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Shielding factors for lightning protection

Recommendation ITU-T K.101

ITU-T

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Summary

Recommendation ITU-T K.101 contains the calculation procedure for the shielding factors used in Recommendations ITU-T K.46, ITU-T K.47, ITU-T K.56 and ITU-T K.97, and it is intended to:

- 1) provide the rationale for the shielding factor approximate formulas or values contained in the aforementioned Recommendations;
- 2) allow a more precise calculation of the shielding factors, by using the equations provided in this Recommendation.

The shielding factors considered in this Recommendation refer to:

- that of the lightning current distribution in a telecommunication tower, i.e., that of the tower (α_T) as per Recommendations ITU-T K.56 and ITU-T K.97;
- that of the lightning current distribution among several conductors placed in a cable ladder, i.e., that of the feeder tray (α_F) as per Recommendations ITU-T K.56 and ITU-T K.97;
- that provided by the cable tray (β) as per Recommendation ITU-T K.56;
- that of parallel conductors (η) as per Recommendation ITU-T K.47;
- that of refraction (δ) due to the earthing connection of a telecommunication cable, as per Recommendation ITU-T K.46;
- that provided by a telecommunication cable having a metallic sheath (shield) (η) as per Recommendation ITU-T K.46.

History

Edition	Recommendation	Approval	Study Group	Unique ID*
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Keywords

Earthing, lightning, shielding, telecommunication lines, telecommunication towers.

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