

# KIPO

POWER CONSULTANTS

## DATA CENTRES SPECIALISTS



Empower your business by harnessing the knowledge and expertise of a leading power systems consultancy.

Discrimination, Selectivity and Grading Studies

Specialist HV and LV Arc Flash Studies

Nuisance Tripping Investigations, Fault Finding and Reporting

Detailed Visual Survey, Compliance, Corrective Feasibility and Surveying

Protection Relay Settings Commissioning & HV Switchboard Commissioning

HV and LV Discrimination (Selectivity) Studies

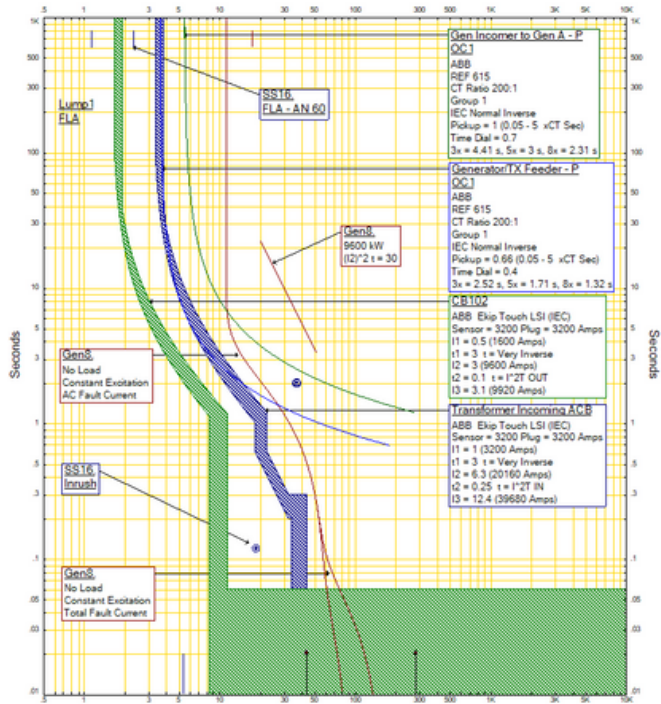
Short Circuit Studies

BS7671: Reg 536.2 Satisfactory Status Certificate of Selectivity

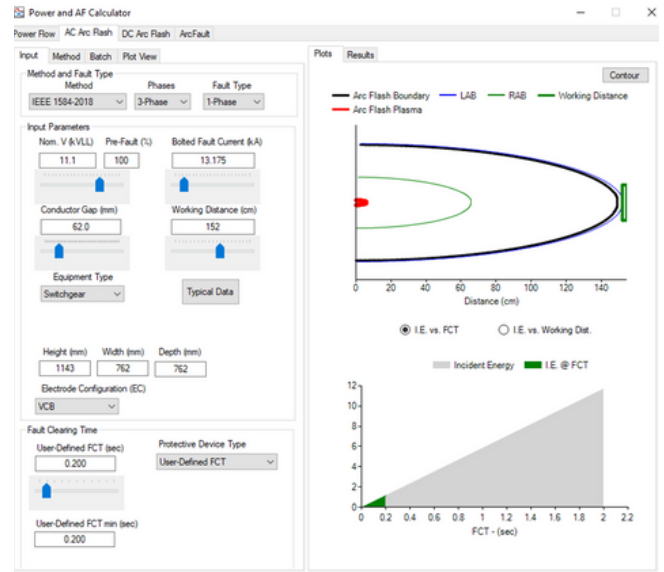
Earthing Potential Rise Studies

EMF and EMI Measured Survey Work

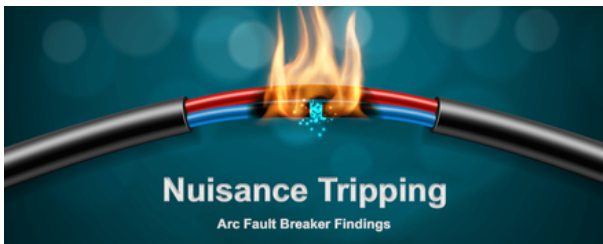
# Discrimination, Selectivity and Grading Studies



# Specialist HV and LV Arc Flash Studies



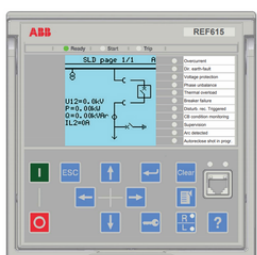
# Nuisance Tripping Investigations, Fault Finding and Reporting



# Detailed Visual Survey, Compliance, Corrective Feasibility and Surveying



# Protection Relay Settings Commissioning & HV Switchboard Commissioning



# COMMISSIONING RELAYS

## Commissioning Settings, Retrofit & Modifications

Schneider



Micom Relays

Siemens



Siemens 7rs110

ABB



ABB relay

Others



Alstom MCAG Relay



Sepam Relays



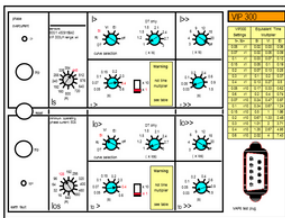
Siemens SIPROTEC



ABB REF Relay



Alstom REF Relay



VIP 300 Relay



Siemens Solkar



ABB REJ603



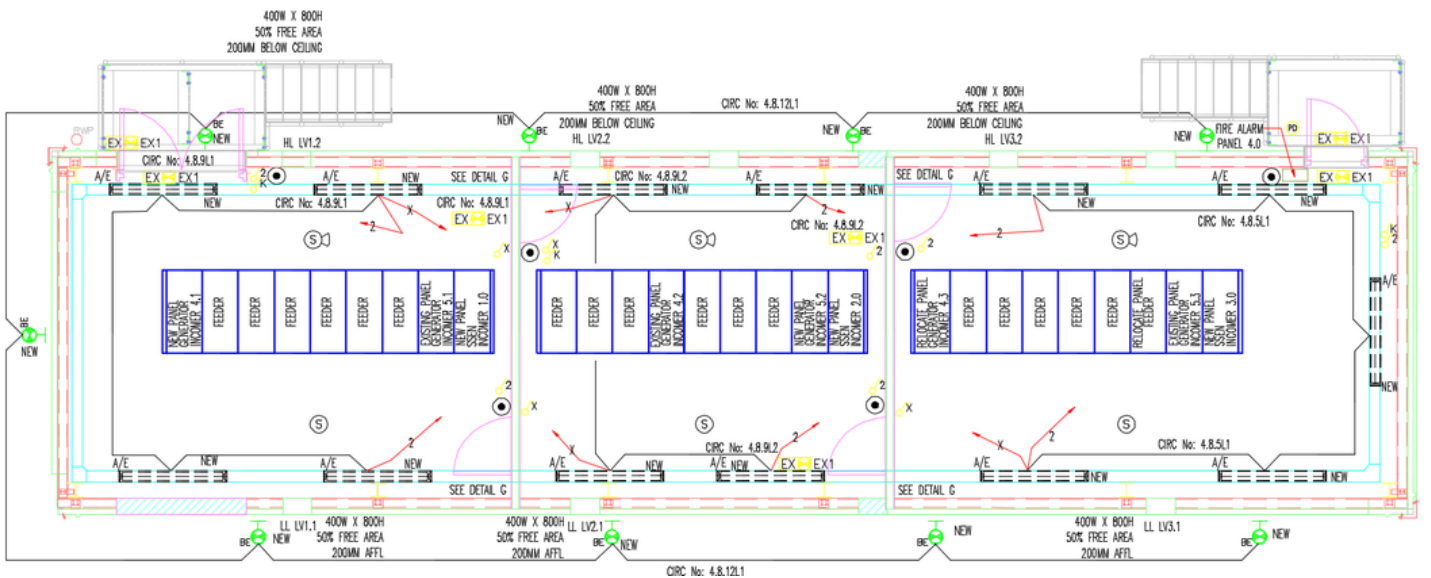
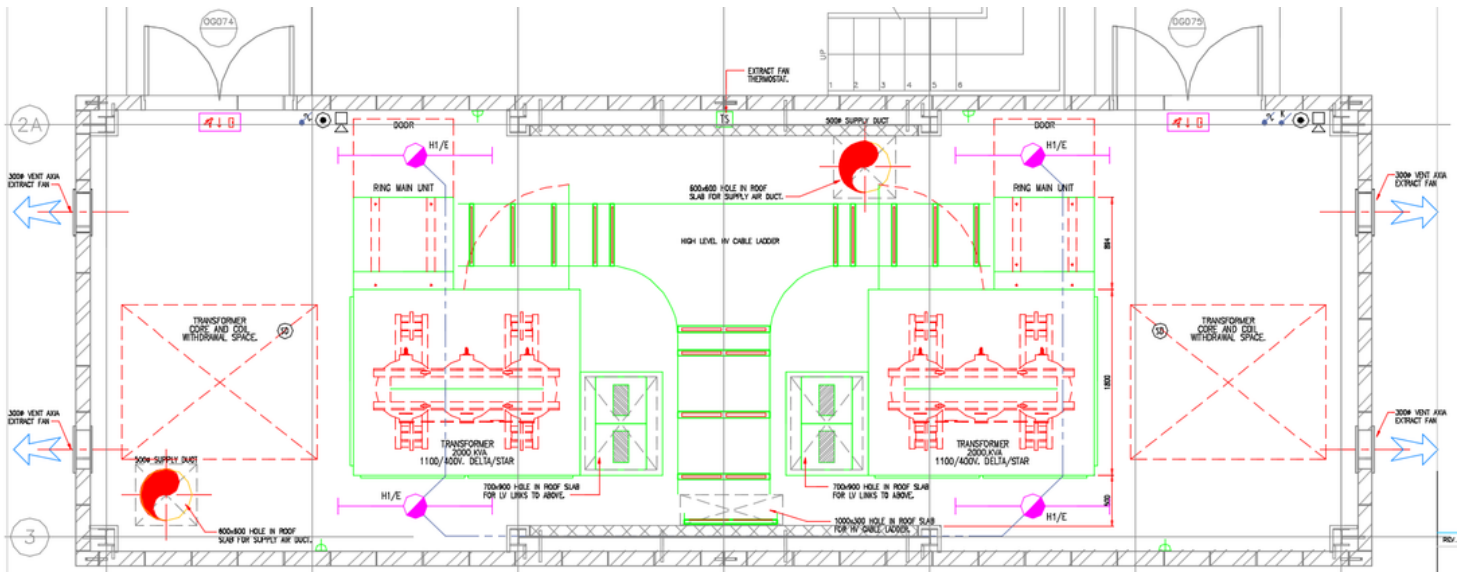
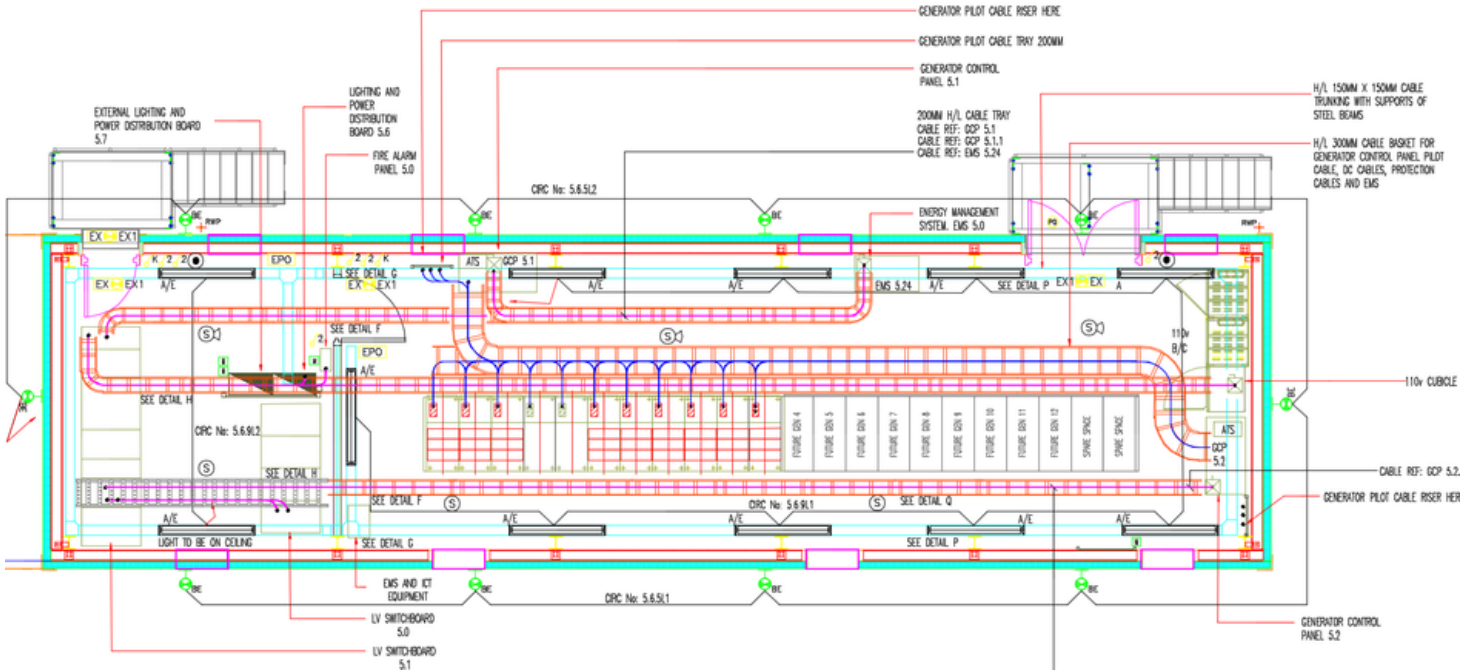
Fanox Relay



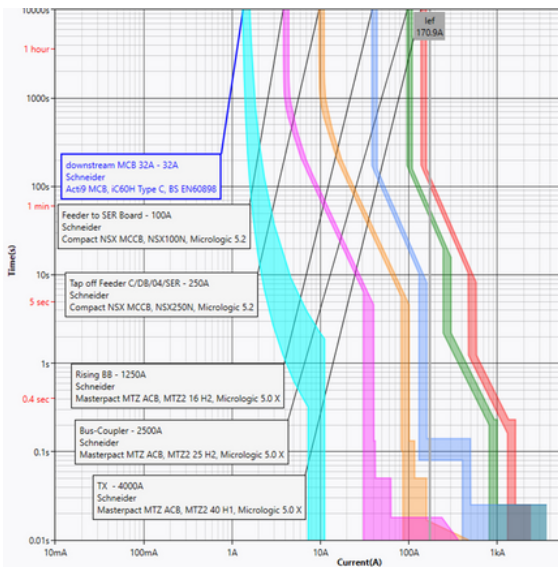
### HV COLD COMMISSIONING SERVICES WHICH INCLUDE:

- Pressure tests
- Interlock checks
- DC functional tests
- CT and VT testing
- Ductor Tests
- Protection relay secondary injections with new applied settings from protection studies
- PMS and Scada Controls
- Witnessing at FAT or SAT
- Technical Reports
- Rewiring, Retrofit and Modifications

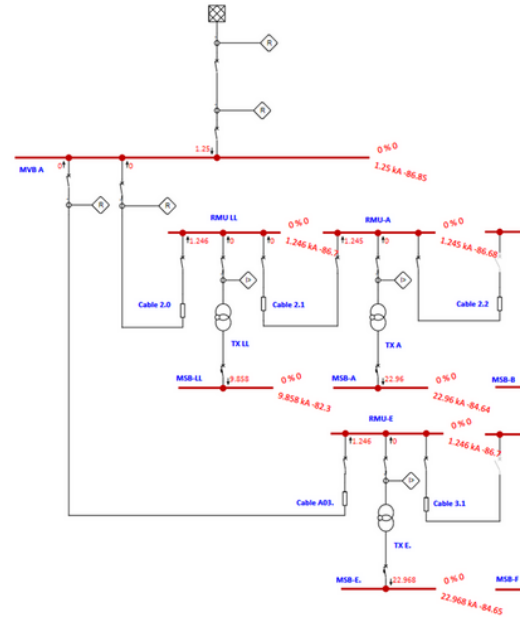
# HV Design



# HV and LV Discrimination (Selectivity) Studies



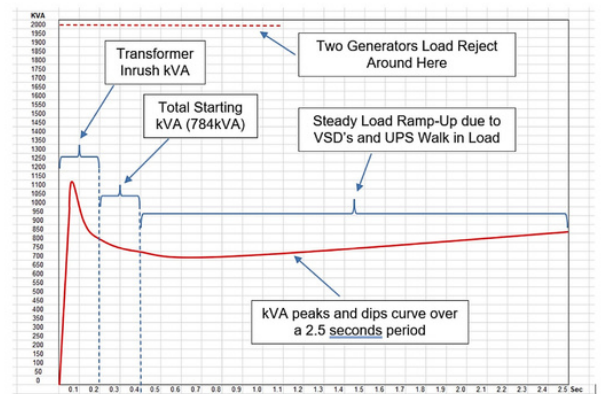
# Short Circuit Studies



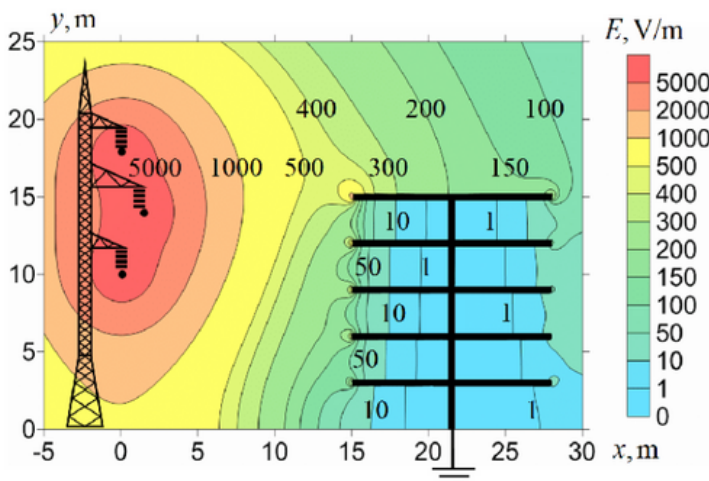
# BS7671: Reg 536.2 Satisfactory Status Certificate of Selectivity



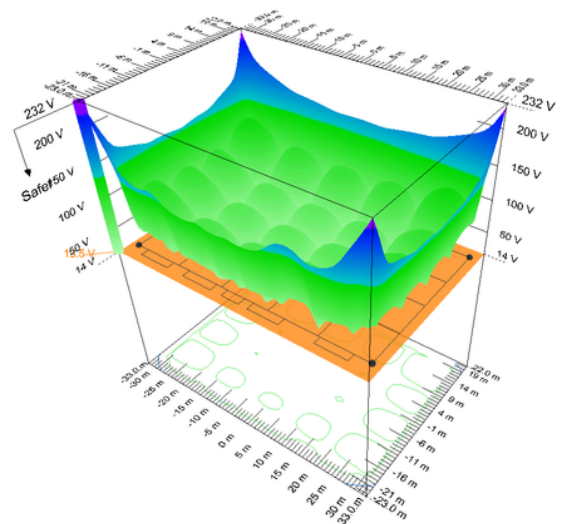
# Transient Stability Studies



# EMF and EMI Measured Survey Work



# Earthing Potential Rise Studies





### **High, Medium and Low Voltage Design**

Our High, Medium and Low Voltage designs consider the overall design of the electrical network relating to power generation, distribution switchgear, protection and relay selection and power/distribution transformers.



### **Discrimination Studies**

A Discrimination Study can help you to prevent unwanted power loss and breaker tripping. The objective of the study is to ensure safety and continuity of power to your electrical network.



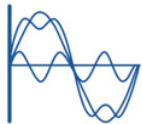
### **Short Circuit Studies**

Short Circuit Studies assess whether your switchgear has been sized correctly in the terms of three phase fault current withstand and that disconnection times are optimal to ensure safety of the installations. We provide in-depth reports for the design of both low voltage and medium voltage networks.



### **Earthing & EPR Survey**

We conduct earthing potential rise surveys to ensure that earthing has been undertaken in the safest way possible, which is particularly important around MV/HV switchgear and substations. These surveys are crucial where there is a high potential of hazard to people or equipment.



### **EMC and Harmonics**

We carry out strategic studies to ensure that your electrical design or installation complies with the Electromagnetic Compatibility (EMC) standards (IEC EN 61000). This can involve harmonic calculations, a power quality and harmonic survey, voltage studies and surge immunity studies.



### **Commissioning of HV Switchboards**

To undertake the commissioning of HV Switchboards, including relay protection settings established for all Arc Flash Studies



### **HV and LV Arc Flash Studies**

HV and LV Arc Flash Studies are used to identify the extent of a specific hazard within your facility and to minimise or mitigate the hazard when servicing the switchgear.



### **EMF Survey and Reports**

Electromagnetic Field surveys and reports are used to detect magnetic fields in areas of work, hotels and offices. We provide EMF surveys and reports, compliant with WHO guidelines, for areas near MV/HV substations, transformers, ageing cables, undersized equipment and mobile phone masts.



### **Detailed Visual Survey, Compliance, Corrective Feasibility, Surveying**

We carry out detailed surveys and feasibility studies to gather information, identify conditions, and make observations without the need for in-depth measurements or analysis.



### **Nuisance Tripping Investigations, Fault Finding and Reporting**

Resolving nuisance tripping issues often requires identifying and addressing the underlying cause to ensure reliable and uninterrupted electrical supply. We provide seamless process of fault finding and reporting to ensure the best solutions.

A technician wearing a high-visibility yellow and grey safety vest is working on a server rack. The technician is holding a red and black probe connected to a yellow multimeter. The server rack is filled with various components and cables. The background is slightly blurred, focusing attention on the technician's work.

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