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: 7 April, 2025

Meeting Time: 8:00AM-12:00PM, EST

Location: Wyndham Grand Orlando Resort Bonnet Creek,

Orlando, FL

A. Call to order

The meeting was called to order at 8:00AM EST by the Working Group Chair, Jeff Mizener.

B. Roll call and Disclosure of Affiliation

Attendees present stated their name and affiliation. Quorum was established with 19 of 27 members present with 34 attendees. A list of attendees (name, affiliation, and voting status) is attached.

C. 4. IEEE SA Patent Policy: Call for Patents

The call for patents was issued; none raised. Link to slides below. https://development.standards.ieee.org/myproject/Public/mytools/mob/slideset.pdf

D. IEEE SA Copyright Policy/IEEE Participant Behavior

The IEEE SA Copyright Policy slides and the Participant Behavior slides were distributed to participants prior to the meeting via the agenda. The chair also presented the following slides below.

https://standards.ieee.org/ipr/

E. Approval of agenda

Motion to approve the meeting agenda. (Mover: Mike, Lafond; Second: Dan, Hrncir) The agenda was unanimously approved as presented without objection.

F. Approval of Virtual 2025 meeting minutes

Motion to approve the minutes from Virtual 2025 working group meeting.

(Mover: Mike, Lafond; Second: Dan, Hrncir) The Virtual 2025 meeting minutes were unanimously approved without objection.

S25 LVSD WG Minutes 2025-03-17 C37.17 R0.pdf

G. Working group P&Ps

All in attendance are 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

H. Document status report

- The PAR revision was submitted and approved.
- The PAR expiration date of 31 December 2027 is unchanged.
- The latest draft is D01.

I. New business

• LSIG was added to the definition of "protective functions" to clarify the meaning of the definition.

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- Clause 6.5 External and/or supplemental power source monitoring was discussed.
 Clarifying wording was documented for acceptable system responses when power is lost or drops too low.
- Clause 6.1 General was discussed. Clarifying wording was documented for acceptable system responses was documented if a trip system error is detected. Option of communications message to a remote host was removed.
- It was noted that Clause 6. trip system self-monitoring performance requirements do not have corresponding testing requirements. WG was unsure where testing requirements should be documented. Chair Jeff Mizener will bring the topic to LVSD for guidance.
- Clause 8.1 General requirements for overcurrent trip functions was refined. A
 specific detail was around trip systems not intended to be used with switching
 devices that have not also been qualified to C37.17. Should these trip systems be
 required to have a published "trip system response curve" when a "time-current
 curve" would already be published. Concern was raised that these two different
 curves would be confusing to engineers who use them to perform arc flash
 calculations.
- It was identified that the relevant terms from C37.13 were not used correctly throughout the draft. The chair Jeff Mizener will scrub the next draft to ensure the following terms are used appropriately.
 - o Time-current curve
 - o Time-overcurrent characteristic curve
 - Trip system response curve
- Annex F discussion was held around the following topics.
 - Objective for the working group should be provide guidance around what firmware updates can be performed for LSIG protection functions.
 - A goal should be that C37.17 provide guard rails around how to make firmware updates for LSIG protection functions.
 - Type of firmware updates that are not allowed should also be defined in C37.17
 - Clause F.3.14 had draft text added for more broad wording beyond "password protected".
 - Clause F.3.15 needs some word smithing for clarity. Action assigned to Danish Zia for improved wording.
 - The words "deny reset" were identified to be technical challenging with current trip system architectures. Potentially a solution of immediate tripping of a circuit breaker could be suitable. Topic to be revisited.
- Definitions "remote" and "direct" were removed. They were deemed not necessary.
- The term "core protection functions" was used inconsistently in the document without a definition. The chair Jeff Mizener will scrub the document to remove the word "core".
- Neutral Overload Function question was asked if LSIG covers neutral overload function. It is believed that long time covers this.
- Question was asked if ERMS and ZSI are "protective functions". These are modifiers
 to protective functions and supporting words to be added to future draft. Chair Jeff
 Mizener.

J. Old business

 No old business was discussed, but WG Members are encouraged to formulate topics for discussion.

K. Conclusion & Future Working Group Meetings

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- The Working Group Chair, Jeff Mizener, will create a new draft with strawman language on topics identified during the WG.
- A virtual meeting will be called before the next in-person meeting.
- The next planned in-person meeting: Fall 2025 October 5 9, Peppermill Resort, Reno, NV

L. Adjourn

Meeting adjourned at 12:00PM EST

(Mover: Mike, Lafond; Second: Paul, Rakus. Motion passed to adjourn.)

Meeting minutes recorded by Clint Carne

Attendees List:

Last name	First name	Affiliation	Voting Status
Blake	Randy	Schneider Electric	Voting Member
Bohrer	Chris	Utility Relay Company	Non-Voting Member
Burns	Robert	Eaton Corporation	Voting Member
Burket	Michael	Schneider Electric	Non-Voting Member
Burse	Ted	Powell Industries, Inc.	Voting Member
Carne	Clint	Schneider Electric	Voting Member
Delfino	Daniel	ABB Ltd.	Voting Member
Doroz	Arkadiusz (Eric)	Eaton Corporation	Voting Member
Edwards	Doug	Siemens Industry, Inc.	Voting Member
Flowers	Keith	Siemens Industry, Inc.	Voting Member
Gerzeny	Brian	Powell Industries, Inc.	Non-Voting Member
Grahor	Lou	Eaton Corporation	Voting Member
Hardy	Erin	Eaton Corporation	Voting Member
Hawkins	Tom	Siemens Industry, Inc.	Non-Voting Member
Hrncir	Dan	Eaton Corporation	Voting Member
Hunt	Terry	Westinghouse	Non-Voting Member
Jahan	Fathmi	ABB	Non-Voting Member
Johnson	Travis	Xcel Energy	Non-Voting Member
Kaminski	John	Siemens Industry, Inc.	Non-Voting Member
Lafond	Mike	National Breaker Services	Voting Member
Ledford	Travis	ABB	Non-Voting Member
Lightsey	Daniel	Maverick Power	Non-Voting Member
Lyu	Sounghwan	Federal Pacific	Non-Voting Member
Miller	Shawn	Meramec Instrument Transformer	Non-Voting Member
Mizener	Jeff	Siemens Industry, Inc.	Voting Member
Moser	Darryl	ABB	Voting Member
Olivares	Roberto	Siemens Industry, Inc.	Non-Voting Member

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Parks	Owen	ABB Ltd.	Voting Member
Rakus	Paul	Eaton Corporation	Voting Member
Rowell	Amy	Schneider Electric	Non-Voting Member
Tatum	Bryan	UL Solutions	Voting Member
Thomas	Christo	Schneider Electric USA Inc	Voting Member
Weishuhn	Will	ABB	Non-Voting Member
Zia	Danish	UL Solutions	Voting Member

Remember: Contact the Chair & Secretary to request Voting Member status.