



ILDC/ILMC Strikes Again
Network with lightning
experts from around the world

April 27-30, 2020
Broomfield, Colorado, USA

www.vaisala.com/ILDC



Reassessment of NFPA 780 versus IEC 62305-3 Requirements for Installations in the United States

Authors

Mr. Mitchell Guthrie - Engineering Consultant Blanch

Mr. Mark Morgan - East Coast Lightning Equipment

Abstract

There appears to be a misunderstanding by some of the differences between the requirements of the United States national lightning protection standard NFPA780 and the requirements of IEC Standard 62305 Part 3. This paper provides clarification of the scope and content of each standard and describes the method used by each to implement the functions required of a lightning protection system, as well as applicable techniques in design and installation in each standard. It addresses misconceptions of the differences between the standards suggested in the literature.

A common misunderstanding for utilities applications is due to confusion as to the interpretation relative to what is included and what is not included in the scope of NFPA 780. The scope excludes the protection of the equipment specific to generation, transmission and distribution systems because this is generally covered by electrical utilities standards. The provisions of the standard may be applied to all other aspects of such installations. As an example, the standard includes specific chapters on protection of wind turbines and solar arrays. This is not inconsistent with the way utilities applications would be protected in accordance with the requirements of IEC 62305-3.

Another misunderstanding leading to perceived differences between the standards is due a lack of consideration or awareness of the country clauses in IEC 62305 specific to installations in the United States. These clauses become mandatory for IEC 62305 lightning protection system design and installations in the countries for which they are applicable. Such clauses applicable in the United States are identified in the paper.

Topic Areas

Lightning Safety, Protection, and Casualty Occurrence

Submission Format

Oral