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ELECTRICAL SUPPLY, INC.  
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Temperature rating of Conductor (see Table 310.13.)

Temp.	60°C (140°F)	75°C (187°F)	90°C (194°F)	60°C (140°F)	75°C (187°F)	90°C (194°F)	Temp.
Size AWG or kcmil	TW, UF	THHW, THWN	THHW, THWN-2	TW, UF	THHW, THWN	THHN, THHW, THWN-2	Size AWG or kcmil
COPPER				ALUMINUM OR COPPER-CLAD ALUMINUM			
18	-	-	14	-	-	-	-
16	-	-	18	-	-	-	-
14	20	20	25	-	-	-	-
12	25	25	30	20	20	25	12
10	30	35	40	25	30	35	10
8	40	50	55	30	40	45	8
6	55	65	75	40	50	60	6
4	70	85	95	55	65	75	4
3	85	100	110	65	75	85	3
2	95	115	130	75	90	100	2
1	110	130	150	85	100	115	1
1/0	125	150	170	100	120	135	1/0
2/0	145	175	195	115	135	150	2/0
3/0	165	200	225	130	155	175	3/0
4/0	195	230	260	150	180	205	4/0
250	215	255	290	170	205	230	250
300	240	285	320	190	230	255	300
350	260	310	350	210	250	280	350
400	280	335	380	225	270	305	400
500	320	380	430	260	310	350	500
600	355	420	475	285	340	385	600
700	385	460	520	310	375	420	700
750	400	475	535	320	385	435	750
800	410	490	555	330	395	450	800
900	435	520	585	355	425	480	900
1000	455	545	615	375	445	500	1000
1250	495	590	665	405	485	545	1250
1500	520	625	705	435	520	585	1500
1750	545	650	735	455	545	615	1750
2000	560	665	750	470	560	630	2000

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SORGEL DRY TYPE TRANSFORMER DATA  
Three Phase

KVA Rating	Amperes			
	208 V	240 V	480 V	600V
3	8.3	7.2	3.6	2.9
6	16.6	14.4	7.2	5.8
9	25.0	21.6	10.8	8.7
15	41.6	36	18	14.4
30	83.0	72	36	28.8
45	125	108	54	43
75	208	180	90	72
112.5	312	270	135	108
150	415	360	180	144
200	554	480	240	192
225	625	540	270	216
300	830	720	360	288
400	1110	960	480	384
500	1380	1200	600	480
750	2080	1800	900	720

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MAXIMUM NUMBER of CONDUCTORS in TRADE SIZES or TUBING

Type Letters	Conductor size AWG / kcmil	Conduit or tubing trade size (inches)									
		1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4
THHN, THWN, THWN-2	14	12	22	35	61	84	138	241	364	476	608
	12	9	16	26	45	61	101	176	266	347	443
	10	8	10	16	28	38	63	111	167	219	279
	8	6	6	9	16	22	36	64	96	126	161
6	4	4	7	12	16	26	46	69	91	116	
4	1	2	4	7	10	16	28	43	56	71	
3	1	1	3	6	8	13	24	36	47	60	
2	1	1	3	5	7	11	20	30	40	51	
1	1	1	1	4	5	8	15	22	29	37	
1/0	1	1	1	3	4	6	12	19	25	32	
2/0	0	1	1	2	3	5	10	16	20	26	
3/0	0	1	1	1	2	4	8	13	17	22	
4/0	0	1	1	1	2	4	7	11	14	18	
250	0	0	1	1	1	3	6	9	11	15	
300	0	0	1	1	1	3	5	7	10	13	
350	0	0	1	1	1	2	4	6	9	11	
400	0	0	0	1	1	1	4	6	8	10	
500	0	0	0	1	1	1	3	5	6	8	
600	0	0	0	1	1	1	2	4	5	7	
700	0	0	0	1	1	1	2	3	4	6	
750	0	0	0	1	1	1	1	3	4	5	
800	0	0	0	1	1	1	1	3	4	5	
900	0	0	0	1	1	1	1	3	4	4	
1000	0	0	0	1	1	1	1	2	3	4	

Note: This table is for concentric stranded conductors only. For cables with compact conductors, the dimensions in table 5A shall be used

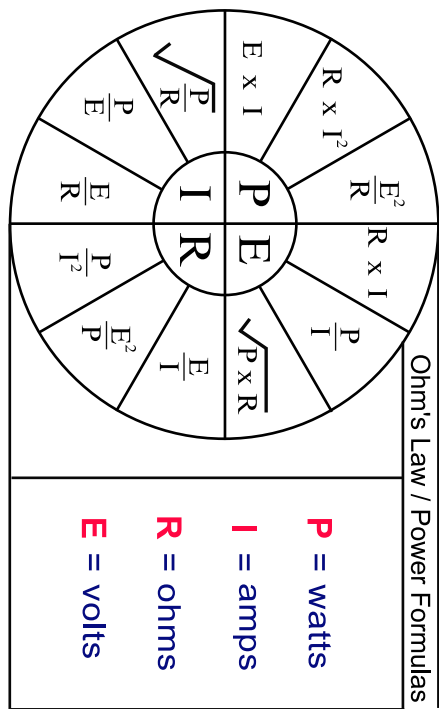
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AC/DC Formulas

To Find	Direct Current	AC / 1 phase 115v or 120v	AC / 1 phase 208v, 230v or 240v	AC / 2 phase All voltages
Amps when Horsepower is known	HP x 746 E x Eff	HP x 746 E x Eff x PF	HP x 746 E x Eff x PF	HP x 746 1.73 x E x Eff x PF
Amps when Kilowatts is known	kW x 1000 E	kW x 1000 E x PF	kW x 1000 E x PF	kW x 1000 1.73 x E x PF
Amps when KVA is known		kVA x 1000 E	kVA x 1000 E	kVA x 1000 1.73 x E
Kilowatts	I x E 1000	I x E x PF 1000	I x E x PF 1000	I x E x 1.73 PF 1000
Kilovolts - Amps		I x E 1000	I x E 1000	I x E x 1.73 1000
Horsepower (output)	I x E x Eff 746	I x E x Eff x PF 746	I x E x Eff x PF 746	I x E x Eff x 1.73 x PF 746

E = Voltage / I = Amps / W = Watts / PF = Power Factor / Eff = Efficiency / HP = Horsepower

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SORGEL DRY TYPE TRANSFORMER DATA  
Single Phase

KVA Rating	Amperes		
	120 V	240 V	480 V
1	8.33	4.16	2.08
1.5	12.5	6.24	3.12
2	16.66	8.33	4.16
3	25	12.5	6.1
5	41	21	10.4
7.5	62	31	15.6
10	83	42	21
15	124	62	31
25	208	104	52
37.5	312	156	78
50	416	208	104
75	624	312	156
100	830	415	207
167	1390	695	348
200	1660	833	416

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