Insulator Class Recommendation

Distribution Company Awareness

ESA is providing information regarding industry specifications for line post insulators. CSA C411.6 references “Line Post Composite Insulator for Overhead Distribution Lines ≤ 75kV”, and addresses the differences between insulator classes (LP 28M, LP 46, LP 46M, etc) and recommends that LP 46 class insulators not be used on grounded metal structures for the voltage class implied. The LP 46M insulator class is available and is a recommended option on grounded metal structures.

ESA Recommends

- Electrical Distributors should remain alert to industry standards & specifications such as CSA C411.6 to ensure standard designs drawings accurately reflect desired construction practices.
- Electrical Distributors should consider specifying insulator classes with the suffix “M”, when available, for use on standard design drawings when attached to grounded metal structures.
- Electrical Distributors should consider grounded metal structures to include both metallic and steel reinforced concrete poles. The Ontario Electrical Safety Code (OESC) addresses insulator class in Table 100.

Table 100
Minimum insulation on steel or concrete poles
(See Rules 75-400 to 75-404)

	Insulator type	
	Porcelain	Polymer
System voltage	Insulator class	
2.4/4.16–8/13.8 kV	(ANSI) Pin insulator 55-5 *3 (ANSI) LP 57-1L and 57-1S *5	(CEA) DS15 *1 (CEA) LP15 *2
14.4/24.9 and 16/27.6 kV	(ANSI) Pin insulator 56-3 *4 (ANSI) LP 57-2L and 57-2S *5	(CEA) DS28 *1 (CEA) LP28M *2
44 kV	(ANSI) Pin insulator 56-5 *4 (ANSI) LP 57-5L and 57-5S *5	(CEA) DS46 *1 (CEA) LP46M *2

ANSI — American National Standard Institute
**3 — C29.5*
**4 — C29.6*
**5 — C29.7*
CEA — Canadian Electricity Association
**1 — LWIWG — 01*
**2 — LWIWG — 02*