



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

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ELECTRICAL (EMC)

Valid To: November 30, 2020

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 as well as the satellite location listed below:

Test:

Test Method(s):

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 + Cor1 + Cor2; CISPR 32:2012 + Cor1 + Cor2:2012;
EN 55032; EN 55032:2012 (*excluding Broadcast Receivers*);
47 CFR, Part 15 (Subpart B, using ANSI C63.4-2014);
ICES-003 Issue 6;
CNS 13438:2006 (*Up to 6 GHz*);
AS/NZS CISPR 11;
KN 11; KN 22

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):*****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
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

Insulation Coordination (Dielectric Strength and Impulse)	IEC 60255-5; IEC 60255-5:2000; EN 60255-5; EN 60255-5:2001; IEEE C37.90; IEEE C37.90:2005
Information technology equipment – Safety – Part 1: General requirements	EN/IEC/UL 60950-1; CAN/CSA-C22.2 No.60950-1-07 (excluding Clauses 4.2.8, 4.3.12, 4.3.13, 4.6.2 and 4.7.3.6)
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 12.2, 12.4 and 13.2.3)
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):*****Product Safety (cont.)***

Safety of laser products – Part 1: Equipment classification and requirements

EN 60825-1; EN 60825-1:2014;
IEC 60825-1; IEC 0825-1:2013

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 26: Electromagnetic compatibility requirements

IEC 60255-26; IEC 60255-26:2013;
EN 60255-26; EN 60255-26:2013 + AC:2013

Measuring relays and protection equipment – Part 27: Product safety requirements

IEC 60255-27; IEC 60255-27:2013;
EN 60255-27; EN 60255-27:2014

Environmental and Testing Requirements for Communications Networking Devices Installed in Electric Power Substations

IEEE 1613; ISSS 1613:2009

Environmental and Testing Requirements for Communications Networking Devices Installed in Transmission and Distribution Facilities

IEEE 1613.1; IEEE 1613.1:2013

Communication Network and Systems for Power Utility Automation: Part 3 General

IEC 61850-3; IEC 61850-3:2013;
EN 61850-3; EN 61850-3:2013

Function Testing

Burden Testing

IEC 60255-1 Clause 6.10

Testing Activities Performed in Support of FCC Declaration of Conformity and Certification in Accordance with 47 Code of Federal Regulations and FCC KDB 974614, Appendix A, Table A.1²:

Rule Subpart/Technology	Test Method	Maximum Frequency
Unintentional Radiators Part 15B	ANSI C63.4:2014	26000 MHz

¹When the date, revision or edition of a test method standard is not identified on the scope of accreditation, the laboratory is expected to be using the current version within one year of the date of publication, per part C., Section 1 of A2LA R101 - *General Requirements - Accreditation of ISO-IEC 17025 Laboratories*.

²Accreditation 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 14th day of November 2018.

A handwritten signature in black ink, written over a horizontal line.

President and CEO
For the Accreditation Council
Certificate Number 3354.01
Valid to November 30, 2020

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