SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

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ELECTRICAL

Valid To: November 30, 2027 Certificate Number: 2829.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on automotive sub-components, information technology equipment (ITE), medical electrical equipment, electric motors, and various electronic and electrical components/systems:

Test Technology:	**Test Method(s) [1,2]:**
Automotive EMC	
RF Emissions (Radiated and Conducted)	CISPR 25 (2008); CISPR 25; EN 55025 (2008); EN 55025; AS/NZS CISPR 25 (2004); AS/NZS CISPR 25; AS/NZS CISPR 36
Electrostatic Discharge (ESD) Immunity	ISO 10605 (2008); ISO 10605
Absorber Lined Shielded Enclosure (ALSE) RF Immunity	ISO 11452-2 (2004); ISO 11452-2
TEM Cell RF Immunity	ISO 11452-3 (2001); ISO 11452-3
Bulk Current Injection RF Immunity	ISO 11452-4 (2005); ISO 11452-4
Stripline Immunity	ISO 11452-5 (2002); ISO 11452-5
Immunity to Magnetic Fields	ISO 11452-8 (2015); ISO 11452-8
Portable Transmitter RF Immunity	ISO 11452-9 (2012); ISO 11452-9
Automotive Transient Immunity	ISO 7637-2 (2004); ISO 7637-2; ISO 7637-3 (2007); ISO 7637-3

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Test Technology:	**Test Method(s) [1,2] :**
Electrical Load Electric Vehicle Conductive Charging System Automotive EMC	ISO 16750-2; IEC 61851-21-2; UN ECE REG 10 (Automotive)
Earth-moving and building construction machinery – Machines with internal electrical power supply	ISO 13766-1; ISO 13766-2
Unintentional Emissions Radiated & Conducted	
U.S. (FCC) *(3m semi-anechoic chamber, up to 40 GHz)*	47 CFR, FCC Part 15, Subpart B (using ANSI C63.4:2014); ANSI C63.4:2014; ANSI C63.4a-2017
Industrial, Scientific, and Medical (Consumer ISM)	47 CFR, FCC Part 18 (using MP-5:1986); MP-5:1986
Canada (ISED) **Information Technology Equipment**	ICES-003
Lighting Equipment	ICES-005
Industrial, Scientific, and Medical (ISM) Radio Frequency Generators	ICES-001
International **Unintentional Radiators**	
Information Technology	AS/NZS CISPR 22; CISPR 22; EN 55022
Multimedia Equipment	AS/NZS CISPR 32; CISPR 32; EN 55032
Intentional Emissions Unlicensed Transmitters	
U.S. (FCC)	
Intentional Radiators	47 CFR, FCC Part 15 C Unlicensed Transmitters (using ANSI C63.10:2020); ANSI C63.10:2013, ANSI C63.10:2020+Cor. 1-2023
U-NII without DFS Intentional Radiators	47 CFR FCC Part 15 E, U-NII without DFS (using ANSI C63.10:2020); ANSI C63.10:2013 ANSI C63.10:2020+Cor. 1-2023
Canada (ISED) **Intentional Radiators**	RSS-GEN; RSS-210 (< 40 GHz); RSS-247 (without DFS); RSS-310; IEEE C95.3
Generic Standards (Residential)	AS/NZS 61000.6.3; IEC 61000-6-3; EN 61000-6-3
Generic Standards (Industrial)	AS/NZS 61000.6.4; IEC 61000-6-4; EN 61000-6-4; EN IEC 61000-6-8

Test Technology:	Test Method(s) [1,2] :
Industrial, Scientific, and Medical	AS CISPR 11; CISPR 11; EN 55011
Vehicles, Boats, and Internal Combustion Engines	AS/NZS CISPR 12; CISPR 12; EN 55012
Household Appliances, Electric Tools, and Similar Apparatus	AS/NZS CISPR 14.1; CISPR 14.1; EN 55014-1
Electrical Lighting & Similar Equipment	AS/NZS CISPR 15; CISPR 15; EN 55015
Information Technology	AS/NZS CISPR 22; CISPR 22; EN 55022
Multimedia Equipment	AS/NZS CISPR 32; CISPR 32; EN 55032; AS/NZS CISPR 35; CISPR 35; EN 55035
Vehicles, Boats, and Other Devices Equipped with Internal Combustion Engines, Traction Batteries, or Both	ICES-002
Information Technology Equipment (including digital apparatus)	ICES-003
Medical Electrical Equipment – Part 1-2: General Requirements for Basic Safety & Essential Performance – Collateral Standard: Electromagnetic Disturbance – Requirements and Tests	IEC 60601-1-2; EN 60601-1-2
Electrical Equipment for Measurement, Control and Laboratory use – EMC Requirements – Part 2-6: Particular Requirements – in vitro Diagnostic (IVD) Medical Equipment	IEC 61326-2-6; EN 61326-2-6
Electrical Equipment for Measurement, Control & Laboratory use – EMC Requirements – Part 1: General Requirements	IEC 61326-1; EN 61326-1
Railway Applications – EMC Part 3-2: Rolling Stock – Apparatus	EN 50121-3-2
Railway Applications – EMC – Part 4: Emission & Immunity of the Signaling & Telecommunications Apparatus	EN 50121-4
Railway Applications – Rolling Stock Electronic Equipment	EN 50155
Electromagnetic Compatibility – Product Family Standard for Audio, Video, Audio-visual, and Entertainment Lighting Control Apparatus for Professional use – Emissions	EN 55103-1

Test Technology:	**Test Method(s) [1,2] :**
Road Traffic Signal Systems – EMC	EN 50293
Electrical Apparatus for the Detection and Measurement of Combustible Gases, Toxic Gases, or Oxygen	EN 50270
Harmonic Current Emissions	AS/NZS 61000-3-2; IEC 61000-3-2; EN 61000-3-2
Voltage Fluctuation and Flicker Emissions	AS/NZS 61000-3-3; IEC 61000-3-3; EN 61000-3-3
Immunity EMC	
Electrostatic Discharge (ESD) Immunity	EN 61000-4-2 (2009); EN 61000-4-2; IEC 61000-4-2 (2008); IEC 6100-4-2; AS/NZS 61000.4.2 (2002); AS/NZS 61000.4.2
Radiated RF Immunity	EN 61000-4-3 (2008); EN 61000-4-3; IEC 61000-4-3 (2008); IEC 61000-4-3; AS/NZS 61000.4.3 (2006); AS/NZS 61000.4.3
Electric Fast Transient / Burst Immunity	EN 61000-4-4 (2005); EN 61000-4-4; IEC 61000-4-4 (2004); IEC 61000-4-4; AS/NZS 61000.4.4 (2006); AS/NZS 61000.4.4
Surge Immunity	EN 61000-4-5 (2006) (*excluding clause 6.2*); EN 61000-4-5 (*excluding clause 6.2*); IEC 61000-4-5 (2005) (*excluding clause 6.2*)
Conducted RF Immunity	EN 61000-4-6 (2007); EN 61000-4-6; IEC 61000-4-6 (2008); IEC 61000-4-6; AS/NZS 61000.4.6 (2006); AS/NZS 61000.4.6
Power Frequency Magnetic Field Immunity	EN 61000-4-8 (1994); EN 61000-4-8; IEC 61000-4-8 (2001); IEC 61000-4-8; AS/NZS 61000.4.8 (2002); AS/NZS 61000.4.8
Pulse Magnetic Field Immunity	EN 61000-4-9 (1993); EN 61000-4-9; IEC 61000-4-9 (2001); IEC 61000-4-9
Damped Oscillatory Magnetic Field Immunity	EN 61000-4-10 (2017); EN 61000-4-10; IEC 61000-4-10 (2016); IEC 61000-4-10
Voltage Dips, Short Interruptions, and Voltage Variations Immunity	EN 61000-4-11 (2004); EN 61000-4-11; IEC 61000-4-11 (2004); IEC 61000-4-11; AS/NZS 61000.4.11 (2004); AS/NZS 61000.4.11;
Ring Wave Immunity	EN 61000-4-12 (2017); EN 61000-4-12; IEC 61000-4-12 (2017); IEC 61000-4-12
Harmonic and Inter-harmonic Immunity	IEC 61000-4-13 (2002); IEC 61000-4-13; EN 61000.4.13 (2009); EN 61000-4-13; AS/NZS 61000.4.13 (2006); AS/NZS 61000.4.13

Test Technology:	**Test Method(s) [1,2] :**
Common Mode Immunity	EN 61000-4-16 (2016); EN 61000-4-16; IEC 61000-4-16 (2015); IEC 61000-4-16
Damped Oscillatory Immunity	EN 61000-4-18 (2019); EN 61000-4-18; IEC 61000-4-18 (2019); IEC 61000-4-18
DC Dips and Interrupts	EN 61000-4-29; IEC 61000-4-29; AS/NZS 61000.4.29
Military EMC	MIL-STD-461D / MIL-STD-462D, (CE101, CE102, RE101, RE102, CS101, CS114, CS115, CS116, RS101, RS103); MIL-STD-461E, (CE101, CE102, RE101, RE102, CS101, CS114, CS115, CS116, RS101, RS103); MIL-STD-461F, (CE101, CE102, RE101, RE102, CS101, CS106, CS114, CS115, CS116, RS101, RS103); MIL-STD-461G/H (*up to 18 GHz and 200 V/m*), (RE101, RE102, CE101, CE102, RS101, RS103, CS101, CS114, CS115, CS116, CS118, CE106, RE103); DEF STD 59-411, Part 03 (DCE01.B, DCE02.B, DCE03.B, DCS01.B, DCS02.B, DCS03.B, DCS010.B, DRE01.B, DRE02.B, DRS01.B, DRS02.B, DRS03.B); MIL-STD-1275E; MIL-STD-704F
Aircraft	RTCA DO-160 F and G: Section 20.4: Radio Frequency Susceptibility (Conducted); Section 20.5: Radio Frequency Susceptibility (Radiated – 2 MHz to 18 GHz up to 200 V/m); RTCA DO-160 F and G: Section 4: Temperature and Altitude (*excluding section 4.6*); Section 5: Temperature Variation Testing; Section 6: Humidity Testing; Section 7: Operation Shock and Crash Safety Testing; Section 8: Vibration Testing; Section 15: Magnetic Effect Testing; Section 16: Power Input Testing; Section 17: Voltage Spike Testing; Section 18: Audio Frequency Conducted Susceptibility (Power Input Testing); Section 19: Induced Signal Susceptibility Section 20: Radio Frequency Susceptibility (Radiated and Conducted); Section 21: Emission of Radio Frequency Energy; Section 24: Icing Testing (Category A only); Section 25: Electrostatic Discharge Immunity; Section 26: Fire Flammability
RF Shielding Performance	MIL-STD-285; IEEE 299

Test Technology:	**Test Method(s) [1,2] :**
RADHAZ (Radiation Hazard)	AS 2772.2; ARPANSA; IEC 62233; AS/NZS 62110; AS/NZS 61786.2
Electronic Switches	EN 60669-2-1 (Section 26); IEC 60669-2-1 (Section 26)
Gaming Machine National Standard (GMNS)	AS/NZS GMNS Version 10.3 (Sections 2.3.51 to 2.3.59, 2.4.27, 2.4.30a to 2.4.30d, and 2.3.17, 2.3.18, 2.3.19, 2.3.22, 2.3.46, 2.3.47, 2.3.48, 2.3.49, 2.3.50, 2.3.53, 2.3.54, 2.3.55, 2.3.56, 2.3.57, 2.3.58, 2.3.59, 2.4.27, 2.4.28, 2.4.30(a), 2.4.30(b), 2.4.30(c), 2.4.30(d), 5.2.6, 5.2.11)
Generic Immunity	EN 61000-6-1; IEC 61000-6-1; AS/NZS 61000-6-1; EN 61000-6-2; IEC 61000-6-2; AS/NZS 61000-6-2; EN IEC 61000-6-5
Household EMC	AS/NZS CSIPR 14-2; CISPR 14-2
Household Safety	IEC 60335-1; AS/NZS 60335-1 (Sections 14, 15, and 19.11.4)
Information Technology	AS/NZS CISPR 24; CISPR 24
Laboratory	EN 61326-1
Lighting	EN 61547
Maritime	EN 60945 (Sections 5.2.2, 7, 8, 9, 10, and 11.2)
Medical	EN 60601-1-2
Alarm Systems	EN 50130-4 (*excluding EN 61000-4-20*)
Overhead AC Powerlines and HV Installations	AS 2344
Radio Spectrum Matters (ERM) *(excluding adaptivity)*	ETSI EN 300 220; ETSI EN 300 328; ETSI EN 300 330; ETSI EN 301 843-1 (Maritime); ETSI EN 301 843-5 (Maritime); ETSI EN 301 489-1; ETSI EN 301 489-3; ETSI EN 301 489-17; ETSI EN 301 489-19; ETSI EN 301 489-20; ETSI EN 302 064-2; AS/NZS 4268; AS/NZS 4770
Railway	EN 50121-3-1; EN 50121-3-2; IEC 50155
Traffic Signals	AS/NZS 2144; EN 50293

Test Technology:	**Test Method(s) [1,2] :**
EMR	EN 62311
Road Vehicles	ISO 11451-2; ISO 11451-3; ISO 11451-4
Components – Valves Monitor	AS 4118.1.4
Environmental	
Surface Resistance Test	IEC 60079-0 – Explosive Atmospheres – Section 26.13 – Surface resistance test of part of enclosures of non-metallic materials; ASTM D257-14 – DC Resistance or Conductance of Insulating Materials - Section 12.3 – Surface Resistance or Conductance.
Temperature / Humidity	IEC 60068-2-1 (2007); IEC 60068-2-1; AS 60068.2.1 (2003); AS 60068-2-1; EN 60068-2-1 (2007); EN 60068-2-1; IEC 60068-2-2 (2007); IEC 60068-2-2; EN 60068-2-2 (2007); EN 60068-2-2; AS 60068.2.2 (2003); AS 60068.2.2; IEC 60068-2-14 (2009) - Part N; IEC 60068-2-14 - Part N; EN 60068-2-14 (2009) - Part N; EN 60068-2-14 - Part N; AS 60068-2-14 (2003) - Part N; AS 60068-2-14 - Part N; IEC 60068-2-30 (2005); IEC 60068-2-30; EN 60068-2-30 (2005); EN 60068-2-30; AS 60068.2.30 (2003); AS 60068-2.30; MIL-STD-810G Methods 501.5, 502.5, 503.5, and 507.5; RTCA DO-160G: Section 4: Temperature & Altitude (*excluding section 4.6*); Section 5: Temperature Variation Testing; Section 6: Humidity Testing; ISO 16750-4 (*excluding ice water shock test and gas corrosion test*)
Vibration / Shock: 1,000 kgf Sine (PK) 1,000 kgf Random (RMS) 2,000 kgf Shock (PK) (5 to 2,800) Hz (1 to 2,800) Hz in Manual Mode Max. Velocity: 1.7 m/sec Max. Acceleration: up to 90 g (bare table) Max Rated Displacement: 51mm P-P standard	IEC 61373; EN 61373; IEC 60068-2-6; EN 60068-2-6; AS 60068-2-6; IEC 60068-2-27; EN 60068-2-27; AS 60068-2-27; MIL-STD-810G; RTCA DO-160G; ISO 16750-3

Test Technology:	**Test Method(s) [1,2] :**
Ingress Protection	AS 60529; IEC 60529; EN 60529; MIL-STD-810G Method 510.5; NEMA 250; ISO 20653
UV	EN ISO 4892-2:2016; EN ISO 4892-3:2016; AS 60068.2.5 Environmental Testing - Tests – Test Sa- Simulated Solar Radiation at Ground Level; MIL-STD-810G – Method 505.6 (Solar Radiation Sunshine); AECTP-300-3 Method 305
Heat and Flammability	AS/NZS 60695.2.10; IEC 60695-2-10 ; EN 60695-2-10; AS/NZS 60695.2.11; IEC 60695-2-11; EN 60695-2-11; AS/NZS 60695.2.12; IEC 60695-2-12; EN 60695-2-12; AS/NZS 60695.2.13; IEC 60695-2-13; EN 60695-2-13; AS/NZS 60695.10.2; IEC 60695-10-2; EN 60695-10-2; AS/NZS 60695.11.5; IEC 60695-11-5; EN 60695-11-5
Salt	MIL-STD-810G, Method 509.5 - Salt Fog; AS 60068.2.11; AS 60068.2.52; EN 60068.2.11; EN 60068.2.52; IEC 60068.2.11; IEC 60068.2.52; RTCA DO-160G, Section 14 - Salt Fog; ISO 9227; AS 2331.3.1; ASTM B117
Impact	AS 60068.2.75; IEC 60068.2.75; EN 60068.2.75
Climatic Environmental Test	AECTP-300
Caravan and light trailer towing components – Electrical connectors	AS 4177.5
Product Safety Audio/video, Information & communication technology equipment *(*see Table #1 exclusion list below)*	AS/NZS 62368.1; IEC 62368-1; EN 62368-1
Household and similar electrical appliance – Safety *(*see Table #2 exclusion list below)*	AS/NZS 60335.1; IEC 60335-1; EN 60335-1; AS/NZS 60335.2.2 (AS/NZS National variations only); AS/NZS 60335.2.3 (AS/NZS National variations only); AS/NZS 60335.2.4 (AS/NZS National variations only); AS/NZS 60335.2.5 (AS/NZS National variations only); AS/NZS 60335.2.6; IEC 60335-2-6, EN 60335-2-6; AS/NZS 60335.2.7 (AS/NZS National variations only); AS/NZS 60335.2.8; IEC 60335-2-8; EN 60335-2-8; AS/NZS 60335.2.9; IEC 60335-2-9; EN 60335-2-9; AS/NZS 60335.2.9 (AS/NZS National variations only); AS/NZS 60335.2.10 (AS/NZS National variations only); AS/NZS 60335.2.11 (AS/NZS National variations only); AS/NZS 60335.2.12; IEC 60335-2-12; EN 60335-2-12; AS/NZS 60335.2.13 IEC 60335-2-13; EN 60335-2-13; AS/NZS 60335.2.14 (AS/NZS National variations only); AS/NZS 60335.2.15; IEC 60335-2-15; EN 60335-2-15

Test Technology:	**Test Method(s) [1,2] :**
Product Safety (cont.) Household and similar electrical appliance – Safety *(*see Table #2 exclusion list below)* *(cont.)*	AS/NZS 60335.2.16 (AS/NZS National variations only); AS/NZS 60335.2.17 (AS/NZS National variations only); AS/NZS 60335.2.21; IEC 60335-2-21; EN 60335-2-21; AS/NZS 60335.2.23 (AS/NZS National variations only); AS/NZS 60335.2.24 (AS/NZS National variations only); AS/NZS 60335.2.25 (AS/NZS National variations only); AS/NZS 60335.2.26; IEC 60335-2-26; EN 60335-2-26; AS/NZS 60335.2.27 (AS/NZS National variations only); AS/NZS 60335.2.28; IEC 60335-2-28; EN 60335-2-28; AS/NZS 60335.2.29; IEC 60335-2-29; EN 60335-2-29; AS/NZS 60335.2.30; IEC 60335-2-30; EN 60335-2-30; AS/NZS 60335.2.31; IEC 60335-2-31; EN 60335-2-31; AS/NZS 60335.2.32; IEC 60335-2-32; EN 60335-2-32; AS/NZS 60335.2.34 (AS/NZS National variations only); AS/NZS 60335.2.35; IEC 60335-2-35; EN 60335-2-35; AS/NZS 60335.2.36; IEC 60335-2-36; EN 60335-2-36; AS/NZS 60335.2.38; IEC 60335-2-38; EN 60335-2-38; AS/NZS 60335.2.39; IEC 60335-2-39; EN 60335-2-39; AS/NZS 60335.2.40; IEC 60335-2-40; EN 60335-2-40; AS/NZS 60335.2.41; IEC 60335-2-41; EN 60335-2-41; AS/NZS 60335.2.42; IEC 60335-2-42; EN 60335-2-42; AS/NZS 60335.2.43; IEC 60335-2-43; EN 60335-2-43; AS/NZS 60335.2.44 (AS/NZS National variations only); AS/NZS 60335.2.45; IEC 60335-2-45; EN 60335-2-45; AS/NZS 60335.2.47; IEC 60335-2-47; EN 60335-2-47; AS/NZS 60335.2.48; IEC 60335-2-48; EN 60335-2-48; AS/NZS 60335.2.49; IEC 60335-2-49; EN 60335-2-49; AS/NZS 60335.2.51; IEC 60335-2-51; EN 60335-2-51; AS/NZS 60335.2.52 (AS/NZS National variations only); AS/NZS 60335.2.53; IEC 60335-2-53; EN 60335-2-53; AS/NZS 60335.2.54 (AS/NZS National variations only); AS/NZS 60335.2.55 (AS/NZS National variations only); AS/NZS 60335.2.56 (AS/NZS National variations only); AS/NZS 60335.2.59 (AS/NZS National variations only); AS/NZS 60335.2.60; IEC 60335-2-60: EN 60335-2-60; AS/NZS 60335.2.61 (AS/NZS National variations only); AS/NZS 60335.2.65; IEC 60335-2-65; EN 60335-2-65; AS/NZS 60335.2.66 (AS/NZS National variations only); AS/NZS 60335.2.67 (AS/NZS National variations only); AS/NZS 60335.2.68 (AS/NZS National variations only); AS/NZS 60335.2.69; IEC 60335-2-69; EN 60335-2-69; AS/NZS 60335.2.71 (AS/NZS National variations only); AS/NZS 60335.2.72; IEC 60335-2-72; EN 60335-2-72; AS/NZS 60335.2.73; IEC 60335-2-73; EN 60335-2-73; AS/NZS 60335.2.74; IEC 60335-2-74; EN 60335-2-74; AS/NZS 60335.2.75; IEC 60335-2-75; EN 60335-2-75; AS/NZS 60335.2.76; IEC 60335-2-76; EN 60335-2-76; AS/NZS 60335.2.77 (AS/NZS National variations only); AS/NZS 60335.2.78 (AS/NZS National variations only); AS/NZS 60335.2.79; IEC 60335-2-79; EN 60335-2-79; AS/NZS 60335.2.80; IEC 60335-2-80; EN 60335-2-80; AS/NZS 60335.2.81 (AS/NZS National variations only)

Test Technology:	Test Method(s) [1,2] :
Product Safety (cont.)	
Household and similar electrical appliance – Safety (cont.) *(*see Table #2 exclusion list below)*	AS/NZS 60335.2.82; IEC 60335-2-82; EN 60335-2-82; AS/NZS 60335.2.83 (AS/NZS National variations only); AS/NZS 60335.2.84 (AS/NZS National variations only); AS/NZS 60335.2.85; IEC 60335-2-85; EN 60335-2-85; AS/NZS 60335.2.86; IEC 60335-2-86; EN 60335-2-86; AS/NZS 60335.2.89 (AS/NZS National variations only); AS/NZS 60335.2.95; IEC 60335-2-95; EN 60335-2-95; AS/NZS 60335.2.96; IEC 60335-2-96; EN 60335-2-96; AS/NZS 60335.2.97; IEC 60335-2-97; EN 60335-2-97; AS/NZS 60335.2.98; IEC 60335-2-98; EN 60335-2-98; AS/NZS 60335.2.100; IEC 60335-2-100; EN 60335-2-100; AS/NZS 60335.2.101; IEC 60335-2-101; EN 60335-2-101; AS/NZS 60335.2.102 (AS/NZS National variations only); AS/NZS 60335.2.103; IEC 60335-2-103; EN 60335-2-103; AS/NZS 60335.2.105 (AS/NZS National variations only); AS/NZS 60335.2.106 (AS/NZS National variations only); AS/NZS 60335.2.108 (AS/NZS National variations only); AS/NZS 60335.2.109 (AS/NZS National variations only); AS/NZS 60335.2.113 (AS/NZS National variations only); AS/NZS 60335.2.114(AS/NZS National variations only); AS/NZS 60335.2.116; IEC 60335-2-116; EN 60335-2-116
Safety of power transformers, power supplies, reactors and similar products *(*see Table #3 exclusion list below)*	AS/NZS 61558.1; IEC 61558-1; EN 61558-1; AS/NZS 61558.2.4; IEC 61558-2-4; EN 61558-2-4; AS/NZS 61558.2.5; IEC 61558-2-5; EN 61558-2-5; AS/NZS 61558.2.6; IEC 61558-2-6; EN 61558-2-6; AS/NZS 61558.2.8; IEC 61558-2-8; EN 61558-2-8; AS/NZS 61558.2.12; IEC 61558-2-12; EN 61558-2-12; AS/NZS 61558.2.16; IEC 61558-2-16; EN 61558-2-16
Safety requirements for electrical equipment for measurement, control, and laboratory use *(*see Table #4 exclusion list below)*	AS 61010.1; IEC 61010-1; EN 61010-1; IEC 61010-2-010; EN 61010-2-010; IEC 61010-2-020; EN 61010-2-020; IEC 61010-2-030; EN 61010-2-030; IEC 61010-2-040; EN 61010-2-040; IEC 61010-2-051; EN 61010-2-051; IEC 61010-2-081; EN 61010-2-081; IEC 61010-2-101; EN 61010-2-101; IEC 61010-2-201; EN 61010-2-201; IEC 61010-2-202; EN 61010-2-202
Medical Electrical Equipment *(*see Table #5 exclusion list below)*	AS/NZS 60601.1; IEC 60601-1; EN 60601-1; AS/ZNS 60601.1.6; IEC 60601-1-6; EN 60601-1-6; AS/ZNS 60601.1.8; IEC 60601-1-8; EN 60601-1-8; AS/ZNS 60601.1.11; IEC 60601-1-11; EN 60601-1-11
Luminaire products	AS/NZS 60598.1; IEC 60598-1; EN 60598-1; AS/NZS 60598.2.1; IEC 60598-2-1; EN 60598-2-1; AS/NZS 60598.2.2; IEC 60598-2-2; EN 60598-2-2; AS/NZS 60598.2.3; IEC 60598-2-3; EN 60598-2-3; AS/NZS 60598.2.4; IEC 60598-2-4; EN 60598-2-4; AS/NZS 60598.2.5; IEC 60598-2-5; EN 60598-2-5

Test Technology:	Test Method(s) [1,2] :
Product Safety (cont.) Luminaire products (cont.)	AS/NZS 60598.2.8; IEC 60598-2-8; EN 60598-2-8; AS/NZS 60598.2.10; IEC 60598-2-10; EN 60598-2-10; AS/NZS 60598.2.20; IEC 60598-2-20; EN 60598-2-20
Lamp Control Gears	AS/NZS 61347.1; IEC 61347-1; EN 61347-1; AS/NZS 61347.2.2; IEC 61347-2-2; EN 61347-2-2; AS/NZS 61347.2.3; IEC 61347-2-3; EN 61347-2-3; AS/NZS 61347.2.11; IEC 61347-2-11; EN 61347-2-11; AS/NZS 61347.2.13; IEC 61347-2-13; EN 61347-2-13
Products Containing Button/Coin Cell Batteries	IEC 62115 (clauses 13.4.1, 13.4.2 & 13.4.6 only); AS/NZS 62115 (clauses 13.4.1, 13.4.2 & 13.4.6 only); UL 4200A (sections 5 & 6 only); ISO 8124-1 (clause 5.24 only); AS/NZS ISO 8124-1 (clause 5.24 only)
Hand-held motor-operated electric tools	AS/NZS 60745.1 (AS/NZS National variations only); AS/NZS 60745.2.1 (AS/NZS National variations only); AS/NZS 60745.2.3 (AS/NZS National variations only); AS/NZS 60745.2.4 (AS/NZS National variations only); AS/NZS 60745.2.8 (AS/NZS National variations only); AS/NZS 60745.2.12 (AS/NZS National variations only); AS/NZS 60745.2.16 (AS/NZS National variations only); AS/NZS 60745.2.18 (AS/NZS National variations only); AS/NZS 60745.2.19 (AS/NZS National variations only); AS/NZS 60745.2.20 (AS/NZS National variations only); AS/NZS 60745.2.21 (AS/NZS National variations only); AS/NZS 60745.2.22 (AS/NZS National variations only); AS/NZS 60745.2.23 (AS/NZS National variations only)
Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery	AS/NZS 62841.1 (AS/NZS National variations only); AS/NZS 62841.2.1 (AS/NZS National variations only); AS/NZS 62841.2.2 (AS/NZS National variations only); AS/NZS 62841.2.3 (AS/NZS National variations only); AS/NZS 62841.2.4 (AS/NZS National variations only); AS/NZS 62841.2.5 (AS/NZS National variations only); AS/NZS 62841.2.6 (AS/NZS National variations only); AS/NZS 62841.2.8 (AS/NZS National variations only); AS/NZS 62841.2.9 (AS/NZS National variations only); AS/NZS 62841.2.10 (AS/NZS National variations only); AS/NZS 62841.2.11 (AS/NZS National variations only); AS/NZS 62841.2.14 (AS/NZS National variations only); AS/NZS 62841.2.17 (AS/NZS National variations only); AS/NZS 62841.2.21 (AS/NZS National variations only) AS/NZS 62841.3.1 (AS/NZS National variations only); AS/NZS 62841.3.4 (AS/NZS National variations only); AS/NZS 62841.3.6 (AS/NZS National variations only); AS/NZS 62841.3.7 (AS/NZS National variations only); AS/NZS 62841.3.9 (AS/NZS National variations only); AS/NZS 62841.3.10 (AS/NZS National variations only); AS/NZS 62841.3.12 (AS/NZS National variations only); AS/NZS 62841.3.13 (AS/NZS National variations only)

Test Technology:	**Test Method(s) [1,2] :**
Product Safety (cont.)	
Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery (cont.)	AS/NZS 62841.3.14 (AS/NZS National variations only); AS/NZS 62841.4.1 (AS/NZS National variations only); AS/NZS 62841.4.2 (AS/NZS National variations only); AS/NZS 62841.4.3 (AS/NZS National variations only); AS/NZS 62841.4.4 (AS/NZS National variations only); AS/NZS 62841.4.5 (AS/NZS National variations only)
Proof and Comparative Tracking Index	AS/NZS 60112; IEC 60112; EN 60112
General requirements for electrical equipment *(*see Table #6 exclusion list below)*	AS/NZS 3100; AS/NZS 3105; AS/NZS 3112; AS/NZS 3120; AS/NZS 3121; AS/NZS 3122; AS/NZS 3133; AS/NZS 3136; AS/NZS 3190; AS/NZS 3199
Electric Vehicle Conductive Charging Systems *(*see Table #7 exclusion list below)*	AS/NZS 61851.1, IEC 61851-1, EN 61851-1: (Mode 1, Mode 2 and Mode 3 Only) AS/NZS 62752; IEC 62752; EN 62752
Performance of external power suppliers	AS/NZS 4665.1:2005+A1:2009; AS/NZS 4665.2:2005+A1:2009
Safety of Machinery	AS/NZS 4024.1204; IEC 60204-1;EN 60204-1;
Low-voltage switchgear and controlgear assemblies *(*see Table #8 exclusion list below)*	AS/NZS 61439.1 ; IEC 61439-1 ; EN 61439-1; AS/NZS 61439.2 ; IEC 61439-2 ; EN 61439-2
Energy Solution	AS/NZS 5398; SA TS 5398
Passive filter units for electromagnetic interference suppression	IEC 60939-1, EN 60939-1, AS/NZS 60939.1; IEC 60939-2, EN 60939-2, AS/NZS 60939.2; IEC 60939-3, EN 60939-3, AS/NZS 60939.3
Railway applications - Rolling stock	IEC 50153; EN 50153; AS/NZS 50153
Uninterruptable Power Supply (UPS) (*see Table #9 exclusion list below)	IEC 62040-1, EN 62040-1:AS/NZS 62040-1

[1] When the date, edition, version, etc. is not identified in the scope of accreditation, laboratories may use the version that immediately precedes the current version for a period of one year from the date of publication of the standard measurement method, per Annex A, Part C of A2LA *R101 - General Requirements: Accreditation of Conformity Assessment Bodies.*

[2] The laboratory is only accredited for testing activities outlined within the test methods listed above. Reference to any other activity within these standards, such as risk management or risk assessment, does not fall within the laboratory's accredited capabilities.

Exclusion Tables
*Table #1: Clauses excluded for electrical product safety testing

Clause	Test
5.4.1.10.2	Vicat test
5.4.12	Insulating liquid
8.5.5	High pressure lamps
10	Radiations
G.2.3	Relay controlling connectors supplying power to other equipment
G.5.3.4	Transformers using fully insulated winding wire (FIW)
G.9	Integrated circuit (IC) current limiters
G.15	Pressurized liquid filled components
Annex J	Insulated winding wires for use without interleaved insulation
Annex M.7	Risk of explosion from lead acid and NiCd batteries
Annex M.8.2	Internal protection from external spark ignition source – spark test
Annex R	Limited short-circuit test
Annex U	Mechanical strength of CRTs and protection against the effects of implosion

Exclusion Tables
*Table #2: Clauses excluded for electrical product safety testing

Clause	Test
15	Accredited only for Humidity test (External dimensions of appliance less than 100×100×100cm)
22.16	Automatic cord reel test
22.32	Rubber aging test, ceramic material strength test
22.46 and Annex R	Software evaluation
22.48	Prevent back siphonage test of IEC 61770
27.4	Electroplated coating thickness test in ISO 2178 or ISO 1463
Annex J	Coated printed circuit boards

Exclusion Tables
*Table #3: Clauses excluded for electrical product safety testing

Clause	Test
17	Accredited only for: Humidity test (External dimensions of appliance less than 100×100×100cm)
19.9	Oxygen bomb test
20	The aging test for rubber components

Exclusion Tables
*Table #4: Clauses excluded for electrical product safety testing

Clause	Test
10.5.3	Vicat test
12.2.1	Ionizing radiation
12.3	UV Radiation
12.4	Microwave Radiation above 40GHz
12.5.1	Sound pressure level
12.5.2	Ultrasonic pressure
12.6	Laser sources
13.2.3	Implosion of cathode ray tubes
Annex H	Qualification of conformal coating for protection against pollution

Exclusion Tables
*Table #5: Clauses excluded for electrical product safety testing

Clause	Test
8.8.4.2	Oxygen bomb test
9.5.2	Cathode ray tubes test
9.6.2.1	Audible acoustic energy test
9.6.3	Hand-transmitted vibration test
10.1	X-radiation
10.3	Microwave radiation above 40GHz
10.4	Lasers
11.2	Fire prevention – Spark ignition test
15.4.3.4	Primary Lithium batteries tests according to IEC 60086-4
15.4.3.4	Secondary Lithium batteries tests according to IEC 62133
Annex G	Protection against hazards of ignition of flammable anesthetic mixtures
Annex L	Insulated winding wires for use without interleaved insulation

Exclusion Tables
*Table #6: Clauses excluded for electrical product safety testing

Clause	Test
Clause 13.15 of AS 3133:2020	Test for switches intended for self-ballasted lamp loads
Clause 8.9 of AS/NZS 3190	Maximum break times and minimum non-actuating times
Clause 8.11 of AS/NZS 3190	Test for tripping time without pre-loading or prior energization
Clause 8.12 of AS/NZS 3190	Additional tests for d.c. pulses for RCDs
Clause 8.14 of AS/NZS 3190	Endurance test
Clause 8.15 of AS/NZS 3190	Short-time through-current withstand test
Clause 8.16 of AS/NZS 3190	Test under earth fault conditions

Exclusion Tables
*Table #7: Clauses excluded for electrical product safety testing

Clause	Test
6.2.4	Mode 4
6.3.2.4	Mode 4 using the combined charging system
Annex D	Control pilot function that provides LIN communication using the control pilot circuit

Exclusion Tables
*Table #8: Clauses excluded for electrical product safety testing

Test
Temperature rise limited to 290 A at 240 V AC and 350 A at 440 VAC

Exclusion Tables
*Table #9: Clauses excluded for electrical product safety testing

Clause	Test
Annex CC	Ventilation of lead-acid battery compartments

Exclusion Tables
*Table #10: Clauses excluded for electrical product safety testing (ONSITE)

Standard	Clause	Test
IEC 60601-1; EN 60601-1; AS/NZS 60601-1	11.1, 15.3.6, 11.6.5	Temperature rise test, Ingress protection and Mould Stress Relief test
IEC 60204-1; EN 60204-1; AS/NZS 4024.1204	11.2.3, 11.3	Heating effects, Ingress Protection

Testing Activities Performed in Support of FCC Certification in Accordance with 47 Code of Federal Regulations and FCC KDB 974614, Appendix A, Table A.1:

Rule Subpart/Technology	**Test Method**	**Maximum Frequency (MHz)**
Unintentional Radiators		
Part 15B	ANSI C63.4:2014	40000
Intentional Radiators		
Part 15C	ANSI C63.10:2020	40000
U-NII without DFS Intentional Radiators		
Part 15E	ANSI C63.10:2020	40000

NOTE: Accreditation does not imply acceptance to the FCC equipment authorization program. Please see the FCC website (https://apps.fcc.gov/oetcf/eas/) for a listing of FCC approved laboratories.

Accredited Laboratory

A2LA has accredited

COMPLIANCE ENGINEERING SERVICES

Keysborough, Victoria, Australia

for technical competence in the field of

Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated April 2017*).

Presented this 8th day of December 2025.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 2829.01
Valid to November 30, 2027

For the tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.