

LAMPO² (PURE BATTERY EV): SPECIFICATIONS

Unique features

Four different charging modes:

- 1) standard single-phase with up to 3,3kW on board charger for typical overnight home-charge
- 2) "control-pilot" equipped and (EDF provided) PLC single-phase with 6,6kW on board charger typical for public charging
- 3) standard three-phase 9,9kW on board charger typical for charging at industrial plugs (fleet-owners)
- 4) an interface for DC fast charging (able to transmit a max. power of 80kW), where up to 100km of additional range can be charged within just 10 minutes, by an off-board system

Four wheel drive designed in order to allow the maximum regeneration and to ensure more driving safety

Intelligent charging system: the user can configure the charging parameters: earliest charging time/last charging stop, max. charging yield and charging status to be achieved by the end of charging

Range estimator: GPS based device calculating different parameters like the remaining range (considering elevations etc) and the notification of the closest public charging stations

External charging status LED

Integrated charging cable

Performances and consumption

Max. speed (km/h): approx. 200

Acceleration (sec., 0-100 km/h): approx. 5

WtW emissions (g CO₂): 0

Max shaft torque (Nm): 640 (from 0 to 4'500 rpm)

Max torque on the wheels (Nm): 640 x 6.4 = 4'100

Max power (kW): 300 (408 HP)

Range (km): 200

Energy consumption (Wh/km - ton): 99

Cost of energy (CHF/100km): approx 2.40

Motorization

Electric vehicle (2 electric motors and Li-ion batteries), fixed ratio gearbox (1/6.4)

Electric motors

Type: Brusa HSM1-10.18.13 hybrid synchronous with transaxle gearbox, powered by a Brusa DMC534 inverter

Quantity: 2, one on front axle, one on rear axle

Max Power (kW): 300

Max shaft torque (Nm): 640 (from 0 to 4'500 rpm)

Cooling: water

Batteries

Type: Brusa EVB1 Li battery packs based on prismatic Kokam SLPB cells (Li-ion with polymeric electrolyte)

Quantity: 2

Total rated energy (kWh): 32

Full charge (EU domestic plug) (h): 12

Capacity 0.5C (Ah): 80

Nominal voltage (V): 400

Max continuous discharge current (A): 200

Max peak discharge current (A): 400

Max charging current (A): 80

Number of cells: 216

Weight (kg): 280

Cooling: water

Estimated life time @ 80% DOD (cycles/km): >800 / >160'000

Battery chargers (on board)

Type: Brusa NLG513 -Sx

Quantity: 3

Power (kW): 9.9

Cooling: air

DC/DC converter for the on board devices

Type: Brusa BSC624-12V

Vehicle structure

Tubular steel chassis, composite material body

Dimension & weight

Seats: 2

Length (mm): 4'280

Width (mm): 1'880

Height (mm): 1'203

Wheelbase (mm): 2'415

Weight (empty, kg): 1'580

Tires: 245/45 R18

Safety equipment

Airbag (driver and passenger seat)

Rigid occupant safety cell

Front and rear crumple zones

Side impact door beams

Seatbelt pretensioners

Integrated headrests

Vehicle theft-deterrent

Voltage Insulation System

Emergency stop button

Interior equipment

Multifunction touch screen for the control of the car functions

Driving style settings

Sport steering wheel

Electrically heated seats (Peltier effect)

Electric heating

Cruise control

Central locking system

Electric brake button on steering wheel

Boost button on steering wheels

GPS based range estimator

Intelligent charging system

GPS navigation system

Exterior equipment

Double-insulated black soft top

LED tail lights

Auxiliary solar panels

Aerodynamic shaped back wheels cover

Price

Single prototype, not for sale

Remote photovoltaic plant

Type: photovoltaic laminate by United Solar Ovonic, amorphous silicon cells

Surface (m²): 260

Rated power (kW): 16

Energy production per year (kWh/year): 16'800

Developed & manufactured by

Protoscar SA

Via Ronchi

CH-6821 Rovio

Phone: +41/91/6496060

Fax: +41/91/6497270

Web: www.protoscar.com