

RECEIVING / INSPECTION / STORAGE

The Package Compact Substation is shipped from the factory ready for installation on site. It has been submitted to all normal routine tests before being shipped, and it is not required to do any voltage testing before putting it into service, provided the substation has not sustained any damage during transportation.

Immediately upon receipt of the Package Compact Substation, examine them to determine if any damage or loss was sustained during transit. If abuse or rough handling is evident, file a damage claim with carrier and promptly notify the nearest ABB office. ABB ELECTRICAL INDUSTRIES CO. LTD. is not responsible for damage of goods after delivery to the carrier; however, we will lend assistance if notified of claims.

PERSONNEL SAFETY

The first and most important requirements are the protection against contact with live parts during normal service as well as maintenance or modifications.

This is the reason why all live parts have been metal enclosed, so that when the parts are live and the Package Compact Substation doors are open, no one can be able to touch them. Also, it is safe in case any short-circuiting or sparking occurs at the bus bars.

VENTILATION

Transformer compartment has been provided with sand trap louvers, to prevent ingress of sand and that proper air circulation should take place.

EARTHING

Proper earthing bus bar has been provided.

HANDLING

Lifting lugs has been provided on top of four corners of the housing for lifting the DPS by crane and chains as a single unit, otherwise this can be done by a forklift of

Sufficient capacity, but the lifting fork must be positioned under the transformer portion.

INSTALLATIONS

A clean, flat surface capable of supporting the Package Compact Substation unit weight is the only requirement for a foundation. It is, however, important that adequate accessibility, ventilation and ease of inspection of the unit must be provided. In all installation work, the safety regulations for electrical installations have to be observed.

Each Package Compact Substation must be permanently grounded or earthed by connecting an effective recognized ground or earth as prescribed by the latest applicable edition of IEC or ANSI requirements. The Package Compact Substation is designed to operate with a solidly grounded neutral system. The neutral connection should be solidly and permanently grounded.

Tap connections

All units have taps located in the High Voltage winding. The tap arrangement is shown on the nameplate of the transformer. These taps are provided to furnish rated output voltage when the input voltage differs from the rated voltage.

To change tap connections, do the following steps:

1. De-energized the unit, short-circuit both the high and low voltage connections and ground both sides.
2. Unlock the tap changer handle, and then move the tap changer handle to the desired tap, then locked the tap changer handle.
3. Remove safety shorts and ground connections from the high voltage and low voltage buses.

After ensuring that no tools or hardware was left in the enclosure, and the enclosures are closed properly, you may then re-energize the Package Compact Substation. Make sure that the tap connections are proper for the required voltage as listed on the nameplate. The transformer is normally shipped with the tap changer for the rated voltage.

Cable connections

When making outside cable connections, conductors suitable for at least 85°C should be used. All connections should be made without placing undue stress on the terminals. Conductors should be securely fastened in place and adequately supported with allowances for expansion and contraction.

