

ADP S – Sag and Tension Guide

Shielded Fiberglass Reinforced Aerial Drop Wire

Initial Sag and Tension

Span ft	3-Pair x 22 AWG											
	0°F		20°F		40°F		60°F		80°F		100°F	
	Tension lbs	Sag in	Tension lbs	Sag in	Tension lbs	Sag in	Tension lbs	Sag in	Tension lbs	Sag in	Tension lbs	Sag in
50	39	6	38	6	36	6	35	6	33.6	6.5	32.2	6.7
75	57	9	55	9	54	9	52	10	50.4	9.8	48.8	10.0
100	76	12	74	12	72	12	70	13	68.1	12.9	66.2	13.2
125	93	15	91	15	89	15	87	16	85.1	16.1	83.2	16.4
150	109	18	107	18	105	19	103	19	100.9	19.6	98.8	19.9
175	126	21	124	22	122	22	120	22	117.9	22.8	115.8	23.2
200	143	25	141	25	139	25	137	26	134.8	26.0	132.7	26.4
225	162	28	160	28	157	28	155	29	152.7	29.1	150.5	29.5
250	179	31	177	31	174	32	172	32	169.7	32.3	167.4	32.8
275	197	34	195	34	192	35	190	35	187.6	35.4	185.2	35.8
300	214	37	212	37	209	38	207	38	204.7	38.6	202.5	39.0
325	232	40	230	40	227	41	225	41	222.7	41.7	220.3	42.1
350	249	43	247	44	244	44	242	44	239.6	44.9	237.2	45.3
375	267	46	265	47	262	47	260	48	257.7	47.9	255.4	48.3
400	284	50	282	50	279	50	277	51	274.7	51.2	272.3	51.6

Span ft	5-Pair x 22 AWG											
	0°F		20°F		40°F		60°F		80°F		100°F	
	Tension lbs	Sag in	Tension lbs	Sag in	Tension lbs	Sag in	Tension lbs	Sag in	Tension lbs	Sag in	Tension lbs	Sag in
50	57	5	55	5	52	6	50	6	47.5	6.1	45.1	6.4
75	78	8	75	9	73	9	70	9	67.4	9.7	64.7	10.0
100	98	12	96	12	93	13	90	13	87.2	13.4	84.5	13.7
125	119	15	116	16	113	16	110	17	107.1	17.0	104.2	17.4
150	139	19	136	19	133	20	130	20	127.1	20.7	124.3	21.1
175	159	23	156	23	153	23	150	24	146.9	24.4	143.8	24.8
200	180	26	177	27	173	27	170	28	166.7	28.0	163.3	28.5
225	199	30	196	30	193	31	190	31	186.9	31.7	183.7	32.2
250	219	33	216	34	213	34	210	35	207.0	35.3	204.0	35.8
275	239	37	236	37	233	38	230	38	227.0	39.0	223.9	39.5
300	259	41	256	41	253	42	250	42	246.9	42.6	243.8	43.1
325	280	44	276	45	273	45	270	46	266.8	46.3	263.6	46.8
350	300	48	297	48	293	49	290	49	286.7	50.0	283.4	50.5
375	319	52	316	52	313	53	310	53	306.8	53.6	303.7	54.1
400	340	55	336	56	333	56	330	57	326.8	57.3	323.5	57.8

NESC Ice and Wind Loading Districts

3-Pair x 22 AWG						
Span ft	Heavy		Medium		Light	
	Vertical Sag in	Horizontal Sag in	Vertical Sag in	Horizontal Sag in	Vertical Sag in	Horizontal Sag in
50	17	13	11	12	4	11
75	29	22	18	21	6	19
100	43	32	26	30	8	26
125	58	44	35	40	11	34
150	80	60	44	51	13	43
175	97	73	55	63	16	52
200	115	86	67	78	19	62
225	x	x	81	94	22	70
250	x	x	95	109	26	83
275	x	x	107	123	30	95
300	x	x	119	137	34	110
325	x	x	x	x	39	126
350	x	x	x	x	44	142
375	x	x	x	x	48	155
400	x	x	x	x	52	167

5-Pair x 22 AWG						
Span ft	Heavy		Medium		Light	
	Vertical Sag in	Horizontal Sag in	Vertical Sag in	Horizontal Sag in	Vertical Sag in	Horizontal Sag in
50	15	11	10	10	4	10
75	27	20	17	18	6	17
100	42	30	25	27	9	24
125	58	42	34	37	12	32
150	74	53	45	49	15	40
175	90	65	57	61	18	50
200	106	76	69	74	22	60
225	x	x	81	87	27	73
250	x	x	92	99	32	86
275	x	x	104	111	37	99
300	x	x	115	123	42	112
325	x	x	x	x	46	125
350	x	x	x	x	51	137
375	x	x	x	x	55	149
400	x	x	x	x	59	160

Loading District Specifics

	Heavy	Medium	Light
Horizontal Wind Pressure (lb/ft ²)	4	4	9
Radial Ice Thickness (in)	½	¼	0
Temperature (F)	0	15	30