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Edition 2

SOUTH AFRICAN NATIONAL STANDARD

**The selection, handling and installation of
electric power cables of rating not exceeding
33 kV**

Part 1: Definitions and statutory requirements

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Table of changes

Change No.	Date	Scope

Acknowledgement

The SABS Standards Division wishes to acknowledge the valuable assistance received from the Association of Electric Cable Manufacturers of South Africa.

Foreword

This South African standard was prepared by National Committee SABS/TC 066, *Electric cables*, in accordance with procedures of the SABS Standards Division, in compliance with annex 3 of the WTO/TBT agreement.

This edition cancels and replaces the first edition (SABS 0198-1:1988)

A reference is made in 3.1 to “national regulations and statutory requirements” relating to the installation of electric cables. In South Africa the installation of electric cables might be affected by the provisions of one or more of the following Acts, or by the regulations or requirements promulgated in terms of these Acts:

- a) Electricity Act, 1987 (Act No. 41 of 1987);
- b) Fencing Act, 1963 (Act No. 31 of 1963);
- c) Forest Act, 1984 (Act No. 122 of 1984);
- d) Mine Health and Safety Act, 1996 (Act No. 29 of 1996);
- e) Mines and Works Act, 1956 (Act No. 27 of 1956);
- f) National Roads Act, 1971 (Act No. 54 of 1971);
- g) National Water Act, 1998 (Act No. 36 of 1998);
- h) Occupational Health and Safety Act, 1993 (Act No. 85 of 1993); and
- i) Post Office Act, 1958 (Act No. 44 of 1958).

In South Africa, SANS 97, SANS 1339 and the SANS 1507 series of standards have been declared compulsory (see 3.3) in terms of the Standards Act, 1993 (Act No. 29 of 1993) in the following two compulsory specifications:

Reaffirmed and reprinted in May 2015.
This document will be reviewed every five years
and be reaffirmed, amended, revised or withdrawn.

Foreword *(concluded)*

- *Compulsory specification for the safety of electric cables with extruded solid dielectric insulation for fixed installations (300/500 V to 1 900/3 300 V)*, as published by Government Notice No. R1165 (Government Gazette No. 25306) of 15 August 2003 (as amended from time to time) (VC 8075); and
- *Compulsory specification for the safety of medium-voltage electric cables*, as published by Government Notice No. R1164 (Government Gazette No. 25306) of 15 August 2003 (as amended from time to time) (VC 8077).

SANS 10198 consists of the following parts, under the general title *The selection, handling and installation of electric power cables of rating not exceeding 33 kV*:

Part 1: *Definitions and statutory requirements.*

Part 2: *Selection of cable type and methods of installation.*

Part 3: *Earthing systems – General provisions.*

Part 4: *Current ratings.*

Part 5: *Determination of thermal and electrical resistivity of soil.*

Part 6: *Transportation and storage.*

Part 7: *Safety precautions.*

Part 8: *Cable laying and installation.*

Part 9: *Jointing and termination of extruded solid dielectric-insulated cables up to 3,3 kV.*

Part 10: *Jointing and termination of paper-insulated cables.*

Part 11: *Jointing and termination of screened polymeric-insulated cables.*

Part 12: *Installation of earthing system.*

Part 13: *Testing, commissioning and fault location.*

Part 14: *Installation of aerial bundled conductor (ABC) cables.*

NOTE The first five parts deal with factors to be taken into account when an electrical distribution system is being designed. The last nine parts deal with the practical aspects of handling and installing cables.

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The selection, handling and installation of electric power cables of rating not exceeding 33 kV

Part 1:

Definitions and statutory requirements

1 Scope

This part of SANS 10198 covers definitions and statutory requirements pertaining to the installation of electric power cables, and the parties to be consulted regarding the laying of cables near roads, railways, pipelines, powerlines and other services.

2 Definitions

For the purposes of this part of SANS 10198, the following definitions apply.

2.1

cable

length of insulated conductor (or two or more insulated conductors assembled together) that might or might not be provided with an overall mechanical covering

2.2

circuit-breaker

mechanical switching device capable of making, carrying and breaking electric currents under normal circuit conditions, and also of making, carrying for a specified time and breaking currents under specified abnormal circuit conditions, such as those of short circuit

2.3

close overcurrent protection

<circuit> overcurrent protection that, when the current flowing is equal to 1,5 times the rated current of the circuit which it protects, will operate within 4 h

2.4

earthed

so connected to the general mass of earth as to ensure an immediate discharge of electrical energy at all times and without danger

2.5

earth fault

insulation failure between a conductor and earth