

## SCOPE OF ACCREDITATION

**CSA INTERNATIONAL - EDMONTON**  
**1707-94 Street**  
**Edmonton, AB**  
**T6N 1E6**

Accredited Laboratory No. 135  
(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: 2011-09-15

VALID TO: 2013-12-07

### **CONSTRUCTION**

#### **Construction Materials**

##### **Plumbing Products (See also ELAS, METAL and NONMETAL Sections)**

CAN/CSA B45 CSA Standard on Plumbing Fixtures (including Fixtures  
for Use in Recreational Vehicles)  
Except for: Clause 4.3 Life Test

CSA B66 Prefabricated Septic Tanks and Sewage Holding Tanks  
Except for:

Clause 6.2.7 Laminated Hardness  
Clause 8.2.3 Steel Tanks

### **ELECTRICAL PRODUCTS AND ELECTRONIC PRODUCTS**

## **Communications Equipment and Systems:**

### **Components and Assemblies**

CSA C22.2 8                      Electromagnetic Interference (EMI) Filters  
Except for:  
Clause 6.14 limited short circuit  
Clause 6.15 short circuit withstand

### **Power and Signal Distribution Equipment**

CAN/CSA C22.2 126              Cable Tray System  
Except for:  
CI 6.2 zinc coating  
CI 6.5 tests for non-metallic cable trays

CAN/CSA C22.2 203              Modular Wiring Systems for Office Furniture

CAN/CSA C22.2 42              General Use Receptacles, Attachment Plugs, and Similar Devices  
Except for:  
CI 7.7 retention of blades (receptacles and other similar devices)  
CI 7.10 retention of blades (repeated)  
CI 7.13 creep - self contained devices  
CI 7.16 receptacle grounding  
CI 7.19 impact  
CI 7.20 assembly security  
CI 7.22 fault current (pin type terminals)  
CI 7.25 receptacles intended for use with copper aluminium conductors  
CI 7.26 heat cycling with conductor disturbance for receptacles intended for use with copper-aluminium conductors  
CI 7.27 heat cycling with vibration of receptacles intended for use with copper-aluminium conductors  
CI 7.28 environmental test for receptacles intended for use with copper or aluminium conductors  
CI 7.29 stripping test for receptacles intended for use with copper or aluminium conductors  
CI 7.32 isolated-ground receptacle - ageing and dielectric strength  
CI 7.34 test on devices with varistors intended for surge suppression of connected loads

CAN/CSA C22.2 76              Splitters  
Except for:  
CI 6.5 Adherence of Coating on Aluminum Surfaces

CSA C22.2 0.5                    Threaded Conduit Entries

CSA C22.2 159                   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,

CSA C22.2 18

and in Gaseous Mines

Outlet Boxes, Conduit Boxes & Fittings

Except for:

CI 6.3.3 Crushing

CI 6.9 thickness of protective coating of boxes, covers and fittings

CI 6.15 fittings and clamps for flexible metal conduit, armour cable and aluminium sheathed cables

CI 6.16 clamps and fittings for non-metallic sheathed cabled

CI 6.17 threadless fittings for electrical metallic tubing and rigid conduit

CI 6.18 other types of fittings

CI 6.19 concrete-tight fitting

CI 6.20 service entrance cable fitting

CI 6.21 non-metallic and insulated metallic bushings

CI 6.22 straps for rigid conduit and metal tubing

CI 6.23 straps and staples for armoured cable, flexible metal conduit and non-metallic sheathed cable

CI 6.24 hangers for rigid conduit and electrical metal tubing

CI 6.25 metal fittings for liquid tight flexible metal or non-metallic conduit

CI 6.26 armoured cable bushings

CI 6.28 metal grips

CI 6.29 fittings for flexible cord

CI 6.30 fittings for tray cable

CI 6.31 steel stud bushings and standoffs for non-metallic sheathed cables

CI 6.32 wire pull test for angle fitting, conduit body and short-radius conduit body

CI 6.33 test on expanded foam closed cell materials

	CI 6.34 expansion fittings (for rigid metal conduit)
	CI 6.35 hubs
CSA C22.2 26	Construction and Test of Wireways, Auxilliary Gutters and Associated Fittings
CSA C22.2 40	Cutout, Junction, and Pull Boxes Except for:  CI 6.1.3 Thickness Determination of Protective Zinc Coatings  CI 6.29 Chemical Retardant Properties

### **Radio, Television and Electronic Apparatus**

CSA C22.2 0.8	Safety Functions Incorporating Electronic Technology Except for: CI 4.4.2 static electricity CI 4.4.3 susceptibility to conducted EMI CI 4.4.4 susceptibility to radiated EMI
CSA C22.2 1	Radio, Television, and Electronic Apparatus Except for:  CI 12.12 Vibration  CI 14.5.1.1 Thermal Cut-Outs  CI 14.5.1.2 Thermal Links  CI 14.5.1.3 PTC-s Thermistors  CI 18 Mechanical Strength of Picture Tubes  CI 20.2.3 Printed Boards
CSA C22.2 6	Electric Clocks

### **Components and Assemblies:**

#### **Rectifiers**

CSA C22.2 107.1	Commercial and Industrial Power Supplies Except for: CI 17.3 Vibration Test
CSA C22.2 107.2	Battery Chargers Except for: CI 8.5.1 Vibration CI 8.5.2 Shock

#### **Switches and Controls**

CSA C22.2 14 (600V maximum) Industrial Control Equipment

Except for:

CI 6.4 Overload Relay Calibration

CI 6.7 Current Withstand

CI 6.9 Burnout

CI 6.10 Short Circuit Calibration of Test Circuit

CI 6.11 Short Circuit

CI 6.12 Controllers Intended for Use on Circuits Capable of Delivering High Fault Currents

CI 6.13 Group Fusing

CI 6.14 Instantaneous Trip Circuit Breakers

CI 6.19 Transient Voltage Suppression

CI 6.21 Printed Circuit Board Coatings

CSA C22.2 178

Automatic Transfer Switches

Except for:

CI 6.9 Short Circuit

CI 6.10 Closing

CI 6.11 Instrumentation and Calibration of High Capacity Circuits

**Transformers**

CAN/CSA C22.2 13

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

Except for: Clause A6.8: Switch Test

CAN/CSA C22.2 223

Power Supplies with Extra-Low-Voltage Class 2 Outputs

CAN/CSA C22.2 47

Air-Cooled Transformers (600V maximum)

Except for:

CI 6.3.4 Basic Impulse Insulation Level

CSA C22.2 173

Transformers for Toy and Hobby Use

CSA C22.2 66

Specialty Transformers (600V maximum)

**Electrical Appliances:**

**Cooking and Liquid Heating**

CAN/CSA C22.2 164

Electric Sauna Heaters

Except for:

CI 6.10 sharp edge test

CAN/CSA C22.2 64

Household Cooking and Liquid-Heating Appliances

Except for:

	CI 6.10 performance of automatic temperature controls
	CI 6.10 performance of fuse links
	CI 6.26 test for induction heating hot plates
CSA C22.2 109	Commercial Cooking Appliances Except for: CI 6.6 Flexing
	CI 6.9 Performance of Fusible Links
	CI 6.11 Performance of Automatic Controls
	CI 6.12 Temperature Stability Tests for Thermal Fuses
	CI 6.15 Fibreglass Sleeving Investigation
CSA C22.2 195	Motor Operated Food Processing Appliances Except for:
	CI 6.13.1 Flexing
	CI 6.17 High Current Arc Ignition
	CI 6.18 Cord Set Retention

### **(Household and Commercial)**

CSA C22.2 1335.1	Portable Electrical Motor-Operated and Heating Appliances: General Requirement Except for:
	CI 11.10.17 temperature limiting and regulatory control test
	CI 24 components
	CI 30.2.1 flame test annex J IEC 707
	CI 30.2.3 needle flame test Annex M IEC 695-2.2
	CI 30.3 proof tracking test Annex N
	CI 30.5 resistance to tracking IEC 112
	CI 32 radiation toxicity and similar hazards Annex G
	leakage current
CSA C22.2 218.1	Spas, Hot Tubs and Associated Equipment
CSA C22.2 218.2	Hydromassage Bathtub Appliance

### **Heating, Refrigerating and Air Conditioning**

CAN/CSA C22.2 120	Refrigeration Equipment Except for:
	CI 6.14 Flexing
CAN/CSA C22.2 224	Radiant Heaters and Infrared and Ultraviolet Lamp Assemblies for Cosmetic or Hygienic Purposes in Nonmedical Applications Except for:
	CI 6.8 Radiation Output
	CI 6.17 Protective Eyewear
	CI 6.19 Bond Strength of Printed Wiring Board
CAN/CSA C22.2 236	Heating and Cooling Equipment (600V maximum) Except for:

	CI 59 Accelerated Aging Tests
	CI 65 Ultra Violet Exposure Test
CSA C22.2 104	CI 66 Water Exposure and Immersion Test Humidifiers and Evaporative Coolers Except for: CI 6.6 Gasket Test
CSA C22.2 113	Fans and Ventilators CSA C22.2 117 Room Air Conditioner Except for: CI 6.10 Short Circuit CI 6.18 Short Circuit Test for Motors Protective Devices
CSA C22.2 15	Electrically Heated Warming Pads Except for: CI 6.1.6 Flexing CI 6.1.7 Heating (Repeated) CI 6.1.8 Burnout CI 6.2 Waterproof Pads CI 6.3 Thermostats CI 6.4 Heater Elements CI 6.29 Tensile strength of Seams
CSA C22.2 155	Electric Duct Heaters
CSA C22.2 187	Electrostatic Air Cleaners Except for:
CSA C22.2 3	CI 6.10 High Voltage Insulating Materials Electrical Features of Fuel Burning Equipment Except for: Clause 6.1.3 Motors
CSA C22.2 46	Electric Air-Heater Except for: CI 6.14 Performance Of Thermally Operated Controls CI 6.15 Performance Of Heaters Having PTC Heater Elements
CSA C22.2 88	Construction and Testing of Industrial Heating Equipment
CSA C22.2 92	Dehumidifiers

### **Lighting and Fixtures**

CAN/CSA C22.2 166	Stage and Studio Luminaires
CAN/CSA C22.2 207	Portable and Stationary Electric Signs and Displays
CSA C22.2 12	Portable Luminaires Except for:  CI 6.4.8.3 Calibration of Protected Devices  CI 6.9 Endurance (Extension Lamp Cord Reek)  CI 6.10 Swivel Strength Flexing and Swivelling
CSA C22.2 137	

	Electric Luminaires for Use in Hazardous Locations Except for:
CSA C22.2 141	CI 3.6.7 Vibration Unit Equipment for Emergency Lighting Except for:
CSA C22.2 184	CI 6.15 Light Output Solid State Lighting Controls Except for:
CSA C22.2 206 CSA C22.2 37	CI 6.2 Interference Level  CI 6.9 Limited Short Circuit Lighting Poles Christmas Tree and Other Decorative Lighting Outfits Except for:
	CI. 6.8 Accelerated Aging  CI 6.11 Corrosion Cracking  CI 6.14.1 Blade Retention
CSA C22.2 74 CSA C22.2 89	Equipment for Use with Electric Discharge Lamps Swimming-Pool Luminaires, Submersible Luminaires and Accessories Except for:
CSA C22.2 9	CI 6.10 Accelerated Aging Luminaires Except for:
	CI 13.6 Swivel Joint Rotation  CI 13.8 Glass Containment Barrier - Thermal Shock  CI 13.10 Polymeric Containment Barrier - Melt through  CI 13.19 Weather Resistance  CI 13.20 Printed Circuit Board Coating  CI 13.26 Insulation Equivalences  CI 13.32 High Current Ignition  CI 13.33 Comparative Tracking Index  CI 13.37 UV Exposure Conditioning

## CI 13.45 Glow Wire

### Miscellaneous Electrical Appliances (Specify)

CAN/CSA C22.2 103	Electric Fence Controllers
CAN/CSA C22.2 191	Engine Heaters and Battery Warmers Except for:  CI 6.9 Performance of Automatic Temperature Controls  CI 6.11 Performance of Fusible Links  CI 6.21 Performance of Heaters having PTC Heater Elements
CAN/CSA C22.2 199	Combustion Safety Controls and Solid State Ignitors for Gas and Oil Burning Equipment Except for: CI 6.16 Transient Voltage Surge Suppression
CSA C22.2 128	Vending Machines Except for:  CI 6.9 Limited Short Circuit
CSA C22.2 200	Electric Waterbed Heater Systems Except for:  CI 6.12 Flexing
CSA C22.2 213	CI 6.17 Automatic Temperature Controls Non-Incendive Electrical Equipment for Use in Class I, Division 2, Hazardous Locations
CSA C22.2 221	Electrically Heated Hobby and Educational Type Kilns Except for: CI 6.9 Performance of Thermostats

### Motor Operated Electrical Appliances

CAN/CSA C22.2 147	Motor-Operated Gardening Appliances Except for: CI 6.12 Flexing CI 6.14.6 Rotary Mowers CI 6.14.7 Snow Movers CI 6.15 Speed Control Limited Circuit Test CI 6.18 Foot Probe Test
CAN/CSA C22.2 68	Motor-Operated Appliances (Household and Commercial) Except for:  CI 6.2.14 Motor Operated Treadmills  CI 6.9.2 Endurance

CI 6.13.2 Flexing

CI 6.13.3 Cord Set Retention

CI 6.13 Speed Control - Limited Short Circuit

CI 6.17.3 Performance Under Rated Load

CI 6.17.4 Pneumatic Pilot Valve

CI 6.18 High Current Arc Ignition

CI 6.21.3 Entrapment

CI 6.21.8 Longitudinal Abrasion

CAN/CSA C22.2 71.2

Electric Bench Tools  
Except for:

CI 6.14 High Current Arc Ignition

CSA C22.2 10

Electric Floor Surfacing and Cleaning Machines

CSA C22.2 243

Vacuum Cleaners and Blower Cleaners

### **Equipment, Miscellaneous**

CSA C22.2 0.1

General Requirements for Double-Insulated Equipment

CSA C22.2 0.12

Wiring Space and Wire Bonding Space in Enclosures for  
Equipment Rated 750V or less

### **Conductors**

CSA C22.2 174

Cables and Cable Glands for Use I Hazardous Locations

CSA C22.2 27

Busways  
Except for:

CI 6.3 Endurance - Trolley Busways

CI 6.4 Electrical Conductivity - Trolley Busways

### **Enclosures**

CAN/CSA C22.2 94

Special Purpose Enclosures  
Except for:

CI 6.3 Drip

CI 6.7 Sleet and Formation of Ice

CI 6.10 Oil Exclusion

	CI 6.12.2.2 Paint Flaking Test (ISO 2409)
CSA C22.2 25	Enclosures for Use in Class II, Groups E, F and G Hazardous Locations
CSA C22.2 30	Explosion-Proof Enclosures for Use in Class I Hazardous Locations

### **Grounding**

CSA C22.2 0.4	Bonding and Grounding of Electrical Equipment (Protective Grounding) Except for:
	CI 4.3 Limited Short Circuit
CSA C22.2 41	Grounding and Bonding Equipment

### **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:
	4.3.12 Flammable Liquids
	4.3.13 Radiation
	CI 4.2.8 Cathode Ray Tube
	Annex A.3 Hot Flaming Oil Test
	Annex A.2 Flammability Test for the Fire Enclosures of Movable Equipment having a Total Mass not Exceeding 18Kg
CSA C22.2 234	Safety of Component Power Supplies

### **Materials:**

#### **Plastics**

CAN/CSA C22.2 0.17	Evaluation of Properties of Polymeric Materials Except for:
	CI 4.2.4 vertical flame test ASTM 04804
	CI 4.2.5 foamed plastic material flame test
	CI 4.3.2 comparative trading index

- CI 4.3.3 high current arc ignition
- CI 4.3.4 high voltage arc resistance to ignition
- CI 4.3.5 radiant panel ASTM E162 flammability
- CI 5.2 Izod impact test
- CI 5.3 flexural strength ASTM D790
- CI 5.5 drop weight impact
- CI 5.6 tensile impact
- CI. 5.7.2 heat deflection test
- CI.5.7.3 vicat softening point
- CI.5.8 weathering

### **Motors, Generators, and Machines:**

#### **Complete Unit**

- CSA C22.2 145                      Motors and Generators for Use in Hazardous Locations  
Except for:  
CI 7.4 Accumulation of Static Electricity - Non-metal  
Fans

### **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  
Except for:  
CI 12.4 microwave radiation  
CI 12.6 laser radiation IEC 824  
CI 13.3 implosion of high vacuum devices.
- CAN/CSA C22.2 231                      CSA Safety Requirements for Electrical and Electronic  
Measuring and Test Equipment  
Except for:
- CAN/CSA C22.2 60601-1              CI 8.0 Protection from Implosion and Explosion  
Medical Equipment, Part I  
Except for:
- CI 25 Expelled Parts
- CI 25.2 vacuum tube implosion test or per IEC 65
- CI 36 EMC Requirements
- CI 37 to 41.5 protected against hazards of ignition of  
flammable anaesthetic mixtures
- CI 44 Sterilization
- CSA C22.2 125

Electromedical Equipment

Except for:

CI 6.8.4 Humidity and Ingress of Fluids

CI 6.17 Molten PVC and Copper Test

CI 6.18 Implosion Test for Cathode Ray Tubes

CI 6.20 Bond Strength of Printed Wiring Boards

CSA C22.2 151

Laboratory Equipment

Except for:

CI 6.14 Implosion Test for Cathode Ray Tubes

CI 6.15 Bond Strength Test for Printed Wire Boards

CI 6.16 Molten PVC and Copper Test

## **ENVIRONMENTAL AND OCCUPATIONAL HEALTH AND SAFETY**

### **Occupational Health and Safety:**

#### **Warning Devices**

CSA C22.2 205

Signal Equipment

Except for:

CI 6.8 Across the Line Capacitors

CI 6.14 Isolation Capacitors and Networks

## **MACHINERY**

### **Boilers, Pressure Vessels and Piping:**

#### **Pumps and Related Equipment**

CAN/CSA C22.2 108

Liquid Pumps

Except for:

CI 6.9 Accelerated Aging (Gaskets)

CAN/CSA C22.2 142

Process Control Equipment

Except for:

CI 8.3 Mechanical Slip Clutch Test

CSA C22.2 139

Electrically Operated Valves

Except for:

Cl 6.5 Operation  
Cl 6.9 Leakage Test

**Stationary Equipment:**

**Hoists**

CSA C22.2 33 Construction and Test of Electric Cranes and Hoists  
(600V maximum)  
Except for: Clause 8.1 Switch controller Test  
Clause 8.3 Mechanical Slip Clutch Tests

**Transportation, Agricultural and Construction Vehicles and Components:**

**Recreational, All-Terrain**

CSA Z240 RV Series Recreational Vehicles  
CSA Z241 Series Park Model Trailers

**MARKETPLACE PRODUCTS-CONSUMER AND BUSINESS**

**Furniture and Consumer Articles:**

**Hazardous Products**

CAN/CSA C22.2 157 Intrinsically Safe and Non-Incendive Equipment for Use  
in Hazardous Locations  
Except for:

CAN/CSA E1214-1-1-9 Cl 6.9.2 Tested for Sealed Components (Rubber Gaskets)  
Part 1: Electrical Apparatus Protected by Enclosures -  
Section 1: Specification for Apparatus  
Except for: Cl 4.2 dust tightness

CAN/CSA E60079-0 Part 0: General Requirements  
CAN/CSA E60079-1 Part 1: Construction and Verification Test of Flameproof  
Enclosures of Electrical Apparatus  
Except for:  
Cl A4.1.5 resistance to list test

CAN/CSA E60079-11 Part 11: Intrinsic Safety 'i'  
CAN/CSA E60079-15 Part 15: Electrical Apparatus with Type of Protection 'n'  
CAN/CSA E60079-18 Part 18: Encapsulation 'm'  
Except for:  
Cl 3.1 Annex C resistance to light test

CAN/CSA E60079-2 Part 2: Electrical Apparatus - Type of Protection 'p'  
CAN/CSA E60079-5 Part 5: Sand Filled Apparatus  
CAN/CSA E60079-6 Part 6: Oil Immersed Apparatus

CAN/CSA E60079-7	Part 7: Increased Safety 'e' Except for: CI 6.2 Annex B- rotor temperature measurement test
CSA C22.2 149	Electrically Operated Toys Except for: CI 6.15.3 Automatic Controls

## **Tools**

CSA C22.2 105	Electrical Equipment for Woodworking
CSA C22.2 122	Hand-Held Electrically Heated Tools Except for:  CI 6.7 Performance of Thermally Operated Controls  CI 6.10 Limited Short Circuit for Electronic Controls  CI 6.11 Flexing
CSA C22.2 73	Construction and Testing of Electrically-Equipped Machine Tools

## **NON METALLIC MINERALS AND PRODUCTS**

### **Energy Equipment: (Appliances)**

#### **Handling of Liquid Fuels**

Dispensing Devices

#### **(Tanks)**

CSA C22.2 22	Electrical Equipment for Flammable and Combustible Fuel Dispensers
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#### **Solid Fuel Fired Appliances**

CSA B365	Installation Code for Solid Fuel Burning Appliances and Equipment
CSA B366.1	Solid-Fuel Fired Central Heating Appliances

### **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: 2011-09-15

Number of Scope Listings: 110

SCC 1003-15/190

Partner File #0

Partner: None