E-mobility Compact Secondary Substation (CSS)

GRP or steel enclosure to enable EV charging

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 makes it ideal for space restricted installations

Conditions
- Internal arc tested to IEC62271-202, a safer design for equipment, personnel and public environment
- Factory-delivered solution with external connection completed at site results in reduced installation time
- Compartmentalized design ensures authorized access and increases safety
- Digital solutions can be included to provide connectivity for remote monitoring and controlling

Equipment description
The CSS typically houses medium voltage switchgear (up to 40.5 kV), transformers (oil or dry type) and low voltage switchboard with protection devices, ie circuit breakers or fused disconnects. The CSS is compartmentalized to isolate the MV and LV sections to reduce risk of accidental handling.

Technical data

<table>
<thead>
<tr>
<th>Key specifications</th>
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<tbody>
<tr>
<td>Medium voltage level</td>
<td>from 6.3 - 40.5 kV</td>
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<tr>
<td>Typical ratings (kVA)</td>
<td>up to 4000 kVA</td>
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<tr>
<td>Secondary voltage</td>
<td>400-480 V</td>
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<tr>
<td>Trafo type</td>
<td>Oil or dry</td>
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<tr>
<td>Protection degree</td>
<td>IP 54/23D (SWGR/trafo)</td>
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<tr>
<td>Applicable standards</td>
<td>IEC, GB, AS, GOST, ANSI, CSA, and more</td>
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Optional equipment
- Seismic certifications
- IP35 or IP45 protection
- Added ventilation
- Remote monitoring
- Remote monitoring & control

Installation
- One-piece delivery factory assembled and tested
- Solutions with foundation and oil pit, or without foundation
- Reduced site works
- Compact design for reduced footprint
- Utility homologated solutions

Single line diagram

E-mobility Compact Secondary Substation