MacLean™ POWER SYSTEMS
7801 Park Place Rd.
York, SC 29745 USA
(803) 628-2100

Braced Post Insulator Assembly

B2911069T12061AX

1) H2 91 10 058 AX SS 022	[1]
2) S1 40 80 054 MX AL 035	[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)	69.1 in	1,755 mm
Suspension Section Length (SSL)	66.0 in	1,676 mm
Height of Assembly (H)	61.0 in	1,549 mm
Length of Brace (B)	89.9 in	2,283 mm
Upper Pole Connection Offset (A)*	2.0 in	51 mm
Angle Between Insulators (C)		41 Degrees
Dry Arc Distance	56.7 in	1,440 mm
Leakage Distance	157.0 in	3,988 mm

*This connection bracket to be supplied by customer

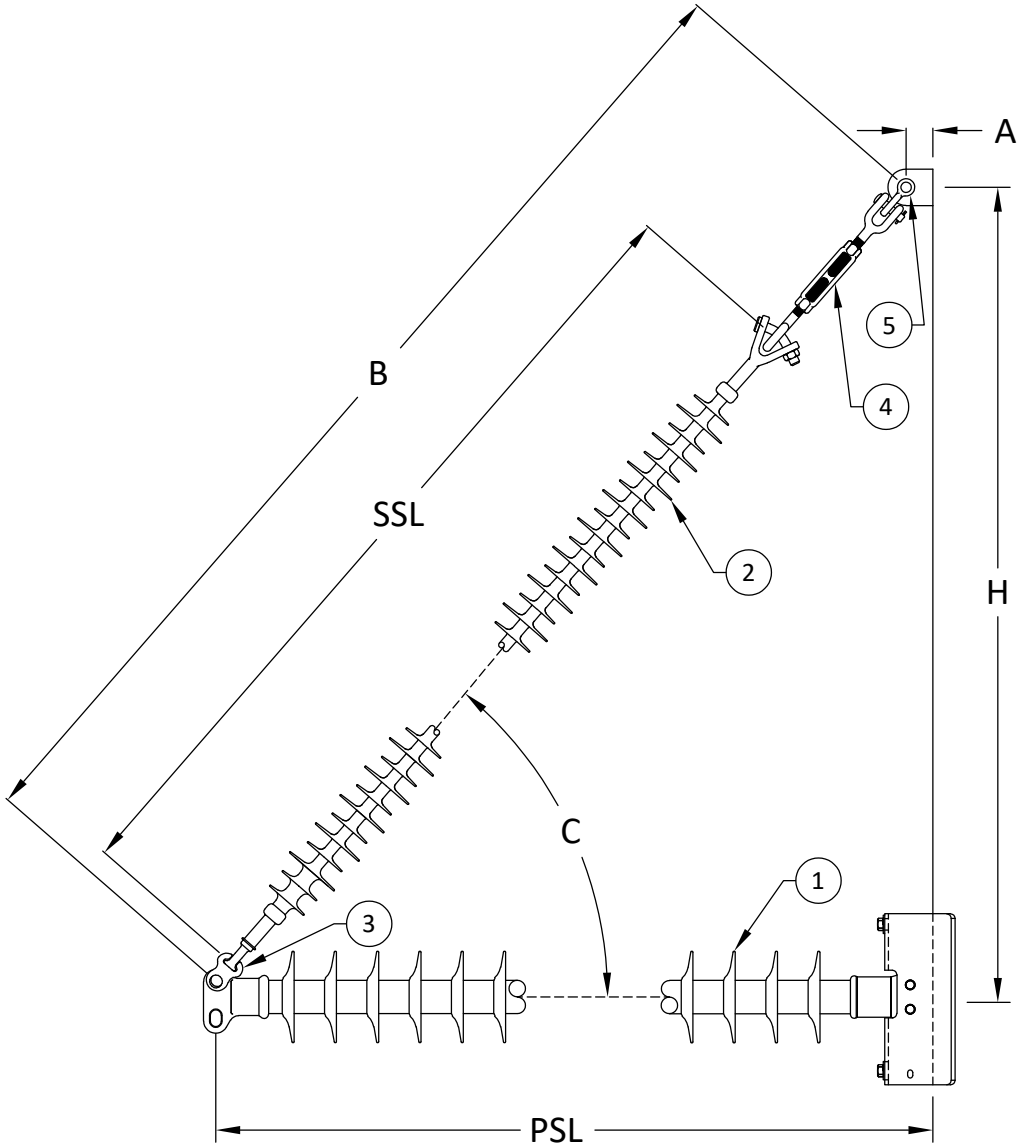
ASSEMBLY ELECTRICAL VALUES*

60 Hz Dry F.O. (Min. Withstand)	532 kV	(499) kV
60 Hz Wet F.O. (Min. Withstand)	491 kV	(391) kV
CIFO+ (Min. Withstand)	926 kV	(821) kV
CIFO- (Min. Withstand)	970 kV	(864) kV

*Values shown are based on minimum electicals for the assembly

ASSEMBLY MECHANICAL VALUES

Maximum Working Vertical Load	8,312 lbs	37.0 kN



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MPS Catalog Number: **H2 91 10 058 AX SS 022**

Date: 04/20/2022

End Fittings

Tower End Fitting:	Gain / 0 deg / Steel
	Anchor / Ductile Iron
Line End Fitting:	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:			0	deg
Number of Sheds:			22	
Rod Diameter:			2.5	in
Weight Estimate:	78.7	lbs	36	kg

Dimensional Values

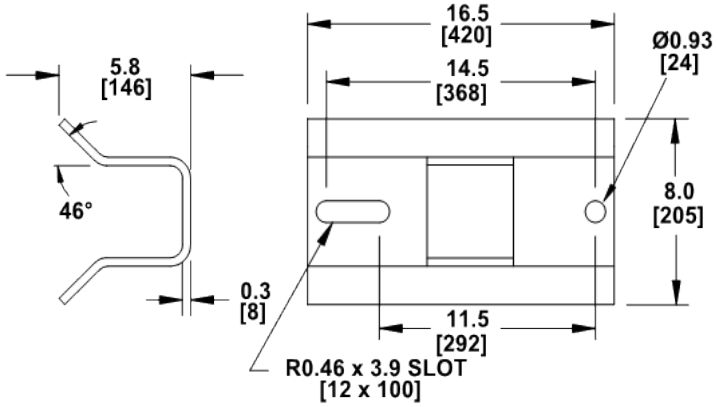
Section Length (L):	69.1	in	1,755	mm
Rubber Length (X):	58	in	1,473	mm
Shed spacing (S):	2.5	in	64	mm
Shed Projection (P):	2.4	in	61	mm
Dry Arc Distance:	60.9	in	1,547	mm
Leakage Distance:	157	in	3,988	mm

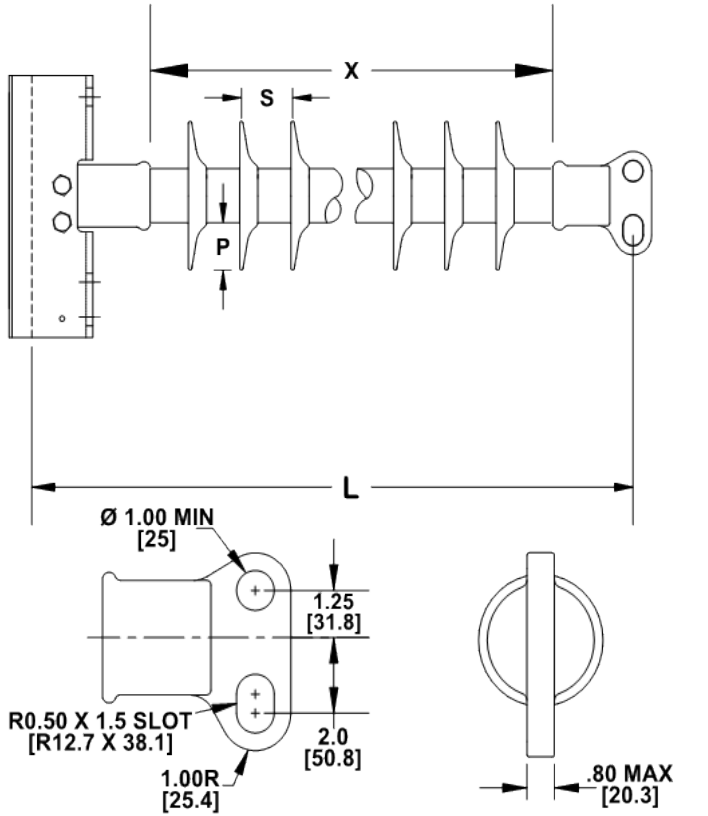
Electricals Values

60 Hz dry Flashover (Min. Withstand):	568	kV	533	kV
60 Hz Wet Flashover (Min. Withstand):	523	kV	418	kV
CIFO Positive (Min. Withstand):	992	kV	878	kV
CIFO Negative (Min. Withstand):	1032	kV	923	kV

Mechanical Values

Max. Design Cant. Load (MDCL):	1,287	lbs	5.7	kN
Specified Cant. Load (SCL):	2,574	lbs	11.4	kN
Specified Tensile Load (STL):	15,000	lbs	66.7	kN





Dimension: inches [millimeters]

NOTE: Drawing not actual depiction of insulator appearance.

Silicone rubber sheath and sheds complies with applicable ANSI and IEC standards.

Notes:

Prepared By: Stephen Lucci

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7801 Park Place Rd.
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MPS Catalog Number **S1 40 80 054 MX AL 035**

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:	17 large	18 standard
Rod Diameter:		16 mm
Weight Estimate:	11.6 lbs	5 kg

Dimensional Values

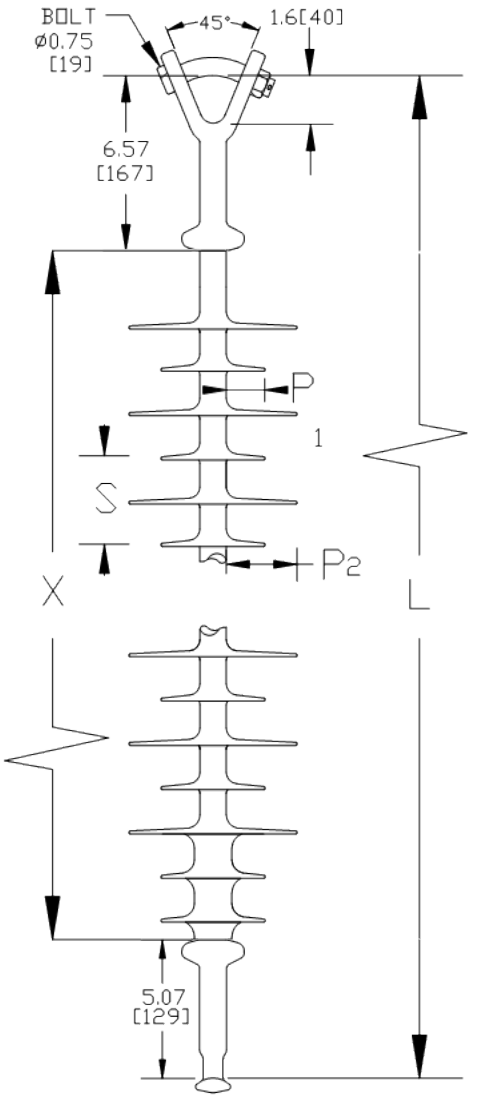
Section Length (L):	66 in	1,676 mm
Rubber Length (X):	54 in	1,372 mm
Standard Shed Height (P1):	1.5 in	38 mm
Large Shed Height (P2):	2 in	51 mm
Projection Ration (S/P):	-	1.5
Shed Spacing (S):	3 in	76 mm
Dry Arc Distance:	56.7 in	1,440 mm
Leakage Distance:	158.4 in	4,023 mm

Electricals Values

60 Hz dry Flashover (Min. Withstand):	554 kV	510 kV
60 Hz Wet Flashover (Min. Withstand):	491 kV	427 kV
CIFO Positive (Min. Withstand):	942 kV	824 kV
CIFO Negative (Min. Withstand):	994 kV	875 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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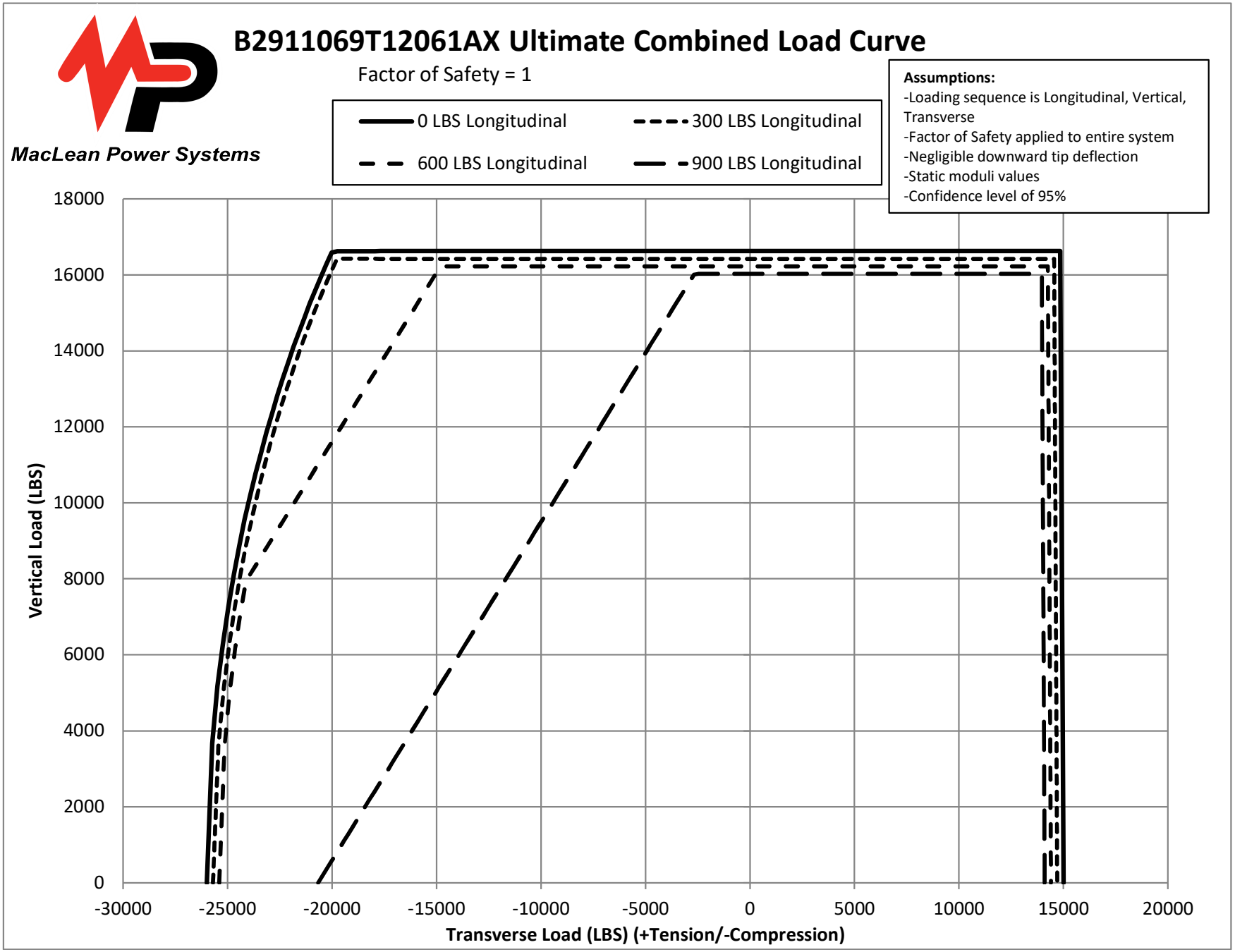
MacLean Power Systems
B2911069T12061AX Ultimate Combined Load Curve
Factor of Safety = 1
0 LBS Longitudinal
300 LBS Longitudinal
600 LBS Longitudinal
900 LBS Longitudinal
Assumptions:
-Loading sequence is Longitudinal, Vertical, Transverse
-Factor of Safety applied to entire system
-Negligible downward tip deflection
-Static moduli values
-Confidence level of 95%
Vertical Load (LBS)
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
-30000
-25000
-20000
-15000
-10000
-5000
0
5000
10000
15000
20000
Transverse Load (LBS) (+Tension/-Compression)

4/21/2022