

# Lightning Protection Design

DEHN Services – Engineering Service Datasheet



Service	Lightning Protection Design incl. BOM & Drawings acc. Local & International Standards*
Part No.	E17302
Description	<p>A Lightning Protection System Design shows placements of lightning protection components which make up the external lightning protection system for a project. The class of Lightning Protection System is obtained from a lightning risk analysis (additional service for a fee) and the system is designed according to the requirements given by the relevant standards*.</p> <p>The lightning sphere method is used to determine the air-termination systems. The project-specific factors are considered during planning implementation and recorded in drawings. Furthermore, the separation distance (if available) is determined and a bill of material (BOM) is drawn up.</p> <p><b>Note:</b> If only a <u>separation distance calculation</u> is shown in the offer, only the determination of the separation distances is carried out based on a specified lightning protection system. We do not check the functionality of the lightning protection system.</p> <p><b>Note:</b> If a <u>budget planning</u> is shown in the offer, then, in deviation from the entire service description, only a rough planning is carried out as part of a budget calculation. Furthermore, a brief description of the planned lightning protection system and the budget price for the lightning protection planning will be provided. Drawings or a parts list are not included.</p>
Basis*	<p>IEC 62305 Edition 3.0 – Protection against Lightning (Intl) IEC 62561 Part 1-8 2012-02 – Lightning protection system components (Intl) DIN EN 62305 Edition 2.0 2010-12 – Protection against Lightning (DE) DIN EN 62561 Part 1-8 2012-02 – Lightning protection system components (DE) VDE 0185-305 2011-10 – Protection against Lightning (DE) SANS 62305 Edition 2.0 2010-12 – Protection against Lightning (ZA) SANS 62561 Part 1-8 2012-02 – Lightning protection system components (ZA) BS EN 62305 Edition 2.0 2010-12 – Protection against Lightning (GB) NFPA 780 2023 – Installation of Lightning protection systems (US) UL 96 2023 – Safety for Standard Lightning Protection Components (US) SS 555:2018 – Protection against lightning (SG) SN 62305 – Protection against Lightning (CH) SN 414022:2024-02 – Lightning Protection systems (CH)</p> <p><b>Note: Unless clearly stated by the customer, the service will be carried out in accordance with the standard and current version applicable in the country in question. If the service is to be carried out in accordance with a different standard/version, this must be defined before the order is created.</b></p>

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Outcomes	<p>Considering the standards, customer-specific components and additional recommendations, the report includes:</p> <ul style="list-style-type: none"><li>○ 3D design of the external lightning protection system according to the selected or determined lightning protection class</li><li>○ CAD drawings of the lightning protection system and the detailed drawings of the lightning protection components used</li><li>○ Description of the lightning protection solutions and information on the framework conditions that must be considered in the practical implementation of the planning</li><li>○ Bill of materials (BOM)</li></ul> <p>All documents and drawings are provided in electronic form as .pdf documents. Other formats on request.</p>
Prerequisites	<ul style="list-style-type: none"><li>○ Specification of the lightning protection class (determined from the risk analysis or based on other specifications)</li><li>○ Geographic location of project</li><li>○ Dimensions CAD drawings of structures/objects</li><li>○ Electrical Line Diagrams (if necessary)</li></ul> <p>All required details asked for in questionnaire form.</p>
Optional Additional Services	<p>Site Inspection Services and Meeting (Part No. E17101) to determine project details. Lightning Risk Assessment (Part No. E17201) to determine measures required. 3D Modelling (Part No. E17301) for a detailed 3D model On-site acceptance of lightning protection and final project meeting (Art. Nr. E17105). Surge Protection Specification (Part No. E17304).</p>