

SCOPE OF ACCREDITATION

Canadian Standards Association
CSA INTERNATIONAL - POINTE-CLAIRE (MONTREAL)
865 Ellingham Street
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H9R 5E8

Accredited Laboratory No. 150
(Conforms with requirements of CAN-P-4E (ISO/IEC 17025:2005))

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CLIENTS SERVED: All interested parties

FIELDS OF TESTING: Electrical/Electronic, Mechanical/Physical

ISSUED ON: 2011-05-03

VALID TO: 2013-04-12

ELECTRICAL PRODUCTS AND ELECTRONIC PRODUCTS

Communications Equipment and Systems:

Radio, Television and Electronic Apparatus

CAN/CSA C22.2 60065-03 Audio, Video and Similar Electronic Appliances
Except for: 6.2 Laser radiation
7.2 Heat resistance of insulating material
(softening temp.)
8.18 Endurance test for Wound Components
12.1.2 Vibration test
12.3 Remote Control
13.4 Creepage Distances CTI
14.1 Resistors
14.6 Switches
14.7 Safety Interlocks

	14.2 Capacitors and RC-units
	16 External flexible cords
	18 Mechanical strength of picture tubes and protection against effects of implosion
	19.5.1 Fragmentation test
	A.10.2.1 Splash Treatment
	H Insulated winding wires for use without interleaved insulation
CSA C22.2 1	Radio, Television, and Electronic Apparatus Except for: 9: TV-Rated Switches and Relays 18: Discharge Path Resistors and Isolating Resistors
CSA C22.2 6	Electric Clocks
CSA E60065-00	Audio, Video and Similar Electronic Appliances Except for: 6.2 Laser radiation 7.2 Heat resistance of insulating material (softening temp.) 8.18 Endurance test for Wound Components 12.1.2 Vibration test 12.3 Remote Control 13.4 Creepage Distances CTI 14.1 Resistors 14.2 Capacitors and RC-units 14.6 Switches 14.7 Safety Interlocks 16 External flexible cords 18 Mechanical strength of picture tubes and protection against effects of implosion 19.5.1 Fragmentation test A.10.2.1 Splash Treatment H Insulated winding wires for use without interleaved insulation
IEC 60065	Audio, Video and Similar Electronic Appliances Except for: 6.2 Laser radiation 7.2 Heat resistance of insulating material (softening temp.) 8.18 Endurance test for Wound Components 12.1.2 Vibration test 12.3 Remote Control 13.4 Creepage Distances CTI 14.1 Resistors 14.2 Capacitors and RC-units 14.6 Switches 14.7 Safety Interlocks 16 External flexible cords 18 Mechanical strength of picture tubes and protection against effects of implosion 19.5.1 Fragmentation test A.10.2.1 Splash Treatment H Insulated winding wires for use without interleaved insulation

Components and Assemblies:

(Power and Signal Distribution Equipment - Wiring and Related Products)

CSA C22.2 153	Quick-Connect Terminals
CSA C22.2 158	Terminal Blocks Except for: 6.11 : Corrosion Cracking Test 6.12 : Aluminum conductors
CSA C22.2 18.1	Metallic Outlet Boxes Except for: 12.3 Boxes with Attached Device-Mounting Straps 12.5 Ceiling Suspended Fan Support 13 Corrosion protection
CSA C22.2 18.2	Nonmetallic outlet boxes Except for: 6.3.2.4 Simulated hammer blow at low temperature (all types of boxes) 6.3.3 Crushing 6.3.4 Aging 6.5 Ceiling fan support boxes 6.9 Thickness of protective metallic coating 6.13 Elastomeric material - Accelerated aging Conduit, Tubing, and Cable Fittings
CSA C22.2 18.3	Conduit, Tubing, and Cable Fittings Except for: 8.7 Concrete-tightness test 8.16.7 Elastomeric materials accelerated aging test 8.16.8 Thermoplastic materials accelerated aging test 8.17.8 Elastomeric materials accelerated aging test 8.17.9 Thermoplastic materials accelerated aging test 8.18.4 Oil spray test 8.18.5 Elastomeric materials accelerated aging test 8.18.6 Thermoplastic materials accelerated aging test 8.21.8 Elastomeric materials accelerated aging test 8.21.9 Thermoplastic materials accelerated aging test
CSA C22.2 182.1	Industrial Type, Special Use Attachment Plugs, Receptacles, and Connectors
CSA C22.2 182.2	Industrial Locking Type, Special Use Attachment Plugs, Receptacles, and Connectors Except for: 7.2 : Blade Security 7.4 : Crushing 7.9 : Resistance to arcing
CSA C22.2 182.3	Special Use Attachment Plugs, Receptacles, and Connectors Except for: 6.8 : Resistance to arcing (receptacles and connectors)

Rectifiers

CSA C22.2 107.1	General Use Power Supplies Except for:
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10.5.2 : Harmonic Distortion
15.3.3 : Harmonic Distortion
15.3.5 : Anti-Islanding Test
17.3.1 : Vibration Test
17.3.2 : Harmonic Distortion Test

CSA C22.2 107.2

Battery Charger

Switches and Controls

CAN/CSA C22.2 177

Clock-Operated Switches
Except for: 6.7 : Tungsten-Filament-Lamp load
6.8 : Special-Purpose Enclosure Tests

CAN/CSA C22.2 76

Splitters

CSA C22.2 14

Industrial Control Equipment
Except for:
6.9 : Burnout
6.10 : Short-Circuit Calibration of Test Circuits
6.11 : Short Circuit-Overload Relays and Equipment
Incorporating Overload Relays 6.12 : Controller intended
for use on circuits capable of delivering high-fault currents
6.13 : Group fusing
6.14 : Instantaneous-Trip Circuit breaker
6.19 : Transient-Voltage-Surge Suppression
6.21.5 : Adhesion

CSA C22.2 156

Solid-State Speed Controls
Except for:
6.2 - Line Conducted Interference Level

CSA C22.2 4

Enclosed Switches
Except for: 7.3 Overload Test
7.4 Endurance Test
7.6 Close-Open Test

CSA C22.2 55

Special Use Switches
Except for: 6.3.3 : "T" Rated (AC or DC)
6.3.4 : "L" Rated (AC)
6.3.5 : Television Switch
6.6 : Endurance (continued) - Television switch
6.7 : Dielectric Strength (Repeated) - Television switch
6.11 : Crushing
6.12 : Effect of Heat on Actuating Members
6.14 : Environmental
6.15 : Arc-Tracking - Television switches

Transformers

CAN/CSA C22.2 223

Power Supplies with Extra-Low-Voltage Class 2 Outputs

CAN/CSA C22.2 47

Air-Cooled Transformers
Except for: Clause 6.3.4 - Basic Impulse Insulation Level

CSA C22.2 13

Transformers for Luminous-Tube Signs, Oil- or
Gas-Burner Ignition Equipment, Cold-Cathode Interior
Lighting

	Except for: A6.2 : Open-Circuit High-Potential Voltage B6.2 : Open-Circuit High-Potential C6.2 : Open-Circuit High-Potential Voltage
CSA C22.2 173	Transformers for Toy and Hobby Use
CSA C22.2 66	Specialty Transformers
CSA C22.2 66.1	Low Voltage Transformers - Part 1: General Requirements
CSA C22.2 66.2	Low Voltage Transformers - Part 2: General Purpose Transformers
CSA C22.2 66.3	Low Voltage Transformers - Part 3: Class 2 and Class 3 Transformers

Electrical Appliances:

Cooking and Liquid Heating

CAN/CSA C22.2 110	Construction and Test of Electric Storage-Tank Water Heaters
CAN/CSA C22.2 218.1	Spas, Hot Tubs, and Associated Equipment Except for: Clause 6.6.7 - Circulating Water Pump Test Clause 6.7.2.3 Splashing Clause 6.7.3.3 Splashing Clause 6.7.4.3 Splashing
CAN/CSA C22.2 61	Household Cooking Ranges Except for: Clause 6.3.3 - Electric Ranges in Combination with Fuel Burning Heaters
CAN/CSA C22.2 64	Household Cooking and Liquid-Heating Appliances Except for: 6.17 : Insertion Endurance 6.26.3 : Transient Surge Test (for Induction Heating Hot Plates) 8.6.1 : Escape Current Test
CSA C22.2 109	Commercial Cooking Appliances Except for: Clause 6.18.4 - ANSI/ASTM Deflection Temperature test
CSA C22.2 195	Motor Operated Food Processing Appliances (Household and Commercial) Except for: 6.17 : High Current Arc Ignition

Heating, Refrigerating and Air Conditioning

CAN/CSA C22.2 117	Room Air Conditioners
CAN/CSA C22.2 120	Refrigeration Equipment Except for: 6.19 : Elastomeric Materials Deterioration Test for Gaskets and Adhesives 6.26 : Pressure Tests
CAN/CSA C22.2 224	Radiant Heaters and Infrared and Ultraviolet Lamp Assemblies for Cosmetic or Hygienic Purposes in Nonmedical Applications Except for: Clause 6.8 - Radiation Output

	Clause 6.17 - Protective Eyewear
	Clause 6.8 - Bond Strength of Printed Wiring Boards
CSA C22.2 101	Electrically Heated Bedding Appliances for Household Use Except for: 6.4 : Flexing (Bedding) 6.7 : Laundering 6.29 : Physical Properties (Heater Element) 6.32 : Deformation (Heater Element) 6.35 : Flexing (Heater Element) 6.39 : Shrinkage (Blanket Shell)
CSA C22.2 104	Humidifiers Except for: Clause 70 - Backflow Test
CSA C22.2 113	Fans and Ventilators Except for: 6.15.3 : ANSI/ASTM Deflection Temperature test 6.24 : Impact Force (Fan Blade)
CSA C22.2 122	Hand-Held Electrically Heated Tools
CSA C22.2 155	Electric Duct Heaters
CSA C22.2 187	Electrostatic Air Cleaners Except for: Clause 6.10 - High Voltage Insulating Materials
CSA C22.2 217	Radiant Space Heating Panels, Panel Sets, and Systems Except for: Clauses: All Thin Sheet Heating Panels Tests
CSA C22.2 236	Heating and Cooling Equipment Except for: 59 Accelerated aging tests (oxygen bomb test) 55 Limited short-circuit test (3 phases, over 240 volts 1 phase and over 1000 Amps) 62 Fatigue test analysis 70 Ultraviolet light exposure test App.B 3 Molten PVC and Copper Test
CSA C22.2 24	Temperature-Indicating and Regulating Equipment (applicable only for electronic thermostats and dampers)
CSA C22.2 46	Electric Air-Heaters Except for: Clause 6.15.6 - Vibration
CSA C22.2 63	Household Refrigerators and Freezers Except for: 8.22 : Accelerated aging test (oxygen bomb test) 9.5 : Horizontal burning test - 0.17HBF, 0.17HF-1, or 0.17HF-2 foamed materials 9.9 : Flame spread test 9.11 : High-current arc ignition test
CSA C22.2 72	Heater Elements Except for: 6.5 - Flame Retardance
CSA C22.2 88	Construction and Test of Industrial Heating Equipment
CSA C22.2 92	Dehumidifiers

Lighting and Fixtures

CAN/CSA C22.2 207	Portable and Stationary Electric Signs and Displays
CAN/CSA C22.2 74	Equipment for Use with Electric Discharge Lamps
CSA C22.2 12	Portable Luminaires

CSA C22.2 166	Stage and Studio Luminaires
CSA C22.2 37	Christmas Tree and Other Decorative Lighting Outfits Except for: 6.11 Corrosion Cracking Clause 6.14.1 - Blade Retention
CSA C22.2 89	Swimming-Pool Luminaires, Submersible Luminaires and Accessories
CSA C22.2 9.0	General requirements for Luminaires Except for: 13.8 : Glass Containment Barrier - Thermal Shock 13.10 : Polymeric Containment Barrier - Melt-Through 13.25 : Folded Blade Compression for Direct Plug-In Power Supplies 13.32 : High-Current Arc Ignition (HAI) 13.33 : Comparative Tracking Index (CTI) 13.37 : UV Exposure Conditioning 16.32 : Weatherometer (UV Conditioning)
CSAC22.2 250	Luminaires Except for: 16.7 Glow Wire End Product 16.8 High-current arc ignition (HAI) 16.25 UV exposure test apparatus 16.28 Lamp containment barrier thermal shock 16.29 Polymeric Lamp containment Barrier - Melt-Through

Miscellaneous Electrical Appliances (Specify)

CAN/CSA C22.2 103	Electric Fence Controllers
CAN/CSA C22.2 189	High-Voltage Insect Killers Except for: Clause 6.5.2 - Arc Tracking
CAN/CSA C22.2 191	Engine Heaters and Battery Warmers
CAN/CSA C22.2 81	Electric Irons
CSA C22.2 102	Brooders and Incubators
CSA C22.2 128	Vending Machines Except for: Clause 6.15 - Elastomeric Material Deterioration Test for Gaskets and Adhesives
CSA C22.2 140.2	Hermetic Refrigerant Motor-Compressors Except for: 33 : Vibration test 42 : Gasket-accelerated aging test 43 : Metallic coating thickness test
CSA C22.2 140.3	Refrigerant-Containing Components for Use in Electrical Equipment
CSA C22.2 200	Electric Waterbed Heater Systems
CSA C22.2 221	Electrically Heated Hobby and Educational Type Kilns
CSA C22.2 36	Hairdressing Equipment
CSA C22.2 99	Construction and Test of Domestic Electric Ironing Machines

Motor Operated Electrical Appliances

CAN/CSA C22.2 112	Clothes Drying Machines Except for: Clause 32.16 - High-current arc ignition
CAN/CSA C22.2 147	Motor-Operated Gardening Appliances Except for: Clause 6.18 - Foot Probe Test
CAN/CSA C22.2 68	Motor-Operated Appliances (Household and Commercial)
CAN/CSA C22.2 71.1	Portable Electric Tools
CAN/CSA C22.2 71.2	Electric Bench Tools Except for: Clause 6.15 - High Current Arc Ignition
CAN/CSA C22.2 745-1	Safety of Portable Electric Tools Except for: Clause 20.13 - Aging test for rubber in oxygen bomb
CAN/CSA C22.2 745-3	Safety of Portable Electric Tools
CAN/CSA E335-1/3E	Safety of Household and Similar Electrical Appliances - Part 1:General Requirements Except for: Clause 22.32 - Insulation Integrity - Oxygen Bomb Test Clause 24 - Components Clause 30.2.1 - Flame Test, Annex J - IEC 707 Clause 30.3 - Proof Tracking Test, Annex N Clause 32 - Radiation, Toxicity and Other Hazards
CSA C22.2 10	Electric Floor Surfacing and Cleaning Machines
CSA C22.2 105	Electrical Equipment for Woodworking Machinery
CSA C22.2 243	Vacuum Cleaners, Blower Cleaners, and Household Floor Finishing Machines Except for: Clause: 5.24 End-product arc resistance
CSA C22.2 73	Construction and Test of Electrically-Equipped Machine Tools
CSA E335-1/2E	Safety of Household and Similar Electrical Appliances - Part 1:General Requirements Except for: Clause 22.23 - Insulation Integrity - Oxygen Bomb Test Clause 24 - Components Clause 30.2.1 - Flame Test, Annex J - IEC 707 Clause 30.3 - Proof Tracking Test, Annex N Clause 32 - Radiation, Toxicity and Other Hazards

Washing Equipment

CSA C22.2 167	Household Dishwashing Machines
CSA C22.2 168	Commercial Dishwashing Machines
CSA C22.2 169	Electric Clothes Washing Machines and Extractors Except for: Clause 32.19 - High-current arc ignition
CSA C22.2 53	Electric Washing Machines

Equipment, Miscellaneous

Enclosures

CAN/CSA C22.2 60529	Degrees of protection provided by enclosures (IP Code) Except for: 13.4 Dust test for first characteristic numerals 5 and 6
CAN/CSA C22.2 94	Special Purpose Enclosures Except for: 6.7 : Sleet and Formation of Ice 6.12.1 : Rust Resistance 6.12.2 : Corrosion Resistance App.A Alternative Tests

Grounding

CSA C22.2 0.4	Bonding and Grounding of Electrical Equipment (Protective Grounding) Except for: 4.3 Limited Short-Circuit test (3 phases, over 240 volts 1 phase and over 1000 Amps)
CSA C22.2 41	Grounding and Bonding Equipment Except for: 6.5 : Protective Coatings 6.7 : Conditioning

Welding

CSA C22.2 60	Arc Welding Equipment
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Information Processing and Business Equipment:

(Generally Applicable Tests)

CAN/CSA C22.2 60950-1	Safety of Information Technology Equipment, Including Electrical Business Equipment Except for: 2.10.4 : Creepage distances (CTI) 3.2.5.1 Screened AC Power Cords 4.2.8 : Cathode ray tubes 4.3.12 : Flammable liquids 4.3.13 : Radiation (laser) 4.7.3 High Current Arcing 6.2.2.1 : Impulse test 6.5 : Acoustic Tests A.3 : High current arcing ignition test A.7 : Flammability test for classifying foamed material HF-1, HF-2 or HBF
CSA C22.2 950	Safety of Information Technology Equipment, Including Electrical Business Equipment Except for: 2.9.3 : Creepage distances (CTI) 4.2.8 : Cathode ray tubes 4.3.12 : Radiation (laser) 4.4.8 : Flammable liquids 6.4.2.1 : Impulse test 6.4.3 : Acoustic tests

IEC 60950-1	A.3 : High current arcing ignition test A.7 : Flammability test for classifying foamed material HF-1, HF-2, or HBF Safety of Information Technology Equipment, Including Electrical Business Equipment Except for: Clauses: 2.10.4 Creepage distances (CTI) 4.2.8 Cathode ray tubes 4.3.12 Flammable liquids 4.3.13 Radiation (laser) 6.2.2.1 Impulse test 6.5 Acoustic Tests A.3 High current arcing ignition test A.7 Flammability test for classifying foamed material HF-1, HF-2 or HBF
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Materials:

Plastics

CAN/CSA C22.2 0.17	Evaluation of Properties of Polymeric Materials Except for: clauses: 4.2.4 Vertical Burning Tests for Classifying Thin Materials as VTM-0, VTM-1, and VTM-2 4.2.5 Flame Test for Foamed Materials 4.3.2 High-Current Arc Ignition (HAI) 4.3.3 High-Voltage Arc Resistance (HVAR) 5.2 Charpy Impact 5.3 Izod Impact 5.5 Tensile Strength 5.8.2 Heat Deflection Temperature (HDT/DTUL) 5.8.3 Vicat Softening Point 5.9.2 Weatherometer Test 6.5 Comparative Tracking Index (CTI) 7. Relative Thermal Index (RTI)
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Medical Devices:

Treatment Equipment

CAN/CSA C22.2 601.1	Medical Electrical Equipment, Part 1: General Requirements for Safety Except for: 25.2 : Expelled parts, Graphical display vacuum tube test 36 : Electromagnetic compatibility 37 : Flammable gases 39.3b : Prevention of electrostatic charges (ISO) std 2882) 39.4 : Corona 40.5b : Gasket and/or sealing ageing test (IEC pub. 68-2-2, Clause 15) 41 : Requirements and tests for CATEGORY APG
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IEC 60601-1	EQUIPMENT, parts and components 56 Components 59.2c : Insulation - aging in an atmosphere of oxygen under pressure Appendix F: Test apparatus for flammable mixtures Medical Electrical Equipment Except for: 25.2 : Expelled parts, Graphical display vacuum tube test 36 : Electromagnetic compatibility 37 : Flammable gases 39.3b : Prevention of electrostatic charges (ISO std 2882) 39.4 : Corona 40.5b : Gasket and/or sealing ageing test (IEC pub. 68-2-2, Clause 15) 41 : Requirements and tests for CATEGORY APG EQUIPMENT, parts and components 56 Components 59.2c : Insulation - aging in an atmosphere of oxygen under pressure Appendix F: Test apparatus for flammable mixtures
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Motors, Generators, and Machines:

Complete Unit

CSA C22.2 100	Motors and Generators (1 hp max, 600 VAC, 120 VDC Except for: 9 : AC Machines rated over 750 VAC or in IEC Frame Size 315 and larger 10 : All DC Machines in IEC Frame Size 90 and Larger 12 : Inverter-Duty AC Machines
CSA C22.2 77	Motors with Inherent Overheating Protection 1 hp max, 600 VAC, 120 VDC Except for: Clause: 5.9 Dielectric Strength Tubular Insulator

Scientific Instruments: (For biological, chemical electrical, mechanical optical and physical examination)

(Complete Units)

CAN/CSA C22.2 1010.1	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use, Part 1: General Requirements Except for: 10.3 : Resistance to heat of Insulating Material 12.6 : Laser sources 13.3 : Implosion of High-vacuum Devices 14 - Components
CAN/CSA C22.2 61010.1	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use, Part 1: General

	Requirements Except for: 10.5.3 Resistance to heat of Insulating Material 12.6 Laser sources 13.2 Implosion of High-vacuum Devices 14 Component
IEC 1010-1	Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use Except for: 10.3 : Resistance to heat of Insulating Material 12.6 : Laser sources 13.3 : Implosion of High-vacuum Devices 14 : Components

ENVIRONMENTAL AND OCCUPATIONAL HEALTH AND SAFETY

Occupational Health and Safety:

Warning Devices

CSA C22.2 205	Signal Equipment Except for: Clause: 6.14 Isolation Capacitors and Networks
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MACHINERY

Boilers, Pressure Vessels and Piping:

Pumps and Related Equipment

CSA C22.2 108	Liquid Pumps Except for: Clause: 6.9 Accelerated Aging (Gaskets)
CSA C22.2 115	Meter-Mounting Devices
CSA C22.2 139	Electrically Operated Valves Except for: 6.5.2 : Opening and Closing - Safety Valves 6.5.4 : Operating Times
CSA C22.2 142	Process Control Equipment

MARKETPLACE PRODUCTS-CONSUMER AND BUSINESS

Furniture and Consumer Articles:

(Toys)

CSA C22.2 149	Electrically Operated Toys
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Notes:

CAN-P-4E (ISO/IEC 17025): General Requirements for the Competence of Testing and Calibration Laboratories (ISO/IEC 17025-2005)

S. Cross, Director, Conformity Assessment

Date: 2011-05-03

Number of Scope Listings: 111

SCC 1003-15/193

Partner File #0

Partner: None