

EXTERNAL LIGHTNING PROTECTION



Q-LAT ESE120 IOT EARLY STREAMER EMISSION (ESE) AIR TERMINAL

Characteristics

Efficiency (Delta T)	ΔT	60μs
Standard deviation ESE / Single Rod	σ	$\sigma_{ESE} < 0.4 \sigma_{PTS}$
Lightning current withstanding test	I_{imp}	100kA (normative test)
Max. current withstanding (10/350 μ s)	I_{max}	$\geq 200kA$

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	6 Independent working unit
Central rod	Full electrical continuity
Metal housing	Superior Stainless Steel
Maintenance	Free (thanks to QLAT [®] advanced technology & superior material)
Warranty (excluding battery)	2 YEARS

QLAT[®] Connect Module Technical Specification

QLAT [®] Connect remote information	-ESE Lightning Rod Status, Humiture... -Lightning Discharge (Times, Date & Time) -Battery Level -Network/signal quality
Communication	GSM/GPRS Quad-band Compatible (2G/3G/4G/5G...WIFI) available
Power Supply	Lithium Iron Phosphate Battery, 16A.h - 9.6V
Battery Charge	Monocrystalline Glass-coated Solar panel
Advanced Lightning Strike Counter (IEC 62561-6:2018 Compliant)	Integrated advanced QLAT [®] Lightning Strike Counter Special contactless counting technology $I_{imp \text{ min}} = 1kA$ $I_{imp \text{ max}} = 100kA$
Module / QLAT [®] connection	Fast Connect Technology Plug-in system
Maintenance	Battery Replacement Kit PY30820230 (Lithium Iron Phosphate Battery, 16A.h - 9.6V)
Operating Temperature range	-15°C to +55°C
Relative Humidity	0% HR to 100% HR
Max. Operating Altitude	4000m HASL (Height Above Sea Level)
Ingress Protection	IP 54



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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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