

PC37.17 PAR Study Group Minutes
IEEE STANDARD FOR TRIP SYSTEMS FOR LOW-VOLTAGE (1000 V AND BELOW) AC
AND GENERAL PURPOSE (1500 V AND BELOW) DC POWER CIRCUIT BREAKERS
JEFF MIZENER, CHAIRMAN
CLINT CARNE, VICE-CHAIRMAN

Meeting Date: 17 April 2023

Meeting Time: 1:30PM-3:15PM, EST

Location: Sheraton Sand Key Resort, Clearwater Beach, FL

A. Call to order

The meeting was called to order at 1:29PM EST.

B. Introductions

Self-introduction with affiliations was made by attendees. There were 27 people present. As a study group by definition all attendees are members, and we have a 100% quorum.

C. Approval of agenda

The agenda was approved by Mike Lafond (1st) and Marcelo Valdes (2nd). There were no Nay votes.

D. Instructions for Chairs of Standards Development Activities and IEEE SA Copyright Policy

The slides for "[INSTRUCTIONS FOR CHAIRS OF STANDARDS DEVELOPMENT ACTIVITIES](#)" and "[IEEE SA COPYRIGHT POLICY](#)" were shown to the working group. These slides can be downloaded from the links.

E. Approval of previous meeting minutes

The prior minutes were approved by Marcelo Valdes (1st) and Darryl Moser (2nd). There were no Nay votes.

F. Working group P&Ps

All in attendance were referred to the Switchgear Committee P&P link in the case of procedural questions.

https://www.ewh.ieee.org/soc/pes/switchgear/O-and-P/PES_SWG_WG_PnP_Final_2019-03-19.pdf

G. Document status report

- C37.17-2022 was approved and has been published.
- A PAR for a revision of C37.17-2022 was submitted, approved and forwarded to NESCOM for consideration during their May meeting.

H. New business

- Topics for consideration in revising C37.17-2022 were reviewed and the following were identified in the meeting:
 - Considerations for software updates
 - How to properly reference UL 5500
 - Partitioning of firmware could potentially be used to create separation between protective functions that are subject to third-party (e.g.: by UL) evaluation and those not subject to evaluation. Further text is required to define what methods of partitioning would be acceptable to allow software updates without requiring re-evaluation of the device.
 - It is necessary to identify what functions that are considered "core protective functions" within scope of C37.17. L, S, I, & G are usually considered "core" but the current version of the standard gives the impression that they are all **required** when in fact they are not.

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Examples are fire-pump breaker – instantaneous-only and devices applied in apparatus without short time withstand capability – LI trip systems.. The functions which impact these “core” functions should be considered in any consideration of partitioning.

- Software updates of “safety related” functions are governed by UL489 SE but this is not a good fit for devices governed by this standard. The question of what trip system functions are considered “safety-related” was raised and needs to be discussed. LSI&G?
- Time-current curves were discussed and it was acknowledged that coordination between C37.13 and C37.17 is necessary.
 - A “mandatory qualifying adjective” to the title of Figure A.1 to be added
 - Removal of the descriptive caption “Maximum breaker opening time” in Figure A.1 should be removed.
 - Should the left/lower curve be referred to as “minimum pickup value” and the upper/right curve “maximum trip time” – again referring only to the response of the trip system.
- With the update of C37.13 it was concluded that the applicable definitions in 17 should refer to the trip unit only and not the breaker
- Discussion if electromechanical trip devices are still being manufactured. If not, then references to EM trip units can be moved to the historical annex.
- Pickup values for electromechanical trip units go up to 160% in the document. It was questioned whether that was still necessary. These values have been in the standard since at least the 1979 edition.
- Definitions – Further review of “pickup (of a trip device)” and “pickup setting” to ensure their proper use within the document.
- Clause 7.7 Neutral overload functions maybe able to be consolidated within clause 7.3 Long-time delay trip functions (electronic devices only)
- Actions
 - Draft text of how to reference UL 5500 (using 1699 as reference) – Danish Zia to provide
 - Reach out to current suppliers of electromechanical trip devices – Doug Edwards

I. Conclusion

- Wrap-up and discussion of next steps
- The next planned in-person meeting: Fall 2023, Catamaran Resort San Diego, CA

Meeting minutes respectfully submitted by Clint Carne

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Attendees List:

Last name	First name	Affiliation	Role
Randy	Blake	Schneider Electric	Member
Christopher	Bohrer	URC	Member
Robert	Burns	Eaton	Member
Ted	Burse	Powell Industries, Inc	Member
Daniel	Delfino	ABB	Member
Arkadiusz (Erik)	Doroz	Eaton	Member
Doug	Edwards	Siemens Industry, Inc.	Member
Keith	Flowers	Siemens Industry, Inc.	Member
Marc	Foster	Schneider Electric	Member
Lou	Grahor	Eaton Corporation	Member
Erin	Hardy	Eaton	Member
Dan	Hrncir	Eaton	Member
Terry	Hunt	Westinghouse	Member
John	Kaminski	Siemens	Member
Michael	Lafond	UL LLC	Member
Josh	Lustig	Black & Veatch	Member
Darryl	Moser	ABB	Member
Owen	Parks	ABB	Member
Wahaj	Saleem	Siemens	Member
Dean	Sigmon	xPert Solutions	Member
Kevin	Sippel	Eaton Electric	Member
Christo	Thomas	Schneider Electric	Member
Andrew	Truman	Black & Veatch	Member
Marcelo	Valdes	ABB	Member
Will	Weichuhn	ABB	Member
Matt	Westerdale	Bureau of Reclamation	Member
Danish	Zia	UL LLC	Member