



Product Description: S-144-LN-XY-F12NS/S - Maximum Span 202 m (663 ft)

Loading Conditions: NESC LIGHT

Ice Thickness	0 mm	0 in
Wind Speed	95.4 km/hr	59.3 MPH
Temperature	-1.1 C	30 F
Safety Factor	0.73 N/m	0.1 lb/ft

Tension @ Maximum Span for 1.5 % Installation Sag:

Short Term	600 kg	1,323 lb
Long Term	329 kg	725 lb

Specifications:

Maximum Span	202 m	663 ft
Cable Weight	195 kg/km	131 lb/1000 ft
Cable Diameter	16.28 mm	0.64 in.
Installation Temp	20 C	68 F
Cable Modulus	88,627 kg	195,389 lb
Linear Expansion Coefficient	0.00002157 1 / C	0.00002157 1 / F
Estimated Break Load	1,329 kg	2,930 lb

Maximum Cable Length: Dependent on construction and/or fiber type

Singlemode	4,000 m	13,123 ft
62.5/125 Multimode	4,000 m	13,123 ft

Install Conditions at 20.00 °C (68 °F)

Span (m)	Sag (m)	Install Sag (%)	Tension (kg)	Cable Strain (%)
20	0.3	1.5	33	0.1
40	0.61	1.5	66	0.12
61	0.91	1.5	99	0.16
81	1.21	1.5	131	0.20
101	1.52	1.5	164	0.24
121	1.82	1.5	197	0.27
141	2.12	1.5	230	0.31
162	2.42	1.5	263	0.35
182	2.73	1.5	296	0.38
202	3.03	1.5	329	0.42

Loading Conditions at -1.10 °C (30 °F)

Vertical Sag % of Span (%)	Vertical Sag (m)	Horizontal Sag (m)	Resultant Sag (m)	Tension (kg)	Cable Strain (%)	Blowout Angle (°)
0	0.1	0.3	0	133	0.15	75
0.54%	0.22	0.80	0.83	202	0.22	75
0.62%	0.38	1.38	1.43	262	0.29	75
0.68%	0.55	2.03	2.10	317	0.35	75
0.73%	0.74	2.72	2.82	369	0.41	75
0.78%	0.94	3.46	3.58	418	0.47	75
0.81%	1.15	4.22	4.38	466	0.52	75
0.85%	1.37	5.02	5.20	512	0.57	75
0.88%	1.59	5.85	6.06	556	0.62	75
0.90%	1.82	6.69	6.94	600	0.67	75

The recommended maximum space potential at ADSS attachment point is 12 kV

Recommended Hardware:

Dead End Assembly:

HUBBELL Dead-End: AFWDEL113CEL, Max. Tension: 2,500 lbs. (1,134 kg)
 PLP Dead-End: 2872008C1E1, Max. Tension: 2,500 lbs. (1,134 kg)

Slack Storage Devices:

HUBBELL OPTI-LOOP™ Storage wheel: FOSSPCW14ADSS
 PLP Fiberlign® Storage System: 8004072

Fixed Tangent Support (Line Angle Changes <= 20 deg & Spans <= 600 ft (183 m))

HUBBELL: Dielectric: NA
 HUBBELL: Galvanized Steel: ASCF114
 PLP: Dielectric: 44009776
 PLP: Aluminum: 4450103

Heliformed Suspension Units (Spans <= 500 ft (152 m)):

HUBBELL: AFWSUS113

Vibration Damper:

HUBBELL: SVD106
 PLP Vibration Dampers: 50509862

Suspended Support (Line Angle Changes <= 20 deg & Spans <= 600 ft (183 m))

PLP: Aluminum Suspension: 4450203S

Downlead Cushion & Abrasion Protector:

PLP Cushion: 8003043, Add "H1" - Wood Attachment Kit & "LTC1" - Lattice Tower Clamp Kit
 PLP Abrasion Protector: PTG-0203 Length: 6 ft

Corona coils not required

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Product Description: S-144-LN-XY-F12NS/S - Maximum Span 168 m (551 ft)

Loading Conditions: NESC MEDIUM

Ice Thickness	6.4 mm	0.25 in
Wind Speed	63.6 km/hr	39.5 MPH
Temperature	-9.4 C	15 F
Safety Factor	2.92 N/m	0.2 lb/ft

Tension @ Maximum Span for 1.5 % Installation Sag:

Short Term	624 kg	1,376 lb
Long Term	273 kg	602 lb

Specifications:

Maximum Span	168 m	551 ft
Cable Weight	195 kg/km	131 lb/1000 ft
Cable Diameter	16.28 mm	0.64 in.
Installation Temp	20 C	68 F
Cable Modulus	88,627 kg	195,389 lb
Linear Expansion Coefficient	0.00002157 1 / C	0.00002157 1 / F
Estimated Break Load	1,329 kg	2,930 lb

Maximum Cable Length: Dependent on construction and/or fiber type

Singlemode	4,000 m	13,123 ft
62.5/125 Multimode	4,000 m	13,123 ft

Install Conditions at 20.00 °C (68 °F)

Span (m)	Sag (m)	Install Sag (%)	Tension (kg)	Cable Strain (%)
17	0.25	1.5	27	0.08
34	0.50	1.5	55	0.11
50	0.76	1.5	82	0.14
67	1.01	1.5	109	0.17
84	1.26	1.5	137	0.20
101	1.51	1.5	164	0.24
118	1.76	1.5	191	0.27
134	2.02	1.5	219	0.30
151	2.27	1.5	246	0.33
168	2.52	1.5	273	0.36

Loading Conditions at -1.10 °C (30 °F)

Vertical Sag % of Span (%)	Vertical Sag (m)	Horizontal Sag (m)	Resultant Sag (m)	Tension (kg)	Cable Strain (%)	Blowout Angle (°)
1.16%	0.20	0.18	0.27	148	0.14	43
1.57%	0.53	0.49	0.72	220	0.22	43
1.84%	0.93	0.87	1.27	281	0.29	43
2.04%	1.37	1.28	1.88	339	0.36	43
2.21%	1.86	1.73	2.54	391	0.42	43
2.35%	2.37	2.21	3.24	441	0.47	43
2.47%	2.91	2.72	3.98	489	0.53	43
2.58%	3.47	3.24	4.75	536	0.58	43
2.68%	4.05	3.79	5.55	580	0.63	43
2.77%	4.66	4.35	6.37	624	0.68	43

The recommended maximum space potential at ADSS attachment point is 12 kV

Recommended Hardware:

Dead End Assembly:

HUBBELL Dead-End: AFWDEL113CEL, Max. Tension: 2,500 lbs. (1,134 kg)
 PLP Dead-End: 2872008C1E1, Max. Tension: 2,500 lbs. (1,134 kg)

Slack Storage Devices:

HUBBELL OPTI-LOOP™ Storage wheel: FOSSCW14ADSS
 PLP Fiberlign® Storage System: 8004072

Fixed Tangent Support (Line Angle Changes <= 20 deg & Spans <= 600 ft (183 m))

HUBBELL: Dielectric: NA
 HUBBELL: Galvanized Steel: ASCF114
 PLP: Dielectric: 44009776
 PLP: Aluminum: 4450103

Heliformed Suspension Units (Spans <= 500 ft (152 m):

HUBBELL: AFWSUS113

Vibration Damper:

HUBBELL: SVD106
 PLP Vibration Dampers: 50509862

Suspended Support (Line Angle Changes <= 20 deg & Spans <= 600 ft (183 m))

PLP: Aluminum Suspension: 4450203S

Downlead Cushion & Abrasion Protector:

PLP Cushion: 8003043, Add "H1" - Wood Attachment Kit & "LTC1" - Lattice Tower Clamp Kit
 PLP Abrasion Protector: PTG-0203 Length: 6 ft

Corona coils not required

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Product Description: S-144-LN-XY-F12NS/S - Maximum Span 113 m (371 ft)

Loading Conditions: NESCA HEAVY

Ice Thickness	12.7 mm	0.5 in
Wind Speed	63.6 km/hr	39.5 MPH
Temperature	-17.8 C	0 F
Safety Factor	4.38 N/m	0.3 lb/ft

Tension @ Maximum Span for 1.5 % Installation Sag:

Short Term	642 kg	1,415 lb
Long Term	184 kg	406 lb

Specifications:

Maximum Span	113 m	371 ft
Cable Weight	195 kg/km	131 lb/1000 ft
Cable Diameter	16.28 mm	0.64 in.
Installation Temp	20 C	68 F
Cable Modulus	88,627 kg	195,389 lb
Linear Expansion Coefficient	0.00002157 1 / C	0.00002157 1 / F
Estimated Break Load	1,329 kg	2,930 lb

Maximum Cable Length: Dependent on construction and/or fiber type

Singlemode	4,000 m	13,123 ft
62.5/125 Multimode	4,000 m	13,123 ft

Install Conditions at 20.00 °C (68 °F)

Span (m)	Sag (m)	Install Sag (%)	Tension (kg)	Cable Strain (%)
11	0.17	1.5	18	0.07
23	0.34	1.5	37	0.09
34	0.51	1.5	55	0.11
45	0.68	1.5	74	0.13
57	0.85	1.5	92	0.15
68	1.02	1.5	110	0.18
79	1.19	1.5	129	0.20
90	1.36	1.5	147	0.22
102	1.53	1.5	165	0.24
113	1.70	1.5	184	0.26

Loading Conditions at -1.10 °C (30 °F)

Vertical Sag % of Span (%)	Vertical Sag (m)	Horizontal Sag (m)	Resultant Sag (m)	Tension (kg)	Cable Strain (%)	Blowout Angle (°)
1.40%	0.16	0.10	0.19	164	0.14	33
1.93%	0.44	0.28	0.52	237	0.22	33
2.29%	0.77	0.51	0.93	301	0.29	33
2.56%	1.16	0.75	1.38	358	0.36	33
2.78%	1.57	1.03	1.88	411	0.42	33
2.98%	2.02	1.32	2.41	461	0.48	33
3.15%	2.49	1.63	2.97	509	0.53	33
3.30%	2.98	1.95	3.56	555	0.58	33
3.44%	3.50	2.28	4.18	599	0.63	33
3.57%	4.03	2.63	4.81	642	0.68	33

The recommended maximum space potential at ADSS attachment point is 12 kV

Recommended Hardware:

Dead End Assembly:

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