

Customer: **Gymnázium, SOŠ a VOŠ Nový Bydžov**
 Project: **Hromosvodní instalace**
 Project No.: **Ing. Lipovský**

Calculation of the separation distance according to ČSN EN 62305-3: 2006

1. Class of LPS selected LPS III ▼ $k_i = 0,04$
 2. Insulating material Air ▼ $k_m = 1$

3. Vertical distance L in [m] L = **24,00 m**

L : total effective distance from the point at which the separation distance s is to be calculated to the nearest point of the equipotential bonding.

4. Selection of down conductors, earthing system, air-termination system ▼

n = 4 and more; earthing system Type B; meshed conductors

Additional entries for earthing systems Type B and n = 2 and more

Down conductors n = **16**
 Distance c = **15,0 m**
 Height h = **19,7 m**

$k_c = 0,31388$

Separation distance

s = 0,301 m

at vertical distance L [m] from: **24,0 m**

Explanation of factors

k_i : depends on the class of LPS selected

k_c : depends on the lightning current which flows in the down conductors

k_m : depends on the material of the electrical insulation

L : total effective distance from the point at which the separation distance s is to be calculated to the nearest point of the equipotential bonding.

| Distance (height) from the equipotential bonding level | Separation distance s |
|--------------------------------------------------------|-----------------------|
| 0,5 m | 0,006 |
| 1,0 m | 0,013 |
| 1,5 m | 0,019 |
| 2,0 m | 0,025 |
| 2,5 m | 0,031 |
| 3,0 m | 0,038 |
| 3,5 m | 0,044 |
| 4,0 m | 0,050 |
| 4,5 m | 0,056 |
| 5,0 m | 0,063 |
| 5,5 m | 0,069 |
| 6,0 m | 0,075 |
| 6,5 m | 0,082 |
| 7,0 m | 0,088 |
| 7,5 m | 0,094 |
| 8,0 m | 0,100 |
| 8,5 m | 0,107 |
| 9,0 m | 0,113 |
| 9,5 m | 0,119 |
| 10,0 m | 0,126 |

| Distance (height) from the equipotential bonding level | Separation distance s |
|--------------------------------------------------------|-----------------------|
| 10,5 m | 0,132 |
| 11,0 m | 0,138 |
| 11,5 m | 0,144 |
| 12,0 m | 0,151 |
| 12,5 m | 0,157 |
| 13,0 m | 0,163 |
| 13,5 m | 0,169 |
| 14,0 m | 0,176 |
| 14,5 m | 0,182 |
| 15,0 m | 0,188 |
| 15,5 m | 0,195 |
| 16,0 m | 0,201 |
| 16,5 m | 0,207 |
| 17,0 m | 0,213 |
| 17,5 m | 0,220 |
| 18,0 m | 0,226 |
| 18,5 m | 0,232 |
| 19,0 m | 0,239 |
| 19,5 m | 0,245 |
| 20,0 m | 0,251 |

