

Braced Post Insulator Assembly B2901034T12070MX

1) H2 90 10 023 MX SS 012	[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)	33.7 in	856 mm
Suspension Section Length (SSL)	36.2 in	919 mm
Height of Assembly (H)	70.0 in	1,778 mm
Length of Brace (B)	69.4 in	1,763 mm
Upper Pole Connection Offset (A)*	2.0 in	51 mm
Angle Between Insulators (C)		75 Degrees
Dry Arc Distance	25.6 in	650 mm
Leakage Distance	63.8 in	1,621 mm

*This connection bracket to be supplied by customer

ASSEMBLY ELECTRICAL VALUES*

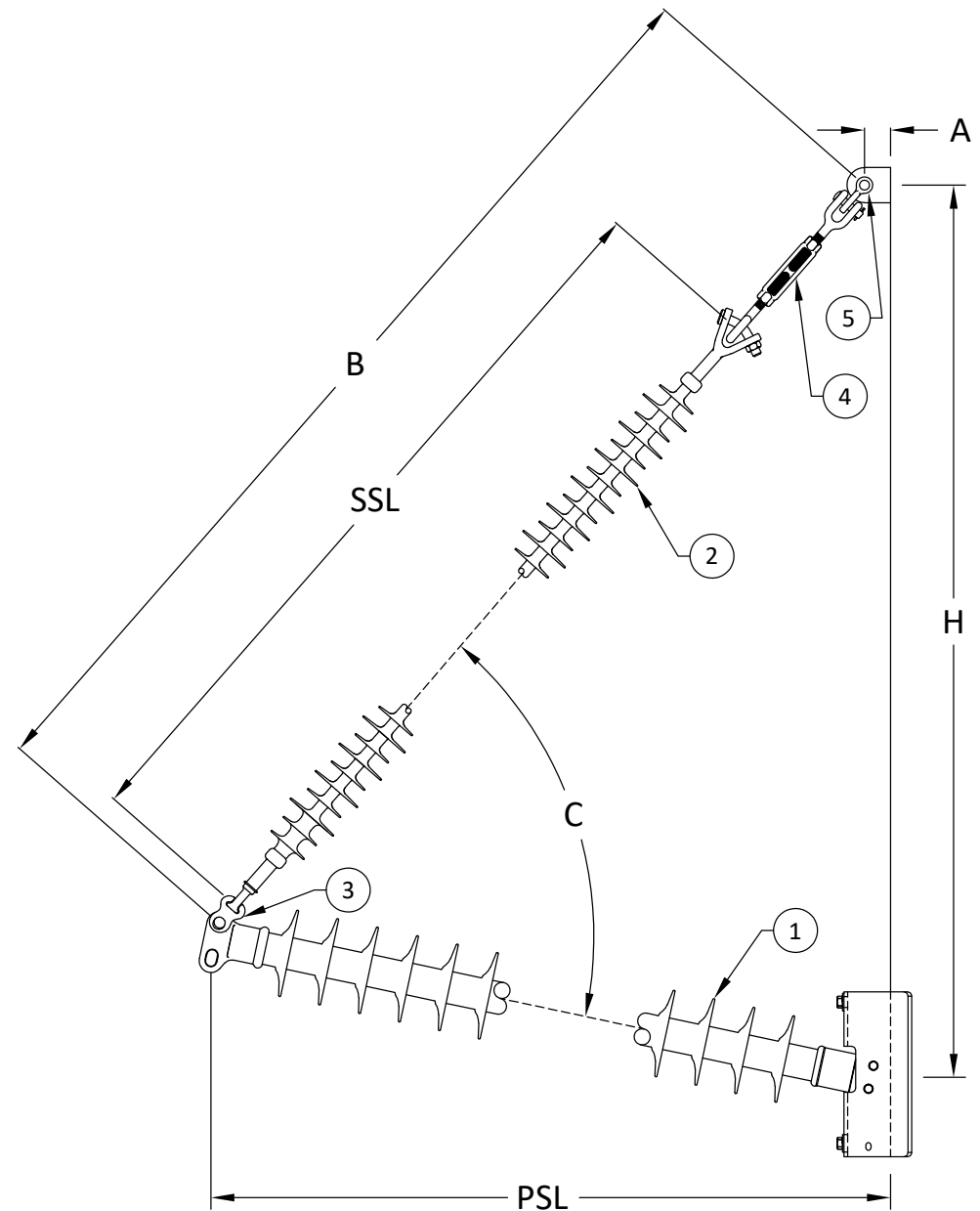
60 Hz Dry F.O. (Min. Withstand)	255 kV	(239) kV
60 Hz Wet F.O. (Min. Withstand)	233 kV	(179) kV
CIFO+ (Min. Withstand)	433 kV	(387) kV
CIFO- (Min. Withstand)	527 kV	(422) kV

*Values shown are based on minimum electricals for the assembly

ASSEMBLY MECHANICAL VALUES

Maximum Working Vertical Load	12,370 lbs	55.0 kN
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MPS Catalog Number

H2 90 10 023 MX SS 012

Date: 03/22/2022

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:

12

Rod Diameter:

2.5 in

Weight Estimate:

46.6 lbs

21 kg

Dimensional Values

Section Length (L):

33.7 in 856 mm

Rubber Length (X):

23 in 584 mm

Shed spacing (S):

1.95 in 50 mm

Shed Projection (P):

1.86 in 47 mm

Dry Arc Distance:

25.6 in 649 mm

Leakage Distance:

63.8 in 1,620 mm

Electricals Values

60 Hz dry Flashover (Min. Withstand):

254 kV 239 kV

60 Hz Wet Flashover (Min. Withstand):

232 kV 179 kV

CIFO Positive (Min. Withstand):

432 kV 387 kV

CIFO Negative (Min. Withstand):

527 kV 421 kV

Mechanical Values

Max. Design Cant. Load (MDCL):

2,981 lbs 13.3 kN

Specified Cant. Load (SCL):

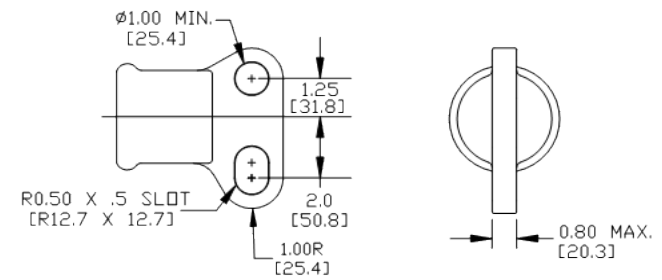
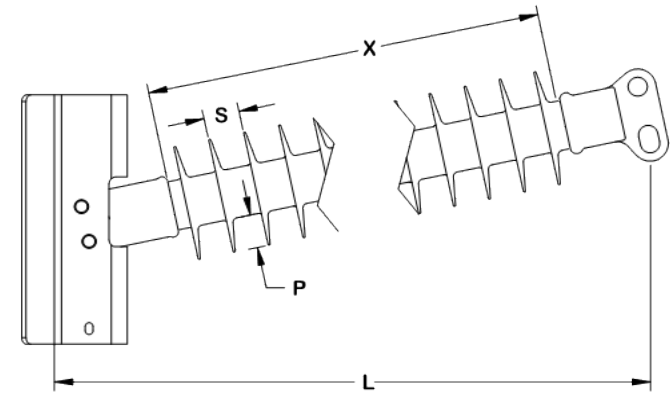
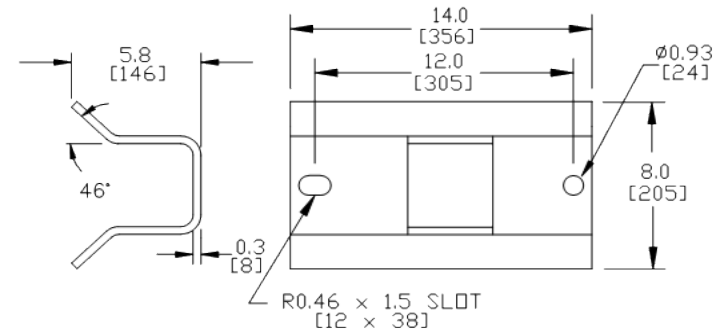
5,962 lbs 26.5 kN

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 80 025 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

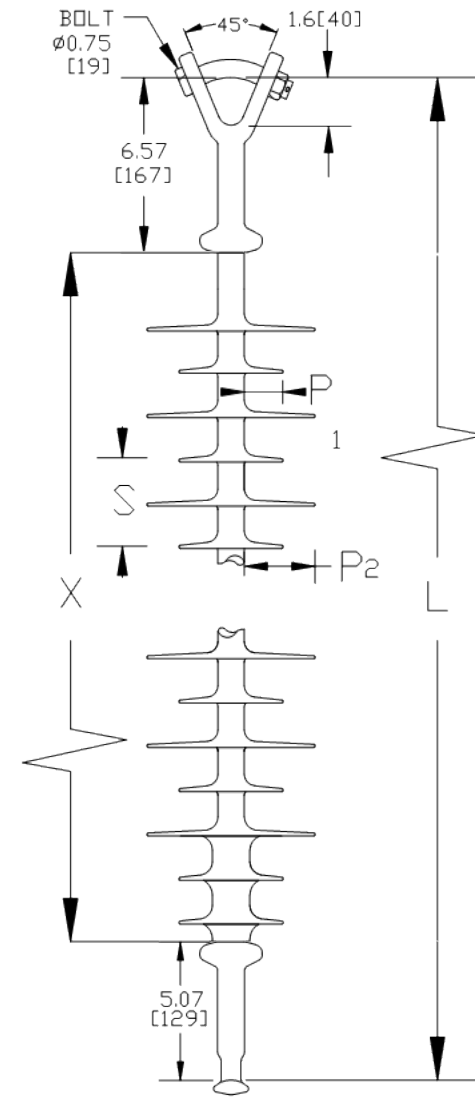
Specified Mech. Load (SML):

25,000 lbs 111.2 kN

Routine Test Load (RTL):

12,500 lbs 55.6 kN

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

B2901034T12070MX 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%

