

"Verification test for the triggering advance early streamer emission air terminals"

First of all, seeing the table—"Verification test for the triggering advance early streamer emission air terminals"—(the attached TEST REPORT –page 5/5 published by KERI (Korea Electrotechnology Research Institute); in TEST CONDITION, the Waveform being 249μs. However, the test has to be performed the minimum 650μs of Waveform, but on a given condition of KERI, the test was performed (applied) into 249μs. After testing, we get the values of converting it into 650μs.

The converting values of Waveform: $650 \div 249 = 2.61$

We can get the final Average upward leader triggering time by converting it into 2.61 times– each Average upward leader triggering time indicated in TEST REPORT

specimen		On applying249μs each Average upward leader triggering time (TEST REPORT–KERI)	Converting it into 650μs Average upward leader triggering time	Average upward leader triggering time	Protection Radius Height 5m basis		
SIMPLE ROD	general lightning rod (Franklin rod)	167.1μs	167.1x2.61= 436.131μs		LEVEL 1	LEVEL 2	LEVEL 3
KEC K-1	KEC MODEL	156.3μs	156.3x2.61= 407.943μs	436.131μs–407.943μs =28.188μs	45M	61M	68M
KEC K-2	KEC MODEL	149.8μs	149.6x2.61= 390.456μs	436.13μs1–390.456μs =45.675μs	61M	79M	87M
KEC K-3	KEC MODEL	141.4μs	141.4x2.61= 369.054μs	436.131μs–369.054μs =67.077μs	82M	100M	110M

* Conclusion; such as the above table, in comparison with the general lightning rod(Franklin rod), K-1 discharges 28.188μs faster than it, K-2 45.675μs, and K-3 67.077μs.