1	1	156/78	313/156
50	ES5H50S	WS-17	31 (787)	18 (457)	18 (457)	415 (188)	1	1	208/104	416/208
75	ES5H75S	WS-09	44 (1118)	23 (584)	21 (533)	610 (277)	1	1	313/156	625/313
100	ES5H100S	WS-09	44 (1118)	23 (584)	21 (533)	705 (320)	1	1	417/208	833/417
167	ES5H167S	WS-16	46 (1168)	26 (660)	24 (610)	980 (445)	1	1	695/348	1392/695

Notes:

1. DOE 2016 refers to Department of Energy CFR (Code of Federal Regulations) title 10, part 431.196. NRCAN 2019 refers to Natural Resources Canada CSA C802.2, Minimum Efficiency Values for Dry-Type Transformers. Verify certifications with Technical Support.
2. Weather shields (set of two) must be ordered separately.

3. Design Styles and Electrical Connections can be found at the end of the Ventilated Distribution Transformers section.

4. Transformers designated made to order items are subject to terms and conditions per your order acknowledgment.

* Not all optional designs are listed. Contact Technical Services.

Dry Type Distribution Transformers

Selection Tables: Single Phase

Group 2 – 120/208/240/277 Volt Primary, 120/240 Secondary, 60 Hz

kVA	Catalog Number	Type 3R Weather Shield ²	Height in (mm)	Width in (mm)	Depth in (mm)	Approx. Ship Weight lbs (kg)	Design Style ³	Elec Conn ³	Primary Amps @ 277 V	Secondary Amps
15	ES12H15S	WS-15	28 (711)	16 (406)	16 (406)	215 (98)	1	2	54.2	125/62.5
25	ES12H25S	WS-15	28 (711)	16 (406)	16 (406)	250 (113)	1	2	90.3	208/104

Notes:

1. DOE 2016 refers to Department of Energy CFR (Code of Federal Regulations) title 10, part 431.196. NRCAN 2019 refers to Natural Resources Canada CSA C802.2, Minimum Efficiency Values for Dry-Type Transformers. Verify certifications with Technical Support.
2. Weather shields (set of two) must be ordered separately.

3. Design Styles and Electrical Connections can be found at the end of the Ventilated Distribution Transformers section.

4. Transformers designated made to order items are subject to terms and conditions per your order acknowledgment.

Selection Tables: Three Phase

Group A: 480 Volt Δ Primary, 208Y/120 Secondary, 60 Hz

kVA	Catalog Number	Type 3R Weather Shield ¹	Height in (mm)	Width in (mm)	Depth in (mm)	Approx. Ship Weight lbs (kg)	Design Style ²	Elec Conn ²	Primary Amps	Secondary Amps
15	EE2H15 ³	WS-02	23 (584)	18 (457)	17 (431)	221 (100)	2	5	18.1	41.7
	EE2H15S									
30	EE2H30 ³	WS-14	28 (711)	23 (584)	19 (483)	310 (141)	2	5	36.1	83.4
	EE2H30S									
45	EE2H45 ³	WS-14	28 (711)	23 (584)	19 (483)	387 (176)	2	5	54.2	125
	EE2H45S									
75	EE2H75 ³	WS-30	34 (864)	28 (711)	26 (660)	678 (308)	2	5	90.3	208
	EE2H75S									
112.5	EE2H112S	WS-30	34 (864)	28 (711)	26 (660)	794 (360)	2	5	135	313
150	E2H150S	WS-10	44 (1118)	33 (838)	21 (533)	1005 (456)	1	5	181	417
225	E2H225S	WS-11	46 (1168)	36 (914)	24 (610)	1368 (621)	1	5	271	625
300	E2H300S	WS-11	46 (1168)	36 (914)	24 (6010)	1479 (671)	1	5	361	834
500	E2H500S	WS-12	65 (1651)	45 (1143)	35 (889)	2457 (1114)	1	5	602	1390

Group B: 480 Volt Δ Primary, 240 Volt Δ Secondary with 120 V reduced capacity center tap ⁴, 60 Hz

kVA	Catalog Number	Type 3R Weather Shield ¹	Height in (mm)	Width in (mm)	Depth in (mm)	Approx. Ship Weight lbs (kg)	Design Style ²	Elec Conn ²	Primary Amps	Secondary Amps
15	EE5H15 ³	WS-02	23 (584)	18 (457)	17 (431)	221 (100)	2	6	18.1	36.1
	EE5H15S									
30	EE5H30 ³	WS-14	28 (711)	23 (584)	19 (483)	322 (146)	2	6	36.1	72.3
	EE5H30S									
45	EE5H45 ³	WS-14	28 (711)	23 (584)	19 (483)	387 (176)	2	6	54.2	108
	EE5H45S									
75	EE5H75 ³	WS-30	34 (864)	28 (711)	26 (660)	678 (308)	2	6	90.3	181
	EE5H75S									
112.5	EE5H112S	WS-30	34 (864)	28 (711)	26 (660)	792 (359)	2	6	135	271
150	E5H150S	WS-10	44 (1118)	33 (838)	21 (533)	1009 (458)	1	6	181	361
225	E5H225S	WS-11	46 (1168)	36 (914)	24 (610)	1367 (620)	1	6	271	542
300	E5H300S	WS-11	46 (1168)	36 (914)	24 (610)	1478 (670)	1	6	361	723
500	E5H500S	WS-12	65 (1651)	45 (1143)	35 (889)	2457 (1114)	1	6	602	1204

Notes:

1. Weather shields (set of two) must be ordered separately.
2. Design Styles and Electrical Connections can be found at the end of the Ventilated Distribution Transformers section.
3. Unshielded model.

4. Refer to *Capacity of Center Tap in Center Tap Delta Transformers* at the beginning of this section.

5. Transformers designated made to order items are subject to terms and conditions per your order acknowledgment.

6. Models that begin with EE indicate they are Enhanced Enclosure models. Only available in 11-112.5 kVA sizes.

Dry Type Distribution Transformers

Selection Tables: Three Phase

Group C: 480 Volt Δ Primary, 480Y/277 Secondary, 60 Hz

kVA	Catalog Number	Type 3R Weather Shield ¹	Height in (mm)	Width in (mm)	Depth in (mm)	Approx. Ship Weight lbs (kg)	Design Style ²	Elec Conn ²	Primary Amps	Secondary Amps
15	EE81H15S	WS-02	23 (584)	18 (457)	17 (431)	220 (100)	2	8	18.1	18.1
30	EE81H30S	WS-14	28 (711)	23 (584)	19 (483)	322 (146)	2	8	36.1	36.1
45	EE81H45S	WS-14	28 (711)	23 (584)	19 (483)	387 (176)	2	8	54.2	54.2
75	EE81H75S	WS-30	34 (864)	28 (711)	26 (660)	679 (308)	2	8	90.3	90.3
112.5	EE81H112S	WS-30	34 (864)	28 (711)	26 (660)	791 (359)	2	8	135	135
150	E81H150S	WS-10	44 (1118)	33 (838)	21 (533)	1001 (454)	1	8	181	181
225	E81H225S	WS-11	46 (1168)	36 (914)	24 (610)	1377 (625)	1	8	271	271
300	E81H300S	WS-11	46 (1168)	36 (914)	24 (6010)	1497 (679)	1	8	361	361
500	E81H500S	WS-12	65 (1651)	45 (1143)	35 (889)	2456 (1114)	1	8	602	602

Group D: 208 Volt Δ Primary, 480Y/277 Secondary, 60 Hz

kVA	Catalog Number	Type 3R Weather Shield ¹	Height in (mm)	Width in (mm)	Depth in (mm)	Approx. Ship Weight lbs (kg)	Design Style ²	Elec Conn ²	Primary Amps	Secondary Amps
15	EE84H15S	WS-02	23 (584)	18 (457)	17 (431)	220 (100)	2	10	41.7	18.1
30	EE84H30S	WS-14	28 (711)	23 (584)	19 (483)	320 (145)	2	10	83.4	36.1
45	EE84H45S	WS-14	28 (711)	23 (584)	19 (483)	390 (177)	2	10	125	54.2
75	EE84H75S	WS-30	34 (864)	28 (711)	26 (660)	680 (308)	2	10	208	90.3
112.5	EE84H112S	WS-30	34 (864)	28 (711)	26 (660)	799 (362)	2	10	313	135
150	E84H150S	WS-10	44 (1118)	33 (838)	21 (533)	1000 (454)	1	10	417	181

Group E: 208 Volt Δ Primary, 208Y/120 Secondary, 60 Hz

kVA	Catalog Number	Type 3R Weather Shield ¹	Height in (mm)	Width in (mm)	Depth in (mm)	Approx. Ship Weight lbs (kg)	Design Style ²	Elec Conn ²	Primary Amps	Secondary Amps
15	EE3H15S	WS-02	23 (584)	18 (457)	17 (431)	222 (101)	2	9	41.7	41.7
30	EE3H30S	WS-14	28 (711)	23 (584)	19 (483)	320 (145)	2	9	83.4	83.4
45	EE3H45S	WS-14	28 (711)	23 (584)	19 (483)	390 (177)	2	9	125	125
75	EE3H75S	WS-30	34 (864)	28 (711)	26 (660)	679 (308)	2	9	208	208
112.5	EE3H112S	WS-30	34 (864)	28 (711)	26 (660)	801 (363)	2	9	313	313
150	E3H150S	WS-10	44 (1118)	33 (838)	21 (533)	1004 (455)	1	9	416	416

Group F: 240 Volt Δ Primary, 208Y/120 Secondary, 60 Hz

kVA	Catalog Number	Type 3R Weather Shield ¹	Height in (mm)	Width in (mm)	Depth in (mm)	Approx. Ship Weight lbs (kg)	Design Style ²	Elec Conn ²	Primary Amps	Secondary Amps
15	EE6H15S	WS-02	23 (584)	18 (457)	17 (431)	220 (100)	2	11	36.1	41.7
30	EE6H30S	WS-14	28 (711)	23 (584)	19 (483)	311 (141)	2	11	72.3	83.4
45	EE6H45S	WS-14	28 (711)	23 (584)	19 (483)	392 (178)	2	11	108	125
75	EE6H75S	WS-30	34 (864)	28 (711)	26 (660)	678 (308)	2	11	181	208
112.5	EE6H112S	WS-30	34 (864)	28 (711)	26 (660)	799 (362)	2	11	271	313
150	E6H150S	WS-10	44 (1118)	33 (838)	21 (533)	1005 (456)	1	11	361	417

Notes:

1. Weather shields (set of two) must be ordered separately.

2. Design Styles and Electrical Connections can be found at the end of the Ventilated Distribution Transformers section.

3. Models that begin with EE indicate they are Enhanced Enclosure models. Only available in 11-112.5 kVA sizes.

Dry Type Distribution Transformers

Selection Tables: Three Phase

Group G: 240 Volt Δ Primary, 480Y/277 Secondary, 60 Hz

kVA	Catalog Number	Type 3R Weather Shield ¹	Height in (mm)	Width in (mm)	Depth in (mm)	Approx. Ship Weight lbs (kg)	Design Style ²	Elec Conn ²	Primary Amps	Secondary Amps
15	EE85H15S	WS-02	23 (584)	18 (457)	17 (431)	221 (100)	2	12	36.1	18.1
30	EE85H30S	WS-14	28 (711)	23 (584)	19 (483)	322 (146)	2	12	72.3	36.1
45	EE85H45S	WS-14	28 (711)	23 (584)	19 (483)	392 (178)	2	12	108	54.2
75	EE85H75S	WS-30	34 (864)	28 (711)	26 (660)	682 (309)	2	12	181	90.3
112.5	EE85H112S	WS-30	34 (864)	28 (711)	26 (660)	798 (362)	2	12	271	135
150	E85H150S	WS-10	44 (1118)	33 (838)	21 (533)	1001 (454)	1	12	361	181

Group J: 480 Volt Δ Primary, 380Y/220 Secondary, 60 Hz

kVA	Catalog Number	Type 3R Weather Shield ¹	Height in (mm)	Width in (mm)	Depth in (mm)	Approx. Ship Weight lbs (kg)	Design Style ²	Elec Conn ²	Primary Amps	Secondary Amps
15	EE79H15S	WS-02	23 (584)	18 (457)	17 (431)	220 (100)	2	7	18.1	22.8
30	EE79H30S	WS-14	28 (711)	23 (584)	19 (483)	320 (145)	2	7	36.1	45.6
45	EE79H45S	WS-14	28 (711)	23 (584)	19 (483)	387 (176)	2	7	54.2	68.4
75	EE79H75S	WS-30	34 (864)	28 (711)	26 (660)	678 (308)	2	7	90.3	114
112.5	EE79H112S	WS-30	34 (864)	28 (711)	26 (660)	797 (362)	2	7	135.3	170.9
150	E79H150S	WS-10	44 (1118)	33 (838)	21 (533)	1011 (459)	1	7	180.4	227.9

Group K: 480 Volt Δ Primary, 208Y/120 Secondary, 60 Hz, Copper-Wound

kVA	Catalog Number	Type 3R Weather Shield ¹	Height in (mm)	Width in (mm)	Depth in (mm)	Approx. Ship Weight lbs (kg)	Design Style ²	Elec Conn ²	Primary Amps	Secondary Amps
15	EE2H15SCU	WS-02	23 (584)	18 (457)	17 (431)	255 (116)	2	5	18.1	41.7
30	EE2H30SCU	WS-14	28 (711)	23 (584)	19 (483)	349 (158)	2	5	36.1	83.4
45	EE2H45SCU	WS-14	28 (711)	23 (584)	19 (483)	455 (206)	2	5	54.2	125
75	EE2H75SCU	WS-30	34 (864)	28 (711)	26 (660)	781 (354)	2	5	90.3	208
112.5	EE2H112SCU	WS-30	34 (864)	28 (711)	26 (660)	923 (419)	2	5	135	313
150	E2H150SCU	WS-10	44 (1118)	33 (838)	21 (533)	1154 (523)	1	5	181	417
225	E2H225SCU	WS-11	46 (1168)	36 (914)	24 (610)	1539 (698)	1	5	271	625
300	E2H300SCU	WS-11	46 (1168)	36 (914)	24 (610)	1662 (754)	1	5	361	834
500	E2H500SCU	WS-12	65 (1651)	45 (1143)	35 (889)	2457 (1114)	1	5	602	1390

Notes:

1. Weather shields (set of two) must be ordered separately.
2. Design Styles and Electrical Connections can be found at the end of the Ventilated Distribution Transformers section.
3. Transformers designated made to order items are subject to terms and conditions per your order acknowledgment.
4. Models that begin with EE indicate they are Enhanced Enclosure models. Only available in 11-112.5 kVA sizes.

Dry Type Distribution Transformers

Selection Tables: Three Phase

Group L: 600 Volt Δ Primary, 208Y/120 Secondary, 60 Hz

kVA	Catalog Number	Type 3R Weather Shield ¹	Height in (mm)	Width in (mm)	Depth in (mm)	Approx. Ship Weight lbs (kg)	Design Style ²	Elec Conn ²	Primary Amps	Secondary Amps
15	EE7H15S	WS-02	23 (584)	18 (457)	17 (431)	221 (100)	2	13	14.41	41.6
30	EE7H30S	WS-14	28 (711)	23 (584)	19 (483)	310 (141)	2	13	28.9	83.3
45	EE7H45S	WS-14	28 (711)	23 (584)	19 (483)	387 (176)	2	13	43.3	125
75	EE7H75S	WS-30	34 (864)	28 (711)	26 (660)	678 (308)	2	13	72.2	208
112.5	EE7H112S	WS-30	34 (864)	28 (711)	26 (660)	794 (360)	2	13	108	312
150	E7H150S	WS-10	44 (1118)	33 (838)	21 (533)	1005 (456)	2	13	144	416
225	E7H225S	WS-11	46 (1168)	36 (914)	24 (610)	1368 (621)	1	13	217	625
300	E7H300S	WS-11	46 (1168)	36 (914)	24 (610)	1479 (671)	1	13	289	833
500	E7H500S	WS-12	65 (1651)	45 (1143)	35 (889)	2457 (1114)	1	13	481	1388

Group M: 600 Volt Δ Primary, 480Y/277 Secondary, 60 Hz

kVA	Catalog Number	Type 3R Weather Shield ¹	Height in (mm)	Width in (mm)	Depth in (mm)	Approx. Ship Weight lbs (kg)	Design Style ²	Elec Conn ²	Primary Amps	Secondary Amps
15	EE71H15S	WS-02	23 (584)	18 (457)	17 (431)	221 (100)	2	14	14.4	18
30	EE71H30S	WS-14	28 (711)	23 (584)	19 (483)	310 (141)	2	14	28.9	36.1
45	EE71H45S	WS-14	28 (711)	23 (584)	19 (483)	387 (176)	2	14	43.3	54.1
75	EE71H75S	WS-30	34 (864)	28 (711)	26 (660)	678 (308)	2	14	72.2	90.2
112.5	EE71H112S	WS-30	34 (864)	28 (711)	26 (660))	794 (360)	2	14	108	132.3
150	E71H150S	WS-10	44 (1118)	33 (838)	21 (533)	1005 (456)	1	14	144	180.4
225	E71H225S	WS-11	46 (1168)	36 (914)	24 (610)	1368 (621)	1	14	217	270.6
300	E71H300S	WS-11	46 (1168)	36 (914)	24 (610)	1479 (671)	1	14	289	360.9
500	E71H500S	WS-12	65 (1651)	45 (1143)	35 (889)	2457 (1114)	1	14	481	601.4

Notes:

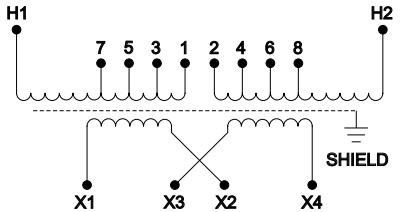
1. Weather shields (set of two) must be ordered separately.
2. Design Styles and Electrical Connections can be found at the end of the Ventilated Distribution Transformers section.
3. Transformers designated made to order items are subject to terms and conditions per your order acknowledgment.
4. Models that begin with EE indicate they are Enhanced Enclosure models. Only available in 11-112.5 kVA sizes.

Dry Type Distribution Transformers

Electrical Connections (Single Phase)

240 x 480 Volt Primary,
120/240 Volt Secondary
Taps: 2, 2½% FCAN; 4, 2½% FCBN

1

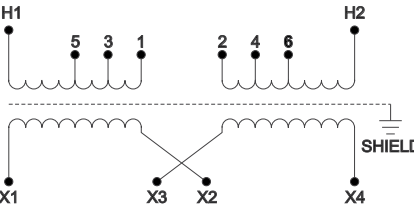


Primary Voltage	Interconnect	Connect Lines To
504	1 to 2	H1 & H2
492	2 to 3	H1 & H2
480	3 to 4	H1 & H2
468	4 to 5	H1 & H2
456	5 to 6	H1 & H2
444	6 to 7	H1 & H2
432	7 to 8	H1 & H2
252	H1 to 2 H2 to 1	H1 & H2
240	H1 to 4 H2 to 3	H1 & H2
228	H1 to 6 H2 to 5	H1 & H2
216	H1 to 8 H2 to 7	H1 & H2
Secondary Voltage	Interconnect	Connect Lines To
240	X2 to X3	X1 & X4
120-0-120	X2 to X3 X2 to $\perp$	X1-X2-X4
120	X1 to X3 X2 to X4	X1 & X4

ES5 Series

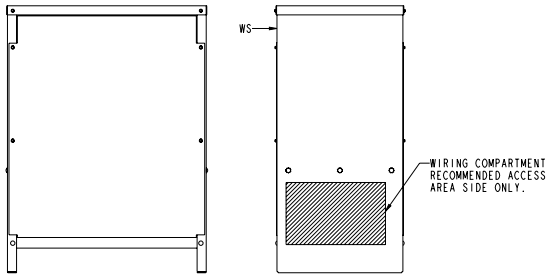
120/208/240/277 Volt Primary,
120/240 Volt Secondary
Taps: None

2

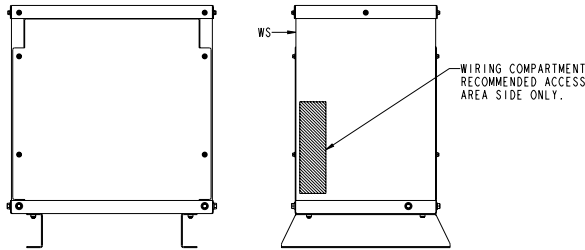


Primary Voltage	Interconnect	Connect Lines To
277	1 to 2	H1 & H2
240	3 to 4	H1 & H2
208	5 to 6	H1 & H2
120	H1 to 4 H2 to 3	H1 & H2
Secondary Voltage	Interconnect	Connect Lines To
240	X2 to X3	X1 & X4
120-0-120	X2 to X3 X2 to $\perp$	X1-X2-X4
120	X1 to X3 X2 to X4	X1 & X4

ES12 Series



Design Style 1

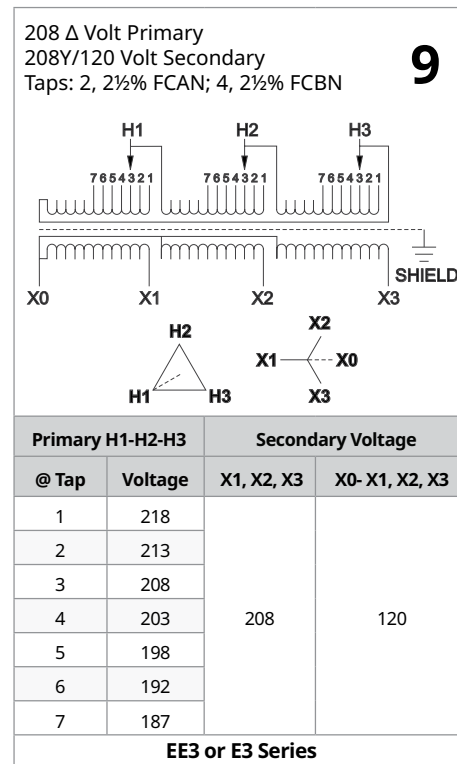
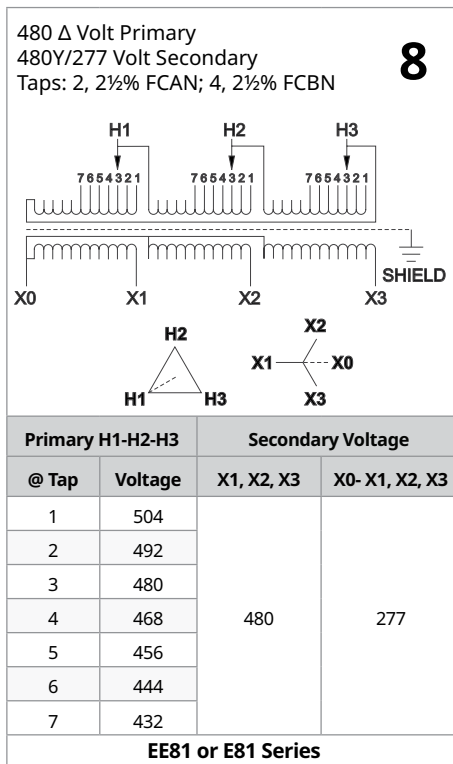
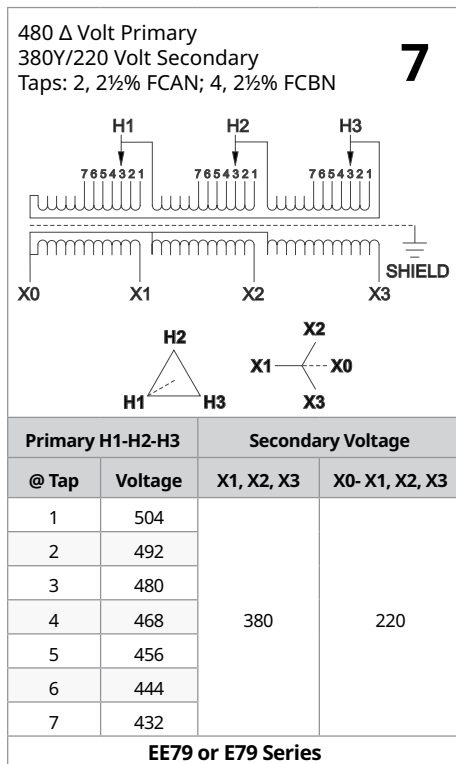
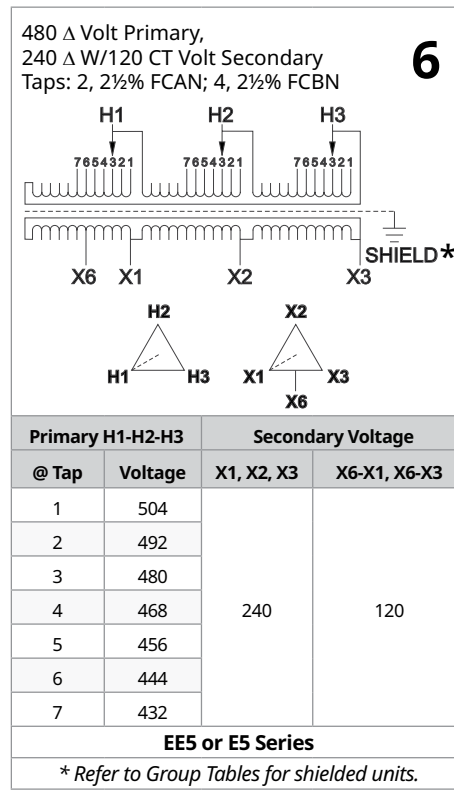
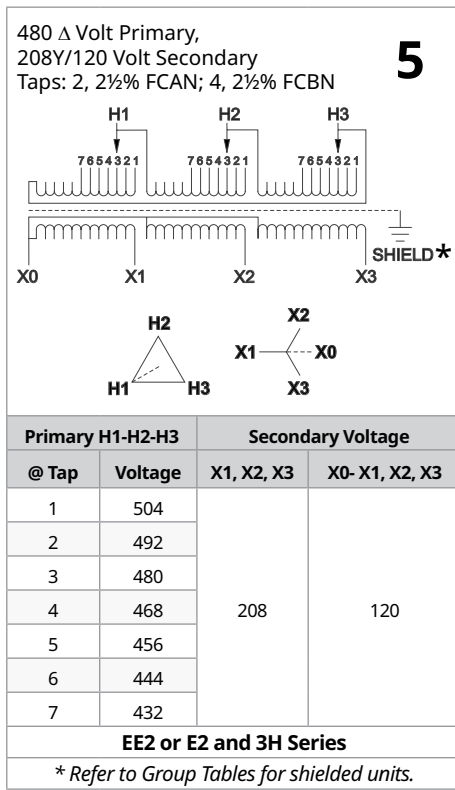


Design Style 2

Wall mounting brackets are available for ventilated transformers up to 75 kVA:
WMB1151 has a maximum weight capacity of 500 lb. (227 kg.)
WMB6375 has a maximum weight capacity of 780 lb. (354 kg)

Dry Type Distribution Transformers

Electrical Connections (Three Phase)



Dry Type Distribution Transformers

Electrical Connections (Three Phase) cont.

208 Δ Volt Primary
480Y/277 Volt Secondary
Taps: 2, 2½% FCAN; 4, 2½% FCBN

10

Primary X1-X2-X3		Secondary Voltage	
@ Tap	Voltage	H1-H2-H3	H0-H1, H2, H3
1	218	480	277
2	213		
3	208		
4	203		
5	198		
6	192		
7	187		

EE84 or E84 Series

240 Δ Volt Primary
208Y/120 Volt Secondary
Taps: 2, 2½% FCAN; 4, 2½% FCBN

11

Primary H1-H2-H3		Secondary Voltage	
@ Tap	Voltage	X1, X2, X3	X0- X1, X2, X3
1	252	208	120
2	246		
3	240		
4	234		
5	228		
6	222		
7	216		

EE6 or E6 Series

240 Δ Volt Primary
480Y/277 Secondary
Taps: 2, 2½% FCAN; 4, 2½% FCBN

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Primary X1-X2-X3		Secondary Voltage	
@ Tap	Voltage	H1-H2-H3	H0-H1, H2, H3
1	252	480	277
2	246		
3	240		
4	234		
5	228		
6	222		
7	216		

EE85 or E85 Series

600 Δ Volt Primary
208Y/120 Volt Secondary
Taps: 2, 2½% FCAN; 4, 2½% FCBN

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Primary H1-H2-H3		Secondary Voltage	
@ Tap	Voltage	X1, X2, X3	X0- X1, X2, X3
1	630	208	120
2	615		
3	600		
4	585		
5	570		
6	555		
7	540		

EE7 or E7 Series

* Only applies to electrostatically shielded units.

600 Δ Volt Primary
480Y/277 Volt Secondary
Taps: 2, 2½% FCAN; 4, 2½% FCBN

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Primary H1-H2-H3		Secondary Voltage	
@ Tap	Voltage	X1, X2, X3	X0- X1, X2, X3
1	630	480	277
2	615		
3	600		
4	585		
5	570		
6	555		
7	540		

EE71 or E71 Series

* Only applies to electrostatically shielded units.