GE \ Conventeam Drives

PECE

PECe Maintenance Course

The course has been designed to familiarise electricians, technicians and maintenance engineers with the many different aspects associated with the operation and maintenance HPCi and PECe controllers .

Where possible, application specific exercises, actual drawings and programs listings are used to allow the students to gain the greatest possible benefit from the course.

Course Reference
PECe

Course Duration
3 Day

Documentation
HPCi and PECe Training Manual.

DOWNLOAD SYLLABUS →

Objectives

To introduce students to the concepts and operation of HPC and PECe controllers, including the following areas:

- PECe Hardware Overview.
- Types of Variables
- Searching
- Monitoring Data
- Local and Global Variables
- Fault finding
- Program Structure
- Monitoring the program
- Addressing and documentation
- Ethercat
- Loading programs

COURSE CONTENT

- The function of the elements used in a PECe drive, controller, PIBe, Power stack and I/O.
- Wiring, LED indication and operation of the PIBe.
- Understanding how the PIBe interfaces with the Thyristor stack.
- Function of the ethercat I/O, module, wiring and led indication.
- Introduction to the P80i.
- Demonstration for the program structure for PECe.
- Understanding the structure of the flash card files KEY, IP and SYS files.
- Procedure for changing a processor and Setting up communications between the HPC and programmer.
- Downloading a program into the controller.
- Overview of the closed loop speed and current regulators in the P80i program showing how to monitor the system.
- Understanding the PECe regulator P80i program, in terms of the speed amp and current amp and firing angle.
- Explanation into the Encoder feedback, current feedback, voltage and how they enter the PIBe.
- Description of Global Variables and Documentation.
- Description of Local Variables and Documentation and the KKS structure.
- Monitoring the FBD program.
- Monitoring variables using DATA Monitor.
- Searching and cross reference and using KKS comments.
- Introduction to the FBD instruction set and the various libraries
- Making changes to program.
- Compile the program and interrupting error messages.
- Demonstration of how the PECe controller sends the firing pulses to the thyristor stack, through the PIBe.
- Alarms and chasing the alarms back in the software.
- Determining how to energise control on and control available.
- Ethercat Beckhoff communications and fault finding.
- Torque referencing and speed limiting.