The ABB EcoFlex Energy Storage Module (ESM) for electric vehicle charging support provides a buffer of power and energy where sufficient power is not available from the grid.

EcoFlex ESM eHouse is a prefabricated and movable, plug-and-play solution allowing for immediate operation after connection to the LV grid. The ease of installation of this pre-wired solution drastically reduces the site activities in terms of manhours, excavation and civil works activities.

Solution can be easily connected to other ABB EcoFlex products. Robust and modular design allows stacking different EcoFlex solutions on each other in limited site conditions.

Solution features
- ISO dimensions for ease of transportation
- Compact design to reduce footprint installation
- Plug-and-play solution
- Pre-tested at factory
- Relocatable
- Robust design

Equipment description
The EcoFlex ESM houses the inverter, batteries, battery management system, protection equipment, internal power and control cabling.

ESM also contains the heating, ventilation and air condition system (HVAC) and fire suppression system which are designed to ensure safe operation and optimal environment for the installed components to maximize the lifetime of the system.

Technical data

<table>
<thead>
<tr>
<th>Key specifications</th>
<th>Typical ratings</th>
<th>Connection voltage</th>
<th>Storage power</th>
<th>Storage capacity</th>
<th>Transformer type</th>
<th>Protection degree</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>up to 500 kVA</td>
<td>400-480 V</td>
<td>Up to 500 kW</td>
<td>Up to 500 kWh</td>
<td>Oil or dry</td>
<td>IP 54</td>
<td>6060 x 2440 x 2900 mm</td>
</tr>
</tbody>
</table>
Additional equipment
- Energy management system
- Remote monitoring
- Remote monitoring and control
- SCADA ready
- HVAC
- Fire extinguishing system
- Seismic certifications

Installation
- One-piece delivery factory assembled and tested
- LV connection needed at site
- Reduced site works
- Compact design for reduced footprint
- Top lifting by crane
- Bottom lifting by forklift for ease relocation
- Standard lifting devices to be used
- Plug-and-play concept

Single line diagram

Energy storage module EcoFlex solution for EV charging support