



NORME INTERNATIONALE INTERNATIONAL STANDARD

CEI
IEC

62305-2

Edition-1
2005-01

Project: OŠ SAVSKO NASELJE

Structure's Dimensions:

Length of structure (m): 80
Width of structure (m): 25
Height of roof plane (m)*: 15
Collection area (m²): 17.812 m²

Structure's Attributes:

Risk of physical damage (incl. fire): Ordinary
Structure screening effectiveness: Average
Internal wiring type: Unscreened

Environmental Influences:

Location factor: Similar in height
Environmental factor: Urban
Annual ground flash density: 3,2 flash/km²
Number thunderdays: 32 days/year

Protection Measures:

Class of LPS: Class IV
Fire protection provisions: Automated systems
Surge protection: Coord. SPD IEC 62305-4

Conductive Electric Service Lines:

Power Line:

Type of service to the structure: Buried cable
Type of external cable: Unscreened
Presence of MV / LV transformer: No Transformer

Other Overhead Services:

Number of conductive services: 0
Type of external cable: Unscreened

Other Underground Services:

Number of conductive services: 5
Type of external cable: Unscreened

Types of Loss:

Type 1 - Loss of Human Life:

Special hazards to life: Average panic level
Life loss due to fire: Commercial, schools...
Life loss due to overvoltages: Not relevant

Type 2 - Loss of Essential Public Services:

Services lost due to fire: No service exist
Services lost due to overvoltages: No service exist

Type 3 - Loss of Cultural Heritage:

Cultural heritage lost due to fire: No heritage value

Type 4 - Economic Loss:

Special hazards to economics: No special hazards
Economic loss due to fire: Office, school
Economic loss due to overvoltage: Museum, school
Step/touch potential loss factor: No shock risk
Tolerable risk of economic loss: 1 in 1,000

Calculated Risks:

	<i>Tolerable Risk Rt</i>	<i>Direct Strike Risk Rd</i>	<i>Indirect Strike Risk Ri</i>	<i>Calculated Risk R</i>
Loss of Human Life:	1,00E-05	2,88E-06	3,08E-06	5,96E-06
Loss of Public Services:	1,00E-03	0,00E+00	0,00E+00	0,00E+00
Loss of Cultural Heritage:	1,00E-03	0,00E+00	0,00E+00	0,00E+00
Economic Loss:	1,00E-03	3,13E-06	5,79E-05	6,10E-05

IEC Risk Assessment Calculator: Version 1.0.3

Database: Version 1.0.3

IEC Central Office Support (Tel: +41-22-919 0211)
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The IEC lightning risk assessment calculator is intended to assist in the analysis of various criteria to determine the risk of loss due to lightning. It is not possible to cover each special design element that may render a structure more or less susceptible to lightning damage. In special cases, personal and economic factors may be very important and should be considered in addition to the assessment obtained by use of this tool. It is intended that this tool be used in conjunction with the written standard IEC62305-2.



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Results for collection areas and frequencies:

Ad - collection area of direct strikes to the structure	17.812 m2
Nd - expected annual number of direct strikes to the structure	0,028 flashes/year
Am - collection area of structure influenced by induced overvoltages from indirect strikes	250.850 m2
Nm - expected annual number of strikes direct to ground or to grounded objects near the structure inducing overvoltages	0,774 flashes/year
Ac1 - collection area of overhead lines from direct strikes	34.380 m2
NL1 - expected annual number of direct strikes to the overhead line which are potentially dangerous	0,055 flashes/year
AI1 - collection area of overhead lines to indirect strikes	1.000.000 m2
NI1 - expected annual number of indirect strikes to ground near the overhead line which induce damaging overvoltages	0,320 flashes/year
Ac2 - collection area of underground lines from direct strikes	21.354 m2
NI2 - expected annual number of strikes direct to the underground lines which are potentially dangerous	0,034 flashes/year
AI2 - collection area of underground lines to indirect strikes	559.017 m2
NI2 - expected annual number of indirect strikes to ground near the underground line which induce damaging overvoltages	0,179 flashes/year

Type 1 - Loss of Human Life:

RA1 - risk of dangerous touch and step potentials inside and outside the structure from a direct strike to the structure	2,85E-08
RB1 - risk of destruction due to fire, explosion, mechanical, chemical damage from a direct strike to the structure	2,85E-06
RC1 - risk of electrical / electronic equipment failure due to overvoltage from a direct strike to the structure	0,00E+00
RM1 - risk of electrical / electronic equipment failure due to overvoltage from an indirect strike to the structure	0,00E+00
RU1 - risk of dangerous touch and step potentials inside and outside the structure from a direct strike to the service lines	6,15E-09
RV1 - risk of destruction due to fire, explosion, mechanical, chemical damage from a direct strike to the service lines	3,08E-06
RW1 - risk of electrical / electronic equipment failure due to overvoltage from a direct strike to the service lines	0,00E+00
RZ1 - risk of electrical / electronic equipment failure due to overvoltage from an indirect strike to the service lines	0,00E+00

Type 2 - Loss of Essential Public Services:

RB2 - risk of destruction due to fire, explosion, mechanical, chemical damage from a direct strike to the structure	0,00E+00
RC2 - risk of electrical / electronic equipment failure due to overvoltage from a direct strike to the structure	0,00E+00
RM2 - risk of electrical / electronic equipment failure due to overvoltage from an indirect strike to the structure	0,00E+00
RV2 - risk of destruction due to fire, explosion, mechanical, chemical damage from a direct strike to the service lines	0,00E+00
RW2 - risk of electrical / electronic equipment failure due to overvoltage from a direct strike to the service lines	0,00E+00
RZ2 - risk of electrical / electronic equipment failure due to overvoltage from an indirect strike to the service lines	0,00E+00

Type 3 - Loss of Cultural Heritage:

RB3 - risk of destruction due to fire, explosion, mechanical, chemical damage from a direct strike to the structure	0,00E+00
RV3 - risk of destruction due to fire, explosion, mechanical, chemical damage from a direct strike to the service lines	0,00E+00

Type 4 - Economic Loss:

RA4 - risk of dangerous touch and step potentials inside and outside the structure from a direct strike to the structure	0,00E+00
RB4 - risk of destruction due to fire, explosion, mechanical, chemical damage from a direct strike to the structure	2,28E-06
RC4 - risk of electrical / electronic equipment failure due to overvoltage from a direct strike to the structure	8,55E-07
RM4 - risk of electrical / electronic equipment failure due to overvoltage from an indirect strike to the structure	2,32E-05
RU4 - risk of dangerous touch and step potentials inside and outside the structure from a direct strike to the service lines	0,00E+00
RV4 - risk of destruction due to fire, explosion, mechanical, chemical damage from a direct strike to the service lines	2,46E-06
RW4 - risk of electrical / electronic equipment failure due to overvoltage from a direct strike to the service lines	6,15E-06
RZ4 - risk of electrical / electronic equipment failure due to overvoltage from an indirect strike to the service lines	2,60E-05

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