

Energy Storage Module in CSS

UniPack to support the grid with battery energy storage



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



Available in multiple configurations, sizes and materials



Maximize ROI with pre-engineered and factory tested solutions



Simple and quick installation

ESM CSS with integrated energy storage

The energy storage module (ESM) CSS solution with integrated energy storage provides a buffer of power and energy in parallel to the grid. Typical application is the peak power demand control and energy back-up. The ease of installation of a pre-wired solution drastically reduces site activities in terms of man hours, excavation and civil work activities. The different versions of the pre-engineered and industrialized ESM allow scalability, high reliability and reduced project execution times.

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 40.5kV), transformers (oil or dry type), low voltage switchboard with protection devices e.g. 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	Up to 1000 kW
Storage capacity	Up to 1000 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

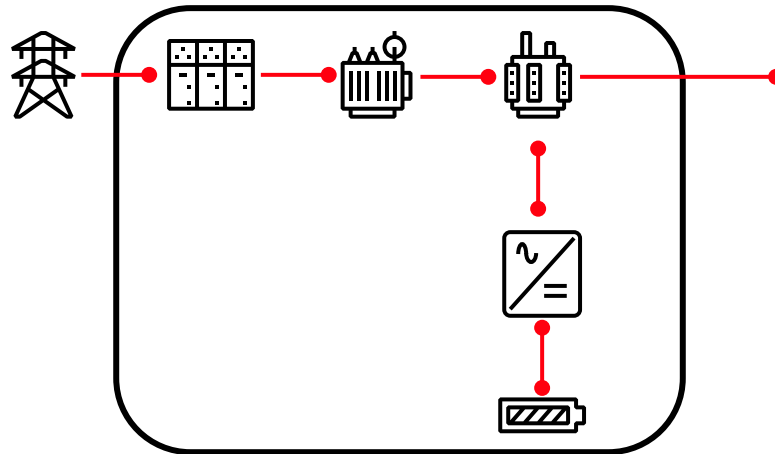
Optional equipment

- Seismic certifications
- IP35 or IP45 protection
- Ventilation area chosen for different climate conditions
- SCADA ready
- Remote monitoring
- Remote monitoring and control
- Energy management systems

Installation

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

Single line diagram



Energy storage module CSS solution with integrated energy storage

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