

The incoming HV and LV connections can be made from the top or the bottom.

connections

HV side connections are made by cables.

LV side connections are made conventionally by cables, but can also be made using the «very safe» alternative using Prefabricated Busbar Trunking (PBT).

In all cases shown the cables or busbars must be supported to avoid mechanical stress on the HV or LV terminals or HV plug in connectors.

The HV connections should be made to the top part of the delta connection bars. The LV connections are made at the top of the transformer.

Warning :

- The distance between HV cables or busbars and the surface of the winding should be at least 120 mm except on the flat face of the HV side where the minimum clearance will be set by the HV terminal.

The clearance to the outer HV delta bar should also be a minimum of 120 mm.

- The resin coating, or the use of plug in connectors does not give protection against direct contact and the transformer must not be touched when it is energised.

- The overvoltage limiter (type CARDEW.C) can not be installed on the transformer LV busbars : the working temperature can not exceed 40°C (unless specifically designed for higher temperatures).

- Trihal without metal enclosure (IP 00).

- standard HV and LV connections.

- The outgoing (or incoming) LV conductors can be made from above or below (figures 1 and 2).

- The outgoing (or incoming) HV conductors can be made from above or below (figures 1 and 2).

In the case of an outgoing (or incoming) conductor from below it is necessary to put a spacer (spacer will not be supplied by France Transfo).

- HV connections with plug in connectors (figure 3).

- LV connections using prefabricated electrical trunking (PBT)(figure 4).

On site installation is simplified as far as possible, with very easy fitting, assembly and dismantling :

- the transformer is delivered pre-equipped with the PBT connection interface,

- the possibility of adjusting on site by ± 15 mm in all 3 directions,

- connection and disconnection is achieved within an hour at most providing optimum continuity of service.

As an example, the French guide C 15-005 recommends not exceeding 4 cables per LV phase, a limit which does not exist for PBT, which should therefore be used beyond this. PBT/Trihal interface connection, tested in the factory, guarantees conformity of the installation to NF C 15-100.

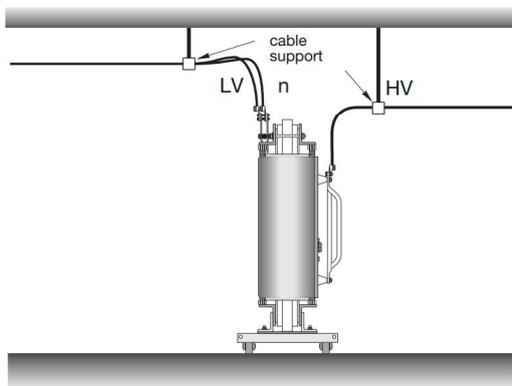


figure 1 - standard HV and LV connections from above

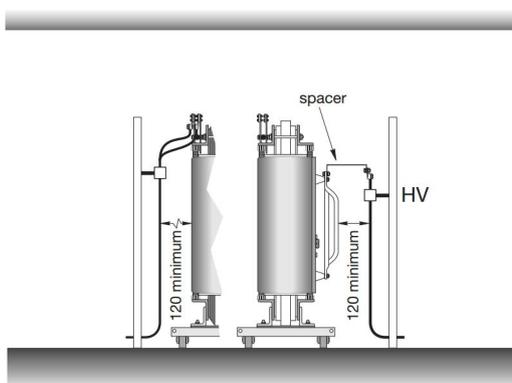


figure 2 -standard HV and LV connections from below

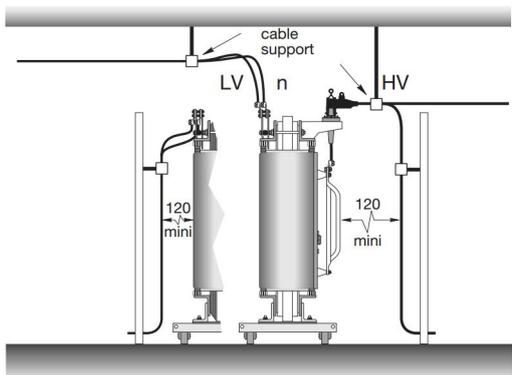
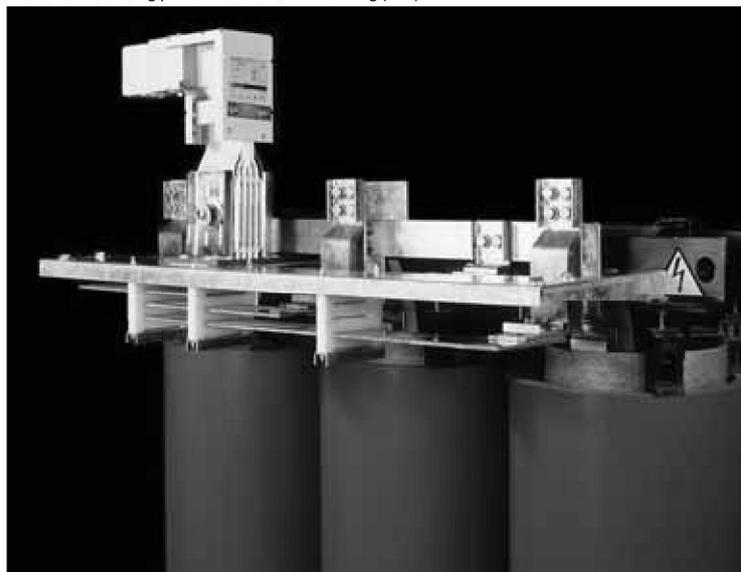


figure 3 - HV connections with plug in connectors

LV connections using prefabricated electrical trunking (PBT)



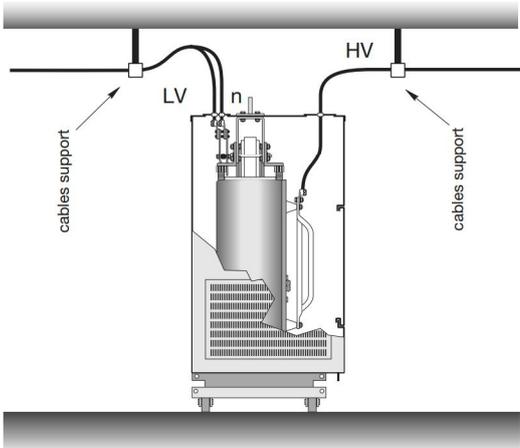


figure 1 - standard HV and LV connections from above

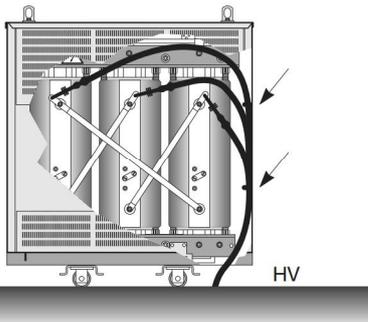


figure 2 - standard HV connection from below

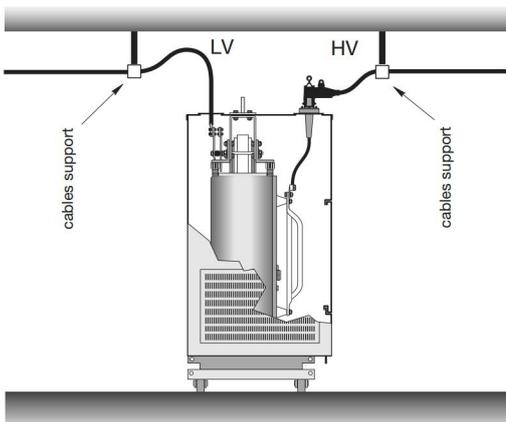


figure 3 - HV connections with plug in connectors (option)

■ Trihal with IP 31 metal enclosure.

standard HV and LV connections (figures 1 and 2).

- The outgoing (or incoming) LV conductors must go upwards from the terminals under the enclosure cover. The LV conductors should never pass between the HV coils and the enclosure.

- The outgoing (or incoming) HV conductors can pass above (figure 1) or below (figure 2).

HV connection from below.

- The outgoing (or incoming) HV conductors can come from below directly to the connection terminal (figure 2). In this case incoming conductors are passed through the removable flap door located at the bottom right of the HV side.

- The HV cables must be fastened inside the enclosure on the HV side panel. A cable bracket can be ordered as an option, for this purpose.

It is advisable to verify the feasibility of this type of connection in relation to the section and the bending radius of cables and the space available in the enclosure.

HV connection by plug in connector (figure 3).

LV connections using prefabricated electrical trunking (PBT) (figure 4).

Warning :

It is necessary to verify conformity with the IP31 protection index after having drilled the insulation gland plate for HV, LV and other.



figure 4 - LV connections with PBT on enclosure