

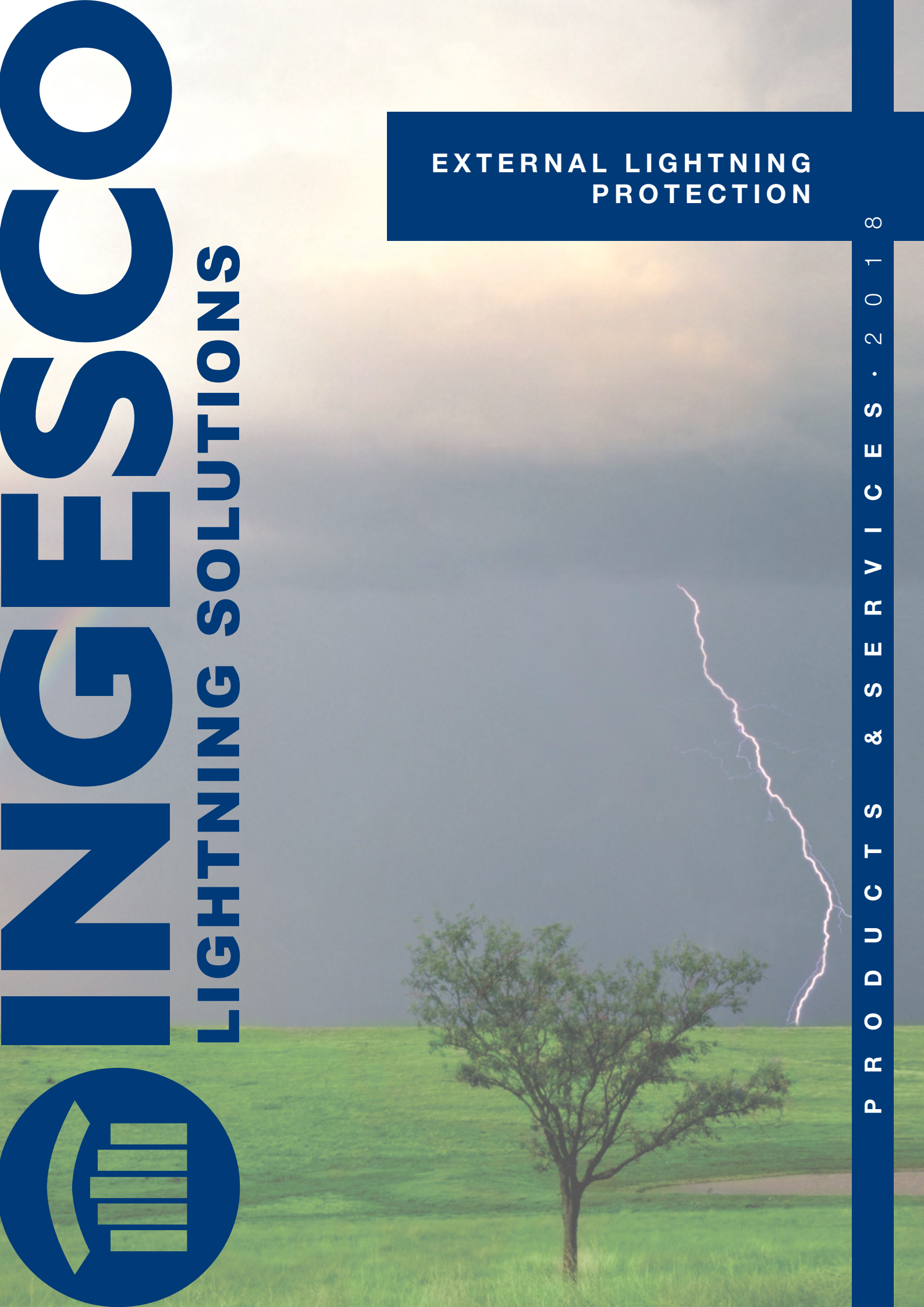
INGESCOCO

LIGHTNING SOLUTIONS



EXTERNAL LIGHTNING
PROTECTION

P R O D U C T S & S E R V I C E S • 2 0 1 8



INGESCO® PDC (ESE) LIGHTNING RODS



Product certified by
BUREAU VERITAS
Certification



Non-expendable
5 year warranty
Natural field trials
Max. current 200kA
No maintenance
Stainless steel 316 L
UNE 21186:2011
NFC 17-102:2011
NP 4426:2013

Model PDC6.4

► technical specifications

Lightning rod with **non-electronic** streaming.

Suitable for external lightning protection of all types of structures and open areas.

- **Level of protection rated very high.**
- **100% effective in discharge.**
- Guaranteed **electrical continuity.**
- **Retains all its initial properties after each discharge so does not require specific maintenance.**
- No batteries or external power. No electronic. **Not fungible.**
- **Operation guaranteed** in any atmospheric condition.
- Made of **AISI 316L** stainless steel and polyamide (PA66).

► standards | tests | specifications

INGESCO® PDC, meets the requirements in the following standards:

- CTE SUA 8
- IEC 62305
- UNE 21.186:2011
- IEC 62.561/1
- NFC 17-102:2011
- NP 4426:2013

Evaluation tests of ESE (Annex C UNE 21186: 2011) in the LABELEEC High Voltage Laboratory.

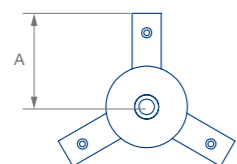
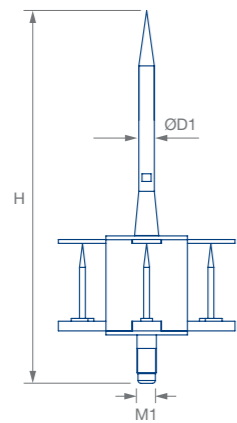
Certificate of current supported IEC 62561/1, issued by the LABELEEC High Voltage Laboratory.

Certificate product issued by the international certification organization Bureau Veritas.

► coverage radius by protection level

Model	PDC 3.1	PDC 3.3	PDC 4.3	PDC 5.3	PDC 6.3	PDC 6.4
Ref.	101000	101001	101003	101005	101008	101009
Δt	15 μ s	25 μ s	34 μ s	43 μ s	54 μ s	60 μ s
LEVEL I	35 m	45 m	54 m	63 m	74 m	80 m
LEVEL II	43 m	54 m	63 m	72 m	83 m	89 m
LEVEL III	54 m	65 m	74 m	84 m	95 m	102 m
LEVEL IV	63 m	75 m	85 m	95 m	106 m	113 m

Protection radius calculated according to UNE 21.186: 2011, NFC 17.102: 2011 and NP 4426: 2013. (Calculated as a difference in height between the tip of the lightning rods and the considered horizontal plane 20 m.).



INGESCO® PDC 3.1 LIGHTNING ROD

► Coverage radius (m) INGESCO® PDC 3.1 according to protection level and height (UNE 21.186:2011, NFC 17.102:2011 and NP 4426:2013)

Ref.	Material	H (mm)	D1 (mm)	M1 (mm)	A (mm)	Weight (g)
101000	SST	387	16	M20	95	2350

h (m)	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
2	13	15	18	20
4	25	30	36	41
6	32	38	46	52
10	34	40	49	56
20	35	43	54	63

Δt : 15μs
 D: Streaming distance
 L-I : D = 20 m
 L-II : D = 30 m
 L-III : D = 45 m
 L-IV : D = 60 m

INGESCO® PDC 3.3 LIGHTNING ROD

► Coverage radius (m) INGESCO® PDC 3.3 according to protection level and height (UNE 21.186:2011, NFC 17.102:2011 and NP 4426:2013)

Ref.	Material	H (mm)	D1 (mm)	M1 (mm)	A (mm)	Weight (g)
101001	SST	598	16	M20	156	3200

h (m)	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
2	17	20	23	26
4	34	39	46	52
6	43	49	58	66
10	44	51	61	69
20	45	54	65	75

Δt : 25μs
 D: Streaming distance
 L-I : D = 20 m
 L-II : D = 30 m
 L-III : D = 45 m
 L-IV : D = 60 m

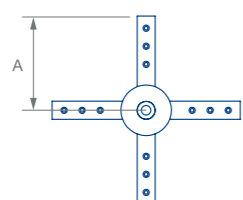
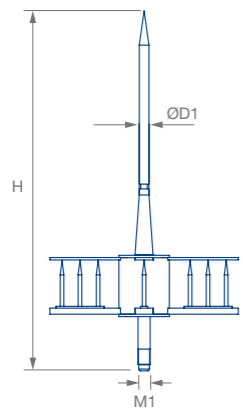
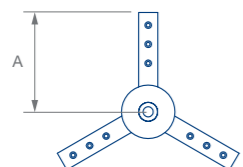
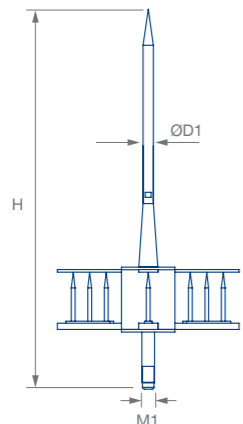
INGESCO® PDC 4.3 LIGHTNING ROD

► Coverage radius (m) INGESCO® PDC 4.3 according to protection level and height (UNE 21.186:2011, NFC 17.102:2011 and NP 4426:2013)

Ref.	Material	H (mm)	D1 (mm)	M1 (mm)	A (mm)	Weight (g)
101003	SST	598	16	M20	156	3400

h (m)	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
2	21	24	27	30
4	41	47	54	61
6	52	59	69	77
10	53	61	71	80
20	54	63	74	85

Δt : 34μs
 D: Streaming distance
 L-I : D = 20 m
 L-II : D = 30 m
 L-III : D = 45 m
 L-IV : D = 60 m



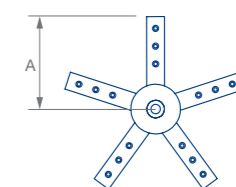
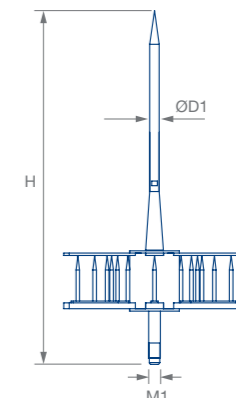
INGESCO® PDC 5.3 LIGHTNING ROD

► Coverage radius (m) INGESCO® PDC 5.3 according to protection level and height (UNE 21.186:2011, NFC 17.102:2011 and NP 4426:2013)

Ref.	Material	H (mm)	D1 (mm)	M1 (mm)	A (mm)	Weight (g)
101005	SST	598	16	M20	156	3600

h (m)	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
2	24	27	31	35
4	49	55	63	70
6	61	69	79	88
10	62	70	81	90
20	63	72	84	95

Δt : 43μs
 D: Streaming distance
 L-I : D = 20 m
 L-II : D = 30 m
 L-III : D = 45 m
 L-IV : D = 60 m



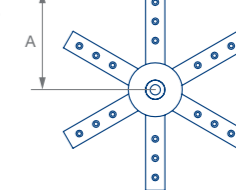
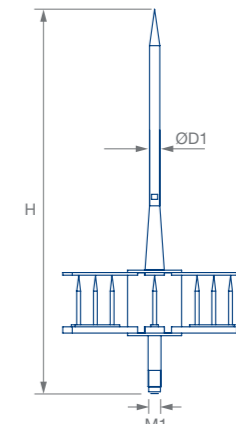
INGESCO® PDC 6.3 LIGHTNING ROD

► Coverage radius (m) INGESCO® PDC 6.3 according to protection level and height (UNE 21.186:2011, NFC 17.102:2011 and NP 4426:2013)

Ref.	Material	H (mm)	D1 (mm)	M1 (mm)	A (mm)	Weight (g)
101008	SST	598	16	M20	156	3800

h (m)	LEVEL I	LEVEL II	LEVEL III	LEVEL IV
2	29	32	36	40
4	58	64	72	80
6	73	80	91	100
10	73	82	93	102
20	74	83	95	106

Δt : 54μs
 D: Streaming distance
 L-I : D = 20 m
 L-II : D = 30 m
 L-III : D = 45 m
 L-IV : D = 60 m



INGESCO® PDC 6.4 LIGHTNING ROD

► Coverage radius (m) INGESCO® PDC 6.4 according to protection level and height (UNE 21.186:2011, NFC 17.102:2011 and NP 4426:2013)

Ref.	Material	H (mm)	D1 (mm)	M1 (mm)	A (mm)	Weight (g)
101009	SST	598	16	M20	186	4150

h (m)	NIVEL I	NIVEL II	NIVEL III	NIVEL IV
2	31	35	39	43
4	63	69	78	85
6	79	87	97	107
10	79	88	99	109
20	80	89	102	113

Δt : 60μs
 D: Streaming distance
 L-I : D = 20 m
 L-II : D = 30 m
 L-III : D = 45 m
 L-IV : D = 60 m

