



IEEE C37.60 IEC 62271-111

**High-voltage switchgear and controlgear –
Part 111: Automatic circuit reclosers for alternating
current systems up to and including 38 kV**

PAR Study Group Sessions #2 and 3
19 April 2023 – Clearwater, FL

Patent and copyright slides



Need for the project

Timeline

This is a dual logo standard, IEEE / IEC

IEC 62271-111 Ed3.0 published 2019, stability date **2027**

IEEE C37.60 published 2018, expires **2028**

The revision process should begin now



IEC 62271-111

Edition 3.0 2019-02

INTERNATIONAL
STANDARD

IEEE Std C37.60™

NORME
INTERNATIONALE



High-voltage switchgear and controlgear –
Part 111: Automatic circuit reclosers for alternating current systems up to and
including 38 kV

Objectives for PAR Study Group

Sessions 2 and 3 – Wednesday, April 19, 2023

- IEEE requires approved PAR to start work
 - Next NesCom submission deadline for PAR approval: May 19, 2023
- IEC approved start of work at Nov 2022 meeting in San Francisco
- **Objective today: Choose scope of the next revision of IEEE C37.60 / IEC 62271-111**

Project plan for Dual Logo Maintenance Team

How this project will be managed

- Meetings: Shared IEEE, IEC
 - Intention: One combined WG / MT. All participants welcome at all meetings.
 - Virtual meetings will need to be scheduled such that ALL members can attend at least SOME meetings (Likely some 7-9am US Central Time (CT), some 4-5pm CT)
- Ballots: Full process in both IEEE and IEC
 - IEEE – Minimum 1 ballot with possible recirculation ballots
 - IEC – Minimum 3 ballots (CD, CDV, FDIS) with possible add'l CDs
- Ian is convener of IEC MT47
 - Also planning to chair the WG in IEEE
 - Need willing and capable secretary

Next steps

- Goal is to submit PAR by May 19th 2023 NesCom date
- If PAR approved, form WG and hold first meeting virtually summer '23
- Goal is to have first ballot draft ready by end of 2024

PAR preparation

Scope

Current scope

1 Scope

This part of IEC 62271 applies to all overhead, pad-mounted, dry vault and submersible single or multi-pole alternating current automatic circuit reclosers for rated maximum voltages above 1 000 V and up to and including 38 kV.

Devices that require a dependent manual operation are not covered by this document.

In order to simplify this document where possible, the term recloser (or reclosers) has been substituted for automatic circuit recloser(s) or cutout mounted recloser(s) or both.

- The scope is written into the PAR (for IEEE) – our goal is to define the scope during these two sessions and submit the PAR to NesCom by 5/19

PAR preparation

Scope changes?

There are devices in the market which are called “reclosers” which do not meet the scope of C37.60. Most notably:

- Devices with dependent manual operation
- Devices rated >38kV
- Devices without a ground connection

1 Scope

This part of IEC 62271 applies to all overhead, pad-mounted, dry vault and submersible single or multi-pole alternating current automatic circuit reclosers for rated maximum voltages above 1 000 V and up to and including 38 kV.

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PAR preparation

Scope changes

Cutout-mounted reclosers were added to C37.60-2012

- Some cutout-mounted reclosers inherently require dependent manual close operation
- They are installed on distribution systems around the world
- Is there a market need for standardization of “devices that require a dependent manual operation”?
 - Is it supported by prevalence in market?
 - Is this the right standard to cover this market need? (Most standards exclude such devices)

IEV ref 441-16-13

en **dependent manual operation** (of a mechanical switching device)
an operation solely by means of directly applied manual energy, such that the speed and force of the operation are dependent upon the action of the operator

PAR preparation

Scope changes

Devices rated >38kV

- Devices exist rated up to 72.5kV
- Reclosers need to see true power testing – this limits the voltage to ~72.5kV based on lab capability
- To bring this technology in scope, the standard would need to expand ratings tables, TRV tables, etc.
- IEEE typically limits distribution class to 38kV, >38kV is transmission
- IEC typically limits distribution class to 52kV and below, >52kV is transmission
- Is there a market need for standardization of reclosers rated > 38kV?
 - Is it supported by prevalence in market?
 - Is this the right standard to cover this market need? This standard would need to cover both distribution and some transmission voltages

PAR preparation

Scope changes

Devices without a ground connection

- Not explicitly mentioned in scope
 - But several requirements are impossible to fulfill without a ground connection, e.g.:
 - 6.3 Earthing of switchgear and controlgear
 - 7 Applicability of various dielectric and surge tests requiring an equipment ground connection
 - To bring this technology in scope, the standard would need to provide for construction and testing of devices without a ground connection
- Since the ground connection is NOT addressed in scope today, this is a question not of scope but of work to be done during the revision process.
- Is there a market need for standardization of reclosers without a ground connection?
- Is it supported by prevalence in market?
 - Is this the right standard to cover this market need?