

THE KENYA POWER AND LIGHTING CO. LTD.**SPECIFICATION
for
33KV ISOLATING LINK**

REVISION RECORD

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FORE WORD

This standard specification has been prepared by the Research and Development Department of the Planning, Research and Performance Monitoring Division, KPLC and lays down specification for 33kV isolating links.

This specification is intended for procurement of materials and does not include provision of contract.

This specification is based on IEC 129 (1975). It is subject to revision as and when required.

This specification supersedes all specifications for 33 kV Isolating Links Published before the revision date.

INTRODUCTION

This specification was prepared to establish and promote uniform requirements for 33kV isolating links. The specification stipulates the minimum requirements for equipment acceptable for evaluation

SPECIFICATION FOR 33KV ISOLATING LINK

1. SCOPE

This specification is for 33 kV Isolating Link for use on line disconnection, isolation of substation apparatus and sectionalising purposes.

2. REFERENCES

The following documents were referred to during the preparation of this specification, and may be referred to in case of conflict, the provision of this specification shall take precedence.

Unless otherwise specified, the latest revision, edition and amendments shall apply

IEC 129: Alternating current disconnectors (isolators) and earthing switches.

BS 729 Hot dip galvanised coating on iron and steel articles.

3. TERMS AND DEFINITIONS

For the purpose of this specification, the definitions in IEC 129.

4. REQUIREMENTS

4.1. SERVICE CONDITIONS

The Isolating Link shall be suitable for continuous outdoor operation in tropical areas with the following atmospheric conditions.

Altitude:	From sea level up to 2200m above mean sea level.
Humidity:	High at the Coast, up to 90%, and lower inland, up to 50%.
Ambient temperature:	Average ambient of $\pm 30^{\circ}\text{C}$ with a minimum of -1°C and a maximum of $+40^{\circ}\text{C}$.
Pollution:	Heavy saline in Coastal Areas and generally clean air inland.

4.2. CONSTRUCTION

- 4.2.1. The isolating link shall be of the vertical opening, designed for single phase operation. It shall be easily removed and replaced by using a portable operating rod.
- 4.2.2. The isolating link shall incorporate porcelain insulators to suit voltage requirements and mounted on hot dipped galvanised steel under base suitable for vertical mounting.

Galvanising shall be as per the requirement of BS 729.

- 4.2.3. The isolating link shall be arranged so that each unit is mounted independently either on an angle bracket or channel base mounting.
- 4.2.4. The isolating link shall be designed such that in fully open position, it shall provide adequate electrical isolation between the contacts.
- 4.2.5. All current carrying parts be made of electrolytic high conductivity material.
- 4.2.6. The link shall be removable from the mounting by use of operating rod.

4.3. RATING

The ratings of the isolating link shall be as under.

Rated voltage	36 kV
Rated lightning impulse withstand voltage	170 kV
Rated frequency	50 Hz
Rated normal current	400 Amps
Rated short time withstand current for 3 seconds	25 kA
Minimum creepage distance of Insulators	825 mm

5. TESTS

- 5.1 The manufacturer shall be responsible for performing or for having performed all the required tests specified in this specification. Tenderers shall confirm the manufacturer's capabilities in this regard when submitting tenders. Any limitations shall be clearly specified.
- 5.2 The isolating link shall be inspected and routine tested in accordance with the requirement of IEC 129.
- 5.3 Certified type test certificates issued by the National Testing Authority confirming compliance of the isolators on offer with the specifications shall be submitted. Sample copies for similar material shall be presented with the tender for the purpose of technical evaluation.

Test reports shall be completed and made available for approval before shipment of the materials.

All materials shall be subjected to inspection by KPLC Engineers or her representative at place of manufacture. All routine tests shall be carried out on a sample picked by the Engineers to confirm earlier results.

6. NOTICES

- 6.1. Draft design and construction drawings shall be submitted to KPLC before the manufacturing of isolating links commence. KPLC undertake to submit their comments or approval for the drawings within three weeks of receiving the draft copies.
- 6.2. Tenders with substantial deviation but offering superior materials shall be accompanied by detailed descriptive manuals, drawings and certified test reports for the purposed of technical evaluation.
- 6.3. A detailed list & contact address of previous customers shall be submitted with the tender. List of workshop tools and equipment shall also be appended.

7. MARKING AND INFORMATION

- 7.1. Technical details characteristics for the solid link being offered shall be submitted for evaluation.
- 7.2. The following information shall be marked indelibly and legibly on the solid link:
 - i) Manufacturers name or trademark
 - ii) Manufacturers type designation
 - iii) Rated current
 - iv) Rated voltage