According to EN 62305-3

Testing of lightning protection systems

Test report No.:	
Date:	

1. General information:			
Location of the building to be tested:			
Name:			
Contact:			
Address:			
Telephone:			
Proprietor of the building to be tested ☐ / customer ☐:			
Name:			
Contact:			
Address:			
Telephone:		E-Mail:	
Address of the tester:			
Name:			
Contact:			
Address:			
Telephone:		E-Mail:	
Address of the lightning protection system designer:			
Name:			
Contact:			
Address:			
Telephone:		E-Mail:	

2. Details on the building:	
Name of the building/complex:	
Location:	
Use:	
Built in (year):	
Extension (year):	
Height of the building:	
Dimensions of the building (circumference):	
Type of construction:	
Roof shape:	
Type of roofing:	

3. Prerequisites of testing:	
Description and drawing of the lightning protection system:	

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Lightning protection standards and regulations in effect at the time the building is constructed:		
☐ DIN EN 62305-3 (2011-10)	☐ DIN V VDE V 0185-3 (2002-11)	☐ DIN VDE 0185-1 (1982-11)
☐ VDE 0185-305-3 (2006-10)	☐ DIN V VDE V 0185-4 (2002-11)	☐ DIN VDE 0185-2 (1982-11)
☐ VDE 0185-305-3: supplementary sheets 1-5	☐ DIN VDE 0100-410 and -540	☐ TGL
☐ VDE 0185-305-4 (2011-10)		
Class of LPS ☐ I ☐ II ☐ III ☐ IV		

4. Test object:	
☐ External LPS	☐ Internal LPS

5. Type of testing:		
☐ Test during the design process	☐ Acceptance test	☐ Repeat test (complete)
☐ Test during construction	☐ Additional test	☐ Repeat test (visual inspection)

6. Test details:	
Measuring method:	
Measuring devices:	
Weather conditions:	

7. Information on the lightning protections system:				
Air-termination systems:				
Drawing No.:				
Mesh size:	☐ ≤ 5 m x 5 m	☐ ≤ 10 m x 10 m	☐ ≤ 15 m x 15 m	☐ ≤ 20 m x 20 m
	☐ ≤ 10 m x 20 m	☐ ≤ ____ m x ____ m		
Protective angle:				
Air-termination system:				
Material:	☐ Aluminium	☐ Copper	☐ StSt (V2A)	☐
Roof superstructures (dimensions):				
Other:				
Down-conductor systems:				
Down-conductor (description):				
Material:	☐ Aluminium	☐ Copper	☐ StSt (V2A)	☐
Cross-section (mm):				
Quantity/Test joint/No.:	Quantity:	Test joint:		No.:
Number of down-conductors:				
Other:				

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Earth-termination system:				
Material:	☐ Steel, hot-dip galvanised	☐ StSt (V4A)	☐ Copper	☐
Type/Design:	Type A ☐ Horizontal earthing electrode		☐ Vertical earthing electrode	
	Type B ☐ Foundation earthing electrode		☐ Surface earthing electrode	
Other:				
Separation distance:				
Danger point:	Description:		Location:	
Separation distance:	Required:		Actual:	
Measures:	Yes ☐			
	No ☐			
Other:				
Lightning equipotential bonding structure connected to metal installations:				
Water pipe(s)/waste disposal line(s):	☐ available	☐ connected, location of connection:		
Other:				
Lightning equipotential bonding structure connected to metal installations:				
Type of system:	☐ TT	☐ TN-C	☐ TN-S	☐ TN-C-S	☐ IT
Lightning current arrester SPD Type 1:	available:	☐ Yes	☐ No	
	Manufacturer:		Product name:	
	Location of installation:			
	Proper function:	☐ Yes	☐ No	
Other:				
Lightning equipotential bonding structure connected to IT installations:				
Data communication and telecommunication:				
Measuring and control technology:				
Coaxial conductors:				
Lightning current arrester SPD Type 1 (D1 category)	available:	☐ Yes	☐ No	
	Manufacturer:		Product name:	
	Installation location:			
	Proper function:	☐ Yes	☐ No	
Other:				

8. Testing of technical documentation:		
	ok	
☐ Complete and in line with standards	☐ Yes ☐ No	

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Testing of lightning protection systems

Test report No.:	

9. Testing on site:

	ok	
☐ **Proper condition of the external LPS:**		
☐ Installation of all conductors and system components		
☐ Installation and condition of the air-termination system	☐ Yes ☐ No	
☐ Installation and condition of the down-conductors	☐ Yes ☐ No	
☐ Earth-termination system		
– All earth connections	☐ Yes ☐ No	
– Components affected by corrosion	☐ Yes ☐ No	
☐	☐ Yes ☐ No	
☐	☐ Yes ☐ No	
☐ **Proper condition of the internal LPS:**		
☐ Correct installation of all lightning current (SPD Type 1) and surge arresters (SPD Type 2)		
– Power supply system	☐ Yes ☐ No	
– Information technology system	☐ Yes ☐ No	
☐ Damage or activation of the lightning current arrester	☐ Yes ☐ No	
☐ Interruption of SPD back-up fuses	☐ Yes ☐ No	
☐ Continuous lightning equipotential bonding for new supply connections inside the building which have been installed since the last inspection	☐ Yes ☐ No	
☐ Equipotential bonding connections inside the building	☐ Yes ☐ No	
☐ Separation distance between LPS and installations	☐ Yes ☐ No	
☐ Changes which require additional protection measures	☐ Yes ☐ No	
☐	☐ Yes ☐ No	
☐	☐ Yes ☐ No	
☐	☐ Yes ☐ No	

10. Measuring:

	ok	
Electrical conductivity of connections which are not visibly installed (test current recommended ≥ 200 mA)		
☐ Air-termination systems	☐ Yes ☐ No	
☐ Down-conductors	☐ Yes ☐ No	
☐ Earth conductors	☐ Yes ☐ No	
☐ Equipotential bonding conductors	☐ Yes ☐ No	
☐ (recommended value < 1 ohm)	☐ Yes ☐ No	
☐	☐ Yes ☐ No	
☐	☐ Yes ☐ No	
☐	☐ Yes ☐ No	

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Test report No.:	

Electrical conductivity of metal installations:			
Gas:	Water:	Heating:	Ventilation:
Ω	Ω	Ω	Ω
Ω	Ω	Ω	Ω
Ω	Ω	Ω	Ω

Measuring the transition resistances R at all measuring points in order to determine the electrical conductivity of the conductors										
Test joint No.:	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11
Value in ohm:										
Test joint No.:	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21
Value in ohm:										
Test joint No.:	21-22	22-23	23-24	24-25	25-26	26-27	27-28	28-29	29-30	30-31
Value in ohm:										
Test joint No.:	31-32	32-33	33-34	34-35	35-36	36-37	37-38	38-39	39-40	40-41
Value in ohm:										
Test joint No.:	41-42	42-43	43-44	44-45	45-46	46-47	47-48	48-49	49-50	50-51
Value in ohm:										
Test joint No.:	51-52	52-53	53-54	54-55	55-56	56-57	57-58	58-59	59-60	60-61
Value in ohm:										

Soil composition:	☐ sandy soil	☐ gravel	☐ boggy soil, marshy ground, humus soil
	☐ stony	☐ concrete	☐ loamy soil, clay soil, farmland
Soil state:	☐ dry	☐ humid	☐ frozen

☐ Measuring the earthing electrode resistance R_A of individual earthing electrodes when test joint is open										
☐ Measuring the loop resistance:										
Test joint No.:	1	2	3	4	5	6	7	8	9	10
Value in ohm:										
Test joint No.:	11	12	13	14	15	16	17	18	19	20
Value in ohm:										
Test joint No.:	21	22	23	24	25	26	27	28	29	30
Value in ohm:										
Test joint No.:	31	32	33	34	35	36	37	38	39	40
Value in ohm:										
Test joint No.:	41	42	43	44	45	46	47	48	49	50
Value in ohm:										
Test joint No.:	51	52	53	54	55	56	57	58	59	60
Value in ohm:										

Measuring the earthing electrode resistance of the entire system when test joints are closed _____ Ω		
Visual inspection of the uncovered earthing electrode	☐ Yes	☐ No
Location of the uncovered earthing electrode:		

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Test report No.:	

11. Total earthing resistance of the system:		
Type of measurement:	☐ without protective conductor	Ω
	☐ with protective conductor	Ω

12. Test report:		
The LPS has no defects	☐ Yes	☐ No
The test revealed the following defects:		

Testing of lightning protection systems

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13. Details on administrative regulations:

Specified test mode of the repeat test according to administrative requirements and regulations.

Interval between complete inspections:

1 year		
2 years		
3 years		
4 years		
5 years		
6 years		

Protection level	Visual inspection (year)	Complete inspection (year)	Critical situations [a, b] complete inspection (year)
I and II	1	2	1
III and IV	2	4	1

[a] Lightning protection systems utilized in applications involving structures with a risk caused by explosive materials should be visually inspected every 6 months. Electrical testing of the installation should be performed once a year. An acceptable exception to the yearly test schedule would be to perform the tests on a 14 to 15 month cycle where it is considered beneficial to conduct earth resistance testing over different times of the year to get an indication of seasonal variations.
[b] Critical situations could include structures containing sensitive internal systems, office blocks, commercial buildings or places where a high number of people may be present.

Source: EN 62305-3; Table E.2 Maximum period between inspections of a LPS

The inspection frequencies given in Table E.2 should apply where no specific requirements are identified by the authority having jurisdiction.

Next inspection in (year)		
Number of pages test report		
Number of pages drawings		
Number of photos for the test report		
Number of pages of all enclosures		
Enclosures of the test report Drawing No.		

Notes for the proprietor of the system:

The proprietor has to remedy the defects.

Check if additional internal lightning protection measures are necessary.

In case of structural alteration or lightning strike, immediately contact the revision service.

Company

Place

Date

Signature of the tester