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| Technical Specifications - Battery Operated Vehicles | |
| Description | |
| General description of vehicle | |
| Vehicle Model |  |
| Vehicle Type |  |
| Drawing and /or Photographs of the vehicle |  |
| Description of The Traction Battery Pack | |
| Make and Trade name (If any) |  |
| Kind of Electro – Chemical Chemistry |  |
| Nominal Voltage (V) at Pack level |  |
| Nominal Voltage (V) at Cell Level |  |
| Number of Cells/Modules and its Configuration |  |
| Battery Energy (kWh) |  |
| Battery Capacity (C5) |  |
| End of Discharge Voltage Value (V) at Pack Level |  |
| Provision of ventilation for battery Yes / No |  |
| Brief description of the battery pack ventilation system adopted in the vehicle. Provide drawing if necessary. |  |
| Traction Battery Approval as per AIS 048 :Report Number |  |
| On-board Indication of battery state of charge (SOC) |  |
| Details of indication when state of charge (SOC) of the battery reaches a level when the manufacturer recommends re-charging. |  |
| Indication format. |  |
| Relationship of state of charge indicator and the indication. |  |
| Make |  |
| Model |  |
| Indication of state of charge of battery reaches a level at which driving vehicle further may cause damage to batteries |  |
| Indicatibon format. |  |
| Relationship of state of charge indicator and the indication. |  |
| Battery Mass (kg) |  |
| Brief description of maintenance procedure of battery pack, if any |  |
| Battery Management System (BMS) | |
| Make |  |
| Model Number / Part Number |  |
| Software Version |  |
| Hardware Version |  |
| Architecture (attach circuit board diagram and Cell configuration structure ) |  |
| Balancing Type (Active/Passive) |  |
| Communication Protocol |  |
| DC – DC Converter | |
| Make |  |
| Model Number / Part Number |  |
| Hardware Version |  |
| Input Range (Current in A and Voltage in V) |  |
| Output Range (Current in A and Voltage in V) |  |
| Description of The Drive Train | |
| General |  |
| Make |  |
| Type |  |
| Use : Mono motor / multi motors (number) |  |
| Transmission Arrangement parallel / Transaxial / others to precise |  |
| Test Voltage (V) |  |
| Motor Nominal Speed (min -1) |  |
| Motor Maximum Speed, Min –1 or by default reducer outlet shaft / gear box speed (specify gear engaged) |  |
| Maximum Power Speed (min –1) and (km/h) |  |
| Maximum Power (kW) |  |
| Maximum Thirty Minutes Power (kW) |  |
| Maximum Thirty Minutes speed km/h (Reference in AIS-039 (Rev.1) and AIS-040 (Rev.2) |  |
| Range as per AIS 040 (Rev.1) (km) |  |
| Speed at the beginning of the range (min –1) |  |
| Speed at the end of the range (min –1 ) |  |
| Traction Motor |  |
| Make |  |
| Model Number / Part number |  |
| Type (BLDC, DC, AC etc) |  |
| Working Principle |  |
| Direct current / alternating current / number of phases |  |
| Separate excitation / series / compound |  |
| Synchron / asynchron |
| Coiled rotor / with permanent magnets / with housing |  |
| Number of Poles of the Motor |  |
| Motor power curve (kW) with motor RPM (min-1) / vehicle speed in (km/h), (Provide Graph) |  |
| Power Controller |  |
| Make |  |
| Model Number / Part number |  |
| Software Version |  |
| Hardware Version |  |
| Type |  |
| Control Principle : vectorial / open loop / closed / other (to be specified ) |  |
| Maximum effective current supplied to the Motor (A) |  |
| Voltage range use (V to V) |  |
| Cooling System motor : liquid / air controller : liquid / air Battery : liquid / air |  |
| Liquid cooling equipment characteristics |  |
| Nature of the liquid , circulating pumps, yes / no |  |
| Characteristics or make(s) and type(s) of the pump |  |
| Thermostat : setting |  |
| Radiator : drawing(s) or make(s) and type(s) |  |
| Relief valve : pressure setting |  |
| Fan : Characteristics or make(s) and type(s) |  |
| Fan : duct |  |
| Air-cooling equipment characteristics |  |
| Blower : Characteristics or make(s) and type(s) |  |
| Standard air ducting |  |
| Temperature regulating system yes / no |  |
| Brief description |  |
| Air filter : make(s) type(s) |  |
| Maximum temperatures recommended by the manufacturer: |  |
| Motor Outlet : oC |  |
| Controller inlet : oC |  |
| Battery inlet : oC |  |
| At motor reference point(s) oC |  |
| At controller reference point(s) oC |  |
| At Battery reference point(s) oC |  |
| Insulating Category : |  |
| Ingress Protection (IP)-Code : |  |
| Lubrication System Principle Bearings : friction / ball Lubricant : grease / oil Seal : yes / no Circulation : with / without |  |
| Charger : | |
| Charger : on board / external |  |
| Make |  |
| Model |  |
| Software Version |  |
| Hardware Version |  |
| Type (AC/DC, Slow /Fast) |  |
| Standard Protocol (BEVC DC001(or) BEVC AC001(or) CCS (or) GB/T (or) CHAdeMO (or) SAE J1772 (or) if other specify) |  |
| Description of the normal profile of charging system |  |
| Specifications |  |
| Mains Supply : single phase/ three phase |  |
| Input Nominal Voltage (V) & frequency (Hz) with tolerances. |  |
| Output Voltage Range (V) and Current Range (A) |  |
| Reset period recommended between the end of the discharge and the start of the charge |  |
| Recommended duration of a complete charge |  |
| In case of on-board charger |  |
| Continuous rating of charger socket (A) : |  |
| Time rating (h) of charger socket, if any : |  |
| Whether soft-start facility Yes / No : |  |
| Maximum initial in-rush current (A) |  |
| Electrical details of vehicle for functional safety | |
| Schematic diagram showing the electrical layout giving all major electrical items along with their physical location in the vehicle. It shall include batteries, power-train components, protection fuses, circuit breakers etc. |  |
| Specifications of circuit breakers/ fuses used for protection of batteries / power-train |  |
| IS / IEC specifications |  |
| Rating (A) |  |
| Opening time (ms) |  |
| Working voltage V |  |
| Schematic highlighting physical location of live parts having working voltage greater than 60 V DC or 25 V AC |  |
| Electric cables / connectors / wiring harness |  |
| IEC protection class |  |
| Insulation material used |  |
| Is Conduits provided? Write Yes / No |  |
| List of exposed conductive parts of on-board equipment. |  |
| Any potential equalization resistance used to electrically connect these parts Yes/ No |  |
| If yes, give details |  |
| List of failures due to which the vehicle will come to standstill |  |
| List of conditions under which the performance of vehicle is limited and how. |  |
| Electrical energy consumption of Vehicle in W-h/km, as per AIS-039 | |