



Wire Length for DVS-511 24VDC Power Supply

		Distance from 24 VDC Power (Paired Conductors) with units at end of circuit Feet of Wire vs Wire Gauge (AWG) (10% drop)				
Units	Current	#18	#16	#14	#12	#10
1	0.7	215 ft.	345 ft.	545 ft.	865 ft.	1,380 ft.
2	1.4	110 ft.	170 ft.	275 ft.	435 ft.	690 ft.
3	2.1	70 ft.	115 ft.	180 ft.	290 ft.	460 ft.
4	2.8	55 ft.	86 ft.	135 ft.	215 ft.	345 ft.

Wire Length for Speaker Loops

Maximum wire length for Speaker Loops is determined by allowable losses and total Speaker Loop load in Watts. The wire lengths (distance from VECPT to speaker) in the table shown are for about 1dB loss at the far end. This should be used as a guide. Actual installation will vary depending upon placement and loading of individual speakers. This guide assumes linear loading with good connections and twisted-paired cabling. Recommended wire type is Twisted-Paired cable such as the FPL Red-Jacketed Fire-Alarm Wire.

NOTE: When speaker wire is run in the same conduit as an Addressable Loop, or Data Cable, then the Speaker wire is recommended to be Shielded-Twisted-Paired Cable.

Number of Speakers		Total Load (Watts)	Wire Gauge (AWG)				Speaker Loop Voltage
@1/2W	@1W		#18	#16	#14	#12	
10	5	5	3,750 ft. 30,010 ft.	5,960 ft. 47,500 ft.	9,510 ft. 76,090 ft.	15,075 ft. 120,595 ft.	@ 25 VRMS @ 70 VRMS
20	10	10	1,965 ft. 15,705 ft.	3,120 ft. 24,965 ft.	4,980 ft. 39,830 ft.	7,890 ft. 63,125 ft.	@ 25 VRMS @ 70 VRMS
30	15	15	1,330 ft. 10,640 ft.	2,115 ft. 16,910 ft.	3,370 ft. 26,975 ft.	5,345 ft. 42,755 ft.	@ 25 VRMS @ 70 VRMS
40	20	20	1,005 ft. 8,045 ft.	1,600 ft. 12,785 ft.	2,550 ft. 20,395 ft.	4,040 ft. 32,325 ft.	@ 25 VRMS @ 70 VRMS
60	30	30	675 ft. 5,405 ft.	1,075 ft. 8,535 ft.	1,715 ft. 13,710 ft.	2,715 ft. 21,725 ft.	@ 25 VRMS @ 70 VRMS
80	40	40	510 ft. 4,070 ft.	810 ft. 6,470 ft.	1,290 ft. 10,320 ft.	2,045 ft. 16,360 ft.	@ 25 VRMS @ 70 VRMS
100	50	50	380 ft. 3,040 ft.	610 ft. 4,840 ft.	965 ft. 7,670 ft.	1,540 ft. 12,220 ft.	@ 25 VRMS @ 70 VRMS