



Kenya Power

ASEA TAP CHANGER SPARES- SPECIFICATION

A Document of the Kenya Power & Lighting Co. Ltd
January 2024



**TITLE: ASEA TAP CHANGER
SPARES**

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0.1 CIRCULATION LIST

COPY NO.	COPY HOLDER
1	In charge, E/plant
2	

0.2 AMENDMENT RECORD

Rev No.	Date (YYYY-MM-DD)	Description of Change	Prepared by (Name & Signature)	Approved by (Name & Signature)
0	2024-1-3	New issue	Daniel Achendi 	George Welimo

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FOREWORD

This specification have been prepared by the E/plant workshop of The Kenya Power and Lighting Company Limited (KPLC) and it lays down requirements for specifications of ASEA tap changer spares

ASEA tap changer spares will be used to replace faulty ASEA tap changer parts in power transformers that have ASEA onload tap changers.

This specification was prepared to establish uniform requirements for specifications of ASEA tap changer spares for used at Kenya Power and Lighting Company Ltd.

There are no other specifications in this series.

This specification stipulates the minimum requirements for specifications of ASEA tap changer spares acceptable for use in the company and it shall be the responsibility of the supplier to ensure that the offered spares is of the highest quality and guarantees excellent service to KPLC, good workmanship and good engineering practice.

Users of Kenya Power specifications are responsible for their correct interpretation and application.

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1. SCOPE

1.1. This specification is for ASEA tap changer spares

2. NORMATIVE REFERENCES

The following standards contain provision, which, through reference in this text, constitute provisions of this specification. For dated editions, the cited edition will apply; for undated editions, the latest edition of the referenced document shall apply.

IEC/ISO 17025

IEC: 60214

3. DEFINITIONS AND ABBREVIATIONS

For the purpose of this specification, the definitions and abbreviations given in the reference standards shall apply together with the following abbreviations.

3.1. ABBREVIATIONS

- A-Amp
- AC-Alternating Current
- KPLC- Kenya Power and Lighting Company Limited
- ISO – International Organization for Standardization.
- IEC- International electrotechnical commission
- Kg –Kilogram
- KV - Kilovolt
- LV – Low Voltage
- EN – European Standard
- mA-milliAmp
- RMS-Root mean Square
- V-Volt

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4. REQUIREMENTS

4.1. GENERAL REQUIREMENT

4.1.1. Transformer Technical details

- 4.1.1.1. Transformer MVA rating:23MVA
- 4.1.1.2. Transformer ratio:132/33kV
- 4.1.1.3. Vector group-Dyn1/Dyn11
- 4.1.1.4. Tap number 1 have the highest voltage rating
- 4.1.1.5. Voltage tapping range:

Tap	HV voltage
1	142560
2	140800
3	139040
4	137280
5	135520
6	133760
7	132000
8	130416
9	128832
10	127248
11	125664
12	124080
13	122496
14	120912
15	119328
16	117744
17	116160

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4.1.1.6. Location of the tapping is 33kV winding

4.1.1.7. Tapping method shall be onload tap Changer

4.2. TECHNICAL TAP CHANGER DETAILS

4.2.1. Tap changer make shall be ASEA or equivalent

4.2.2. Tap changer type shall be type UZERN 200/500

4.2.3. Motor Voltage 415V,50Hz

4.2.4. Control voltage 110V, 50Hz

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4.3. DOCUMENTATION AND SUPPORT

4.3.1. Warranty

4.3.1.1. The ASEA tap changer spares shall be backed by a minimum of 12-months factory warranty after delivery.

4.3.2. Documentation

4.3.2.1. The Bidder shall submit a clause by clause statement of compliance with the specifications together with copies of the manufacturer's catalogues, brochures, technical data and proven test reports clearly marked to support each clause, all in English for evaluation. The manufacturer's type reference/designation of the item offered shall be indicated

4.3.3. Drawings

- 4.3.3.1. Electrical controls drawings
- 4.3.3.2. power schematic drawings
- 4.3.3.3. Detailed OLTC drawings

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5. TESTS REQUIREMENTS

5.1. The ASEA tap changer spares shall be inspected and tested in accordance with standards and this specification. It shall be the responsibility of the manufacturer to perform or to have performed all the tests specified. Tenderers shall confirm the manufacturer's capabilities in this regard when submitting tenders. Any limitations shall be clearly specified.

5.2. Copies of previous Test Reports issued by own or a third party testing laboratory that is accredited to ISO/IEC 17025:2005 or 17025:2017 confirming compliance of the ASEA tap changer spares offered shall be submitted with the offer for evaluation (all in English Language). A copy of the **accreditation certificate** and the **scope of accreditation** of the testing laboratory shall also be submitted. Any translations of certificates or reports into English language shall be signed and stamped by the Testing Authority that carried out tests. Copies of test reports for the ASEA tap changer spares offered to be submitted for tender evaluation shall include but not limited to the following test

- a) Lightning and switching Impulse Voltage
- b) Short Circuit current
- c) Power Frequency voltage withstand test
- d) Temperature Rise
- e) Breaking Capacity test
- f) Transition impedance test

6. INSPECTION REQUIREMENTS

6.1 On receipt of the ASEA tap changer spares, Kenya Power will inspect them in order to verify compliance with the specification. The supplier shall replace without charge to Kenya Power, any ordered ASEA tap changer spares, which upon examination or use fail to meet any or all of the requirements in the specification.

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7. MARKING AND PACKING

7.1 MARKING

The following information shall be marked legibly and in a permanent manner on the ASEA Tap changer:

- a) The manufacturer's name or trade mark;
- b) The type reference number / model number;
- c) Standard of manufacture and tests;
- d) The serial number;
- e) The instructions for handling and use (in the English Language).

8. PACKING

8.1 ASEA tap changer spares shall be packaged to protect it from damage and entry of moisture during transportation, handling and storage.

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A: GUARANTEED TECHNICAL PARTICULARS (Normative)

To be filled and signed by the Manufacturer and submitted together with relevant copies of the Manufacturer's catalogues, brochures, drawings, technical data, and copies of complete type test certificates and test reports for tender evaluation, all in English Language)

Tender No.

Bidder's name and Address.....

Clause number	REQUIREMENT	Bidder's offer
		UZERN 200/500
Manufacturer's Name and address		specify
Country of origin		specify
4.1.	GENERAL REQUIREMENT	
4.1.1.	Transformer Technical details	
4.1.1.1.	Transformer MVA rating:	specify
4.1.1.2.	Transformer ratio:	specify
4.1.1.3.	Vector group	specify
4.1.1.4.	Tap with the highest voltage rating	specify
4.1.1.5.	Percentage tapping range:	specify
4.1.1.6.	Location of the tapping	specify
4.1.1.7.	Tapping method	specify
4.2.	TECHNICAL TAP CHANGER DETAILS	
4.2.1.	Tap changer make	specify
4.2.2.	Tap changer parameter or Model	state
4.2.3.	Motor Voltage	specify
4.2.4.	Control voltage	specify
4.2.5.	Step voltage	specify
4.3.	DOCUMENTATION AND SUPPORT	
4.3.1.	Warranty	
4.3.1.1.	Factory warranty after delivery.	State
4.3.2.	Documentation	

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4.3.2.1.	The Bidder shall submit a clause by clause statement of compliance with the specifications together with copies of the manufacturer's catalogues, brochures, technical data and proven test reports clearly marked to support each clause, all in English for evaluation. The manufacturer's type reference/designation of the item offered shall be indicated	Submit
4.3.3.	Drawings	
4.3.3.1.	Electrical controls drawings	Submit
4.3.3.2.	power schematic drawings	Submit
4.3.3.3.	Detailed OLTC drawings	Submit
5	TESTS REQUIREMENTS	
5.1.	Manufacturer tests capabilities	state
5.2.	Copies of previous Test Reports issued by own or a third party testing laboratory that is accredited to ISO/IEC 17025:2005 or 17025:2017 confirming compliance of the ASEA tap changer spares offered shall be submitted with the offer for evaluation (all in English Language). A copy of the accreditation certificate of the testing laboratory shall also be submitted. Copies of test reports for the ASEA tap changer spares offered to be submitted for tender evaluation shall include but not limited to the following test a) Lightning and switching Impulse Voltage b) Short Circuit current c) Power Frequency voltage withstand test d) Temperature Rise e) Breaking Capacity test f) Transition impedance test	Submit
6	INSPECTION REQUIREMENTS	
6.1	On receipt of the ASEA tap changer spares, Kenya Power will inspect them in order to verify compliance with the specification. The supplier shall replace without charge to Kenya Power, any ordered ASEA tap changer spares, which upon examination or use fail to meet any or all of the requirements in the specification.	State

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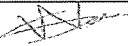


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7	MARKING AND PACKING	
7.1	MARKING	
	The following information shall be marked legibly and in a permanent manner on the ASEA Tap changer: a) The manufacturer's name or trade mark; b) The type reference number / model number; c) Standard of manufacture and tests; d) The serial number; e) The instructions for handling and use (in the English Language).	State
8	PACKING	
8.1	Packaging to protect it from damage and entry of moisture during transportation, handling and storage.	State

.....
Manufacturer's Name, Signature, Stamp and Date

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