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This extended version of IEC 62271-102:2018+AMD1:2022 includes the content of the references made to IEC 62271-1:2017+AMD1:2021 CSV

**High-voltage switchgear and controlgear –
Part 102: Alternating current disconnectors and earthing switches**

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[IEC 62271-102:2018](https://standards.iteh.ai/catalog/standards/iec/77fa07bc-9c99-42ac-9be0-868e74adc341/iec-62271-102-2018)

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INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 29.130.10; 29.130.99

ISBN 978-2-8322-5676-3

Warning! Make sure that you obtained this publication from an authorized distributor.

INTERNATIONAL ELECTROTECHNICAL COMMISSION

IEC 62271-1
Edition 2.0 2017-07

HIGH-VOLTAGE SWITCHGEAR AND CONTROLGEAR –

**Part 1: Common specifications for alternating
current switchgear and controlgear**

INTERPRETATION SHEET 1

This interpretation sheet has been prepared by IEC technical committee 17: High-voltage switchgear and controlgear.

The text of this interpretation sheet is based on the following documents:

DISH	Report on voting
17/1090/DISH	17/1095/RVDISH

Full information on the voting for the approval of this interpretation sheet can be found in the report on voting indicated in the above table. [71-102:2018](https://standards.iteh.ai/catalog/standards/iec/77fa07bc-9c99-42ac-9be0-868e74adc341/iec-62271-102-2018)

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Interpretation of 4.2.2 of IEC 62271-1:2017 regarding the altitude correction factor

Subclause 4.2.2 of IEC 62271-1:2017 contains two references for calculation of the required insulation withstand level at altitudes higher than 1 000 m, IEC 60071-2:1996 and IEC TR 62271-306. The two references are in conflict, as the altitude correction factor according to IEC 60071-2:1996 starts at sea level and that of IEC TR 62271-306 starts at an altitude of 1 000 m. This results in different altitude correction factors.

As already stated in 5.3 of IEC 62271-1:2017, the rated insulation levels refer to normal service conditions. Altitudes up to 1 000 m above sea level are covered and need no altitude correction.

For altitudes higher than 1 000 m the equation provided in 4.5.1.1 b) of IEC TR 62271-306:2012 and in H.3.4 of IEC 60071-2:2018 shall be used, i.e.

$$k_{\text{alt}} = e^{m \left(\frac{H-1000}{8150} \right)}$$

where

k_{alt} is the altitude correction factor;

H is the altitude in m above sea level;

m is an exponent.

Conservative values for the exponent m are provided in Table 4 of IEC TR 62271-306:2012. For further details about the exponent m , see H.4 of IEC 60071-2:2018.

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