



**INFO UPDATE**

## ***Electrical/Electronics***

**Volume 7 — October 2009**

**Issue date: October 28, 2009**

*Info Update* is published by the Canadian Standards Association (CSA) eight times a year. It contains important information about new and existing standards, e.g., recently published standards, and withdrawn standards. It also gives you highlights of other activities and services.

CSA offers a free online service called *Keep Me Informed* that will notify registered users when each new issue of *Info Update* is published. To register go to <http://www.csa-intl.org/onlinestore/KeepMeInformed/PleaseIdentifyYourself.asp?Language=EN>.

To view the complete issue of *Info Update* visit <http://standardsactivities.csa.ca/standardsactivities/default.asp?language=en>.

### What you'll find

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Within each program, information is organized into the following sections:

#### **Completed Projects / Projets terminés**

##### ▼ **New Standards – New Editions – Special Publications**

This section lists new standards, new editions (including adoptions), and special publications that have been published since the last issue of *Info Update*. To place your order call 1-800-463-6727 or visit our Online Store at <http://www.csa.ca>. Prices shown are quoted in Canadian dollars and do not include applicable taxes or shipping charges. Our office locations are listed at the end of this document.

##### ▼ **Nouvelles normes – Nouvelles éditions – Publications spéciales publiées en français**

Cette section énumère les nouvelles normes et éditions (y compris les normes adoptées) ainsi que les publications spéciales qui ont paru depuis la dernière livraison du bulletin Info-Update. Pour commander, composez le 1 800 463-6727 ou visitez notre Boutique en ligne, au <http://www.csa.ca>. Les prix sont indiqués en dollars canadiens et ne comprennent pas les taxes pertinentes ni les frais d'expédition. La liste de nos bureaux est présentée à la fin de ce document.

##### ▼ **Amendments**

Amendments are issued periodically for some standards. This section lists amendments that have been published since the last issue of *Info Update*. Most amendments are made available to the purchaser free of charge by returning the update notification card included in the standard or registering online for the update service through the Online Store at <http://www.csa.ca> and clicking on "My Account" on the navigation bar. Amendments developed by other standards development organizations, and adopted by CSA are made available for a fee. The prices shown are quoted in Canadian dollars and do not include applicable taxes or shipping charges.

##### ▼ **Modifications publiées en français**

Dans le cas de certaines normes, des modifications sont publiées à intervalles réguliers. Cette section présente la liste des modifications publiées depuis la dernière livraison du bulletin *Info-Update*. La plupart des modifications étant offertes gratuitement, vous n'avez qu'à remplir et à nous retourner la carte d'avis de mise à jour incluse avec chaque norme. Vous pouvez également vous inscrire en direct à notre service de mise à jour en vous rendant à la Boutique en ligne, au <http://www.csa.ca>, et en cliquant sur le bouton « Mon compte » de la barre de navigation. Des frais s'appliquent toutefois aux modifications élaborées par d'autres organismes de normalisation et adoptées par la CSA. Les prix sont indiqués en dollars canadiens et ne comprennent pas les taxes pertinentes ni les frais d'expédition.

##### ▼ **Adopted Standards**

Adopted standards have been developed by another standards development organization and have been approved by our technical committee for use in Canada, with or without modification. They are available for sale from CSA. You will find published adopted standards listed under "New Standards — New Editions — Special Publications."

##### ▼ **Endorsed Standards**

Endorsed standards have been developed by another standards development organization, and have been approved by the appropriate CSA technical committee for use in Canada.

Endorsed standards are not sold by CSA.

For copies, contact the originating organization or Global Info Centre Canada at 1-800-854-7179 or 613-237-4250; fax 613-237-4251; e-mail [gic@ihscanada.ca](mailto:gic@ihscanada.ca); Web site <http://www.global.ihs.com>.

## **Completed Projects (cont'd) / Projets terminés (suite)**

### ▼ Reaffirmed Standards

The standards listed in this section have been reviewed to determine if they remain technically valid and are acceptable for use until the next edition is published or for a further five years.

### ▼ Withdrawn Standards

The standards listed in this section have been withdrawn. Most withdrawn standards are available from our archived collection. Some copies may not be in original format.

To order, call toll-free 1-800-463-6727 (in Toronto, 416-747-4044).

### ▼ Formal Interpretations

This section lists questions that individuals have submitted about a particular standard. Each question has been reviewed and answered by the appropriate committee. If you would like to submit a question about a particular standard, please see the end notes in the preface of that standard.

## **Under Development**

The *Under Development* section formerly published in *Info Update* is now available directly on the CSA website. This enhancement allows us to provide you with these important notifications on a more timely basis. To visit the new "Current Standards Activities" page, go to: <http://standardsactivities.csa.ca/standardsactivities/default.asp?language=en>.

## **Certification and Testing (CSA International)**

### ▼ Informs Notices (Bulletins from CSA International)

An *Informs* is a notice containing information only. It does not contain anything that would require you to resubmit products for certification. If you would like a copy of an *Informs* notice, call CSA International at 416-747-4171, or fax 416-747-2476.

### ▼ Certification Notices

Certification notices inform you about changes that would require a product to be resubmitted for certification or about critical factors that may affect a product's certification. Products must comply with the changed requirements by the effective dates given.

CSA certification and testing clients receive these notices automatically. If you did not receive a copy or would like to receive one, call CSA International at 416-747-2488, or fax 416-747-4173.



Completed Projects / Projets terminés

New Standards – New Editions – Special Publications

C22.2 No. 0.3-09, 7th edition

Test Methods for Electrical Wires and Cables

PDF only ..... \$200

This standard describes the apparatus, test methods, and formulas to be used in carrying out the tests and calculations required by CSA electrical wire and cable standards.

The acceptance requirements expected to be fulfilled through the testing of any particular type of wire or cable are contained in the standard relating to that type and do not constitute a part of this standard.

C22.2 No. 0.8-09, 2nd edition

Safety Functions Incorporating Electronic Technology

PDF only ..... \$150

This standard applies to products and component devices where the electronics technology handles the operational logic, including the safety features. This standard applies to the following configurations:

- safety control function(s) implemented in hardware only
• safety control function(s) implemented in some combinations of hardware and software.

The scope of this standard includes the sensors and actuators that are associated with the safety control.

This standard applies to products where failure in either the hardware or software, or any associated devices, can lead to a hazard.

This standard prescribes minimum requirements for the documentation necessary to evaluate and confirm that the equipment meets the safety requirements as specified in this standard.

C22.2 No. 68-09, 7th edition

Motor-Operated Appliances (Household and Commercial)

PDF only ..... \$150

This standard applies to motor-operated appliances intended for use with nominal system voltages of 600 V and less. Where appliances are driven by universal-type motors or electromagnetic mechanisms, the scope is limited to appliances rated for use on nominal system voltages of 240 V or less.

This standard applies to appliances designed to be used in accordance with the Rules of the Canadian Electrical Code, Part I.

This standard applies to permanently connected and cord-connected appliances for household and commercial use in non-hazardous locations.



**New Standards – New Editions – Special Publications (cont'd)**

**C22.2 No. 68-09 (cont'd)**

This standard applies to sprayers intended for extensive open spraying of cleaning fluids, paint, insecticides, and similar liquids having a flashpoint higher than 60 °C, but excluding electrostatic sprayers and sprayers for use in spray booths or in other areas where hazardous concentrations of flammable vapours are likely to be present.

**C22.2 No. 126.1-09, 3rd edition**

*Metal Cable Tray Systems* (bi-national standard with NEMA VE 1, fifth edition)

PDF only ..... \$100

This standard specifies the requirements for metal cable trays and associated fittings designed for use in accordance with the rules of the *Canadian Electrical Code, Part I*, and the *National Electrical Code*.

**C22.2 No. 127-09, 7th edition**

*Equipment and Lead Wires*

PDF only ..... \$175

This standard applies to insulated conductors intended for internal wiring of electrical equipment, for leads of transformers, motors, etc., and for luminous-tube signs and ignition systems, to be installed in accordance with the *Canadian Electrical Code, Part I*.

**C22.2 No. 179-09, 4th edition**

*Airport series lighting cables*

PDF only ..... \$125

This standard applies to airport series lighting cables (Type ASLC) intended for use above and below ground in dry or wet locations in accordance with the Rules of the *Canadian Electrical Code, Part I*, at a nominal voltage of 5000 V and a maximum temperature rating of 90 °C.

This standard does not apply to cables with connectors moulded to them, including the primary leads used on transformers. These cables are covered under CSA C22.2 No. 180.

**C22.2 No. 263-09, 1st edition**

*Fire Pump Controllers* (tri-national standard with NMX-J-626-ANCE, first edition and UL 218, second edition)

PDF only ..... \$370

This standard covers controllers intended for starting and stopping centrifugal and positive displacement fire pumps, including automatic and non-automatic types for electric motor with or without transfer switch or engine driven pumps, in accordance with NFPA 20, *Stationary Pumps for Fire Protection*.

Types of controllers covered include diesel engine, electric motor, limited service, high voltage, and residential. Controllers may be suitable for use as service equipment. This equipment is for installation in non-hazardous locations in accordance with the *Canadian Electrical Code, Part I*.

**New Standards – New Editions – Special Publications (cont’d)**

**SPE-1000-09, 3rd edition**

*Model Code for the Field Evaluation of Electrical Equipment*

PDF only ..... \$125

This model code addresses the essential construction, marking, and test requirements that equipment must meet before it can be labelled. It allows for the evaluation of electrical equipment and 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 to determine conformance, such as the evaluation of relevant test data presented in support of an application for field evaluation.

Field evaluation of equipment in accordance with this model code should be undertaken only by fully qualified and competent persons. These persons should be experienced in conducting field evaluation and field testing of electrical and electronic equipment to Canadian safety requirements or other requirements acceptable to the authority having jurisdiction (AHJ).

Because field evaluation of electrical equipment and products is conducted to the requirements of this model code, it is not equivalent to an evaluation in support of certification, which is conducted to the requirements of the applicable standard. Consequently, equipment and 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 conformance to legislation. This legislation may be either federal, provincial, or municipal.

The requirements of this model code have been accepted by the AHJs.

**Amendments**

**C22.2 No. 96-09**

*Portable Power Cables*

Revision of Clauses 13.3.1(h) and 14.5.4.1 and Tables 2B and 3.

**C22.2 No. 100-04 (R2009)**

*Motors and Generators*

Revision of Clauses 2.1.1, 2.2, 4.14, 4.15.2.1, 11.2.8.2.5, 11.3.1, 11.3.2, 12.3.3, 12.3.4.1, and 12.3.4.2 and Annex B. Addition of Clause 11.2.9 and Annex C.

**CAN/CSA-C22.2 No. 223-M91 (R2008)**

*Power Supplies with Extra-Low-Voltage Class 2 Outputs*

Addition of Clause 4.1.6. Deletion of Clause 4.5.2.4.



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## Modifications publiées en français

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### **CAN/CSA-C22.2 n° 223-M91 (C2008)**

*Blocs d'alimentation à sorties très basse tension de classe 2*

L'article 4.1.6 a été ajouté et l'article 4.5.2.4 a été abrogé.

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## Reaffirmed Standards

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### **C22.2 No. 29-M1989 (R2009)**

*Panelboards and Enclosed Panelboards*

### **C22.2 No. 34-M1987 (R2009)**

*Electrode Receptacles, Fittings and Connectors for Gas Tubes*

### **CAN/CSA-C22.2 No. 110-94 (R2009)**

*Construction and Test of Electric Storage-Tank Water Heaters*

### **CAN/CSA-E60335-2-53:05 (R2009)**

*Household and similar electrical appliances — Safety — Part 2-53: Particular requirements for sauna heating appliances* (Adopted CEI/IEC 60335-2-53:2005, third edition, without modification)

CSA has reaffirmed its endorsement of the following IEC standard:

- **IEC 60684-2 (1997)**  
*Flexible insulating sleeving — Part 2: Methods of test*

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## Endorsed Standards

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### **IEC 60216-4-1 (2006)**

*Electrical insulating materials — Thermal endurance properties — Part 4-1: Ageing ovens — Single-chamber ovens*

### **IEC 60371-3-1 (2006)**

*Specification for insulating materials based on mica — Part 3: Specifications for individual materials — Sheet 1: Commutator separators and materials*

### **IEC 60426 (2007)**

*Electrical insulating materials — Determination of electrolytic corrosion caused by insulating materials — Test methods*

### **IEC 60454-3-2 (2006)**

*Pressure-sensitive adhesive tapes for electrical purposes — Part 3: Specifications for individual materials — Sheet 2: Requirements for polyester film tapes with rubber thermosetting, rubber thermoplastic or acrylic crosslinked adhesives*



## Endorsed Standards (cont'd)

### IEC 60454-3-4 (2007)

*Pressure-sensitive adhesive tapes for electrical purposes — Part 3: Specifications for individual materials — Sheet 4: Cellulose paper, creped and non-creped, with rubber thermosetting adhesive*

### IEC 60454-3-8 (2006)

*Pressure-sensitive adhesive tapes for electrical purposes — Part 3: Specifications for individual materials — Sheet 8 — Woven fabric tapes with pressure-sensitive adhesive based on glass, cellulose acetate alone or combined with viscose fibre*

### IEC 60587 (2007)

*Electrical insulating materials used under severe ambient conditions — Test methods for evaluating resistance to tracking and erosion*

### IEC 60641-1 (2007)

*Pressboard and presspaper for electrical purposes — Part 1: Definitions and general requirements*

### IEC 60684-2-AM2 (2005)

*Flexible insulating sleeving — Part 2: Methods of test — Amendment 2*

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## Formal Interpretations

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The following interpretation regarding Clause 4.14.5 of CSA standard C22.2 No. 165-92, *Electric Boilers*, was approved by the Technical Committee on Industrial Products.

**Question:** The wording in Cl. 4.14.5 implies that both the temperature regulating and the temperature limiting controls are required to disconnect all ungrounded conductors.

CSA has interpreted the intent of this clause is for only the temperature limiting control be required to disconnect ungrounded conductors during an abnormal condition. This is consistent in harmonizing with UL 834, Sec. 31.2 and 31.3 from which CSA No. 165, Cl. 4.14 was derived.

Is CSA's interpretation regarding the intent of Cl. 4.14.5 correct?

**Answer:** Yes.





## Certification and Testing (CSA International)

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### Certification Notices

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**Please note:** ► Notices marked with an arrowhead are new in this issue.

Effective Date	Subject	Title
December 15, 2009	Publication of Update No. 2 to CSA standard C22.2 No. 227.2.1-04, <i>Liquid-Tight Flexible Nonmetallic Conduit</i> (bi-national standard with UL 1660).	Conduit No. 22
December 31, 2009	Publication of Update No. 4 to CSA standard C22.2 No. 42-99, <i>General Use Receptacles, Attachment Plugs and Similar Wiring Devices</i> . Ground Fault Circuit Interrupter (GFCI) devices, combined with receptacles having tamper-resistant features, CSA-certified to the CSA standard C22.2 No. 144.1, shall comply with the new test and marking requirements in this update.	Ground Fault Circuit Interrupters No. 7
December 31, 2009	Publication of Update No. 4 to CSA standard C22.2 No. 42-99, <i>General Use Receptacles, Attachment Plugs and Similar Wiring Devices</i> .	Wiring Devices No. 56
December 31, 2009	Publication of Update No. 2 to CSA standard C22.2 No. 130-03, <i>Requirements for Electrical Resistance Heating Cables and Heating Device Sets</i> . (Supersedes Wiring Devices No. 37.)	Wiring Devices No. 37A
January 1, 2010	Publication of the second edition of CSA standard CAN/CSA-C681-06, <i>Performance of Self-Ballasted Compact Fluorescent lamps and Ballasted Adapters</i> .	Verification Service Announcement No. 35
January 5, 2010	Publication of CSA standard C22.2 No. 45.2-08, <i>Electrical Rigid Metal Conduit — Aluminum, Red Brass, and Stainless Steel</i> (bi-national standard with UL 6A, 2nd edition).	Conduit No. 23
► March 1, 2010	Publication of CSA standard C22.2 No. 35-09, <i>Extra-Low Voltage Control Circuit Cable, Low-Energy Control Cable, and Extra-Low-Voltage Control Cable</i> .	Wire and Cable No. 149
March 10, 2010	Publication of Update No. 2 to CSA standard C22.2 No. 243-01, <i>Vacuum Cleaners, Blower Cleaners and Household Floor Finishing Machines</i> (bi-national standard with UL 1017).	Vacuum Cleaners and Blower Cleaners No. 9

**Certification Notices (cont'd)**

<b>Effective Date</b>	<b>Subject</b>	<b>Title</b>
March 31, 2010	Publication of Amendments to UL 1059, <i>Terminal Blocks</i> . (Supersedes Wiring Devices No. 40.)	Wiring Devices No. 40A
April 1, 2010	Publication of CSA standard C22.2 No. 250.7-07, <i>Extra-low-voltage Landscape Lighting Systems</i> . (Supersedes Lighting Products No. 34.)	Lighting Products No. 52
May 3, 2010	Publication of CSA standard C22.2 No. 96-09, <i>Portable Power Cables</i> .	Wire and Cable No. 147
May 31, 2010	Transfer of existing certifications of shielded and concentric neutral power cables to CSA standard C68.5-05, <i>Primary Shielded and Concentric Neutral Cable for Distribution Utilities</i> .	Wire and Cable No. 142
May 31, 2010	Publication of CSA standard C68.10-08, <i>Shielded Power Cable for Commercial and Industrial Applications, 5-46 KV</i> .	Wire and Cable No. 139
May 31, 2010	Extension of effective date for CSA standard CAN/CSA-C22.2 No. 42.1-00, <i>Cover Plates for Flush-Mounted Wiring Devices</i> (bi-national standard with UL 514D).	Wiring Devices No. 39A
June 1, 2010	Publication of CSA standards CAN/CSA-C22.2 No. 60745-1-04 and CAN/CSA-C22.2 No. 60745-2-04 (bi-national standards with UL 60745-1 and associated Part 2 series standards).	Electrical Tools No. 15
July 1, 2010	Publication of Update No. 2 to CSA standard C22.2 No. 62.1-03, <i>Nonmetallic Surface Raceways and Fittings</i> (bi-national standard with UL5A).	Raceways and Fittings No. 7
▶ July 30, 2010	Publication of CSA standard C22.2 No. 2515-09, <i>Aboveground Reinforced Thermosetting Resin Conduit (RTRC) and Fittings</i> (bi-national standard, with UL 2515). (Supersedes Conduit No. 7.)	Conduit No. 24
▶ July 30, 2010	Publication of CSA standard C22.2 No. 2420-09, <i>Belowground Reinforced Thermosetting Resin Conduit (RTRC) and Fittings</i> (bi-national standard, with UL 2420). (Supersedes Conduit No. 7.)	Conduit No. 25
July 31, 2010	Publication of CSA standard CAN/CSA-C22.2 No. 71.2-2008, <i>Electric Bench Tools</i> .	Electric Tools No. 22

**Certification Notices (cont'd)**

<b>Effective Date</b>	<b>Subject</b>	<b>Title</b>
September 17, 2010 (existing certifications)	Publication of CSA standard C22.2 No. 250.0-08, <i>Luminaires</i> (bi-national standard with UL 1598, 3rd edition). (Supersedes Lighting Products No. 35, 35A, and 47.)	Lighting Products No. 53
December 1, 2010	Publication of CSA standard CAN/CSA-C22.2 No. 60950-1-07 (bi-national standard with UL 60950-1).	Information Technology and Electrical Business Equipment No. 16
December 15, 2010	Publication of the CSA standard C22.2 No. 43-08, <i>Lampholders</i> (bi-national standard with UL 496).	Wiring Devices No. 58
February 28, 2011	Publication of CSA standard C22.2 No. 52-09, <i>Underground Secondary and Service-Entrance Cables</i> .	Wire and Cable No. 143
▶ May 31, 2011	Transfer of existing certifications of shielded and concentric neutral power cables to CSA standard C68.5-07, <i>Primary Shielded and Concentric Neutral Cable for Distribution Utilities</i> . (Supersedes Wire and Cable No. 142 and supplements Wire and Cable No. 136.)	Wire and Cable No. 142A
▶ May 31, 2011	Extension of effective date for certification of shielded power cables to CSA standard C68.10, <i>Shielded Power Cable for Commercial and Industrial Applications, 5-46 kV</i> .	Wire and Cable No. 150
January 1, 2012	Publication of CSA standard CAN/CSA-E61131-2:06, <i>Programmable controllers — Part 2: Equipment requirements and tests</i> (Adopted IEC 61131-2:2003, second edition, with Canadian deviations).	Programmable Controllers No. 1
May 1, 2012	Publication of bi-national standard CSA C22.2 No. 66-06 Series and UL 5085 Series, <i>Low Voltage Transformers</i> .	Transformers No. 6
▶ July 31, 2012	Publication of CSA standard C22.2 No. 236-05, <i>Heating and Cooling Equipment</i> (bi-national standard with UL 1995).	Gas Products No. 201

**Certification Notices (cont'd)**

<b>Effective Date</b>	<b>Subject</b>	<b>Title</b>
▶ October 31, 2012	Publication of CSA standard CAN/CSA-C22.2 No. 60745-1-07, <i>Hand-Held Motor-Operated Electric Tools — Safety — Part 1: General Requirements</i> (bi-national standard, with UL 60745-1), and associated Part 2 standards. (Supersedes Electrical Tools Nos. 6, 15, 16, 16A, and 19.)	Electrical Tools No. 23
August 21, 2016	Publication of CSA standard CAN/CSA-C22.2 No. 60335-2-24-06, <i>Safety Requirements for Household and Similar Electrical Appliances, Part 2: Particular Requirements for Refrigerating Appliances, Ice Cream Appliances and Ice Makers</i> (tri-national standard with UL 60335-2-24 and NMX-J-521/2-24-ANCE-2006. Adopted IEC 60335-2-24:2002, sixth edition, with national deviations).	Household Refrigerators and Freezers No. 3