

IEEE Guide to Current Interruption with Horn-Gap Air Switches

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Secretariat

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National Electrical Manufacturers Association**

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Abstract: IEEE C37.36b-1990, *IEEE Guide to Current Interruption with Horn-Gap Air Switches*, is intended to aid air switch users in establishing suggested maximum values of excitation, resistive and capacitive currents that may be successfully interrupted while using outdoor air switches. This guide pertains to air switches mounted in the normal horizontal-upright position and not equipped with interrupting aids.

Keywords: air switch, capacitive current, current interruption, excitation current, horn-gap air switches, resistive current

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Foreword

(This Foreword is not a part of IEEE C37.36b-1990, IEEE Guide to Current Interruption with Horn-Gap Air Switches.)

This guide is intended to aid air switch users in establishing suggested maximum values of excitation, resistive and capacitive currents that may be successfully interrupted while using outdoor air switches. This guide pertains to air switches mounted in the normal horizontal-upright position and not equipped with interrupting aids.

The subject of current interruption using an air switch is so common to the industry that everyone appears to have an opinion concerning this matter. Some opinions hold that an air switch should never be used to interrupt any current except the capacitive current from insulators on the shortest length of bus or miscellaneous equipment. Others can document good experiences in interrupting excitation or capacitive currents two to ten times the maximum suggested levels in this guide. Both ends of this spectrum and the variations in the middle have merit based on individual experiences. However, this guide must achieve a consensus position among switch manufacturers, engineering consultants, governmental bodies, users, and many other interested parties in order to exist. Subsequently, the suggestions in this guide have been forged upon the consensus that the current interruption levels are at least as high as the values specified herewithin. No criticism is directed toward any organization for exceeding the suggestions of this guide. Finally, this guide will continue to require feedback in the future to develop suggestions that accurately address the needs of industry.

Table 1 of this guide provides the user with a quick procedure to establish the capability of a switch for current interruption when the switch is *near grounded equipment*. The user should note that this procedure should only be utilized after the user has thoroughly reviewed this guide and is confident of proper application. In a similar manner, Table 2 of this guide provides the user with a quick procedure to establish the capability of a switch for current interruption when the switch is *not near grounded equipment*.

The user is required to calculate his or her own current interruption values for applications that differ from the assumptions of Tables 1 and 2. Refer to the Appendixes for calculation methods and sample calculations.

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