

Braced Post Insulator Assembly B2901060T12087MA

1) H2 90 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)	60.1 in	1,527 mm
Suspension Section Length (SSL)	60.0 in	1,524 mm
Height of Assembly (H)	87.0 in	2,210 mm
Length of Brace (B)	93.3 in	2,370 mm
Upper Pole Connection Offset (A)*	2.0 in	51 mm
Angle Between Insulators (C)		64 Degrees
Dry Arc Distance	48.1 in	1,222 mm
Leakage Distance	137.9 in	3,503 mm

*This connection bracket to be supplied by customer

ASSEMBLY ELECTRICAL VALUES*

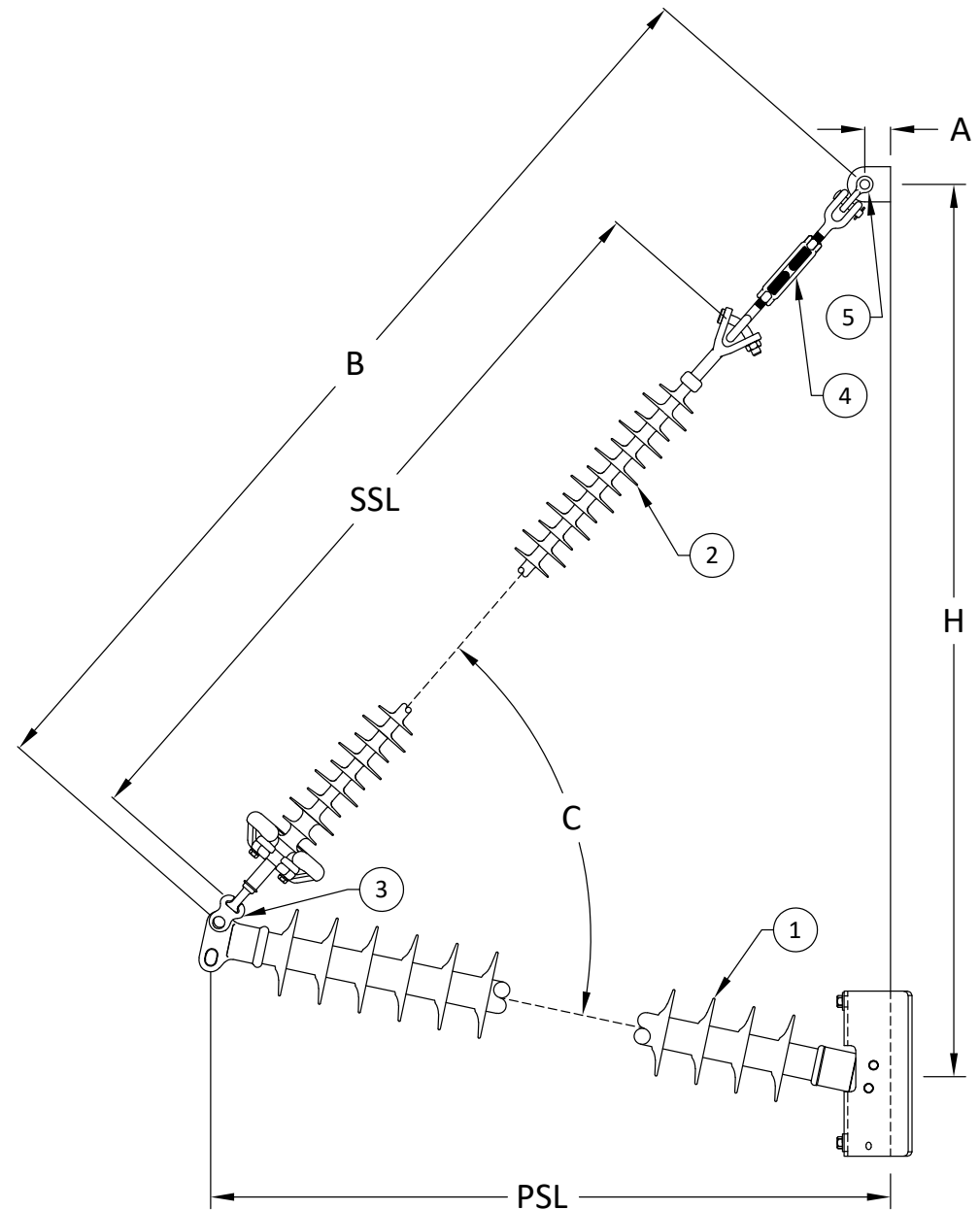
60 Hz Dry F.O. (Min. Withstand)	456 kV	(428) kV
60 Hz Wet F.O. (Min. Withstand)	422 kV	(334) kV
CIFO+ (Min. Withstand)	790 kV	(704) kV
CIFO- (Min. Withstand)	847 kV	(744) kV

*Values shown are based on minimum electricals for the assembly

ASSEMBLY MECHANICAL VALUES

Maximum Working Vertical Load	11,486 lbs	51.1 kN
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MPS Catalog Number

H2 90 10 050 MX SS 026

Date: 03/25/2022

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:

26

Rod Diameter:

2.5 in

Weight Estimate:

62.4 lbs

28 kg

Dimensional Values

Section Length (L):

60.1 in 1,527 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):

1,520 lbs 6.8 kN

Specified Cant. Load (SCL):

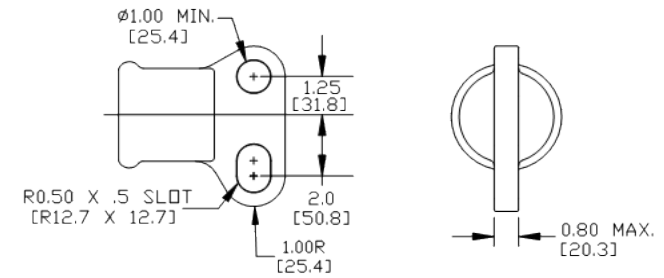
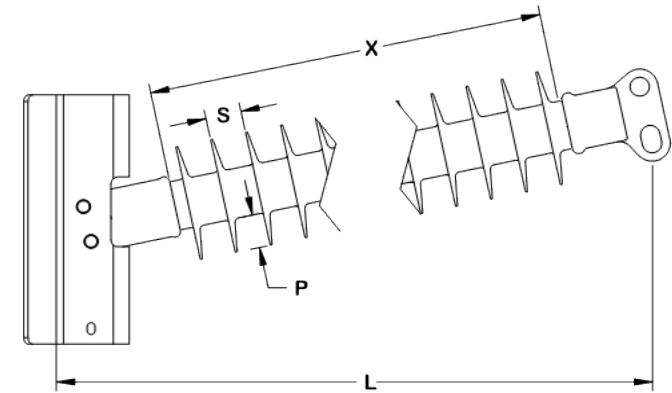
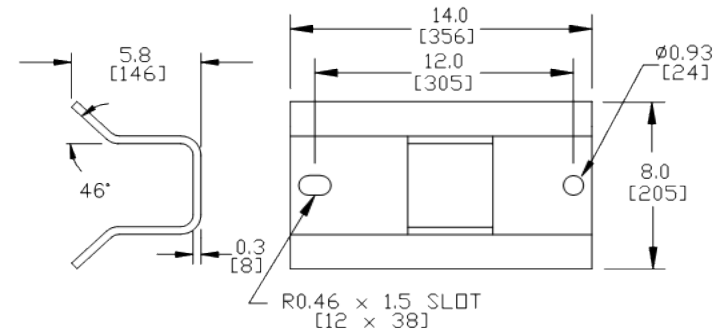
3,040 lbs 13.5 kN

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):

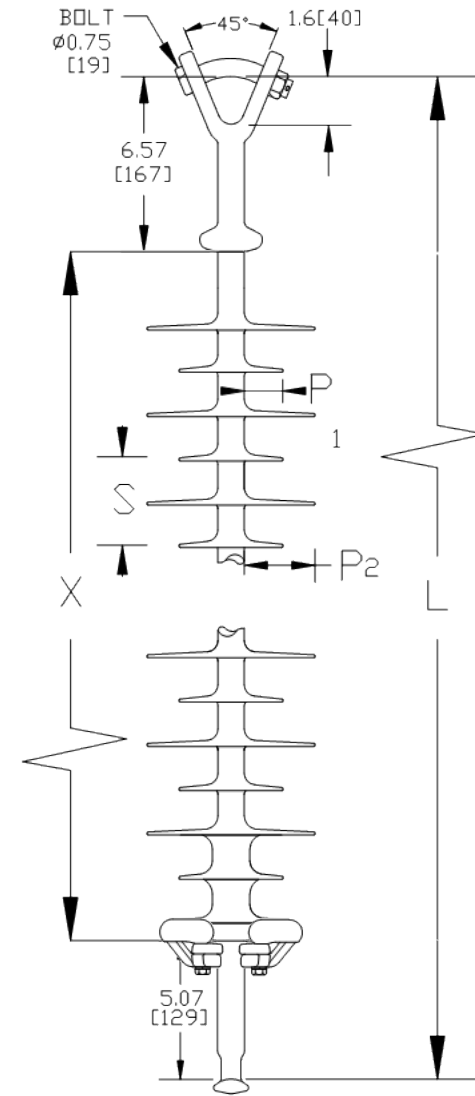
25,000 lbs 111.2 kN

Routine Test Load (RTL):

12,500 lbs 55.6 kN

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Prepared By: Stephen Lucci



MacLean Power Systems

B2901060T12087MA 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%

