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Standards

Irish Standard
I.S. EN ISO 18243:2019

Electrically propelled mopeds and motorcycles - Test specifications and safety requirements for lithium-ion battery systems (ISO 18243:2017)

I.S. EN ISO 18243:2019

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This document is based on:

EN ISO 18243:2019

Published:

2019-03-06

This document was published under the authority of the NSAI and comes into effect on:

2019-03-24

ICS number:

NOTE: If blank see CEN/CENELEC cover page

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National Foreword

I.S. EN ISO 18243:2019 is the adopted Irish version of the European Document EN ISO 18243:2019, Electrically propelled mopeds and motorcycles - Test specifications and safety requirements for lithium-ion battery systems (ISO 18243:2017)

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EUROPEAN STANDARD

EN ISO 18243

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2019

ICS 43.140

English Version

Electrically propelled mopeds and motorcycles - Test specifications and safety requirements for lithium-ion battery systems (ISO 18243:2017)

Cyclomoteurs et motocycles à propulsion électrique -
Spécifications d'essai et exigences de sécurité pour les
systèmes de batterie au lithium-ion (ISO 18243:2017)

Elektrisch angetriebene Kleinkrafträder und
Motorräder - Spezifikationen und
Sicherheitsanforderungen für Lithium-Ionen-
Batteriesysteme (ISO 18243:2017)

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EN ISO 18243:2019 (E)

| Contents | Page |
|-------------------------------|-------------|
| European foreword..... | 3 |

European foreword

The text of ISO 18243:2017 has been prepared by Technical Committee ISO/TC 22 "Road vehicles" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 18243:2019 by Technical Committee CEN/TC 301 "Road vehicles" the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2019, and conflicting national standards shall be withdrawn at the latest by September 2019.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

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Endorsement notice

The text of ISO 18243:2017 has been approved by CEN as EN ISO 18243:2019 without any modification.

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INTERNATIONAL STANDARD

ISO
18243

First edition
2017-04

Electrically propelled mopeds and motorcycles — Test specifications and safety requirements for lithium-ion battery systems

*Cyclomoteurs et motocycles à propulsion électrique — Spécifications
d'essai et exigences de sécurité pour les systèmes de batterie au
lithium-ion*



Reference number
ISO 18243:2017(E)

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ISO 18243:2017(E)



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Contents

| | Page |
|---|-----------|
| Foreword | v |
| Introduction | vi |
| 1 Scope | 1 |
| 2 Normative references | 1 |
| 3 Terms and definitions | 1 |
| 4 Symbols and abbreviated terms | 4 |
| 5 General requirements | 5 |
| 5.1 General conditions..... | 5 |
| 5.2 Tests..... | 5 |
| 5.3 Test procedure..... | 6 |
| 5.4 Preparation of the DUT for testing..... | 7 |
| 5.4.1 Preparation of battery pack..... | 7 |
| 5.4.2 Preparation of battery system..... | 7 |
| 6 General test methods | 8 |
| 6.1 Pre-conditioning cycles..... | 8 |
| 6.1.1 Purpose..... | 8 |
| 6.1.2 Test procedure..... | 8 |
| 6.2 Standard cycle (SC)..... | 8 |
| 6.2.1 Purpose..... | 8 |
| 6.2.2 Test procedure..... | 8 |
| 7 Performance test | 9 |
| 7.1 Energy and capacity at RT..... | 9 |
| 7.1.1 Purpose..... | 9 |
| 7.1.2 Test procedure..... | 9 |
| 7.1.3 Requirement..... | 10 |
| 7.2 Energy and capacity at different temperature and discharge rates..... | 10 |
| 7.2.1 Purpose..... | 10 |
| 7.2.2 Test procedure..... | 10 |
| 7.2.3 Requirements..... | 12 |
| 7.3 Power and internal resistance..... | 13 |
| 7.3.1 Purpose..... | 13 |
| 7.3.2 Pulse power characterization profile..... | 13 |
| 7.3.3 Test procedure..... | 17 |
| 7.3.4 Requirements..... | 18 |
| 7.4 No load SOC loss..... | 19 |
| 7.4.1 Purpose..... | 19 |
| 7.4.2 Test procedure..... | 19 |
| 7.4.3 Test sequence..... | 20 |
| 7.4.4 Requirement..... | 20 |
| 7.5 SOC loss at storage..... | 21 |
| 7.5.1 Purpose..... | 21 |
| 7.5.2 Test procedure..... | 21 |
| 7.5.3 Test sequence..... | 21 |
| 7.5.4 Requirement..... | 22 |
| 7.6 Cycle life..... | 22 |
| 7.6.1 Purpose..... | 22 |
| 7.6.2 Test procedure..... | 22 |
| 7.6.3 Requirements..... | 22 |
| 8 Safety and reliability test | 23 |
| 8.1 Vibration..... | 23 |
| 8.1.1 Purpose..... | 23 |

ISO 18243:2017(E)

| | | |
|--|---------------------------------|-----------|
| 8.1.2 | Test procedure | 23 |
| 8.1.3 | Requirements | 23 |
| 8.2 | Mechanical shock | 23 |
| 8.2.1 | Purpose | 23 |
| 8.2.2 | Test procedure | 23 |
| 8.2.3 | Requirements | 24 |
| 8.3 | Drop | 24 |
| 8.3.1 | Purpose | 24 |
| 8.3.2 | Test procedure | 24 |
| 8.3.3 | Requirements | 24 |
| 8.4 | Thermal shock | 24 |
| 8.4.1 | Purpose | 24 |
| 8.4.2 | Test procedure | 24 |
| 8.4.3 | Requirements | 24 |
| 8.5 | Water immersion | 25 |
| 8.5.1 | Purpose | 25 |
| 8.5.2 | Test procedure | 25 |
| 8.5.3 | Requirements | 25 |
| 8.6 | Fire | 25 |
| 8.6.1 | Purpose | 25 |
| 8.6.2 | Test procedure | 25 |
| 8.6.3 | Requirements | 26 |
| 8.7 | Overtemperature condition | 26 |
| 8.7.1 | Purpose | 26 |
| 8.7.2 | Test procedure | 26 |
| 8.7.3 | Requirements | 26 |
| 8.8 | Short circuit protection | 27 |
| 8.8.1 | Purpose | 27 |
| 8.8.2 | Test procedure | 27 |
| 8.8.3 | Requirements | 27 |
| 8.9 | Overcharge protection | 27 |
| 8.9.1 | Purpose | 27 |
| 8.9.2 | Test procedure | 27 |
| 8.9.3 | Requirements | 28 |
| 8.10 | Over discharge protection | 28 |
| 8.10.1 | Purpose | 28 |
| 8.10.2 | Test procedure | 28 |
| 8.10.3 | Requirements | 28 |
| 8.11 | Dewing | 29 |
| 8.11.1 | Purpose | 29 |
| 8.11.2 | Test procedure | 29 |
| 8.11.3 | Requirements | 29 |
| 8.12 | Salt spray | 30 |
| 8.12.1 | Purpose | 30 |
| 8.12.2 | Test procedure | 31 |
| 8.12.3 | Requirements | 31 |
| Annex A (informative) Battery pack and system | | 32 |
| Annex B (informative) Description of the screen referenced in 8.6 | | 36 |
| Bibliography | | 37 |

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 38, *Motorcycles and mopeds*.

ISO 18243:2017(E)

Introduction

Lithium-ion based battery systems are an efficient alternative energy storage system for electrically propelled mopeds and motorcycles. The requirements for lithium-ion based battery systems to be used as power source for the propulsion of electrically propelled mopeds and motorcycles are significantly different to those batteries used for consumer electronics or stationary usage.

This document provides specific test procedures for lithium-ion battery packs and systems specifically developed for propulsion of mopeds and motorcycles. This document specifies such tests and related requirements to ensure that a battery pack or system is able to meet the specific needs of the mopeds and motorcycles industry.

It enables mopeds and motorcycles manufacturers to choose test procedures to evaluate the characteristics of a battery pack or system for their specific requirements.

Electrically propelled mopeds and motorcycles — Test specifications and safety requirements for lithium-ion battery systems

1 Scope

This document specifies the test procedures for lithium-ion battery packs and systems used in electrically propelled mopeds and motorcycles.

The specified test procedures enable the user of this document to determine the essential characteristics on performance, safety and reliability of lithium-ion battery packs and systems. The user is also supported to compare the test results achieved for different battery packs or systems.

This document enables setting up a dedicated test plan for an individual battery pack or system subject to an agreement between customer and supplier. If required, the relevant test procedures and/or test conditions of lithium-ion battery packs and systems are selected from the standard tests provided in this document to configure a dedicated test plan.

NOTE 1 Electrically power-assisted cycles (EPAC) cannot be considered as mopeds. The definition of electrically power-assisted cycles can differ from country to country. An example of definition can be found in the EU Directive 2002/24/EC.

NOTE 2 Testing on cell level is specified in IEC 62660 (all parts).

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 13063, *Electrically propelled mopeds and motorcycles — Safety specifications*

ISO 16750-1, *Road vehicles — Environmental conditions and testing for electrical and electronic equipment — Part 1: General*

IEC 60068-2-30, *Environmental testing — Part 2-30: Tests – Test Db: Damp heat, cyclic (12 h + 12 h cycle)*

IEC 60068-2-47, *Environmental testing — Part 2-47: Tests – Mounting of specimens for vibration, impact and similar dynamic tests*

IEC 60068-2-52, *Environmental testing — Part 2-52: Tests – Test Kb: Salt mist, cyclic (sodium, chloride solution).*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

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