

Installation and Commissioning



Electrical plant including high voltage distribution switchgear and transformers are an important part of any overall project installation whether offshore or onshore, for an office block or a factory. Owing to the importance of the equipment it is essential that the installation and commissioning activities are completed by a suitably qualified and experienced organisation.

Installation Considerations

After months of careful consideration throughout the planning and design stage, the time has come to take delivery of your electrical power distribution switchgear and transformers. The typical design life of this type of plant is 25-30 years (can be variable) and the correct installation of your electrical plant will help to ensure a reliable electricity supply throughout its lifecycle.

Typical works for electrical power distribution switchgear and transformers will include earthing and power cabling installation, switchgear and transformer installation, control cable termination and auxiliary plant installation.

All equipment must be installed to the appropriate design package which is an essential source of information throughout the installation phase of the work.

Why commission your installation?


Your manufacturer will complete a selection of tests at their manufacturing facility and will provide you with the relevant test certification. In addition to this, a detailed and comprehensive site commissioning phase is pivotal to the success of your project. Your appointed specialist contractor or consultant should produce a detailed commissioning plan for the activities to be completed before you enter the commissioning phase of the works. A comprehensive commissioning phase will ensure that the system is installed to the design, is fit and ready for service and is fully tested.

What does the commissioning involve?

Each project and plant type will have different requirements but in terms of HV switchgear, Lucy Electric typically recommends a pre-commissioning check and a final commissioning/energisation check. The pre-commissioning check will be completed after the switchgear is installed and will include activities such as operational checks, application of protection relay settings (or TLF's – Time limit fuses) and other general tests.



The final commissioning tests will be completed after the cabling is connected and the equipment is ready for energisation. These final checks will include activities such as final checks on the switchgear ready for energisation, cable testing, and proving / checking of protection / control circuitry.

A full and detailed commissioning ne will ensure that the installation is ready for service and will help reduce operational issues throughout the plant lifecycle.

As a principle contractor, end client or consultant, you should be given the opportunity to witness and sign off these tests and following the commissioning phase it is also important to retain these records for your site files.



Relevant Information Sources

- Lucy Electric cable termination guide (<http://www.lucyelectric.com/en/press-news/company/guidelines-cable-termination/>)
- Relevant manufacturers installation & commissioning literature
- Electricity at work act
- Health and safety at work act
- HSG 230 HSE document "Keeping electrical switchgear safe"

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