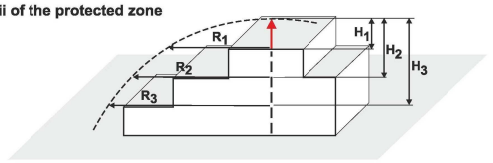
OMEGA-x, Ω-x

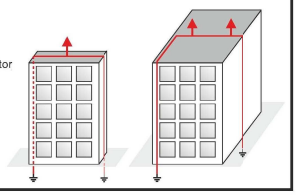
Principles of installation of lightning conductors OMEGA, Ω-x in accordance with the standards EN 62-305 and NFC 17-102 (09/2011).

Radii of the protected zone

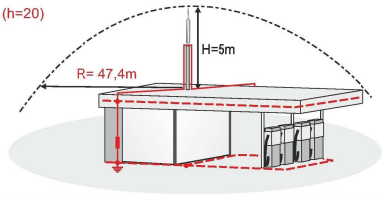


Connections to the earthing system

Each lightning conductor has two connections to the ground - one belonging to this conductor and another one which may be a natural connection or belong to another lighting conductor (earthing system resistance R_z <=10 Ohm).



Filling station protection level I (h=20)

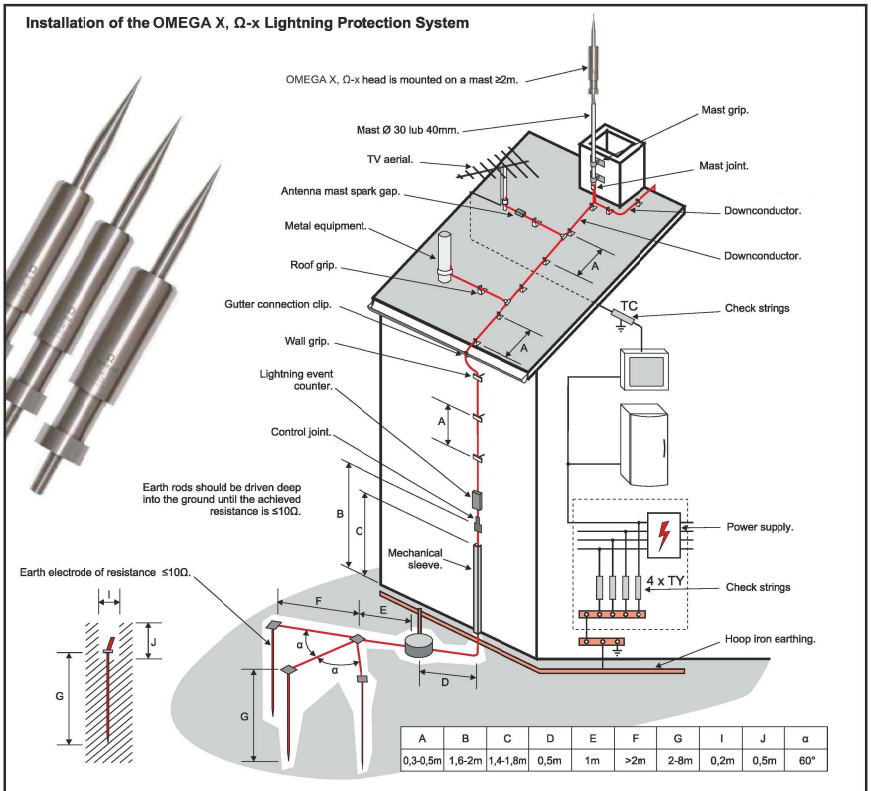


Radii of the protection zone (in accordance with NFC 17-102)

ΔT	Protection level (efficiency)	Protection radius R[m] for H= 2m	3m	4m	5m	7m	10m	20m
60	I (98%)	31 (18,6)*	47	63	79 (47,4)*	79	79	80
45		26	39	51	63	63	64	65
35		23	30	36	49	50	51	52
25		17	25	34	42	43	44	45
60	II (95%)	35	53	70	88	88	88	90
45		30	44	58	72	72	73	75
35		25	35	44	57	58	58	62
25		20	29	40	50	50	52	55
60	III (90%)	39	58	78	97	98	99	102
45		33	49	65	80	81	83	86
35		27	40	52	65	67	68	73
25		23	34	46	57	58	63	65
60	IV (80%)	43	64	85	107	108	109	113
45		36	54	71	89	90	92	97
35		30	47	64	73	75	77	82
25		26	39	52	65	66	69	75

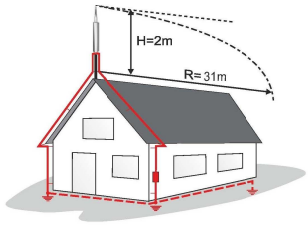
Concerns facilties that require protection at the 1++ level (99.9%), and facilities that are hazardous to the environment (danger coefficient h=20, EN 62305-2) or ones that may cause environmental contamination (danger coefficient h=50, EN 62305-2) protection radii must be reduced by 40%.
ΔT - time advance
The value of the H height is equal to the difference in height between the blade of the head and the highest point of the protected facility, minimum 2m.

Installation of the OMEGA X, Ω-x Lightning Protection System

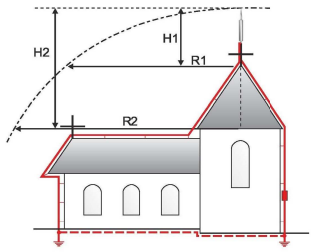


A	B	C	D	E	F	G	I	J	α
0,3-0,5m	1,6-2m	1,4-1,8m	0,5m	1m	>2m	2-8m	0,2m	0,5m	60°

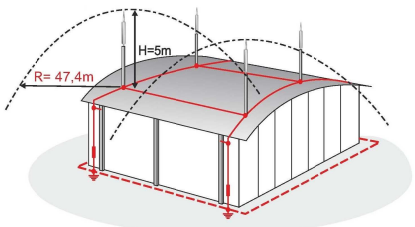
Lightning protection of a detached house



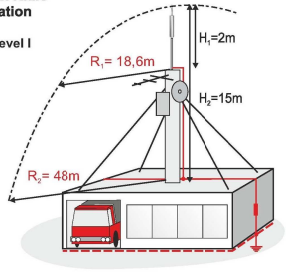
Lightning protection of a church



Airbus A380 aircraft hangar protection (100x100x40 m) Protection level I (h=20)



Protection of building objects with radio communication masts Protection level I (h=20)



SELECTED REFERENCES


Aircraft hangars Air France - Paris-Orly Airport, France


The Millau Viaduct, France


Aircraft hangars Air France Industries -Airport Roissy Charles de Gaulle, Paris, France


Pantheon Paris, France


Speedway Stadium in Toruń, Poland


Sport and Recreation Centre - Aquapark , Wielka Nieszawka, Poland


Total petrol station, France


Airbus A380 aircraft hangars, France


Les Invalides in Paris, France


House of Nicolaus Copernicus in Toruń, Poland

Lightning protection

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