COURSE DESCRIPTION

G860 PCS6000 Operation & Maintenance

Course goal
The goal of the course is to introduce and instruct the service and operation engineer to the PCS6000 Product Family. To allow them to learn in a safe and instructive environment the techniques required to carry out the correct procedure in operating and maintaining the PCS6000 frequency converter.

Main learning objectives
— Upon completion of this course, the participants will be able to:
— Describe the service training and authorization program
— Identify the PCS6000 configurations
— Explain the converter components and functionality
— Explain the operational sequences (control & emergency)
— Carry out standard maintenance
— Verify proper functionality of certain components
— Exchange standard parts
— Connect to IPC and use the software tools
— Carry out basic troubleshooting using service software and manuals

Participant profile
Electricians, technicians and engineers who operate, maintain or troubleshoot PCS6000. It is also a prerequisite for future commissioning & service engineers.

Prerequisites
— Electrical engineering knowledge & experience
— Laptop

Topics
— System description
— PCS6000 product overview
— Control hardware
— Power hardware
— Water Cooling Unit
— Maintenance
— Control sequences
— Troubleshooting
— Practical exercises
— Service processes

Follow-up training
— G861 Service & Commissioning

Course type
This is a face to face class room training with maximum 6 participants.

Learning methods and tools
This is an instructor led course with lectures and demonstrations. For maximum effectiveness it’s based on a good balance between theoretical training and practical exercises with training equipment
Duration
4 days

To register:
Please apply online (signup required):
ABB MyLearning/G860
Custom-tailored training courses or standard training at additional course dates are available on request.
Please note: The course is only carried out if at least 4 participants have been booked.

Course outline

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<th>DAY 1</th>
<th>DAY 2</th>
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<tr>
<td>— Welcome, course goals and schedule</td>
<td>— Converter components and functionality in detail</td>
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<tr>
<td>— Introduction to PCS6000</td>
<td>— Introduction to manuals and reports (user manual, service manual, maintenance report, etc.)</td>
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<tr>
<td>— Safety instructions for training unit</td>
<td>— Hands-on: Preventive maintenance</td>
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<td>— Hardware description</td>
<td>• Installation inspection</td>
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| — Hands-on:  
  • Operation of the converter  
  • Demonstration of control sequences | • DC link checks |
| — Exercise: Reading electrical circuit diagrams | • Functionality and security procedures |
| — Converter components and functionality in detail | • GRB and GDM/GBM checks |
| — Introduction to manuals and reports (user manual, service manual, maintenance report, etc.) | • Insulation resistance test |

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<th>DAY 3</th>
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<tr>
<td>— Introduction to IPC and software tools</td>
<td>— Troubleshooting procedure</td>
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| — Hands-on:  
  • Software download to PEC  
  • Change IP address of IPC | — Hands-on: fault finding exercises |
| — Hands-on:  
  • Test IGCT’s and diodes  
  • Semiconductor replacement | — Warranty and failure reporting |
| — Factory visit | — Final exam |
| | — Course conclusion and feedback |

Classroom training

Hands-on training