

E-mobility Compact Secondary Substation (CSS)

UniPack to support high-power charging with storage



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



Pre-assembled solution, pre-tested and assembled, to minimize site works



Ease of handling, transportation, unloading and connection



Reduced site activities decrease safety-related risks

E-mobility CSS with integrated energy storage

The e-mobility CSS solution with integrated energy storage provides electrification to power cabinets, while simultaneously providing a buffer of power in parallel to the grid. This solution's typical application is the peak power demand control. The ease of installation of a pre-wired solution drastically reduces site activities in terms of man-hours, excavation and civil works activities. Different internal layouts are available.

Features of solution

- Available in multiple enclosure materials:
 - 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), a low voltage switchboard with protection devices, ie circuit breakers or fused disconnects, and integrated energy storage. 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
Storage power	300 kW
Storage capacity	300 kWh
Trafo type	Oil or dry
Protection degree	IP 54/23D (MV SWGR, LV and storage /trafo)
Applicable standards	IEC, GB, AS, GOST, ANSI, CSA, and more

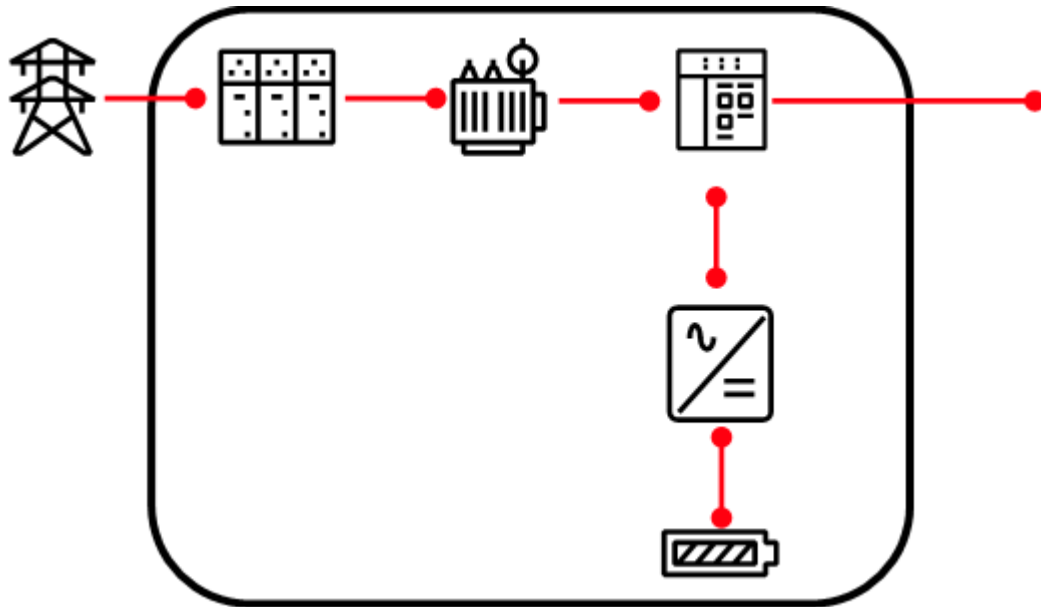
Optional equipment

- Seismic certifications
- IP35 or IP45 protection for challenging conditions
- Cooling area chosen to fit different conditions
- SCADA ready
- Remote monitoring
- Remote monitoring and control
- Energy management systems

Installation

- One-piece delivery factory assembled and tested
- MV connection and power cabinet connection needed at site
- Reduced site works
- Compact design for reduced footprint
- No heavy crane needed

Single line diagram



E-mobility CSS solution with integrated energy storage