



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

S&C ELECTRIC COMPANY - NICOLAS J. CONRAD LABORATORY

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Chicago, IL 60626

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ELECTRICAL

Valid to: November 30, 2025

Certificate Number: 3348.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following electrical tests on re-closers, fault interrupters, switches, fuses, and switchgear:

**Test Type/Test Parameters<sup>1</sup>:**

Line Charging  
Up to 52 kV  
1 to 10 Amps

Cable Charging  
Up to 52 kV  
1 to 40 Amps

Interrupting  
Up to 52 kV  
Up to 40 kA

Fault-making  
Up to 52 kV  
Up to 63 kA

Short Time and Peak Withstand  
Up to 63 kA

**Test Method(s):**

IEC 62271-111:2019, Sub clause 7.101;  
IEEE Std. C37.60-2018, Sub clause 7.101;  
IEC 62271-100:2017, Sub clause 6.111;  
IEEE Std. 1247-2005, Sub-clause 8.3.2.4

IEC 62271-111:2019, Sub clause 7.101;  
IEEE Std. C37.60-2018, Sub clause 7.101;  
IEEE Std. C37.74-2014, Sub clause 6.7.5.6;  
IEC 62271-100:2017, Sub clause 6.111;  
IEEE Std. 1247-2005, Sub-clause 8.3.2.3

IEC 62271-111:2019, Sub clause 7.103;  
IEEE Std. C37.60-2019, Sub clause 7.103;  
IEC62271-100:2017, Sub clause 6.108

IEC 62271-111:2019, Sub clause 7.102;  
IEEE Std. C37.60-2018, Sub clause 7.102;  
IEEE Std. C37.74-2014, Sub clause 6.7.4.6;  
IEEE Std. 1247-2005, Sub-clause 8.5

IEC 62271-1:2017, Sub clause 7.6;  
IEC 62271-102:2018, Sub clause 7.6;  
IEC 62271-103:2011, Sub clause 6.6;  
IEC 62271-111:2019, Sub clause 7.6;  
IEEE Std. C37.60-2018, Sub clause 7.6;  
IEC 62271-200:2011, Sub clause 6.6;  
IEC 62271-201:2014, Sub clause 6.6;  
IEEE Std. C37.74, Sub clause 6.7.4.3;  
IEEE Std. C37.74-2014, Sub clause 6.7.4.5;  
IEC 62271-100:2017, Sub clause 6.6;  
IEEE Std. 1247-2005, Sub-clause 8.4.2;  
IEEE Std. 1247-2005, Sub-clause 8.4.3

**Test Type/Test Parameters<sup>1</sup>:**

Load and Loop Switching  
(Making and Breaking)  
Up to 52 kV  
Up to 2 kA

Breaking  
Up to 40 kA

Critical Current  
Up to 40 kA

Temperature-rise / Continuous Current  
Up to 1,500 amps

Lightning Impulse Voltage Test  
Up to 1,300 kV

Partial Discharge  
Up to 40 kV

Power-frequency Voltage Dry Test  
Up to 600 kV

Power-frequency Voltage Wet Test  
Up to 600 kV

Switching Impulse Voltage Test  
Up to 1,300 kV

**Test Method(s):**

IEC 62271-103:2011, Sub clause 6.101;  
IEC 62271-201:2014, Sub clause 6.101;  
IEEE Std. C37.74-2014, Sub clause 6.7.5.4;  
IEEE Std. C37.74-2014, Sub clause 6.7.5.5;  
IEC 62271-100:2017, Sub clauses 6.102 to 6.106;  
IEEE Std. 1247-2005, Sub-clause 8.3.2.1;  
IEEE Std. 1247-2005, Sub-clause 8.3.2.2

IEC 60282-2:2008, Sub clause 8.6

IEC 62271-111:2019, Sub clause 7.104;  
IEEE Std. C37.60-2019, Sub clause 7.104

IEC 62271-1:2017, Sub clause 7.5;  
IEC 62271-102:2018, Sub clause 7.5;  
IEC 62271-103:2011, Sub clause 6.5;  
IEC 62271-111:2019, Sub clause 7.5;  
IEEE Std. C37.60-2018, Sub clause 7.5;  
IEC 62271-200:2011, Sub clause 6.5;  
IEC 62271-201:2014, Sub clause 6.5;  
IEEE Std. C37.74-2014, Sub clauses 6.7.3 and 6.7.6;  
IEC 62271-100:2017, Sub clause 6.5

IEC 62271-102:2018, Sub clause 7.2.4;  
IEC 62271-103:2011, Sub clause 6.2;  
IEC 62271-111:2019, Sub clause 7.2.7.3;  
IEC 62271-200:2011, Sub clause 6.2.6.2;  
IEC 62271-201:2014, Sub clause 6.2.6.2;  
IEC 60282-2:2008, Sub clause 8.4.4

IEC 62271-102:2018, Sub clause 7.2.9;  
IEC 62271-111:2019, Sub clause 7.106;  
IEC 62271-200:2011, Sub clause 6.2.9;  
IEC 62271-201:2014, Sub clause 6.2.9

IEC 62271-102:2018, Sub clause 7.2;  
IEC 62271-103:2011, Sub clause 6.2;  
IEC 62271-111:2019, Sub clause 7.2.7.2;  
IEC 62271-200:2011, Sub clause 6.2;  
IEC 62271-201:2014, Sub clause 6.2;  
IEC 60282-2:2008, Sub clause 8.4

IEC 62271-102:2018, Sub clause 7.2;  
IEC 62271-103:2011, Sub clause 6.2;  
IEC 62271-111:2019, Sub clause 7.2.3;  
IEC 62271-200:2011, Sub clause 6.2;  
IEC 60282-2:2008, Sub clause 8.4

IEC 62271-102:2018, Sub clause 7.2.4;  
IEC 62271-103:2011, Sub clause 6.2

**Test Type/Test Parameters<sup>1</sup>:**

Ice Loading Test  
Up to ¾ inch

Mechanical Duty Test  
Automatic Operation: Up to 10  
operations per minute

**Test Method(s):**

IEC 62271-111:2019, Sub clause 7.110

IE271-111:2019, Sub clause 7.109

<sup>1</sup>This laboratory also uses customer supplied specifications and/or methods directly related to the testing technologies and parameters listed above.



## Accredited Laboratory

A2LA has accredited

### S & C ELECTRIC COMPANY - NICOLAS J. CONRAD LABORATORY

*Chicago, 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 30<sup>th</sup> day of November 2022.

A blue ink signature of the Vice President of Accreditation Services.

Vice President, Accreditation Services  
For the Accreditation Council  
Certificate Number 3348.01  
Valid to November 30, 2025

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