

WORKSHOP:

The New “Gulf Technical Regulation for Low Voltage Electrical Equipment and Appliances” Organized in cooperation between GSO, CEN & CENELEC



The “Gulf Technical Regulation for Low Voltage Electrical Equipment and Appliances” Requirements, Scope, Implementation and supporting Standards.

1st April 2016, Brussels, CEN-CENELEC Management Centre

OUTLINE

- ❖ The Requirements
- ❖ The History and evolution
- ❖ Scope
- ❖ Implementation
- ❖ Obligations of Economic Operators
- ❖ Conformity of Electrical Equipment
- ❖ Presumption of Conformity
- ❖ GSO Standards Development

The History and Evolution

❖ 1st Version (BD-070705-03)

- Adopted By GSO's Board of Directors: 27/11/2007
- Correspond to :
73/23/EEC

❖ 2nd Version (BD-142004-01)

- Adopted by GSO's Board of Directors : 05/11/2014
- Date of implementation :
01/07/2016
- Experimentation :
01/06/2015
- Correspond to :
2014/35/EU

<http://www.gso.org.sa/gso-website/gso-website/activities/conformity/technical-regulations-and-guides>

BD-142004-01 Updates

- ❖ **Precise definition and determining obligations of:**
 - Economic Operators,
 - Conformity Assessment Procedures
 - Obligations of the Notified Bodies;
- ❖ **Oblige the Manufacturers to carry out a risk analysis of all hazards that the electrical equipment may present, as well as an assessment of the potential exposure to such hazards;**
- ❖ **Add requirements related to electromagnetic compatibility of Low-Voltage electrical equipment.**

The Title

❖ 1st Version (BD-070705-03)

❖ 2nd Version (BD-142004-01)

- The Conformity Assessment Regulation related to electrical equipment designed for use within certain voltage limits.
 - Correspond to : 73/23/EEC
 - Gulf Technical Regulation for Low Voltage Electrical Equipment and Appliances.
 - Correspond to : 2014/35/EU
- electrical equipment designed for use within certain voltage limits

The Introduction

- ❖ Gulf Cooperation Council (GCC) Goals;
- ❖ GCC economic agreement;
- ❖ Gulf Standardization Organization (GSO) Objectives;
- ❖ Regional Conformity Assessment Scheme (RCAS);
- ❖ Products Origin: manufactured locally or imported;
- ❖ Products freely distributed in GCC member states;
- ❖ Regional coverage: GCC member states and Republic of Yemen = GSO member states.

The Provisions structure / Chapters

- I. GENERAL PROVISIONS
 - II. OBLIGATIONS OF ECONOMIC OPERATORS
 - III. CONFORMITY OF ELECTRICAL EQUIPMENT
 - IV. CONFORMITY ASSESSMENT
 - V. OBLIGATIONS AND POWERS OF MEMBER STATES
 - VI. ORGANIZATION (GSO) PROCEDURES
 - VII. ADMINISTRATIVE PROVISIONS
 - VIII. FINAL PROVISIONS
- ANNEXES (1-6)

The Annexes

1. Essential requirements of the safety objectives and the requirements of the electromagnetic compatibility.
2. Equipment and phenomena outside the scope.
- 3. Conformity Assessment Procedure related to electrical equipment in list (1).**
- 4. Conformity Assessment Procedure related to electrical equipment in list (2).**
5. Manufacturer's Declaration of Conformity.
- 6. Importer's Declaration of Conformity.**

GENERAL PROVISIONS

GENERAL PROVISIONS

❖ The Definitions

- ❑ Gulf institutions GCC, GSO, Member states, GCCA, GCS, ...
- ❑ Technical and **EMC** definitions.

❖ Subject-matter

This Technical Regulation lays down the **mandatory requirements** for **the safety and electromagnetic compatibility** of electrical equipment with which all electrical equipment must comply before its placing on the market and then move freely within the Member States markets.

Non covered aspects (such us Energy Efficiency) may be subject to particular National Technical Regulations for some products.

GENERAL PROVISIONS

❖ The Scope : This Technical Regulation shall apply to
“electrical equipment”

All electrical and electronic devices and appliances and fixtures that contain electrical and/or electronic components designed for use with a voltage rating of between 50 and 1000 V for alternating current and between 75 and 1500 V for direct current, other than the electrical equipment and phenomena listed in Annex (2).

Annex (2) Equipment and phenomena outside the scope

1. Electrical equipment for use in an explosive atmosphere
2. Electrical equipment for radiology and medical purposes
3. Electrical parts for goods and passenger lifts
4. Electricity meters
5. Electric fence controllers
6. Radio-electrical interference
7. Specialized electrical equipment, for use on ships, aircraft or railways, which complies with the safety provisions drawn up by International Bodies in which the Member States participate.

Gradual Implementation

- ❖ GSO member states decided to implement gradually the Gulf Technical Regulation (BD-142004-01), as what Article (20) clause 1, 2 and 3 explains.
- ❖ The Gulf Committee of Conformity Assessment shall determine two lists for two categories of electrical equipment depending on their degree of hazard to persons, property and environment referred to as list (1) and list (2).

Gradual Implementation

❖ List (1)

- Low risk degree of hazards
- CAPs set out in Annex (3)
- Not published contained NO Electrical Equipment.

❖ List (2)

- High risk degree of hazards
- CAPs set out in Annex (4)
- Published and contained 13 groups of Electrical Equipment.

- The current implementation is exclusively for current List (2) i.e. TC-143307-01
- The Electrical Equipment not listed in List (2) does not mean they are in List (1).
- The Electrical Equipment not listed can't bear the GC Marking and shall follow the existing National Regulation.

<http://www.gso.org.sa/gso-website/gso-website/activities/conformity/technical-regulations-and-guides>

OBLIGATIONS OF ECONOMIC OPERATORS

ECONOMIC OPERATORS

- ❖ Manufacturer
- ❖ Authorized Representative
- ❖ Importer
- ❖ Distributor

economic operators shall determine their roles and responsibilities in regard to the definitions of the economic operators in the Gulf Technical Regulation (BD-142004-01), and not with what usually used in the market place

Manufacturer

Ensuring safety and compliance

- ❖ Ensuring compliance with the essential and specific safety and **EMC** requirements;
- ❖ Drawing up the technical documentation and proceeding to Conformity Assessment;
- ❖ Establishing the Manufacturer's DoC. and affixing the **GC marking** on Electrical Equipment;

Traceability and Monitoring

- ❖ Keeping Technical documentation and maintaining compliance;
- ❖ Providing information;
- ❖ Taking correctives measures;
- ❖ Cooperating with competent national authorities.

Arabic Language Requirements

❖ Manufacturer Information

- ☐ Name or registered trade name, and the address

❖ Safety Information

- ☐ Accompanied by safety information in Arabic language

❖ Instruction of use

- ☐ Instructions for use are provided in Arabic language

❖ Technical File

- ☐ English but under request by Authorities (summary, some or/and all) contents of the Technical file shall be translated to Arabic

Legal Representative

May be appointed by a written mandate

❖ **Shall perform the tasks specified in the mandate...;**

- ☐ keeps the Manufacturer's DoC and the technical documentation
- ☐ ...Provides authorities with all the information and documentation necessary...
- ☐ cooperates with the competent national authorities...

❖ **Could not:**

- ☐ draw up the technical documentation

Importer

Places only compliant products on the market

❖ **Ensures:**

- ☐ appropriate CAPs has been carried out
- ☐ technical documentation is drawn up
- ☐ products bear the required conformity marking, and are accompanied by the required documents.

❖ **Issues the Importer's DoC.**

Importer

❖ Ensures safety monitoring and traceability

- ☐ Takes corrective measures and participate in safety monitoring
- ☐ Providing information (Ar.)
- ☐ Ensures... storage or transport conditions do not jeopardize its compliance
- ☐ Cooperates with the competent national authorities...

Distributor

makes available only compliant products on the market

❖ **verifies**

- ☐ conformity marking,
- ☐ required documents, instructions and safety information
- ☐ compliance with the requirements on traceability.

❖ **Takes corrective measures and participate to safety monitoring**

❖ **Ensures... storage or transport conditions do not jeopardize its compliance**

❖ **..., provides authorities with all the information and documentation necessary...**

CONFORMITY OF ELECTRICAL EQUIPMENT

Presumption of conformity

Conformity to Essential Requirements

❖ Safety

- ❑ Article (4) and Annex (1) Paragraph (1) to (3).
 - ... it does not endanger the safety of persons, property and environment when properly installed, maintained, and used in applications for which it was made.
 - Annex (1) Paragraph (2) clauses (e.) and (f.)
 - voltage and frequency of each Member State.
 - type and shape of the plugs and socket outlets.
 - weather conditions in the Member States.

❖ EMC

- ❑ electromagnetic disturbance
- ❑ immunity to the electromagnetic disturbance

Essential requirements of safety

- ❖ **Marking**
- ❖ **Instructions for use**
- ❖ **Ensuring products can be safely and properly assembled and connected.**
- ❖ **Design and manufacture as to ensure protection against hazards... (par. 2&3)**

Protection against hazards arising from the Electrical Equipment

- ❖ Danger of physical injury or other harm ...;
- ❖ Non electrical dangers ... revealed by experience;
- ❖ Temperatures, arcs, radiations or EM influences;
- ❖ Suitable insulation for foreseeable conditions of use...;
- ❖ Taking into account
 - ❑ Voltage and frequency of each MS,
 - ❑ Type and shape of plugs and socket outlets used in MSs
- ❖ EE to operate in non-air-conditioned or external atm. To be designed ... considering the weather conditions in M.Ss.

Protection against hazards, caused by external influences

❖ Ensuring:

- Meeting expected mechanical requirements ... to ensure persons and property are not endangered;
- Resistance to non-mechanical influences in expected environmental conditions;
- Not to endanger persons and property in foreseeable conditions of overload.

Requirements for EMC

- ❖ Equivalent to 2004/108/EC
- ❖ EM disturbance generated by EE does not exceed the level to cause disturbance of radio and telecommunications equipment or others;
- ❖ level of immunity to the EM disturbance to allow for operating without unacceptable degradation of intended use.

Presumption of Conformity

❖ Presumption of conformity with Gulf Standards

Electrical equipment, which is in conformity with Gulf Standards or parts thereof, shall be presumed to be in conformity with the safety and electromagnetic compatibility requirements covered by those Standards or parts thereof

❖ Gulf Standards is available on the Web site:

<http://www.gso.org.sa/standards/public/standardsList.seam>

Gulf (GSO) Standards

هيئة التقييس
لدول مجلس التعاون دول الخليج العربية
GCC Standardization Organization





دليل المواصفات الخليجية
GSO Standards Catalogue

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Gulf (GSO) Standards

- ❖ GSO Standards in the Electrotechnical Filed mainly based on identical adoption (adoption by endorsement) from the IEC.
- ❖ Degree of relevance is 76% with IEC.
- ❖ GSO IEC 60335-1:2011
- ❖ 2011 is the year of adoption by GSO
- ❖ IEC 60335-1:2010+AMD1:2013+COR1:2014
- ❖ IEC 60335-1:2010/AMD2:2016 PRV (Pre release version)
- ❖ EN Harmonized Standards with IEC.
- ❖ Available with NSBs (National Standardization Bodies)

Gulf (GSO) Standards

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1. GSO IEC 60335-1:2011

Household and Similar Electrical Appliances - Safety - Part 1 : General Requirements

- Adoption by endorsement for the latest version of this international standard.
- An update for an old release

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Presumption of Conformity

❖ Presumption of conformity with IEC Standards

Where Gulf Standards as referred to in Article (14) have not yet been drawn up or published, electrical equipment which is in conformity with the International Electrotechnical Commission (IEC) Standards or parts thereof, shall be presumed to be in conformity with the safety and electromagnetic compatibility requirements covered by those Standards or parts thereof


Gulf (GSO) Standards Development

- ❖ GSO welcomes and encourage all economic operators to share/comment/suggest/...etc in the process of developing new or updating exciting GSO Standards.
- ❖ How to participate in GSO Standards Development?

- ☐ Sign Up on the website.

<https://www.gso.org.sa/gd/sign-up?lang=en>

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GSO
 Technical
 Committees

GSO General
 and Steering
 Committees

Metrology
 Technical
 Committees

GCC Building
 Code
 Committees

GSO Technical Committees

GSO Technical Committees is responsible for developing the GSO Standards

TC01 GSO Technical Committee for Chemical and Textile Products

TC02 GSO Technical Committee for Mechanical Products

TC03 GSO Technical Committee for Electrical and Electronic Products

TC04 GSO Technical Committee for Metrology

TC05 GSO Technical Committee for Food and Agricultural Products

TC06 GSO Technical Committee for Construction and Building Materials

TC07 GSO Technical Committee for Oil and Gas

TC08 GSO Technical Committee for Information and Information Technology

TC09 GSO Technical Committee for Electric Power Generation, Transmission and Distribution Equipment

TC10 GSO Technical Committee for Water Production, Transport and Distribution Equipment

TC11 GSO Technical Committee for Medical Devices and Supplies

TC12 GSO Technical Committee for Cosmetics and Personal Care

Standards Projects

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TC03 - GSO Technica

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Electrical Sector

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Descending

Project No. Type	Project Title	Committee Schedule	Prepared By	Stage Deadline
14147 Adopt	Ref Standard : IEC IEC 61557-15:2014 Electrical safety in low voltage distribution systems up to 1 000 V a.c. and 1 500 V d.c. - Equipment for testing, measuring or monitoring of protective measures - Part 15: Functional safety requirements for insulation monitoring devices in IT systems and equipment for insulation fault location in IT systems Electrical Sector	TC03 2016		DS 17/05/2016
14803 Adopt	Ref Standard : IEC IEC 60598-2-14 Luminaires –Part 2-14: Particular requirements – Luminaires for cold cathode tubular Electrical Sector	TC03 2016		DS 03/05/2016
14802 Adopt	Ref Standard : IEC IEC 61543+Am1+Am2 Residual current-operated protective devices Electrical Sector	TC03 2016		DS 03/05/2016
14801 Adopt	Ref Standard : IEC IEC 62606 General requirements for arc fault detection devices Electrical Sector	TC03 2016		DS 17/04/2016
13888 Adopt	Ref Standard : IEC IEC 60794-1-20 Optical fibre cables –Part 1-20: Part 1-20: Generic specification – Basic optical cable test procedures – General and definitions Electrical Sector	TC03 2016		DS 14/04/2016



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English Title *

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Scope *

Purpose & Justification *

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Residual current-operated protective devices

 Committee TC03	 Schedule 2016	 Prepared By 	 Stage DS	 Deadline 03/05/2016
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Project Info

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Arabic Title

أدوات وقاية تعمل بالتيار المتبقي المعدة للإستخدامات المنزلية - التوافقية الكهرومغناطيسية

English Title

Residual current-operated protective devices

Category

Electrical Sector

Scope

This. International Standard is intended to ensure electromagnetic compatibility (EMC) of devices providing residual current protection, for rated voltages not exceeding 440 V a.c., intended principally for protection of persons against shock hazards. This standard applies for environmental conditions which occur in installations connected to low-voltage public networks or similar. It may also provide guidance for ensuring EMC for other products intended for safety purposes or for products including electronic circuits and for which a high level of continuity of service is required. For EMC test requirements not included in the product standards reference should be made to this product family standard.

Type

Adopt

Stanadard No

IEC IEC 61543+Am1+Am2

References

IEC 61543+Am1+Am2
Edition 1.0 1995-04

Submitted By

 01/02/2016  سامي عبيدات

THANK YOU