SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

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ELECTRICAL

Valid To: June 30, 2028 Certificate Number: 7256.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on automotive, electrical, electronic, and mechanical components and assemblies:

Test Technology:	**Test Method(s)[1]:**
EMC Tests	
Absorber-Lined Shielded Enclosure (ALSE)	ISO 11452-2; ISO 11452-2 (2004); SAE J1113-21
Bulk Current Injection (BCI)	ISO 11452-4; ISO 11452-4 (2005; 2011); SAE J1113-4; SAE J1113-4 (2014)
Conducted Immunity on Power lines Supply Voltage transients	ISO 7637-2; ISO 7637-2 (2004); ISO 7637-4; SAE J1113-11
Conducted Immunity on Signal Lines	ISO 11452-10; ISO 7637-3; ISO 7637-3 (2007); SAE J1113-12
Conducted Transient Emissions	ISO 7637-2; ISO 7637-2 (2004); ISO 7637-4
Electrical Loads	ISO 16750-2; ISO 16750-2 (2006; 2012)
Electrical Tests for Voltage Class B Systems and Components	ISO 21498-2
Electrostatic Discharge (ESD)	ISO 10605; ISO 10605 (2001; 2008); SAE J1113-13;

Test Technology:	**Test Method(s)[1]:**
	SAE J1113-13 (2015)
HV-LV Coupling Test	CISPR 25; CISPR 25 (2008; 2016)
Immunity to Magnetic Fields	ISO 11452-8; ISO 11452-8 (2007); SAE 1113-22
Immunity to Voltage Fluctuations, Disturbances of the Supply Voltage Lines (Dropouts, Dips, Cranking, Ramp Up/Down)	ISO 16750-2; ISO 16750-2 (2006; 2012)
Method of Testing for Immunity of Vehicles to Electromagnetic Radiation	ISO 11451-2; ISO 11451-2 (2005); ISO 11451-3; ISO 11451-3 (2007; 2015)
Over/Under, Reverse, Jump Start, Defective Regulator Voltages, Electrical Stress	ISO 16750-2; ISO 16750-2 (2006; 2012)
Portable Transmitter RF Immunity	ISO 11452-9; ISO 11452-9 (2012)
RF Conducted Emissions	CISPR 25; CISPR 25 (2008; 2016); CISPR 32; ICES-002; SAE J1113-41
RF Radiated Emissions	CISPR 12; CISPR 25; CISPR 25 (2008; 2016); CISPR 32; CISPR 36; ICES-002; SAE J1113-41
Road vehicles — Supply Voltage of 48 V — Electrical Requirements and Tests	ISO 21780
Stripline Immunity	ISO 11452-5; SAE J1113-23
Transverse Electromagnetic (TEM) Cell	ISO 11452-3; ISO 11452-3 (2001; 2016); SAE J1113-24
Reverberation Radiated Immunity	ISO 11452-11
Flicker	IEC 61000-3-3; IEC 61000-3-11
Harmonics	IEC 61000-3-2; IEC 61000-3-12
Electrical Fast transients/ Burst	IEC 61000-4-4
Surge	IEC 61000-4-5

Test Technology:	**Test Method(s)[1]:**
Generic Product Specific Automotive Component EMC Standards	BMW GS95002; BMW GS95002 (2010); BMW GS95002-2; BMW GS95002-2 (2021); BMW GS95002-3; BMW GS95002-3 (2015); BMW GS95002-5; BMW GS95002-5 (2015); BMW GS95003-2; BMW GS95003-2 (2010); BMW GS-95023; BMW GS95024-2-1; BMW GS95024-2-1 (2010); BMW GS95024-2-2; BMW GS95024-2-2 (2011); BMW GS95024-2-3; BMW GS95024-2-3 (2011); BSL 0006-100; BSL 0006-100 (2015); CEVT Reg. No. 8888621495-1; CEVT Reg. No. 8888621495-2; CEVT Reg. No. 8888621495-3; CEVT Reg. No. 8888621495-4; Claas (CN 05 0215-1); CS.000244; CS.000245; CS.000246; FCA CS.00054; FCA CS.00054 (2015; 2018); Fiat 9.90110; Fiat 9.90110 (2007); Fiat 9.90111; Fiat 9.90111/01; Fiat 9.90111/01 (2012); FMC 1278; FMC 1278 (2018; 2021); FMC 1280; FMC 1280 (2018); FPT FPI9.EMS011; GMW 3097; GMW 3097 (2015; 2019; 2022; 2024); GMW 3172; GMW 3172 (2015; 2018); Hyundai/Kia ES 96200-00; Hyundai/Kia ES 96200-00 (rev 20); Hyundai/Kia ES 95400-10; JLR-EMC-CS; JLR-EMC-CS v1.0; John Deere JDQ 203; John Deere JDQ 203 (2013; 2018); Lotus LTS 41001; Lotus LTS 41001-2019; LV 123;

Test Technology:	**Test Method(s)[1]:**
	LV 124-1; LV 148; MACLAREN MSL.03.04; MBN 10284-2; MBN 10284-2 (2008; 2011; 2015; 2019); MBN 10284-4; MBN 10284-4 (2011; 2017); MBN 11123; MBN 11123 (2019); MBN LV 123; MBN LV 123 (2014); MBN LV 124-1; MBN LV 124-1 (2011; 2013); MES PW 67602; MES PW 67602 D (2019); Mitsubishi ES-X82114; Mitsubishi ES-X82114 (2009); NAVISTAR DR100159- 06_Electrical_Environmental_Spec; Nissan 28400 NDS91; Nissan 28400 NDS91 (2012); Nissan 28401 NDS02; Nissan 28401 NDS02 (2010; 2013; 2016); Piaggio 7431; PSA B21 7110; PSA B21 7110 (2008; 2012; 2015; 2019); PSA B21 7112; Renault 36-00-808; Renault 36-00-808 (2010; 2012; 2016); Renault 36-00-811; Renault-Nissan RNDS-C-00513; Renault-Nissan RNDS-C-00513 v4.0; Renault-Nissan RNDS-C-00517; Renault-Nissan RNDS-C-00517 v3.0; Rivian EMC Component Standard; SAME DEUTZ FAHR; SCANIA TB1901; SCANIA TB1901 (2016; 2020); SPT 0024; TESLA TS-0000048-07; TESLA TS-0000425-05; Triumph (S5263); TSC0501G; TSC0502G; Volvo Note-Treg 33659457; Volvo Note-Treg 33659457 (2019); Volvo REQ-043878; Volvo STD 515-0003; Volvo STD 515-0003 (2009; 2017); VW 80000; VW 80000 (2013; 2017); VW 80101; VW 80101 (2006; 2009); VW 80300; VW 80300 (2016); VW 80303; VW 80303 (2014); VW TL 81000; VW TL 81000 (2013; 2014; 2016; 2018; 2021);

Test Technology:	**Test Method(s)[1]:**
	VW/Audi/Porsche VW80101; ZOOX ZIST-EMC; IEC 61000-6-3 (IEC 61000-3-2, 3-3, 3-11, 3-12)
Industrial Control Equipment, power conversion and supply systems[2]	IEC 62477-1; EN IEC 62477-1; IEC 62109-1; EN IEC 62109-1; IEC 62109-2; EN IEC 62109-2; UL 1741; IEC 61851-1; EN IEC 61851-1; IEC 61851-1 (2010); EN 61851-1 (2011); IEC 61851-23; EN IEC 61851-23; IEC 61851-23 (2014); EN 61851-23 (2014); IEC 61851-24; EN IEC 61851-24; IEC 61851-24 (2014); EN 61851-24 (2014); IEC 61439-1; EN IEC 61439-1; IEC 61439-1 (2011); EN 61439-1 (2011); IEC 61439-2; EN IEC 61439-2; IEC 61439-2 (2011); EN 61439-2 (2011); IEC 61439-3; EN 61439-3; IEC 61439-3 (2012); EN 61439-3 (2012); IEC 61439-4; EN IEC 61439-4; IEC 61439-4 (2012); EN 61439-4 (2012); IEC 61439-5; EN IEC 61439-5; IEC 61439-5 (2014); EN 61439-5 (2014); IEC 61439-6; EN IEC 61439-6; IEC 61439-7; EN IEC 61439-7; IEC 61439-7 (2018); EN 61439-7 (2018); IEC 62817; EN 62817; UL 3703; IEC 62116; EN 62116; RD244/2019; CSA C22.2 No. 107.1; UL 991; UL 2594; CSA C22.2 No. 280; UL 508A; C22.2 N° 286; IEC 62040-1; EN IEC 62040-1; IEC 60204-1 (2008); EN 60204-1 (2008); IEC 61683; EN IEC 61683; EN 50530; IEC 61727; EN 61727; IEC 62933-2-1; IEC TS 62933-2-2; IEC TS 62933-3-1; IEC TS 62933-3-2; IEC TS 62933-3-3; IEC TS 62933-4-1; IEC 62933-4-4; IEC TS 62933-5-1; IEC 62933-5-2; IEC 62933-5-3;

Test Technology:	**Test Method(s)[1]:**
	IEC 61921; EN IEC 61921; IEC 61921 (2003); EN 61921 (2003); IEC 62368-1; EN IEC 62368-1; IEC 62368-1 (2018); EN 62368-1 (2018); IEC 61010-1; EN IEC 61010-1; IEC 62752; EN IEC 62752; IEC 62619; EN IEC 62619; ISO 5474-1; ISO 5474-2; ISO 5474-3; UL 2202; CSA C22.2 No. 346; EN 50123-1; EN 50123-3; EN 50171; ABNT NBR 16149; ABNT NBR 16150; C10/11; DEWA Standards for distributed renewable resources generators connected to the distribution network; Arrêté du 23 avril 2008 relatif aux prescriptions techniques de conception et de fonctionnement pour le raccordement à un réseau public de distribution d'électricité en basse tension ou en moyenne tension d'une installation de production d'énergie électrique; G98; G99; INMETRO ordinances 004/2011; INMETRO ordinances 357/2014; Intermittent Renewable Resources (IRR). Transmission Interconnection Code (TIC); NDU-013; NDU-015; NRS 097-2-1; NTCO - NORMA TÉCNICA DE CONEXIÓN Y OPERACIÓN DE PMGD EN INSTALACIONES DE MEDIA TENSIÓN; NTSyC - NORMA TÉCNICA DE SEGURIDAD Y CALIDAD DE SERVICIO; Portaria 73-2020; Grid Connection code for (RPPS) connected to the electricity transmission system (TS) or the distribution system (DS) in South Africa; CÓDIGO DE REDES FOTOVOLTAICO - NORMAS TÉCNICAS, OPERATIVAS Y DE CALIDAD, PARA LA CONEXIÓN DE LOS SISTEMAS DE CENTRALES SOLARES Y CENTRALES SOLARES CON TECNOLOGÍA FOTOVOLTAICA AL SISTEMA INTERCONECTADO NACIONAL (SIN); Solar Energy Plants Grid Connection Code;

Test Technology:	**Test Method(s)[1]:**
	UNE 217001; UNE 217002; Intermittent Renewable Resources (Wind and PV). Distribution Connection Code (DCC) At Medium Voltage (MV); Technical Requirements for Connecting Small Scale PV (ssPV) Systems to Low Voltage Distribution Networks
Medical devices	IEC 60601-1[3]; EN 60601-1; ANSI/AAMI ES 60601-1; CAN/CSA-C22.2 No. 60601-1
EMC Tests Military and Airborne Equipment	RTCA-DO160 F/G /EUROCAE Ed.14 Section 15 (Magnetic Effect); RTCA-DO160 F/G /EUROCAE Ed.14 Section 16 (Power Input); RTCA-DO160 F/G /EUROCAE Ed.14 Section 17 (Voltage Spike); RTCA-DO160 F/G /EUROCAE Ed.14 Section 18 (Audio Frequency Conducted Susceptibility – Power Inputs, excluding CAT Z (270 Volts DC Electric system)); RTCA-DO160 F/G /EUROCAE Ed.14 Section 19 (Induced Signal Susceptibility) 19.3.4 ----> Both versions (F & G). Category ZC minimum harness length of 3 meters as limitation (600 VAC maximum output voltage) 19.3.4 ----> Both versions (F & G). Category CC minimum harness length of 9 meters as limitation (600 VAC maximum output voltage) RTCA-DO160 F/G /EUROCAE Ed.14 Section 20 (Radio Frequency Susceptibility) (Radiated and Conducted); RTCA-DO160 F/G /EUROCAE Ed.14 Section 21 (Conducted and radiated RF Emissions); RTCA-DO160 F/G /EUROCAE Ed.14 Section 25 Electrostatic Discharge (ESD) RTCA-DO160 F/G /EUROCAE Ed.14 Section 22 Lightning Induced Transient Susceptibility MIL-STD-461 E/F/G/H CE101 MIL-STD-461 E/F/G/H CE102 MIL-STD-461 E/F/G/H CE106 MIL-STD-461 E/F/G/H CS101 MIL-STD-461 E/F/G/H CS103 MIL-STD-461 E/F/G/H CS104 MIL-STD-461 E/F/G/H CS105 MIL-STD-461 F CS106 MIL-STD-461 E/F/G/H CS109 MIL-STD-461 E/F/G/H CS114

Test Technology:	**Test Method(s)[1]:**
	MIL-STD-461 E/F/G/H CS115 MIL-STD-461 E/F/G/H CS116 MIL-STD-461 G/H CS118 MIL-STD-461 E/F/G/H RE101 MIL-STD-461 E/F/G/H RE102 MIL-STD-461 E/F/G/H RE103 MIL-STD-461 E/F/G/H RS101 MIL-STD-461 E/F/G/H RS103 MIL-STD-461G/H CS117, conducted susceptibility, lightning induced transients, cables and power leads. MIL-STD-704 according to MIL-HDBK-704-8 D/E/F

[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 test method, per Annex A, Part C of A2LA *R101 - General Requirements: Accreditation of Conformity Assessment Bodies.*

[2]This laboratory performs field testing for these tests.

[3]Exclusion Table:

Standard	Clause	Test
IEC 60601-1	8.8.4.2	Resistance to environmental stress
IEC 60601-1	9.5.2	Cathode ray tubes
IEC 60601-1	10	Protection against unwanted and excessive radiation HAZARDS (X-radiation, microwave, Lasers)
IEC 60601-1	11.2.2	ME EQUIPMENT and MESYSTEMS used in conjunction with OXYGEN RICH ENVIRONMENTS
IEC 60601-1	11.4	ME EQUIPMENT and MESYSTEMS intended for use with flammable anaesthetics
IEC 60601-1	11.5	ME EQUIPMENT and MESYSTEMS intended for use in conjunction with flammable agents
IEC 60601-1	ANNEX G	Protection against HAZARDS of ignition of flammable anaesthetic mixtures
IEC 60601-1	11.7	Biocompatibility of MEEQUIPMENT and MESYSTEMS
IEC 60601-1	13.2.11	Failures of components in MEEQUIPMENT used in conjunction with OXYGEN RICH ENVIRONMENTS
IEC 60601-1	15.4.2	Positive temperature coefficient devices (PTC's) with IEC 60730-1: 2010 clauses 15, 17, J.15 and J.17
IEC 60601-1	15.4.3.4	Performance of the tests identified in IEC 60086-4 Performance of the tests identified in IEC 62133
IEC 60601-1	Annex L	Insulated winding wires for use without interleaved insulation

Accredited Laboratory

A2LA has accredited

LGAI TECHNOLOGICAL CENTER S.A.

Bellaterra, Spain

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 29th day of June 2026.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 7256.01
Valid to June 30, 2028

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