

## Braced Post Insulator Assembly B2911061T12074MA

|                                   |     |
|-----------------------------------|-----|
| 1) H2 91 10 050 MX SS 026         | [1] |
| 2) S1 40 80 048 MA AL 031         | [1] |
| 3) Socket/Y-Clevis (SYC-56)       | [1] |
| 4) Turnbuckle (G-227-NBC-3/4x12C) | [1] |
| 5) Shackle (ASH-55-BC)            | [1] |

### ASSEMBLY DIMENSIONAL VALUES

|                                   |          |            |
|-----------------------------------|----------|------------|
| Post Section Length (PSL)         | 61.0 in  | 1,549 mm   |
| Suspension Section Length (SSL)   | 60.0 in  | 1,524 mm   |
| Height of Assembly (H)            | 74.0 in  | 1,880 mm   |
| Length of Brace (B)               | 93.7 in  | 2,380 mm   |
| Upper Pole Connection Offset (A)* | 2.0 in   | 51 mm      |
| Angle Between Insulators (C)      |          | 51 Degrees |
| Dry Arc Distance                  | 47.1 in  | 1,196 mm   |
| Leakage Distance                  | 137.9 in | 3,503 mm   |

\*This connection bracket to be supplied by customer

### ASSEMBLY ELECTRICAL VALUES\*

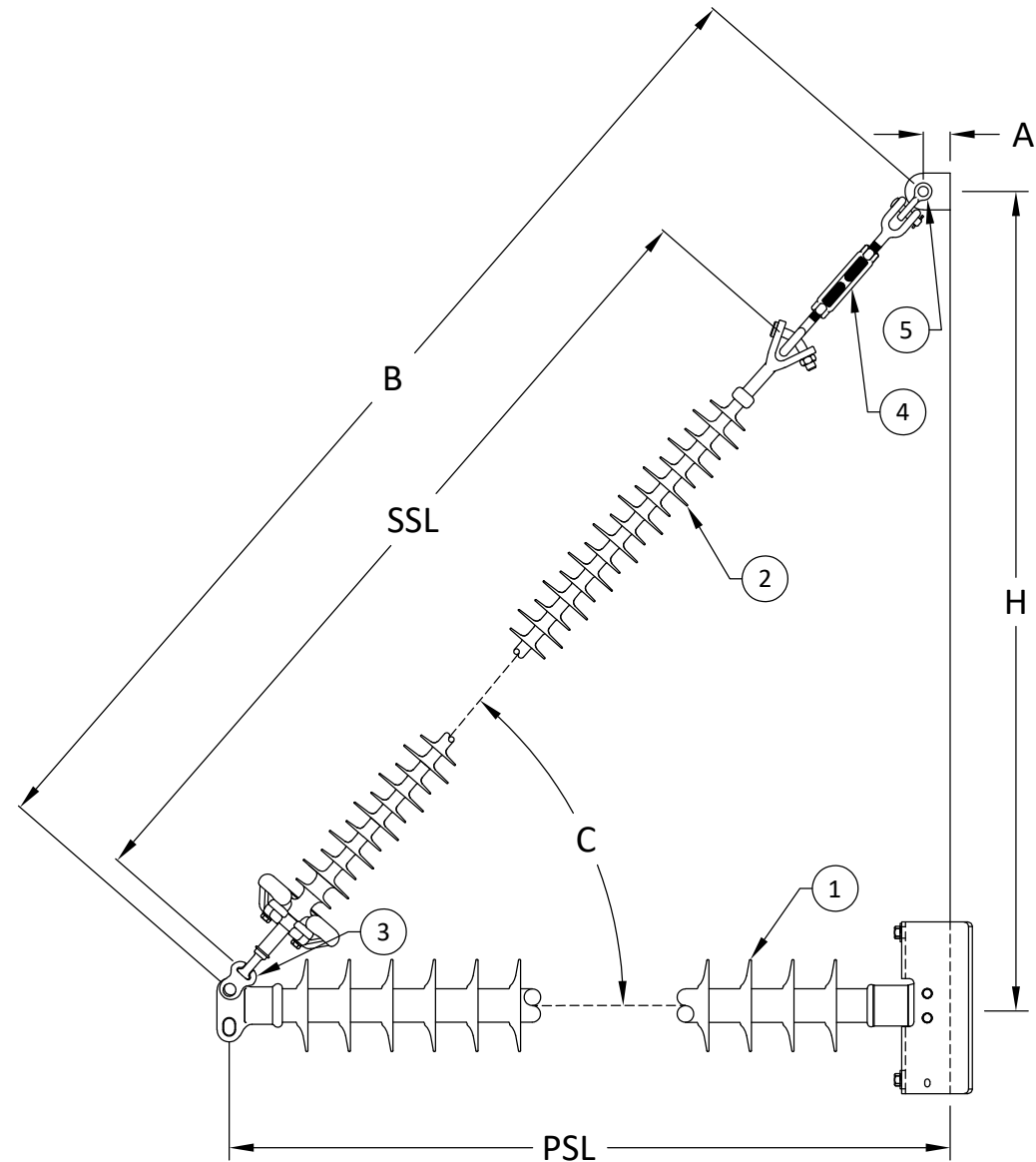
|                                 |        |          |
|---------------------------------|--------|----------|
| 60 Hz Dry F.O. (Min. Withstand) | 447 kV | (420) kV |
| 60 Hz Wet F.O. (Min. Withstand) | 414 kV | (327) kV |
| CIFO+ (Min. Withstand)          | 774 kV | (690) kV |
| CIFO- (Min. Withstand)          | 835 kV | (730) kV |

\*Values shown are based on minimum electricals for the assembly

### ASSEMBLY MECHANICAL VALUES

|                               |           |         |
|-------------------------------|-----------|---------|
| Maximum Working Vertical Load | 9,714 lbs | 43.2 kN |
|-------------------------------|-----------|---------|

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MPS Catalog Number

**H2 91 10 050 MX SS 026**

Date: 04/13/2022

**End Fittings**

Tower End Fitting:

Gain / 0 deg / Steel

Line End Fitting:

2 HL Drop Tongue / Galv. Ductile Iron

**Material**

Corona Ring (Line):

None

Corona Rings are recommended for applications of 230 kV and above

Mounting Angle:

0 deg

Number of Sheds:

26

Rod Diameter:

2.5 in

Weight Estimate:

62.5 lbs

28 kg

**Dimensional Values**

Section Length (L):

61 in 1,549 mm

Rubber Length (X):

50 in 1,270 mm

Shed spacing (S):

1.95 in 50 mm

Shed Projection (P):

1.86 in 47 mm

Dry Arc Distance:

52.9 in 1,343 mm

Leakage Distance:

137.9 in 3,503 mm

**Electricals Values**

60 Hz dry Flashover (Min. Withstand):

498 kV 468 kV

60 Hz Wet Flashover (Min. Withstand):

461 kV 365 kV

CIFO Positive (Min. Withstand):

866 kV 769 kV

CIFO Negative (Min. Withstand):

912 kV 811 kV

**Mechanical Values**

Max. Design Cant. Load (MDCL):

1,494 lbs 6.6 kN

Specified Cant. Load (SCL):

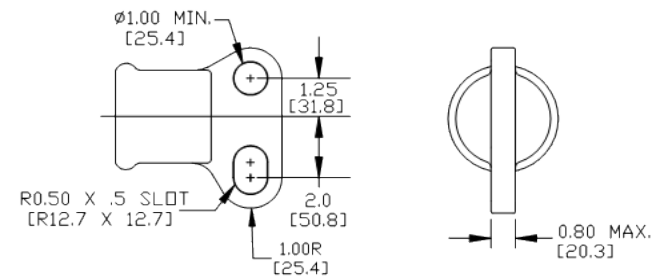
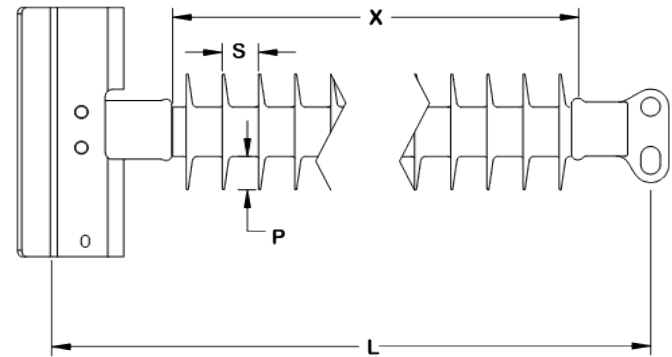
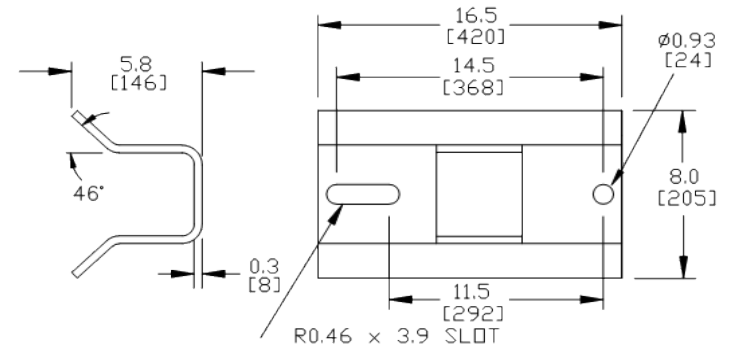
2,988 lbs 13.3 kN

Specified Tensile Load (STL):

15,000 lbs 66.7 kN

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Notes:



Dimension: inches [millimeters]

NOTE: Drawing not actual depiction of insulator appearance.

Silicone rubber sheath and sheds complies with applicable ANSI and IEC standards.

Prepared By: Stephen Lucci

MPS Catalog Number

**S1 40 80 048 MA AL 031**

Date: 04/01/2022

**End Fittings**

Tower End Fitting:

Y-Clevis / Forged Steel

Line End Fitting:

Ball / Forged Steel  
/ (ANSI 52-5)

**Material**

Corona Ring (Line):

8" Corona Ring

Corona Rings are recommended for applications of 230 kV and above

Number of Sheds:

15 large      16 standard

Rod Diameter:

16 mm

Weight Estimate:

12.9 lbs      6 kg

**Dimensional Values**

Section Length (L):

60 in      1,524 mm

Rubber Length (X):

48 in      1,219 mm

Standard Shed Height (P1):

1.5 in      38 mm

Large Shed Height (P2):

2 in      51 mm

Projection Ration (S/P):

-      1.5

Shed Spacing (S):

3 in      76 mm

Dry Arc Distance:

48.1 in      1,222 mm

Leakage Distance:

140.1 in      3,559 mm

**Electricals Values**

60 Hz dry Flashover (Min. Withstand):

472 kV      437 kV

60 Hz Wet Flashover (Min. Withstand):

422 kV      367 kV

CIFO Positive (Min. Withstand):

809 kV      703 kV

CIFO Negative (Min. Withstand):

857 kV      751 kV

**Mechanical Values**

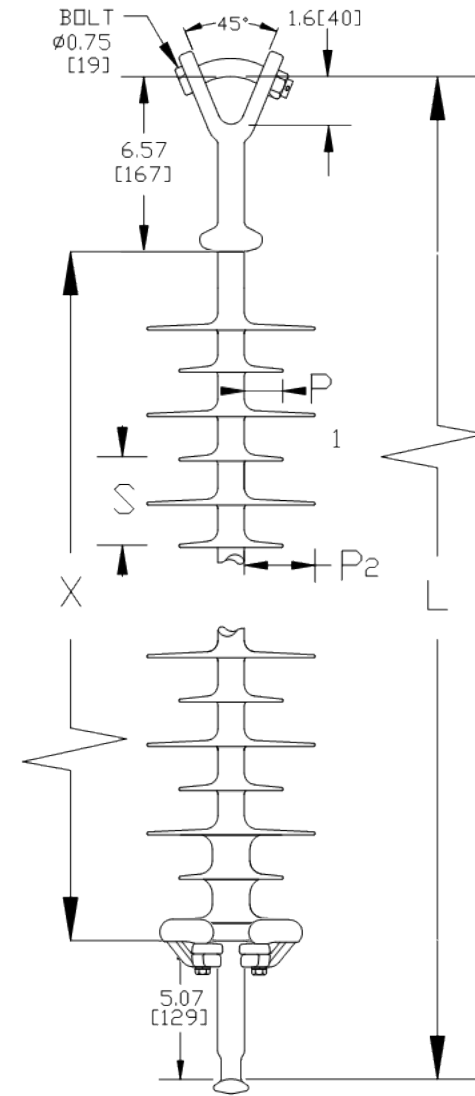
Specified Mech. Load (SML):

25,000 lbs      111.2 kN

Routine Test Load (RTL):

12,500 lbs      55.6 kN

Notes:



Dimension: inches [millimeters]

NOTE: Drawing not actual depiction of insulator appearance.

Silicone rubber sheath and sheds complies with applicable ANSI and IEC standards.

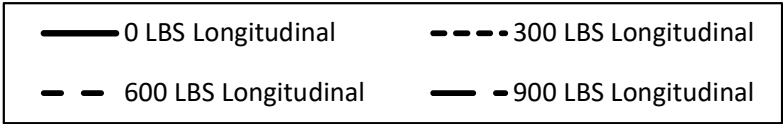
Prepared By: Stephen Lucci



MacLean Power Systems

## B2911061T12074MA Ultimate Combined Load Curve

Factor of Safety = 1



**Assumptions:**  
-Loading sequence is Longitudinal, Vertical, Transverse  
-Factor of Safety applied to entire system  
-Negligible downward tip deflection  
-Static moduli values  
-Confidence level of 95%

