

CHAdeMO proposal for technical scope of EPAC charging group

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1. Background

Due to rising market growth in eBikes (officially called as Electrically Power Assisted Cycles =**EPAC**) in the areas of fleet operators, municipalities and power users, demand for public charging using a unique common connector and charging communication is rising. Thus, the aim of this working group is to evaluate options for a market oriented and standardized solution focused strongly on an EPAC charging system.

2. Why do we need a new group?

Charging power needed:

EPAC	e-Motorcycle	EV
		
500 W	5 kW	50 kW

The charging power is roughly one order of magnitude smaller than for e-Motorcycles
→ Own charging standard needed

3. Scope

The scope of the group is based on current EPAC systems, but not limited to this application, as long as the application (e.g. electric kick scooters, monowheels etc.) fits into the proposed technical scope below.

The aim is to specify a common connector and communication as well as related requirements for the charging equipment and the EPAC.

The current regions for focus are Asia, EU and US markets.

4. Starting point

The starting point for discussion could be existing documents in the frame-work (e.g.):

- ISO TS 4210-10 (SCOPE focused on EPAC)
- Working documents of IEC TS 61851-3-series (SCOPE is very broad on light electric vehicles in general, 0 - 120 V)

5. Key specifications (proposal, for finalization in the group)

- Power: max. 500 - 800 W
- Voltage: ideally 36 V nominal, i.e. max. 42 V
- Current: max. 15-25 A
- Connector: common mechanical connector to fulfill above requirements
- Communication: CAN based communication;
Protocol to be derived from IEC 61851-24
- Further topics: temperature range, IP class ...