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**Construction
Design Handbook**

**STANDARD APPLICATIONS FOR AREVA 'K' SERIES AND
SIEMENS (EX VA TECH) ARGUS MULTIFUNCTION RELAYS**

DH 09

Issue 1

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STANDARD APPLICATIONS FOR AREVA 'K' SERIES AND SIEMENS (EX VA TECH) ARGUS MULTIFUNCTION RELAYS

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1. PURPOSE

Areva 'K' Series and Siemens (ex VA Tech) Argus relays are multifunction numerical relays which because of their inherent flexibility are used for a variety of applications. This flexibility has led to a number of different settings being applied for similar applications which have resulted in errors being introduced. The purpose of this procedure is to standardise the application and setting of these relays for any particular functional application to eradicate setting and configuration errors.

2. REFERENCES

PS(T)010:	Application & Setting of Protection.
TGN(E)184:	Application & Setting of Protection.
UKBP/TP107(E):	Protection & Control Relay Settings.
UKBP/TP124:	Protection & Automatic Switching Schedules.

3. RESPONSIBILITIES

3.1 Settings Engineer (Supplier)

Responsible for calculating the relay settings for any 'K' Series or Argus relays used on any particular project.

3.2 Settings Engineer (National Grid), Construction

Responsible for calculating and producing any non-project related settings and reviewing settings calculations undertaken by suppliers, entering settings information into MARS, issuing settings sheets to site and reviewing and confirming the correctness of any new relay applications.

3.3 Commissioning Engineer (National Grid), Asset Management – Maintenance Delivery

Responsible for ensuring the setting as specified on the setting sheet is correctly applied to any particular relay.

4. REQUIREMENTS

4.1 Procedure for 'K' Series and Argus Relays

This procedure outlines National Grid's standard applications and settings for Argus and 'K' Series relays. **Appendix 1** details the Argus applications and **Appendix 2** the 'K' Series ones. The tables in these sections outline each application, giving the function or functions where appropriate, state a drawing that should be used to base the design on and a sample setting sheet outlining the configuration to be used. The only settings that should be changed from the standard ones are highlighted like **this** and represent the power system quantities to be applied, for example, current, time multiplier and timer settings.

When one of these relays is being used a circuit specific drawing should be produced, based on the standard diagram for the particular application and settings calculated and applied according to the standard setting sheet. The only difference in the settings should be the actual current, timer and time multiplier settings used.

The drawing numbers and titles are given as it is impractical to include them within this document. The drawings should be available within the Livelink-IDMS drawing management system. If they cannot be located they should be requested from Network Performance, Drawing Management within Asset Management.

4.2 Procedure for New Applications Not Listed Within This Design Handbook

If any new applications which are not included within this Design Handbook are required the following procedure shall be followed:

- At the earliest time possible within the execution of a specific project but prior to the multifunction relay being subject to Stage 1 commissioning, the proposed circuit diagram and proposed test documentation must be forwarded by the Supplier to the Commissioning Officer who will in turn forward it to the Settings Engineer (National Grid) allocated to the scheme.
- The Settings Engineer (National Grid) shall enlist the assistance of another Settings Engineer (National Grid) to jointly confirm the acceptability of the settings sheet, the corresponding circuit diagram and the test document. When these are confirmed as correct the Settings Engineer (National Grid) shall formally (email) notify both the Commissioning Panel Chairman and Commissioning Officer for the scheme that Stage 1 testing of these relays may commence.
- The Settings Engineer (National Grid) shall also provide the National Grid Construction Design Assurance Manager with copies of the confirmed setting sheet, drawing and test document so that the new application is recorded and this Design Handbook is updated.
- The Construction Design Assurance Manager will ensure that the new standard application is included within this Design Handbook for future use on other projects.

It is envisaged this Design Handbook will be updated regularly with any new applications. This also applies to any other multifunction overcurrent relays that are used as multipurpose relays for a standalone application.

This Design Handbook does not apply to any numerical relays used within or part of a type registered bay solution.

5. RECORDS

For every relay installed a setting must be created in MARS2 and issued to site for application to the relay as outlined in UKBP/TP107(E), Protection & Control Relay Settings. Site and circuit specific drawings are required for every application.

6. AUTHORISATION/REVISION

Rev N°	Date	Author	Revision Details	Authorised by
1	15/08/07	A J Chamberlain	First Issue	Keith Harker

A1.1 Feeder Backup Earth Fault Protection

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