

NAMS 780:2023
FIRST Edition
SANS 780:2021

NAMIBIAN STANDARD

Distribution Transformers

This Namibian standard is the identical implementation of SANS 780:2021 and is adopted with the permission of the South African Bureau of Standards

Published by the Namibian Standards Institution (NSI)
Established by section 2 of the Standards Act, 2005 (Act No 18 of 2005)
37 Feld Street, Windhoek, Namibia
P.O. Box 26364 Windhoek, Namibia
Tel +264-61-386400, Fax +264-61-386454, Website: www.nsi.com.na
© NSI



NAMS 780:2023

First Edition

SANS 780:2021

National foreword

This Namibian Standard (DNAMS) is identical to SANS 780:2022-Distribution Transformers, and was approved for adoptions by the Namibian Standards Institution CEO.

Namibian standards are developed based on NSI Standards development procedures in accordance with the rules given in the International Organization for Standardization/ International Electrotechnical Commission (ISO/IEC) Directives 1, ISO/IEC Guide 21-1 Adoption of international standards as regional or national standards and WTO – TBT World Trade Organization code of Good Practice (which is published as Annex 3 in the TBT Agreement)

The NSI Technical Committee responsible for the standard is NSI TC 4/SC 1, Electrotechnical Committee-Distribution Transformers.

This SANS 780:2021 NAMS 780: 2023 was published on 19 January 2023.

SOUTH AFRICAN NATIONAL STANDARD

Distribution transformers

WARNING
This document references other
documents normatively.

This page has been left blank intentionally



COPYRIGHT PROTECTED DOCUMENT

© SABS

In terms of the Standards Act 8 of 2008, the copyright in all South African National Standards or any other publications published by the SABS Standards Division, vests in the SABS. Any use of South African National Standards is limited to use specifically prescribed by the SABS. In the case of a South African National Standard based on an international standard, ownership of the copyright vests in the organization from which the SABS adopted the standard, whether it be under licence or membership agreement. The SABS is obliged to protect such copyright and is authorized to make the relevant international organization aware of any misuse thereof. Unless exemption has been granted, no extract or full text of any South African National Standard may be copied, reproduced, stored in a retrieval system or transmitted in any form or by any means without prior written permission from the SABS Standards Division. This does not preclude the free use, in the course of implementing the standard, of necessary details such as symbols, and size, type or grade designations. If these details are to be used for any purpose other than implementation, prior written permission must be obtained.

Details, advice and limitations of use can be obtained from the Manager: Standards Sales and Information Services. Tel: +27 (0) 12 428 6883 email: sales@sabs.co.za

SABS – Standards Division

The objective of the SABS Standards Division is to develop, promote and maintain South African National Standards. This objective is incorporated in the Standards Act, 2008 (Act No. 8 of 2008).

The SABS continuously strives to improve the quality of its products and services and would therefore be grateful if anyone finding an inaccuracy or ambiguity while using this standard would inform the secretary of the technical committee responsible, the identity of which can be found in the foreword.

Buying Standards

Contact the Sales Office for South African and international standards, which are available in both electronic and hard copy format. Tel: +27 (0) 12 428 6883 email: sales@sabs.co.za

South African National Standards are also available online from the SABS Webstore www.store.sabs.co.za

Information on Standards

SABS Customer Services provide comprehensive standards-related information on national, regional and international standards. Tel: +27 (0) 12 428 7911 / 0861 27 7227 email: info@sabs.co.za

SANS 780:2021
Edition 5.1

Table of changes

Change No.	Date	Scope
Amdt 1	2021	Amended to update the requirements for short-circuit impedance, load loss and temperature rise, and for transformers that have a tapped winding, miscellaneous requirements, the clause on tests, general requirements for routine, type and special tests, and update the annex on guide to purchasers on preparing an enquiry.

Foreword

This South African standard was prepared by National Committee SABS/TC 067/SC 08, *Electricity distribution systems and components – Distribution and power transformers*, in accordance with procedures of the South African Bureau of Standards, in compliance with annex 3 of the WTO/TBT agreement.

This document was approved for publication in May 2021.

This document supersedes SANS 780:2019 (edition 5).

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

Annexes A, B and C form an integral part of this document. Annex D is for information only.

Compliance with this document cannot confer immunity from legal obligations.

Contents

	Page
Foreword	
1 Scope	3
2 Normative references	4
3 Definitions and abbreviations	6
4 Rating	6
5 Requirements for transformers that have a tapped winding.....	7
6 Connection and phase displacement symbols for three-phase transformers.....	9
7 Rating plates	9
8 Miscellaneous requirements.....	9
9 Tolerances	23
10 Tests	23
11 Marking	27
Tables 1-10.....	28-34
Figures 1-6	34-38
Annex A (normative) Guide to purchasers on preparing an enquiry	39
Annex B (normative) Recommendations with regard to responsibility for testing	45
Annex C (normative) Non-preferred fittings.....	46
Annex D (informative) Example of a routine test report.....	50
Bibliography	51