



**INFO UPDATE**

## ***Electrical/Electronics***

**Volume 5 — July 2009**

**Issue date: July 29, 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 It contains important information about new and existing standards, e.g., recently published standards, and withdrawn standards.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>.



**Completed Projects / Projets terminés**

---

**New Standards – New Editions – Special Publications**

---

**C22.2 No. 153-09, 2nd edition**

*Electrical Quick-Connect Terminals* (bi-national standard with UL 310, eighth edition)

PDF only ..... \$370

This standard applies to quick-connect terminals, both connectors and tabs, having nominal widths of 2.8, 3.2, 4.8, 5.2, and 6.3 mm (0.110, 0.125, 0.187, 0.205, and 0.250 in). They are intended for internal wiring connections in electrical equipment and for the field termination of conductors to electrical equipment in accordance with the *Canadian Electrical Code, Part I*, in Canada, and the *National Electrical Code*, in the United States of America.

**C22.2 No. 233-09, 2nd edition**

*Cords and Cord Sets for Communication Systems*

PDF only ..... \$100

This standard applies to cords and cord sets intended for indoor use to electrically connect communication systems that have a normal operating voltage-to-ground of less than 150 V rms, and that are installed or used in accordance with the *Canadian Electrical Code, Part I*.

This standard applies to single-, paired-, and multi-conductor cords, as well as cord sets, where no part of the cord is subjected to a temperature exceeding 60 °C.

---

**Reaffirmed Standards**

---

**C22.2 No. 3-M1988 (R2009)**

*Electrical Features of Fuel-Burning Equipment*

**C22.2 No. 21-95 (R2009)**

*Cord Sets and Power Supply Cords*

**C22.2 No. 25-1966 (R2009)**

*Enclosures for Use in Class H Groups E, F, and G Hazardous Locations*

**C22.2 No. 26-1952 (R2009)**

*Construction and Test of Wireways, Auxiliary Gutters, and Associated Fittings*

**C22.2 No. 37-M1989 (R2009)**

*Christmas Tree and Other Decorative Lighting Outfits*

**C22.2 No. 42-99 (R2009)**

*General Use Receptacles, Attachment Plugs, and Similar Wiring Devices*

**CAN/CSA-C22.2 No. 42.1-00 (R2009)**

*Cover Plates for Flush-Mounted Wiring Devices* (bi-national standard with UL 514D, first edition)



## **Reaffirmed Standards (cont'd)**

### **C22.2 No. 56-04 (R2009)**

*Flexible Metal Conduit and Liquid-Tight Flexible Metal Conduit*

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

*Motors and Generators*

### **C22.2 No. 122-M1989 (R2009)**

*Hand-Held Electrically Heated Tools*

### **C22.2 No. 137-M1981 (R2009)**

*Electric Luminaires for Use in Hazardous Locations*

### **C22.2 No. 145-M1986 (R2009)**

*Motors and Generators for Use in Hazardous Locations*

### **C22.2 No. 156-M1987 (R2009)**

*Solid-State Speed Controls*

### **C22.2 No. 158-1987 (R2009)**

*Terminal Blocks*

### **C22.2 No. 159-M1987 (R2009)**

*Attachment Plugs, Receptacles, and Similar Wiring Devices for Use in Hazardous Locations: Class I, Groups A, B, C, and D; Class II, Group G, in Coal or Coke Dust, and in Gaseous Mines*

### **C22.2 No. 182.2-M1987 (R2009)**

*Industrial Locking Type, Special Use Attachment Plugs, Receptacles, and Connectors*

### **C22.2 No. 182.3-M1987 (R2009)**

*Special Use Attachment Plugs, Receptacles, and Connectors*

### **C22.2 No. 184-M1988 (R2009)**

*Solid-State Lighting Controls*

### **CAN/CSA-C22.2 No. 188-04 (R2009)**

*Splicing Wire Connectors* (tri-national standard with NMX-J-548-ANCE-2004, first edition, and UL 486C, fifth edition)

### **C22.2 No. 190-M1985 (R2009)**

*Capacitors for Power Factor Correction*

### **CAN/CSA-C22.2 No. 191-M89 (R2009)**

*Engine Heaters and Battery Warmers*

### **C22.2 No. 201-M1984 (R2009)**

*Metal-Enclosed High Voltage Busways*

### **C22.2 No. 203.1-94 (R2009)**

*Manufactured Wiring Systems*



## Reaffirmed Standards (cont'd)

### **CAN/CSA-C22.2 No. 224-M89 (R2009)**

*Radiant Heaters and Infrared and Ultraviolet Lamp Assemblies for Cosmetic or Hygienic Purposes in Nonmedical Applications*

### **C22.2 No. 245-95 (R2009)**

*Marine Shipboard Cable* (bi-national standard with UL 1309, first edition)

### **C22.2 No. 255-04 (R2009)**

*Neon Transformers and Power Supplies*

### **CAN/CSA-C22.2 No. 60745-2-19-05 (R2009)**

*Hand-held motor-operated electric tools — Safety — Part 2-19: Particular requirements for jointers* (bi-national standard with UL 60745-2-19, first edition. Adopted IEC 60745-2-19:2005, first edition, with Canadian deviations)

### **C22.3 No. 4-1974 (R2009)**

*Control of Electrochemical Corrosion of Underground Metallic Structures*

### **CAN/CSA-C22.3 No. 6-M91 (R2009)**

*Principles and Practices of Electrical Coordination Between Pipelines and Electric Supply Lines*

### **CAN/CSA-CEI/IEC 61000-4-14-01 (R2009)**

*Electromagnetic compatibility (EMC) — Part 4-14: Testing and measurement techniques — Voltage fluctuation immunity test* (Adopted CEI/IEC 61000-4-14:1999, first edition, without modification)

### **CAN/CSA-CEI/IEC 61000-4-28-01 (R2009)**

*Electromagnetic compatibility (EMC) — Part 4-28: Testing and measurement techniques — Variation of power frequency, immunity test* (Adopted CEI/IEC 61000-4-28:1999, first edition, without modification)

### **CAN/CSA-CEI/IEC 61000-4-30:04 (R2009)**

*Electromagnetic compatibility (EMC) — Part 4-30: Testing and measurement techniques — Power quality measurement methods* (Adopted CEI/IEC 61000-4-30:2003, first edition, without modification)

### **CAN/CSA-E79-18-95 (R2009)**

*Electrical apparatus for explosive gas atmospheres — Part 18: Encapsulation "m"* (Adopted CEI/IEC 79-18:1992, first edition, with Canadian deviations)

### **CAN/CSA-E730-2-2-94 (R2009)**

*Automatic electrical controls for household and similar use — Part 2: Particular requirements for thermal motor protectors* (Adopted CEI/IEC 730-2-2:1990, first edition, with Canadian deviations)

### **CAN/CSA-E730-2-5-94 (R2009)**

*Automatic electrical controls for household and similar use — Part 2: Particular requirements for automatic electrical burner control systems* (Adopted CEI/IEC 730-2-5:1990, first edition, with Canadian deviations)



## **Reaffirmed Standards (cont'd)**

### **CAN/CSA-E742-94 (R2009)**

*Automatic electrical controls for household and similar use — Part 2: Particular requirements for automatic electrical burner control systems* (Adopted CEI/IEC 742:1983, first edition, with Canadian deviations)

### **CAN/CSA-E60335-2-14:05 (R2009)**

*Household and similar electrical appliances — Safety — Part 2-14: Particular requirements for kitchen machines* (Adopted CEI/IEC 60335-2-14:2005, fourth edition, with Canadian deviations)

### **CAN/CSA-E60335-2-15:05 (R2009)**

*Household and similar electrical appliances — Safety — Part 2-15: Particular requirements for appliances for heating liquids* (Adopted CEI/IEC 60335-2-15:2003, fifth edition, with Canadian deviations)

### **CAN/CSA-E60335-2-23:05 (R2009)**

*Household and similar electrical appliances — Safety — Part 2-23: Particular requirements for appliances for skin or hair care* (Adopted CEI/IEC 60335-2-23:2005, fifth edition, without modification)

### **CAN/CSA-E60335-2-31:05 (R2009)**

*Household and similar electrical appliances — Safety — Part 2-31: Particular requirements for range hoods* (Adopted CEI/IEC 60335-2-31:2005, fourth edition, with Canadian deviations)

### **CAN/CSA-E60335-2-55:05 (R2009)**

*Household and similar electrical appliances — Safety — Part 2-55: Particular requirements for electrical appliances for use with aquariums and garden ponds* (Adopted CEI/IEC 60335-2-55:2005, third edition, without modification)

### **CAN/CSA-E60335-2-76:05 (R2009)**

*Household and similar electrical appliances — Safety — Part 2-76: Particular requirements for electric fence energizers* (Adopted CEI/IEC 60335-2-76:2005, second edition, with Canadian deviations)

### **CAN/CSA-E61496-1:04 (R2009)**

*Safety of machinery — Electro-sensitive protective equipment — Part 1: General requirements and tests* (Adopted CEI/IEC 61496-1:1997, first edition, with Canadian deviations)

### **CAN/CSA-E61496-2:04 (R2009)**

*Safety of machinery — Electro-sensitive protective equipment — Part 2: Particular requirements for equipment using active opto-electronic protective devices (AOPDs)* (Adopted CEI/IEC 61496-2:1997, first edition, with Canadian deviations)



## Reaffirmed Standards (cont'd)

CSA has reaffirmed its endorsement of the following IEC standards:

- **IEC 60093 (1980)**  
*Methods of test for volume resistivity and surface resistivity of solid electrical insulating materials*
- **IEC 60167 (1964)**  
*Methods of test for the determination of the insulation resistance of solid insulating materials*
- **IEC 60212 (1971)**  
*Standard conditions for use prior to and during the testing of solid electrical insulating materials*
- **IEC 60243-1-1998**  
*Electrical strength of insulating materials — Test methods — Part 1: Tests at power frequencies*
- **IEC 60243-2 (2001)**  
*Electric strength of insulating materials — Test methods — Part 2: Additional requirements for tests using direct voltage*
- **IEC 60250 (1969)**  
*Recommended methods for the determination of the permittivity and dielectric dissipation factor of electrical insulating materials at power, audio and radio frequencies including metre wavelengths*
- **IEC 60345 (1971)**  
*Method of test for electrical resistance and resistivity of insulating materials at elevated temperatures*
- **IEC 60371-3-3 (1983)**  
*Specification for insulating materials based on mica. Part 3: Specifications for individual materials. Sheet 3: Rigid mica materials for heating equipment*
- **IEC 60377-1 (1973)**  
*Methods for the determination of the dielectric properties of insulating materials at frequencies above 300 MHz. Part 1: General*
- **IEC 60377-2 (1977)**  
*Methods for the determination of the dielectric properties of insulating materials at frequencies above 300 MHz. Part 2: Resonance methods*
- **IEC 60394-1 (1972)**  
*Varnished fabrics for electrical purposes. Part 1: Definitions and general requirements*
- **IEC 60394-2 (1972)**  
*Varnished fabrics for electrical purposes. Part 2: Methods of Test*
- **IEC 60394-3-1 (1976)**  
*Varnished fabrics for electrical purposes. Part 3: Specifications for individual materials. Sheet 1: Oleoresinous varnish-cotton base, OR/C*



## Reaffirmed Standards (cont'd)

CSA has reaffirmed its endorsement of the following IEC standards:

- **IEC 60394-3-2 (1988)**  
*Varnished fabrics for electrical purposes. Part 3: Specifications for individual materials. Sheet 2: Glass-fabric based varnished fabrics with epoxy, polyurethane, silicone, polyester, bituminous or oleoresinous varnish*
- **IEC 60454-3-6 (1998)**  
*Pressure-sensitive adhesive tapes for electrical purposes — Part 3: Specifications for individual materials — Sheet 6: Polycarbonate film tapes with acrylic thermoplastic adhesive*
- **IEC 60454-3-7 (1998)**  
*Pressure-sensitive adhesive tapes for electrical purposes — Part 3: Specifications for individual materials — Sheet 7: Polyimide film tapes with pressure-sensitive adhesive*
- **IEC 60455-1 (1998)**  
*Resin based reactive compounds used for electrical insulation — Part 1: Definitions and general requirements*
- **IEC 60455-2 (1998)**  
*Resin based reactive compounds used for electrical insulation — Part 2: Methods of test*
- **IEC 60455-2-2 (1984)**  
*Specification for solventless polymerisable resinous compounds used for electrical insulation — Part 2: Methods of test — Test methods for coating powders for electrical purposes*
- **IEC 60455-3-11 (1988)**  
*Specification for solventless polymerisable resinous compounds used for electrical insulation. Part 3: Specifications for individual materials. Sheet 11: Epoxy resin-based coating powders*
- **IEC 60464-1 (1998)**  
*Varnishes used for electrical insulation — Part 1: Definitions and general requirements*
- **IEC 60493-1 (1974)**  
*Guide for the statistical analysis of ageing test data. Part 1: Methods based on mean values of normally distributed test results*
- **IEC 60554-1 (1977)**  
*Specification for cellulosic papers for electrical purposes. Part 1: Definitions and general requirements*
- **IEC 60554-3-1 (1979)**  
*Specification for cellulosic papers for electrical purposes. Part 3: Specifications for individual materials. Sheet 1: General purpose electrical paper*
- **IEC 60554-3-2 (1983)**  
*Specification for cellulosic papers for electrical purposes. Part 3: Specifications for individual materials. Sheet 2: Capacitor paper*



## Reaffirmed Standards (cont'd)

CSA has reaffirmed its endorsement of the following IEC standards:

- **IEC 60554-3-3 (1980)**  
*Specification for cellulosic papers for electrical purposes. Part 3: Specifications for individual materials. Sheet 3: Crêpe paper*
- **IEC 60554-3-4 (1979)**  
*Specification for cellulosic papers for electrical purposes. Part 3: Specifications for individual materials. Sheet 4: Electrolytic capacitor paper*
- **IEC 60554-3-5 (1984)**  
*Specification for cellulosic papers for electrical purposes. Part 3: Specifications for individual materials. Sheet 5: Special papers*
- **IEC 60589 (1977)**  
*Methods of test for the determination of ionic impurities in electrical insulating materials by extraction with liquids*
- **IEC 60648 (1979)**  
*Method of test for coefficients of friction of plastic film and sheeting for use as electrical insulation*
- **IEC 60667-1 (1980)**  
*Specification for vulcanized fibre for electrical purposes. Part 1: Definitions and general requirements*
- **IEC 60667-2-1982**  
*Specification for vulcanized fibre for electrical purposes. Part 2: Methods of test*
- **IEC 60667-3-1 (1986)**  
*Specification for vulcanized fibre for electrical purposes. Part 3: Specifications for individual materials. Sheet 1: Flat sheets*
- **IEC 60672-2 (1999)**  
*Ceramic and glass insulating materials — Part 2: Methods of test*
- **IEC 60672-3 (1997)**  
*Ceramic and glass-insulating materials — Part 3: Specifications for individual materials*
- **IEC 60674-1 (1980)**  
*Specification for plastic films for electrical purposes. Part 1: Definitions and general requirements*
- **IEC 60674-2 (1988)**  
*Specification for plastic films for electrical purposes. Part 2: Methods of test*
- **IEC 60763-1 (1983)**  
*Specification for laminated pressboard. Part 1: Definitions, classification and general requirements*





---

## Withdrawn Standards

---

**CAN/CSA-C22.3 No. 8-M91 (R2003)***Railway Electrification Guidelines***CAN/CSA-C233.1-87 (R2004)***Gapless Metal Oxide Surge Arresters for Alternating Current Systems*

---

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

---

### Informs Notices

---

<b>Date</b>	<b>Subject</b>	<b>Title</b>
April 27, 2009	Publication of Update No. 2 to CSA standard C22.2 No. 18.4-04, <i>Hardware for the Support of Conduit, Tubing and Cable</i> (bi-national standard with UL 2239).	Wiring Devices No. 59
April 27, 2009	Publication of CSA standard C22.2 No. 48-09, <i>Nonmetallic Sheathed Cables</i> .	Wire and Cable No. 144
April 27, 2009	Publication of CSA standard C22.2 No. 230-09, <i>Tray Cables</i> .	Wire and Cable No. 145
April 27, 2009	Publication of CSA standard C22.2 No. 96.1-09, <i>Mine Power Feeder Cables</i> .	Wire and Cable No. 146
June 19, 2009	Publication of Technical Information Letter No. D-32, providing interim certification requirements for harmonization of test values for field wiring terminals.	Industrial Control Equipment No. 26
June 19, 2009	Publication of CSA standard C22.2 No. 230-09, <i>Tray cables</i> (supersedes Wire and Cable No. 145).	Wire and Cable No. 145A



## Certification Notices

**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 requirements and new marking requirements of Update No. 4 to CSA standard C22.2 No. 42-99.	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 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
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

**Certification Notices (cont'd)**

<b>Effective Date</b>	<b>Subject</b>	<b>Title</b>
▶ 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 31, 2010	Publication CSA standard CAN/CSA-C22.2 No. 71.2-2008, <i>Electric Bench Tools</i> .	Electric Tools No. 22
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
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

**Certification Notices (cont'd)**

<b>Effective Date</b>	<b>Subject</b>	<b>Title</b>
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
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