CSA GROUP™

CSA C22.2 No. 254:21
National Standard of Canada

Motor control centres

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CSA C22.2 No. 254:21
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Title: *Motor control centres*

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Although the intended primary application of this Standard is stated in its Scope, it is important to note that it remains the responsibility of the users to judge its suitability for their particular purpose.

National Standard of Canada

CSA C22.2 No. 254:21
Motor control centres

ICS 29.160.30

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Standard for Safety for Motor Control Centers

Second Edition, Dated June 28, 2021

SUMMARY OF TOPICS

This new Edition dated June 28, 2021 includes revised requirements for Temperature Terminations.

The requirements are substantially in accordance with Proposal(s) on this subject dated August 28, 2020 and January 29, 2021.

Association of Standardization and Certification
NMX-J-353-ANCE-2021
Third Edition

CSA Group
CSA C22.2 No. 254:21
Second Edition

Underwriters Laboratories Inc.
UL 845
Sixth Edition

Motor Control Centers

June 28, 2021

Approved American National Standard

ANSI/UL 845-2021

Commitment for Amendments

This standard is issued jointly by the Association of Standardization and Certification (ANCE), the Canadian Standards Association (operating as “CSA Group”), and Underwriters Laboratories Inc. (UL). Comments or proposals for revisions on any part of the standard may be submitted to ANCE, CSA Group, or UL at anytime. Revisions to this standard will be made only after processing according to the standards development procedures of ANCE, CSA Group, and UL. CSA Group and UL will issue revisions to this standard by means of a new edition or revised or additional pages bearing their date of issue. ANCE will incorporate the same revisions into a new edition of the standard bearing the same date of issue as the CSA Group and UL pages.

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This Standard is subject to review within five years from the date of publication, and suggestions for its improvement will be referred to the appropriate committee. To submit a proposal for change, please send the following information to inquiries@csagroup. org and include "Proposal for change" in the subject line: Standard designation (number); relevant clause, table, and/or figure number; wording of the proposed change; and rationale for the change.

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This ANSI/UL Standard for Safety consists of the Sixth Edition. The most recent designation of ANSI/UL 845 as an American National Standard (ANSI) occurred on June 28, 2021. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, Title Page (front and back), or the Preface.

The Department of Defense (DoD) has adopted UL 845 on April 20, 1993. The publication of revised pages or a new edition of this Standard will not invalidate the DoD adoption.

Comments or proposals for revisions on any part of the Standard may be submitted to UL at any time. Proposals should be submitted via a Proposal Request in UL's On-Line Collaborative Standards Development System (CSDS) at https://csds.ul.com.

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Preface

This is the harmonized ANCE, CSA Group, and UL standard for Motor Control Centers. It is the third edition of NMX-J-353-ANCE, the second edition of CSA C22.2 No. 254, and the sixth edition of UL 845. This edition of NMX-J-353-ANCE/CSA C22.2 No. 254/UL 845 supersedes the previous edition published on August 31, 2005.

This harmonized standard was prepared by the Association of Standardization and Certification (ANCE), the CSA Group, and Underwriters Laboratories Inc. (UL). The efforts and support of the Technical Harmonization Subcommittee 17D – Motor Control Centers on the Harmonization of Electrotechnical Standards of the Nations of the Americas (CANENA) are gratefully acknowledged.

This standard is considered suitable for use for conformity assessment within the stated scope of the standard.

The present Mexican Standard was developed by the CT CDI Control y Distribucion Industrial from the Comite de Normalizacion de la Asociacion de Normalizacion y Certificacion, A.C., CONANCE, with the collaboration of the motor control centers manufactures and users.

This standard was reviewed by the CSA Integrated Committee on Industrial Control, under the jurisdiction of the CSA Technical Committee on Industrial Products and the CSA Strategic Steering Committee on Requirements for Electrical Safety, and has been formally approved by the CSA Technical Committee. This standard has been developed in compliance with Standards Council of Canada requirements for National Standards of Canada. It has been published as a National Standard of Canada by CSA Group.

Application of Standard

Where reference is made to a specific number of samples to be tested, the specified number is to be considered a minimum quantity.

Note: Although the intended primary application of this standard is stated in its scope, it is important to note that it remains the responsibility of the users of the standard to judge its suitability for their particular purpose.

Level of harmonization

This standard is published as an identical standard for ANCE, CSA Group, and UL.

An identical standard is a standard that is exactly the same in technical content except for national differences resulting from conflicts in codes and governmental regulations. Presentation is word for word except for editorial changes.

Interpretations

The interpretation by the standards development organization of an identical or equivalent standard is based on the literal text to determine compliance with the standard in accordance with the procedural rules of the standards development organization. If more than one interpretation of the literal text has been identified, a revision is to be proposed as soon as possible to each of the standards development organizations to more accurately reflect the intent.

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Motor Control Centers

1 Scope

1.1 Products covered

1.1.1 This standard applies to motor control centers to be used in accordance with the U.S. *National Electrical Code*, ANSI/NFPA 70, CSA C22.1, *Canadian Electrical Code, Part 1*, and the Mexican *Electrical Installations (Utility)*, NOM-001-SEDE.

1.1.2 These requirements cover motor control centers for use on circuits having available short-circuit currents not more than 200 000 A rms symmetrical or 200 000 A dc.

1.1.3 This standard applies to single- and three-phase 50 and 60 Hz and dc motor control centers rated not more than 1000 V ac or dc.

1.1.4 Requirements for fire pump controllers are as provided in Annex C, item 11.

1.2 Products not covered

These requirements do not cover switchboards or panelboards intended for the control of electric light and power circuits, nor do they cover an individual unit for this purpose. Such units, however, that consist of manually or automatically operated switches, branch-circuit or service-circuit circuit-breakers, overcurrent-protective devices, or the like may be used within a motor control center.

1.3 Equipment

1.3.1 A motor control center can contain, but is not limited to, any combination of equipment such as the following:

a) full-voltage reversing or non-reversing combination motor control units;

b) full-voltage multispeed combination motor control units;

c) reduced-voltage part-winding, wye-delta or auto-transformer combination motor control units;

d) solid-state industrial controllers, such as adjustable-speed drives, programmable controllers, protective relays, and the like;

e) lighting or distribution panelboards;

f) feeder-tap units;

g) incoming-line equipment, such as main lugs, fusible switch, isolation switch, or circuit-breaker;

h) control or lighting transformers;

i) special equipment assemblies;

j) combination contactor units.

1.3.2 The foregoing equipment can contain, but is not limited to, such items as pushbuttons, selector switches, indicating lights, control transformers, control circuit fuses, and auxiliary devices incorporated as an integral part of the units.