Eskom	Standard	Technology

Title: **STANDARD FOR THE CONTROL AND APPLICATION OF LOCKS AND ISSUE OF MASTER KEYS**

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Date: 17/03/2020

PCM Reference: **Develop Operating Procedures**

SCOT Study Committee Number/Name: **Wires Operating**

Content

1. Introduction

The document was compiled to comply with the OHSAct and NRS 082 requirements and to ensure that control, application and issuing of master locks and master keys to personnel in Wires (Transmission and Distribution Business) is standardised.

The document seeks to ensure that the network is secured with approved locks and unauthorised access to network is restricted / controlled and only authorised personnel is issued with keys to access the area they are authorised for.

2. Supporting clauses

2.1 Scope

2.1.1 Purpose

The purpose of this standard is to set out in detail the application of the padlocking system and to set out the method of issue and control of the various master keys in order to safeguard access to electrical apparatus and to further the standardization process within the Wires.

2.1.2 Applicability

This procedure is applicable to Eskom Wires and the contractors employed by the division. In the Environment where the standard has not been the requirement in the past an implementation period of five years shall be allowed to phase the documents requirements in.

2.2 Normative/informative references

Parties using this document shall apply the most recent edition of the documents listed in the following paragraphs.

2.2.1 Normative

[1] DIN 17224, 1982 Stainless Steel Wire And Strip For Springs: Technical Delivery Conditions.

[2] OHS Act No. 85, Occupational Health And Safety Act And Regulations.

[3] NRS 000, Rationalized User Definitions For Use In The Electricity Supply Industry.

[4] SANS 1533, Padlocks.

[5] 240-114967625, Operating Regulations For High Voltage Systems.

[6] 240-70413865, Authorisation Standard In Terms Of Regulations For High Voltage Systems and

[7] DST_240-70500896, Standard For Master Locks And Master Keys For Electrical And Related Equipment.

2.2.2 Informative

[8] DST_240-70413865, Authorisation Standard In Terms Of Regulations For High Voltage Systems;

[9] DST_240-70413713, Assessment Procedure for authorization; and

[10] DST_240-70413681, Portfolio of evidence for authorization.

2.3 Definitions

2.3.1 General

All definitions listed in recognised industry glossaries such as NRS 000, ORHVS, IEV and SANS1533 are applicable.

2.3.2 Disclosure classification

Controlled disclosure: controlled disclosure to external parties (either enforced by law, or discretionary).

2.4 Abbreviations

None

2.5 Roles and responsibilities

It is the responsibility of the Designated Person or his delegate to ensure that the control, the application of master locks on the system and the issuing of master keys to personnel in Wires is carried out in accordance with this standard.

2.6 Process for monitoring

Document number	Document title
-	Process Control Manual (PCM) for **Develop Operating Procedures**.
32-644	Eskom documentation management standard

2.7 Related / supporting documents

Document number	Document title
240-70500880	Standard For The Control And Application Of Locks And Issue Of Master keys Annex A: General master keys register
240-70500896	Standard For Master Locks And Master Keys For Electrical And Related Equipment.

3. Requirements

3.1 Types of locks and their application

There shall be six types of locks:

a) General locks;

b) Restricted Area Locks;

c) Prohibited area locks;

d) Operating locks;

e) Live chamber locks; and

f) Supervisor locks.

Note: The Supervisor lock replaces the old non-standard lock.

3.1.1 General locks (White Lock)

The general locks shall be used to lock the following:

a) Power line servitude gates.

b) Substation perimeter fence gates (does this include access gates to electric fences).

3.1.2 Restricted Area Locks (Orange Lock)

The LV locks shall be used to lock the following:

a) Metering kiosks.

b) LV side of mini substations.

c) Pillar Boxes.

d) Any place where live exposed L.V Equipment exist.

e) Substation building doors / Control room/Battery room/Carrier rooms.

3.1.3 Prohibited area locks (Green Lock)

The prohibited area locks shall be used to lock the following:

a) Switch-house doors / GIS.

b) Substation yards.

Note 1: Control rooms housing metal clad switchgear is regarded as prohibited area unless all switchgears are locked with operating locks which will mean it is now be restricted area (Orange lock).

Note 2: This is recommended due to the fact that contractors are not returning keys after completion of contract.

Note 3: Contractor (Authorised as per ORHVS) access to prohibited areas: A dual locking system shall be adopted, this comprises of a barrel, Green lock and a unique lock (Contractor).

3.1.4 Operating locks (Yellow)

The operating locks shall be used to lock the following:

a) Line isolators and air-break switches;

b) All isolators in substation yards;

c) JB boxes and Marshalling kiosks in substation yards where operating can take place from e.g. LOR (Local or Remote) switches where used by more than one utility (Dual locking System);

d) All earth switches in substation yards;

e) HV side of mini-substations;

f) Earthing equipment (Including earthing gear carry bags / storage boxes)

g) Switchgear Operating Mechanism;

h) Off Circuit Tapchangers and

i) RMU switches.

3.1.5 Live chamber locks (Black Lock)

These locks shall be used for restricting access to any live chamber as defined in the “Operating regulations for high voltage systems, 240-114967625” including Electric fence access gates.

3.1.6 Supervisor locks (Blue)

These locks shall be utilized to control the access to power system apparatus for a specific condition or reason or apparatus that is no longer a part of the network or installation reaches the stage at which the making of connections between the apparatus and the power system will enable some part of apparatus to be made alive.

3.2 Allocation of Master Keys

Master keys may only be issued to persons in accordance to the table below:

Type of Lock	Color	Authorisation
General Lock	White	No Authorisation Required
Restricted Area Lock	Orange	LV Authorisation as per ORLVS
Prohibited Area Lock	Green	Authorisation as per ORHVS
Operating Lock	Yellow	Authorisation as per ORHVS
Live Chamber Lock	Black	Authorisation as per ORHVS
SUPERVISOR Lock	Blue	Authorisation as per ORHVS

3.3 Storage of master locks and master keys

3.3.1 Master locks

a) All master locks shall be available in stores as a stock item.

3.3.2 Master keys

a) Designated Person or his delegate shall be responsible for the issuing of keys in accordance with this standard and shall keep master keys in their custody.

3.4 Control and issue of master keys

a) All master keys shall be numbered with a unique number in accordance with 240-70500896.

b) A control register shall be maintained by the head of department (designated person's delegate) for master keys in the area of control and the following shall be detailed:

- type(s) of master keys;
- master key number;
- name of recipient;
- recipient's unique number;
- workplace of recipient;
- date of issue;
- signature of recipient; and
- date and signature/return of master keys.

c) Where master keys are to be issued to an Eskom contractor a written receipt (stating the number of each key) shall be obtained from the contractor. On return of the master keys the original copy of the receipt shall be returned to the contractor.

d) Master keys shall be delivered by hand.

e) The head of department shall ensure that all keys are withdrawn if authorization has been cancelled, suspended or expired.

f) Authorizations shall be checked to ensure correct keys are issued.

3.5 Loss of master keys

a) The loss of Master keys by any employee or contractor shall immediately be reported in writing to the Designated Person or his delegate and the following minimum information shall be captured in the key register:

- The name of the person who lost/damaged a master key;
- The unique number of person that lost/damaged a master key
- Type, color or number of a master key lost;
- The date on which the key got lost/damaged;
- A signed sworn statement (description of how the master key got lost).

3.6 Duplication of Master Keys And Locks

Under no circumstances shall master keys and locks be duplicated without authorization

4. Authorization

Name and surname	Designation
Amelia Mtshali	Senior Manager (DB & OUS)
Andre Bekker	Manager (AM & O Eng.)
Dumisani Mtolo	SCOT/SC Chairperson
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This document has been seen and accepted by:

5. Revisions

This revision of Task Manual DMN_ 240-70500880 **supersedes all revisions of this document.**

Date	Rev	Compiler	Remarks
March 2020	3	David Ntombela	Changed the date on the front page of this document, reviewed normative references and added the acknowledgement section.
Sept 2014	2	David Ntombela	“In Environment where the standard has not been the requirement in the past an implementation period of five years shall be allowed to phase it in”
April 2014	1	David Ntombela	All documents are being re-registered and allocated a 240 number. DST_34-616 has changed to DMN_ 240-70500880. A New format has been implemented and the document was also formatted.
March 2012	1	David Ntombela	Reformatted the document Document number changed to DST 34-616

Date	Rev	Compiler	Remarks
Aug 2004	0	Ernest Mutloane	Reformatted the document Added Related documents Included the assessment form to the document Document reference number changed from SCS to DIS
Sept 2000		Colin Smith	Original issue as SCSASAAU1

6. Development team

The following people were involved in the development of this document:

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7. Acknowledgements

The Switchgear care group would like to thank the former WG members below for their contribution:

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Annex A – - General master keys register

(Normative)

Eskom	**FORM TITLE**	**GENERAL MASTER KEYS REGISTER**		
	FORM NUMBER	240-70500880	REV DATE	September 2019
	DOCUMENT TITLE	Standard For The Control And Application Of Locks And Issue Of Master keys		

General Master Keys register

Master key No:	Issued to	Unique No:	Work station	Date issued	Received by	Returned		Lost	
						Date	**Signature**	**Date**	**Signature**

I understand that these master keys are issued to me in accordance with section 4 of the “Operating regulations for high voltage system (240-114967625)”.