



**The Gambia  
Standards Bureau**

## **National Electrical Wiring Standard**

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**DATE OF PUBLICATION**

This Gambian Standard was Gazetted under the authority of the Bureau on 17 November 2017.

**THE GAMBIA STANDARDS BUREAU**

The Gambia Standards Bureau is a statutory Government specialized Agency established by The Gambia Standards Bureau Act 2010 to standardize products, methods, systems and for connected matters. Hence, the Bureau is the sole National Standardization Body. As such, it has been a member of International Standardization Bodies such as the International Organization for Standardization (ISO) since 2011, International Electrotechnical Commission (IEC) and the Standards and Metrology Institute for Islamic Countries (SMIIC) from 2012.

The objectives of the Bureau, as specified in its Act, are to: establish and promulgate standards for imported and locally-produced goods; facilitate domestic and international trade; foster and promote standards both for industrial efficiency and advancing economic development; promote the health and safety of consumers; enhance international cooperation in relation to standards and standardization. Thus, the National Quality Policy details the responsibilities of the Bureau in Standardization, Metrology and Conformity Assessment services in Testing, Inspection and Certification.

Therefore, the functions, of the Bureau are to define, prepare, publish, modify or amend Standards Specifications as well information-dissemination of standards. In addition to providing Testing, Inspection and Certification services for goods, systems and processes independently or in relation to conformity with its Standards Mark, the Bureau also conducts training and research. In Metrology, the Bureau serves as the custodian of primary national reference measurement standards through its National Metrology Laboratories and conducts calibration of measurement devices and physical standards.

The development of Gambian Standards (GAMS) is carried out by the Bureau through Technical Committees composed of a balanced representation of stakeholders, as may be appropriate to the subject in question. The Bureau ensures that Standards are developed in accordance with the *ISO/IEC Guide 21-1:2005: Regional or National adoption of International Standards and other International deliverables* and the *World Trade Organization Code of good practice for the preparation, adoption and application of standards*. To the greatest extent possible, Gambian Standards are aligned to or are adoptions of relevant international standards.

For further information on and copies of Gambian Standards, please contact The Gambia Standards Bureau.

**TECHNICAL COMMITTEE RESPONSIBLE: NATIONAL ELECTROTECHNICAL COMMITTEE**

The National Electrotechnical Committee (NEC) developed this National Wiring Standard. The NEC was initially set up by PURA in 2008 when they became a member of IEC. Upon establishment of the Bureau and replacement of PURA at IEC, the Bureau took over the NEC in 2012 and began the work of development of standards in the electrotechnical field.

The NEC consists of representatives from the following Institutions/Organizations:

- Public Utilities Regulatory Authority
- National Water and Electricity Company
- Gambia Telecommunications Company
- Ministry of Energy
- Ministry of Information and Communication Infrastructure
- University of The Gambia
- Gambia Technical Training Institute
- New Gambia Industrialists
- ComAfrique Intelizon Initiative
- Renewable Energy Association of The Gambia
- Consumer Protection Association of The Gambia
- The Gambia Chamber of Commerce and Industry

The Gambia Standards Bureau is the Secretariat and Secretary to the NEC.

**FOREWORD**

The Gambia Standards Bureau (TGSB), in conformity with international best practice co-opted the National Electrotechnical Committee (NEC) of The Gambia as its Technical Committee (TC) on Electrotechnicals. The Bureau serves as the Secretariat for this TC. The NEC developed the National Electrical Wiring Standard using the equivalent Ghana standard as working document.

This Gambian Standard applies to the distribution of electrical energy in and around all types of dwelling houses, business premises, public buildings, factories, construction sites, kiosks, temporary installations and play grounds.

The standard addresses the following:

- Scope and Normative References
- Definitions
- Symbols/Formulae
- Requirements for the Control and Distribution of Electricity Supply
- Protective Measures for Safety
- Selection and Erection of Equipment
- Special Installations, Locations and Structures
- Inspection and Testing

The standard can be obtained from The Gambia Standards Bureau.

## 1. SCOPE

This Standard GAMS 003 applies to the distribution of electrical energy in and around all types of dwelling houses, business premises, public buildings, factories, construction sites, kiosks, temporary installations and play grounds.

It states the main requirements for ensuring satisfactory results and safety including safety against electric shocks, burns and fire.

The primary purpose of this Standard therefore is to safeguard persons and property from hazards arising from the use of electricity.

The Standard primarily concerns installations, in which the declared voltages do not normally exceed 1000V a.c. or 1500V d.c. between conductors and 600V a.c. or 900V d.c. between conductors and earth.

This Standard is not intended either to take the place of detailed specifications and designs or to instruct untrained persons, and are supplementary to the Regulations.

Only proven and established materials, appliances and methods are considered here but this does not exclude the use of other materials and methods that may from time to time be permitted and authorised by the Gambia Standards Bureau.

External distribution installations are not dealt with in this Standard; however, interconnection between houses on premises is covered.

This Standard does not cover the following:

- (a) Internal wiring of manufactured apparatus which is not wired on site.
- (b) parts of telecommunications (for example radio, telephone, bell, call and sound distribution, fire alarms; emergency lighting circuits and equipment which are not fed directly from a public or private power distribution source;
- (c) electrical equipment of motor vehicles;
- (d) electrical equipment on board ships and aircraft;
- (e) electrical installations at mines, quarries, mobile and fixed offshore facilities;

## 2. NORMATIVE REFERENCES

The following referenced documents are indispensable for the application of this standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document including amendments applies.

- 2.1 IEC 60320 – 1: 2007 - Appliances Couplers for household and similar general purposes – Part 1: General requirements.
- 2.2 IEC 60238 - Edison screw lamp holders
- 2.3 IEC 61439-1 - Low-voltage switchgear and control gear assemblies - Part 1: General rules
- 2.4 IEC 60898-1 - Electrical Accessories - Circuit-Breakers for Over-current Protection for Household and Similar Installations - Part 1: Circuit-Breakers for A.C. Operation
- 2.5 IEC 60898-2 - Circuit-Breakers for Over-current Protection for Household and Similar Installations - Part 2: Circuit-Breakers for A.C. and D.C. Operation
- 2.6 IEC 60755:2008 - General requirements for residual current operated protective devices
- 2.7 IEC 61184: - Bayonet lamp holders
- 2.8 IEC 61558 – 1: -Safety of transformers, reactors, power supply units and similar products - Part 1 – General requirement and test
- 2.9 IEC 61558 – 2 – 4: -Safety of transformers, reactors, power supply units and similar products for supply voltages up to 1 100 V – Part 2-4: Particular requirements and tests for isolating transformers and power supply units incorporating isolating transformers
- 2.10 IEC 61558 – 2 – 6: -Part 2-6: Particular requirements and tests for safety isolating transformers and power supply units incorporating safety isolating transformers.