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**SANS 1524-8:2016**

Edition 1.1  
Amdt 1

# **SOUTH AFRICAN NATIONAL STANDARD**

## **Electricity payment systems**

### **Part 8: The management of secure modules**

**WARNING**

**This document references other documents normatively.**

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### Table of changes

Change No.	Date	Scope
Amdt 1	2016	Amended to change the designation "SANS 1524-8/NRS 009-8" to read "SANS 1524-8", and to delete the annex on example of a sample secure module coding request form.

## Foreword

This South African standard was approved by National Committee SABS/TC 062, *Electrical energy measurement and control*, in accordance with procedures of the SABS Standards Division, in compliance with annex 3 of the WTO/TBT agreement.

This document was approved for publication in March 2016.

This document supersedes SANS 1524-8:2012 (edition 1).

A vertical line in the margin shows where the text has been technically modified by amendment No. 1.

Reference is made in the definitions for "blank module" and "initialized module" to "relevant national electricity supplier". In South Africa this means Eskom.

SANS 1524 consists of the following parts, under the general title *Electricity payment systems*:

SANS 1524-1, *Electricity payment systems – Part 1: Payment meters*.

*Part 1-1: Mounting and terminal requirements for payment meters.*

*Part 1-2: Surge protective devices for the protection of payment meters.*

*Part 4: Payment electricity meter cards.*

*Part 6-10: Interface standards – Online vending server – Vending clients.*

*Part 8: The management of secure modules.*

*Part 9: Implementing electricity vending systems.*

Annex A is for information only.

**Compliance with a standard cannot confer immunity from legal obligations.**

## **Introduction**

An electricity payment system is intended to provide the electricity supply authority with a means of controlling the sale of electricity to its customers. The system will enable customers to purchase units of electricity from places and at times convenient to both the customer and the electricity supply authority. The system should provide for accounting, data collection and processing to aid administration of the system and it should provide safeguards against fraud.

The secure module can pose significant risk to the customer if the device is not properly managed and controlled. Essentially, the device could be used fraudulently to vend electricity leading to the loss of revenue streams to the user.

With the transmission of online vending systems, the use of secure modules will be limited to the server and therefore the risk that these devices pose, will be reduced. In addition, the number of modules required will be significantly reduced due to the processing capabilities of the server unit. The decommissioning of credit dispensing units (CDUs) will result in an excess of modules in the field. It is therefore critical that these be adequately managed.

This document proposes procedures that should be adopted by the customers of these secure modules to ensure that their risk will be minimized.

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## Electricity payment systems

### Part 8: The management of secure modules

#### 1 Scope

This part of SANS 1524 specifies the practices to be implemented by users of electricity payment systems for the management of secure modules.

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#### 2 Terms, definitions and abbreviations

For the purposes of this document, the following terms, definitions and abbreviations apply.

##### 2.1 Terms and definitions

**blank module**

new secure module that has not been registered at the relevant national electricity supplier's (see foreword) key management centre

NOTE A blank module is one that has not been loaded with master keys or vending keys.

**coded module**

secure module that has been initialized and loaded with the vending keys of specific supply group codes

NOTE A coded module is one that has been loaded both with master keys and vending keys.

**initialized module**

secure module that has been loaded with master keys, and registered at the relevant national electricity supplier's (see foreword) key management centre

NOTE An initialized module is one that has been loaded with master keys but not with vending keys.

**recycling**

process of re-using a previously coded secure module, involving recoding, under authorization, at the KMC

**secure module**

electronic hardware device that is used for the creation of encrypted credit tokens for use in payment meters

NOTE A secure module is most commonly used in credit dispensing units (CDUs) installed at vendor premises.