

Conductor Sizes

Conductors Sized (AWG) for 3% Voltage Drop

Use 3% voltage drop for any “critical application” affecting the safety of the vessel or its passengers: bilge pumps, navigation lights, electronics, etc....

IMPORTANT!

Length (feet): Determined by measuring the length of the conductor from the positive (+) power source connection to the electrical device and back to the negative (-) power source connection. Note that the power source connection may be either the battery, panelboard or switchboard.

Current (amps): Determined by adding the total amps on a circuit.

3% VOLTAGE DROP AT 12 VOLTS

Length	Current (amps)												
	5	10	15	20	25	30	40	50	60	70	80	90	100
10'	18	14	12	12	10	10	8	8	6	6	6	4	4
15'	16	12	10	10	8	8	6	6	4	4	4	2	2
20'	14	10	10	8	6	6	6	4	4	2	2	2	2
25'	12	10	8	6	4	4	4	2	2	2	2	1	1
30'	12	10	8	6	6	6	4	4	2	2	2	1	1
40'	10	8	6	6	4	4	2	2	1	0	0	2/0	2/0
50'	10	6	6	4	4	2	2	1	0	2/0	2/0	4/0	4/0
60'	10	6	6	4	2	2	1	0	2/0	3/0	3/0	4/0	4/0
70'	8	6	4	2	2	1	0	2/0	3/0	3/0	4/0	4/0	
80'	8	6	4	2	2	1	0	2/0	3/0	4/0	4/0		
90'	8	4	2	2	1	0	2/0	3/0	4/0	4/0			
100'	6	4	2	2	1	0	2/0	3/0	4/0				
110'	6	4	2	2	1	0	2/0	3/0	4/0				
120'	6	4	2	1	0	2/0	3/0	4/0					
130'	6	2	2	1	0	2/0	3/0	4/0					
140'	6	2	2	1/0	2/0	2/0	3/0	4/0					
150'	6	2	1	0	2/0	3/0	4/0						
160'	6	2	1	0	2/0	3/0	4/0						
170'	6	2	1	2/0	3/0	3/0	4/0						