

Chair: Paul Found

Secretary: Karla Trost

Meeting Minutes

- 1. Call to Order** Paul Found
The meeting was called to order at 1:35PM CDT.
- 2. 6.3.2 Call for Patents and Copyright slides were presented** Paul Found
- 3. Introduction of Members and Guests**
Self-introductions with affiliations we made via chat.
- 4. Attendance and Quorum Check** Karla Trost
Of 19 members, 14 were present for the first session and 12 for the second session; Quorum was achieved.
YY guests attended with Z requesting membership. Membership was granted.
- 5. Approval of Agenda** Paul Found
Peter Meyer made a motion to approve
Brendan Kirkpatrick seconded
- 6. Approval of Previous Minutes** Paul Found
Jacob Midkiff made a motion to approve the revised minutes.
Brendan Kirkpatrick seconded
- 7. Review Action Items** Paul Found
 - It has been requested to develop the definition of a “Control”.
 - Discussion: if the definition should limit the scope by the inclusion of the term “microprocessor-based.”
 - Discussion on the inclusion/exclusion of the motor operators as users have some controls in which the motor operator is included inside of the control cabinet.
 - As the definition is written, it does not exclude that the motor operator be mounted inside of the control, but it would not be defined & covered by the standard.
 - Are the motor operators always something controlled which may or may not be mounted in the cabinet? Motor operators are part of the apparatus, regardless of their location.

- Question: if “relay” was defined as a protective device or more general.
- The current definition states “mounted inside an enclosure separate from the switchgear” which would not include the integrated controls we have included in the draft verbiage. **Action: update definition to include integrated control.**
- **Action item: Paul to work with commenters (Ian Rokser, Brendan Kirkpatrick, Jeff Mizener) to update the definition of a control prior to the draft going out to the Members for review.**
- Manufacturers to review the differences between 60068-2-30 or 60068-2-38 and determine if inclusion of 60068-2-38 is feasible.
 - No manufacturers provided written feedback. G&W provided some verbal feedback during the meeting that increased testing would impact development costs.
 - No other feedback was received during the meeting.
 - **Action Item: Paul to add language to the draft document to include 60068-2-38. Will update with Ian & Chris.**
 - A recommendation was made to use 60068-2-30 as a minimum requirement and 60068-2-38 for smaller devices.
 - 60068-2-2 needs to remain as it tests a different set of conditions.
- Request for manufacturers to send input for 6.1.4 (Battery Charger Design Requirements)
 - Two manufacturers provided feedback. This was reviewed with the group:
 - Discussion on general requirements:
 - Current plan is to draft a statement saying that AC fuses are required and accessory fuses are required per user/ manufacturer agreement.
 - Regarding user connections:
 - Do we want to include a “Touch Safe” requirement?
User feedback – to ensure no hazardous voltages are present if the control is opened.
 - Test Functionality:
 - Based on feedback so far: **Action:** a requirement will be included for a self-diagnostic load test of the batteries.
 - Some NEETRAC lab work has been done on battery life. A result of this work was that batteries are considered a commodity item and are swapped without specific tracking. Therefore the data could not be correlated to the manufacturer’s expected life. (Manufacturer B50 life expectation, but Utilities expect B10 life.)
 - A recommendation was made to include a definition for the expected battery life.
 - A recommendation was made that manufacturers must include the expected battery life in the instruction manual.
 - Built in Logic: Based on the feedback received so far, no draft verbiage regarding battery charger built in logic will be included.
- Karla Trost to review/compare service conditions in the apparatus standards and 100.1 to determine if they cover all possible locations. Do we want to refer to apparatus or

the control standard for service conditions? (C37.62 D7/C27.60/C37.74/C37.100.1 were compared).

- The review information was presented. It was concluded that either common clauses or the apparatus standards may be referred to. Currently, the defined for test requirements for controls in C37.68 is more stringent than what is called out in nominal service conditions in common or apparatus clauses.
- Based on the fact that the control may or may not be located in the same service condition as the apparatus, we should document the service condition in C37.68 for the alternative control mounting.
- Discussion on design IP ratings per application being used as normal service conditions – Ian noted that IP ratings stand on their own. Recommendations formed the following action.
- **Action: The draft document will include a statement such as, “At a minimum, service conditions shall match the relevant equipment standard. If the control is meant to be mounted in a different service condition, the manufacturer shall define the appropriate service conditions, and the control shall pass tests defined by C37.68.” Karla to add.**
- As what is called out in 7.6.1 as written could conflict with the PAR, Karla Trost to take the informative/example section and make it an informative Annex.
 - The revised section was shown with the revision to section 7.6.1. Note that IP ratings will apply to entire control design (enclosure, ventilation, connections...), not just the enclosure. 7.6 is currently titled ‘Verification of Enclosure Protection’ – this will be renamed to reflect the entire control being tested.
 - No changes are suggested.
- Design Requirements to continue draft material: Francois Soulard (lead)
 - The drafted material was reviewed.
 - The drafted section will be sent to Francois task group (Travis, Peter M, Paul, Robert H, Benson, Jeff M, Kate, Frank) to further build. **Action: Francois will provide this section for comment from the full member group for input. Members to submit comments to Francois.**
 - Member comment was made that the language should reflect performance and function, rather than less language on specific construction comments.
- Production Tests (Section 8) to be drafted: Paul Found (lead)
 - The drafted material was reviewed.
 - Discussion on if the metering and sensor production tests are in the Apparatus Standards. We should ensure that operational tests are covered in one or the other.
 - Member comment was made that this section should include “these core tests are common to all controls, and specific application tests will be included in the apparatus standard”.
 - **Action Item: Paul will follow the request seeking information from working group participants regarding production testing of the ground lug and control Hi-pot requirements.**

- Jeff Mizener will join the section 8 task group for review.
- Some items seemed to fit a new section - Section 9 "Shipping and Preparation" has been started and will need to be drafted and reviewed.

8. New Items

- **Action 1: Assemble a Draft Document and post to IEEE Central Desktop. (Work done by the Section Leads, Editorial Review by Paul, Karla, Frank, and Jeff.)**
- **Action 2: Send the Draft Document to the WG members for review and comment by August 14, 2020. (Action by Paul)**
- **Action 3: Working Group feedback to be returned by September 25th via ballot comment format.**

9. Next Steps

- Project Milestones
 - Resolutions/ Draft: Fall 2020
 - 1st Ballot: December 2020
 - Comment Resolution: Spring 2021
 - 2nd Ballot (if needed): Summer 2021
 - Final Resolutions: Fall 2021

10. Next meeting: is scheduled to take place October 4-8, 2020 at the Sheraton Sundance Square, Fort Worth, TX with the Fall Switchgear Committee meeting.

11. Adjournment.

The meeting was adjourned at 4:30PM CDT.

Annex 1: Attendance

Role	First Name	Last Name	Company	5/5/2020
Chair	Paul	Found	BC Hydro	X
Member	Peter	Agliata	Hubbell Power Systems	
Member	Edwin	Almeida	Southern California Edison	
Member	Chris	Ambrose	Federal Pacific (Div. of Electro-Mechanical Corp.)	X
Member	Katherine	Cummings	G&W Electric	X
Member	Frank	DeCesaro	Eaton's Power Systems Division	X
Member	Anil	Dhawan	ComEd	
Member	Nenad	Uzelac	G&W Electric	X
Member	Mark	Feltis	Schweitzer Engineering Laboratories, Inc	
Member	Christopher	Hastreiter	Eaton	X
Member	Travis	Johnson	Xcel Energy	
Member	Brendan	Kirkpatrick	Southern California Edison	X
Member	Benson	Lo	Toronto Hydro	X
Member	Donald	Martin	G&W Electric Co.	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	X
Member	Francois	Soulard	Hydro-Quebec	X
Secretary	Karla	Trost	G&W Electric	X
Guest	Antone	Bonner	PAS Consulting	X
Guest	Dan	Busilan	Dominion Energy	X
Guest	David	Dart	NOJAPower	X
Guest	Peter	Glaesman	PCORE Electric Company, Inc.	X
Guest	Sahadev	Gohil	AZZ Switchgear Systems	X
Guest	James	Lagree	Eaton	X
Guest	Robert	Lau	nVent Hoffman	X
Guest	Jeff	Mizener	Siemens Industry, Inc.	X
Guest	Kevin	Sippel	Eaton Electric	X
Guest	William	Walter	We-Energies	X