

ISBN 978-0-626-33228-0

**SANS 959-3:2017**

Edition 1.1  
Amdt 1

# **SOUTH AFRICAN NATIONAL STANDARD**

## **Photovoltaic systems for use in individual homes, schools and clinics**

### **Part 3: Standardized requirements applicable to the installation and maintenance of off-grid systems in individual homes, schools and clinics**

**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](mailto: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](mailto:sales@sabs.co.za)

South African National Standards are also available online from the SABS Webstore [www.store.sabs.co.za](http://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](mailto:info@sabs.co.za)

### Table of changes

Change No.	Date	Scope
Amdt 1	2017	Amended to change the designation "SANS 959-3/NRS 052-3" to read "SANS 959-3", and to update referenced standards.

## Foreword

This South African standard was prepared by National Committee SABS/TC 069, *Power electronics and alternative energy conversion*, in accordance with procedures of the SABS, in compliance with annex 3 of the WTO/TBT agreement.

This document was approved for publication in June 2017.

This document supersedes SANS 959-3:2012 (edition 1).

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

Reference is made in 5.2.1(b) to "legislation". In South Africa this means the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993).

Reference is made in the note to the introductory paragraph in clause 2, in 3.1, and in 5.2.1 to the "Electrical Installation Regulations", and in 3.2, 5.2.1(e) and tables 1 and 2 to the "EIR". In South Africa this means the Electrical Installation Regulations (2009) of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993).

Annexes A, B, C, D E, F and G are for information only.

### **Compliance with this document cannot confer immunity from legal obligations.**

SANS 959 consists of the following parts and sections, under the general title *Photovoltaic systems for use in individual homes, schools and clinics*:

*Part 1: Standardized requirements applicable to off-grid individual homes, schools and clinics.*

*Part 2-1: Test procedures for main components – Photovoltaic modules.*

*Part 2-2: Test procedures for main components – Batteries.*

*Part 2-3: Test procedures for main components – Regulators, charge controllers and maximum power point trackers (MPPTs).*

*Part 2-4: Test procedures for main components – Inverters.*

*Part 2-5: Test procedures for main components – Luminaires.*

*Part 3: Standardized requirements applicable to the installation and maintenance of off-grid systems in individual homes, schools and clinics.*

## **Introduction**

This part of SANS 959 is applicable to homes, schools and clinics.

**Amdt 1**

This part of SANS 959 was developed to standardize installation requirements for photovoltaic components and systems as applicable to the solar home systems programme and the school and clinic systems electrification programmes. These programmes apply particularly to systems (up to a maximum power of 200 W) that are envisaged in a national programme to provide solar power supplies to individual homes, schools and clinics which would ordinarily be remote from the electricity grid.

**Amdt 1**

A number of recommended system sizes are set out in annex A of SANS 959-1:2016.

**Amdt 1**