

Braced Post Insulator Assembly B2901080T12085AX

1) H2 90 10 070 AX SS 027	[1]
2) S1 40 80 066 MX AL 043	[1]
3) Socket/Y-Clevis (SYC-56)	[1]
4) Turnbuckle (G-227-NBC-3/4x6C)	[1]
5) Shackle (ASH-55-BC)	[1]

ASSEMBLY DIMENSIONAL VALUES

Post Section Length (PSL)	79.7 in	2,024 mm
Suspension Section Length (SSL)	78.0 in	1,981 mm
Height of Assembly (H)	84.0 in	2,134 mm
Length of Brace (B)	102.3 in	2,598 mm
Upper Pole Connection Offset (A)*	2.0 in	51 mm
Angle Between Insulators (C)		53 Degrees
Dry Arc Distance	68.7 in	1,745 mm
Leakage Distance	191.5 in	4,864 mm

*This connection bracket to be supplied by customer

ASSEMBLY ELECTRICAL VALUES*

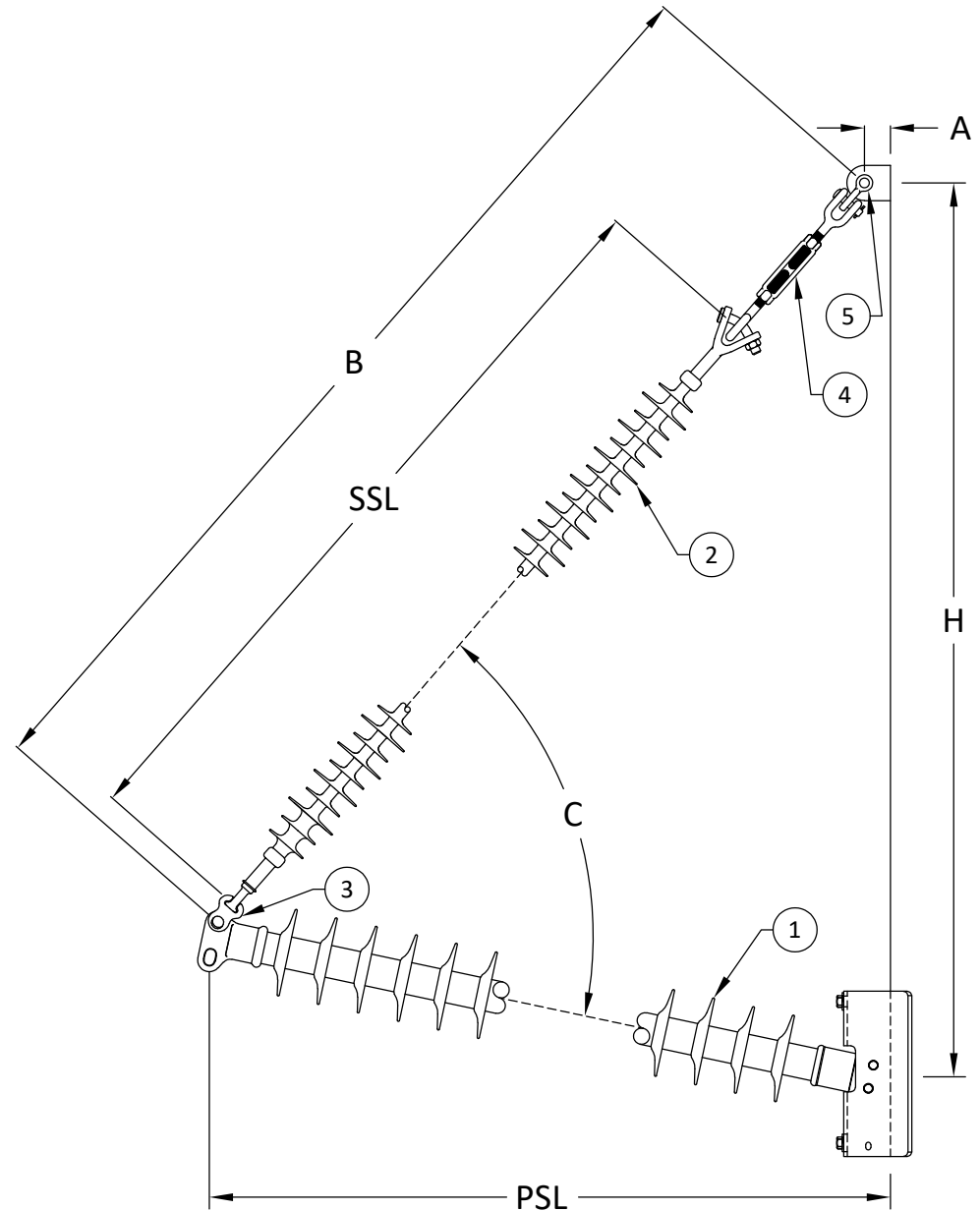
60 Hz Dry F.O. (Min. Withstand)	636 kV	(597) kV
60 Hz Wet F.O. (Min. Withstand)	583 kV	(468) kV
CIFO+ (Min. Withstand)	1,113 kV	(983) kV
CIFO- (Min. Withstand)	1,147 kV	(1,030) kV

*Values shown are based on minimum electricals for the assembly

ASSEMBLY MECHANICAL VALUES

Maximum Working Vertical Load	10,227 lbs	45.5 kN
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MPS Catalog Number:

Date:

H2 90 10 070 AX SS 027

03/28/2022

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:

27

Rod Diameter:

2.5 in

Weight Estimate:

87.4 lbs

40 kg

Dimensional Values

Section Length (L):

79.7 in 2,024 mm

Rubber Length (X):

70 in 1,778 mm

Shed spacing (S):

2.5 in 64 mm

Shed Projection (P):

2.4 in 61 mm

Dry Arc Distance:

72.9 in 1,852 mm

Leakage Distance:

191.5 in 4,864 mm

Electricals Values

60 Hz dry Flashover (Min. Withstand):

672 kV 630 kV

60 Hz Wet Flashover (Min. Withstand):

614 kV 495 kV

CIFO Positive (Min. Withstand):

1178 kV 1039 kV

CIFO Negative (Min. Withstand):

1209 kV 1088 kV

Mechanical Values

Max. Design Cant. Load (MDCL):

1,109 lbs 4.9 kN

Specified Cant. Load (SCL):

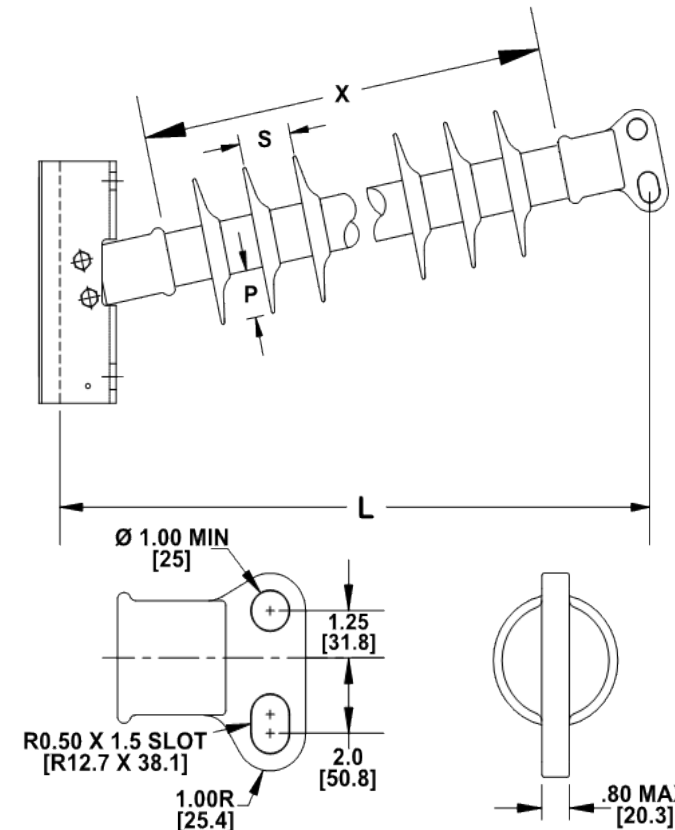
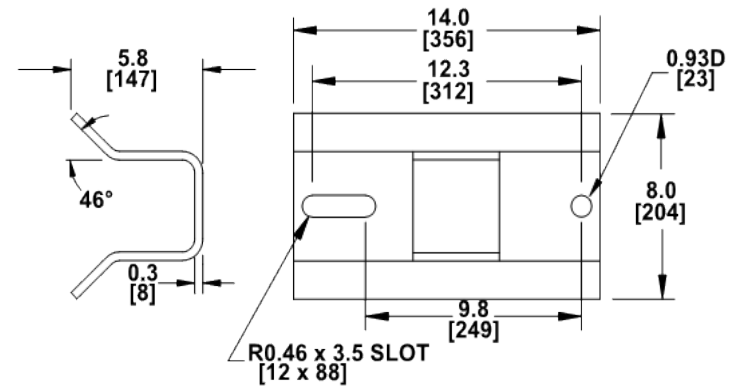
2,218 lbs 9.9 kN

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

MPS Catalog Number

S1 40 80 066 MX AL 043

Date: 03/28/2022

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:

21 large 22 standard

Rod Diameter:

16 mm

Weight Estimate:

13.2 lbs 6 kg

Dimensional Values

Section Length (L):

78 in 1,981 mm

Rubber Length (X):

66 in 1,676 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:

68.7 in 1,745 mm

Leakage Distance:

195 in 4,953 mm

Electricals Values

60 Hz dry Flashover (Min. Withstand):

669 kV 610 kV

60 Hz Wet Flashover (Min. Withstand):

583 kV 507 kV

CIFO Positive (Min. Withstand):

1,124 kV 993 kV

CIFO Negative (Min. Withstand):

1,180 kV 1,048 kV

Mechanical Values

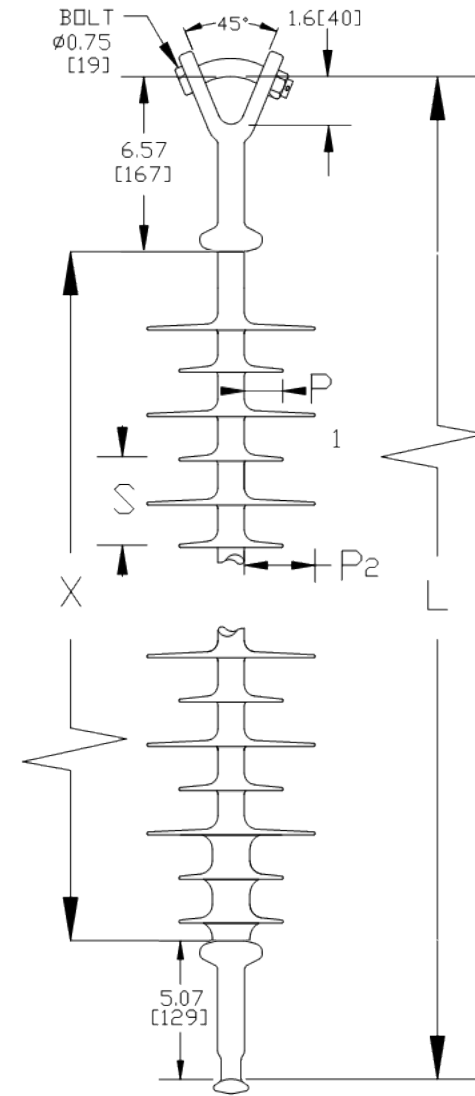
Specified Mech. Load (SML):

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.

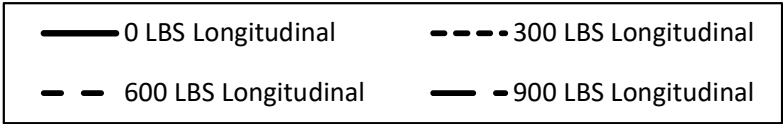
Prepared By: Stephen Lucci



MacLean Power Systems

B2901080T12085AX 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%

