

# TECHNICAL REPORT

## AMENDMENT 2

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Performance of high-voltage direct current (HVDC) systems with line-commutated converters –  
Part 3: Dynamic conditions

[IEC TR 60919-3:2009/AMD2:2021](https://standards.iteh.ai/catalog/standards/sist/d55ce22c-2b71-4633-9860-d5cb7de9d6c6/iec-tr-60919-3-2009-amd2-2021)

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**PERFORMANCE OF HIGH-VOLTAGE DIRECT CURRENT (HVDC)  
SYSTEMS WITH LINE-COMMUTATED CONVERTERS –**

**Part 3: Dynamic conditions**

**AMENDMENT 2**

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Amendment 2 to IEC TR 60919-3:2009 has been prepared by subcommittee 22F: Power electronics for electrical transmission and distribution systems, of IEC technical committee 22: Power electronic systems and equipment.

The text of this amendment is based on the following documents:

Draft	Report on voting
22F/634/DTR	22F/654/RVDTR

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this Amendment is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at [www.iec.ch/members\\_experts/refdocs](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/standardsdev/publications/](http://www.iec.ch/standardsdev/publications/).

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- replaced by a revised edition, or
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## 2 Normative references

Replace the existing reference IEC TR 60919-1, modified by IEC TR 60919-3/AMD1:2016, with the following new reference:

IEC TR 60919-1:2020, *Performance of high-voltage direct current (HVDC) systems with line-commutated converters – Part 1: Steady-state conditions*

[IEC TR 60919-3:2009/AMD2:2021](https://standards.iteh.ai/catalog/standards/sist/d55ce22c-2b71-4633-9860-d5cb7de9d6c6/iec-tr-60919-3-2009-amd2-2021)

Replace the existing reference IEC TR 60919-2, modified by IEC TR 60919-3/AMD1:2016, with the following new reference:

IEC TR 60919-2:2008, *Performance of high-voltage direct current (HVDC) systems with line-commutated converters – Part 2: Faults and switching*

IEC TR 60919-2:2008/AMD1:2015

IEC TR 60919-2:2008AMD2:2020

### 5.4.3 HVDC converters, switchable reactive power sources and synchronous compensators

Replace the existing first paragraph with the following new paragraph:

Similar to SVC, STATCOM may be installed, if an HVDC is connected to a weak a.c. system. Typical SVC is representatively TCR (thyristor controlled reactor) type, which requires harmonic filters, such as 5<sup>th</sup>, 7<sup>th</sup>, 11<sup>th</sup>, 13<sup>th</sup> and high pass filters. On the other hand, latest STATCOM needs only small filters or even no filters.

### 9.2.4 Overvoltage effects

Delete the last two sentences of the existing second paragraph, modified by IEC TR 60919-3/AMD1:2016.

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