

Voltage Drop Tables

6 VOLTS MAXIMUM VOLTAGE DROP 5% PER NATIONAL ELECTRIC CODE - WIRING DISTANCE IN FEET

Wire Size	Watts	4	6	8	10	12	13	16	18	20	24	25	28	35	44	50	75	100	150	200	250	
#12		111	89	67	53	45	41	33	30	27	22	21	19	15	12	11	8	6	4			
#10		177	141	106	85	71	65	53	47	42	35	32	30	24	19	17	11	9	6			
#8		281	225	106	135	113	110	84	75	68	56	54	48	39	31	27	18	14	9	7		
#6		447	358	268	215	179	165	134	120	107	89	86	77	62	49	43	29	22	15	11	9	

12 VOLTS MAXIMUM VOLTAGE DROP 5% PER NATIONAL ELECTRIC CODE - WIRING DISTANCE IN FEET

Wire Size	Watts	4	8	12	13	16	18	24	25	28	35	44	50	75	100	150	200	250	300	
#12		534	267	178	165	134	110	89	85	76	61	49	42	29	21	14	10	8		
#10		849	425	283	260	212	190	142	136	121	97	77	68	45	34	23	17	14	11	
#8		1351	675	450	415	338	300	225	215	193	154	123	108	72	54	36	27	21	18	
#6		2148	1073	716	660	537	485	358	340	307	245	195	170	114	86	57	43	34	28	

24 VOLTS MAXIMUM VOLTAGE DROP 5% PER NATIONAL ELECTRIC CODE - WIRING DISTANCE IN FEET

Wire Size	Watts	13	18	25	28	35	44	50	75	100	150	200	250	300	400
#12		660	440	340	305	244	194	168	116	84	56	40	32	26	21
#10		1040	760	544	485	388	309	272	180	136	92	68	52	44	34
#8		1668	1200	860	772	616	491	432	288	216	144	108	84	72	54
#6		2640	1900	1360	1227	980	781	650	456	344	228	172	136	112	85

32 VOLTS MAXIMUM VOLTAGE DROP 5% PER NATIONAL ELECTRIC CODE - WIRING DISTANCE IN FEET

Wire Size	Watts	13	18	25	28	35	44	50	75	100	150	200	250	300	400
#12		1170	840	600	543	435	345	300	200	150	100	75	60	50	42
#10			1340	960	863	690	549	480	320	240	160	120	86	80	63
#8				1540	1372	1100	873	770	510	385	255	192	154	128	100
#6					2180	1740	1388	1220	815	610	405	305	240	200	163

FORMULAS

$$CM = 22 \times W \times L$$

$$= .05 \times E^2$$

CM = Wire size in circular mills

W = Emergency loads in watts

L = Length of circuit in feet

$$L = CM \times .05 \times E^2$$

E = Line voltage

$$L = 22 \times W$$

22 = Constant

.05 = Factor for maximum allowable voltage drop

Circular Mill Chart		
AWG	AMP Capacity	C/M
12	20	6530
10	25	10,380
8	30	16,510
6	50	26,250

*Voltage drop table information is a suggested guideline only