

EXTERNAL LIGHTNING PROTECTION



Q-LAT ESE90 EARLY STREAMER EMISSION (ESE) AIR TERMINAL

Characteristics			
Efficiency (Delta T)	ΔT	30μs	
Standard deviation ESE / Single Rod	σ	$\sigma_{ESE} < 0.6 \sigma_{PTS}$	
Lightning current withstanding test requires	I_{imp}	100kA (normative test)	
Max. current withstanding (10/350μs)	I_{max}	$\geq 200kA$	
Approx Net Weight	P	3.0 kg	
Operating principles			
Detection of downward leader	Continuous measuring of electric field gradient ($\Delta E/\Delta t$)		
Upward streamer development conditions	QLAT®-Smart Technology optimizing the streamer development conditions		
Upward streamer emission	Sparking by High Voltage Impulses		
Internal circuits	3 Independent working unit		
Central rod	Full electrical continuity		
Metal housing	Superior Stainless Steel		
On-site testing capabilities	Proprietary QLAT® E.S.E. tester		
Maintenance	Free (thanks to QLAT® advanced technology & superior material)		
Warranty	2 YEARS		
Mechanical Specification			
Fixing on pole	M20 Thread		
Down conductor connection	Adapter(for connecting ESE to Pole & ESE to Copper Tape/Cable)		
Packing			
Dimensions	230*230*450 mm box/pc, 4pc in 480*500*500mm carton		
Contents	QLAT® E.S.E. Head, Nut, Hex key, New Adapter		
Approx Gross Weight	4.5 kg		
Environmental sustainability	100% recyclable		
Certifications & Standards Compliance			
Patent Right	Patent N°. 2013300191363		
Test Certificate N°. Successful General, Mechanical, Environmental, Electrical Withstand Current & E.S.E. Time Tests			
		N°. 210430-01/EN	



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PROTECTION RADIUS TABLE

Level Proteksi Tipe	Level I (99% = 20 M)		Level II (97% = 30 M)		Level III (91% = 45 M)		Level IV (84% = 60 M)	
	Q-LAT ESE 90	Q-LAT ESE 120	Q-LAT ESE 90	Q-LAT ESE 120	Q-LAT ESE 90	Q-LAT ESE 120	Q-LAT ESE 90	Q-LAT ESE 120
Tinggi/h (m)	Radius Proteksi (m)							
2	19	32	22	34	25	39	28	43
3	29	47	33	52	38	58	43	64
4	38	63	44	69	50	78	57	86
5	48	79	55	86	63	97	71	107
6	48	79	55	87	64	97	72	107
8	49	79	56	87	65	98	73	108
10	49	79	57	88	66	99	75	109
12	49	80	57	88	67	100	76	110
20	50	80	59	89	71	102	81	113
30	-	-	60	90	73	104	85	116
45	-	-	-	-	75	105	89	119
60	-	-	-	-	-	-	90	120



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