

SPE-1000-99

***Model Code for the Field
Evaluation of Electrical
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Preface

This is the second edition of CSA Model Code SPE-1000, *Model Code for the Field Evaluation of Electrical Equipment*. It supersedes the previous edition published in 1994.

This Model Code is based upon guidelines for special inspections. These guidelines have been in effect for 20 years with a good safety record. The Canadian Advisory Council on Electrical Safety strongly supports the continuation of special inspections of electrical products, with the stipulation that the requirements be formally published.

The special inspection service is offered on behalf of participating provinces and territories by a certification organization or an inspection agency recognized by the regulatory authority. The service provides the means for evaluating products on location and, if found in compliance with stated technical requirements, such products may be marked with a special inspection service label.

Typically, the electrical inspection authorities base their official acceptance of electrical products upon a certification by an independent agency that the equipment conforms to the applicable Standards. The independent certification organization bases its certification upon inspection and testing of a typical unit or sample of the equipment as manufactured. The conformity of a typical unit to the applicable Standard is a prerequisite for certification of the equipment.

This Model Code does not deal with type (or prototype) inspection and testing of equipment as practised in a regular certification program. Certain performance-related requirements judged to be nonessential to safety of the equipment with respect to fire, shock, and other hazards that expose a user or operator to danger are not included. The object of the Model Code is to facilitate a safety evaluation of equipment that is limited in scope to essential safety considerations and that does not include evaluation of the efficacy or performance of products.

This Model Code contains requirements that address minimum construction, marking, and test requirements that are consistent with maintaining the level of safety for electrical products so as not to present an undue hazard to persons or property. It is not the purpose of these requirements to address the performance of electrical products or their quality, where such features are judged to have no direct bearing on probable hazards to the user.

This edition has been revised by the Task Force on the Model Code as the result of requests for changes. It was also reviewed by the Committee on the Canadian Electrical Code, Part I.

September 1999

Notes:

- (1) Use of the singular does not exclude the plural (and vice versa) when the sense allows.
- (2) Although the intended primary application of this Model Code is stated in its Scope, it is important to note that it remains the responsibility of the users of the Model Code to judge its suitability for their particular purpose.
- (3) This publication was developed by consensus, which is defined by CSA Policy governing standardization — Code of good practice for standardization as "substantial agreement." Consensus implies much more than a simple majority, but not necessarily unanimity. It is consistent with this definition that a member may be included in the Task Force list and yet not be in full agreement with all clauses of this publication.
- (4) CSA Model Codes are subject to periodic review, and suggestions for their improvement will be referred to the appropriate committee.
- (5) All enquiries regarding this Model Code, including requests for interpretation, should be addressed to CSA International, Standards Division, 178 Rexdale Boulevard, Toronto, Ontario M9W 1R3.
Requests for interpretation should
 - (a) define the problem, making reference to the specific clause, and, where appropriate, include an illustrative sketch;
 - (b) provide an explanation of circumstances surrounding the actual field condition; and
 - (c) be phrased where possible to permit a specific "yes" or "no" answer.

Committee Interpretations are processed in accordance with the CSA Directives and guidelines governing standardization and are published in CSA's periodical Info Update. For subscription details, write to CSA Sales Promotion, Info Update, at the address given above.

0. Introduction

0.1

Field evaluation of equipment in accordance with this Model Code should be undertaken only by fully qualified persons. These persons should be experienced in conducting field evaluation and field testing of electrical and electronic equipment that is intended for use or sale after the examination and testing are completed and acceptance granted.

Field evaluation of electrical products is not equivalent to an evaluation in support of certification. Consequently, products that are field-evaluated and labelled cannot be considered as certified.

When used in conjunction with the requirements of the *Canadian Electrical Code, Part I*, this Model Code addresses the minimum requirements for equipment as they pertain to electrical safety. Where other authorities have jurisdiction, they must be consulted by the equipment owner or the owner's agent as to compliance with legislation. This legislation may be either federal, provincial, or municipal.

This Model Code addresses the essential construction, marking, and test requirements that equipment must meet. It allows for the evaluation of electrical products with the objective of minimizing the risk of degrading the safety of the equipment through the procedures used in the field evaluation. Where the required tests involve procedures deemed to present a risk to the safety of the particular equipment, such tests may be carried out on a separate representative sample supplied for the sole purpose of testing. Alternatively, other means may be taken, such as the evaluation of relevant test data presented in support of an application for field evaluation.

The requirements of this Model Code have been accepted by participating provinces and territories. The requirements define the construction and test criteria that a product must meet before it can be labelled.

SPE-1000-99

Model Code for the Field Evaluation of Electrical Equipment

1. Scope

1.1

This Model Code provides construction, marking, and test requirements for the field evaluation of electrical/electronic equipment on behalf of participating provinces and territories by a certification organization or an inspection agency recognized by the regulatory authority.

1.2

This Model Code applies, but is not limited, to the following:

- (a) custom-built equipment for special applications;
- (b) equipment manufactured on a nonrepetitive basis;
- (c) equipment sold in limited quantities;
- (d) equipment not obtainable as "Certified" under a regular certification program;
- (e) equipment already installed and awaiting acceptance by the regulatory authority; and
- (f) complete systems or subassemblies.

1.3

This Model Code applies to equipment for which the evaluation is performed on a complete system or a limited number (batch) of units that are all available for examination and testing during the evaluation process.

1.4

This Model Code applies to equipment that may be evaluated at a client's facilities or at other specified locations, including the location of equipment installation.

1.5

This Model Code applies where the requirements are supplemented by requirements of particular equipment Standards, where referenced, and the installation requirements of the *Canadian Electrical Code, Part I*, as applicable.

1.6

This Model Code does not apply to the re-evaluation of equipment that has been rejected due to the results of a previous evaluation conducted by a certification organization through any other existing certification service.

1.7

This Model Code does not apply to the field evaluation of

- (a) wire and cable products;
- (b) wiring devices;
- (c) equipment for use in hazardous locations;
- (d) electromedical, radiation-emitting, and laboratory equipment used in health care facilities; and
- (e) components that will require further evaluation as part of a complete assembly, such as switches, relays, and timers.