ISO 13063:2012-09 (E)

Electrically propelled mopeds and motorcycles - Safety specifications

Contents

Page

Foreword v

1 Scope 1

2 Normative references 1

3 Terms and definitions 1

4 Environmental and operational conditions 5

5 Voltage classes 5

6 Marking 5
6.1 Marking of voltage class B electric components 5
6.2 Marking of voltage class B wiring 5

7 Requirements and measures of voltage class A electric components 6
7.1 Requirements of voltage class A electric components 6
7.2 Test procedures for the protection measures of voltage class A electric components 7

8 Measures and requirements for protection of persons against electric shock of voltage class B electric components 8
8.1 General requirements of voltage class B electric components and RESS 8
8.2 Basic protection measures of voltage class B electric components and RESS 8
8.3 Protection under first failure conditions of voltage class B electric components and RESS8 8.4 Alternative approach for protection against electric shock of voltage class B electric components and RESS 9
8.5 Creepage distance of voltage class B electric components and RESS 9
8.6 Clearance of voltage class B electric components and RESS 10
8.7 Requirements of barrier/enclosures of voltage class B electric components 11
8.8 Requirements for insulation of voltage class B electric components and RESS 11
8.9 Insulation requirements of the voltage class B RESS 11
8.10 Isolation resistance requirements of the electric system and electric circuit 12
8.11 Requirements for withstand voltage of voltage class B electric components and RESS 12
8.12 Requirements of potential equalization of voltage class B electric components and RESS 12
8.13 Requirements for vehicle charging inlet of voltage class B electric components and RESS 13
8.14 RESS of voltage class B over-current interruption 13

9 Test procedures for the protection measures against electric shock for voltage class B electric components and RESS 13
9.1 General 13
9.2 Isolation resistance measurements for voltage class B electric circuits 13
9.3 Isolation resistance measurement for the voltage class B electric power sources 15
9.4 Withstand voltage test for the voltage class B electric components 16
9.5 Continuity test for potential equalization 18

10 Requirements for safety means and protection of persons against hazardous situations 18
10.1 Requirements for the emission of hazardous gases and other hazardous substances 18
10.2 Requirements for safety means and protection of persons against hazardous situations from RESS 18

11 Operational safety 19
11.1 Propulsion system, power-on/power-off procedure 19
11.2 Connection of the vehicle to an off-board electric power supply 19
11.3 Driving partially 19
11.4 Driving backwards 20

12 Protection against failure 20
12.1 Fail safe design 20
12.2 First failure response 20
12.3 Unintentional vehicle behaviour 20

13 Electromagnetic compatibility 20
13.1 Susceptibility 20
13.2 Emissions 21

14 Emergency Response 21

15 Owner's guide manual 21

Bibliography 22