



Chair: Paul Found

Secretary: Karla Trost

Meeting Minutes

1. Call to Order Paul Found
 The meeting was called to order at 4:15PM on Tuesday, April 30, 2019.

2. 6.3.2 Call for Patents Paul Found

3. Introduction of Members and Guests
 Self-introductions with affiliations were made by the attendees.

4. Attendance and Quorum Check Karla Trost

| Session 1 | Session 2 |
|---|---|
| Of 20 members 11 were present, Quorum was achieved. | Of 20 members 11 were present, Quorum was achieved. |
| 19 guests attended with 3 requesting membership. Membership was approved. | |

Note: The membership role was reviewed after the meeting. 4 members were removed due to change in jobs and/or not meeting attendance requirements.

5. Approval of Agenda Paul Found
 Proposed agenda was reviewed.
 Motion to approve by: Francois Soulard
 Motion seconded by: Jeff Mizener
 Motion carried.

6. Approval of Previous Minutes Paul Found
<http://www.ewh.ieee.org/soc/pes/switchgear/minutes/2018-2/F18RODEa4REV1.pdf>
 Motion to approve by: Jeff Mizener
 Motion seconded by: Anil Dhawan
 Motion carried.

7. Review Action Items Paul Found

- Access to IEC 60529, IEC 60068-2-1/2/78/30, NEMA 250 standards. IEC 60529 is still pending. The standards are located on imeetcentral under Reference Standards.

- There is confusion on the bullet in report Section 6 that says: “Perform testing at the furthest point from the switch.” Paul and Kate to provide more explanation.
 - If there are extended cables, a manufacturer should confirm design testing with the maximum cable length.
- A member brought up C57.148-2011. Is there information in this that might be useful?
 - A comparison table was shared and is available in imeetcentral
 - **Action Item:** Request WG access to C57.148-2011 from IEEE. (Paul Found)
- Need a small group to take the applications and the sections and draft the applicability/summary table and document outline. Completed and published to Central Desktop
- Nenad proposed having a group of manufacturers provide a list of unique tests for integrated controls. Paul (Lead), Karla (G&W), Peter (Hubbell), Stephen (Siemens), Pete (S&C) Combined with the recommendation is a for a group to start drafting the standard language. Karla, Ian, Chris, Mark, Peter A (Peter to find S&C resource).
 - **Action Item** for 6.1.4 – All send to Karla Trost
 - Discussion on 5.1.1 – would this apply to devices powered from the apparatus? TBD
 - **Action Item: Karla Trost** Ensure we include a definition for Current Powered
 - Discussion on 7.1.1: Wind vibration during non-operations would occur and would be more than transportation. There is interest in leaving this in.
 - Discussion on 7.1.2: Discussion on including, refer to the apparatus, and/or remove the clause. – Reference C37.100.1-2018 as currently in the draft.
 - Discussion on 7.2.3 – refer to both IEEE and IEC standards, confirm the year of IEC 60255-26 to use. Is 2018 active?
 - Discussion on 7.2.5 and 7.2.6 – Recloser is dual logo, so recommendation is to put in both IEEE and IEC. No one disagreed.
 - For 60255-26 ensure published and correct year / clauses.
 - Discussion on 7.3.2.1 – Recommendation to use the manufacturer’s documented time. Manufacturer must document which options are included on this test.
 - **Action Item:** Chris Ambrose and Karla Trost to put together a list of standard and options and send out for fill-in by the group (what are the bare requirements.)
 - Note that may need to cover lightning/ surges that impact antennas/ extended devices.
 - Discussion on 7.3.3. – “If the relevant equipment standard does not cover, then, the following are applicable”.
 - Discussion on 7.3.4 – Will need to define Healthy or “New” **Action Item:** Karla Trost to add spot for definitions for this section.
 - Discussion on changing “alarm for low battery condition” for “alarm for abnormal battery condition”.
 - Add definition for Battery Charger/ Battery Management system

The first session was paused at 5:45PM Tuesday, April 30th. The second session resumed at 10:16AM Wednesday, May 1st.

- Discussion Section 7.4 – Do we need to include? Does apparatus testing cover? Not necessarily. Utility input – control should always be “safe to the touch” under a ground fault rise condition.
 - Need to ensure that the grounding design criteria covers a single point of ground.
 - Possibly may want to re-title this section, “Control Safety Grounding”
 - “Resistance measurement” IEC common clauses is the same as 37.60-2018 Clause 6.3.
- Discussion on Section 7.5 – Do we need to include design criteria or testing related to the temperature rise (heat generation)? Discussion was yes.
 - **Action Item:** Paul Found will review IEC60068-2-30 and -38 with Chris Hastreiter to provide comparison. Anil Dhawan will help review to determine if this covers the heat generation.
- 7.6.1, change to 7.6.2 and 7.6.3 **Action Item:** Karla Trost
- Section 7.6 – Request to add an informative annex and table showing the IP ratings? Can we do this without copyright? Can we create a table only showing the ratings we are using? **Action Item:** Karla Trost to ask IEEE.
 - Add statement that normal service conditions from apparatus standards apply. (Abnormal service conditions are out of scope.)
 - 7.6.3.1 Should be IP63 or higher since IP33 already minimum stated.
Action Item: Karla Trost

8. New Items

- The Design Requirements and Production Test Requirements need to be worked on. Request for volunteers to work on draft language for review at the fall meeting.
 - Design Requirements Group: Francois Soulard (lead), Travis Johnson, Pete Meyer, Robert Hanna, Benson Lo, Jeff Mizener, Kate Cummings, Paul Found
 - Production Test Requirements Group: Paul Found (lead), Don Martin, Peter Agliata, Chris Hastreiter, Anil Dhawan

9. Next Steps

- Project Milestones
 - Draft verbiage/ tests: Spring-and Fall 2019
 - Compile initial ballot draft: Spring 2020
 - Draft for Initial Sponsor Ballot: December 2020

10. Next meeting: is scheduled to take place in San Diego with the Fall Switchgear Committee meeting.

11. Adjournment.

Meeting adjourned at 11:22AM.

Annex 1: Attendance

| Role | First Name | Last Name | Company | Present |
|-----------|------------|-------------|--|---------|
| Chair | Paul | Found | BC Hydro | X |
| Member | Chris | Ambrose | Federal Pacific (Div. of Electro-Mechanical Corp.) | X |
| Member | Katherine | Cummings | G&W Electric | Excused |
| Member | Anil | Dhawan | ComEd | X |
| Member | Mark | Feltis | Schweitzer Engineering Laboratories, Inc | Excused |
| Member | Travis | Johnson | Xcel Energy | X |
| Member | Brendan | Kirkpatrick | Southern California Edison | X |
| Member | Benson | Lo | Toronto Hydro | X |
| Member | Peter | Meyer | S&C Electric Company | X |
| Member | Jacob | Midkiff | Dominion Energy | X |
| Member | Stephen | Pell | Siemens | X |
| Member | Caryn | Riley | Georgia Tech/NEETRAC | X |
| Member | Ian | Rokser | Eaton Corp | Excused |
| Member | Francois | Soulard | Hydro-Quebec | X |
| Member | Nenad | Uzelac | G&W Electric | X |
| Secretary | Karla | Trost | G&W Electric | X |

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|-------|-----------------|-------------|---------------------------------|---|
| Guest | Peter | Agliata | Hubbell Power Systems | X |
| Guest | Edwin | Almeida | Southern California Edison | |
| Guest | Thomas | Ballard | Hubbell Power Systems | X |
| Guest | David | Beseda | S&C Electric Co. | |
| Guest | Antone | Bonner | PAS Consulting | X |
| Guest | Mohit | Chhabra | S&C Electric Company | X |
| Guest | Randall | Creach | AZZ Switchgear Systems | |
| Guest | Frank | DeCesaro | Eaton's Power Systems Division | X |
| Guest | Edgar | Dullni | ABB | X |
| Guest | Nadia | El khattabi | Hydro-Quebec | X |
| Guest | Michael | Flack | Southern Company Services, Inc. | |
| Guest | Jeffrey | Gieger | Thomas & Betts | X |
| Guest | Jodi | Haasz | IEEE | X |
| Guest | Robert | Hanna | ABB INC | X |
| Guest | Christophe r | Hastreiter | Eaton | X |
| Guest | Christian | Heinrich | Siemens AG | |
| Guest | Harold | Hirz | Thomas and Betts | X |
| Guest | John | Kaminski | Siemens | |
| Guest | Ryan | Kowdley | Pacific Gas & Electric | |
| Guest | Robert | Lau | Pentair Technical Solutions | X |
| Guest | Bradley | Lewis | AEP | |
| Guest | Donald | Martin | G&W Electric Co. | X |

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|-------|----------|----------|--------------------------------------|---|
| Guest | Benjamin | Marx | Sargent and Lundy | X |
| Guest | Jeff | Mizener | Siemens Industry, Inc. | X |
| Guest | Ashley | Moran | IEEE Standards Association (IEEE-SA) | X |
| Guest | Roberto | Olivares | Siemens | |
| Guest | Al | Pruitt | The Durham Company | X |
| Guest | Larry | Putman | Powell | X |
| Guest | Mark | Roberson | AZZ/Calvert | |
| Guest | Erin | Spiewak | IEEE | |
| Guest | John | Webb | ABB | |
| Guest | Michael | Whitney | CSA America | |