

## Braced Post Insulator Assembly B2901091T12092AA

1) H2 90 10 082 AX SS 032	[1]
2) S1 40 80 078 MA AL 051	[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)	91.4 in	2,322 mm
Suspension Section Length (SSL)	89.9 in	2,283 mm
Height of Assembly (H)	92.0 in	2,337 mm
Length of Brace (B)	114.2 in	2,901 mm
Upper Pole Connection Offset (A)*	2.0 in	51 mm
Angle Between Insulators (C)		51 Degrees
Dry Arc Distance	78.1 in	1,984 mm
Leakage Distance	226.0 in	5,740 mm

\*This connection bracket to be supplied by customer

### ASSEMBLY ELECTRICAL VALUES\*

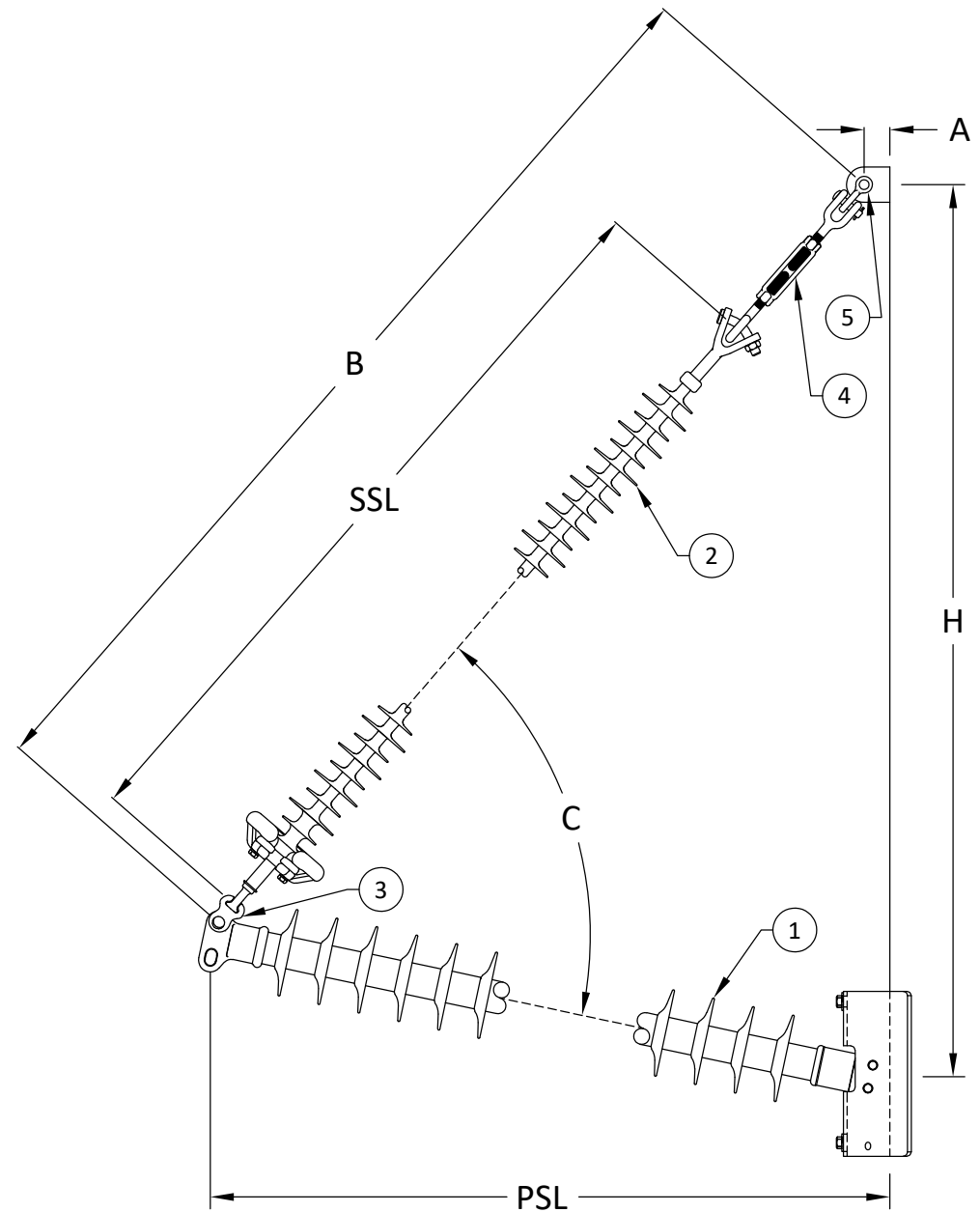
60 Hz Dry F.O. (Min. Withstand)	716 kV	(672) kV
60 Hz Wet F.O. (Min. Withstand)	651 kV	(527) kV
CIFO+ (Min. Withstand)	1,257 kV	(1,107) kV
CIFO- (Min. Withstand)	1,284 kV	(1,158) kV

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

### ASSEMBLY MECHANICAL VALUES

Maximum Working Vertical Load	9,931 lbs	44.2 kN
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MPS Catalog Number:

**H2 90 10 082 AX SS 032**

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:

32

Rod Diameter:

2.5 in

Weight Estimate:

96.1 lbs

44 kg

**Dimensional Values**

Section Length (L):

91.4 in      2,322 mm

Rubber Length (X):

82 in      2,083 mm

Shed spacing (S):

2.5 in      64 mm

Shed Projection (P):

2.4 in      61 mm

Dry Arc Distance:

84.9 in      2,156 mm

Leakage Distance:

226 in      5,740 mm

**Electricals Values**

60 Hz dry Flashover (Min. Withstand):

773 kV      726 kV

60 Hz Wet Flashover (Min. Withstand):

700 kV      569 kV

CIFO Positive (Min. Withstand):

1360 kV      1196 kV

CIFO Negative (Min. Withstand):

1382 kV      1250 kV

**Mechanical Values**

Max. Design Cant. Load (MDCL):

967 lbs      4.3 kN

Specified Cant. Load (SCL):

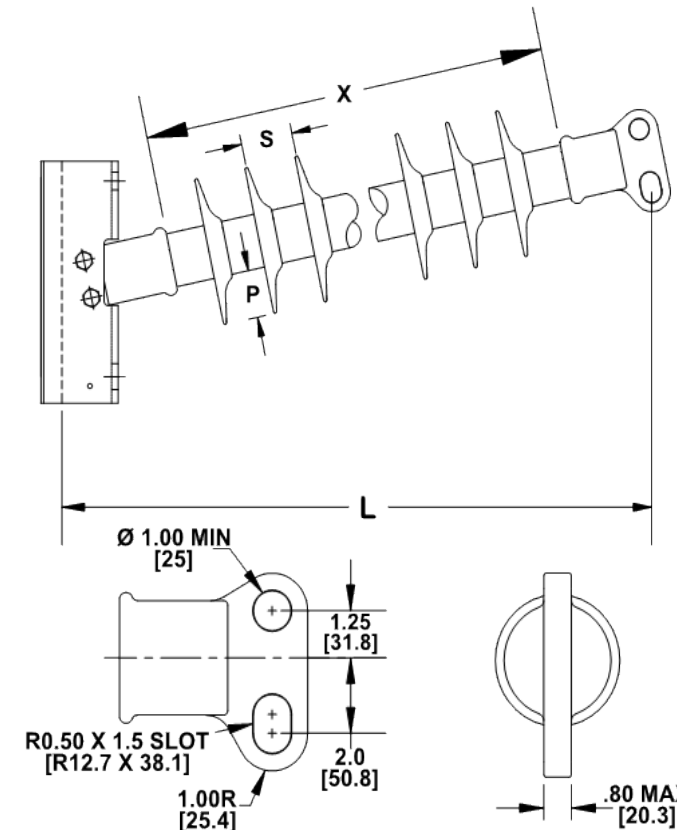
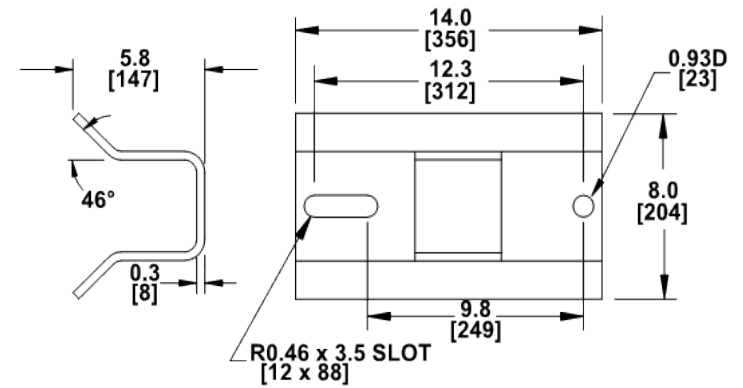
1,934 lbs      8.6 kN

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 80 078 MA AL 051**

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:

25 large      26 standard

Rod Diameter:

16 mm

Weight Estimate:

17.1 lbs      8 kg

**Dimensional Values**

Section Length (L):

89.9 in      2,283 mm

Rubber Length (X):

78 in      1,981 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:

78.1 in      1,984 mm

Leakage Distance:

231.6 in      5,883 mm

**Electricals Values**

60 Hz dry Flashover (Min. Withstand):

758 kV      686 kV

60 Hz Wet Flashover (Min. Withstand):

651 kV      567 kV

CIFO Positive (Min. Withstand):

1,264 kV      1,125 kV

CIFO Negative (Min. Withstand):

1,323 kV      1,183 kV

**Mechanical Values**

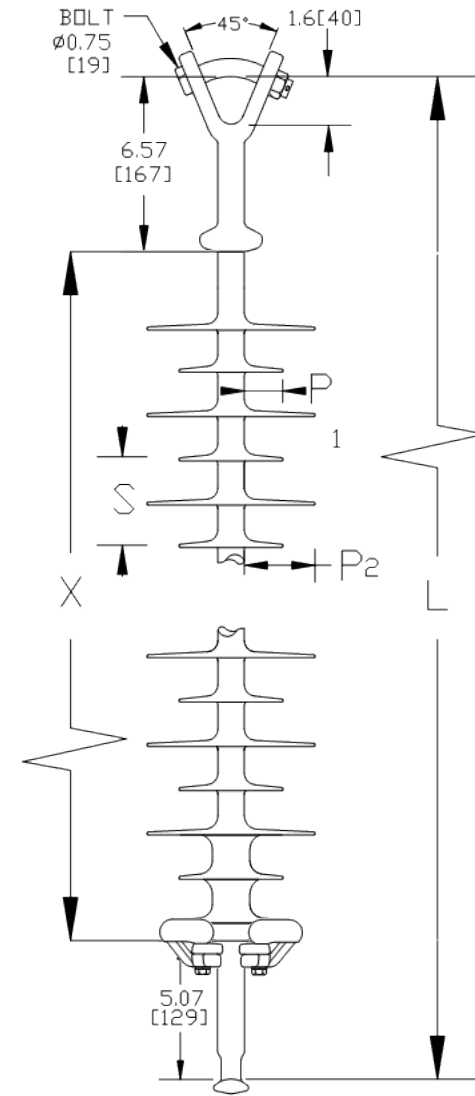
Specified Mech. Load (SML):

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.

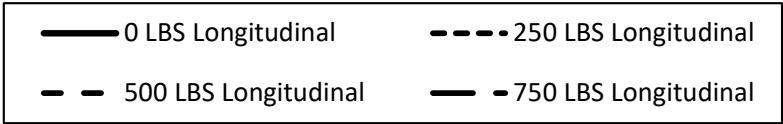
Prepared By: Stephen Lucci



MacLean Power Systems

# B2901091T12092AA 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%

