

TTA or PTTA

It is important to appreciate that, although IS EN 60439-1 is the basic standard for assemblies, it only considers those which can be classified either as “type-tested assemblies (TTA)” or “partially type-tested assemblies (PTTA)”.

Assemblies should be of “fixed” or “withdrawable” construction. For details and guidance of withdrawable assemblies.

There are no other classifications – the standard does not care for assemblies built to less stringent design and test requirements, or which satisfy only some requirements of the standard.

(Such assemblies do not conform to IS EN 60439-1)

To comply with the standard, a full program of verifications must be completed. Users should ask to see documentary evidence of this.

TYPE TESTED ASSEMBLIES (TTAs)

Definition

A low voltage switchgear and control gear assembly conforming to an established type or system without deviations likely to significantly influence the performance, from the typical assembly verified to be in accordance with this standard.

When type tested assemblies are being used it is important to check that they are constructed in accordance with the type test and that any deviations from the type tested construction do not have a significant influence in the performance as verified by the type test.

Deviations from the type test, which could affect the performance, are:

- A. Structural changes which will affect the mechanical strength of the assembly.
- B. Incorrect sizing of busbar or cross section area which will affect the temperature-rise limits.
- C. Busbar supports spacing, changes in the type or quantity of busbar supports, and the busbar support structure. Which will affect the short circuit withstand strength.
- D. Reduction in compartment size may result in overheating of components and wiring may cause component breakdown or insulation failure and possible short circuit faults.

PARTIALLY TYPE TESTED ASSEMBLIES (PTTAs)

Definition

A low voltage switchgear and control gear assembly, containing both type-tested and non type tested arrangements, provided that the latter are derived (e.g. By calculation) from type-tested arrangements which have complied with the relevant tests.

The type-tested arrangements should cover as a minimum the mechanical assembly, the main and distributor busbar systems complete with all busbar supports.

The standard allows for use of the other parts in the assembly that are not part of the type test for the assembly for example, components and compartment layouts provided they themselves have been derived (e.g. By calculation) from type tested arrangements.