Technical datasheet

UniPack – Compact Secondary Substation (CSS) Steel Housing – Mercury Layout (1250 kVA)

ABB's Compact Secondary Substation (CSS) concept is a type tested assembly for applications where power is transformed from MV (medium voltage) to LV (low voltage) systems. It comprises an enclosure containing all the required MV switchgear, distribution transformers, LV switchboards, connections and auxiliary equipment.

Features

- Type tested according to the latest IEC 62271-202 specifications
- Internal arc fault Type AB tested at 20 kA, 1 second
- High level of safety for equipment and personnel
- All equipment inside the CSS is type tested
- Footprint engineered to meet required clearance standards
- Steel housing
- Can be lifted with transformer installed
- Engineered for smooth air flow and natural cooling
- Locking system for all doors to prevent un-authorized entry of personnel
- Stainless steel hinges for corrosion resistance
- No access to live parts

Equipment description

Transformer – CSS is designed and manufactured to house dry or oil filled transformers.
Medium Voltage (12 kV) – CSS can be provided with different options of MV switchgear from ABB's portfolio of SF6 insulated compact secondary switchgear.
Low Voltage – A breaker (Disconnector, LBS or MCCB) mounted between the transformer and LV busbar or the cables can be mounted directly on the busbar. Various numbers and ratings of outgoing feeders can be provided depending on transformer size and customer needs.
Special LV equipment available upon request.

Standard models

Primary voltage: 12 kV – 24 kV
Power rating: up to 1250 kVA
Market: India and South Asia

Layout	Max. kVA	kV	Max. number of MV Switchgear panels	MV Switchgear Insulation type
Mercury	315	12/24	4	Gas
Mercury	400	12/24	4	Gas
Mercury	500	12/24	4	Gas
Mercury	630	12/24	4	Gas
Mercury	750	12/24	4	Gas
Mercury	1000	12/24	4	Gas
Mercury	1250	12/24	4	Gas

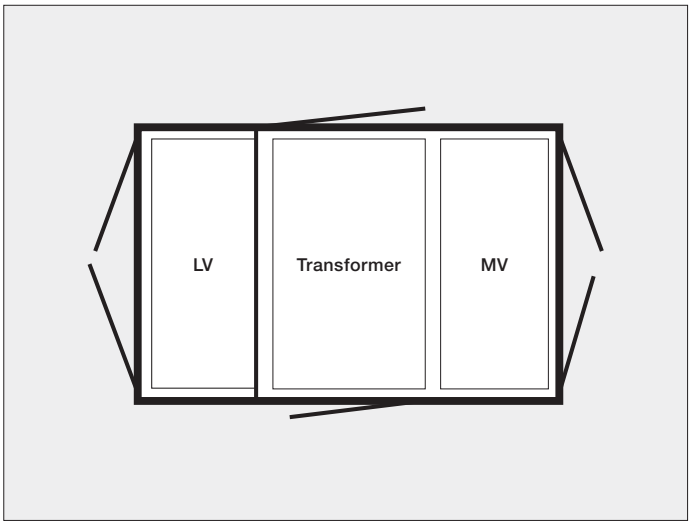
Technical data	UniPack Compact Secondary Substation – Mercury layout					
Transformer (kVA)	315	400	500	630	1000	1250
Type of layout	Mercury					
Rated voltage (kV)	12 kV/24 kV					
Short circuit withstand current of internal earthing network	20kA/1s					
Max. dimension of substation in mm (LxWxH)	3100x2360x2507					
Weight of substation excluding transformer (approximate)	2100 kg					
Transformer compartment dimension (LxWxH)	1614x2145x2100					
Maximum transformer load losses/No load losses to be installed	15500/1850 W					
Transformer compartment IP protection degree	IP 23D					
MV/LV IP compartment protection	IP54					
CSS Enclosure Thermal Class	K 10					
MV equipment	1-way MV switchgear with Metering Panel					
LV equipment	1 no. – I/C ACB or MCCB, 4 to 8 nos – O/G MCCBs					
Internal connection between MV switchgear and transformer	Single core 95 sq.mm Al. unarmored XLPE cable					
Internal connection between LV switchgear and transformer	AL Busbar sized according to the rated power of transformer					
Rated current of LV panel	up to 2500 A					
Rated short circuit withstand capacity of LV Busbar system	50 kA/1s					

Additional equipment

- Devices for metering and circuit control are available
- Power Factor Correction (PFC) panel
- Provision for automation
- Auxiliary lighting transformer

Installation

- A factory tested solution is delivered direct to the installation site, all necessary lifting devices for moving the substation are also provided
- Ready to install unit complete with internal interconnections, wiring and earthing.
- Simple civil foundation for installation of substation.
- Only external connection to be done at site, resulting in significantly reduced less installation time.
- For detailed information please see our installation manual



CSS Mercury layout

For more information please visit:
Your sales contact: www.abb.com/contacts
More product information: www.abb.com/productguide