Automation Transformers - Non-Ventilated 50 VA to 45 kVA

SolaHD encapsulated transformers are rated for Hazardous Locations as well as harsh industrial environments. Encapsulation and rugged UL Listed/NEMA Type 3R enclosures protect the transformer from dust, moisture, and provide extra shock and vibration resistance. SolaHD transformers fully comply with the latest addition of the National Electrical Code for Class I, Division 2, Group A, B, C and D locations when installed in compliance with NEC 501.100 (B).

c UL us
E25872
E77014

Features

Single Phase: .05 – .250 kVA

- UL Listed/NEMA Type 3R non encapsulated enclosure for indoor and outdoor service
- Low temperature rise, UL Class 130°C insulation system, 80°C temperature rise under full load
- Conduit knockouts for side entry into wiring compartment
- Copper lead wire terminations

Single Phase: 0.500 – 25 kVA
Three Phase: 3 – 45 kVA

- UL Listed/NEMA Type 3R encapsulated enclosure for indoor and outdoor service
- Electrostatically shielded for quality power on sizes 1 kVA and larger
- UL Class 200°C insulation system, 115°C temperature rise under full load
- Conduit knockouts for side entry into wiring compartment
- Copper lead wire terminations
- .500 - 45 kVA units are encapsulated with electrical grade silica and epoxy for industrial applications

Related Products

- Some SolaHD DC power supplies are available with Class I, Division 2 ratings or encapsulation.
- Surge Protective Devices

Certifications and Compliances

- c UL us Listed: E25872, E77014
  - UL 1561 or UL 506
  - CSA C22.2 No. 47 or No. 66

Accessories and Optional Design Styles

- Stainless Steel Enclosures
- Copper Wound designs
- UL Listed/NEMA Type 4, 4X or 12 Encapsulated Enclosures
- Low temperature designs available

Note: Weights and dimensions may change and should not be used for construction purposes.

Selection Table: Single Phase

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

kVA	Catalog Number Group I Rolled Steel	Catalog Number Group II Stainless Steel	Height in (mm)	Width in (mm)	Depth in (mm)	Approx. Ship Weight lbs (kg)	Design Style *	Elec Conn *	Primary Amps	Secondary Amps
Non–Encapsulated										
.050	**HS1B50**	**N/A**	6.00 (152.4)	4.00 (101.6)	3.00 (76.2)	3.00 (1.36)	2	15	.208/.104	0.416/0.208
.075	**HS1B75**		6.00 (152.4)	4.00 (101.6)	3.00 (76.2)	3.00 (1.36)	2	15	.312/.156	0.625/0.312
.100	**HS1B100**		6.00 (152.4)	4.00 (101.6)	3.00 (76.2)	4.00 (1.81)	2	15	.417/.208	0.833/0.417
.150	**HS1B150**		8.00 (203.2)	4.00 (101.6)	4.00 (101.6)	5.00 (2.27)	2	15	.625/.313	1.25/.625
.250	**HS1B250**		8.00 (203.2)	4.00 (101.6)	4.00 (101.6)	8.00 (3.63)	2	15	1.04/.512	2.08/1.04
Encapsulated										
0.5	**HS1F500B**	**HSS1F500B**	10.00 (254.0)	6.00 (152.4)	5.00 (127.0)	22.0 (9.98)	3	15	2.08/1.04	4.16/2.08
0.75	**HS1F750B**	**HSS1F750B**	10.00 (254.0)	6.00 (152.4)	5.00 (127.0)	27.0 (12.25)	3	15	3.13/1.56	6.25/3.13
1	**HS1F1BS**	**HSS1F1BS**	10.00 (254.0)	6.00 (152.4)	5.00 (127.0)	28.0 (12.70)	3	16	4.17/2.08	8.33/4.17
1.5	**HS1F1.5AS**	**HSS1F1.5AS**	12.00 (304.8)	10.00 (254.0)	7.00 (177.8)	38.0 (17.24)	4	16	6.25/3.13	12.5/6.25
2	**HS1F2AS**	**HSS1F2AS**	12.00 (304.8)	10.00 (254.0)	7.00 (177.8)	45.0 (20.42)	4	16	8.33/4.17	16.7/8.33
3	**HS5F3AS**	**HSS5F3AS**	12.00 (304.8)	10.00 (254.0)	7.00 (177.8)	55.0 (24.95)	4	17	12.5/6.25	25.0/12.5
5	**HS5F5AS**	**HSS5F5AS**	17.00 (431.8)	14.00 (355.6)	9.00 (228.6)	131.0 (59.42)	4	17	20.8/10.4	41.6/20.8
7.5	**HS5F7.5AS**	**HSS5F7.5AS**	17.00 (431.8)	14.00 (355.6)	9.00 (228.6)	156.0 (70.76)	4	18	31.3/15.6	62.5/31.3
10	**HS5F10AS**	**HSS5F10AS**	17.00 (431.8)	14.00 (355.6)	9.00 (228.6)	156.0 (70.76)	4	18	41.7/20.8	83.3./41.7
15	**HS5F15AS**	**HSS5F15AS**	30.00 (762.0)	29.00 (736.6)	12.00 (304.8)	549.0 (249.02)	4	18	62.5/31.2	125.0/62.5
25	**HS5F25AS**	**HSS5F25AS**	30.00 (762.0)	29.00 (736.6)	12.00 (304.8)	637.0 (288.94)	4	18	104.0/52.0	208.0/104.0

Group 2: 600 Volt Primary, 120/240 Secondary, 60 Hz

kVA	Catalog Number Group 1 Rolled Steel	Catalog Number Group 2 Stainless Steel	Height in (mm)	Width in (mm)	Depth in (mm)	Approx. Ship Weight lbs (kg)	Design Style *	Elec Conn *	Primary Amps	Secondary Amps
Non–Encapsulated										
.100	**HS10B100**	**N/A**	6.00 (152.4)	4.00 (101.6)	3.00 (76.2)	4.00 (1.81)	2	21	0.167	.833/.417
.150	**HS10B150**		8.00 (203.2)	4.00 (101.6)	4.00 (101.6)	5.00 (2.27)	2	21	0.25	1.25/.625
.250	**HS10B250**		8.00 (203.2)	4.00 (101.6)	4.00 (101.6)	8.00 (3.63)	2	21	0.417	2.08/1.04
Encapsulated										
.500	**HS10F500B**	**HSS10F500B**	10.00 (254.0)	6.00 (152.4)	5.00 (127.0)	22.0 (9.98)	3	21	0.833	4.16/2.08
.750	**HS10F750B**	**HSS10F750B**	10.00 (254.0)	6.00 (152.4)	5.00 (127.0)	23.0 (10.43)	3	21	1.25	6.25/3.13
1	**HS10F1BS**	**HSS10F1BS**	10.00 (254.0)	6.00 (152.4)	5.00 (127.0)	28.0 (12.70)	3	21	1.67	8.33/4.17
1.5	**HS10F1.5AS**	**HSS10F1.5AS**	12.00 (304.8)	10.00 (254.0)	7.00 (177.8)	38.0 (17.24)	4	21	2.5	12.5/6.25
2	**HS10F2AS**	**HSS10F2AS**	12.00 (304.8)	10.00 (254.0)	7.00 (177.8)	60.0 (27.22)	4	21	3.33	16.7/8.33
3	**HS10F3AS**	**HSS10F3AS**	12.00 (304.8)	10.00 (254.0)	7.00 (177.8)	66.0 (29.94)	4	22	5.0	25.0/12.5
5	**HS10F5AS**	**HSS10F5AS**	17.00 (431.8)	14.00 (355.6)	9.00 (228.6)	100.0 (45.36)	4	22	8.3	41.6/20.8
7.5	**HS10F7.5AS**	**HSS10F7.5AS**	17.00 (431.8)	14.00 (355.6)	9.00 (228.6)	135.0 (61.23)	4	22	12.5	62.5/31.3
10	**HS10F10AS**	**HSS10F10AS**	17.00 (431.8)	14.00 (355.6)	9.00 (228.6)	150.0 (68.04)	4	22	16.7	83.3/41.7

* Note: Design Styles and Electrical Connections can be found at the end of the Non-Ventilated Distribution Transformers section.

Selection Table: Single Phase

Group 3: 120/208/240/277 Volt Primary, 120/240 Secondary, 60 Hz

kVA	Catalog Number Group 1 Rolled Steel	Catalog Number Group 2 Stainless Steel	Height in (mm)	Width in (mm)	Depth in (mm)	Approx. Ship Weight lbs (kg)	Design Style [1]	Elec Conn [1]	Primary Amps @ 277 V	Secondary Amps
Encapsulated										
1	**HS12F1BS**	**HSS12F1BS**	10.00 (254.0)	6.00 (152.4)	5.00 (127.0)	29.0 (13.15)	3	19	3.6	8.33/4.17
1.5	**HS12F1.5AS**	**HSS12F1.5AS**	12.00 (304.8)	10.00 (254.0)	7.00 (177.8)	40.0 (18.14)	4	20	5.4	12.5/6.25
2	**HS12F2AS**	**HSS12F2AS**	12.00 (304.8)	10.00 (254.0)	7.00 (177.8)	60.0 (27.22)	4	20	7.2	16.7/8.33
3	**HS12F3AS**	**HSS12F3AS**	12.00 (304.8)	10.00 (254.0)	7.00 (177.8)	66.0 (29.94)	4	20	10.8	25.0/12.5
5	**HS12F5AS**	**HSS12F5AS**	17.00 (431.8)	14.00 (355.6)	9.00 (228.6)	104.0 (47.17)	4	20	18.0	41.6/20.8
7.5	**HS12F7.5AS**	**HSS12F7.5AS**	17.00 (431.8)	14.00 (355.6)	9.00 (228.6)	135.0 (61.23)	4	20	27.1	62.5/31.3
10	**HS12F10AS**	**HSS12F10AS**	17.00 (431.8)	14.00 (355.6)	9.00 (228.6)	156.0 (70.76)	4	20	36.1	83.3/41.7

Group 4: Export 190/200/208/220/380/400/415/440 Volt Primary, 110/220 Secondary, 50/60 Hz Copper wound
Export 200/208/230/400/415/460 Volt Primary, 115/230 Secondary, 50/60 Hz Copper wound
Export 208/240/415/480 Volt Primary, 120/240 Secondary, 60 Hz only Copper wound

kVA	Catalog Number Group 1 Rolled Steel	Catalog Number Group 2 Stainless Steel	Height in (mm)	Width in (mm)	Depth in (mm)	Approx. Ship Weight lbs (kg)	Design Style [1]	Elec Conn [1]	Primary Amps [2]	Secondary Amps
Encapsulated, Copper Wound										
1	**HS14F1BS**	**HSS14F1BS**	10.00 (254.0)	6.00 (152.4)	5.00 (127.0)	34.0 (15.42)	3	23	4.5/2.3	9.1/4.5
1.5	**HS14F1.5BS**	**HSS14F1.5BS**	12.00 (304.8)	10.00 (254.0)	7.00 (177.8)	40.0 (18.13)	4	24	6.8/3.4	13.6/6.8
2	**HS14F2BS**	**HSS14F2BS**	12.00 (304.8)	10.00 (254.0)	7.00 (177.8)	60.0 (27.21)	4	24	9.1/4.5	18.2/9.1
3	**HS14F3BS**	**HSS14F3BS**	12.00 (304.8)	10.00 (254.0)	7.00 (177.8)	73.0 (33.11)	4	24	13.6/6.8	27.3/13.6
5	**HS14F5BS**	**HSS14F5BS**	17.00 (431.8)	14.00 (355.6)	9.00 (228.6)	100.0 (45.36)	4	24	22.7/11.4	45.5/22.7
7.5	**HS14F7.5BS**	**HSS14F7.5BS**	17.00 (431.8)	14.00 (355.6)	9.00 (228.6)	140.0 (63.50)	4	24	34.1/17.0	68.2/34.1
10	**HS14F10BS**	**HSS14F10BS**	17.00 (431.8)	14.00 (355.6)	9.00 (228.6)	175.0 (79.38)	4	24	45.5/22.7	90.9/45.5

Notes:

1. Design Styles and Electrical Connections can be found at the end of the Non-Ventilated Distribution Transformers section.
2. Amperage calculated at 220/440 Volts on primary. UL Listed and CSA Certified. 240 & 480 V not available at 50 Hz.

Selection Tables: Three Phase

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

kVA	Catalog Number Group I Rolled Steel	Catalog Number Group II Stainless Steel	Height in (mm)	Width in (mm)	Depth in (mm)	Approx. Ship Weight lbs (kg)	Design Style [1]	Elec Conn [1]	Primary Amps	Secondary Amps
3	**HT1F3AS**	**HTS1F3AS**	13.00 (330.2)	16.00 (406.4)	9.00 (228.6)	105.0 (47.63)	4	27	3.6	8.3
6	**HT1F6AS**	**HTS1F6AS**	13.00 (330.2)	16.00 (406.4)	9.00 (228.6)	110.0 (49.90)	4	27	7.2	16.6
9	**HT1F9AS**	**HTS1F9AS**	17.00 (431.8)	20.00 (508.0)	11.00 (279.4)	250.0 (113.40)	4	27	10.8	25.0
15	**HT1F15AS**	**HTS1F15AS**	17.00 (431.8)	20.00 (508.0)	11.00 (279.4)	261.0 (118.39)	4	27	18.1	41.7
30	**HT1F30AS**	**HTS1F30AS**	30.00 (762.0)	29.00 (736.6)	12.00 (304.8)	696.0 (315.70)	4	27	36.1	83.4
45	**HT1F45AS**	**HTS1F45AS**	30.00 (762.0)	29.00 (736.6)	12.00 (304.8)	844.0 (382.83)	4	27	54.2	125.0

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

kVA	Catalog Number Group I Rolled Steel	Catalog Number Group II Stainless Steel	Height in (mm)	Width in (mm)	Depth in (mm)	Approx. Ship Weight lbs (kg)	Design Style [1]	Elec Conn [1]	Primary Amps	Secondary Amps
3	**HT3F3AS**	**HTS3F3AS**	13.00 (330.2)	16.00 (406.4)	9.00 (228.6)	97.0 (44.00)	4	26	7.2	8.3
6	**HT3F6AS**	**HTS3F6AS**	13.00 (330.2)	16.00 (406.4)	9.00 (228.6)	141.0 (63.96)	4	26	14.4	16.6
9	**HT3F9AS**	**HTS3F9AS**	17.00 (431.8)	20.00 (508.0)	11.00 (279.4)	256.0 (116.12)	4	26	21.7	25.0

Group C: 480 Volt Δ Primary, 240 Volt Δ 120 Secondary with reduced capacity center tap, 60 Hz [2]

kVA	Catalog Number Group I Rolled Steel	Catalog Number Group II Stainless Steel	Height in (mm)	Width in (mm)	Depth in (mm)	Approx. Ship Weight lbs (kg)	Design Style [1]	Elec Conn [1]	Primary Amps	Secondary Amps
3	**HT5F3AS**	**HTS5F3AS**	13.00 (330.2)	16.00 (406.4)	9.00 (228.6)	105.0 (47.63)	4	28	3.6	7.2
6	**HT5F6AS**	**HTS5F6AS**	13.00 (330.2)	16.00 (406.4)	9.00 (228.6)	110.0 (49.90)	4	28	7.2	14.4
9	**HT5F9AS**	**HTS5F9AS**	17.00 (431.8)	20.00 (508.0)	11.00 (279.4)	250.0 (113.40)	4	28	10.8	21.7
15	**HT5F15AS**	**HTS5F15AS**	17.00 (431.8)	20.00 (508.0)	11.00 (279.4)	305.0 (138.35)	4	28	18.1	36.1
30	**HT5F30AS**	**HTS5F30AS**	29.00 (736.6)	25.00 (635.0)	12.00 (304.8)	698.0 (316.61)	4	28	36.1	72.2
45	**HT5F45AS**	**HTS5F45AS**	29.00 (736.6)	25.00 (635.0)	12.00 (304.8)	876.0 (397.35)	4	28	54.2	108.3

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

kVA	Catalog Number Group I Rolled Steel	Catalog Number Group II Stainless Steel	Height in (mm)	Width in (mm)	Depth in (mm)	Approx. Ship Weight lbs (kg)	Design Style [1]	Elec Conn [1]	Primary Amps	Secondary Amps
3	**HT6F3AS**	**HTS6F3AS**	13.00 (330.2)	16.00 (406.4)	9.00 (228.6)	97.0 (44.00)	4	25	7.2	8.3
6	**HT6F6AS**	**HTS6F6AS**	13.00 (330.2)	16.00 (406.4)	9.00 (228.6)	141.0 (63.96)	4	25	14.4	16.6
9	**HT6F9AS**	**HTS6F9AS**	17.00 (431.8)	20.00 (508.0)	11.00 (279.4)	256.0 (116.12)	4	25	21.7	25.0

Notes:
1. Design Styles and Electrical Connections can be found at the end of the Non-Ventilated Distribution Transformers section.
2. Refer to *Capacity of Center Tap in Center Tap Delta Transformers* at the beginning of this section.

Selection Tables: Three Phase

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

kVA	Catalog Number Group I Rolled Steel	Catalog Number Group II Stainless Steel	Height in (mm)	Width in (mm)	Depth in (mm)	Approx. Ship Weight lbs (kg)	Design Style *	Elec Conn *	Primary Amps	Secondary Amps
3	**HT79F3AS**	**HTS79F3AS**	13.00 (330.2)	16.00 (406.4)	9.00 (228.6)	121.0 (54.88)	4	29	3.6	4.6
6	**HT79F6AS**	**HTS79F6AS**	13.00 (330.2)	16.00 (406.4)	9.00 (228.6)	141.0 (63.96)	4	29	7.2	9.1
9	**HT79F9AS**	**HTS79F9AS**	17.00 (431.8)	20.00 (508.0)	11.00 (279.4)	255.0 (115.7)	4	29	10.8	13.6

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

kVA	Catalog Number Group I Rolled Steel	Catalog Number Group II Stainless Steel	Height in (mm)	Width in (mm)	Depth in (mm)	Approx. Ship Weight lbs (kg)	Design Style *	Elec Conn *	Primary Amps	Secondary Amps
3	**HT7F3AS**	**HTS7F3AS**	13.00 (330.2)	16.00 (406.4)	9.00 (228.6)	116.0 (52.62)	4	30	2.9	8.3
6	**HT7F6AS**	**HTS7F6AS**	13.00 (330.2)	16.00 (406.4)	9.00 (228.6)	145.0 (65.77)	4	30	5.8	16.6
9	**HT7F9AS**	**HTS7F9AS**	17.00 (431.8)	20.00 (508.0)	11.00 (279.4)	225.0 (115.67)	4	30	8.7	25.0

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

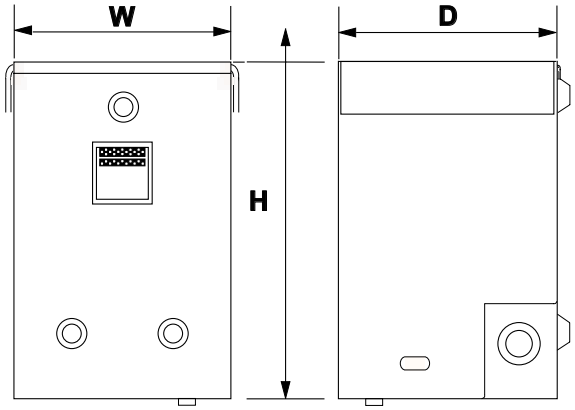
kVA	Catalog Number Group I Rolled Steel	Catalog Number Group II Stainless Steel	Height in (mm)	Width in (mm)	Depth in (mm)	Ship Weight Approx. (lbs)	Design Style *	Elec Conn *	Primary Amps	Secondary Amps
3	**HT84F3AS**	**HTS84F3AS**	13.00 (330.2)	16.00 (406.4)	9.00 (228.6)	97.0 (44.00)	4	31	8.3	3.6
6	**HT84F6AS**	**HTS84F6AS**	13.00 (330.2)	16.00 (406.4)	9.00 (228.6)	141.0 (63.96)	4	31	16.6	7.2
9	**HT84F9AS**	**HTS84F9AS**	17.00 (431.8)	20.00 (508.0)	11.00 (279.4)	256.0 (116.12)	4	31	25.0	10.8

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

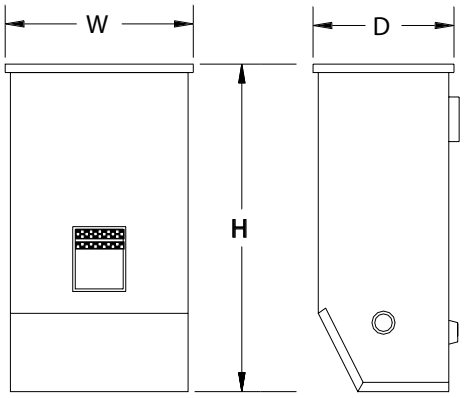
kVA	Catalog Number Group I Rolled Steel	Catalog Number Group II Stainless Steel	Height in (mm)	Width in (mm)	Depth in (mm)	Ship Weight Approx. (lbs)	Design Style *	Elec Conn *	Primary Amps	Secondary Amps
3	**HT85F3AS**	**HTS85F3AS**	13.00 (330.2)	16.00 (406.4)	9.00 (228.6)	97.0 (44.00)	4	32	7.2	3.6
6	**HT85F6AS**	**HTS85F6AS**	13.00 (330.2)	16.00 (406.4)	9.00 (228.6)	141.0 (63.96)	4	32	14.4	7.2
9	**HT85F9AS**	**HTS85F9AS**	17.00 (431.8)	20.00 (508.0)	11.00 (279.4)	256.0 (116.12)	4	32	21.6	10.8

* Notes: Design Styles and Electrical Connections can be found at the end of the Non-Ventilated Distribution Transformers section.

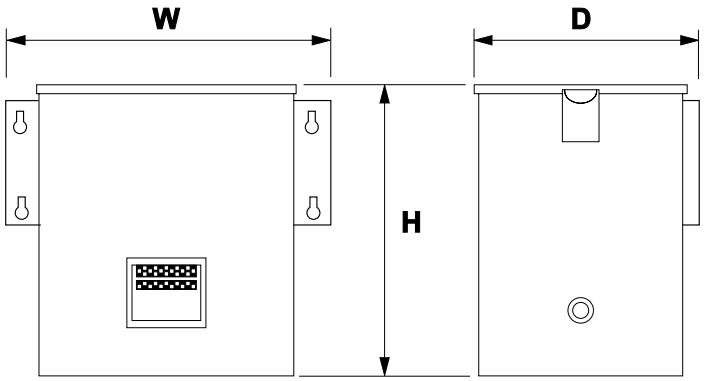
Design Styles



Style 2 - Non-Encapsulated

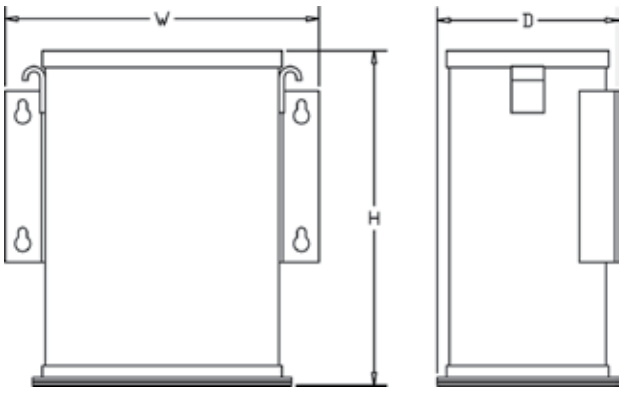


Style 3 - Encapsulated



Style 4 - Encapsulated

Customized Enclosures - Contact Technical Services



Style 5 - Encapsulated

Available for all encapsulated kVA sizes (For Type 4, 12 and 4X)

Electrical Connections (Single Phase)

240 X 480 Volt Primary
120/240 Volt Secondary
Taps: None

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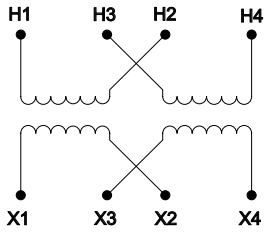

Primary Voltage	Interconnect	Connect Lines to
480	H2 to H3	H1 & H4
240	H1 to H3 H2 to H4	H1 & H4
Secondary Voltage	**Interconnect**	**Connect Lines to**
240	X2 to X3	X1 & X4
120-0-120	X2 to X3 X2 to ⏚	X1-X2-X4
120	X1 to X3 X2 to X4	X1 & X4

HS1 Series

240 X 480 Volt Primary
120/240 Volt Secondary
Taps: None

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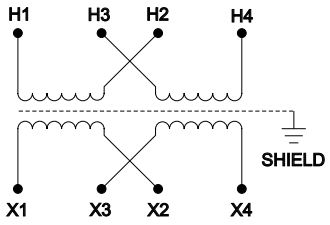
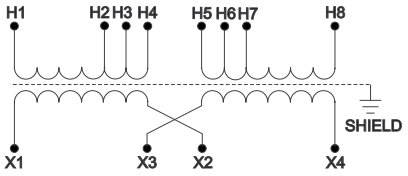


Primary Voltage	Interconnect	Connect Lines to
480	H2 to H3	H1 & H4
240	H1 to H3 H2 to H4	H1 & H4
Secondary Voltage	**Interconnect**	**Connect Lines to**
240	X2 to X3	X1 & X4
120-0-120	X2 to X3 X2 to ⏚	X1-X2-X4
120	X1 to X3 X2 to X4	X1 & X4

HS1 Series

240 X 480 Volt Primary
120/240 Volt Secondary
Taps: 2, 2½% FCAN & FCBN

17

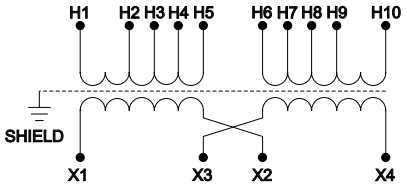


Primary Voltage	Interconnect	Connect Lines to
504	H4 to H5	H1 & H8
492	H3 to H5	H1 & H8
480	H3 to H6	H1 & H8
468	H2 to H6	H1 & H8
456	H2 to H7	H1 & H8
252	H1 to H5 H4 to H8	H1 & H8
240	H1 to H6 H3 to H8	H1 & H8
228	H1 to H7 H2 to H8	H1 & H8
Secondary Voltage	**Interconnect**	**Connect Lines to**
240	X2 to X3	X1 & X4
120-0-120	X2 to X3 X2 to ⏚	X1-X2-X4
120	X1 to X3 X2 to X4	X1 & X4

HS5 Series

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

18

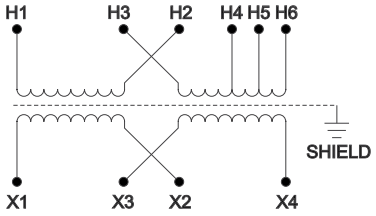


Primary Voltage	Interconnect	Connect Lines to
504	H5 to H6	H1 & H10
492	H4 to H6	H1 & H10
480	H4 to H7	H1 & H10
468	H3 to H7	H1 & H10
456	H3 to H8	H1 & H10
444	H2 to H8	H1 & H10
432	H2 to H9	H1 & H10
252	H1 to H6 H5 to H10	H1 & H10
240	H1 to H7 H4 to H10	H1 & H10
228	H1 to H8 H3 to H10	H1 & H10
216	H1 to H9 H2 to H10	H1 & H10
Secondary Voltage	**Interconnect**	**Connect Lines to**
240	X2 to X3	X1 & X4
120-0-120	X2 to X3 X2 to ⏚	X1-X2-X4
120	X1 to X3 X2 to X4	X1 & X4

HS5 Series

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

19

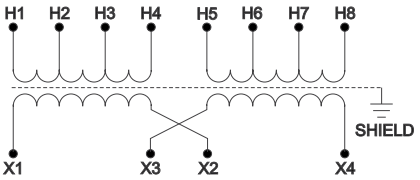


Primary Voltage	Interconnect	Connect Lines to
277	H2 to H3	H1 & H6
240	H2 to H3	H1 & H5
208	H2 to H3	H1 & H4
120	H1 to H3 H2 to H5	H1 & H5
Secondary Voltage	**Interconnect**	**Connect Lines to**
240	X2 to X3	X1 & X4
120-0-120	X2 to X3 X2 to ⏚	X1-X2-X4
120	X1 to X3 X2 to X4	X1 & X4

HS12 Series (1 kVA only)

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

20



Primary Voltage	Interconnect	Connect Lines to
277	H4 to H5	H1 & H8
240	H3 to H6	H1 & H8
208	H2 to H7	H1 & H8
120	H1 to H6 H3 to H8	H1 & H8
Secondary Voltage	**Interconnect**	**Connect Lines to**
240	X2 to X3	X1 & X4
120-0-120	X2 to X3 X2 to ⏚	X1-X2-X4
120	X1 to X3 X2 to X4	X1 & X4

HS12 Series

⏚ = Earth Ground

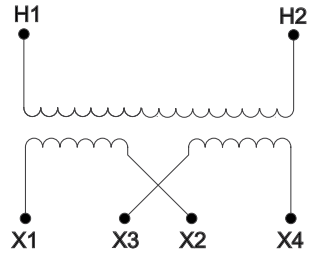
Note:

Connect the electrostatic shield to the equipment ground (green) or to both the equipment ground and the system ground (white). Specifications are subject to change without notice.

Electrical Connections (Single Phase)

600 Volt Primary,
120/240 Volt Secondary
Taps: None

21

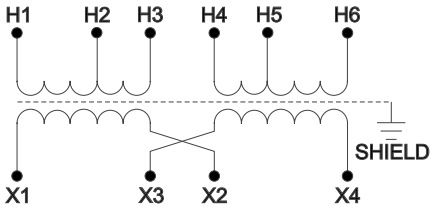


Primary Voltage	Interconnect	Connect Lines to
600		H1 & H2
Secondary Voltage	**Interconnect**	**Connect Lines to**
240	X2 to X3	X1 & X4
120-0-120	X2 to X3 X2 to ⏚	X1, X2 & X4
120	X1 to X3 X2 to X4	X1 & X4
HS10 Series		

Note: 1 through 2 kVA units have electrostatic shielding.

600 Volt Primary
120/240 Volt Secondary
Taps: 2, 5% FCBN

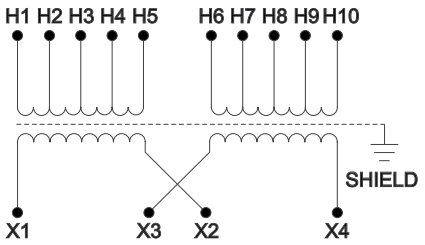
22



Primary Voltage	Interconnect	Connect Lines to
600	H3 to H4	H1 & H6
570	H2 to H4	H1 & H6
540	H2 to H5	H1 & H6
Secondary Voltage	**Interconnect**	**Connect Lines to**
240	X2 to X3	X1 & X4
120-0-120	X2 to X3 X2 to ⏚	X1-X2-X4
120	X1 to X3 X2 to X4	X1 & X4
HS10 Series		

190/200/208/220/380/400/415/440 Volt Pri.
110/220 Volt Secondary
Taps: None

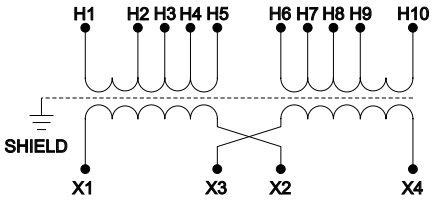
23



Primary Voltage	Interconnect	Connect Lines to
440	H5 to H6	H1 & H10
415	H4 to H6	H1 & H9
400	H3 to H6	H1 & H8
380	H2 to H6	H1 & H7
220	H1 to H6 H5 to H10	H1 & H10
208	H1 to H6 H4 to H9	H1 & H9
200	H1 to H6 H3 to H8	H1 & H8
190	H1 to H6 H2 to H7	H1 & H7
Secondary Voltage	**Interconnect**	**Connect Lines to**
220	X2 to X3	X1 & X4
110-0-110	X2 to X3 X2 to ⏚	X1, X2 & X4
110	X1 to X3 X2 to X4	X1 & X4
HS14 Series (1 kVA only)		

190/200/208/220/380/400/415/440 Volt Pri.
110/220 Volt Secondary
Taps: None

24



Primary Voltage	Interconnect	Connect Lines to
440	H5 to H6	H1 & H10
415	H4 to H7	H1 & H10
400	H3 to H8	H1 & H10
380	H2 to H9	H1 & H10
220	H1 to H6, H5 to H10	H1 & H10
208	H1 to H7, H4 to H10	H1 & H10
200	H1 to H8, H3 to H10	H1 & H10
190	H1 to H9 H2 to H10	H1 & H10
Secondary Voltage	**Interconnect**	**Connect Lines to**
220	X2 to X3	X1 & X4
110-0-110	X2 to X3 X2 to ⏚	X1, X2 & X4
110	X1 to X3 X2 to X4	X1 & X4
HS14 Series		

⏚ = Earth Ground

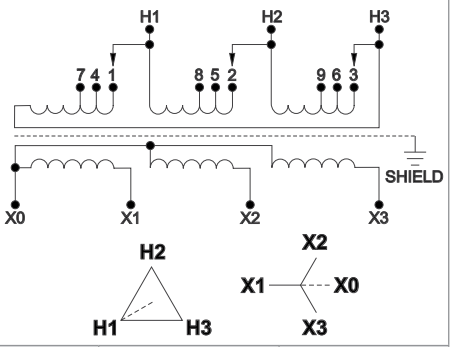
Note:

Connect the electrostatic shield to the equipment ground (green) or to both the equipment ground and the system ground (white). Specifications are subject to change without notice.

Electrical Connections (Three Phase)

240 Δ Volt Primary 208Y/120 Volt Secondary
Taps: 2, 5% FCBN

25

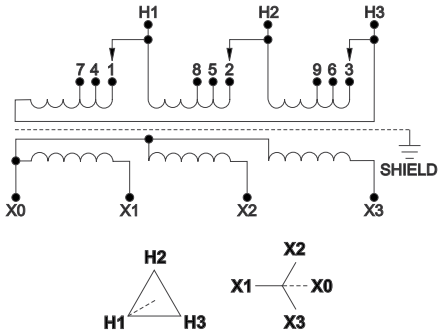


Primary Voltage	Connect Taps	Connect Lines To
240	1-H1 & 2-H2 & 3-H3	H1, H2, H3
228	4-H1 & 5-H2 & 6-H3	H1, H2, H3
216	7-H1 & 8-H2 & 9-H3	H1, H2, H3
Secondary Voltage		**Connect Lines To**
208		X1, X2, & X3
120		X0, X1, X2, X3

HT6 Series

208 Δ Volt Primary
208Y/120 Volt Secondary
Taps: 2, 5% FCBN

26

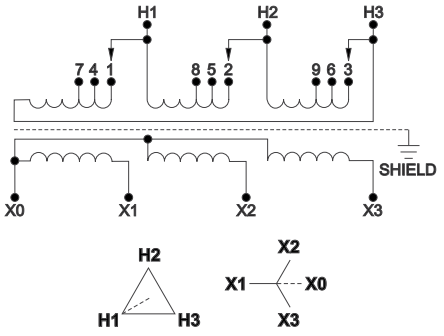


Primary Voltage	Connect Taps	Connect Lines To
208	1-H1 & 2-H2 & 3-H3	H1, H2, H3
198	4-H1 & 5-H2 & 6-H3	H1, H2, H3
187	7-H1 & 8-H2 & 9-H3	H1, H2, H3
Secondary Voltage		**Connect Lines To**
208		X1, X2, & X3
120		X0, X1, X2, X3

HT3 Series

480 Δ Volt Primary
208Y/120 Volt Secondary
Taps: 2, 5% FCBN

27

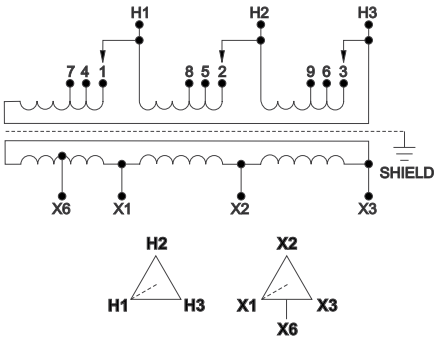


Primary Voltage	Interconnect	Connect Lines to
480	1-H1 & 2-H2 & 3- H3	H1, H2, H3
456	4-H1 & 5-H2 & 6- H3	H1, H2, H3
432	7-H1 & 8-H2 & 9- H3	H1, H2, H3
Secondary Voltage		**Connect Lines to**
208		X1, X2, & X3
120		X0, X1, X2, X3

HT1 Series

480 Δ Volt Primary
240 Δ w/120 CT Volt Secondary
Taps: 2, 5% FCBN

28

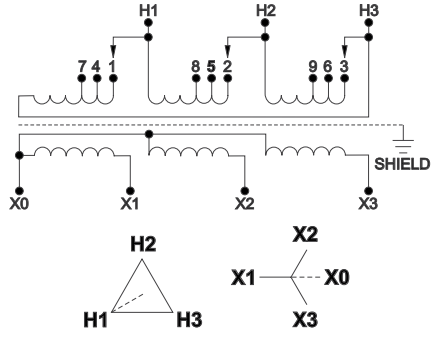


Primary Voltage	Connect Taps	Connect Lines To
480	1-H1 & 2-H2 & 3-H3	H1, H2, H3
456	4-H1 & 5-H2 & 6-H3	H1, H2, H3
432	7-H1 & 8-H2 & 9-H3	H1, H2, H3
Secondary Voltage	**Interconnect**	**Connect Lines To**
240		X1, X2, X3
120-0-120	X6 to ⏚	X1-X6-X3

HT5 Series

480 Δ Volt Primary
380Y/220 Volt Secondary
Taps: 2, 5% FCBN

29



Primary Voltage	Interconnect	Connect Lines to
480	1-H1 & 2-H2 & 3-H3	H1, H2 & H3
456	4-H1 & 5-H2 & 6-H3	H1, H2 & H3
432	7-H1 & 8-H2 & 9-H3	H1, H2 & H3
Secondary Voltage	**Interconnect**	**Connect Lines to**
380		X1, X2, X3
220		X0, X1, X2, X3

HT79 Series

⏚ = Earth Ground

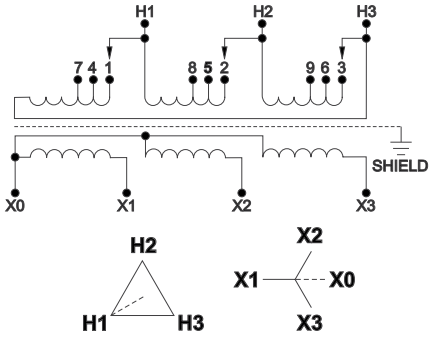
Notes:

Connect the electrostatic shield to the equipment ground (green) or to both the equipment ground and the system ground (white). Specifications are subject to change without notice.

Electrical Connections (Three Phase)

600 Δ Volt Primary
208Y/120 Volt Secondary
Taps: 2, 5% FCBN

30

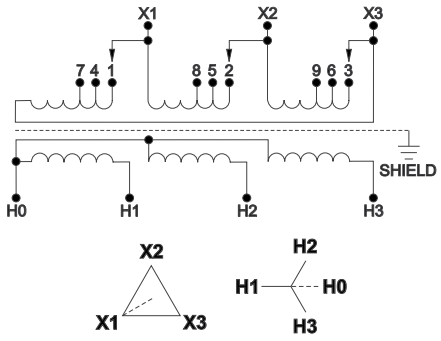


Primary Voltage	Connect Taps	Line Leads
600	1-H1 & 2-H2 & 3-H3	H1, H2, H3
570	4-H1 & 5-H2 & 6-H3	H1, H2, H3
540	7-H1 & 8-H2 & 9-H3	H1, H2, H3
Secondary Voltage		**Line Leads**
208		X1, X2, X3
120		X0, X1, X2, X3

HT7 Series

208 Δ Volt Primary
480Y/277 Volt Secondary
Taps: 2, 5% FCBN

31

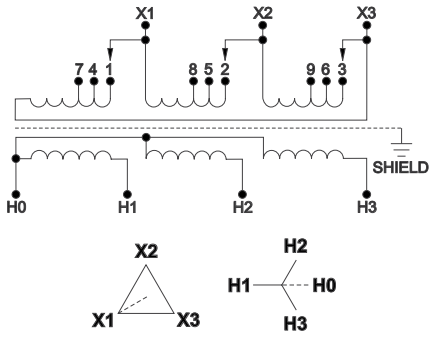


Primary Voltage	Connect Taps	Line Leads
208	1-X1 & 2-X2 & 3-X3	X1, X2, X3
198	4-X1 & 5-X2 & 6-X3	X1, X2, X3
187	7-X1 & 8-X2 & 9-X3	X1, X2, X3
Secondary Voltage		**Line Leads**
480		H1, H2, H3
277		H0, H1, H2, H3

HT84 Series

240 Δ Volt Primary
480Y/277 Volt Secondary
Taps: 2, 5% FCBN

32



Primary Voltage	Connect Taps	Line Leads
240	1-X1 & 2-X2 & 3-X3	X1, X2, X3
228	4-X1 & 5-X2 & 6-X3	X1, X2, X3
216	7-X1 & 8-X2 & 9-X3	X1, X2, X3
Secondary Voltage		**Line Leads**
480		H1, H2, H3
277		H0, H1, H2, H3

HT85 Series

Notes:

Connect the electrostatic shield to the equipment ground (green) or to both the equipment ground and the system ground (white). Specifications are subject to change without notice.