

Section A
Voltage Drop
Length-to-Neutral - Single Phase, 3-wire - Three Phase, 4 wire

Table A-2
One Way Length of Run - In Feet
No. 12 AWG

amps

	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200
1					.10	.12	.14	.16	.17	.19	.20	.22	.24	.26	.28	.30	.32	.33	.34	
2			.10	.14	.17	.21	.24	.28	.31	.35	.38	.42	.45	.49	.52	.56	.59	.63	.66	.70
3		.10	.16	.21	.26	.31	.36	.42	.47	.52	.57	.62	.68	.73	.78	.83	.88	.94	1.00	1.05
4		.14	.21	.28	.35	.42	.48	.55	.62	.69	.76	.82	.89	.96	1.03	1.10	1.16	1.23	1.30	1.37
5		.17	.26	.35	.42	.55	.61	.69	.78	.87	.95	1.03	1.12	1.21	1.29	1.37	1.46	1.55	1.63	1.71
6	.10	.21	.31	.42	.52	.62	.73	.83	.94	1.04	1.15	1.23	1.34	1.44	1.55	1.65	1.76	1.86	1.97	2.07
7	.12	.24	.36	.49	.61	.73	.85	.97	1.09	1.21	1.32	1.44	1.56	1.68	1.80	1.92	2.06	2.19	2.31	2.43
8	.14	.28	.42	.55	.69	.83	.97	1.11	1.25	1.39	1.52	1.65	1.78	1.91	2.04	2.17	2.30	2.43	2.55	2.68
9	.16	.31	.47	.62	.78	.94	1.09	1.25	1.40	1.56	1.72	1.87	2.02	2.18	2.34	2.49	2.64	2.80	2.96	3.11
10	.17	.35	.52	.69	.87	1.04	1.21	1.39	1.56	1.73	1.91	2.09	2.26	2.43	2.61	2.79	2.96	3.13	3.31	3.49
11	.19	.38	.57	.76	.95	1.14	1.33	1.52	1.71	1.90	2.09	2.28	2.47	2.66	2.85	3.05	3.24	3.43	3.62	3.81
12	.21	.42	.62	.83	1.04	1.25	1.45	1.66	1.87	2.08	2.28	2.49	2.69	2.90	3.11	3.31	3.52	3.63	3.83	4.04
13	.23	.45	.68	.90	1.13	1.35	1.58	1.80	2.03	2.25	2.48	2.70	2.93	3.15	3.36	3.58	3.79	4.01	4.22	4.44
14	.24	.49	.73	.97	1.21	1.45	1.70	1.94	2.18	2.42	2.67	2.91	3.15	3.39	3.63	3.88	4.12	4.36	4.60	4.84
15	.26	.52	.78	1.04	1.30	1.56	1.82	2.08	2.34	2.60	2.86	3.12	3.38	3.64	3.90	4.16	4.42	4.68	4.94	5.20
16	.28	.55	.83	1.11	1.39	1.66	1.94	2.22	2.49	2.77	3.05	3.32	3.60	3.88	4.16	4.43	4.71	4.79	5.06	5.34

Table A-3
One Way Length of Run - In Feet
No. 10 AWG

amps

	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200
1									.10	.11	.12	.13	.14	.15	.16	.17	.18	.19	.20	.21
2					.11	.13	.15	.18	.20	.22	.24	.26	.28	.30	.32	.34	.36	.38	.40	.42
3			.10	.13	.17	.20	.23	.26	.30	.33	.36	.39	.43	.46	.49	.52	.56	.59	.62	.65
4			.13	.18	.22	.26	.31	.35	.39	.44	.48	.52	.57	.61	.65	.70	.74	.78	.83	.87
5		.11	.16	.22	.27	.33	.38	.44	.49	.55	.60	.66	.71	.77	.82	.88	.93	.99	1.04	1.10
6		.13	.20	.26	.33	.40	.46	.53	.59	.66	.72	.79	.85	.92	.98	1.05	1.11	1.18	1.24	1.31
7		.15	.23	.31	.38	.46	.54	.61	.69	.77	.84	.91	.99	1.07	1.14	1.22	1.30	1.37	1.45	1.53
8		.18	.26	.35	.44	.53	.61	.70	.79	.88	.96	1.05	1.14	1.23	1.31	1.40	1.49	1.58	1.66	1.75
9	.10	.20	.30	.39	.49	.59	.69	.79	.89	.99	1.08	1.18	1.28	1.38	1.48	1.58	1.68	1.77	1.87	1.97
10	.11	.22	.33	.44	.55	.66	.77	.88	.99	1.10	1.21	1.32	1.43	1.54	1.65	1.76	1.87	1.98	2.09	2.20
11	.12	.24	.36	.48	.60	.72	.84	.97	1.09	1.21	1.33	1.45	1.57	1.69	1.81	1.93	2.05	2.17	2.29	2.41
12	.13	.26	.40	.53	.66	.79	.92	1.05	1.18	1.32	1.43	1.56	1.69	1.82	1.95	2.08	2.21	2.34	2.47	2.60
13	.14	.29	.43	.57	.71	.86	1.00	1.14	1.28	1.43	1.57	1.71	1.85	2.00	2.14	2.28	2.42	2.57	2.71	2.85
14	.15	.31	.46	.61	.77	.92	1.07	1.23	1.38	1.53	1.69	1.84	1.99	2.15	2.30	2.45	2.61	2.76	2.91	3.07
15	.16	.33	.49	.66	.82	.99	1.15	1.32	1.48	1.64	1.81	1.97	2.14	2.30	2.47	2.63	2.80	2.96	3.13	3.29
16	.18	.35	.53	.70	.88	1.05	1.23	1.40	1.58	1.75	1.93	2.10	2.28	2.45	2.63	2.80	2.98	3.15	3.33	3.50

Section B Voltage Drop

**Table A-4
One Way Length of Run - In Feet
No. 12 AWG**

amps	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200
1			.11	.14	.18	.21	.25	.28	.32	.35	.39	.42	.46	.49	.53	.56	.60	.63	.67	.70
2		.14	.21	.28	.35	.42	.50	.57	.64	.71	.78	.85	.92	.99	1.06	1.13	1.20	1.27	1.34	1.41
3	.11	.21	.32	.42	.53	.64	.74	.85	.96	1.06	1.17	1.28	1.38	1.49	1.60	1.70	1.81	1.92	2.02	2.13
4	.14	.28	.42	.57	.71	.85	.99	1.13	1.27	1.42	1.56	1.70	1.84	1.98	2.12	2.27	2.41	2.55	2.69	2.83
5	.18	.35	.53	.71	.89	1.06	1.24	1.42	1.59	1.77	1.97	2.15	2.33	2.50	2.68	2.86	3.04	3.21	3.39	3.57
6	.21	.42	.64	.85	1.06	1.27	1.49	1.70	1.91	2.12	2.34	2.55	2.76	2.97	3.19	3.40	3.61	3.82	4.04	4.25
7	.25	.50	.74	.99	1.24	1.49	1.73	1.98	2.23	2.48	2.72	2.97	3.22	3.47	3.71	3.96	4.21	4.46	4.70	4.95
8	.28	.57	.85	1.13	1.42	1.70	1.98	2.27	2.55	2.83	3.12	3.40	3.68	3.96	4.24	4.72	5.01	5.29	5.57	5.86
9	.32	.64	.96	1.27	1.59	1.91	2.23	2.55	2.87	3.19	3.50	3.81	4.12	4.43	4.75	5.07	5.38	5.70	6.02	6.33
10	.35	.71	1.06	1.42	1.77	2.12	2.48	2.83	3.19	3.54	3.90	4.25	4.61	4.96	5.32	5.67	6.03	6.38	6.74	7.09
11	.39	.78	1.17	1.56	1.95	2.34	2.73	3.12	3.50	3.89	4.28	4.67	5.06	5.45	5.84	6.23	6.62	7.01	7.40	7.79
12	.42	.85	1.27	1.70	2.12	2.55	2.97	3.40	3.82	4.25	4.67	5.10	5.52	5.95	6.37	6.79	7.22	7.64	8.07	8.49
13	.46	.92	1.38	1.84	2.30	2.76	3.22	3.68	4.14	4.60	5.06	5.52	5.98	6.44	6.90	7.36	7.82	8.28	8.74	9.20
14	.50	.99	1.49	1.98	2.48	2.97	3.47	3.96	4.46	4.96	5.45	5.95	6.44	6.94	7.43	7.93	8.42	8.91	9.41	9.91
15	.53	1.06	1.59	2.12	2.66	3.19	3.72	4.25	4.78	5.31	5.84	6.37	6.90	7.44	7.97	8.50	9.03	9.57	10.10	10.63
16	.57	1.13	1.70	2.27	2.83	3.40	3.96	4.53	5.10	5.66	6.23	6.80	7.36	7.93	8.50	9.06	9.63	10.20	10.77	11.33

Section C Voltage Drop

**Table A-5
One Way Length of Run - In Feet
No. 12 AWG**

amps	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200
1			.06	.07	.09	.11	.13	.14	.16	.18	.20	.21	.23	.25	.27	.28	.30	.32	.34	.35
2		.07	.11	.14	.18	.21	.25	.28	.32	.35	.39	.42	.46	.49	.53	.56	.60	.63	.67	.70
3	.06	.11	.16	.21	.27	.32	.37	.42	.48	.53	.58	.63	.68	.72	.77	.82	.87	.91	.96	1.01
4	.07	.14	.21	.28	.36	.42	.50	.57	.64	.71	.78	.85	.92	1.00	1.07	1.14	1.21	1.29	1.35	1.41
5	.09	.18	.27	.35	.45	.53	.62	.71	.80	.89	.99	1.08	1.17	1.26	1.36	1.45	1.54	1.63	1.72	1.81
6	.11	.21	.32	.42	.53	.64	.75	.85	.96	1.06	1.17	1.28	1.39	1.49	1.61	1.72	1.83	1.94	2.04	2.15
7	.13	.25	.37	.50	.62	.74	.87	.99	1.12	1.24	1.36	1.48	1.61	1.73	1.85	1.98	2.10	2.22	2.35	2.47
8	.14	.28	.43	.57	.71	.85	.99	1.13	1.28	1.42	1.56	1.70	1.84	1.98	2.12	2.27	2.41	2.55	2.69	2.83
9	.16	.32	.48	.64	.80	.96	1.12	1.27	1.44	1.59	1.75	1.91	2.07	2.23	2.39	2.55	2.71	2.87	3.03	3.19
10	.18	.35	.53	.71	.89	1.06	1.24	1.42	1.60	1.77	1.94	2.11	2.28	2.46	2.64	2.82	3.00	3.17	3.35	3.53
11	.20	.39	.59	.78	.98	1.17	1.37	1.56	1.75	1.95	2.14	2.34	2.53	2.73	2.92	3.12	3.31	3.51	3.70	3.90
12	.21	.42	.64	.85	1.06	1.27	1.49	1.70	1.91	2.12	2.33	2.54	2.75	2.97	3.18	3.39	3.60	3.82	4.03	4.24
13	.23	.46	.69	.92	1.15	1.38	1.61	1.84	2.07	2.30	2.53	2.76	2.99	3.22	3.45	3.68	3.91	4.14	4.37	4.60
14	.25	.50	.75	.99	1.24	1.49	1.74	1.98	2.23	2.48	2.73	2.98	3.22	3.47	3.72	3.96	4.21	4.46	4.70	4.95
15	.27	.53	.80	1.06	1.33	1.59	1.86	2.12	2.39	2.66	2.92	3.19	3.45	3.72	3.98	4.25	4.51	4.78	5.04	5.31
16	.29	.57	.85	1.13	1.42	1.70	1.98	2.27	2.55	2.83	3.11	3.39	3.67	3.96	4.24	4.52	4.80	5.09	5.37	5.65