

Buck-Boost Transformers



Selection Tables: Single Phase

Table 1: Using Group 1 (120 x 240 V Primary, 12/24 V Secondary) Transformers



Input Voltage	Output Voltage	Quantity Req'd	Connector Diagram*	Application Data	Catalog Number						
					HS19B50	HS19B100	HS19B150	HS19B250	HS19F500B	HS19F750B	HS19F1B
BOOSTING											
100	120	1	B1	KVA	0.25	0.5	0.75	1.25	2.5	3.75	5
				Load Amps	2.08	4.16	6.25	10.4	20.8	31.2	41.6
				Fuse Size	6	10	15	25	35	50	70
109	120	1	A1	KVA	0.5	1	1.5	2.5	5	7.5	10
				Load Amps	4.16	8.33	12.5	20.8	41.6	62.5	83.3
				Fuse Size	10	15	20	30	60	90	125
189	208	1	D1	KVA	0.43	0.87	1.3	2.16	4.33	6.49	8.65
				Load Amps	2.08	4.16	6.25	10.4	20.8	31.2	41.6
				Fuse Size	6	10	15	15	30	45	60
197	208	1	C1	KVA	0.87	1.73	2.6	4.33	8.65	13	17.3
				Load Amps	4.16	8.33	12.5	20.8	41.6	62.5	83.3
				Fuse Size	6	15	20	30	60	90	110
208	229	1	D1	KVA	0.48	0.95	1.43	2.38	4.77	7.15	9.54
				Load Amps	2.08	4.16	6.25	10.4	20.8	31.2	41.6
				Fuse Size	6	10	15	15	30	45	60
218**	240	1	D1	KVA	0.5	1	1.5	2.5	5	7.5	10
				Load Amps	2.08	4.16	6.25	10.4	20.8	31.2	41.6
				Fuse Size	6	10	15	15	30	45	60
229	240	1	C1	KVA	1	2	3	5	10	15	20
				Load Amps	4.16	8.33	12.5	20.8	41.6	62.5	83.3
				Fuse Size	6	15	20	30	60	90	110
BUCKING											
132**	120	1	A2	KVA	0.55	1.1	1.65	2.75	5.5	8.25	11
				Load Amps	4.58	9.16	13.75	22.9	45.8	68.7	91.6
				Fuse Size	10	15	20	30	60	80	110
144**	120	1	B2	KVA	0.3	0.6	0.9	1.5	3	4.5	6
				Load Amps	2.5	5	7.5	12.5	25	37.5	50
				Fuse Size	6	10	15	15	30	40	60
229	208	1	D2	KVA	0.48	0.95	1.43	2.38	4.77	7.15	9.54
				Load Amps	2.29	4.58	6.88	11.4	22.9	34.4	45.8
				Fuse Size	6	10	15	15	30	40	60
252**	240	1	C2	KVA	1.04	2.1	3.15	5.25	10.5	15.7	21
				Load Amps	4.34	8.75	13.13	21.8	43.7	65.6	87.5
				Fuse Size	10	15	15	30	60	80	110
264**	240	1	D2	KVA	0.55	1.1	1.65	2.75	5.5	8.25	11
				Load Amps	2.29	4.58	6.88	11.4	22.9	34.3	45.8
				Fuse Size	6	10	15	15	30	40	60.0

* For connection diagrams, refer to pages 208-211.

** Shaded items are 60 Hz only (All other ratings shown are 50/60 Hz).

Buck-Boost Transformers

Selection Tables: Single Phase

Table 1: Using Group 1 (120 x 240 V Primary, 12/24 V Secondary) Transformers



Input Voltage	Output Voltage	Quantity Req'd	Connection Diagram*	Application Data	Catalog Number					
					HS19F1.5A	HS19F2A	HS19F3A	HS19F5A	HS19F7.5A	S19H10A
BOOSTING										
100	120	1	B1	KVA	7.5	10.0	15.0	25.0	37.5	50.0
				Load Amps	62.5	83.3	125.0	208.0	312.0	416.0
				Fuse Size	100.0	125.0	200.0	350.0	500.0	700.0
109	120	1	A1	KVA	15.0	20.0	30.0	49.9	75.0	100.0
				Load Amps	125.0	167.0	250.0	416.0	625.0	833.0
				Fuse Size	175.0	250.0	350.0	600.0	1000.0	1200.0
189	208	1	D1	KVA	13.0	17.3	26.0	43.3	64.9	86.5
				Load Amps	62.5	83.3	125.0	208.0	312.0	416.0
				Fuse Size	90.0	125.0	175.0	300.0	450.0	600.0
197	208	1	C1	KVA	26.0	34.7	52.0	86.5	130.0	173.3
				Load Amps	125.0	167.0	250.0	416.0	625.0	833.0
				Fuse Size	175.0	225.0	350.0	600.0	1000.0	1200.0
208	229	1	D1	KVA	14.3	19.1	28.6	47.6	71.4	95.3
				Load Amps	62.5	83.3	125.0	208.0	312.0	416.0
				Fuse Size	90.0	125.0	175.0	300.0	450.0	600.0
218**	240	1	D1	KVA	15.0	20.0	30.0	49.9	74.9	99.8
				Load Amps	62.5	83.3	125.0	208.0	312.0	416.0
				Fuse Size	90.0	125.0	175.0	300.0	450.0	600.0
229	240	1	C1	KVA	30.0	40.1	60.0	99.8	150.0	199.9
				Load Amps	125.0	167.0	250.0	416.0	625.0	833.0
				Fuse Size	175.0	225.0	350.0	600.0	1000.0	1200.0
BUCKING										
132**	120	1	A2	KVA	16.5	22.0	33.0	54.9	82.5	110.0
				Load Amps	137.5	183.3	275.0	457.6	687.5	916.3
				Fuse Size	175.0	225.0	350.0	600.0	800.0	1200.0
144**	120	1	B2	KVA	9.0	12.0	18.0	30.0	44.9	59.9
				Load Amps	75.0	100.0	150.0	249.6	374.4	499.2
				Fuse Size	80.0	110.0	175.0	300.0	400.0	600.0
229	208	1	D2	KVA	14.3	19.1	28.6	47.6	71.4	95.3
				Load Amps	68.8	91.6	137.5	228.8	343.2	458.0
				Fuse Size	80.0	110.0	175.0	300.0	400.0	600.0
252**	240	1	C2	KVA	31.5	42.0	63.0	104.8	157.5	209.9
				Load Amps	131.3	174.9	262.5	436.8	656.3	874.7
				Fuse Size	175.0	225.0	350.0	600.0	800.0	1200.0
264**	240	1	D2	KVA	16.5	22.0	33.0	54.9	78.6	109.8
				Load Amps	68.8	91.6	137.5	228.8	343.2	458.0
				Fuse Size	80.0	110.0	175.0	300.0	400.0	600.0

* For connection diagrams, refer to pages 208-211.

** Shaded items are 60 Hz only (All other ratings shown are 50/60 Hz).

Buck-Boost Transformers



Selection Tables: Single Phase

Table 2: Using Group 2 (120 x 240 V Primary, 16/32 V Secondary) Transformers



Input Voltage	Output Voltage	Quantity Req'd	Connection Diagram*	Application Data	Catalog Number				
					HS20B150	HS20B250	HS20F500B	HS20F750B	HS20F1B
BOOSTING									
95	120	1	B1	KVA	0.6	0.9	1.9	2.8	3.8
				Load Amps	4.7	7.8	15.6	23.4	31.2
				Fuse Size	10.0	15.0	25.0	40.0	50.0
106	120	1	A1	KVA	1.1	1.9	3.7	5.6	7.5
				Load Amps	9.4	15.6	31.2	46.8	62.5
				Fuse Size	15.0	25.0	45.0	70.0	90.0
183	208	1	D1	KVA	1.0	1.6	3.2	4.9	6.5
				Load Amps	4.7	7.8	15.6	23.4	31.2
				Fuse Size	10.0	15.0	25.0	35.0	45.0
195	208	1	C1	KVA	2.0	3.2	6.5	9.7	13.0
				Load Amps	9.4	15.6	31.2	46.8	62.5
				Fuse Size	15.0	25.0	45.0	70.0	90.0
208	236	1	D1	KVA	1.1	1.8	3.7	5.5	7.4
				Load Amps	4.7	7.8	15.6	23.4	31.2
				Fuse Size	10.0	15.0	25.0	40.0	50.0
225	240	1	C1	KVA	2.3	3.7	7.5	11.2	15.0
				Load Amps	9.4	15.6	31.2	46.8	62.5
				Fuse Size	15.0	25.0	45.0	70.0	90.0
240**	272	1	D1	KVA	1.3	2.1	4.2	6.4	8.5
				Load Amps	4.7	7.8	15.6	23.4	31.2
				Fuse Size	10.0	15.0	25.0	35.0	45.0
BUCKING									
136**	120	1	A2	KVA	1.3	2.1	4.2	6.4	8.5
				Load Amps	10.6	17.7	35.4	53.2	70.8
				Fuse Size	15.0	20.0	40.0	60.0	80.0
152**	120	1	B2	KVA	0.7	1.2	2.4	3.6	4.7
				Load Amps	6.0	9.9	19.8	29.6	39.5
				Fuse Size	10.0	15.0	20.0	30.0	40.0
236	208	1	D2	KVA	1.1	1.8	3.7	5.5	7.4
				Load Amps	5.3	8.9	17.7	26.5	35.4
				Fuse Size	6.0	15.0	20.0	30.0	40.0
256**	240	1	C2	KVA	2.4	4.0	8.0	12.0	16.0
				Load Amps	10.0	16.6	33.3	50.0	66.7
				Fuse Size	15.0	20.0	40.0	60.0	80.0
272**	240	1	D2	KVA	1.3	2.1	4.2	6.4	8.5
				Load Amps	5.3	8.8	17.7	26.5	35.4
				Fuse Size	10.0	15.0	20.0	30.0	40.0

* For connection diagrams, refer to pages 208-211.

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Visit our website at www.solaheviduty.com or contact **Technical Services** at (800) 377-4384 with any questions.

Buck-Boost Transformers

Selection Tables: Single Phase

Table 2: Using Group 2 (120 x 240 V Primary, 16/32 V Secondary) Transformers



Input Voltage	Output Voltage	Quantity Req'd	Connection Diagram*	Application Data	Catalog Number					
					HS20F1.5A	HS20F2A	HS20F3A	HS20F5A	HS20F7.5A	S20H10A
BOOSTING										
95	120	1	B1	KVA	5.6	7.5	11.2	18.7	28.0	37.4
				Load Amps	46.8	62.5	93.7	156.0	234.0	312.0
				Fuse Size	80.0	100.0	150.0	250.0	400.0	500.0
106	120	1	A1	KVA	11.2	15.0	22.5	37.4	56.2	75.0
				Load Amps	93.7	125.0	187.5	312.0	468.0	625.0
				Fuse Size	150.0	200.0	300.0	450.0	700.0	1000.0
183	208	1	D1	KVA	9.7	13.0	19.5	32.4	48.6	64.8
				Load Amps	46.8	62.5	93.7	156.0	234.0	312.0
				Fuse Size	70.0	90.0	150.0	225.0	350.0	450.0
195	208	1	C1	KVA	19.5	26.0	39.0	64.9	97.3	130.0
				Load Amps	93.7	125.0	187.5	312.0	468.0	625.0
				Fuse Size	125.0	175.0	250.0	450.0	700.0	1000.0
208	236	1	D1	KVA	11.0	14.7	22.0	36.8	55.2	73.6
				Load Amps	46.8	62.5	93.7	156.0	234.0	312.0
				Fuse Size	70.0	90.0	150.0	225.0	350.0	450.0
225	240	1	C1	KVA	22.5	30.0	45.0	74.8	112.3	150.0
				Load Amps	93.7	125.0	187.5	312.0	468.0	625.0
				Fuse Size	125.0	175.0	250.0	450.0	700.0	1000.0
240**	272	1	D1	KVA	12.7	17.0	25.5	42.4	63.6	84.8
				Load Amps	46.8	62.5	93.7	156.0	234.0	312.0
				Fuse Size	70.0	90.0	150.0	225.0	350.0	450.0
BUCKING										
136**	120	1	A2	KVA	12.7	17.0	25.5	42.4	63.6	85.0
				Load Amps	106.2	141.7	212.5	353.6	530.4	708.3
				Fuse Size	125.0	175.0	250.0	400.0	600.0	800.0
152**	120	1	B2	KVA	7.1	9.5	14.3	23.7	35.6	47.4
				Load Amps	59.4	79.2	118.8	197.6	296.4	395.2
				Fuse Size	60.0	80.0	125.0	200.0	300.0	400.0
236	208	1	D2	KVA	11.1	14.8	22.1	36.8	55.2	73.6
				Load Amps	53.2	70.9	106.4	177.0	265.5	354.0
				Fuse Size	60.0	80.0	125.0	200.0	300.0	400.0
256**	240	1	C2	KVA	24.0	32.0	48.0	79.9	119.8	160.0
				Load Amps	99.9	133.3	200.0	332.8	499.2	666.7
				Fuse Size	125.0	175.0	250.0	400.0	600.0	800.0
272**	240	1	D2	KVA	12.8	17.0	25.5	42.4	63.6	84.9
				Load Amps	53.2	70.8	106.3	176.8	265.2	353.6
				Fuse Size	60.0	80.0	125.0	200.0	300.0	400.0

* For connection diagrams, refer to pages 208-211.

** Shaded items are 60 Hz only (All other ratings shown are 50/60 Hz).

Buck-Boost Transformers



Selection Tables: Single Phase

Table 3: Using Group 3 (240 x 480 V Primary, 24/48 V Secondary) Transformers



Input Voltage	Output Voltage	Quantity Req'd	Connecton Diagram*	Application Data	Catalog Number				
					HS22B150	HS22B250	HS22F500B	HS22F750B	HS22F1B
BOOSTING									
200	240	1	B1	KVA	0.75	1.25	2.50	3.74	4.99
				Load Amps	3.10	5.20	10.40	15.60	20.80
				Fuse Size	6.00	10.00	15.00	20.00	30.00
230**	277	1	B1	KVA	0.87	1.44	2.88	4.22	5.76
				Load Amps	3.10	5.20	10.40	15.60	20.80
				Fuse Size	10.00	15.00	20.00	25.00	35.00
346	380	1	D1	KVA	1.20	1.98	3.95	5.93	7.90
				Load Amps	3.10	5.20	10.40	15.60	20.80
				Fuse Size	6.00	10.00	15.00	20.00	30.00
362	380	1	C1	KVA	2.40	3.95	7.90	11.86	15.81
				Load Amps	6.30	10.40	20.80	31.20	41.60
				Fuse Size	10.00	15.00	30.00	40.00	60.00
378	416	1	D1	KVA	1.30	2.16	4.33	6.49	8.65
				Load Amps	3.10	5.20	10.40	15.60	20.80
				Fuse Size	6.00	10.00	15.00	25.00	30.00
436	480	1	D1	KVA	1.50	2.50	4.99	7.49	9.98
				Load Amps	3.10	5.20	10.40	15.60	20.80
				Fuse Size	6.00	10.00	15.00	25.00	30.00
458**	480	1	C1	KVA	3.00	4.99	9.98	14.98	19.97
				Load Amps	6.30	10.40	20.80	31.20	41.60
				Fuse Size	15.00	15.00	30.00	45.00	60.00
BUCKING									
277**	230	1	B2	KVA	0.86	1.44	2.88	4.33	5.76
				Load Amps	3.80	6.26	12.53	18.79	25.05
				Fuse Size	6.00	10.00	15.00	20.00	30.00
398	380	1	C2	KVA	2.50	4.14	8.28	12.40	16.60
				Load Amps	6.50	10.89	21.79	32.70	43.60
				Fuse Size	10.00	15.00	30.00	40.00	60.00
418**	380	1	D2	KVA	1.30	2.18	4.35	6.52	8.69
				Load Amps	3.40	5.72	11.40	17.20	22.90
				Fuse Size	6.00	10.00	15.00	20.00	30.00
504**	480	1	C2	KVA	3.10	5.24	10.50	15.70	21.00
				Load Amps	6.60	10.40	21.80	32.80	43.70
				Fuse Size	15.00	15.00	30.00	45.00	60.00
528**	480	1	D2	KVA	1.65	2.75	5.49	8.24	11.00
				Load Amps	3.40	5.72	11.44	17.16	22.88
				Fuse Size	6.00	10.00	15.00	20.00	30.00

* For connection diagrams, refer to pages 208-211.

** Shaded items are 60 Hz only (All other ratings shown are 50/60 Hz).

Buck-Boost Transformers

Selection Tables: Single Phase

Table 3: Using Group 3 (240 x 480 V Primary, 24/48 V Secondary) Transformers



Input Voltage	Output Voltage	Quantity Req'd	Connecton Diagram*	Application Data	Catalog Number					
					HS22F1.5A	HS22F2A	HS22F3A	HS22F5A	HS22F7.5A	S22H10A
BOOSTING										
200	240	1	B1	KVA	7.49	9.98	15.0	24.96	37.44	49.92
				Load Amps	31.2	41.6	62.5	104.0	156.0	208.0
				Fuse Size	50.0	70.0	90.0	150.0	225.0	350.0
230**	277	1	B1	KVA	8.64	11.52	17.31	28.81	43.21	57.62
				Load Amps	31.2	41.6	62.5	104.0	156.0	208.0
				Fuse Size	50.0	70.0	100.0	175.0	250.0	350.0
346	380	1	D1	KVA	11.86	15.81	23.75	39.52	59.28	79.04
				Load Amps	31.2	41.6	62.5	104.0	156.0	208.0
				Fuse Size	45.0	60.0	90.0	150.0	225.0	300.0
362	380	1	C1	KVA	23.75	31.65	47.5	79.04	118.56	158.08
				Load Amps	62.5	83.3	125	208	312.0	416.0
				Fuse Size	90.0	110.0	175.0	300.0	450.0	600.0
378	416	1	D1	KVA	12.98	17.31	26.0	43.26	64.9	86.53
				Load Amps	31.2	41.6	62.5	104.0	156.0	208.0
				Fuse Size	50.0	60.0	90.0	150.0	225.0	300.0
436	480	1	D1	KVA	14.98	19.97	30.0	49.92	74.88	99.84
				Load Amps	31.2	41.6	62.5	104.0	156.0	208.0
				Fuse Size	45.0	60.0	90.0	150.0	225.0	300.0
458**	480	1	C1	KVA	30.0	39.98	60.0	99.84	149.76	199.68
				Load Amps	62.5	83.3	125.0	208.0	312.0	416.0
				Fuse Size	90.0	110.0	175.0	300.0	450.0	600.0
BUCKING										
277**	230	1	B2	KVA	8.64	11.5	17.3	28.8	43.2	57.6
				Load Amps	37.6	50.1	75.3	125.3	187.9	250.5
				Fuse Size	40.0	60.0	80.0	150.0	200.0	300.0
398	380	1	C2	KVA	24.8	33.1	49.8	82.8	124.2	165.6
				Load Amps	65.4	87.1	130.9	217.9	326.8	435.7
				Fuse Size	80.0	110.0	175.0	300.0	400.0	600.0
418*	380	1	D2	KVA	13.0	17.4	26.1	43.5	65.2	86.9
				Load Amps	34.3	45.8	68.8	114.4	171.6	228.8
				Fuse Size	40.0	60.0	80.0	150.0	200.0	300.0
504**	480	1	C2	KVA	31.4	41.9	63.0	104.8	157.2	209.7
				Load Amps	65.5	87.4	131.3	218.4	327.6	436.8
				Fuse Size	90.0	110.0	175.0	300.0	450.0	600.0
528**	480	1	D2	KVA	16.5	22.0	33.0	54.9	82.4	109.8
				Load Amps	34.3	45.8	68.8	114.4	171.6	228.8
				Fuse Size	40.0	60.0	80.0	150.0	200.0	300.0

* For connection diagrams, refer to pages 208-211.

** Shaded items are 60 Hz only (All other ratings shown are 50/60 Hz).

Buck-Boost Transformers



Selection Tables: Three Phase

Table 4: Using Group 1 (120 x 240 V Primary, 12/24 V Secondary) Transformers



Input Voltage	Output Voltage	Quantity Req'd	Connecton Diagram*	Application Data	Catalog Number							
					HS19B50	HS19B100	HS19B150	HS19B250	HS19F500B	HS19F750B	HS19F1B	
BOOSTING												
188	208	2	F1	KVA	0.749	1.5	2.25	3.75	7.51	11.3	15.0	
				Load Amps	2.08	4.16	6.25	10.4	20.8	31.25	41.6	
				Fuse Size	6.0	10.0	15.0	15.0	30.0	45.0	60.0	
198	208	2	E1	KVA	1.5	3.0	4.5	7.51	15.0	22.5	30.0	
				Load Amps	4.16	8.32	12.5	20.8	41.6	62.5	83.3	
				Fuse Size	6.0	15.0	25.0	30.0	60.0	90.0	110.0	
208	229	2	F1	KVA	0.825	1.65	2.48	4.13	8.26	12.4	16.5	
				Load Amps	2.08	4.16	6.25	10.4	20.8	31.25	41.6	
				Fuse Size	6.0	10.0	15.0	15.0	30.0	45.0	60.0	
208	229	3	J1	KVA	1.65	3.3	4.96	8.26	16.5	24.8	33.1	
				Load Amps	4.16	8.32	12.5	20.8	41.6	62.5	83.3	
				Fuse Size	10.0	15.0	20.0	30.0	60.0	90.0	125.0	
228**	240	2	E1	KVA	1.73	3.46	5.2	8.68	17.3	26	34.6	
				Load Amps	4.16	8.32	12.5	20.8	41.6	62.5	83.3	
				Fuse Size	6.0	15.0	20.0	30.0	60.0	90.0	110.0	
416	436	3	L1	KVA	3.15	6.29	9.44	15.8	31.5	47.2	62.9	
				Load Amps	4.16	8.32	12.5	20.8	41.6	62.5	83.3	
				Fuse Size	6.0	15.0	20.0	30.0	60.0	90.0	110.0	
416	458	3	M1	KVA	1.65	3.31	4.96	8.27	16.5	24.8	33	
				Load Amps	2.08	4.16	6.25	10.4	20.8	31.25	41.6	
				Fuse Size	3.0	6.0	10.0	15.0	30.0	45.0	60.0	
BUCKING												
218	208	2	E2	KVA	1.57	3.14	4.73	7.85	15.7	23.6	31.4	
				Load Amps	4.36	8.72	13.1	21.8	43.6	65.5	87.2	
				Fuse Size	10.0	15.0	20.0	30.0	60.0	80.0	110.0	
229	208	2	F2	KVA	0.824	1.65	2.48	4.12	8.25	12.4	16.5	
				Load Amps	2.29	4.58	6.88	11.4	22.9	34.4	45.8	
				Fuse Size	6.0	10.0	15.0	15.0	30.0	40.0	60.0	
252**	240	2	E2	KVA	1.82	3.63	5.46	9.08	18.2	27.3	36.3	
				Load Amps	4.37	8.74	13.1	21.8	43.7	65.6	87.4	
				Fuse Size	6.00	10.00	15.00	30.00	60.00	80.00	110.00	
264**	240	2	F2	KVA	0.951	1.9	2.86	4.76	9.51	14.3	19	
				Load Amps	2.29	4.58	6.88	11.44	22.9	34.4	45.8	
				Fuse Size	6.0	6.0	10.0	15.0	30.0	40.0	60.0	
418	378	3	M2	KVA	1.5	3.0	4.5	7.49	15.0	22.5	30.0	
				Load Amps	2.29	4.58	6.88	11.44	22.9	34.4	45.8	
				Fuse Size	6.0	6.0	10.0	15.0	30.0	40.0	60.0	

* For connection diagrams, refer to pages 208-211.

** Shaded items are 60 Hz only (All other ratings shown are 50/60 Hz).

Buck-Boost Transformers

Selection Tables: Three Phase

Table 4: Using Group 1 (120 x 240 V Primary, 12/24 V Secondary) Transformers



Input Voltage	Output Voltage	Quantity Req'd	Connecton Diagram*	Application Data	Catalog Number					
					HS19F1.5A	HS19F2A	HS19F3A	HS19F5A	HS19F7.5A	S19H10A
BOOSTING										
188	208	2	F1	KVA	22.5	30.0	45.0	75.1	112.5	150.1
				Load Amps	62.5	83.3	125.0	208.3	312.5	416.6
				Fuse Size	90.0	125.0	175.0	300.0	450.0	600.0
198	208	2	E1	KVA	45.0	60.0	90.1	150.1	225.2	300.2
				Load Amps	125.0	166.6	250.0	416.6	625.0	833.3
				Fuse Size	175.0	225.0	350.0	600.0	1000.0	1200.0
208	229	2	F1	KVA	24.8	33.1	49.6	82.6	123.9	165.3
				Load Amps	62.5	83.3	125.0	208.3	312.5	416.6
				Fuse Size	90.0	125.0	175.0	300.0	450.0	600.0
208	229	3	J1	KVA	49.6	66.1	99.2	165.3	247.9	330.5
				Load Amps	125.0	166.6	250.0	416.6	625.0	833.3
				Fuse Size	175.0	250.0	350.0	600.0	1000.0	1200.0
228**	240	2	E1	KVA	52.0	69.3	103.9	173.2	259.8	346.4
				Load Amps	125.0	166.6	250.0	416.6	625.0	833.3
				Fuse Size	175.0	250.0	350.0	600.0	1000.0	1200.0
416	436	3	L1	KVA	94.4	125.8	188.79	314.6	472.0	629.3
				Load Amps	125.0	166.6	250.0	416.6	625.0	833.3
				Fuse Size	175.0	250.0	350.0	600.0	1000.0	1200.0
416	458	3	M1	KVA	49.6	66.1	99.2	165.3	247.9	330.5
				Load Amps	62.5	83.3	125.0	208.3	312.5	416.6
				Fuse Size	90.0	125.0	175.0	300.0	450.0	600.0
BUCKING										
218	208	2	E2	KVA	47.2	62.7	94.4	157.3	236.0	314.5
				Load Amps	131.0	174.0	262.0	436.6	655.0	873.0
				Fuse Size	175.0	225.0	350.0	600.0	800.0	1200.0
229	208	2	F2	KVA	24.8	33.0	49.6	82.5	123.9	165.2
				Load Amps	68.8	91.6	137.6	229.0	344.1	458.7
				Fuse Size	80.0	110.0	175.0	300.0	400.0	600.0
252**	240	2	E2	KVA	54.6	72.5	109.1	181.8	272.8	363.6
				Load Amps	131.3	174.3	262.5	437.4	656.3	874.7
				Fuse Size	175.0	225.0	350.0	600.0	800.0	1200.0
264**	240	2	F2	KVA	28.6	38.0	57.2	95.1	142.9	190.5
				Load Amps	68.8	91.5	137.5	228.8	343.8	458.3
				Fuse Size	80.0	110.0	175.0	300.0	400.0	600.0
418	378	3	M2	KVA	45.0	59.9	90.1	149.9	225.2	300.2
				Load Amps	68.8	91.6	137.6	228.9	343.9	458.5
				Fuse Size	80.0	110.0	175.0	300.0	400.0	600.0

* For connection diagrams, refer to pages 208-211.

** Shaded items are 60 Hz only (All other ratings shown are 50/60 Hz).

Buck-Boost Transformers



Selection Tables: Three Phase

Table 5: Using Group 2 (120 x 240 V Primary, 16/32 V Secondary) Transformers



Input Voltage	Output Voltage	Quantity Req'd	Connecton Diagram*	Application Data	Catalog Number				
					HS20B150	HS20B250	HS20F500B	HS20F750B	HS20F1B
BOOSTING									
184	208	2	F1	KVA	1.69	2.81	5.63	8.44	11.3
				Load Amps	4.69	7.8	15.6	23.4	31.2
				Fuse Size	10.0	15.0	25.0	35.0	45.0
195	208	2	E1	KVA	3.38	5.63	11.3	16.9	22.5
				Load Amps	9.38	15.6	31.2	46.9	62.5
				Fuse Size	15.0	25.0	45.0	70.0	90.0
208	236	2	F1	KVA	1.92	3.19	6.39	9.58	12.8
				Load Amps	4.69	7.8	15.6	23.4	31.2
				Fuse Size	10.0	15.0	25.0	35.0	45.0
208	236	3	J1	KVA	3.83	6.38	12.8	19.2	25.6
				Load Amps	9.38	15.6	31.2	46.9	62.5
				Fuse Size	15.0	25.0	45.0	70.0	90.0
225	240	2	E1	KVA	3.9	6.5	13	19.5	26
				Load Amps	9.38	15.6	31.2	46.9	62.5
				Fuse Size	15.0	25.0	45.0	70.0	90.0
416	443	3	L1	KVA	7.2	12	24	36	48
				Load Amps	9.38	15.6	31.2	46.9	62.5
				Fuse Size	15.0	25.0	45.0	70.0	90.0
416	471	3	M1	KVA	3.83	6.37	12.8	19.1	25.5
				Load Amps	4.69	7.8	15.6	23.4	31.2
				Fuse Size	10.0	15.0	25.0	35.0	45.0
BUCKING									
222	208	2	E2	KVA	3.61	6	12	18	24
				Load Amps	10	16.6	33.3	50.1	66.7
				Fuse Size	15.0	20.0	40.0	60.0	80.0
236	208	2	F2	KVA	1.92	3.19	6.38	9.56	12.8
				Load Amps	5.32	8.85	17.7	26.5	35.4
				Fuse Size	10.0	10.0	20.0	30.0	40.0
256**	240	2	E2	KVA	4.16	6.92	13.8	20.8	27.7
				Load Amps	10.1	16.6	33.3	50	66.7
				Fuse Size	15.0	20.0	40.0	60.0	80.0
272**	240	2	F2	KVA	2.21	3.67	7.35	11	14.7
				Load Amps	5.32	8.84	17.7	26.5	35.4
				Fuse Size	10.0	15.0	20.0	30.0	40.0
432	380	3	M2	KVA	3.51	5.84	11.7	17.5	23.3
				Load Amps	5.33	8.87	17.7	26.6	35.5
				Fuse Size	10.0	10.0	20.0	30.0	40.0

* For connection diagrams, refer to pages 208-211.

** Shaded items are 60 Hz only (All other ratings shown are 50/60 Hz).

Buck-Boost Transformers

Selection Tables: Three Phase

Table 5: Using Group 2 (120 x 240 V Primary, 16/32 V Secondary) Transformers



Input Voltage	Output Voltage	Quantity Req'd	Connecton Diagram*	Application Data	Catalog Number					
					HS20F1.5A	HS20F2A	HS20F3A	HS20F5A	HS20F7.5A	S20H10A
BOOSTING										
184	208	2	F1	KVA	16.9	22.5	33.8	56.3	84.4	112.6
				Load Amps	46.9	62.5	93.8	156.0	234.0	312.0
				Fuse Size	60.0	90.0	150.0	225.0	350.0	450.0
195	208	2	E1	KVA	33.8	45.0	67.6	112.6	168.9	225.2
				Load Amps	93.7	125.0	187.5	312.0	468.0	625.0
				Fuse Size	125.0	175.0	250.0	450.0	700.0	1000.0
208	236	2	F1	KVA	19.2	25.6	38.2	63.9	95.8	127.7
				Load Amps	46.9	62.5	93.7	156.0	234.0	312.0
				Fuse Size	70.0	90.0	150.0	225.0	350.0	450.0
208	236	3	J1	KVA	38.2	51.1	76.6	127.7	191.6	255.5
				Load Amps	93.7	125.0	187.5	312.0	468.0	625.0
				Fuse Size	150.0	200.0	300.0	450.0	700.0	1000.0
225	240	2	E1	KVA	71.9	52.0	77.9	129.9	194.0	259.8
				Load Amps	93.7	125.0	187.5	312.0	468.0	625.0
				Fuse Size	125.0	175.0	250.0	450.0	700.0	1000.0
416	443	3	L1	KVA	71.9	95.9	143.9	239.8	359.7	479.6
				Load Amps	93.7	125	187.5	312.0	468.0	625.0
				Fuse Size	125.0	175.0	250.0	450.0	700.0	1000.0
416	471	3	M1	KVA	38.2	51.0	76.5	127.5	191.2	254.9
				Load Amps	46.9	62.5	93.8	156.0	234.0	312.0
				Fuse Size	70.0	90.0	150.0	225.0	350.0	450.0
BUCKING										
222	208	2	E2	KVA	36.0	48.1	72.1	120.0	179.9	240.3
				Load Amps	100.0	133.4	200.1	333.0	499.5	667.1
				Fuse Size	125.0	175.0	250.0	400.0	600.0	800.0
236	208	2	F2	KVA	19.2	25.5	38.8	63.8	95.6	127.5
				Load Amps	53.2	70.9	106.4	177.0	265.5	354.0
				Fuse Size	60.0	80.0	125.0	200.0	300.0	400.0
256**	240	2	E2	KVA	41.5	55.4	83.1	138.3	207.5	277.1
				Load Amps	99.9	133.3	200.0	332.8	499.2	666.7
				Fuse Size	125.0	175.0	250.0	400.0	600.0	800.0
272**	240	2	F2	KVA	22.1	29.4	44.2	73.5	110.2	147.0
				Load Amps	53.2	70.8	106.3	176.8	265.2	353.6
				Fuse Size	60.0	80.0	125.0	200.0	300.0	400.0
432	380	3	M2	KVA	35.1	46.8	70.2	116.7	175.1	233.4
				Load Amps	53.3	71.1	106.6	177.3	266.0	354.7
				Fuse Size	60.0	80.0	125.0	200.0	300.0	400.0

* For connection diagrams, refer to pages 208-211.

** Shaded items are 60 Hz only (All other ratings shown are 50/60 Hz).

Buck-Boost Transformers



Selection Tables: Three Phase

Table 6: Using Group 3 (240 x 480 V Primary, 24/48 V Secondary) Transformers



Listed



Certified

Input Voltage	Output Voltage	Quantity Req'd	Connecton Diagram*	Application Data	Catalog Number				
					HS22B150	HS22B250	HS22F500B	HS22F750B	HS22F1B
BOOSTING									
173	208	2	G1	KVA	1.12	1.88	3.75	5.63	7.5
				Load Amps	3.12	5.2	10.4	15.6	20.8
				Fuse Size	6.0	10.0	20.0	25.0	35.0
200	240	2	G1	KVA	1.3	2.16	4.33	6.5	8.66
				Load Amps	3.12	5.2	10.4	15.6	20.8
				Fuse Size	6.0	10.0	20.0	25.0	35.0
362	380	2	E1	KVA	3.91	6.52	13	19.6	26.1
				Load Amps	6.24	10.4	20.8	31.2	41.6
				Fuse Size	10.0	15.0	30.0	45.0	60.0
346	416	3	K1	KVA	2.25	3.75	7.5	11.3	15
				Load Amps	3.12	5.2	10.4	15.6	20.8
				Fuse Size	6.0	10.0	20.0	25.0	35.0
400	480	3	K1	KVA	2.59	4.33	8.65	13	17.3
				Load Amps	3.12	5.2	10.4	15.6	20.8
				Fuse Size	10.0	15.0	20.0	25.0	35.0
436	480	2	F1	KVA	2.59	4.33	8.65	13	17.3
				Load Amps	3.12	5.2	10.4	15.6	20.8
				Fuse Size	6.0	10.0	15.0	25.0	30.0
468	492	2	E1	KVA	5.2	8.66	17.3	26	34.6
				Load Amps	6.24	10.4	20.8	31.2	41.6
				Fuse Size	15.0	15.0	30.0	45.0	60.0
BUCKING									
250	208	2	G2	KVA	1.35	2.25	4.5	6.75	9.01
				Load Amps	3.75	6.25	12.5	18.7	25
				Fuse Size	6.0	10.0	15.0	20.0	30.0
457	380	3	K2	KVA	2.47	4.12	8.23	12.3	16.5
				Load Amps	3.75	6.25	12.5	18.8	25
				Fuse Size	6.0	10.0	15.0	20.0	30.0
499	416	3	K2	KVA	2.7	4.49	8.99	13.5	18
				Load Amps	3.74	6.24	12.5	18.7	24.9
				Fuse Size	6.0	10.0	15.0	20.0	30.0
504**	480	2	E2	KVA	5.45	9.08	18.2	27.2	36.3
				Load Amps	6.56	10.9	21.8	32.8	43.7
				Fuse Size	15.0	15.0	30.0	40.0	60.0
528**	480	2	F2	KVA	2.85	4.76	9.51	14.3	19
				Load Amps	3.43	5.72	11.4	17.2	22.9
				Fuse Size	6.0	10.0	15.0	20.0	30.0

* For connection diagrams, refer to pages 208-211.

** Shaded items are 60 Hz only (All other ratings shown are 50/60 Hz).

Buck-Boost Transformers

Selection Tables: Three Phase

Table 6: Using Group 3 (240 x 480 V Primary, 24/48 V Secondary) Transformers



Input Voltage	Output Voltage	Quantity Req'd	Connecton Diagram*	Application Data	Catalog Number					
					HS22F1.5A	HS22F2A	HS22F3A	HS22F5A	HS22F7.5A	S22H10A
BOOSTING										
173	208	2	G1	KVA	11.3	15	22.5	37.5	56.3	75.1
				Load Amps	31.2	41.6	62.5	104	156	208
				Fuse Size	50	70	100	175	250	350
200	240	2	G1	KVA	13	17.3	26	43.3	65	86.6
				Load Amps	31.2	41.6	62.5	104.0	156.0	208.0
				Fuse Size	50.0	70.0	100.0	175.0	250.0	350.0
362	380	2	E1	KVA	39.1	52.2	78.4	130.4	195.6	260.8
				Load Amps	62.4	83.2	125	208.0	312.0	416.0
				Fuse Size	90.0	125.0	175.0	300.0	450.0	600.0
346	416	3	K1	KVA	22.5	30.0	45.0	75.1	112.6	150.1
				Load Amps	31.2	41.6	62.5	104.0	156.0	208.0
				Fuse Size	50.0	70.0	100.0	175.0	250.0	350.0
400	480	3	K1	KVA	26.0	34.6	52.0	86.6	129.9	173.6
				Load Amps	31.2	41.6	62.5	104.0	156.0	208.0
				Fuse Size	50.0	70.0	100.0	175.0	250.0	350.0
436	480	2	F1	KVA	26.0	34.6	52.0	86.6	129.9	173.2
				Load Amps	31.2	41.6	62.5	104.0	156.0	208.0
				Fuse Size	45.0	60.0	90.0	150.0	225.0	300.0
468	492	2	E1	KVA	52.0	69.3	103.9	173.2	259.8	346.4
				Load Amps	62.4	83.2	125.0	208.0	312.0	416.0
				Fuse Size	90.0	110.0	175.0	300.0	450.0	600.0
BUCKING										
250	208	2	G2	KVA	13.5	18.0	27.1	45.0	67.5	90.1
				Load Amps	37.5	50.0	75.1	125.0	187.5	250.0
				Fuse Size	40.0	60.0	80.0	150.0	200.0	300.0
457	380	3	K2	KVA	24.7	32.9	49.5	82.3	123.5	164.6
				Load Amps	37.5	50.0	75.2	125.1	187.6	250.1
				Fuse Size	40.0	60.0	80.0	150.0	200.0	300.0
499	416	3	K2	KVA	27.0	36.0	54.0	89.9	134.8	179.8
				Load Amps	37.4	49.9	75.0	124.7	187.1	249.5
				Fuse Size	40.0	60.0	80.0	150.0	200.0	300.0
504**	480	2	E2	KVA	54.5	72.6	109.1	181.6	272.4	363.1
				Load Amps	65.5	87.4	131.3	218.4	327.6	436.8
				Fuse Size	80.0	110.0	175.0	300.0	400.0	600.0
528**	480	2	F2	KVA	28.5	38.0	57.2	95.1	142.7	190.2
				Load Amps	34.3	45.8	68.8	114.4	171.6	228.8
				Fuse Size	40.0	60.0	80.0	150.0	200.0	300.0

* For connection diagrams, refer to pages 208-211.

** Shaded items are 60 Hz only (All other ratings shown are 50/60 Hz).

Electrical Connections for Buck-Boost Applications

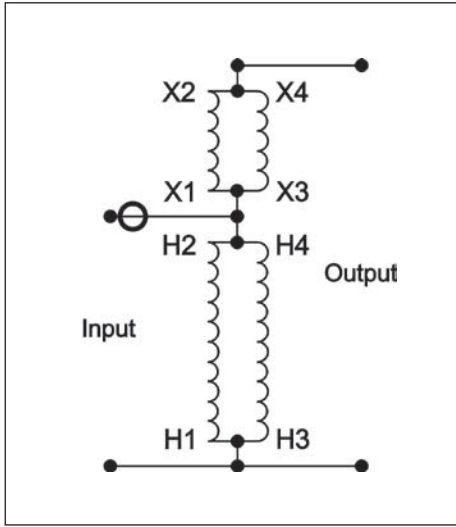


Diagram A1 – Boosting

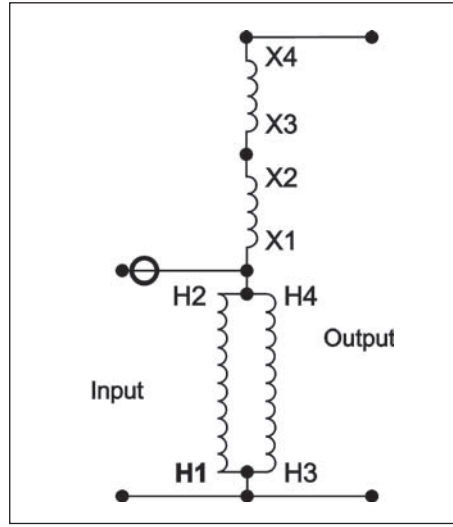


Diagram B1 – Boosting

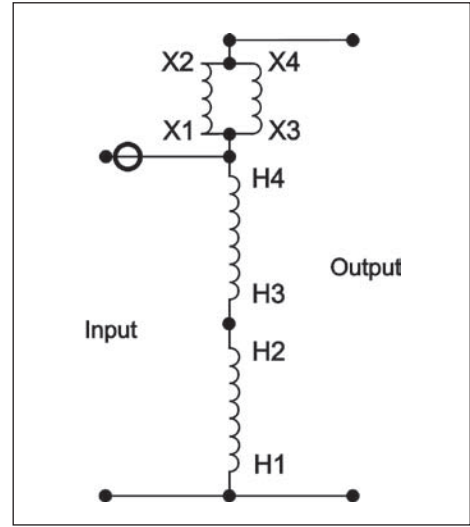


Diagram C1 – Boosting

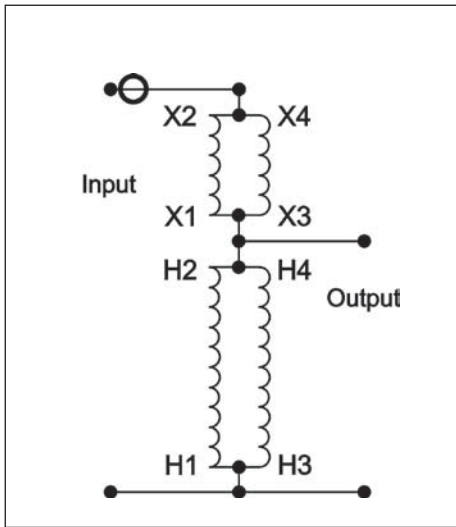


Diagram A2 – Bucking

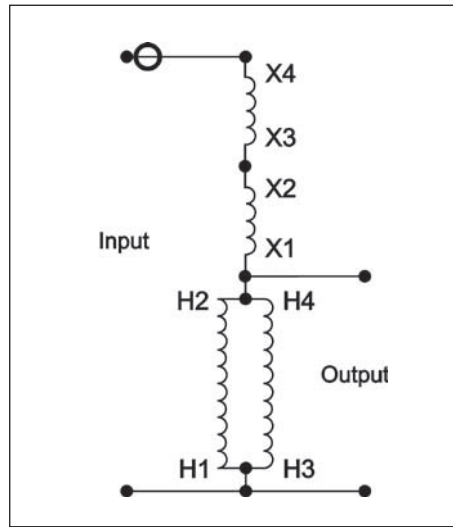


Diagram B2 – Bucking

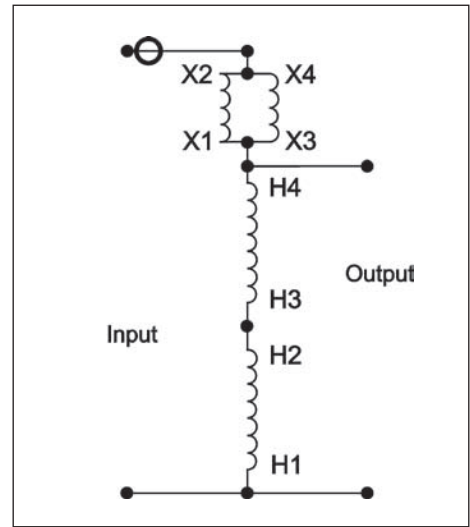


Diagram C2 – Bucking

The **⊖** symbol shown on these connection diagrams indicates where fuses or breakers should be field installed.

Application Note: On all auto-ye connections, the source neutral must be present and connected to the transformer bank. If source neutral is not present, do not use an auto-ye connection.

Buck-Boost Transformers

Electrical Connections for Buck-Boost Applications

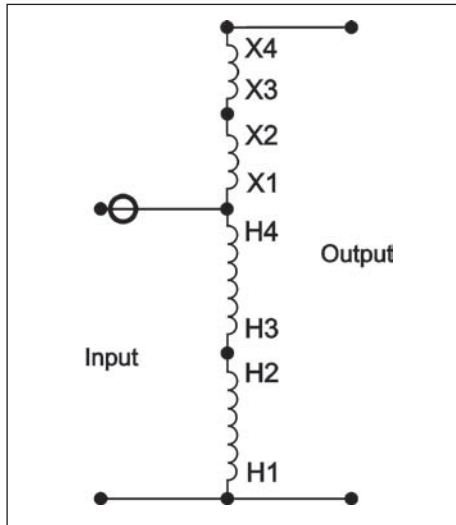


Diagram D1 – Boosting

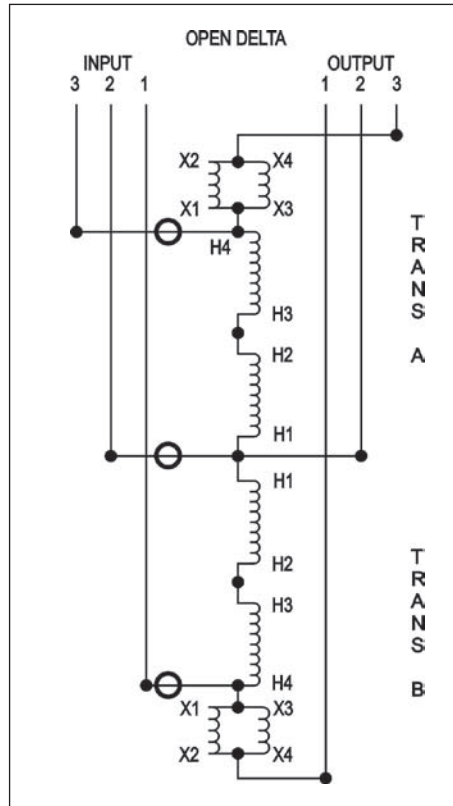


Diagram E1 – Boosting

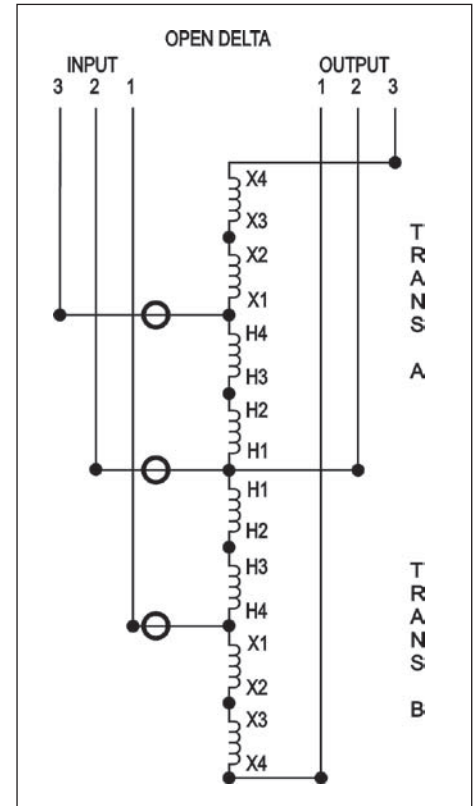


Diagram F1 – Boosting

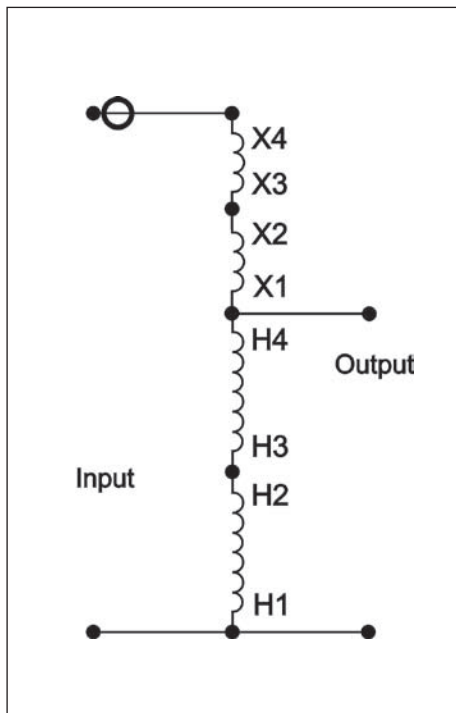


Diagram D2 – Bucking

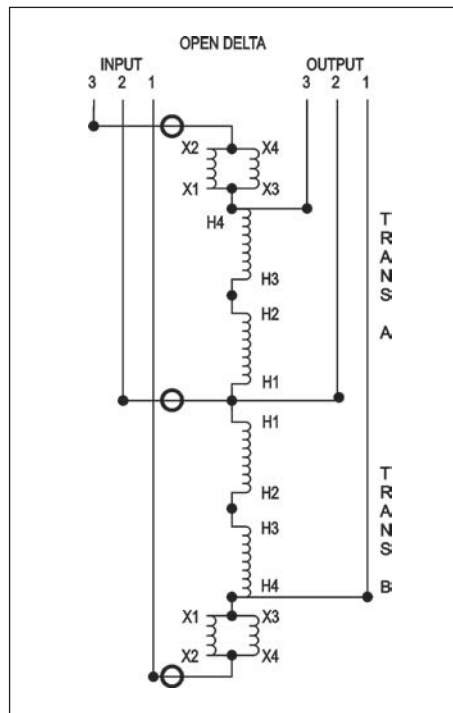


Diagram E2 – Bucking

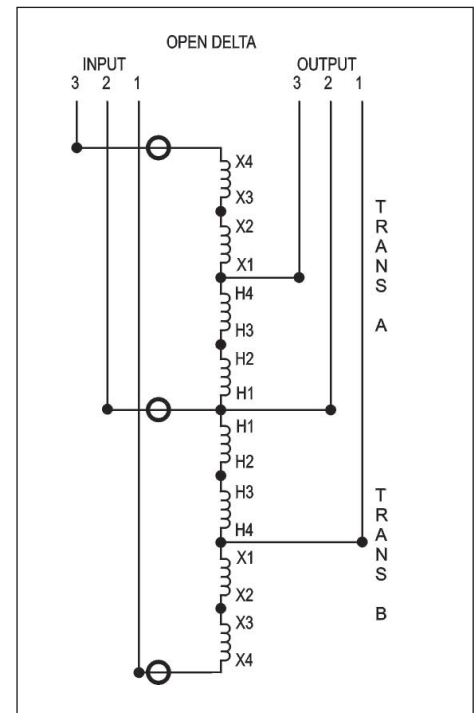


Diagram F2 – Bucking

Buck-Boost Transformers

Electrical Connections for Buck-Boost Applications

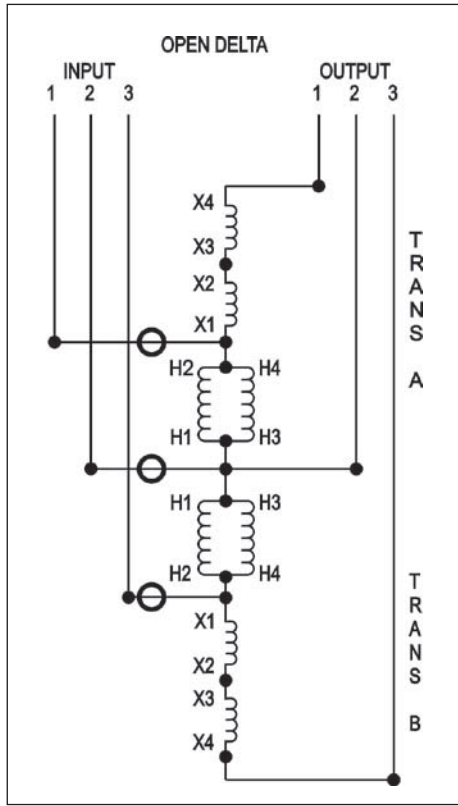


Diagram G1 – Boosting

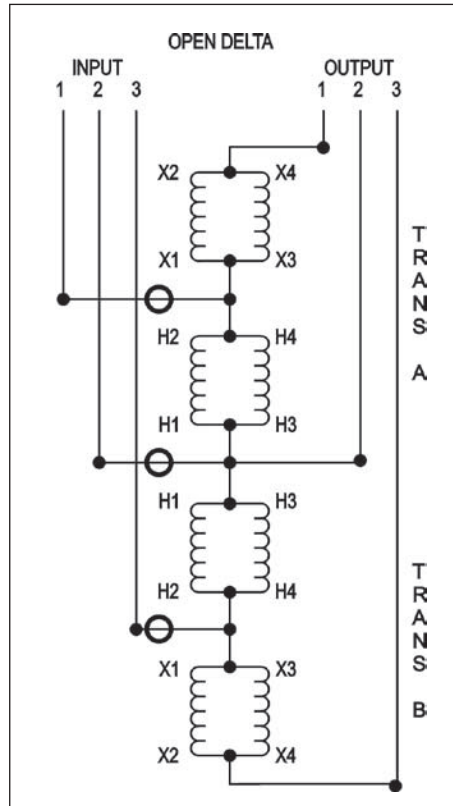


Diagram H1 – Boosting

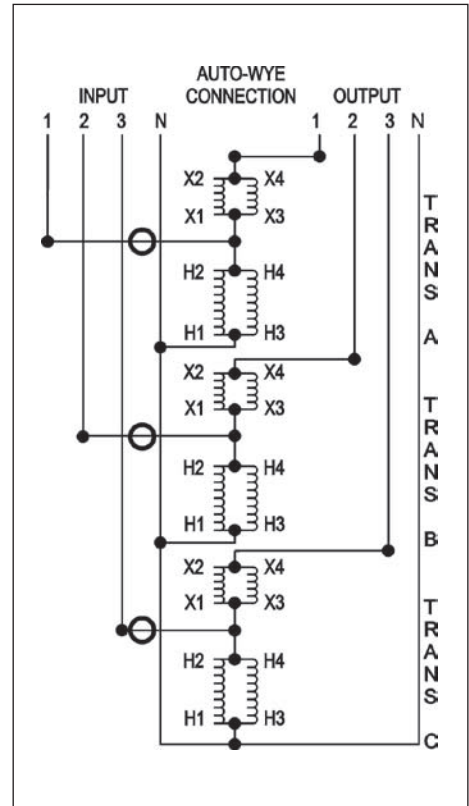


Diagram J1 – Boosting

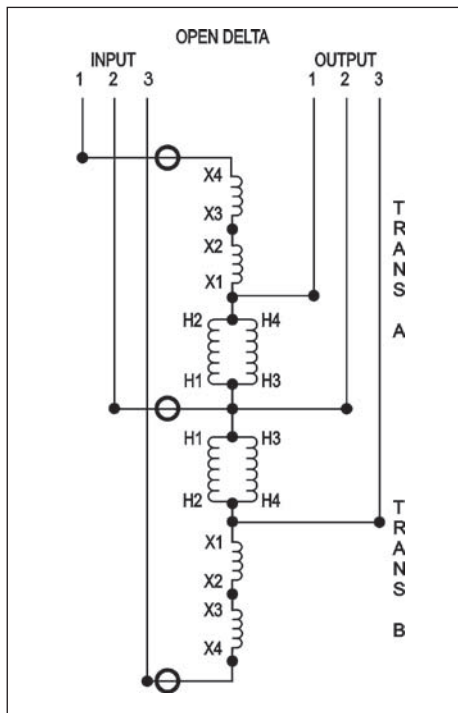


Diagram G2 – Bucking

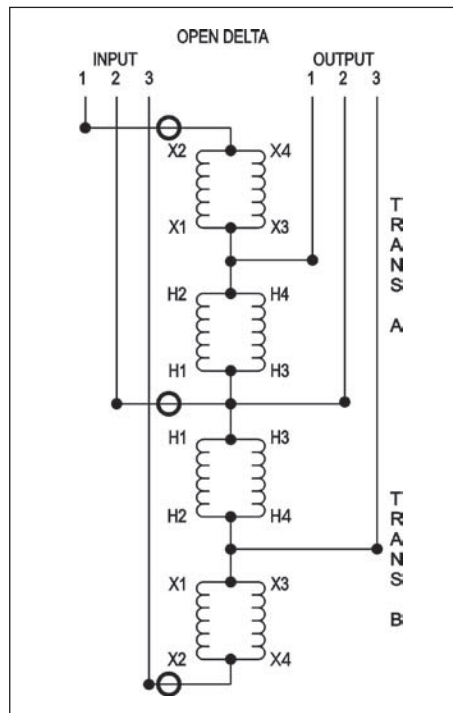


Diagram H2 – Bucking

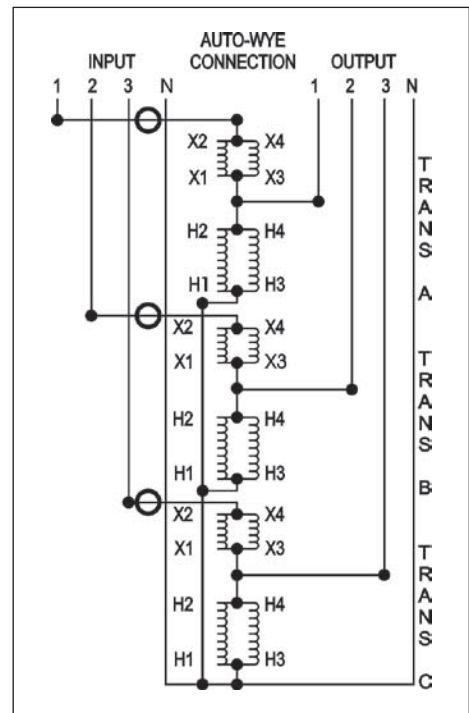


Diagram J2 – Bucking

Buck-Boost Transformers

Electrical Connections for Buck-Boost Applications

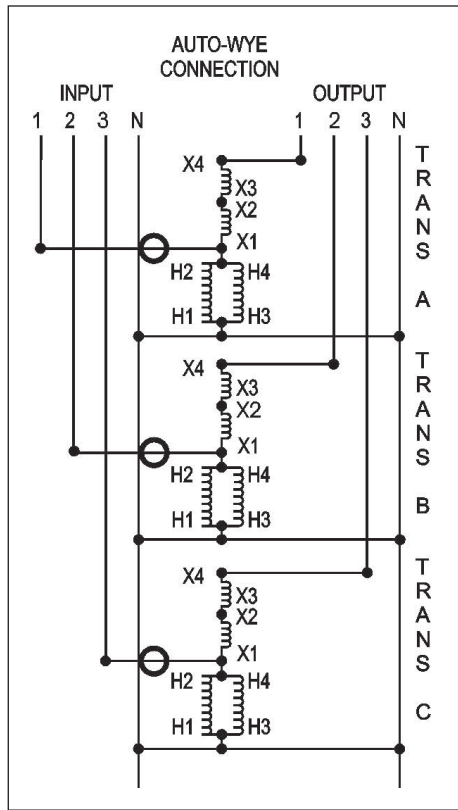


Diagram K1 – Boosting

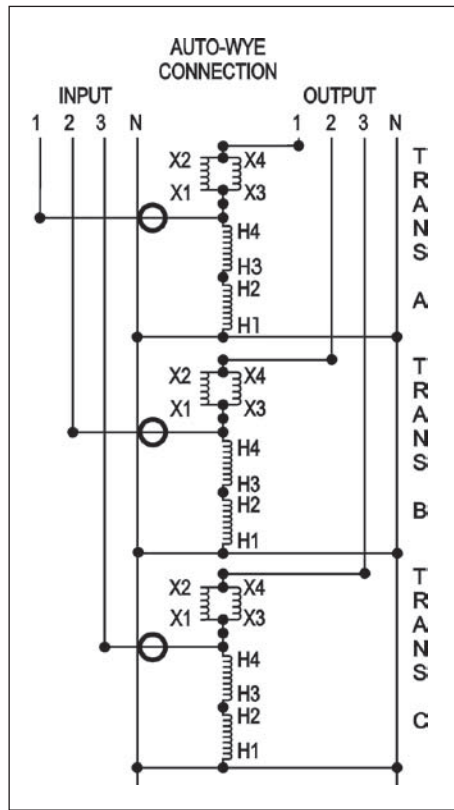


Diagram L1 – Boosting

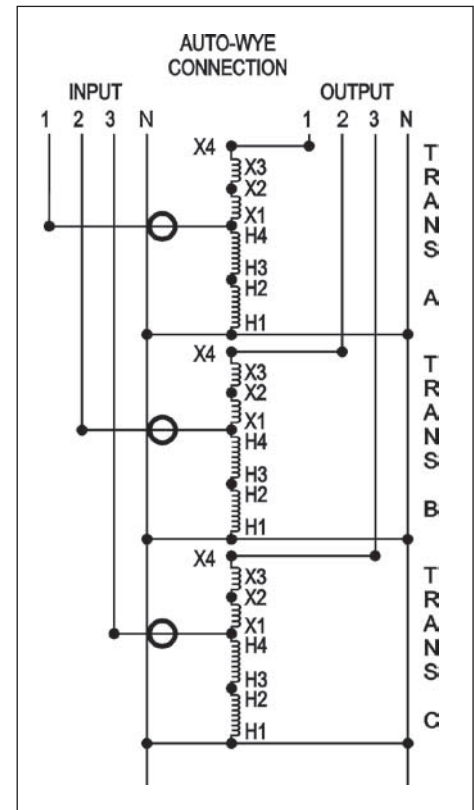


Diagram M1 – Boosting

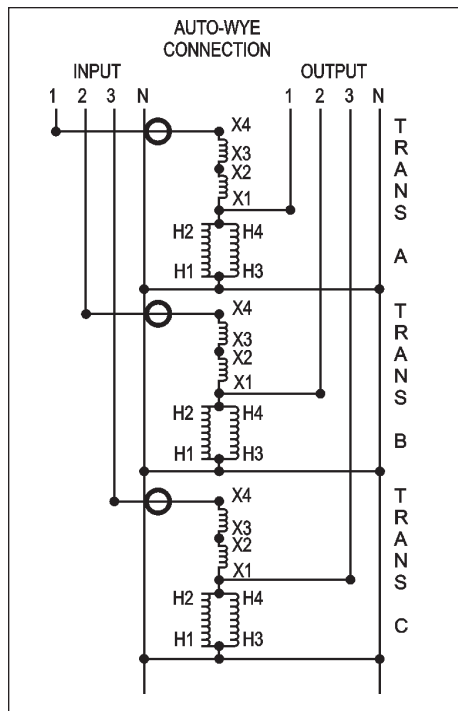


Diagram K2 – Bucking

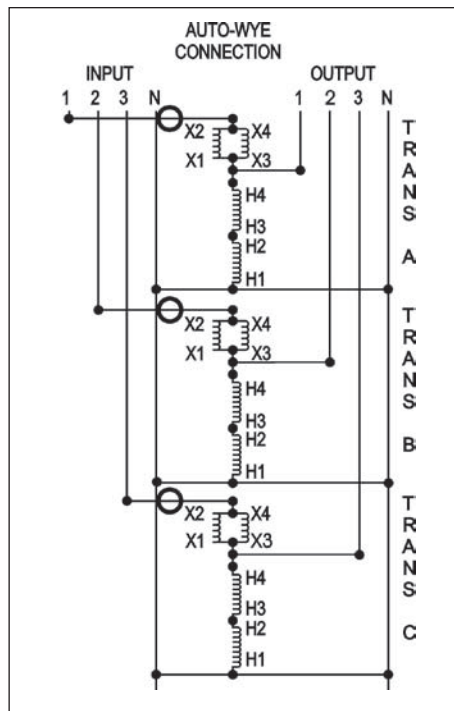


Diagram L2 – Bucking

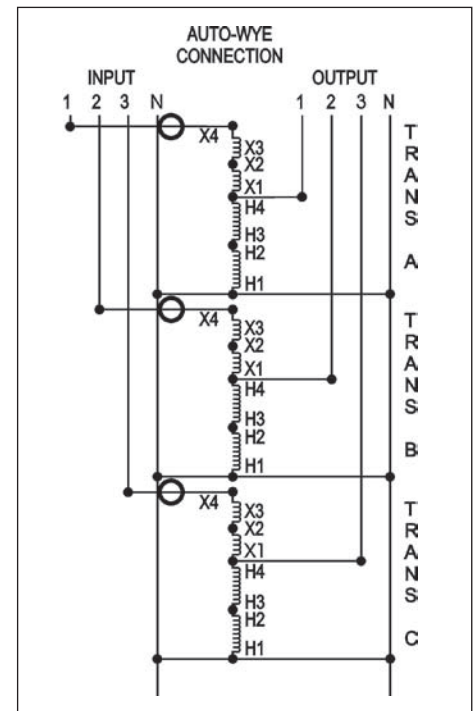


Diagram M2 – Bucking

Visit our website at www.solaheviduty.com or contact **Technical Services** at (800) 377-4384 with any questions.