SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

ELEMENT MATERIALS TECHNOLOGY CHICAGO – MT. PROSPECT
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ELECTRICAL

Valid to: May 31, 2026 Certificate Number: 214.39

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following electrical tests on Industrial Drives, Tractor Components, Automotive System and Subsystems, Consumer Electronics, Electrical Power/Distribution Equipment:

Tests:	**Test Method(s):**
Emissions	
Radiated (5m semi-anechoic chamber)	47 CFR FCC Part 15B (using ANSI C63.4-2014); 47 CFR FCC Part 18 (using MP-5:1986); EN 55011; CISPR 11; AS/NZS CISPR 11; EN 55012; CISPR 12; AS/NZS CISPR 12; EN 55032 (*excluding Annex H*); CISPR 32 (*excluding Annex H*); AS/NZS CISPR 32 (*excluding Annex H*); CISPR 25 (*Section 6.5*); EN/IEC 61000-6-3; EN/IEC 61000-6-4; MIL-STD-461 E, F, G (RE101, RE102, RE103); MIL-STD-462 D (RE101, RE102, RE103); RTCA/DO-160, E, F, G, Sections 15 and 21
Conducted	47 CFR FCC Part 15B (using ANSI C63.4:2014); 47 CFR FCC Part 18 (using MP-5:1986); EN 55011; CISPR 11; AS/NZS CISPR 11; EN 55012; CISPR 12; AS/NZS CISPR 12; EN 55032; CISPR 32; AS/NZS CISPR 32; EN/IEC 61000-6-3; EN/IEC 61000-6-4; MIL-STD-461E, F, G (CE101, CE102, CE106); MIL-STD-462D (CE101, CE102, CE106); RTCA/DO-160-E, F, G, Section 21; CISPR 25 (*Sections 6.3 and 6.4*);
Current Harmonics	EN/IEC 61000-3-2; AS/NZS 61000.3.2
Voltage Fluctuations	EN/IEC 61000-3-3; AS/NZS 61000.3.3
Immunity	
Electrostatic Discharge (ESD)	EN/IEC 61000-4-2; KS C 9610-4-2; AS/NZS 61000.4.2; RTCA/DO-160, E, F, G (Section 25); MIL-STD-461G (CS118); ISO 10605

Tests:	**Test Method(s):**
Radiated Immunity (*80 MHz to 2.7 GHz*)	EN/IEC 61000-4-3; AS/NZS 61000.4.3; MIL-STD-461E, F, G (RS101, RS103, RS105); MIL-STD-462D (RS101, RS103); RTCA/DO-160, E, F, G (*Section 20.5*); ISO 11452-2; ISO 11452-3; ISO 11451-2; ISO 11451-3
Electrical Fast Transient/Burst	EN/IEC 61000-4-4; AS/NZS 61000.4.4;
Transient via lines other than supply lines	ISO 7637-3
Surge Immunity	EN/IEC 61000-4-5; KS C 9610-4-5; AS/NZS 61000.4.5
Automotive (Load Dump)	ISO 16750-2 (Load Dump)
Conducted Immunity	EN/IEC 61000-4-6; AS/NZS 61000.4.6; MIL-STD-461 E, F, G (CS103, CS104, CS105, CS109, CS114, CS115, CS116); MIL-STD-462 D (CS103, CS104, CS105, CS109, CS114, CS115, CS116); RTCA/DO-160, E, F, G (Section 20); ISO 11452-4; ISO 11451-4;
Power Frequency Magnetic Field Immunity	EN/IEC 61000-4-8 (*excluding short duration mode*); AS/NZS 61000.4.8 (*excluding short duration mode*); ISO 11452-8 (*Radiating Loop Method*);
Voltage Dips, Short Interruptions, and Line Voltage Variations	EN/IEC 61000-4-11
Power Input	RTCA/DO-160 E, F, G (Section 16); MIL-STD-704, D, E, F; ISO 16750-2
Generic and Product Family Standards	EN/IEC 61000-6-1; AS/NZS 61000.6.1; EN/IEC 61000-6-2; AS/NZS 61000.6.2; CISPR 14-2; EN 55014-2; AS/NZS CISPR 14-2; CISPR 24; EN 55024; AS/NZS CISPR 24; EN/IEC 60601-1-2; EN/IEC 60947-1; EN/IEC 60439-1; EN/IEC 61326-1; EN/IEC 61326-2; EN 50130-4; EN 50131-1; EN 61800-3; IEC 61800-3 (*up to 75A, 1000V*); EN 14982; ISO 14982 (*using component methods except ISO 7637 and ISO 11452-3*); ISO 13766:2006 Ed 2.0; EN 12895:2015; IEC 60945; ECE R10
Insulation Resistance (*1 kΩ to 10 TΩ*)	MIL-STD-202, Method 302; ASTM D257

Tests:	**Test Method(s):**
High Voltage/Dielectric Withstanding Voltage (*Up to 50 kV AC & 60 KV DC*)	ASTM D149 Types 1, 3, & 4; MIL-STD-202, Method 301
Contact Resistance, Low Level Contact Resistance (LLCR) (*100 μΩ to 200 kΩ*)	MIL-STD-202, Method 303, 304, 307; MIL-DTL 83513G, Method 3.5.6

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[1]:

Rule Subpart/Technology:	**Test Method:**	**Maximum Frequency (MHz):**
Unintentional Radiators Part 15B	ANSI C63.4:2014	10000
Industrial, Scientific, and Medical Equipment Part 18	FCC MP-5:1986	10000

[1] 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

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Mount Prospect, IL

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 24th day of July 2024.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 214.39
Valid to May 31, 2026

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