

**Table 1: 120 x 240 V Primary, 12/24 V Secondary (Single Phase)**

Input Voltage	Output Voltage	Quantity Req'd	Connecton Diagram	Application Data	Application Data											
					HS19B50	HS19B100	HS19B150	HS19B250	HS19F500B	HS19F750B	HS19F1B	HS19F1.5A	HS19F2A	HS19F3A	HS19F5A	HS19F7.5A
<b>BOOSTING</b>																
100	120	1	B1	KVA	0.25	0.5	0.75	1.25	2.5	3.75	5	7.5	10.0	15.0	25.0	37.5
				Load Amps	2.08	4.16	6.25	10.4	20.8	31.2	41.6	62.5	83.3	125.0	208.0	312.0
				Fuse Size	6	10	15	25	35	50	70	100.0	125.0	200.0	350.0	500.0
109	120	1	A1	KVA	0.5	1	1.5	2.5	5	7.5	10	15.0	20.0	30.0	49.9	75.0
				Load Amps	4.16	8.33	12.5	20.8	41.6	62.5	83.3	125.0	167.0	250.0	416.0	625.0
				Fuse Size	10	15	20	30	60	90	125	175.0	250.0	350.0	600.0	1000.0
189	208	1	D1	KVA	0.43	0.87	1.3	2.16	4.33	6.49	8.65	13.0	17.3	26.0	43.3	64.9
				Load Amps	2.08	4.16	6.25	10.4	20.8	31.2	41.6	62.5	83.3	125.0	208.0	312.0
				Fuse Size	6	10	15	15	30	45	60	90.0	125.0	175.0	300.0	450.0
197	208	1	C1	KVA	0.87	1.73	2.6	4.33	8.65	13	17.3	26.0	34.7	52.0	86.5	130.0
				Load Amps	4.16	8.33	12.5	20.8	41.6	62.5	83.3	125.0	167.0	250.0	416.0	625.0
				Fuse Size	6	15	20	30	60	90	110	175.0	225.0	350.0	600.0	1000.0
208	229	1	D1	KVA	0.48	0.95	1.43	2.38	4.77	7.15	9.54	14.3	19.1	28.6	47.6	71.4
				Load Amps	2.08	4.16	6.25	10.4	20.8	31.2	41.6	62.5	83.3	125.0	208.0	312.0
				Fuse Size	6	10	15	15	30	45	60	90.0	125.0	175.0	300.0	450.0
218**	240	1	D1	KVA	0.5	1	1.5	2.5	5	7.5	10	15.0	20.0	30.0	49.9	74.9
				Load Amps	2.08	4.16	6.25	10.4	20.8	31.2	41.6	62.5	83.3	125.0	208.0	312.0
				Fuse Size	6	10	15	15	30	45	60	90.0	125.0	175.0	300.0	450.0
229	240	1	C1	KVA	1	2	3	5	10	15	20	30.0	40.1	60.0	99.8	150.0
				Load Amps	4.16	8.33	12.5	20.8	41.6	62.5	83.3	125.0	167.0	250.0	416.0	625.0
				Fuse Size	6	15	20	30	60	90	110	175.0	225.0	350.0	600.0	1000.0
<b>BUCKING</b>																
132**	120	1	A2	KVA	0.55	1.1	1.65	2.75	5.5	8.25	11	16.5	22.0	33.0	54.9	82.5
				Load Amps	4.58	9.16	13.75	22.9	45.8	68.7	91.6	137.5	183.3	275.0	457.6	687.5
				Fuse Size	10	15	20	30	60	80	110	175.0	225.0	350.0	600.0	800.0
144**	120	1	B2	KVA	0.3z	0.6	0.9	1.5	3	4.5	6	9.0	12.0	18.0	30.0	44.9
				Load Amps	2.5	5	7.5	12.5	25	37.5	50	75.0	100.0	150.0	249.6	374.4
				Fuse Size	6	10	15	15	30	40	60	80.0	110.0	175.0	300.0	400.0
229	208	1	D2	KVA	0.48	0.95	1.43	2.38	4.77	7.15	9.54	14.3	19.1	28.6	47.6	71.4
				Load Amps	2.29	4.58	6.88	11.4	22.9	34.4	45.8	68.8	91.6	137.5	228.8	343.2
				Fuse Size	6	10	15	15	30	40	60	80.0	110.0	175.0	300.0	400.0
252**	240	1	C2	KVA	1.04	2.1	3.15	5.25	10.5	15.7	21	31.5	42.0	63.0	104.8	157.5
				Load Amps	4.34	8.75	13.13	21.8	43.7	65.6	87.5	131.3	174.9	262.5	436.8	656.3
				Fuse Size	10	15	15	30	60	80	110	175.0	225.0	350.0	600.0	800.0
264**	240	1	D2	KVA	0.55	1.1	1.65	2.75	5.5	8.25	11	16.5	22.0	33.0	54.9	82.5
				Load Amps	2.29	4.58	6.88	11.4	22.9	34.3	45.8	68.8	91.6	137.5	228.8	343.2
				Fuse Size	6	10	15	15	30	40	60.0	80.0	110.0	175.0	300.0	400.0

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

**Table 2: 120 x 240 V Primary, 16/32 V Secondary (Single Phase)**

Input Voltage	Output Voltage	Quantity Req'd	Connecton Diagram	Application Data	Application Data											
					HS20B150	HS20B250	HS20F500B	HS20F750B	HS20F1B	HS20F1.5A	HS20F2A	HS20F3A	HS20F5A	HS20F7.5A		
<b>BOOSTING</b>																
95	120	1	B1	KVA	0.6	0.9	1.9	2.8	3.8	5.6	7.5	11.2	18.7	28.0		
				Load Amps	4.7	7.8	15.6	23.4	31.2	46.8	62.5	93.7	156.0	234.0		
				Fuse Size	10.0	15.0	25.0	40.0	50.0	80.0	100.0	150.0	250.0	400.0		
106	120	1	A1	KVA	1.1	1.9	3.7	5.6	7.5	11.2	15.0	22.5	37.4	56.2		
				Load Amps	9.4	15.6	31.2	46.8	62.5	93.7	125.0	187.5	312.0	468.0		
				Fuse Size	15.0	25.0	45.0	70.0	90.0	150.0	200.0	300.0	450.0	700.0		
183	208	1	D1	KVA	1.0	1.6	3.2	4.9	6.5	9.7	13.0	19.5	32.4	48.6		
				Load Amps	4.7	7.8	15.6	23.4	31.2	46.8	62.5	93.7	156.0	234.0		
				Fuse Size	10.0	15.0	25.0	35.0	45.0	70.0	90.0	150.0	225.0	350.0		
195	208	1	C1	KVA	2.0	3.2	6.5	9.7	13.0	19.5	26.0	39.0	64.9	97.3		
				Load Amps	9.4	15.6	31.2	46.8	62.5	93.7	125.0	187.5	312.0	468.0		
				Fuse Size	15.0	25.0	45.0	70.0	90.0	125.0	175.0	250.0	450.0	700.0		
208	236	1	D1	KVA	1.1	1.8	3.7	5.5	7.4	11.0	14.7	22.0	36.8	55.2		
				Load Amps	4.7	7.8	15.6	23.4	31.2	46.8	62.5	93.7	156.0	234.0		
				Fuse Size	10.0	15.0	25.0	40.0	50.0	70.0	90.0	150.0	225.0	350.0		
225	240	1	C1	KVA	2.3	3.7	7.5	11.2	15.0	22.5	30.0	45.0	74.8	112.3		
				Load Amps	9.4	15.6	31.2	46.8	62.5	93.7	125.0	187.5	312.0	468.0		
				Fuse Size	15.0	25.0	45.0	70.0	90.0	125.0	175.0	250.0	450.0	700.0		
240**	272	1	D1	KVA	1.3	2.1	4.2	6.4	8.5	12.7	17.0	25.5	42.4	63.6		
				Load Amps	4.7	7.8	15.6	23.4	31.2	46.8	62.5	93.7	156.0	234.0		
				Fuse Size	10.0	15.0	25.0	35.0	45.0	70.0	90.0	150.0	225.0	350.0		
<b>BUCKING</b>																
136**	120	1	A2	KVA	1.3	2.1	4.2	6.4	8.5	12.7	17.0	25.5	42.4	63.6		
				Load Amps	10.6	17.7	35.4	53.2	70.8	106.2	141.7	212.5	353.6	530.4		
				Fuse Size	15.0	20.0	40.0	60.0	80.0	125.0	175.0	250.0	400.0	600.0		
152**	120	1	B2	KVA	0.7	1.2	2.4	3.6	4.7	7.1	9.5	14.3	23.7	35.6		
				Load Amps	6.0	9.9	19.8	29.6	39.5	59.4	79.2	118.8	197.6	296.4		
				Fuse Size	10.0	15.0	20.0	30.0	40.0	60.0	80.0	125.0	200.0	300.0		
236	208	1	D2	KVA	1.1	1.8	3.7	5.5	7.4	11.1	14.8	22.1	36.8	55.2		
				Load Amps	5.3	8.9	17.7	26.5	35.4	53.2	70.9	106.4	177.0	265.5		
				Fuse Size	6.0	15.0	20.0	30.0	40.0	60.0	80.0	125.0	200.0	300.0		
256**	240	1	C2	KVA	2.4	4.0	8.0	12.0	16.0	24.0	32.0	48.0	79.9	119.8		
				Load Amps	10.0	16.6	33.3	50.0	66.7	99.9	133.3	200.0	332.8	499.2		
				Fuse Size	15.0	20.0	40.0	60.0	80.0	125.0	175.0	250.0	400.0	600.0		
272**	240	1	D2	KVA	1.3	2.1	4.2	6.4	8.5	12.8	17.0	25.5	42.4	63.6		
				Load Amps	5.3	8.8	17.7	26.5	35.4	53.2	70.8	106.3	176.8	265.2		
				Fuse Size	10.0	15.0	20.0	30.0	40.0	60.0	80.0	125.0	200.0	300.0		

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

**Table 3: 240 x 480 V Primary, 24/48 V Secondary (Single Phase)**

Input Voltage	Output Voltage	Quantity Req'd	Connecton Diagram	Application Data	Application Data											
					HS22B150	HS22B250	HS22F500B	HS22F750B	HS22F1B	HS22F1.5A	HS22F2A	HS22F3A	HS22F5A	HS22F7.5A		
<b>BOOSTING</b>																
200	240	1	B1	KVA	0.75	1.25	2.50	3.74	4.99	7.49	9.98	15.0	24.96	37.44		
				Load Amps	3.10	5.20	10.40	15.60	20.80	31.2	41.6	62.5	83.3	125.0	208.0	312.0
				Fuse Size	6.00	10.00	15.00	20.00	30.00	50.0	70.0	90.0	150.0	225.0		
230**	277	1	B1	KVA	0.87	1.44	2.88	4.22	5.76	8.64	11.52	17.31	28.81	43.21		
				Load Amps	3.10	5.20	10.40	15.60	20.80	31.2	41.6	62.5	83.3	125.0	208.0	312.0
				Fuse Size	10.00	15.00	20.00	25.00	35.00	50.0	70.0	100.0	175.0	250.0		
346	380	1	D1	KVA	1.20	1.98	3.95	5.93	7.90	11.86	15.81	23.75	39.52	59.28		
				Load Amps	3.10	5.20	10.40	15.60	20.80	31.2	41.6	62.5	83.3	125.0	208.0	312.0
				Fuse Size	6.00	10.00	15.00	20.00	30.00	45.0	60.0	90.0	150.0	225.0		
362	380	1	C1	KVA	2.40	3.95	7.90	11.86	15.81	23.75	31.65	47.5	79.04	118.56		
				Load Amps	6.30	10.40	20.80	31.20	41.60	62.5	83.3	125	208	312.0		
				Fuse Size	10.00	15.00	30.00	40.00	60.00	90.0	110.0	175.0	300.0	450.0		
378	416	1	D1	KVA	1.30	2.16	4.33	6.49	8.65	12.98	17.31	26.0	43.26	64.9		
				Load Amps	3.10	5.20	10.40	15.60	20.80	31.2	41.6	62.5	83.3	125.0	208.0	312.0
				Fuse Size	6.00	10.00	15.00									

Table 6: 240 x 480 V Primary, 24/48 V Secondary (Three Phase)

Input Voltage	Output Voltage	Quantity Req'd	Connection Diagram	Application Data		Transformer Model																																																																																																																																																																																				
				KVA	Load Amps	HS22R150	HS22R150B	HS22R150C	HS22R150D	HS22R150E	HS22R150F	HS22R150G	HS22R150H	HS22R150I	HS22R150J																																																																																																																																																																											
BOOSTING	208	2	G1	1.73	1.88	3.75	5.63	7.5	11.3	15	22.5	37.5	56.3	84.4	112.6	150	199.5	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000																																																																																																																	
				200	2.16	4.33	6.5	8.66	13	17.3	26	39.1	52.2	75.2	108.3	150	199.5	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000																																																																																																																	
				362	3.91	7.82	11.73	17.6	23.47	35.2	47.63	71.44	95.25	138.38	181.17	271.76	362.15	452.54	542.93	633.32	723.71	814.1	904.49	994.88	1085.27	1175.66	1266.05	1356.44	1446.83	1537.22	1627.61	1718.0	1808.39	1898.78	1989.17	2079.56	2169.95	2260.34	2350.73	2441.12	2531.51	2621.9	2712.29	2802.68	2893.07	2983.46	3073.85	3164.24	3254.63	3345.02	3435.41	3525.8	3616.19	3706.58	3796.97	3887.36	3977.75	4068.14	4158.53	4248.92	4339.31	4429.7	4520.09	4610.48	4700.87	4791.26	4881.65	4972.04	5062.43	5152.82	5243.21	5333.6	5423.99	5514.38	5604.77	5695.16	5785.55	5875.94	5966.33	6056.72	6147.11	6237.5	6327.89	6418.28	6508.67	6599.06	6689.45	6779.84	6870.23	6960.62	7051.01	7141.4	7231.79	7322.18	7412.57	7502.96	7593.35	7683.74	7774.13	7864.52	7954.91	8045.3	8135.69	8226.08	8316.47	8406.86	8497.25	8587.64	8678.03	8768.42	8858.81	8949.2	9039.59	9129.98	9220.37	9310.76	9401.15	9491.54	9581.93	9672.32	9762.71	9853.1	9943.49	10033.88	10124.27	10214.66	10305.05	10395.44	10485.83	10576.22	10666.61	10757.0	10847.39	10937.78	11028.17	11118.56	11208.95	11299.34	11389.73	11480.12	11570.51	11660.9	11751.29	11841.68	11932.07	12022.46	12112.85	12203.24	12293.63	12384.02	12474.41	12564.8	12655.19	12745.58	12835.97	12926.36	13016.75	13107.14	13197.53	13287.92	13378.31	13468.7	13559.09	13649.48	13739.87	13830.26	13920.65	14011.04	14101.43	14191.82	14282.21	14372.6	14463.0	14553.39	14643.78	14734.17	14824.56	14914.95	15005.34	15095.73	15186.12	15276.51	15366.9	15457.29	15547.68	15638.07

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

Table 5: 120 x 240 V Primary, 16/32 V Secondary (Three Phase)

Input Voltage	Output Voltage	Quantity Req'd	Connection Diagram	Application Data		Transformer Model																																																																																																																																																																																																														
				KVA	Load Amps	HS20R150	HS20R150B	HS20R150C	HS20R150D	HS20R150E	HS20R150F	HS20R150G	HS20R150H	HS20R150I	HS20R150J																																																																																																																																																																																																					
BOOSTING	208	2	F1	1.69	2.81	5.63	8.44	11.3	16.9	22.5	33.8	56.3	84.4	112.6	150	199.5	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000																																																																																																																																												
				195	3.38	6.76	10.14	13.51	20.27	30.4	40.53	60.8	81.1	121.7	162.3	216.4	281.9	362.5	443.1	523.7	604.3	684.9	765.5	846.1	926.7	1007.3	1087.9	1168.5	1249.1	1329.7	1410.3	1490.9	1571.5	1652.1	1732.7	1813.3	1893.9	1974.5	2055.1	2135.7	2216.3	2296.9	2377.5	2458.1	2538.7	2619.3	2700	2780.6	2861.2	2941.8	3022.4	3103.0	3183.6	3264.2	3344.8	3425.4	3506.0	3586.6	3667.2	3747.8	3828.4	3909.0	3989.6	4070.2	4150.8	4231.4	4312.0	4392.6	4473.2	4553.8	4634.4	4715.0	4795.6	4876.2	4956.8	5037.4	5118.0	5198.6	5279.2	5359.8	5440.4	5521.0	5601.6	5682.2	5762.8	5843.4	5924.0	6004.6	6085.2	6165.8	6246.4	6327.0	6407.6	6488.2	6568.8	6649.4	6730.0	6810.6	6891.2	6971.8	7052.4	7133.0	7213.6	7294.2	7374.8	7455.4	7536.0	7616.6	7697.2	7777.8	7858.4	7939.0	8019.6	8100.2	8180.8	8261.4	8342.0	8422.6	8503.2	8583.8	8664.4	8745.0	8825.6	8906.2	8986.8	9067.4	9148.0	9228.6	9309.2	9389.8	9470.4	9551.0	9631.6	9712.2	9792.8	9873.4	9954.0	10034.6	10115.2	10195.8	10276.4	10357.0	10437.6	10518.2	10598.8	10679.4	10760.0	10840.6	10921.2	11001.8	11082.4	11163.0	11243.6	11324.2	11404.8	11485.4	11566.0	11646.6	11727.2	11807.8	11888.4	11969.0	12049.6	12130.2	12210.8	12291.4	12372.0	12452.6	12533.2	12613.8	12694.4	12775.0	12855.6	12936.2	13016.8	13097.4	13178.0	13258.6	13339.2	13419.8	13500.4	13581.0	13661.6	13742.2	13822.8	13903.4	13984.0	14064.6	14145.2	14225.8	14306.4	14387.0	14467.6	14548.2	14628.8	14709.4	14790.0	14870.6	14951.2	15031.8	15112.4	15193.0	15273.6	15354.2	15434.8	15515.4	15596.0	15676.6	15757.2	15837.8	15918.4	16000
				256**	4.16	8.32	12.48	16.64	24.96	37.44	50.88	75.36	100.8	134.4	201.6	271.2	361.6	452	542.4	632.8	723.2	813.6	904	994.4	1084.8	1175.2	1265.6	1356	1446.4	1536.8	1627.2	1717.6	1808	1898.4	1988.8	2079.2	2169.6	2260	2350.4	2440.8	2531.2	2621.6	2712	2802.4	2892.8	2983.2	3073.6	3164	3254.4	3344.8	3435.2	3525.6	3616	3706.4	3796.8	3887.2	3977.6	4068	4158.4	4248.8	4339.2	4429.6	4520	4610.4	4700.8	4791.2	4881.6	4972	5062.4	5152.8	5243.2	5333.6	5424	5514.4	5604.8	5695.2	5785.6	5876	5966.4	6056.8	6147.2	6237.6	6328	6418.4	6508.8	6599.2	6689.6	678	6870.4	6960.8	7051.2	7141.6	7232	7322.4	7412.8	7503.2	7593.6	7684	7774.4	7864.8	7955.2	8045.6	8136	8226.4	8316.8	8407.2	8497.6	8588	8678.4	8768.8	8859.2	8949.6	904	9130.4	9220.8	9311.2	9401.6	9492	9582.4	9672.8	9763.2	9853.6	9944	10034.4	10124.8	10215.2	10305.6	10396	10486.4	10576.8	10667.2	10757.6	10848	10938.4	11028.8	11119.2	11209.6	11299.9	11390.3	11480.7	11571.1	11661.5	11751.9	11842.3	11932.7	12023.1	12113.5	12203.9	12294.3	12384.7	12475.1	12565.5	12655.9	12746.3	12836.7	12927.1	13017.5	13107.9	13198.3	13288.7	13379.1	13469.5	13559.9	13650.3	13740.7	13831.1	13921.5	14011.9	14102.3	14192.7	14283.1	14373.5	14463.9	14554.3	14644.7	14735.1	14825.5	14915.9	15006.3	15096.7	15187.1	15277.5	15367.9	15458.3	15548.7	15639.1	15729.5	15819.9	15910.3	16000																						

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

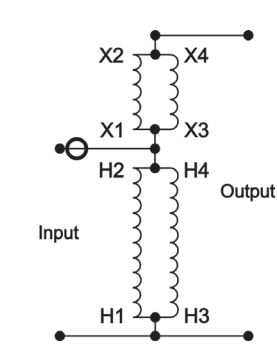


Diagram A1 - Boosting

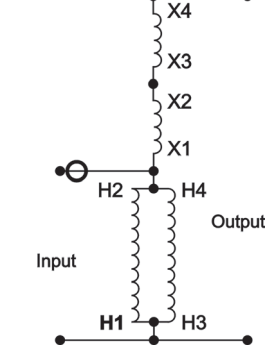


Diagram B1 - Boosting

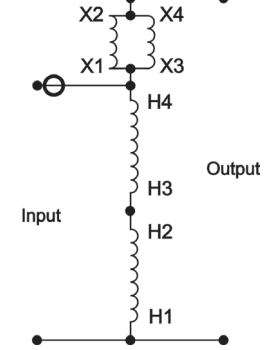


Diagram C1 - Boosting

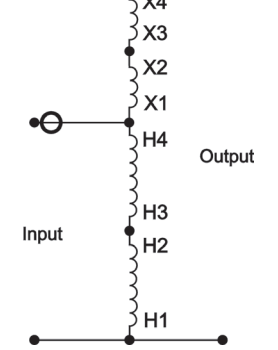


Diagram D1 - Boosting

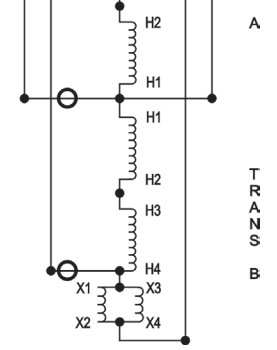


Diagram E1 - Boosting

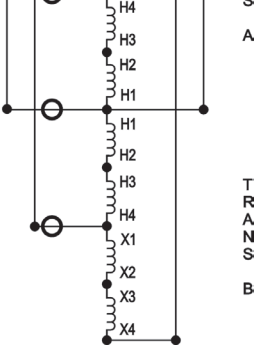


Diagram F1 - Boosting

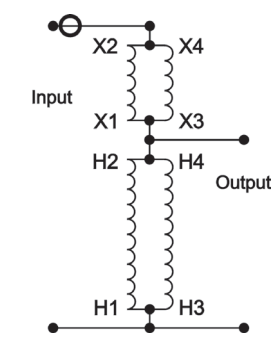


Diagram A2 - Bucking

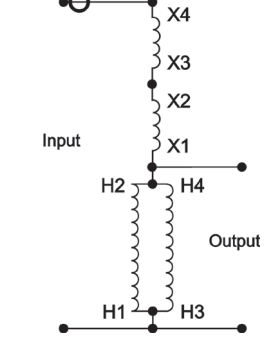


Diagram B2 - Bucking

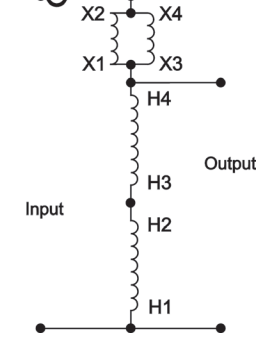


Diagram C2 - Bucking

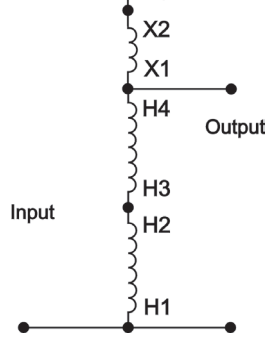


Diagram D2 - Bucking

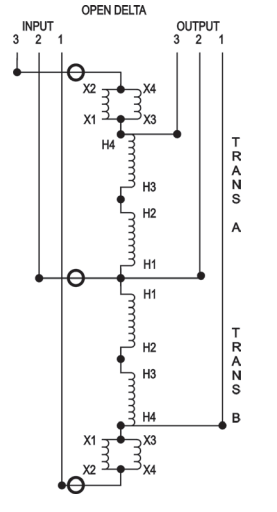


Diagram E2 - Bucking

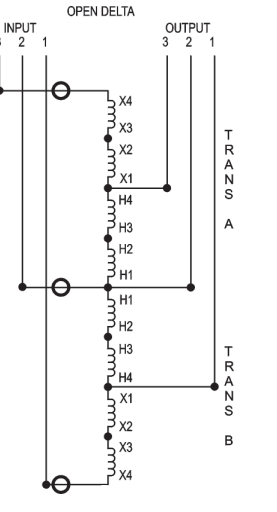


Diagram F2 - Bucking

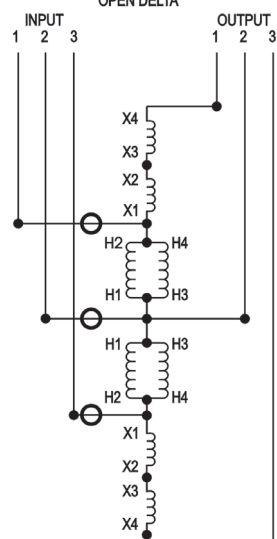


Diagram G1 - Boosting

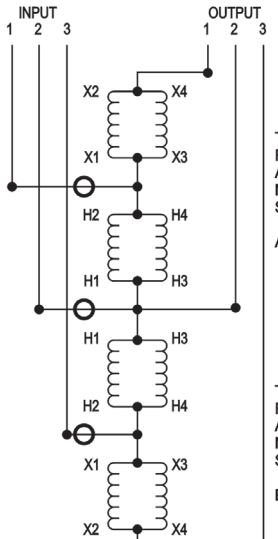


Diagram H1 - Boosting

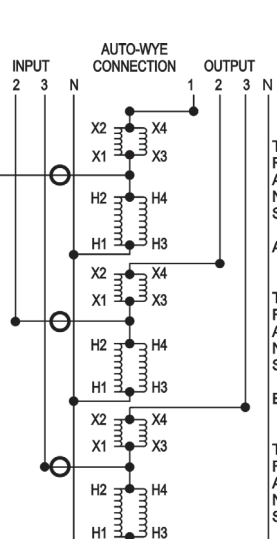


Diagram J1 - Boosting

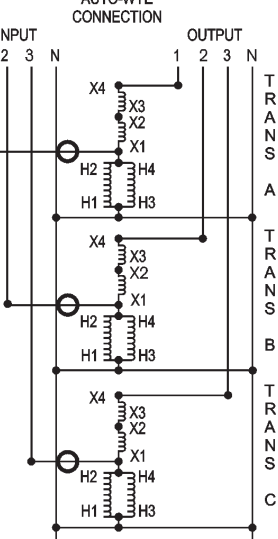


Diagram K1 - Boosting

