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Interested committees:

Title: Draft BS ISO 13063-3 Electrically propelled mopeds and motorcycles — Safety specifications. Part 3: Electrical safety.

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Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/Figure/ Table/Note	Type of comment	Commend (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	

DRAFT INTERNATIONAL STANDARD

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ISO/TC 22/SC 38

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2019-12-12

Electrically propelled mopeds and motorcycles — Safety specifications —

Part 3: Electrical safety

*Cyclomoteurs et motocycles à propulsion électrique — Spécifications de sécurité —
Partie 3: Sécurité électrique*

ICS: 43.140

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Electrically propelled mopeds and motorcycles — Safety specifications —

Part 3: Electrical safety

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1 Scope

This document specifies requirements for protection against electric shock for electric propulsion systems and conductively connected auxiliary electric systems of any kind of electrically propelled mopeds and motorcycles when used in normal conditions. It is applicable only if maximum working voltage of the on-board electrical circuit does not exceed 1000 V a.c. or 1500 V d.c. This document does not provide comprehensive safety information for manufacturing, maintenance and repair personnel.

2 Normative references

The following referenced documents are indispensable for the application 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 3864-1, *Graphical symbols — Safety colours and safety signs — Part 1: Design principles for safety signs and safety markings*

ISO 20653, *Road vehicles — Degrees of protection (IP-code) — Protection of electrical equipment against foreign objects, water and access*

IEC 60227-1, *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V — Part 1: General requirements*

IEC 60245-1, *Rubber insulated cables — Rated voltages up to and including 450/750 V — Part 1: General requirements*

IEC 60664-1, *Insulation coordination for equipment within low-voltage systems — Part 1: Principles, requirements and tests*

IEC 60990, *Methods of measurement of touch current and protective conductor current*

3 Terms and definitions

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

3.1

auxiliary electric system

on-board vehicle system, other than for vehicle propulsion, which operates on electric energy

3.2

balance of electric power system

remaining portion of an electric power system when the power sources (e.g. fuel cell stacks, batteries) are disconnected

3.3

protective barrier

part providing protection against direct contact from any usual direction of access

3.4

basic insulation

insulation applied to live parts for protection against direct contact under fault-free conditions

Note 1 to entry: Basic insulation does not necessarily include isolations used exclusively for functional purposes.

3.5

basic protection

protection against direct contact with live parts under fault-free conditions

3.6

battery-electric vehicle

BEV

electric vehicle with only a traction battery as the power source for vehicle propulsion

Note 1 to entry: The abbreviation BEV is often shortened to EV.

3.7

battery pack

single mechanical assembly comprising battery cells and retaining frames or trays and possibly components for battery management

3.8

BEV operating mode

in operating mode of an HEV, in which only the RESS is used for energy supply for vehicle propulsion and possibly auxiliary electric systems

3.9

conductive part

conductor

part capable of conducting electric current

3.10

creepage distance

shortest distance along a surface of a solid insulating material between two conductive parts

3.11

direct contact

contact of persons with live parts

3.12

double insulation

insulation system comprising both basic insulation and supplementary insulation

3.13

drive direction control

device physically actuated by the rider for selecting the driving direction of the road vehicle (forward or backward)

Note 1 to entry: Lever or push-button switch.

3.14**driving-enabled mode**

only operating mode in which the vehicle can be moved by its own propulsion system

3.15**electric chassis**

conductive parts of a vehicle that are electrically connected and whose potential is taken as reference

3.16**electric drive**

combination of an electric motor and associated power electronics for the conversion of electric to mechanical power and vice versa

3.17**electric power system**

electric circuit, containing electric power sources (e.g. fuel cell stacks, batteries)

3.18**electric shock**

physiological effect resulting from an electric current passing through a human body

3.19**electric vehicle****EV****electrically propelled vehicle****EPV**

vehicle with one or more electric drive(s) for vehicle propulsion

3.20**protective enclosure**

part providing protection of equipment against direct contact from any direction

3.21**exposed conductive part**

conductive part of equipment which can be touched and which is not normally live, but which can become live when basic insulation fails

3.22**hybrid electric vehicle****HEV**

vehicle with at least one RESS and one fuelled power source for vehicle propulsion

EXAMPLE or fuel-cell systems are typically types of fuelled power sources.

3.23**isolation-resistance monitoring system**

system which periodically or continuously monitors the isolation resistance between live parts and the electric chassis or exposed conductive parts

3.24**isolation resistance**

resistance between live parts of voltage class B electric circuit and the electric chassis or exposed conductive parts as well as the voltage class A system

3.25**live part**

conductor or conductive part intended to be electrically energized in normal use