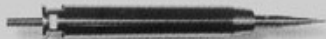


DELTA
TECHNOLOGY

LEADER®



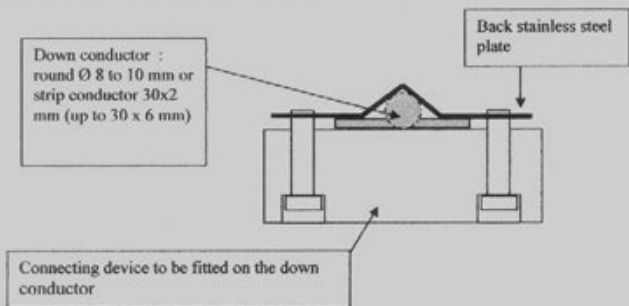
*Technology
and Protection*

LEADER® WORKING TEST FUNCTION & DEVICE

**LEADER® E. S. E. LIGHTNING CONDUCTOR WITH OPTIONAL
WORKING TEST FUNCTION**

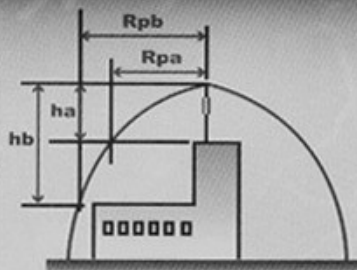


Diagram of installation of the connecting box



WORKING TEST DEVICE





Protection levels



- h_{in}: Height between the tip of the LEADER® lightning conductor and the protected area.
 - R_{pn}: LEADER® protection radius based on its height
 - D: According to standard NFC 17-102:
 20 m at level 1
 45 m at level 2
 60 m at level 3
 - ΔL: Startup discharge (or initiation) advance
 - V(m/μs): Tracer speed
- $$R_p = \sqrt{h(2D-h)} + \Delta L(2D + \Delta L)$$
- with $h \geq 5m$, $\Delta L = V(m/\mu s) \cdot \Delta T (\mu s) = 10^4 \cdot \Delta T$

French standard NFC 17-102 defines the protection level, the criteria and the calculations to define the lightning protection needs for a site, a building, a structure, etc. The protection level corresponds to a strictness level that should be adopted to protect a structure or open area according to the risk factors and consequences of a lightning strike on the structure.

		Height	R _{pn}	PROTECTION RADIUS R _p (m)									
		Reference	ΔL	2	3	4	5	7	10	20	30	60	
LEVEL 3	LEADER 3	L.1003	60	43	64	85	107	108	109	113	116	120	
	LEADER 2	L.1002	45	36	58	72	89	90	92	97	101	105	
	LEADER 1	L.1001	30	28	48	57	72	73	75	81	85	90	
LEVEL 2	LEADER 3	L.1003	60	39	58	78	97	98	99	102	104	105	
	LEADER 2	L.1002	45	32	52	65	80	81	83	86	89	90	
	LEADER 1	L.1001	30	25	39	51	64	65	66	71	73	75	
LEVEL 1	LEADER 3	L.1003	60	31	47	63	79	79	79	80	80	80	
	LEADER 2	L.1002	45	25	40	51	63	64	64	65	65	65	
	LEADER 1	L.1001	30	19	29	38	48	49	49	50	50	50	

The LEADER® lightning conductor's excellent performance has been proven in Pau's high voltage laboratory; 165 μs. However, the NFC 17-102 interpretation form limits use of the initiation advance to 60 μs for installations in France.

Material : red copper, brass and stainless steel Weight : 2.1 Kg Dimensions : 470 mm, Ø 60 mm

An optional test function is available for the entire LEADER® lightning conductor range, including data transfer by dry contact or optical fibre. It enables one to easily and reliably test operation from the lightning conductor base or down conductor (without removing the lightning conductor), particularly after a lightning strike. The test function is a useful complement to usual lightning strike counters, particularly for plants of building governed by an ISO procedure.