

Voltage Drop Chart for #12-2 Wire

<i>Watts</i>	20	40	60	80	100	120	140	160	180	192
<i>Amps</i>	1.7	3.3	5.0	6.7	8.3	10.0	11.7	13.3	15.0	16.0
DISTANCE*										
25	0.1	0.3	0.4	0.5	0.7	0.8	1.0	1.1	1.2	1.3
50	0.3	0.5	0.8	1.1	1.4	1.6	1.9	2.2	2.4	2.6
75	0.4	0.8	1.2	1.6	2	2.4	2.8	3.2	3.7	3.9
100	0.5	1.1	1.6	2.2	2.7	3.2	3.8	4.3	4.9	5.2
125	0.7	1.4	2.0	2.7	3.4	4.1	4.7	5.4	6.1	6.5
150	0.8	1.6	2.4	3.2	4.1	4.9	5.7	6.5	7.3	7.8
175	1.0	1.9	2.8	3.8	4.7	5.7	6.6	7.6	8.5	9.1
200	1.1	2.2	3.2	4.3	5.4	6.5	7.6	8.6	9.7	
225	1.2	2.4	3.7	4.9	6.1	7.3	8.5	9.7		
250	1.4	2.7	4.1	5.4	6.8	8.1	9.5			
275	1.5	3.0	4.5	5.9	7.4	8.9	10.4			
300	1.6	3.2	4.9	6.5	8.1					
325	1.8	3.5	5.3	7.0	8.8					
350	1.9	3.8	5.7	7.6	9.5					
375	2.0	4.1	6.1	8.1	10.1					
400	2.2	4.3	6.5	8.6						
425	2.3	4.6	6.9	9.2						
450	2.4	4.9	7.3	9.7						
475	2.6	5.1	7.7	10.3						
500	2.7	5.4	8.1	10.8						
525	2.8	5.7	8.5							
550	3.0	5.9	8.9							
575	3.1	6.2	9.3							
600	3.2	6.5	9.7							
625	3.4	6.8	10.1							
650	3.5	7.0								
675	3.7	7.3								
700	3.8	7.6								
725	3.9	7.8								
750	4.1	8.1								
775	4.2	8.4								
800	4.3	8.6								
825	4.5	8.9								
850	4.6	9.2								
875	4.7	9.5								
900	4.9	9.7								
925	5.0	10.0								
950	5.1	10.3								
975	5.3									
1000	5.4									

Note: #12-2 wire is rated for a maximum of 20 amps and 240 watts. Always use no more than 80% (according to the National Electrical Code) thus a total of 192 watts of total lamp load.

Formula used:

$$\text{Amps} \times \text{Distance} \times 2 \times \text{Resistance/foot Amps} = \text{Watts} / \text{Volts}$$

Resistance per foot for #12-2 wire = .00162

* Distance of wire is calculated from the transformer to the first connection point ONLY.

