

Braced Post Insulator Assembly B2901084T12104AA

1) H2 90 10 074 AX SS 029	[1]
2) S1 40 80 072 MA AL 047	[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)	83.6 in	2,123 mm
Suspension Section Length (SSL)	84.0 in	2,134 mm
Height of Assembly (H)	104.0 in	2,642 mm
Length of Brace (B)	117.7 in	2,990 mm
Upper Pole Connection Offset (A)*	2.0 in	51 mm
Angle Between Insulators (C)		58 Degrees
Dry Arc Distance	71.6 in	1,819 mm
Leakage Distance	204.5 in	5,194 mm

*This connection bracket to be supplied by customer

ASSEMBLY ELECTRICAL VALUES*

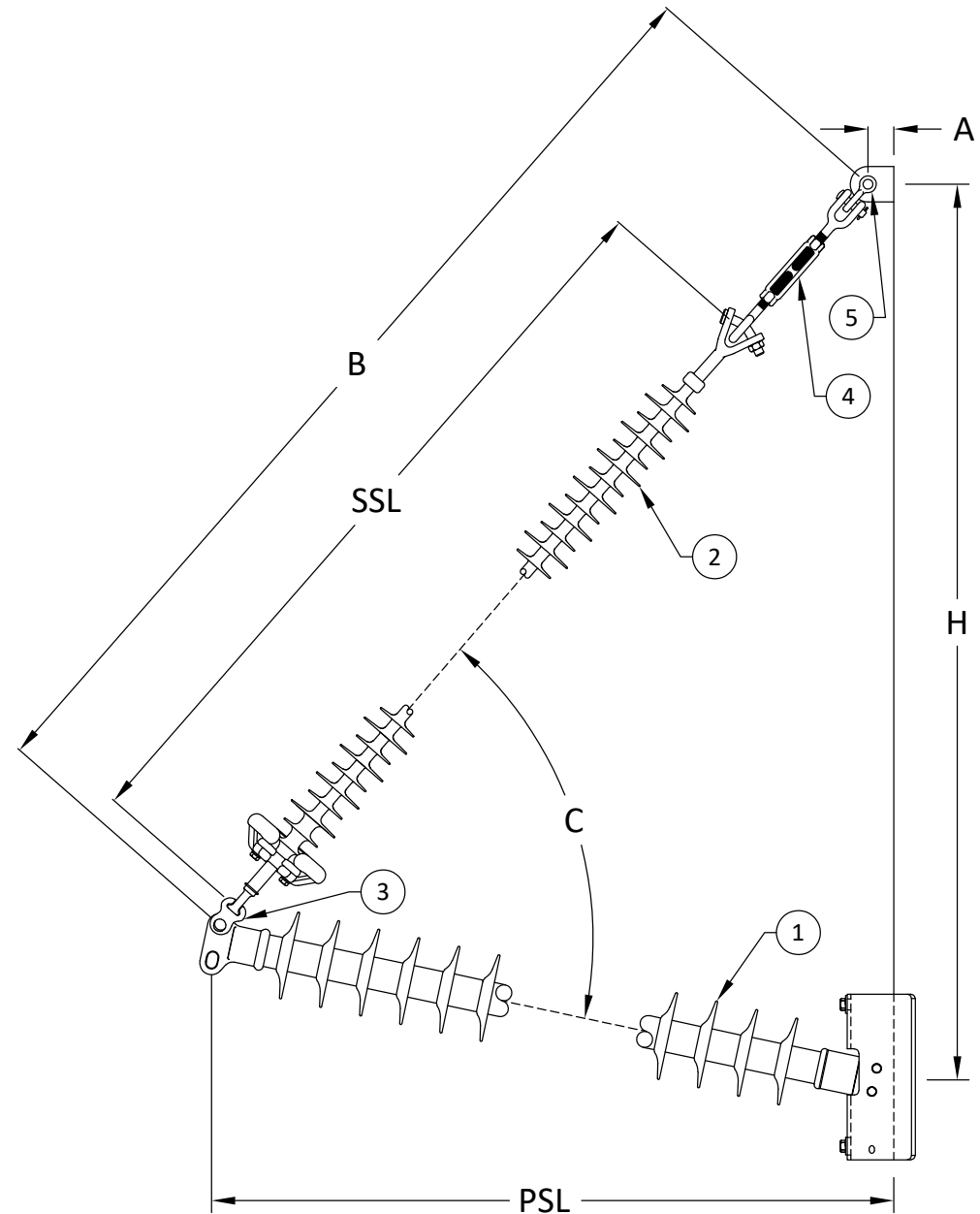
60 Hz Dry F.O. (Min. Withstand)	660 kV	(620) kV
60 Hz Wet F.O. (Min. Withstand)	604 kV	(487) kV
CIFO+ (Min. Withstand)	1,158 kV	(1,022) kV
CIFO- (Min. Withstand)	1,190 kV	(1,070) kV

*Values shown are based on minimum electricals for the assembly

ASSEMBLY MECHANICAL VALUES

Maximum Working Vertical Load	10,904 lbs	48.5 kN
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MPS Catalog Number:

H2 90 10 074 AX SS 029

Date:

04/11/2022

End Fittings

Tower End Fitting:

Gain / 12 deg / Steel

Line End Fitting:

Anchor / Ductile Iron
2 HL Drop Tongue / Galv. Ductile Iron

Material

Corona Ring (Tower):

None

Corona Ring (Line):

None

Corona Rings are recommended for applications of 230 kV and above

Mounting Angle:

12 deg

Number of Sheds:

29

Rod Diameter:

2.5 in

Weight Estimate:

90.5 lbs

41 kg

Dimensional Values

Section Length (L):

83.6 in 2,123 mm

Rubber Length (X):

74 in 1,880 mm

Shed spacing (S):

2.5 in 64 mm

Shed Projection (P):

2.4 in 61 mm

Dry Arc Distance:

76.9 in 1,953 mm

Leakage Distance:

204.5 in 5,194 mm

Electricals Values

60 Hz dry Flashover (Min. Withstand):

706 kV 662 kV

60 Hz Wet Flashover (Min. Withstand):

643 kV 520 kV

CIFO Positive (Min. Withstand):

1239 kV 1092 kV

CIFO Negative (Min. Withstand):

1267 kV 1142 kV

Mechanical Values

Max. Design Cant. Load (MDCL):

1,044 lbs 4.6 kN

Specified Cant. Load (SCL):

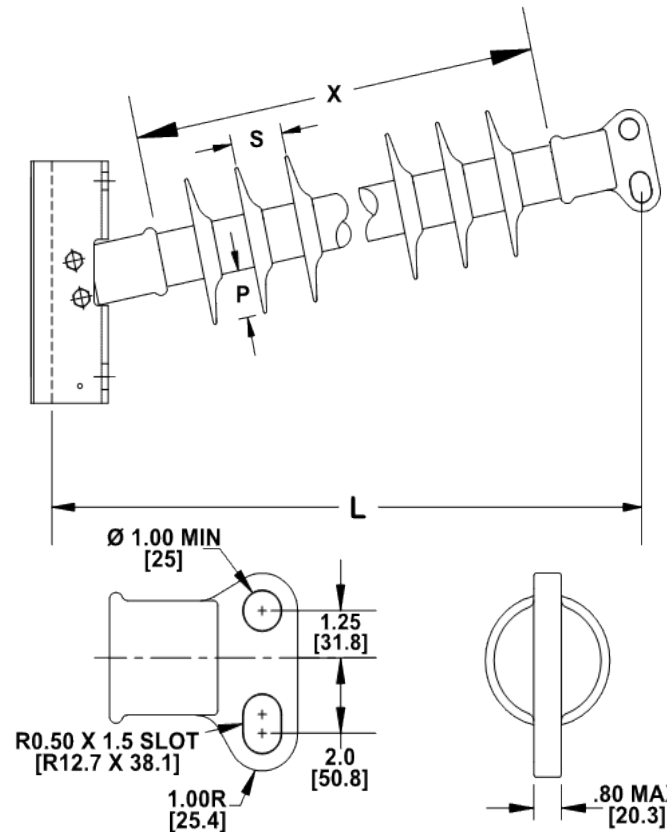
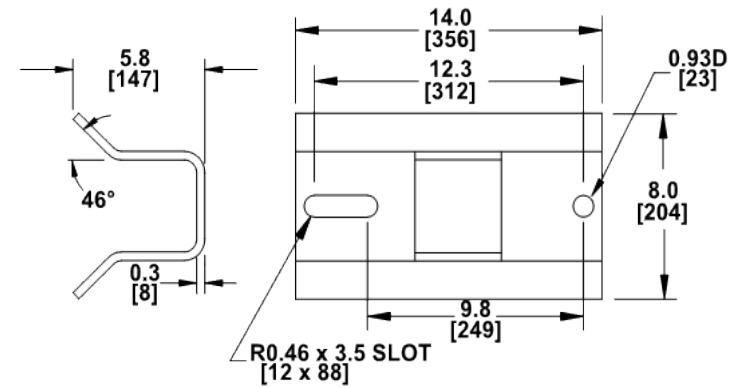
2,088 lbs 9.3 kN

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 80 072 MA AL 047

Date: 04/11/2022

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:

23 large 24 standard

Rod Diameter:

16 mm

Weight Estimate:

16.3 lbs 7 kg

Dimensional Values

Section Length (L):

84 in 2,134 mm

Rubber Length (X):

72 in 1,829 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:

72.1 in 1,831 mm

Leakage Distance:

213.3 in 5,418 mm

Electricals Values

60 Hz dry Flashover (Min. Withstand):

701 kV 637 kV

60 Hz Wet Flashover (Min. Withstand):

608 kV 529 kV

CIFO Positive (Min. Withstand):

1,175 kV 1,040 kV

CIFO Negative (Min. Withstand):

1,232 kV 1,097 kV

Mechanical Values

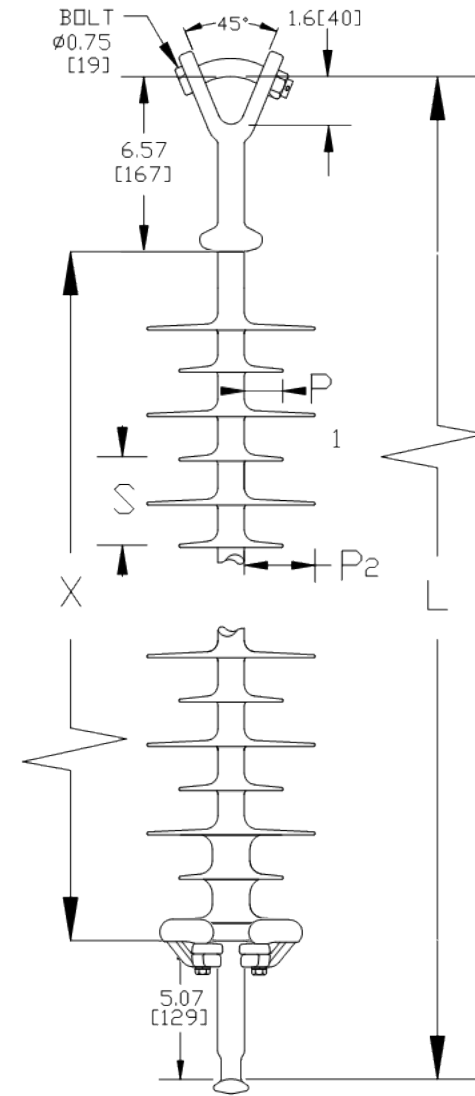
Specified Mech. Load (SML):

25,000 lbs 111.2 kN

Routine Test Load (RTL):

12,500 lbs 55.6 kN

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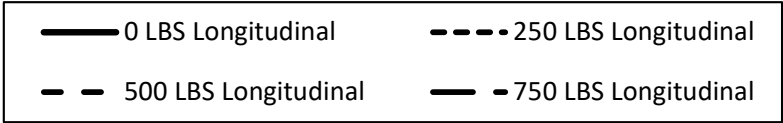
Prepared By: Stephen Lucci



MacLean Power Systems

B2901084T12104AA 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%

