

E-mobility Compact Secondary Substation (CSS)

Skid-mounted 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 skid-mounted Compact Secondary Substation with integrated high-power chargers

The e-mobility skid-mounted CSS with integrated high power chargers is the ideal solution for highway rest areas. This unit is delivered to site as a single-piece pre-wired solution for ease of installation. This configuration drastically reduces the site activities in terms of man-hours, excavation and civil works. Additionally, cabling to charging posts can be easily connected to the junction box besides the HP cabinets. Most importantly, this 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 ensures high safety standards for service personnel and public
- Lockable enclosure to prevent unauthorized entry
- Compact design to reduce footprint installation
- Fire tested according ISO 834
- Flammability according UL 94
- Toxicity according EN 45545

Equipment description

The skid is comprised of a CSS typically housing 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 integrated high-power chargers. 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 2000 kVA
Secondary voltage	400-480 V
Number of power cabinets	Up to 8
Trafo type	Oil or dry
Protection degree	IP 54/23D (MV-LV SWGR/trafo)
Applicable standards	IEC, GB, AS, GOST, ANSI, CSA, and more

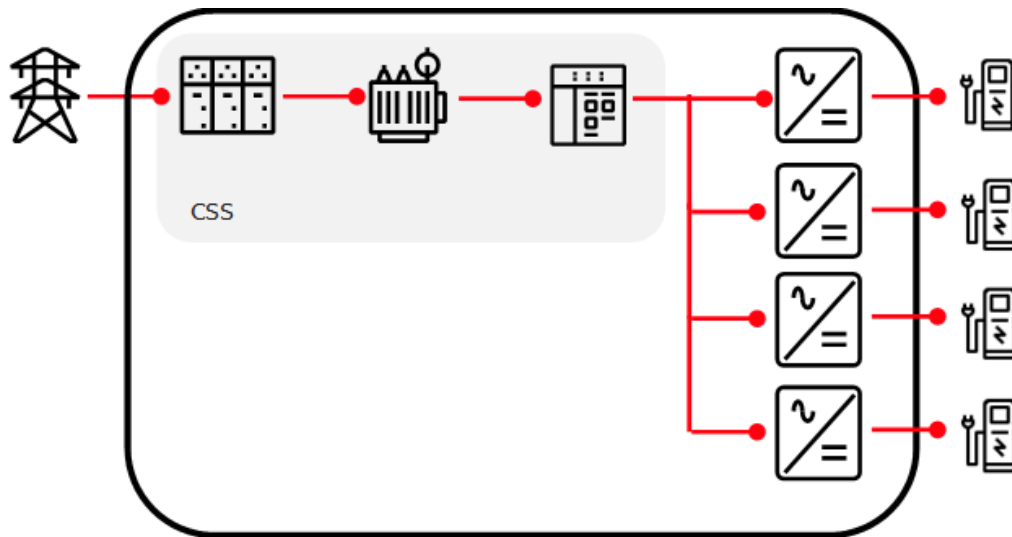
Optional equipment

- 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 skid-mounted CSS with integrated high-power chargers

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