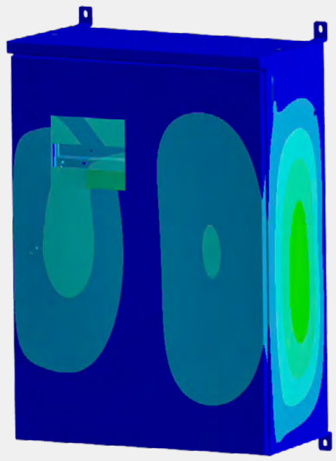
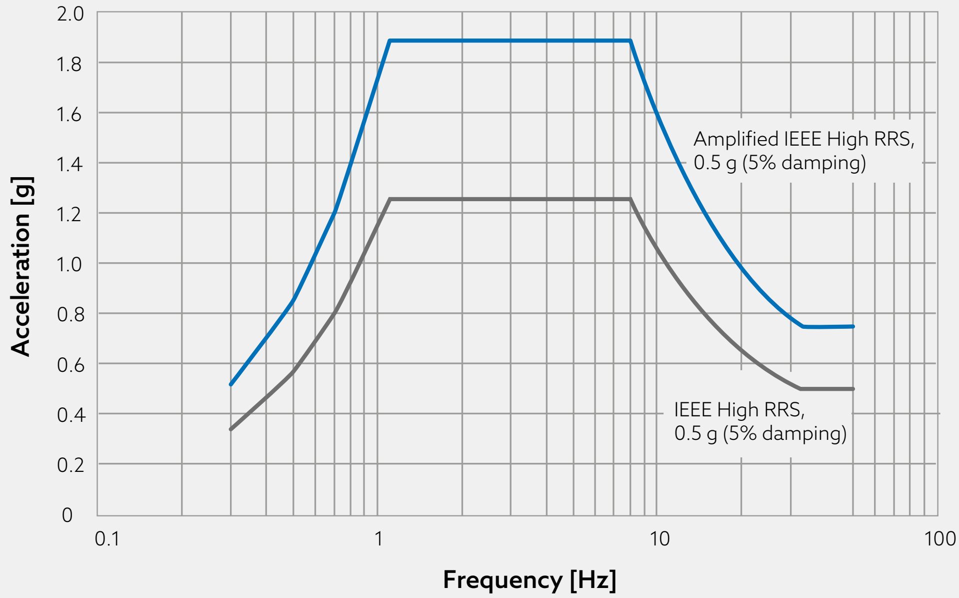
Seismic analysis-qualification confirmation





Type: Tap Changer Control, with max. weight of 75 kg
Qualified in accordance with IEEE 693-2018 Level high; 0.5 g ZPA of the RRS
Accomplished with response spectrum

Ground acceleration

The ground acceleration, equal to the ZPA value (zero period acceleration), depends upon the seismic conditions of the site where the Transformer will be located. For the earthquake calculation the strongest type of earthquake was assumed with 0.5g.

Calculation method

The seismic FEM analysis was carried out with the response spectrum method (described in Standard IEEE693-2018) and a simplified geometry based on components relevant for the overall stiffness.

The response spectrum for 5% damping has been chosen with a max. acceleration of approximately 1.88 g and the missing mass effect was considered. For verification, the critical components of the structure were evaluated without additional safety factors.

Amplification of the ground acceleration

The amplification of the ground acceleration resulting from the vibrational behavior of the transformer is accounted for by means of the superelevation factor 1.5.

Earthquake proof

The structure of the Tap Changer Control is capable to withstand the strongest type of earthquake with respect to IEEE693. The seismic earthquake calculation is evidence for the structural performance of the equipment.
Separate confirmations for relevant electronical components are additionally available.

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