



Rapor
/
Report
No

19-03-01-3-
00-507

DENEY RAPORU

Test Report

Müşteri Customer	:	Topbaş Grup – Sena Topbaş
Adres Address	:	6278 sokak no:19/A Semikler /İzmir Telefon:02324494091 Faks:0232 449 40 91
Numune Sample	:	Yıldırım Sayacı numunesine uygulanan Fonksiyon-Yüksek Gerilim Darbe Akım Testleri
Marka Trade Mark	:	Topbaş Grup
Deney Tarihi Date of Test	:	27/05/2019
Rapor Sayfa Sayısı Number of Pages of Report	:	6

Test Supervised and Recorded by:

ODTU E.E.B.

Test Customer:

Topbaş Grup Adına
- Mehmet TOPBAŞ

Tests Conducted In :

HIZAL San.Tic.Ltd. Yüksek Gerilim Laboratuvarı-OSTİM – Ankara

Mühür
Seal



Tarih
Date
27/05/2019

Laboratuvar Sorumlusu
Deneyi Uygulayan Mühendis
MUSTAFA FAKILI
Elektrik Elektronik Mühendis

Deney Sorumlusu
Deneyi İzleyen ve Kontrol eden
PROF.DR.MIRZAHAN HIZAL
Elektrik Elektronik Mühendis
ODTU E.E.M.B.
Eski Ek Görevli Öğretim Üyesi

**Bu rapor, Laboratuvarımızın yazılı izni olmadan kısmen kopyalanıp çoğaltılamaz.
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1. Description of Samples

Test results are just belong to tested item.

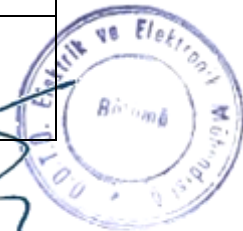
No	Type	Description	Seri No
1	Striker X – LCX17	Lightning Event Counter	1004702

2. Method of Test : NFC17-102 Version-2011 (Appendix C) FRANSIZ STANDARDI, EN 50164-6 standartı

3. if applicable deviation, addition, cutback from test method : Na

4. Items and equipments which are used during test

Cihaz Device	İmalatçı Manufacturer	Seri No / Kod Serial Number / Code	Sertifika No Certificate Nr	Kalibrasyon Tarihi Cal.Date
DMM Fluke 115 Digital Multimetre	FLUKE	11940646	E3381 , 05.15	09.05.2015
DMM UNIT-T Digital Multimetre	UNIT	1130330378	UMS , E3383 , 05.15	09.05.2015
DMM TT T-ECHNI- C Digital Multimetre	TT T-ECHNI-C	995016882	UMS , E3382 , 05.15	09.05.2015
High Voltage Impulse Measurement System	HIZAL / Rigol Electronic	H-220 IVD-09 / DS1102E	UME , AB-0034- K, UME G1YG- 0123	06.2014
High Current Measurement Current Probe	HIZAL / Fluke-	i-2000 Flex Rogwsky Coil/Schunt Serial: 0094	UMS, 020517	03.2017



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4.1. Calibrations valid through: 5 years

IEC 60060-2- (Madde 10.3)

10.3- Interval between successive calibrations of reference measuring systems The interval between calibrations shall be determined according to national regulations. If there is no regulation it is recommended that the calibrations shall be repeated at least once **every five years**, provided that regular performance checks demonstrate the stability of the reference measuring system.

5- *Environmental Conditions* : These values were observed during the test

	Start	Middle	End
<i>Ambient Temperature</i> :	18 C	18 C	18 C
<i>Ambient Atm Pressure</i> :	686mm Hg	686mm Hg	686mm Hg
<i>Relative Humidity</i> :	% 61	%61	%61

Test Name	Result
NFC17-102 Version-2011 (Appendix C) FRANSIZ STANDARDI, EN 50164-6 standartı	OK

7. *Conformity / non-conformity to specifications (if necessary)* : OK

8. *Uncertainty (if required)* : Na

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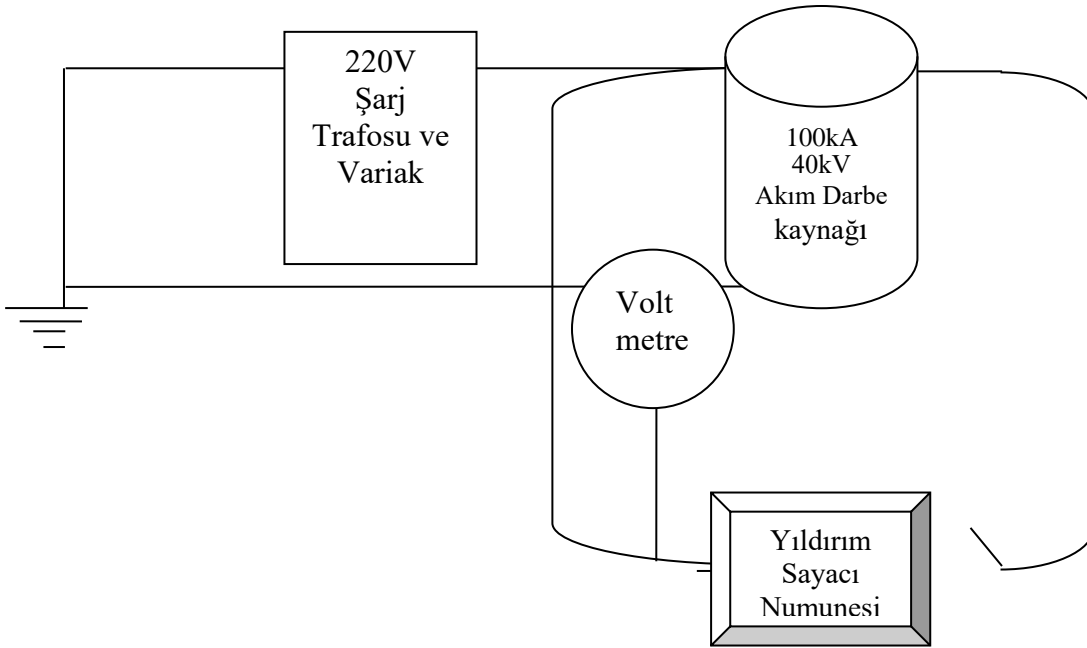
9- Test Description:

The Lightning event counter was first operated on a 100 micro F, 300 Volt charged pulse power supply for control electrical and function testing.

After observing the electrical working and functionality, it was prepared clearly according to the principles expected in the standard mentioned at the beginning of the experiments. A high voltage current pulse generator is shown in Figure-2. Shape voltages of the shape are made to be applied.

It take 1 min between impulses.

The impulse voltages used in the test were applied with a current pulse generator of 100kA "10/350 micro sec" current. Results shown at Table.1. The test system presents the diagram in Figure-1.



ŞEKİL.1. Test Sistemi şematiği





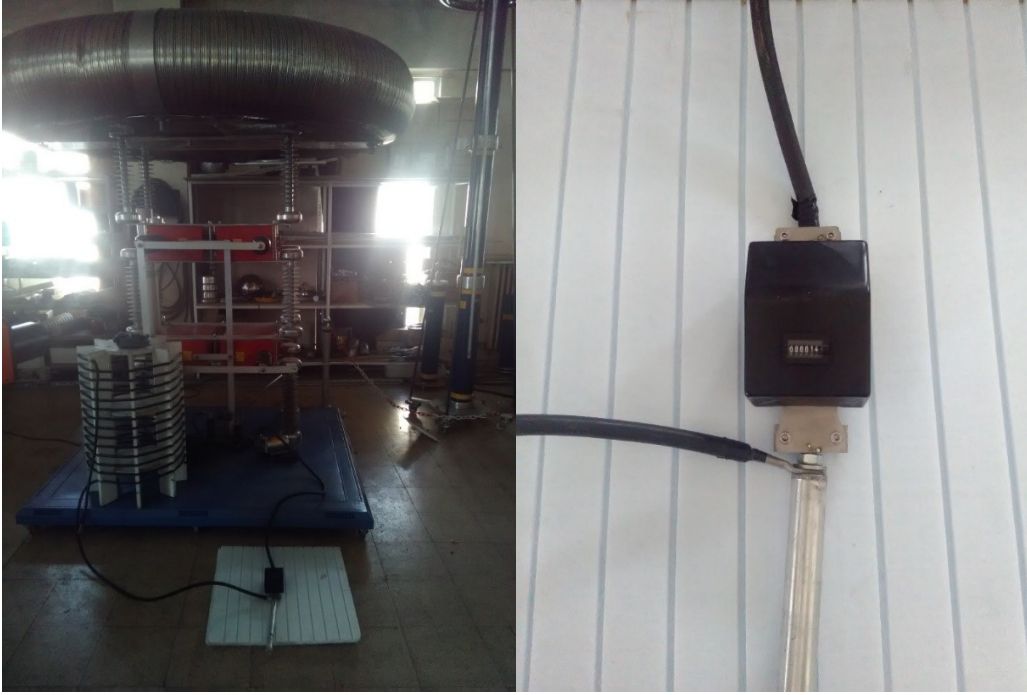
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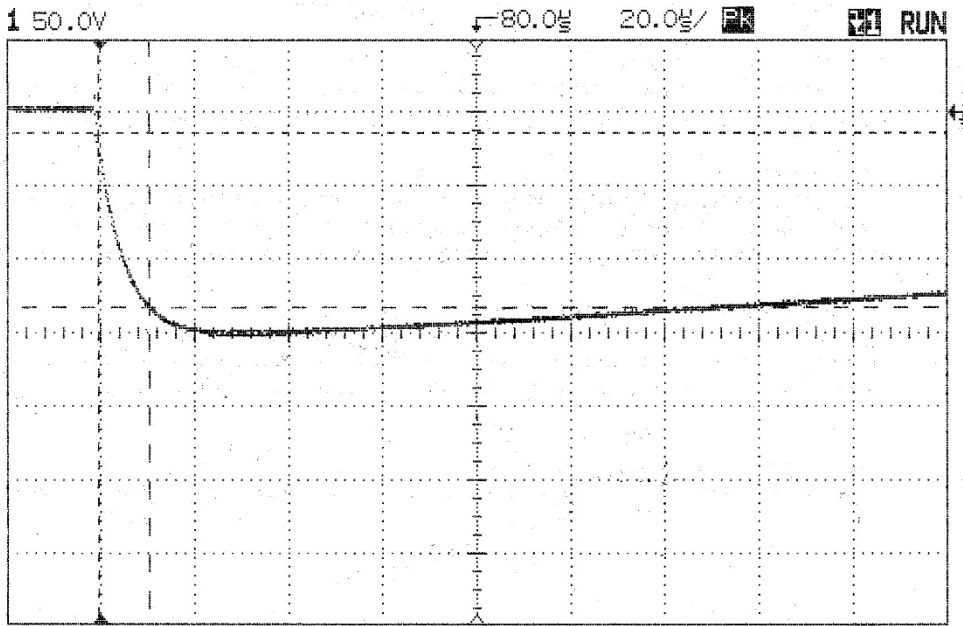
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Pic.1-2. Lightning Impulse Test System and Counter Sample

4. TEST RESULTS

Pic-3: Test Ocillogram



Rise(1)=17.0 us

*I Max (peak point) 100kA 10/350 micro sec"

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Test Results TABLO 1.

TABLO.1		
	Impulse Count	Counter
Lightning Event Counter 1	170	170

10. CONCLUSION

In the context of the applied tests the sample above was found to be in accordance with the performance to the related standart electrical test specification

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