SOLUTION SHEET

E-mobility Compact Secondary Substation (CSS)

CSS with integrated high-power charging

Internally arc tested as per IEC 62271-202, a safer design for equipment, personnel and public environment

Pre-assembled and wired solution, to minimize site works

Reduced site activities to decrease safety related risks

Simple and quick installation

E-mobility Compact Secondary Substation with integrated high-power chargers

The e-mobility CSS with integrated high power chargers is the ideal solution for bus opportunity charging. This unit is delivered as a single piece, pre-wired solution for ease of installation. This configuration drastically reduces site activities in terms of man-hours, excavation and civil works. The CSS enclosure also protects the high-power chargers from the external environment. Cabling to charging posts can be easily connected to the junction box besides the HP cabinets. Most importantly, the unit has been internally arc tested for additional safety in public spaces.

Features of solution

- Available in multiple enclosure material:
  - Steel for rural areas
  - Glass reinforced polyester (GRP) for harsh and challenging environmental conditions
- Internal arc tested design assures high safety standards for service personnel and public
- Lockable enclosure to prevent unauthorized entry
- Compact design to reduce footprint installation
- Fire tested according to ISO 834
- Flammability according to UL 94
- Toxicity according to EN 45545

Equipment description

The CSS typically houses medium voltage switchgear (up to 40.5 kV), transformers (oil or dry type) and a low voltage switchboard with protection devices, ie circuit breakers or fused disconnects, and an integrated high-power charger. LV outgoings can be planned to feed any other loads. The CSS is compartmentalized to isolate the sections to reduce risk of accidental handling.

Technical data

Key specifications	
Medium voltage level	from 2.4 - 40.5 kV
Typical ratings (kVA)	up to 1250 kVA
Secondary voltage	400-480 V
Number of power cabinets	Up to 3
Trafo type	Oil or dry
Protection degree	IP 54/23D (MV-LV SWGR/trafo)
Applicable standards	IEC, GB, AS, GOST, ANSI, CSA, and more

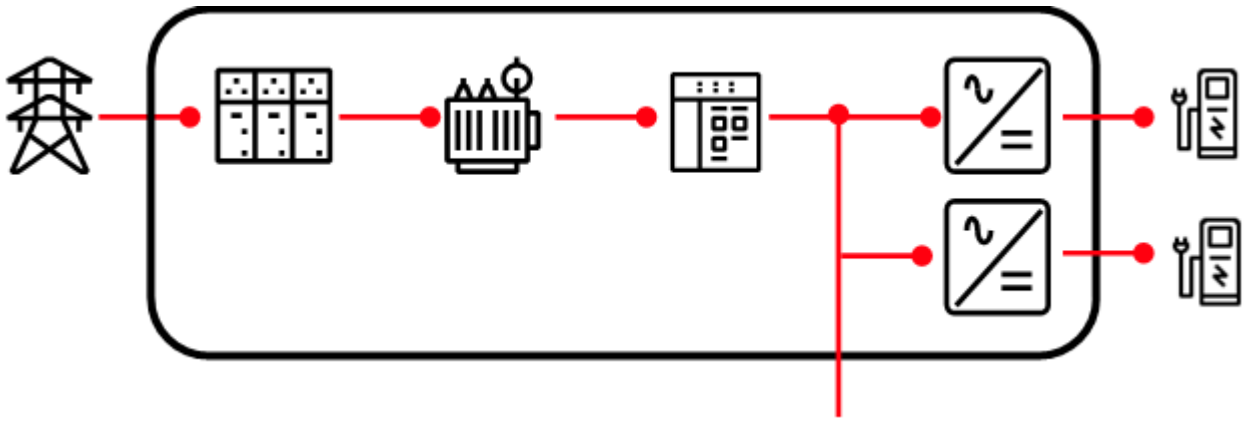
Optional equipment

- Seismic certifications
- IP35 or IP45 protection for demanding locations
- Added ventilation for hot climate
- Remote monitoring
- Remote monitoring and control
- Different switchgear insulation available
- SCADA ready

Installation

- One-piece delivery factory assembled and tested
- MV and charging post connections needed at site
- Reduced site works
- Compact design for reduced footprint
- No heavy crane needed

Single line diagram



E-mobility CSS with integrated high-power chargers

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1VPD110001A0463 REV A MAY 2019