



Product Description: S-096-LN-XY-F12NS/S - Maximum Span 219 m (718 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	474 kg	1,045 lb
Long Term	220 kg	485 lb

Specifications:

Maximum Span	219 m	718 ft
Cable Weight	120 kg/km	80 lb/1000 ft
Cable Diameter	12.72 mm	0.50 in.
Installation Temp	20 C	68 F
Cable Modulus	71,676 kg	158,019 lb
Linear Expansion Coefficient	0.00002157 1 / C	0.00002157 1 / F
Estimated Break Load	1,075 kg	2,370 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 (%)
22	0.33	1.5	22	0.07
44	0.66	1.5	44	0.10
66	0.99	1.5	66	0.14
88	1.31	1.5	88	0.17
110	1.64	1.5	110	0.20
131	1.97	1.5	132	0.23
153	2.30	1.5	154	0.26
175	2.63	1.5	176	0.29
197	2.96	1.5	198	0.32
219	3.29	1.5	220	0.35

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 (°)
0.36%	0.08	0.36	0.37	104	0.14	78
0.46%	0.20	0.94	0.96	161	0.22	78
0.53%	0.35	1.63	1.67	209	0.29	78
0.59%	0.51	2.40	2.45	253	0.35	78
0.63%	0.69	3.22	3.30	294	0.41	78
0.67%	0.88	4.10	4.19	333	0.46	78
0.70%	1.08	5.02	5.13	370	0.51	78
0.73%	1.28	5.97	6.11	405	0.56	78
0.76%	1.50	6.97	7.12	440	0.61	78
0.78%	1.71	7.99	8.17	474	0.66	78

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

Recommended Hardware:

Dead End Assembly:

HUBBELL Dead-End: AFWDEL110CEL, Max. Tension: 2,500 lbs. (1,134 kg)
 PLP Dead-End: 2872004C1E1, 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: AHSC1200 (<= 325 ft)
 HUBBELL: Galvanized Steel: ASCF102
 PLP: Dielectric: 44009952
 PLP: Aluminum: 4450100

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

HUBBELL: AFWSSUS110

Vibration Damper:

HUBBELL: SVD105
 PLP Vibration Dampers: 50502274

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

PLP: Aluminum Suspension: 4450200S

Downlead Cushion & Abrasion Protector:

PLP Cushion: 8003042, Add "H1" - Wood Attachment Kit & "LTC1" - Lattice Tower Clamp Kit
 PLP Abrasion Protector: PTG-0201 Length: 6 ft

Corona coils not required

These calculations are provided for guidance purposes only and should not be used or in any way relied upon without consultation with and of experienced network design specialists. CommScope makes no representations or warranties of any kind, express or implied, including any representation or warranty regarding the quality, content, completeness, suitability, adequacy or accuracy of the data contained herein. under no obligation to issue any upgrades or updates or notify customers/users of these calculations that changes have been made to the The user of these calculations assumes all risks associated with such use, and CommScope Hereby disclaims any and all liability for damages of kind resulting from such use.



Product Description: S-096-LN-XY-F12NS/S - Maximum Span 163 m (535 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	486 kg	1,071 lb
Long Term	163 kg	359 lb

Specifications:

Maximum Span	163 m	535 ft
Cable Weight	120 kg/km	80 lb/1000 ft
Cable Diameter	12.72 mm	0.50 in.
Installation Temp	20 C	68 F
Cable Modulus	71,676 kg	158,019 lb
Linear Expansion Coefficient	0.00002157 1 / C	0.00002157 1 / F
Estimated Break Load	1,075 kg	2,370 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 (%)
16	0.24	1.5	16	0.07
33	0.49	1.5	33	0.09
49	0.73	1.5	49	0.11
65	0.98	1.5	65	0.13
82	1.22	1.5	82	0.16
98	1.47	1.5	98	0.18
114	1.71	1.5	114	0.20
130	1.96	1.5	131	0.23
147	2.20	1.5	147	0.25
163	2.45	1.5	163	0.27

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 (°)
1.21%	0.20	0.21	0.29	113	0.14	47
1.58%	0.51	0.55	0.75	173	0.22	47
1.85%	0.90	0.96	1.32	221	0.29	47
2.06%	1.34	1.43	1.96	266	0.35	47
2.22%	1.81	1.93	2.65	307	0.41	47
2.37%	2.32	2.47	3.38	346	0.46	47
2.50%	2.85	3.03	4.16	383	0.51	47
2.61%	3.40	3.62	4.97	418	0.56	47
2.71%	3.98	4.24	5.81	453	0.61	47
2.81%	4.58	4.87	6.69	486	0.66	47

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

Recommended Hardware:

Dead End Assembly:

HUBBELL Dead-End: AFWDEL110CEL, Max. Tension: 2,500 lbs. (1,134 kg)
 PLP Dead-End: 2872004C1E1, 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: AHSC1200 (<= 325 ft)
 HUBBELL: Galvanized Steel: ASCF102
 PLP: Dielectric: 44009952
 PLP: Aluminum: 4450100

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

HUBBELL: AFWSSUS110

Vibration Damper:

HUBBELL: SVD105
 PLP Vibration Dampers: 50502274

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

PLP: Aluminum Suspension: 4450200S

Downlead Cushion & Abrasion Protector:

PLP Cushion: 8003042, Add "H1" - Wood Attachment Kit & "LTC1" - Lattice Tower Clamp Kit
 PLP Abrasion Protector: PTG-0201 Length: 6 ft

Corona coils not required

These calculations are provided for guidance purposes only and should not be used or in any way relied upon without consultation with and of experienced network design specialists. CommScope makes no representations or warranties of any kind, express or implied, including any representation or warranty regarding the quality, content, completeness, suitability, adequacy or accuracy of the data contained herein. under no obligation to issue any upgrades or updates or notify customers/users of these calculations that changes have been made to the The user of these calculations assumes all risks associated with such use, and CommScope Hereby disclaims any and all liability for damages of kind resulting from such use.



Product Description: S-096-LN-XY-F12NS/S - Maximum Span 103 m (338 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	498 kg	1,098 lb
Long Term	103 kg	227 lb

Specifications:

Maximum Span	103 m	338 ft
Cable Weight	120 kg/km	80 lb/1000 ft
Cable Diameter	12.72 mm	0.50 in.
Installation Temp	20 C	68 F
Cable Modulus	71,676 kg	158,019 lb
Linear Expansion Coefficient	0.00002157 1 / C	0.00002157 1 / F
Estimated Break Load	1,075 kg	2,370 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 (%)
10	0.15	1.5	10	0.06
21	0.31	1.5	21	0.07
31	0.46	1.5	31	0.09
41	0.62	1.5	41	0.10
52	0.77	1.5	52	0.12
62	0.93	1.5	62	0.13
72	1.08	1.5	72	0.14
82	1.24	1.5	83	0.16
93	1.39	1.5	93	0.17
103	1.55	1.5	103	0.19

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 (°)
1.49%	0.15	0.11	0.19	122	0.13	36
1.99%	0.41	0.29	0.50	182	0.22	36
2.33%	0.72	0.51	0.88	233	0.29	36
2.60%	1.07	0.77	1.32	278	0.35	36
2.83%	1.46	1.04	1.79	320	0.41	36
3.03%	1.87	1.34	2.30	359	0.46	36
3.20%	2.31	1.65	2.84	396	0.51	36
3.36%	2.77	1.98	3.40	431	0.56	36
3.50%	3.25	2.32	3.99	465	0.61	36
3.64%	3.74	2.67	4.60	498	0.66	36

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

Recommended Hardware:

Dead End Assembly:

HUBBELL Dead-End: AFWDEL110CEL, Max. Tension: 2,500 lbs. (1,134 kg)
 PLP Dead-End: 2872004C1E1, 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: AHSC1200 (<= 325 ft)
 HUBBELL: Galvanized Steel: ASCF102
 PLP: Dielectric: 44009952
 PLP: Aluminum: 4450100

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

HUBBELL: AFWSSUS110

Vibration Damper:

HUBBELL: SVD105
 PLP Vibration Dampers: 50502274

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

PLP: Aluminum Suspension: 4450200S

Downlead Cushion & Abrasion Protector:

PLP Cushion: 8003042, Add "H1" - Wood Attachment Kit & "LTC1" - Lattice Tower Clamp Kit
 PLP Abrasion Protector: PTG-0201 Length: 6 ft

Corona coils not required

These calculations are provided for guidance purposes only and should not be used or in any way relied upon without consultation with and of experienced network design specialists. CommScope makes no representations or warranties of any kind, express or implied, including any representation or warranty regarding the quality, content, completeness, suitability, adequacy or accuracy of the data contained herein. under no obligation to issue any upgrades or updates or notify customers/users of these calculations that changes have been made to the The user of these calculations assumes all risks associated with such use, and CommScope Hereby disclaims any and all liability for damages of kind resulting from such use.