

ELSAFE INDIA

Leading The Way To Safety
Cochin - Chennai - Bangaluru - Hyderabad - UAE

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

ALL INDIA TOLL FREE
NUMBER
1800-121-9092



QUOTATION

Project Name: TEK1000-VILLA
Quote #: 1712121Q
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

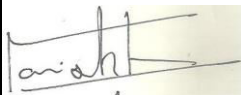
Number	Item	Description	Qty.	Unit	Unit Cost	Total Cost
		Lightning Protection System			(in INR)	(in INR)
1	LA TERMINAL	TeksoPrevent MODEL : TEK1000 (Lightning Arrestor) Supply of Lightning arrestor Tekso Prevent Air terminal which is a Copper built lightning arrestor. 1. Large protection region; High performance 2. High quality 3. Strong anti-corrosion and conductivity	1	No	INR 22,150.00	INR 22,150.00
2	Earthing	Model : TEKSAI Copper rod 2 Nos Spec : 2 Mtr Length x 14.2 mm dia x250 micron (ISO 9001-2008 Certified Company), CPRI Approved, Maintance free Earthing. Model : TEKSAI ELECTRON - High Conductive Concrete (High Conductive & Anti Corrosive Compound) Application : Superior Choice & Reliable Performance for all Soil / Sandy / Rocky / Filled sand location ELECTRON - - 4 bags	1	set	INR 7,000.00	INR 7,000.00
3	Down conductor	HRFR V.GUARD COPPER CABLES 50 SQ MM	20	Mtrs	INR 550.00	INR 11,000.00
4	Elevation Mast	Specially designed 3mtr GI mast, 1Feet FRP Mast with LA Base, adaptor, Ancoring rope if required and Accessories	1	set	INR 5,750.00	INR 5,750.00
5	Installation	Installation	1	Nos	INR 4,000.00	INR 4,000.00
6	Surge Protector Device	Imported 3 Phase/1 Phase Class B SPD, Phoenix/LSG	1	No	Complementary	Complementary
Quotation Valid For 20 days			GRAND TOTAL			INR 49,900.00

Terms & Conditions

- 1 Price Landed at site
- 2 Customers Scope: Material safety will be customer scope after delivery
- 3 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, Toll free
1800-121-9092**



Doc. No. : ES19200407

Rev. No. :


Rev. Date :

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



TEK1000 LIGHTNING ARRESTER





TEK1000 is a Solid Copper Air terminal lightning protection device of 300 mm long, connecting feature of 25 x 3 mm / 70 Sq mm down conductor internally assembled with 100 mm Spherical gap Copper ball with 4 numbers of flash protection spikes (10mm diameter 100 mm long).

Teksai TEK1000 lightning arresters working on a simple principle of Benjamin Franklin which states lightning charges nature of finding easiest path to earth from a nearest sharpest conductor from cloud clubbed with air gap balls which gathers charges from connected earth making lightning attraction more effective.

One entire system of TEK1000 can protect a built-up area of 3500 Sq Ft

TEK1000 is fixed with 300 mm long isolated fiber glass - reinforced plastic (FRP) mast. The isolated down conductor internally connected to the air terminal inside the FRP, 3 Meter GI Mast and base Setting used for top area setting, down conductor used with insulation will be connected to chemical earthing.

Provides air terminal fitted to an isolated fiberglass-reinforced plastic (FRP) mast.

Our Specially designed Masts offer natural isolation properties, high strength for windy sites and low weight to minimize mast loading.

Features lower-cost and Best Results at the typical shorter installation requirements.

Maintenance free chemical earthing used for installation.

Complies with EN 50164-1 and EN 50164-2.

Approved By Central Power research institute-Bangalore (Govt. of India Lab).

5 Yrs Replacement warranty and 15 Yrs Service warranty

PROTECTION LEVEL	EFFECTIVENESS OF LIGHTNING CONDUCTOR E
I	0.98
II	0.95
III	0.90
IV	0.80



Particulars	Specification
Material	Copper
Air Rod Height	300 MM
Air Rod Diameter	100 MM
Protection Angle	65°
Corresponding Protection Radius	2.14 h
Max Impulse Current Discharge	50 KA
Average Discharge Current	25 KA
Current Gradient Less Than	40KA
Grounding Resistance	Less Than 10 Ohm
Resistible Wind Speed	Over 50m/s





Marketing office kerala

ELSAFE PROTECTION AND CONTROL SYSTEMS
D10-4/60, Densons Building Marottichodu,
Edapally, Cochin, Kerala
Ph No : 0484 - 2575199
info@elsafeindia.com
www.elsafeindia.com

www.teksai earthing.com

Distributor / Dealer

Certificate of Quality

Test Details

Serial Number : **16021025**

Product Name : TEKSOPREVENT

Model Number : TEK1000

Date : 03-28-2016

Technical specification

Melting temperature, : 1001 °C

ISO3146 Density, ISO1183 : 1.16 g/cm³

Melt volume rate MVR 275/5, : 140 cm³/10 min.

ISO1133 Molding shrinkage, Test : 0.8%

box 1.5mm Moisture absorption, : 2.6 – 3.2%

equilibrium-23°C/50% r.h. ISO62

Thermal properties

Deflection temperature 1.8MPa, ISO75-2 : 800 °C

Deflection temperature 0.45 MPa, ISO75-2 : 1600 °C

RTI electrical (thickness 1.5mm), UL746B : 1050 °C

Flammability

UL94 rating : V-0 (>=0.4)

Hot wire ignition, ASTM D 3874- : 2 (>=1.5)

88 High current arc ignition, : 0 (>=0.4)

UL746A, Fire/ignition performance- : 1.5 mm

(UL94+HAI+HWI), UL746C

GWFI, IEC60695-2-12 : 1400 °F

GWIT, IEC60695-2-13 : 1350 °F

Limiting Oxygen index LOI ISO4589-2 : > 35 %

Spec. optical density of smoke Ds,- : 60

25kW/m², EN ISO5659-2

Conventional index of toxicity : 1

CIT, - 25kW/m², EN ISO5659-2

Electrical properties

Dielectric constant at 1MHz, IEC60250 : 3.6/6

Dissipation factor at 1MHz, IEC60250 : 200/3000

Volume resistivity, IEC60093 : 1E13/1E9 Ω*m

Surface resistivity, IEC60093 : * / 1E10 Ω

CTI, solution A, IEC60112 : 600

Mechanical properties

Tensile modulus, ISO527-2 : 3500/1500 MPa

Yield stress, ISO527-2, : 75/45 MPa

Yield strain, ISO527-2, : 4/20 %

Strain at break, ISO527-2 : 6/250 %

Charpy V-notch impact strength,-ISO179/1eU : 80/N kJ/m²

Technical specification of Ball Enclosure

Durometer Range A : 25 -85

Tensile, Max. psi (Mpa) : 1300 lbf (10.5kN)

Elongation, max % : 800

Specific Gravity : 1.1

Continuous Temp Max : 800 °C

Compression set : Excellent

Environmental and Immersion Properties

Electrical Resistivity : Excellent*

Flame Resistance : Good*

Impact resistance : Good*

Tear Resistance : Fair

Continuous Temp Max : 1472 °F

Intermittent Temp Max : 1122 °F

Weather change tolerance : Excellent*

Oxidation Resistance : Excellent*

Ozone Resistance : C

300°F Steam Resist. : Good*

Temperature and Environment stress -

Screening tests : Good*

Salt water dipping test : Good*

UV test : Good*

Vibration Endurance test : Excellent*

Impulse Current Test (40KA-240KA) : Good*

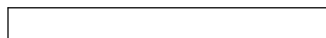
(Equipment are tested only on one piece in a lot of 100 pieces*)



Stamp & Signature

Kent
Head, Quality Control

Quality Check Result: PASSED





FORM NO : NTH/CHN/F5

347218

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

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

परीक्षण प्रमाण पत्र नं
Test Certificate No
NTH(SR)/EL(C)/2014/00176A

जारी होने की तिथि
Date of Issue
23/04/2014

कोड नं
Code No
1396938243840

पृष्ठ
Page
1

पृष्ठों की संख्या
No of Pages
2

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"

नमूना का विशिष्टि (यदि हों)
Product Specification (if any)

Electrical Resistivity test as per customer's specification

नमूना 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 To: 23/04/2014

व्यावहृत प्रणाली का पहचान
Method(s) used for Test

Electrical Resistivity test as per customer's specification

नमूना प्रक्रिया जहाँ प्रासंगिक हों
Sampling Procedure where relevant

NA

Tested By

N. Joseph Kalaiselvan
Natarajan Joseph kalaiselvan

SO Electrical

Checked By

K. Jeyaraj
K. Jeyaraj

SO Electrical

Approved By

S.B. Nanda Kumar
S.B. Nanda Kumar

Scientist-SC(Electrical)

**ARBRO™**PHARMACEUTICALS LIMITED
(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

P



Sample : **EARTHING BACKFILL COMPOUND**

Supplied By : N.S.

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

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

Batch No. Mfg. Date Expiry Date Batch Size

N.S. N.S. N.S. N.S.

Report No. : NR-11060906

Received On : 09/06/2011

Mfg.Lic.No. : N.S.

Ref. No. : N.S.

Sample Qty

100GM.

RESULTS OF ANALYSIS

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

Description :- Black powder.

<Sl.No.>	<Parameters>	<Results>	<Limit (MAX)>
B - TOXIC METALS		:	
1.	Mercury(as Hg)	:- 0.251ppm	1000.0ppm
2.	Lead(as Pb)	:- 8.225ppm	1000.0ppm
3.	Cadmium(as Cd)	:- 0.128ppm	100.0ppm
4.	Hexa-Chromium(as Cr)	:- Less than 1.0ppm	1000.0ppm

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

Page 1 of 1

Date : Monday, June 13, 2011

Person In Charge



CPRI

CENTRAL POWER RESEARCH INSTITUTE
(Member of STL)

Sheet 1 of 4

TEST REPORT

Test Report Number	SC11376A	Dated: 29 th August, 2011
Name & Address of the Customer	M/s. Teksai Power Secure Solution Pvt. Ltd., 3/860, Blue Star Industrial Compound, Pudussery, Kanjikodu, Palaghat, Kerala - 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	GI Earthing Electrode	
Condition of the sample on Receipt	New	
Type	---	
Designation	Teksai	
Serial Number(s)	---	
Number of samples tested	One	
Date (s) of test (s)	10 th August, 2011	
CPRI sample code no(s)	SC11S1323	
Particulars of tests conducted	Short-Time current	
Test in accordance with	Customer's instruction	
Standard / specification	Not applicable	
Sampling plan	20 kA rms for 1.0 s	
Customer's requirement	---	
Deviations if any	---	
Name of the witnessing persons		
Customer's representative	Mr. Praveen.P.V	
Other than customer's representative	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. Maheswara Rao)
Test Engineer




(Swaraj Kumar Das)
Joint Director

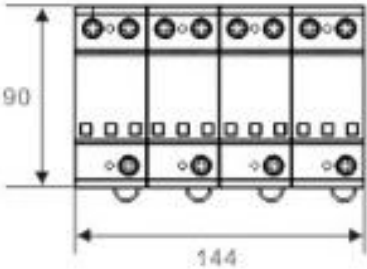
AUTHORISED SIGNATORIES

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
Protection model	L1/L2/L3-N,N-PE
Mechanical characteristics	
Dimension	90 (H)×144 (W)×68(L)mm
Weight per unit	1200g
Mounting	35mm DIN rail
Connecting diameter	≥10mm ²
IP code	IP20
Working conditions	Temperature: -40 to 80℃ , Relative humidity: ≤95%
Approval	FCC, CE, ROHS



PHOENIX CONTACT GERMANY

CTRL 1.5 Surge Arrester - Flashtab FLT 35 CTRL 1.5



Features:-

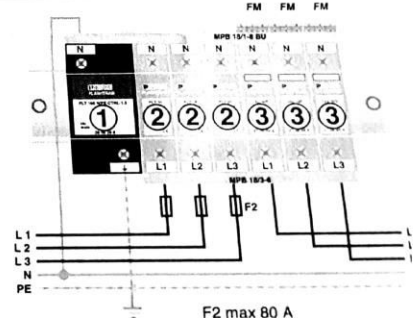
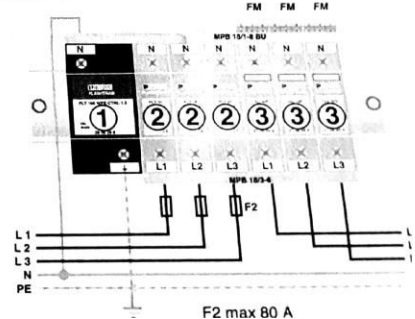
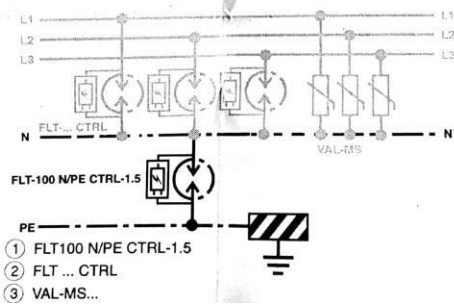
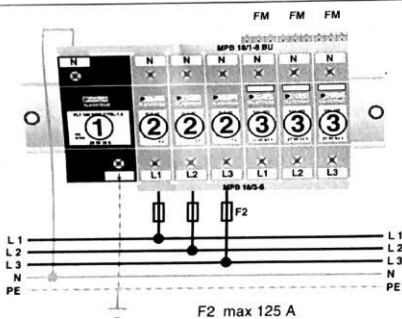
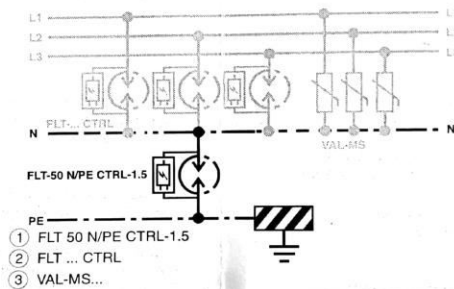
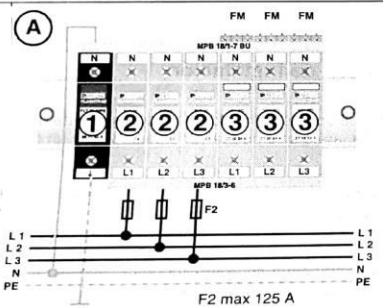
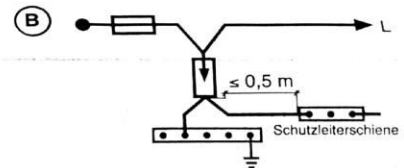
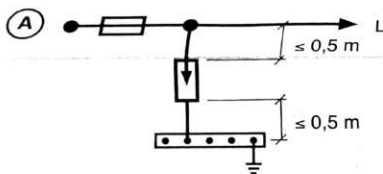
- Lighting current arrester with encapsulated N-PE spark gap and ignition electronics
- 2 Channel Protection level 1.5 KV
- Housing width 40 mm (3 Div)

Specification:-

Un	230 V
Uc	440 V, 260 V
Up	≤1.5 kV
Imp	100 kA
T°C	-40...+85

TN / TT 3+1

DIN V VDE 0100-534:1999-04; IEC 60364-5-534



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
POWERTECH

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

— **EnBW**

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**

e-on
Kernkraft

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

RWE
The energy to lead

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.

Vattenfall Europe
Nuclear Energy


VATTENFALL

Hanover, April 29th, 2016

i.v. J. G. J.

E.ON Kernkraft GmbH

i.v. Bliedau

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

This document is a translation. The definitive version is the original German accreditation certificate.

See notes overleaf.



C E R T I F I C A T E

awarded to

Phoenix Contact GmbH & Co.KG
Flachsmarktstr. 8
32825, Blomberg
Germany

DQS GmbH

confirms, as an IRIS CertificationTM approved certification body, that the Management System of the above organization has been assessed and found to be in accordance with the

IRIS CertificationTM rules:2017
and based on
ISO/TS 22163:2017

for the activities of Design and Development and Manufacturing
for the scopes of certification: 12 (Electrical wiring), 19 (Single railway components)
electromechanical and electrical connecting elements, plug connectors, surge voltage protection, cable assembly, tools and components for electrical engineering

Certificate valid from: 04/03/2018

Certificate valid until: 03/03/2021*

Current date: 06/03/2018
Certificate-Register-No: 239330

* Providing that the subsequent surveillance audits are successful before the validity date of the previous audit.

Certification body address: August-Schanz-Straße 21, 60433 Frankfurt am Main, Germany



Enclosure 1 of Certificate No.: 239330

Phoenix Contact GmbH & Co.KG
Flachsmarktstr. 8
32825, Blomberg
Germany

The location is supported by the following remote locations:

Address	Scope/Process
Phoenix Contact GmbH & Co. KG Bahnhofstr. 9 32816 Schieder-Schwalenberg, Germany	Logistics, Professional Education

Current date: 06/03/2018
Certificate-Register-No: 239330

* Providing that the subsequent surveillance audits are successful before the validity date of the previous audit.

Certification body address: August-Schanz-Straße 21, 60433 Frankfurt am Main, Germany