



**Product Description: S-216-LN-XY-F12NS/S - Maximum Span 140 m (459 ft)**

**Loading Conditions: NESCLIGHT**

|               |            |           |
|---------------|------------|-----------|
| 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 | 438 kg | 966 lb |
| Long Term  | 219 kg | 483 lb |

**Specifications:**

|                              |                  |                  |
|------------------------------|------------------|------------------|
| Maximum Span                 | 140 m            | 459 ft           |
| Cable Weight                 | 188 kg/km        | 126 lb/1000 ft   |
| Cable Diameter               | 16.52 mm         | 0.65 in.         |
| Installation Temp            | 20 C             | 68 F             |
| Cable Modulus                | 73,135 kg        | 161,235 lb       |
| Linear Expansion Coefficient | 0.00002157 1 / C | 0.00002157 1 / F |
| Estimated Break Load         | 1,097 kg         | 2,419 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<br>(ft) | Sag<br>(ft) | Install<br>Sag<br>(%) | Tension<br>(lb) | Cable Strain<br>(%) |
|--------------|-------------|-----------------------|-----------------|---------------------|
| 46           | 0.69        | 1.5                   | 48              | 0.10                |
| 92           | 1.38        | 1.5                   | 97              | 0.13                |
| 138          | 2.07        | 1.5                   | 145             | 0.16                |
| 184          | 2.76        | 1.5                   | 194             | 0.19                |
| 230          | 3.44        | 1.5                   | 242             | 0.22                |
| 276          | 4.13        | 1.5                   | 290             | 0.25                |
| 321          | 4.82        | 1.5                   | 339             | 0.28                |
| 367          | 5.51        | 1.5                   | 387             | 0.31                |
| 413          | 6.20        | 1.5                   | 436             | 0.34                |
| 459          | 6.89        | 1.5                   | 484             | 0.37                |

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

| Vertical Sag<br>% of Span<br>(%) | Vertical<br>Sag<br>(ft) | Horizontal<br>Sag<br>(ft) | Resultant<br>Sag<br>(ft) | Tension<br>(lb) | Cable<br>Strain<br>(%) | Blowout<br>Angle<br>(°) |
|----------------------------------|-------------------------|---------------------------|--------------------------|-----------------|------------------------|-------------------------|
| 0.34%                            | 0.16                    | 0.60                      | 0.62                     | 234             | 0.14                   | 76                      |
| 0.46%                            | 0.43                    | 1.66                      | 1.71                     | 342             | 0.21                   | 76                      |
| 0.55%                            | 0.75                    | 2.92                      | 3.01                     | 437             | 0.27                   | 76                      |
| 0.61%                            | 1.11                    | 4.32                      | 4.46                     | 525             | 0.32                   | 76                      |
| 0.66%                            | 1.51                    | 5.84                      | 6.04                     | 606             | 0.37                   | 76                      |
| 0.70%                            | 1.92                    | 7.46                      | 7.70                     | 684             | 0.42                   | 76                      |
| 0.73%                            | 2.36                    | 9.16                      | 9.46                     | 758             | 0.47                   | 76                      |
| 0.77%                            | 2.82                    | 10.92                     | 11.28                    | 830             | 0.51                   | 76                      |
| 0.80%                            | 3.29                    | 12.76                     | 13.17                    | 900             | 0.55                   | 76                      |
| 0.82%                            | 3.78                    | 14.64                     | 15.12                    | 968             | 0.60                   | 76                      |

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)

**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

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

PLP: Aluminum Suspension: 4450203S

**Corona coils not required**

**Slack Storage Devices:**

HUBBELL OPTI-LOOP™ Storage wheel: FOSPCW14ADSS  
 PLP Fiberlign® Storage System: 8004072

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

HUBBELL: AFWUSUS113

**Vibration Damper:**

HUBBELL: SVD106  
 PLP Vibration Dampers: 50509862

**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

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**Product Description: S-216-LN-XY-F12NS/S - Maximum Span 116 m (380 ft)**

**Loading Conditions: NESCOM 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 | 458 kg | 1,010 lb |
| Long Term  | 181 kg | 399 lb   |

**Specifications:**

|                              |                  |                  |
|------------------------------|------------------|------------------|
| Maximum Span                 | 116 m            | 380 ft           |
| Cable Weight                 | 188 kg/km        | 126 lb/1000 ft   |
| Cable Diameter               | 16.52 mm         | 0.65 in.         |
| Installation Temp            | 20 C             | 68 F             |
| Cable Modulus                | 73,135 kg        | 161,235 lb       |
| Linear Expansion Coefficient | 0.00002157 1 / C | 0.00002157 1 / F |
| Estimated Break Load         | 1,097 kg         | 2,419 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<br>(ft) | Sag<br>(ft) | Install<br>Sag<br>(%) | Tension<br>(lb) | Cable Strain<br>(%) |
|--------------|-------------|-----------------------|-----------------|---------------------|
| 38           | 0.57        | 1.5                   | 40              | 0.09                |
| 76           | 1.14        | 1.5                   | 80              | 0.12                |
| 114          | 1.71        | 1.5                   | 120             | 0.14                |
| 152          | 2.28        | 1.5                   | 160             | 0.17                |
| 190          | 2.85        | 1.5                   | 201             | 0.19                |
| 228          | 3.42        | 1.5                   | 241             | 0.22                |
| 266          | 4.00        | 1.5                   | 281             | 0.24                |
| 304          | 4.57        | 1.5                   | 321             | 0.27                |
| 342          | 5.14        | 1.5                   | 361             | 0.29                |
| 380          | 5.71        | 1.5                   | 401             | 0.32                |

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

| Vertical Sag<br>% of Span<br>(%) | Vertical<br>Sag<br>(ft) | Horizontal<br>Sag<br>(ft) | Resultant<br>Sag<br>(ft) | Tension<br>(lb) | Cable<br>Strain<br>(%) | Blowout<br>Angle<br>(°) |
|----------------------------------|-------------------------|---------------------------|--------------------------|-----------------|------------------------|-------------------------|
| 0.96%                            | 0.37                    | 0.35                      | 0.50                     | 273             | 0.14                   | 43                      |
| 1.39%                            | 1.06                    | 1.00                      | 1.46                     | 376             | 0.20                   | 43                      |
| 1.65%                            | 1.88                    | 1.78                      | 2.59                     | 477             | 0.26                   | 43                      |
| 1.86%                            | 2.83                    | 2.68                      | 3.90                     | 564             | 0.32                   | 43                      |
| 2.03%                            | 3.85                    | 3.65                      | 5.31                     | 648             | 0.37                   | 43                      |
| 2.17%                            | 4.95                    | 4.68                      | 6.81                     | 726             | 0.42                   | 43                      |
| 2.29%                            | 6.10                    | 5.78                      | 8.40                     | 802             | 0.46                   | 43                      |
| 2.40%                            | 7.31                    | 6.92                      | 10.07                    | 874             | 0.51                   | 43                      |
| 2.50%                            | 8.57                    | 8.11                      | 11.80                    | 944             | 0.55                   | 43                      |
| 2.59%                            | 9.87                    | 9.34                      | 13.59                    | 1012            | 0.59                   | 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: FOSPCW14ADSS  
 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: AFWUSUS113

**Vibration Damper:**

HUBBELL: SVD106  
 PLP Vibration Dampers: 50509862

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

PLP: Aluminum Suspension: 4450203S

**Download 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-216-LN-XY-F12NS/S - Maximum Span 78 m (256 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 | 477 kg | 1,052 lb |
| Long Term  | 122 kg | 269 lb   |

**Specifications:**

|                              |                  |                  |
|------------------------------|------------------|------------------|
| Maximum Span                 | 78 m             | 256 ft           |
| Cable Weight                 | 188 kg/km        | 126 lb/1000 ft   |
| Cable Diameter               | 16.52 mm         | 0.65 in.         |
| Installation Temp            | 20 C             | 68 F             |
| Cable Modulus                | 73,135 kg        | 161,235 lb       |
| Linear Expansion Coefficient | 0.00002157 1 / C | 0.00002157 1 / F |
| Estimated Break Load         | 1,097 kg         | 2,419 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<br>(ft) | Sag<br>(ft) | Install<br>Sag<br>(%) | Tension<br>(lb) | Cable Strain<br>(%) |
|--------------|-------------|-----------------------|-----------------|---------------------|
| 26           | 0.38        | 1.5                   | 27              | 0.08                |
| 51           | 0.77        | 1.5                   | 54              | 0.10                |
| 77           | 1.15        | 1.5                   | 81              | 0.12                |
| 102          | 1.54        | 1.5                   | 108             | 0.13                |
| 128          | 1.92        | 1.5                   | 135             | 0.15                |
| 154          | 2.30        | 1.5                   | 162             | 0.17                |
| 179          | 2.69        | 1.5                   | 189             | 0.18                |
| 205          | 3.07        | 1.5                   | 216             | 0.20                |
| 230          | 3.45        | 1.5                   | 243             | 0.22                |
| 256          | 3.84        | 1.5                   | 270             | 0.23                |

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

| Vertical Sag<br>% of Span<br>(%) | Vertical<br>Sag<br>(ft) | Horizontal<br>Sag<br>(ft) | Resultant<br>Sag<br>(ft) | Tension<br>(lb) | Cable<br>Strain<br>(%) | Blowout<br>Angle<br>(°) |
|----------------------------------|-------------------------|---------------------------|--------------------------|-----------------|------------------------|-------------------------|
| 1.19%                            | 0.30                    | 0.20                      | 0.36                     | 295             | 0.12                   | 33                      |
| 1.68%                            | 0.86                    | 0.56                      | 1.03                     | 416             | 0.20                   | 33                      |
| 2.04%                            | 1.56                    | 1.03                      | 1.87                     | 515             | 0.26                   | 33                      |
| 2.31%                            | 2.37                    | 1.55                      | 2.83                     | 605             | 0.31                   | 33                      |
| 2.54%                            | 3.24                    | 2.13                      | 3.88                     | 689             | 0.37                   | 33                      |
| 2.73%                            | 4.19                    | 2.75                      | 5.01                     | 768             | 0.41                   | 33                      |
| 2.90%                            | 5.19                    | 3.40                      | 6.21                     | 844             | 0.46                   | 33                      |
| 3.05%                            | 6.24                    | 4.09                      | 7.47                     | 916             | 0.51                   | 33                      |
| 3.19%                            | 7.34                    | 4.82                      | 8.78                     | 986             | 0.55                   | 33                      |
| 3.32%                            | 8.48                    | 5.56                      | 10.14                    | 1054            | 0.59                   | 33                      |

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:**

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

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 PLP Abrasion Protector: PTG-0203 Length: 6 ft

**Corona coils not required**

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