MacLean™ POWER SYSTEMS

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

Braced Post Insulator Assembly

B2901049T12078MX

1) H2 90 10 039 MX SS 020	[1]
2) S1 40 80 037 MX AL 023	[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)	49.3 in	1,252 mm
Suspension Section Length (SSL)	48.2 in	1,224 mm
Height of Assembly (H)	78.0 in	1,981 mm
Length of Brace (B)	81.5 in	2,070 mm
Upper Pole Connection Offset (A)*	2.0 in	51 mm
Angle Between Insulators (C)		67 Degrees
Dry Arc Distance	38.8 in	986 mm
Leakage Distance	103.5 in	2,629 mm

*This connection bracket to be supplied by customer

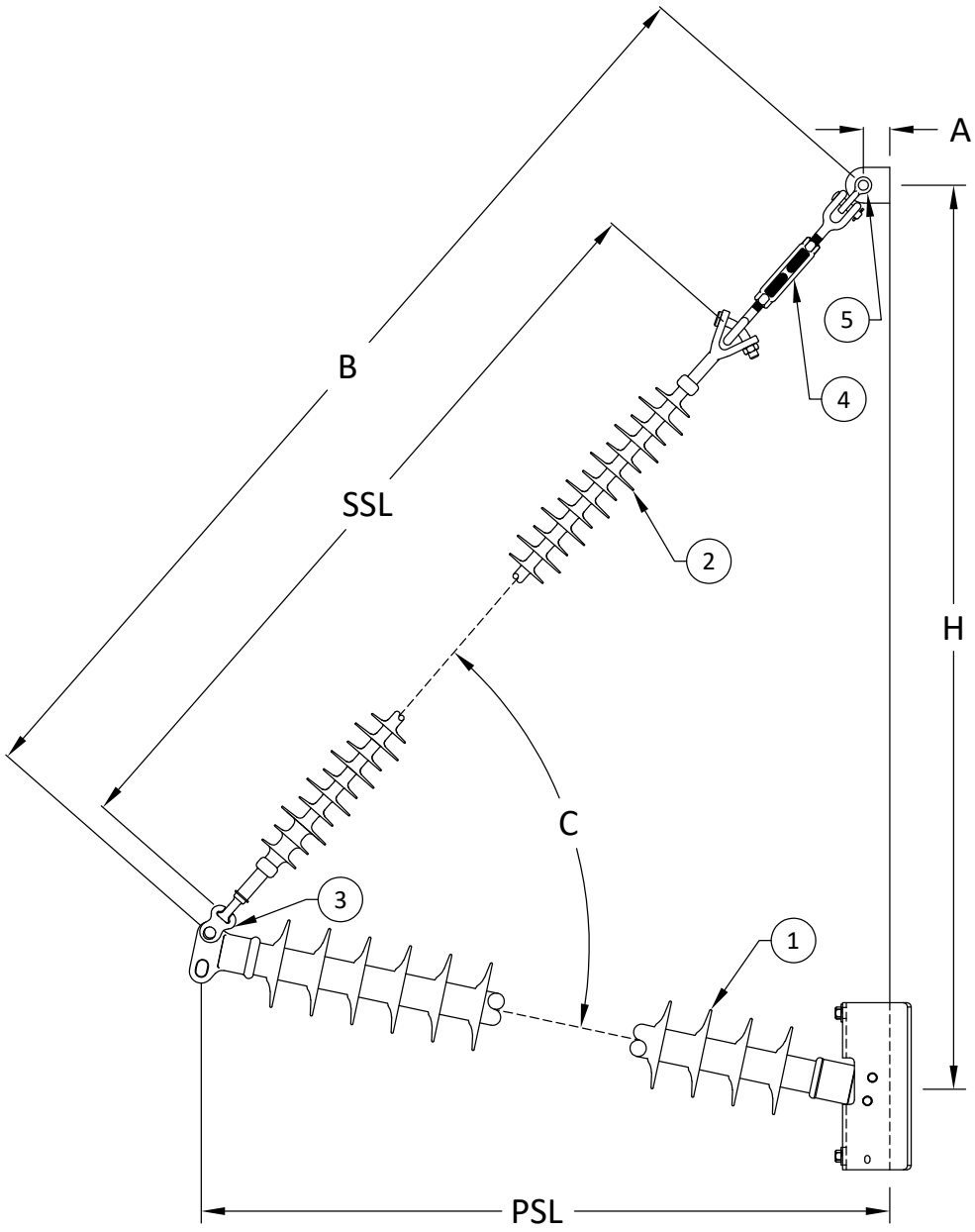
ASSEMBLY ELECTRICAL VALUES*

60 Hz Dry F.O. (Min. Withstand)	374 kV	(351) kV
60 Hz Wet F.O. (Min. Withstand)	346 kV	(271) kV
CIFO+ (Min. Withstand)	643 kV	(574) kV
CIFO- (Min. Withstand)	727 kV	(612) kV

*Values shown are based on minimum electicals for the assembly

ASSEMBLY MECHANICAL VALUES

Maximum Working Vertical Load	11,770 lbs	52.4 kN



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MPS Catalog Number **H2 90 10 039 MX SS 020**

Date: 03/23/2022

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:		20
Rod Diameter:		2.5 in
Weight Estimate:	55.6 lbs	25 kg

Dimensional Values

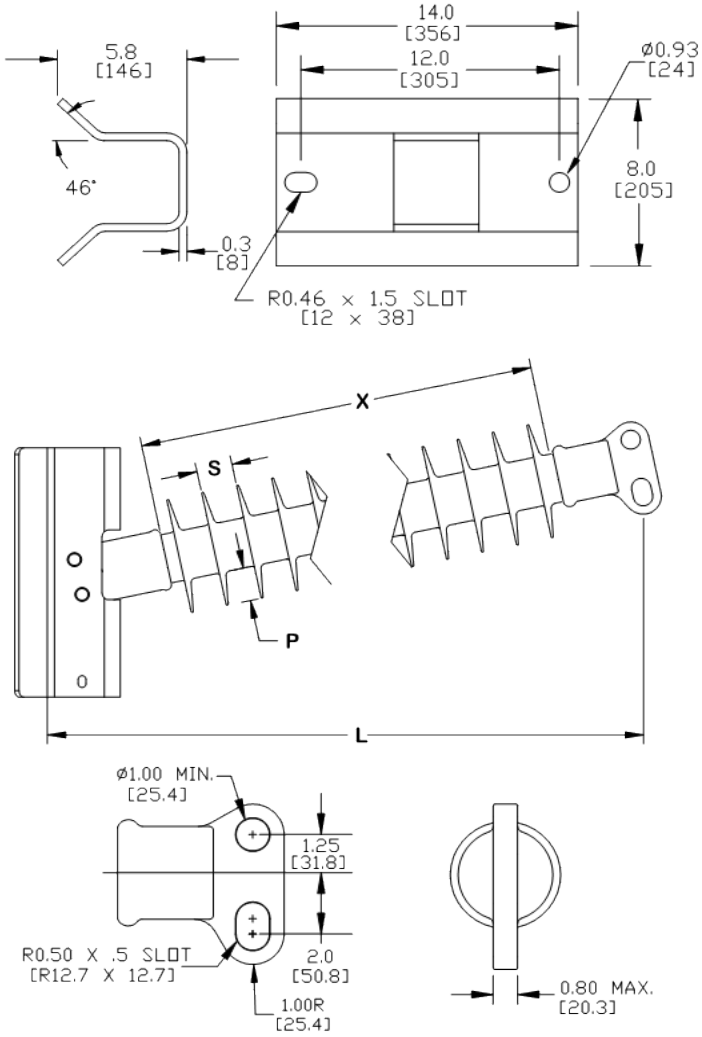
Section Length (L):	49.3 in	1,252 mm
Rubber Length (X):	39 in	991 mm
Shed spacing (S):	1.95 in	50 mm
Shed Projection (P):	1.86 in	47 mm
Dry Arc Distance:	41.2 in	1,046 mm
Leakage Distance:	106.1 in	2,696 mm

Electricals Values

60 Hz dry Flashover (Min. Withstand):	395 kV	371 kV
60 Hz Wet Flashover (Min. Withstand):	366 kV	287 kV
CIFO Positive (Min. Withstand):	680 kV	608 kV
CIFO Negative (Min. Withstand):	759 kV	646 kV

Mechanical Values

Max. Design Cant. Load (MDCL):	1,912 lbs	8.5 kN
Specified Cant. Load (SCL):	3,824 lbs	17 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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MPS Catalog Number **S1 40 80 037 MX AL 023**

Date: 03/23/2022

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:	11 large	12 standard
Rod Diameter:		16 mm
Weight Estimate:	9 lbs	4 kg

Dimensional Values

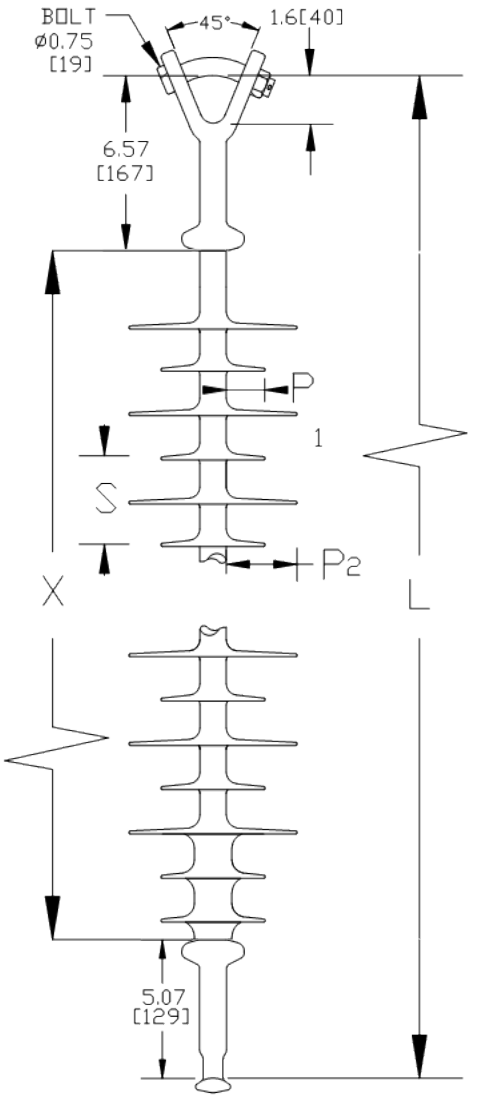
Section Length (L):	48.2 in	1,224 mm
Rubber Length (X):	37 in	940 mm
Standard Shed Height (P1):	1.5 in	38 mm
Large Shed Height (P2):	2 in	51 mm
Projection Ration (S/P):	-	1.5
Shed Spacing (S):	3 in	76 mm
Dry Arc Distance:	38.8 in	986 mm
Leakage Distance:	103.5 in	2,629 mm

Electricals Values

60 Hz dry Flashover (Min. Withstand):	384 kV	356 kV
60 Hz Wet Flashover (Min. Withstand):	346 kV	301 kV
CIFO Positive (Min. Withstand):	662 kV	572 kV
CIFO Negative (Min. Withstand):	705 kV	617 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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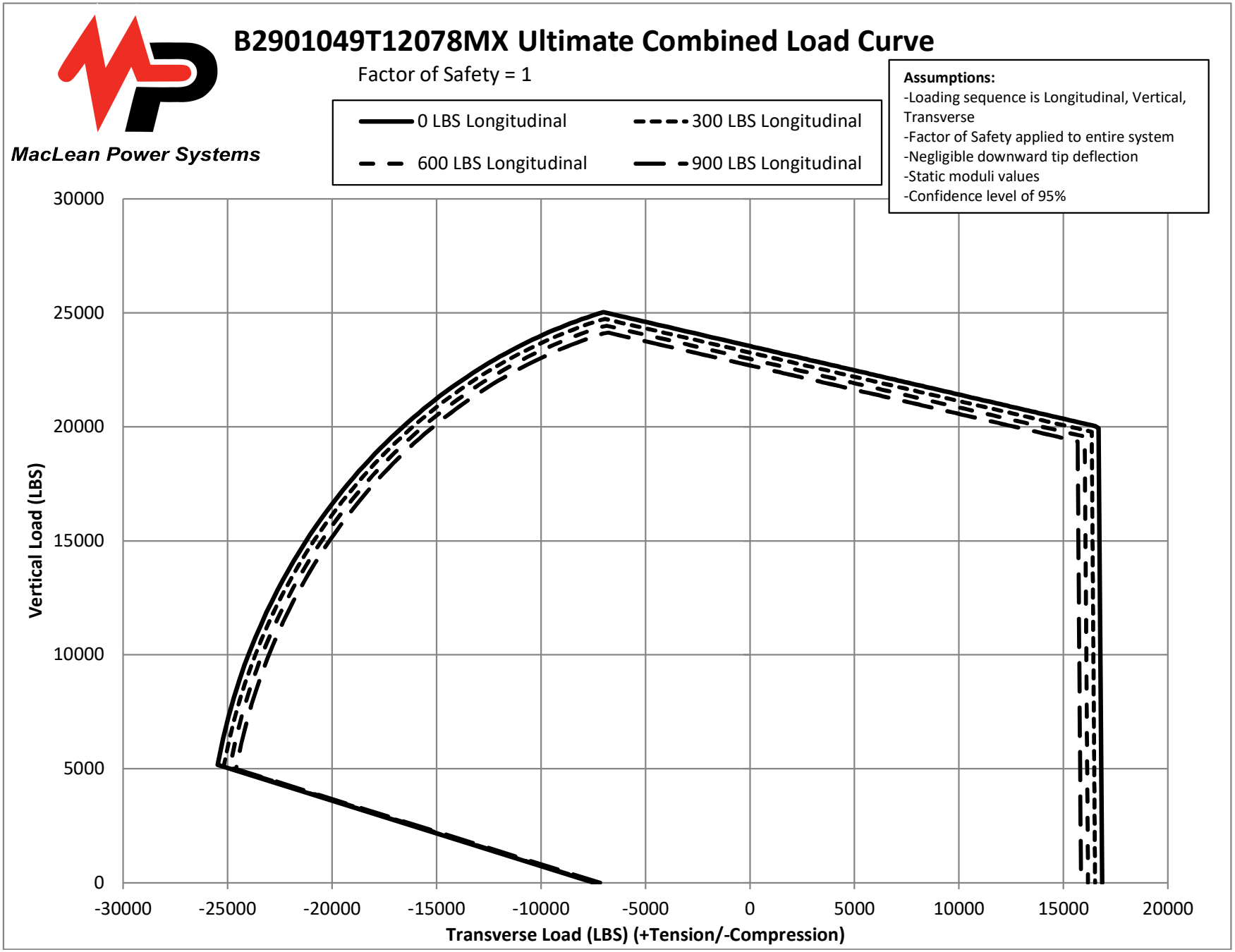
B2901049T12078MX Ultimate Combined Load Curve

Factor of Safety = 1



3/24/2022