ELSAFE INDIA

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www.elsafeindia.com, info@elsafeindia.com Ph No: 0484-2575199-210, Fax: 0484-2575211







QUOTATION

Project Name: LSG ESE PKG

Quote #: 12121 LSG ESE PKG

Company: Residential-Total Protection



These are Residential Packages for Houses at Kerala State only, ALL KERALA FREE DELIVERY, NO HIDDEN CHARGES, FIXED RATE

Revision:

Terms: ***

Ship via: Land Cargo FOB: Ex-Factory Weight: *** As applicable

MAKE-FRANCE Coverage -75 mtr radius

LSG Protect-TGD30

Supply of External Lightning Protection System LSG PROTECT – Thunderguard® ESEs are made of non-corrosive materials, utilize advance and sustainable technologies, maintain a 15 Yrs warrenty, are independently tested certified to NFC 17102 and UNE 21186 standards. Level IV 75 mtrs by capturing dangerous lightning discharges and safely channelling it to earth. All mouting mast connected with FRP mast for Protection of Side Flash Lightning Current and Test link Joint Kit IP 55/65 weather proof enclosure for testing the earth pit.Insulation material should be used to electrically isolate the panels, The lightning air terminal shall be maintenance free type & frequent testing should not be necessary for ensuring the working of it. The central finial shall be elevated above the spheroid and it should be sharp pointed & made-up of stainless steel material for long and reliable operations. An air gap shall be provided between the individual electrically isolated 4 panels and the finial tip of the central rod.

Number	Item	Description	Qty. Unit Unit Cost		Total Cost			
		Lightning Protection System			(in INR)		(in INR) (in INR)	
1	TGD 30	LSG ThunderGuard 30 Lightning Arrester with SS ADAPTOR	1	No	INR	35,750	INR	35,750
2	Earthing	Maintenance free Earthing For Lightning Arrestor: Using 2 no's of 2 Mtr long / 250 micron, 14.2mm Dia DOLPHIN UL Listed Copper bonded Steel Rod & ELECTRON Fill , a low resistivity ,RoHS certified & Maintenance free Grounding Enhancement backfill Compound for ESE Lighning protection earthing: 25 KGS	1	Set	INR	8,000	INR	8,000
3	Elevation Mast	Specially designed 3 mtrs GI mast Setting, and 1 mtr FRP top section insulation mast; Roof top/Tower side mounting arrangement & fixing accessories (anchoring rope & anchoring plate, Base -for roof top installation). The mast coated with paint for additional protection, Cable connector Adaptor	1	Set	INR	8,000	INR	8,000
4	Down Conductor	50 Sq MM V Guard Insulated Copper Cable	25	Mtrs	INR	650	INR	16,250
5	COUNTER/SPD	LSG digital counter / LSG France Class 2 spd (*which ever these available)	1	No	Complementory		Com	plementory
6	Installation	Installation of ESE Lightning Protection System, , SPDs with Down conductor routing from the LA terminal to the earth pit. Earth termination, fixing & Backfilling	1	Job	INR	7,000	INR	7,000
Quotation Valid For 20 days			GRAND TOTAL			INR	75,000.00	

Terms & Conditions

- 1 Gst extra if Applicable
- 2 Customers Scope: Material safety will be customer scope after delivery
- 3 Height arrangement -customer scope.EXTRA CABLE 650/MTR
- 4 Pit digging-Normal soil condtion only. Extra fitting /work charged extra
- 5 Approvals /Permission of work/storage of tools & equipment/safety/ etc : At customers scope

Thank you,

Best Regards

ELSAFE PROTECTION & CONTROL SYSTEMS

Ph No 0484-2575199

6583 3254

Doc. No.: ES19200407

Rev. No.:

Rev. Date:

Sales and Service Provider of ALLTEC USA / LSG FRANCE/ TEKSAI-INDIA, Lightning Arresters, Surge Arresters, Maintanence free Earthing









ESE LIGHTNING ARRESTERS THUNDER GUARD

ThunderGuard series ESE Lightning Arresters Developed and designed in our highly advanced labs is specially designed with unique design philosophy as per NFC-French Standard.

Thunderguard adopts synthesis techniques of leader discharge, impedance to limit current, air-gap discharge etc to produce leader channel in advance, improve lightning effect, reduce discharge voltage and change the discharge process of lightning current.

Thus it broaden the lightning wave, flatten the leading wave, decrease the amplitude and enlarge the scope of protection avoiding side striking and shielding failure then finally actively suppress the damage of Ground Potential Counter attack. Therefore it is an ideal device to prevent direct lightning.

ThunderGuard Series ESE lightning Arresters come in with widest Protection coverage area. Find Our protection radius coverage table for referance.



LSG THUNDERGUARD PROTECTION RADIUS					
	H(m)	ThunderGuard 30	ThunderGuard 60		
	2	20	32		
	3	30	48		
1	4	40	65		
LEVEL 1	5	50	79		
	6	50	79		
	8	51	79		
	10	51	81		
	2	23	38		
	3	35	55		
	4	47	74		
LEVEL2	5	58	89		
	6	58	90		
	8	59	92		
	10	60	92		
	2	27	42		
	3	40	62		
	4	53	82		
LEVEL 3	5	66	99		
	6	66	99		
	8	68	101		
	10	69	101		
	2	30	45		
	3	45	65		
	4	59	87		
LEVEL 4	5	74	108		
	6	74	108		
	8	76	110		
	10	77	111		



ESE LIGHTNING ARRESTERS THUNDER GUARD

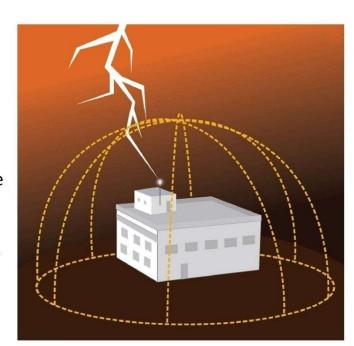
Product Structure:

- Central bar
- Reflector
- Trigger gear
- Exciter
- Dead plate of exciter
- Trigger gear, reflector and central bar all are insulating
- Reflector and central bar show good electrical connection to the earth
- The base of exciter is made up of synthetic resin thus applicable to any corrosion environment



Advantages:

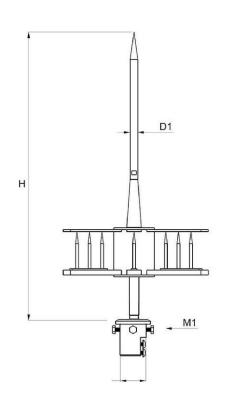
- Non-electronic type, long life.
- Guaranteed electrical continuity and sustainability after repeated lightning strike.
- High radius of protection for user selection.
- Non-electrical system, will not be effected by surge impact.
- Only self-activated during lightning strike and initiative intervene the lightning protection system.

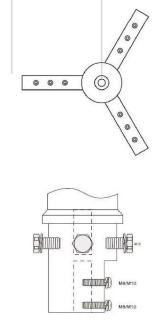




ESE LIGHTNING ARRESTERS THUNDER GUARD

Thunderguard 30



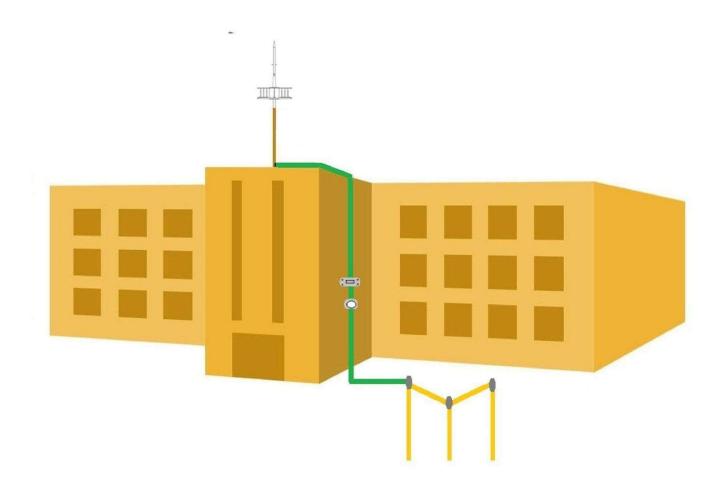




LSG TGD30_® protection (UNE 21.186:2011, NFC 17.102:2011 and NP 4426:2013)

Content No		Hight (mm)	Dimension (mm)	Weight (mm)
232111	Stainless Steel	650	18	3700





LSG PROTECT

No.1 avenue de Luxembourg, Europa tower, 94320 Thiais, France www.lsgprotect.com, cs@lsgprotect.com Contact No 0033-7-61-52-75-00

TEST REPORT



Central Power Research Institute

(A Govt. of India Society,)
P.B. No. 8066, Sadashivanagar, P.O.
Prof. Sir. C.V. Raman Road,
Bangalore - 560 080



केन्द्रीय विद्युत अनुसंधान संस्थान

(भारत सरकार की सोसाइटी, विद्युता मंत्रालय)

प्रो.सर.सी.वी. रामन रोड, सदािवनगर डाक घर, पो.बा.सं. 8066, बेंगलूरु – 560 080

CENTRAL POWER RESEARCH INSTITUTE

(A.Govt.of India Society, Ministry of Power)

Prof. Sir C.V. Raman Road, Sadashivanagar Post Office, P.B. No. 8066, Bengaluru - 560 080 India

वेब सइट / website :http://www.cpri.in

H./No. CPRIBLRHVDMISC19T0151

दिनांक/Date: 07-03-2019

सेवामें /To

म/एस. एनरटेक पावर सॉल्यूशन,

15/513 (59), पहली मंजिल, तीन सितारा प्लाजा,

स्टेडियम बायपास, पलक्कड़, केरल- 678013.

M/s. Enertek Power Solution,

No 15/513(59),1st Floor, Three Star Plaza,

Stadium Bypass, Palakkad, Kerala- 678013.

विषय/ Sub:-परीक्षणरिपोर्ट/ Test Report

महोदय /Dear Sir(s),

आपके दिनांक 18-12-2018 के अनुरोध पर रिपोर्ट सं CPRIBLRHVDMISC19T0151 दिनांक 07-03-2019 इसके साथ संलग्न है।

With Reference to your request dated 18-12-2018 we are enclosing herewith report No./s CPRIBLRHVDMISC19T0151 dated 07-03-2019 कृपया पावती भेजे / kindly acknowledge the receipt of the same.

कृपया ध्यान दें कि संलग्न परीक्षण रिपोर्ट में विषमताएँ /विसंगतियाँ, यदि कोई पाई गई तो इस पत्र की प्राप्ति के 45 दिनों के अंदर सीपीआरआई के ध्यान में लाएँ।

Please note that anomalies/discrepancies in the test report enclosed, if any, shall be brought to the notice of CPRI within 45 days of receipt of this letter.

साथ ही,कृपया ध्यान दे कि इस पत्र के जारी दिनांक से 15 दिनों के भीतर परीक्षण के लिए लाए गए नमूने तथा उनके साथ लाई गई अतिरिक्त सामग्री उच्च वोल्टता प्रयोगशाला के परिसर से हटा दी जाएँगी। उपरोक्त अविध के बाद किसी भी दावे पर विचार न हीं किया जाएगा तथा कुछ और दिनों के लिए नमूनों को रखने के लिए इस अविध के अंदर कोई लिखित अनुरोध की अनुपलब्धि पर सीपीआरआई के मानकों के अनुसार नमूनों का निपटारा किया जाएगा।

Also, please note that the samples and any additional material brought along with them for the testing shall be removed from the High Voltage Laboratory premises within 15 days from the date of issue of this letter. No claims will be entertained after the above period and samples will be disposed off as per CPRI norms, unless written request is received within this period for retaining the samples for a few more days.

भविष्य में भी हमारी सर्वोत्तम सेवाओं का आश्वासन तथा धन्यवाद के साथ। Thanking you and assuring you of the best of our services in the future also.

भवदीय / Yours faithfully

07

U. R. SHESHAGIRI RAO

संयुक्त निदेशक और एचओडी / JOINT DIRECTOR & HOD

उच्चवोल्टताप्रभाग / HIGH VOLTAGE DIVISION

TEST REPORT



Test Report Number

CPRIBLRHVDMISC19T0151

Dated: 07-03-2019

Name & Address of the customer

Enertek Power Solution,

No 15/513(59),1st Floor, Three Star Plaza, Stadium Bypass, Palakkad, Kerala-678013.

Ref: e-mail

Dated: 18-12-2018

Name & Address of the Manufacturer

LSG Protect India.

#204,Lake view complex Nallasopara, Palghar, Mumbai, Maharashtra 401209.

Particulars of Samples tested Condition of the sample on Receipt

New.

Type

Description

Serial Number

Number of samples tested

Date(s) of Test(s)

CPRI Sample Code Number

Thunderguard 60 ESE Lightning Arrester.

TGD 60/001.

One.

18-12-2018 & 20-02-2019.

HVD18S0243.

Particulars of tests conducted

Lightning Impulse Current withstand Test 8/20µs

(60kA).

Test in accordance with standard/

Specification. Sampling Plan

Customer's requirement

As per Customer's Request.

: Not Applicable

: As per the Test Procedure declared by the Customer

(See Page 2).

Deviations if any

Name of the witnessing persons

Customer's representatives

Shri, Sreenath .S. Shri. Manish. J.

Other than customer's representatives Test subcontracted with Address of the

None. None.

Nil.

laboratory

Documents constituting this report

(in words)

Number of sheets

Number of oscillogram/s

Number of graphs

Number of photo/s

Number of Test Circuit Diagrams

Number of drawings

Five.

Six (Plus Two Sheets of Oscillograms).

Nil.

Nil.

One (1812001 REV 0).

(PRABHAKAR C.) Test Engineer



(U. R. SHESHAGIRI RAO) Joint Director/HOD

Approved By

TEST REPORT



Test Report No. CPRIBLRHVDMISC19T0151

Dated: 07-03-2019

TEST PROCEDURE

Three positive & Three negative lightning impulse current shots of 8/20µs wave shape with a magnitude of 60kA (less than one pulse for three minutes) shall be applied through the input. The Sample should be checked for any physical deformation or discoloration after testing. The test was conducted as per the above procedure and the results are tabulated below.

Lightning Impulse Current Withstand Test:

SI. No.	Polarity	Current Applied (kA)	Osc. No
1		61.0	58400
2	+Ve	59.0	58401
3		59.3	58402
4		60.5	58403
5	- Ve	59.4	58404
6		60.3	58405

TEST REPORT



Test Report No. CPRIBLRHVDMISC19T0151

Dated: 07-03-2019

Photo 1. Before the Test





Photo 2. After the Test







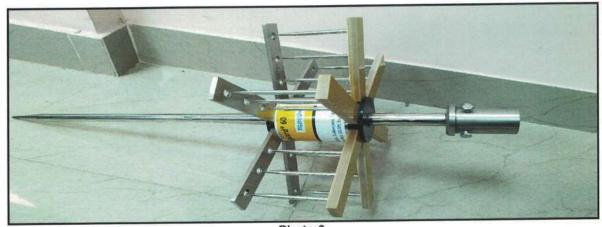


Photo 3.

TEST REPORT



Test Report No. CPRIBLRHVDMISC19T0151

Dated: 07-03-2019

Observations: Sample is subjected to the required current impulses.

No physical deformation observed.

Laboratory Atmospheric conditions during the above tests.

Temperature in Degree Celsius			Atmospheric Pressure
Date	Dry Bulb	Wet Bulb	in mm of Hg.
18-12-2018	23.5	19.0	684.5
20-02-2019	28.0	22.0	683.5

TEST REPORT



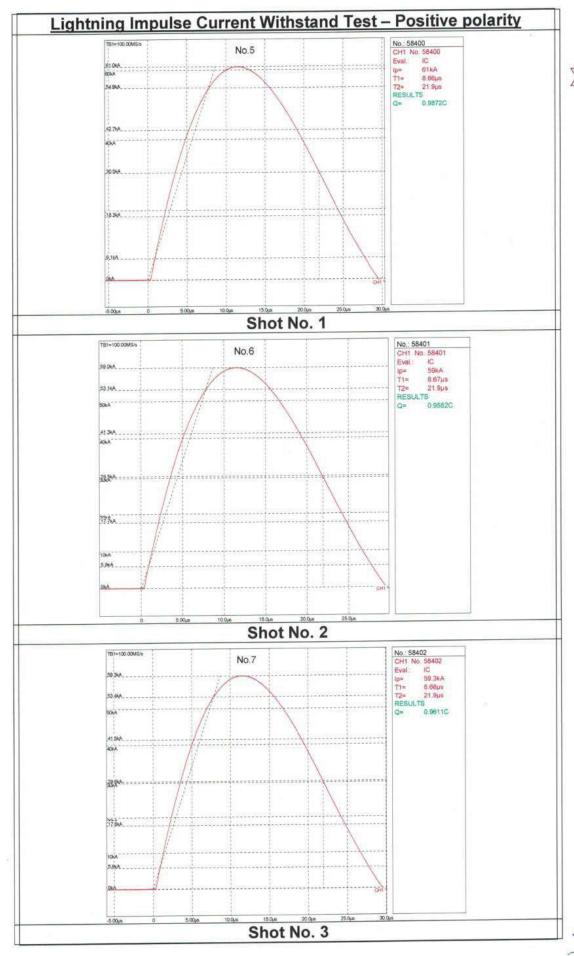
Dated: 07-03-2019

Test Report No. CPRIBLRHVDMISC19T0151

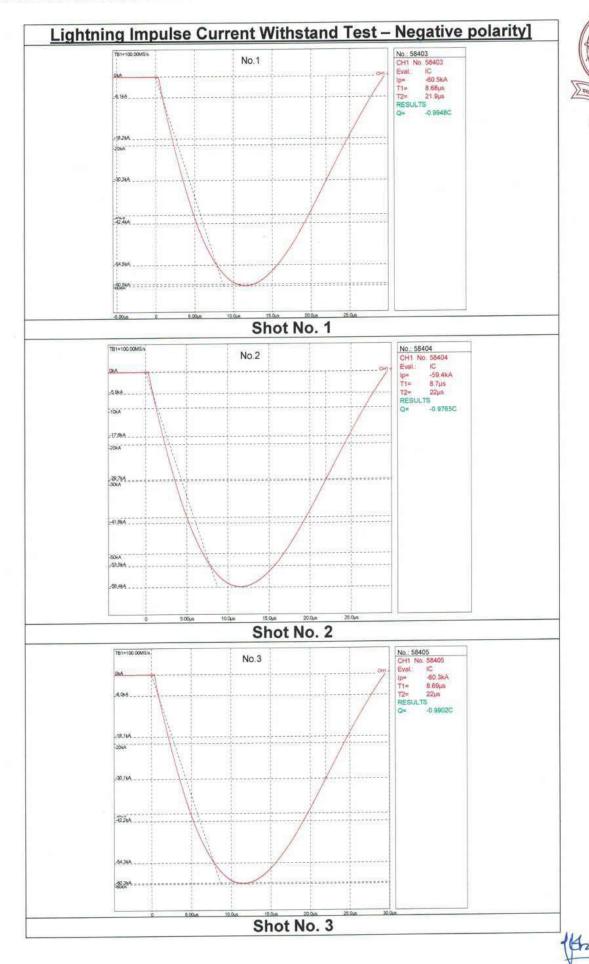
NOTE:

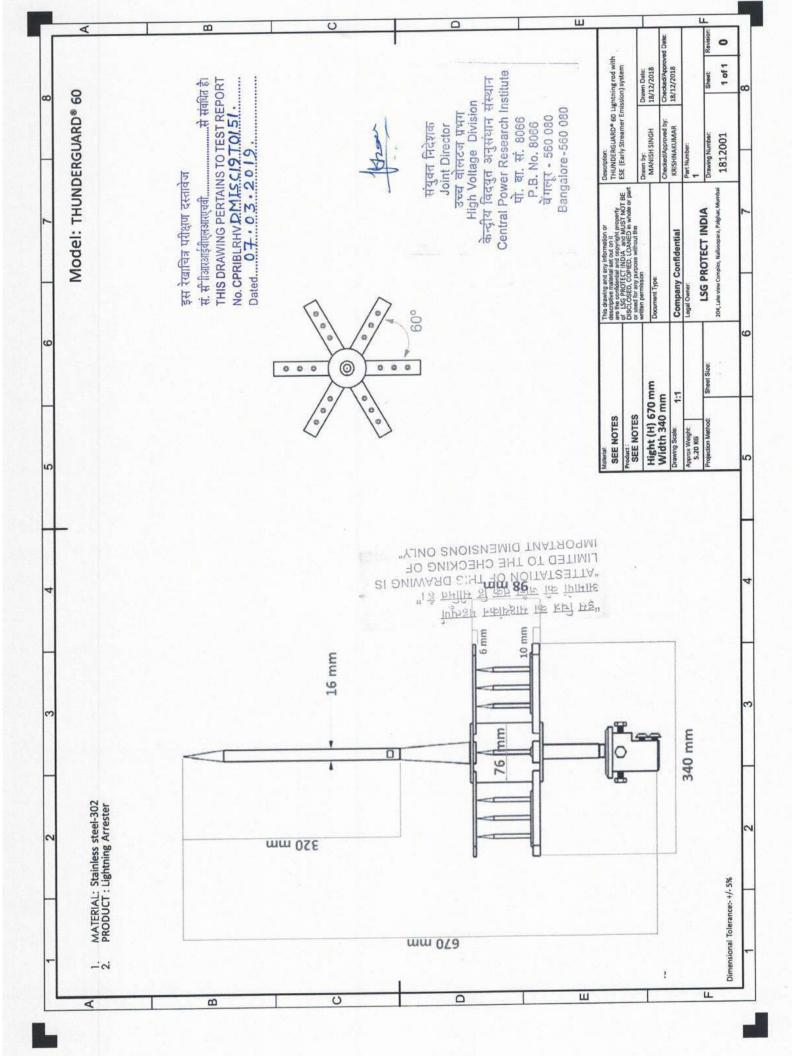
- a) The Test results relate only to the item(s) tested.
- b) Publication or reproduction of the test report /Certificate in any form other than by complete set of the whole test report /Certificate and in the language written is not permitted without the written consent of CPRI.
- c) Any Corrections/erasure invalidates the test Report/Certificate
- d) Any anomaly/discrepancy in the test report /Certificate should be brought to the notice of CPRI within 45 days from the date of issue.
- e) The verification of the sample drawings by CPRI is limited to dimensional checks only wherever possible.

CPRI



CPRI







ANSI

American National Standards Institute
MEMBER

fine Amerikaan Produced Stemshavis bestimte (ANNI)
autopozues its municus and constituents to
strangtions the U.S. multisphase position in
the piotal accuracy while inclined to essence
the subtry wind health of automores
and the protestion of the automores.

Certificate of Compliance

Appendix-I to Certificate No: AC1599

This Appendix shall be an integral part of the Certificate. All expressions and terms defined or used in the Certificate shall have the same meaning in this Addendum, unless the context clearly requires otherwise.

Manufacturer

: LSG PROTECT

Brand Name

TGD

Product Group

LIGHTNING PROTECTION SYSTEM, SURGE

PROTECTION LOW, MEDIUM & HIGH

VOLTAGE DEVICES.

This certificate referred to above covers the following products:

- TGD 20/40/60
- EPB SERIES
- LSC SERIES
- LSG LOW VOLTAGE DIN RAIL (AC SERIES)
- LSG LOW VOLTAGE DIN RAIL (DC SERIES)
- LSG LOW VOLTAGE WALL MOUNT (AC SERIES)
- LSG LOW VOLTAGE WALL MOUNT (DC SERIES)
- LSG MEDIUM VOLTAGE SERIES
- LSG DATA LINE SERIES

The CE mark as shown above can be used, under the responsibility of the manufacturer, after completion of an EC declaration of conformity & Compliance with all relevant EC Directives. The statement is based on a single evaluation of one sample of above mentioned product. It does not simply an assessment of the whole production.

This certificate is issued under the conditions that the quality system maintained in the manufacture of above referenced Models/ Products 8 if is remains valid until the manufacturing conditions or the quality systems are changed is subject to continuous surveillance according to the CE Guidelines further. Certificate validity is conditioned by positive results or surveillance audits







Authorised Signatory

This is an Accredited Certificate Authorized for issue by the Global Accreditionings of Lettification Boilter Europe

Signatory

Limited in accordance with "ISO17021 Conformity Assessment Requirement for Bodies provides certification of Management Systems Certificate holders are listed in the depictor of wiew gach as a lewis of uscert, com

as allowed as the form which the accountage from the control of th

the between miles and or according to the artificial approximation of the contract to the cont





Test Certificate

Test report No. 7/1-3 from 07.01.2014

Applicant LSG PROTECT

Address No.1 Avenue de Luxembourg, Europa Tower, 94320

Thiais, France

Product EARLY STREAMER EMISSION TERMINAL

M/N ThunderGuard

TGD

Applied Standards: NF C 17-102-1995 (Appendix C)

Brand Name ThunderGuard

The products have been tested by us in conformity with a procedure required by NF C 17-102-1995 (Appendix C). The ESE Terminal TGD Series confirm such resultates:

ESE Type	Average time-to- breakdown for the ESE arrester, $T_{\rm ESE}$, μs	Average time-to- breakdown for the reference arrester FLR, T _{FLR} , µs	Difference between the average times T _{FLR} - T _{ESE} , µs	Triggering advance of the ESE, μs
LSG TGD 20	571,1		60,7	60,0
LSG TGD 40	589,9	631,8	41,9	41,0
LSG TGD 60	609,7		22,1	22,0

Note: Uncertainty associated to results $\pm 5 \mu s$

Director R&D Institute "Molniya",

Professor

V. Kravchenk

Haykobo-

The statement is based on an evaluation of three samples of above mentioned products. It does not imply an assessment of the whole production and does not permit the use of the Test laboratory logo.



Ministry Science and Education of Ukraine
National Technical University "Kharkiv Polytechnic Institute"
Research & Design Institute "Molniya"

47, Shevchenko Street, Krarkiv, 61013, Ukraine Phone/Fax: +38 057 7076868; http://www.kpi.kharkov.ua



भारत सरकार Government of India राष्ट्रीय परीक्षण शाला (द.क्षे.) NATIONAL TEST HOUSE (SR)

347218

तरमणी, चेन्नई - 600 113. Taramani, Chennai - 600 113.

Phone : 22432374, 22431157 Fax : 22433158 email : nthsr@tn.nic.in परीक्षण प्रमाण पत्र

TEST CERTIFICATE

INTERIM/FINAL REPORT

पर्याणा प्रमाणा यहा सं Test Certificate No. NTH(SR)/EL(C)/2014/00176A जारी होने की तिथि Date of Issue 23/04/2014

कोड नं Code No. 1396938243840

पुष्ट Page

पृष्ठीं की संख्या No of Pages

जिसे जारी करना है **Issued To.**

TEKSAI POWER SECURE SOLUTION PVT.LTD.

पता Address 3/860, BLUE STAR INDUSTRIES COMPOUND. PUDUSSERY, KANJIKODE, PALLAKKAD, KERALA-678623

ग्राहक का सन्दर्भ सं एवं दिनांक Customer's Ref. No.

TPSS/2014

Date: 25/01/2014

पंजिका सं एवं दिनांक Register No & Date

00176/NTH(SR)/EL(C)/08/04/2014

परीक्षण सामग्री का विवरण Description of Test Item

Earthing material

परीक्षण सामग्री का पहचान Identification of Test Item

Printing marking on the bag: "Teksai-Ultra"

नम्ना का विशिष्टि (यदि ही) Product Specification (Flany)

Electrical Resistivity test as per customer's specification

नम्ना प्राप्ति की तिथि Date of Receipt of the Test Item

08/04/2014

कार्य सम्पादन की तिथि

Date(s) of Performance of Tests

From: 08/04/2014

23/04/2014 To:

व्यावद्वत प्रणाली का पहचान

Electrical Resistivity test as per customer's specification

Method(s) used for Test नमना प्रकिया जहाँ प्रासंगिक हो

NA

Sampling Procedure where relevant

Tested By

N. Zorhh Kelen St Natarajan Joseph kalaiselvan

SO Floctrical

Checked By

SO Flectrica

S.B. Nanda Kumar Scientist-SC(Electrical)





(ANALYTICAL DIVISION)
ISO 9001 : 2008 Certified
Govt. Approved Test House

4/9, Kirti Nagar Industrial Area, New Delhi-110 015 Tele: 011-45754575 Fax: 011-45754545 e-mail: arbrolab@arbropharma.com, Website: www.arbropharmaindia.com CERTIFICATE OF ANALYSIS

150) 9001 : 2008

Sample : EARTHING BACKFILL COMPOUND Report No. :NR-11060906

P

Received On :09/06/2011

Mfg.Lic.No. : N.S. Ref. No. :N.S.

Submitted By : GENIUS PROTECTION SYSTEM. (P) LTD.

:248A, RATI COMPLEX, RAMA MKT., MUNIRKA, N DELHI.

Mfg. Date Expiry Date Batch Size Sample Qty

N.S. 100GM. N.S. N.S. N.S.

RESULTS OF ANALYSIS

Date of start of analysis 10-06-11 Date of Completion of analysis 13-06-11.

Description

:- Black powder.

<\$1.No.> <Parameters> <Results> <Limit (MAX)>

B - TOXIC METALS

Supplied By : N.S.

Address

Batch No.

:- 0.251ppm 1000.0ppm 1. Mercury(as Hg)

1000.0ppm 2. Lead(as Pb) :- 8.225ppm

100.0ppm 3. Cadmium (as Cd) :- 0.128ppm

1000.0ppm Hexa-Chromium (as Cr): - Less than 1.0ppm

Remark :- Observed value for Pb,Cd,Hg & Cr+6 are very low from the max limit, Hence sample complies the ROHS.

REMARKS : PARTY ASKED FOR THE ABOVE TESTS ONLY

Date : Monday, June 13, 2011

Page 1 of 1

Person In Charge



CENTRAL POWER RESEARCH INSTITUTE (Member of STL)

Sheet 1 of 4

TEST REPORT

Test Report Number

SC11376A

Dated: 29th August, 2011

Name & Address of the Customer

M/s. Teksai Power Secure Solution Pvt. Ltd., 3/860, Blue Star Industrial Compound, Pudussery, Kanjikodu, Palaghat, Keraja - 678 029.

Name & Address of the Manufacturer

M/s. Teksai Power Secure Solution Pvt. Ltd., 3/860, Blue Star Industrial Compound, Pudussery, Kanjikodu, Palaghat, Kerala - 678 029.

Particulars of sample tested Condition of the sample on Receipt

GI Earthing Electrode

New

Type
Designation
Serial Number(s)
Number of samples tested

Teksal ---One

Date (s) of test (s)
CPRI sample code no(s).

10th August, 2011 SC11S1323

Particulars of tests conducted

Test in accordance with Standard / specification Sampling plan Customer's requirement Short-Time current
Customer's instruction

Not applicable 20 kA rms for 1.0 s

Deviations if any

Customer's representative

Name of the witnessing persons

Other than customer's representative

Mr. Praveen.P.V Mr. Jacob George

Test subcontracted with address of the laboratory

None:

Documents constituting this report (in words)

Number of sheets Four Number of oscillograms One Number of graphs Nil Number of photos Two Number of test circuit diagrams One Number of drawings One

N. M. (N. Maheswara Rao) Test Engineer



AUTHORISED SIGNATORIES

(Swaraj Kumar Das) Joint Director



Surge Protection Devices

Made in France, EU

ALTERNATE CURRENT

LSGBC50



APPLICATIONS

- - **Dimensions**

- ●B+C class Surge Protective Device for AC Power System.
- Sensitive electronic equipment
- Telecom centers
- Automatic control centers
- Intelligent buildings
- Industrial enterprises
- Medical institutes

FEATURES:

- DIN rail mounting for easy installation
- Plug connectors for quick and easy connection or rewiring
- 50kA lightning impulse current Iimp
- Thermal disconnect device
- Status indicators visually verify protection level

TECHNICAL PARAMETER:

Model	LSGBC50
Electrical Parameter	
Nominal working voltage Un	50/60Hz 220/380V,
Max. continuous operating voltage Uc	385V
Nominal discharge current (8/20µs) In	50kA
Lightning impulse current(10/350μs) Iimp	15kA
Protection level @20kA, 8/20μs Up	2000V
Response time tA	100ns



PHOENIX CONTACT GERMANY

CTRL 1.5 Surge Arrester - Flashtrab FLT 35 CTRL 1.5



Features:-

- Lighting current arrester with encapsulated N-PE spark gap and ignition electronics
- 2 Channel Protection level 1.5 KV
- Housing width 40 mm (3 Div)

Specification:-

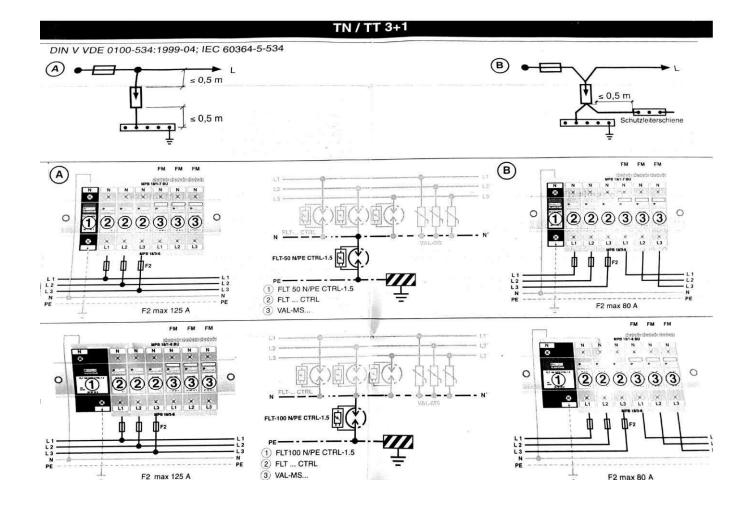
Un 230 V

Uc 440 V, 260 V

Up ≤1.5 kV

Imp 100 kA

T*C -40...+85



Confirmation on quality assurance according to nuclear standard KTA 1401

On behalf of the German nuclear power plant operators, **E.ON Kernkraft GmbH** as a partner of the VGB PowerTech e.V. working group Assessment of Contractors confirms

VGB POWERTEGH

EnBW

Phoenix Contact Group

valid for the sites

Phoenix Contact GmbH & Co. KG
Flachsmarktstraße 8, D-32825 Blomberg
Phoenix Contact Electronics GmbH
Dringenauer Straße 30, D-31812 Bad Pyrmont
Phoenix Contact Deutschland GmbH
Flachsmarktstraße 8, D-32825 Blomberg
Phoenix Contact Power Supplies GmbH
Oberes Feld 1, 33106 Paderborn

and the scope of supply and services

Design, manufacturing and sale of electrical and electronic connecting elements, power supply and surge voltage protection modules, as well as electronic interface systems

the qualification for system- and product related quality assurance.

The assessment was performed on April 20th and 21st, 2016 by

EUROCERT® Gesellschaft zur Qualifizierung von Unternehmen mbH

based on the standard **KTA 1401** as well as on the assessment documents of the VGB PowerTech e.V. working group Assessment of Contractors in consideration of product related requirements.

Details of the assessment are given in the report Eurocert 2016/02.

This confirmation is valid until **March 08th**, **2019** provided that the conditions on which the assessment was based have not been changed.

Hanover, April 29th, 2016

i.V. Blisaudel



Vattenfall Europe Nuclear Energy



i.V. Jay



Deutsche Akkreditierungsstelle GmbH

Entrusted according to Section 8 subsection 1 AkkStelleG in connection with Section 1 subsection 1 AkkStelleGBV
Signatory to the Multilateral Agreements of EA, ILAC and IAF for Mutual Recognition

Accreditation



The Deutsche Akkreditierungsstelle GmbH attests that the calibration laboratory

Phoenix Contact GmbH & Co. KG Flachsmarkstraße 8, 32825 Blomberg

is competent under the terms of DIN EN ISO/IEC 17025:2005 to carry out calibrations in the following fields:

Dimensional quantities

Length

- Length measuring instruments
- Diameter
- Thread

Electrical quantities

DC and low frequency quantities

- Voltage
 - DC voltage
 - **AC voltage**
- Current
 - DC current
 - AC current
- DC resistance

Time and frequency

- Frequency
- Time interval

The accreditation certificate shall only apply in connection with the notice of accreditation of 24.01.2018 with the accreditation number D-K-12161-01 and is valid until 23.02.2020. It comprises the cover sheet, the reverse side of the cover sheet and the following annex with a total of 7 pages.

Registration number of the certificate: D-K -12161-01-00

Braunschweig, 24.01.2018

Dr. Heike Manke Head of Division Translation issued: 03.04.2018

Head of Division