SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

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ELECTRICAL (EMC)

Valid To: November 30, 2024 Certificate Number: 3354.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following electrical tests on protective relays, substation equipment and devices intended to operate with protective relays and substation equipment at the laboratory location listed above:

Test:	**Test Method(s)[1]:**
Emissions	
Radiated and Conducted	CISPR 11; CISPR 11:2009 + A1:2010; EN 55011; EN 55011:2009 + A1:2010; CISPR 22; CISPR 22:2008; EN 55022; EN 55022:2010 + AC:2011; CISPR 32:2015 + A1:2019; CISPR 32: 2015 + A1:2019; EN 55032; EN 55032:2012 (*excluding Broadcast Receivers*); 47 CFR, Part 15 (Subpart B, using ANSI C63.4-2014); ICES-001 Issue 5; ICES-003 Issue 7; CSA CISPR 11:19 CNS 13438:2006 (*Up to 6 GHz*); AS/NZS CISPR 11; KS C 9811; KS 22; KS C 9832 *(excluding broadcast receiver equipment)*
Harmonic Current Emissions	IEC 61000-3-2; IEC 61000-3-2:2014; EN 61000-3-2; EN 61000-3-2:2014
Voltage Fluctuations and Flicker	IEC 61000-3-3; IEC 61000-3-3:2013; EN 61000-3-3; EN 61000-3-3:2013
Immunity	
Surge Withstand Capability	IEEE C37.90.1; IEEE C37.90.1:2012
Electrostatic Discharge (ESD)	IEC 61000-4-2; IEC 61000-4-2:2008; IEEE C37.90.3; IEEE C37.90.3:2001; EN 61000-4-2; EN 61000-4-2:2009
Radiated RF Immunity	IEC 61000-4-3; IEC 61000-4-3:2006 + A1:2007 + A2:2010; EN 61000-4-3; EN 61000-4-3:2006 + A1:2008 + A2:2010; IEEE C37.90.2; IEEE C37.90.2:2004

Test:	Test Method(s)[1]:
Immunity (cont.)	
Electrical Fast Transient Burst Immunity	IEC 61000-4-4; IEC 61000-4-4:2012; EN 61000-4-4; EN 61000-4-4:2012
Surge Immunity	IEC 61000-4-5; IEC 61000-4-5:2005 + Corr:2009; EN 61000-4-5; EN 61000-4-5:2006;
Conducted RF Immunity	IEC 61000-4-6; IEC 61000-4-6:2008; EN 61000-4-6; EN 61000-4-6:2009
Power Frequency Magnetic Field	IEC 61000-4-8; IEC 61000-4-8:2009; EN 61000-4-8; EN 61000-4-8:2010
Pulse Magnetic Field	IEC 61000-4-9; IEC 61000-4-9:1993 + A1:2000; EN 61000-4-9; EN 61000-4-9:1993 + A1:2001
Damped Oscillatory Magnetic Field	IEC 61000-4-10; IEC 61000-4-10:1993 + A1:2000; EN 61000-4-10; EN 61000-4-10:1993 + A1:2001
AC Voltage Dips and Interruptions	IEC 61000-4-11; IEC 61000-4-11:2004; EN 61000-4-11; EN 61000-4-11:2004
Ring Wave	IEC 61000-4-12; IEC 61000-4-12:2017; EN 61000-4-12; EN 61000-4-12:2017
Harmonics and Interharmonics	IEC 61000-4-13; IEC 61000-4-13:2002 +A1:2009 +A2:2015; EN 61000-4-13; EN 61000-4-13:2002 +A1:2009 +A2:2016
Power Frequency	IEC 61000-4-16; IEC 61000-4-16:1998 + A2:2009; EN 61000-4-16; EN 61000-4-16:1998 + A2:2011
Ripple on DC Input Power Port	IEC 61000-4-17; IEC 61000-4-17:1999 + A1:2001 + A2:2008; EN 61000-4-17; EN 61000-4-17:1999 + A1:2004 + A2:2009
Slow Damped Oscillatory Wave	IEC 61000-4-18; IEC 61000-4-18:2006 + A1:2010; EN 61000-4-18; EN 61000-4-18:2007 + Corr:2007 + A1:2010
DC Voltage Dips and Interruptions	IEC 61000-4-29; IEC 61000-4-29:2000; EN 61000-4-29; EN 61000-4-29:2000
Product Safety	
Degrees of protection provided by enclosures (IP Code)	IEC 60529; IEC 60529:1989/A1:1991/A2:2013; EN 60529; EN 60529:1991/A1:2000/A2:2013/AC:2019 (Excluding clauses 6, 7, 8, 11.1, 14, 15);
Insulation Coordination (Dielectric Strength and Impulse)	IEEE C37.90; IEEE C37.90:2005
Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements	EN/IEC/UL 61010-1; CAN/CSA-C22.2 No. 61010-1-12 (*excluding Clauses 7.3, 11.3, 11.4, 11.7, 12.2, 12.4 12.5, 13.2.3, 14.3 and 14.7, Annex H and DVD.4*)
Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-201: Particular requirements for control equipment	EN/IEC/UL 61010-2-201

Test:	Test Method(s)[1]:
Safety of laser products – Part 1: Equipment classification and requirements	EN 60825-1; EN 60825-1:2014; IEC 60825-1; IEC 60825-1:2014
Product Safety (cont.)	
Safety of laser products – Part 2: Safety of optical fiber communication systems (OFCS)	IEC 60825-2; IEC 60825-2:2004 + A1:2006 + A2:2010; EN 60825-2; EN 60825-2:2004 + A1:2007 + A2:2010
Family	
Measuring relays and protection equipment – Part 1: General requirements	IEC 60255-1; IEC 60255-1:2009; EN 60255-1; EN 60255-1:2010; KS 60255-1:2014 *(excluding clause 6.5)*
Measuring relays and protection equipment – Part 26: Electromagnetic compatibility requirements	IEC 60255-26; IEC 60255-26:2013; EN 60255-26; EN 60255-26:2013 + AC:2013; KS 60255-26:2015
Measuring relays and protection equipment – Part 27: Product safety requirements (Excluding Flammability testing)	IEC 60255-27; IEC 60255-27:2013; EN 60255-27; EN 60255-27:2014; KS 60255-27:2013
Electromagnetic compatibility (EMC) Part 6-4: Generic standards – Immunity standard for industrial environments	IEC 61000-6-2; IEC 61000-6-2:2005; EN 61000-6-2; EN 61000-6-2:2005; KS C 9610-6-2 (Annex 18-2)
Electromagnetic compatibility (EMC) Part 6-4: Generic standards – Emission standard for industrial environments	IEC 61000-6-4; IEC 61000-6-4:2006 + A1:2010; EN 61000-6-4; EN 61000-6-4:2007 + A1:2011; KS C 9610-6-4 (Annex 18)
Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirements	EN 61326-1; EN 61326-1:2013; IEC 61326-1; IEC 61326-1:2012
Electrical equipment for measurement, control and laboratory use – EMC requirements –Part 2-2: Particular requirements – Test configurations, operational conditions and performance criteria for portable test, measuring and monitoring equipment used in low-voltage distribution systems	EN 61326-2-2; EN 61326-2-2:2013; IEC 61326-2-2; IEC 61326-2-2:2013
Programmable controllers - Part 2: Equipment requirements and tests Electromagnetic compatibility for multimedia equipment – Immunity requirements	EN 61131-2; EN 61131-2:2007; IEC 61131-2; IEC 61131-2:2007; CISPR 35; CISPR 35:2016; EN 55035; EN 55035:2017; KS C 9835 (excluding broadcast receiver equipment)
Environmental and Testing Requirements for Communications Networking Devices Installed in Electric Power Substations	IEEE 1613; IEEE 1613:2009
Environmental and Testing Requirements for Communications Networking Devices	IEEE 1613.1; IEEE 1613.1:2013

Test:	Test Method(s)[1]:
Installed in Transmission and Distribution Facilities	
Communication Network and Systems for Power Utility Automation: Part 3 General	IEC 61850-3; IEC 61850-3:2013; EN 61850-3; EN 61850-3:2014
Instrument Transformers – Part 13: Stand-alone merging unit (SAMU)	IEC 61869-13:2021; EN 61869-13:2021 (Clauses 6.607, 7.2.5.2.603 – 7.2.5.2.615, 7.2.5.2.1301, 7.2.5.2.1302, 7.2.6.601, 7.2.601, 7.2.1301, 7.2.1302, and 9.1302)
Function Testing Burden Testing	IEC 60255-1 Clause 6.10

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[2]

Rule Subpart/Technology	Test Method	Maximum Frequency
Unintentional Radiators Part 15B	ANSI C63.4:2014	26500 MHz

[1]When the date, revision or edition of a test method standard is not identified on the scope of accreditation, the laboratory 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 part C., Section 1 of A2LA *R101 - General Requirements - Accreditation of ISO-IEC 17025 Laboratories*.

[2]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

SCHWEITZER ENGINEERING LABORATORIES, INC.

Pullman, WA

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 January 2023.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 3354.01
Valid to November 30, 2024

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