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## **VDV Recommendation 507 “Design of and Protective Provisions for Electrical Power Installations Along Urban DC Rail Lines”**

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**Edition 08/2019**

VDV Recommendation 507 deals with traction power supply systems out of the rectifier substations and with electrical equipment and installations along the lines (“line installations”), which are fed by the local AC network. Particular attention has been paid to the special conditions for the realisation of earthing measures and protective provisions within DC networks having connection to AC networks. VDV Recommendation 507 also includes information about the constructional design of urban DC rail lines for minimisation of stray current.

It is the objective of this VDV Recommendation to provide persons responsible for such systems, e.g. project planning engineers, with information and practical examples to facilitate the practical solution of problems.

This Recommendation had to be revised because the EN 50122 series “Railway applications – Fixed installations – Electrical safety, earthing and the return circuit”, on which it is based, was revised in the 2010s, most recently in 2017. Especially Part 1 “Protective provisions against electric shock” has been modified. Thus, the protective provisions are now mainly divided into “protective provisions against direct contact” and “protective provisions against indirect contact” and not into protective provisions with low voltage (nominal voltages up to and including AC 1 000 V / DC 1 500 V) and protective provisions with high voltage (nominal voltages exceeding AC 1 kV / DC 1.5 kV). Therefore, all references to the clauses in the EN 50122 series had to be checked and corrected.

**This VDV Recommendation supersedes VDV Recommendation 507 from 2005.**

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