

Braced Post Insulator Assembly B2901038T12069MX

| | |
|-----------------------------------|-----|
| 1) H2 90 10 027 MX SS 014 | [1] |
| 2) S1 40 80 025 MX AL 015 | [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) | 37.6 in | 955 mm |
| Suspension Section Length (SSL) | 36.2 in | 919 mm |
| Height of Assembly (H) | 69.0 in | 1,753 mm |
| Length of Brace (B) | 69.7 in | 1,770 mm |
| Upper Pole Connection Offset (A)* | 2.0 in | 51 mm |
| Angle Between Insulators (C) | | 72 Degrees |
| Dry Arc Distance | 26.8 in | 681 mm |
| Leakage Distance | 66.9 in | 1,699 mm |

*This connection bracket to be supplied by customer

ASSEMBLY ELECTRICAL VALUES*

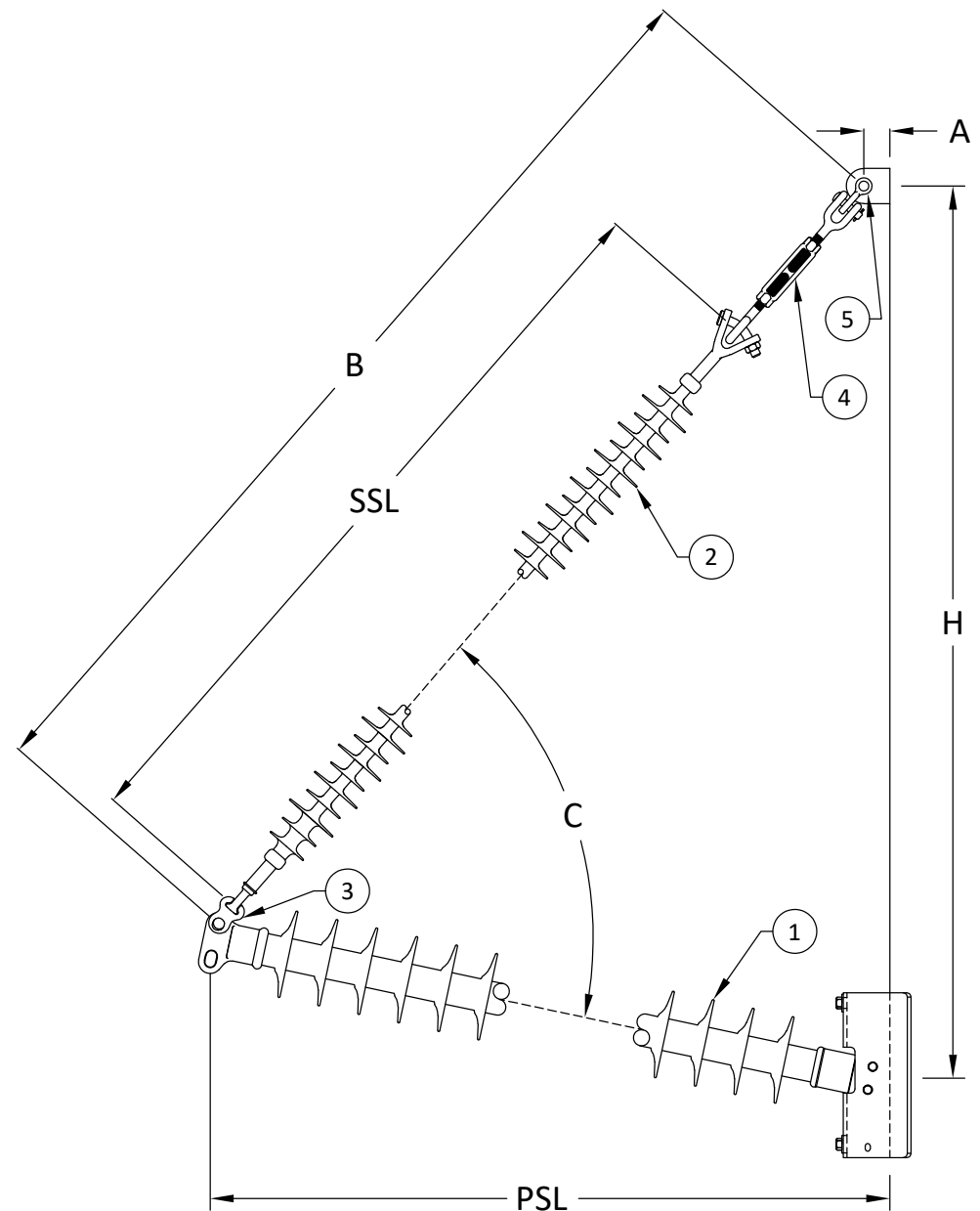
| | | |
|---------------------------------|--------|----------|
| 60 Hz Dry F.O. (Min. Withstand) | 266 kV | (249) kV |
| 60 Hz Wet F.O. (Min. Withstand) | 243 kV | (187) kV |
| CIFO+ (Min. Withstand) | 452 kV | (404) kV |
| CIFO- (Min. Withstand) | 547 kV | (439) kV |

*Values shown are based on minimum electricals for the assembly

ASSEMBLY MECHANICAL VALUES

| | | |
|-------------------------------|------------|---------|
| Maximum Working Vertical Load | 12,148 lbs | 54.0 kN |
|-------------------------------|------------|---------|

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MPS Catalog Number

H2 90 10 027 MX SS 014

Date: 03/23/2022

End Fittings

Tower End Fitting:

Gain / 12 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:

12 deg

Number of Sheds:

14

Rod Diameter:

2.5 in

Weight Estimate:

48.9 lbs

22 kg

Dimensional Values

Section Length (L):

37.6 in 955 mm

Rubber Length (X):

27 in 686 mm

Shed spacing (S):

1.95 in 50 mm

Shed Projection (P):

1.86 in 47 mm

Dry Arc Distance:

29.5 in 749 mm

Leakage Distance:

74.4 in 1,889 mm

Electricals Values

60 Hz dry Flashover (Min. Withstand):

290 kV 272 kV

60 Hz Wet Flashover (Min. Withstand):

266 kV 206 kV

CIFO Positive (Min. Withstand):

495 kV 443 kV

CIFO Negative (Min. Withstand):

589 kV 478 kV

Mechanical Values

Max. Design Cant. Load (MDCL):

2,573 lbs 11.4 kN

Specified Cant. Load (SCL):

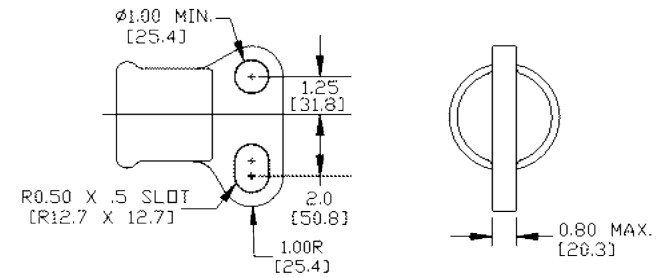
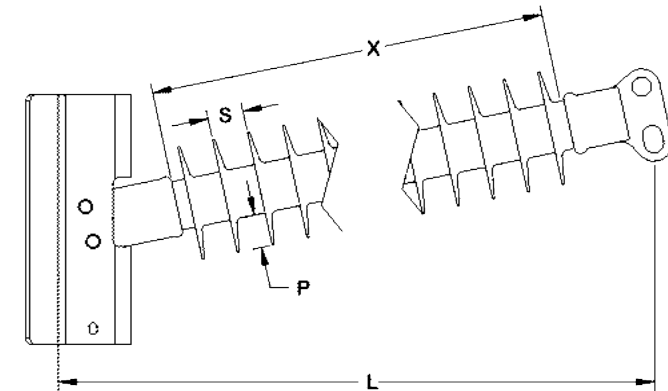
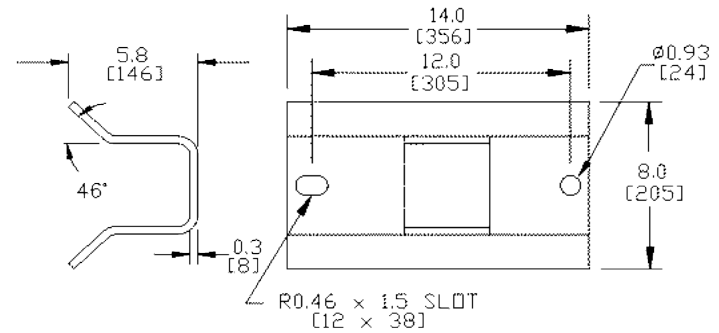
5,146 lbs 22.9 kN

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



7801 Park Place Rd.
York, SC 29745 USA
(803) 628-2100

MPS Catalog Number

S1 40 80 025 MX AL 015

Date: 03/22/2022

End Fittings

Tower End Fitting:

Y-Clevis / Forged Steel

Line End Fitting:

Ball / Forged Steel
/ (ANSI 52-5)

Material

Corona Ring (Line):

None

Corona Rings are recommended for applications of 230 kV and above

Number of Sheds:

7 large 8 standard

Rod Diameter:

16 mm

Weight Estimate:

7.3 lbs 3 kg

Dimensional Values

Section Length (L):

36.2 in 919 mm

Rubber Length (X):

25 in 635 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:

26.8 in 681 mm

Leakage Distance:

66.9 in 1,699 mm

Electricals Values

60 Hz dry Flashover (Min. Withstand):

269 kV 251 kV

60 Hz Wet Flashover (Min. Withstand):

243 kV 212 kV

CIFO Positive (Min. Withstand):

468 kV 403 kV

CIFO Negative (Min. Withstand):

503 kV 444 kV

Mechanical Values

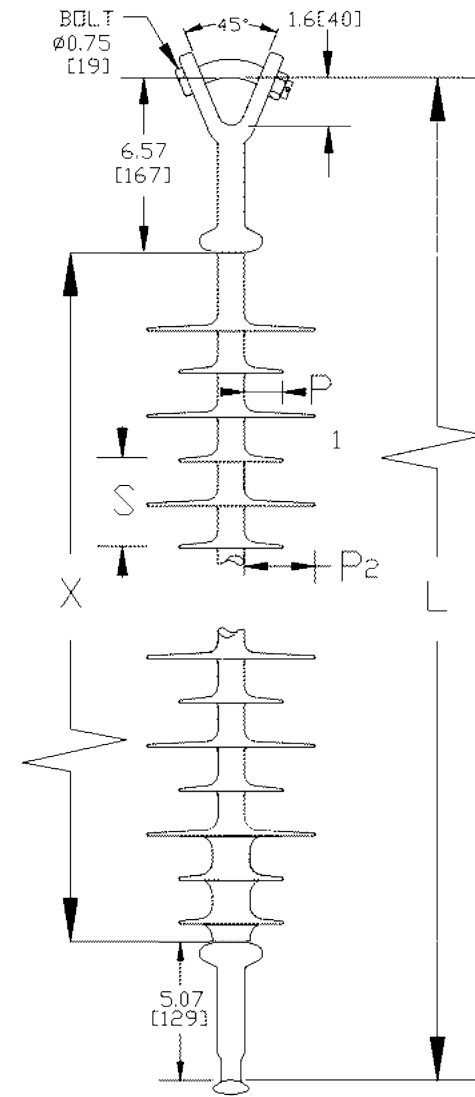
Specified Mech. Load (SML):

25,000 lbs 111.2 kN

Routine Test Load (RTL):

12,500 lbs 55.6 kN

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Notes:

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MacLean Power Systems

B2901038T12069MX 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%

