

## Process Automation and DCS Configuration

*Düsseldorf (Germany)*

*1 - 5 June 2026*

UK Training

# PARTNER



# Process Automation and DCS Configuration

Code: IT28 From: 1 - 5 June 2026 City: Düsseldorf (Germany) Fees: 4900 Pound

## Introduction

In the age of industrial digitization and operational excellence, mastering Process Automation and Distributed Control System DCS Configuration is essential for improving plant efficiency, safety, and scalability. This hands-on training program equips engineers, technicians, and operations managers with the critical knowledge and practical experience needed to design, implement, and optimize modern control systems. Participants will gain a deep understanding of system architecture, control strategies, field device integration, and advanced engineering tools. The course also emphasizes practical skills in Control Loop tuning, HMI Design, and SCADA integration, preparing attendees to take on real-world automation challenges across various industrial sectors.

## Course Objectives

By the end of this program, participants will be able to:

- Understand the fundamentals of Process Automation and control system architectures.
- Identify and describe the components and structure of a modern Distributed Control System DCS.
- Configure core and advanced DCS functions using engineering software.
- Integrate field instrumentation and I/O modules within a DCS platform.
- Tune PID Control Loops for optimal system responsiveness.
- Design interactive Human-Machine Interfaces HMI for operational visibility.
- Perform troubleshooting and apply maintenance best practices.
- Connect DCS platforms with SCADA systems and Manufacturing Execution Systems MES.
- Enhance overall system performance and reliability through System Optimization.

## Course Outlines

### Day 1: Fundamentals of Process Automation

- Introduction to Industrial Automation and its impact on modern industry.
- Overview of control system types: PLCs, SCADA, and DCS.
- Architecture and key components of a DCS.
- Open-loop vs. Closed-loop control strategies.
- Introduction to Proportional-Integral-Derivative PID control and tuning concepts.

### Day 2: DCS Architecture and Hardware Overview

- Core hardware components: controllers, HMIs, I/O modules.
- Redundancy, failover mechanisms, and industrial network topologies.
- Comparing DCS and PLC systems: use cases and decision-making.
- Communication protocols: Modbus, Profibus, OPC, and others.
- Hardware installation practices and industrial cabling standards.



### Day 3: DCS Configuration and Engineering Tools

- Navigating and using DCS configuration software.
- Creating and managing control strategies and loops.
- Setting up alarms, notifications, and event triggers.
- Designing graphical operator displays HMI Design for real-time monitoring.
- Tagging conventions and organizing control data structures.

### Day 4: Advanced Configuration and System Integration

- Programming sequential and batch control applications.
- Interfacing with smart field devices e.g., HART, FOUNDATION Fieldbus.
- Overview of Safety Instrumented Systems SIS.
- Configuring historical data logging and trending capabilities.
- Integrating with SCADA systems and MES platforms.

### Day 5: Maintenance, Troubleshooting & Case Studies

- Preventive and corrective maintenance planning.
- Diagnosing common DCS issues and fault isolation.
- System backup, recovery procedures, and configuration audits.
- Practical exercises and real-life case study reviews.
- Final review session, Q&A, and participant assessment.

### Why Attend this Course: Wins & Losses!

- Gain in-depth knowledge of Process Automation principles and DCS operation.
- Apply hands-on configuration skills for system architecture and control logic.
- Improve plant efficiency through better Control Loop tuning and optimization.
- Learn to design intuitive and functional HMI interfaces for operators.
- Understand how to integrate field-level devices with control platforms.
- Leverage advanced diagnostics to reduce downtime.
- Improve your qualifications with relevant, in-demand technical expertise.
- Collaborate and exchange insights with professionals from multiple industries.

### Conclusion

This comprehensive training on Process Automation and DCS Configuration is designed to elevate the skills of professionals who aim to modernize and optimize their industrial environments. From configuring Control Loops and designing HMI systems, to integrating with SCADA platforms and troubleshooting complex systems, this program offers both strategic insight and technical depth. Investing in such training will not only enhance your individual capabilities but will also contribute to your organization's drive toward efficiency, safety, and digital transformation.

Whether you're a rising engineer, seasoned technician, or operational decision-maker, this course will provide practical tools to meet today's and tomorrow's industrial challenges.





# Blackbird Training Cities

## Europe



Malaga (Spain)



Sarajevo (Bosnia and Herzegovina)



Oporto (Portugal)



Glasgow (Scotland)



Edinburgh (UK)



Oslo (Norway)



Annecy (France)



Bordeaux (France)



Copenhagen (Denmark)



Birmingham (UK)



Lyon (France)



Moscow (Russia)



Stockholm (Sweden)



Podgorica (Montenegro)



Batumi (Georgia)



London (UK)



Istanbul (Turkey)



Amsterdam



Düsseldorf (Germany)  
(Switzerland)



Paris (France)



Athens (Greece)



Barcelona (Spain)



Munich (Germany)



Geneva



Prague (Czech)



Vienna (Austria)



Rome (Italy)



Brussels



Madrid (Spain)



Berlin (Germany)



Lisbon (Portugal)



Zurich



Manchester (UK)



Milan (Italy)



## Blackbird Training Cities

### USA & Canada



Los Angeles (USA)



Orlando, Florida (USA)



Online



Phoenix, Arizona (USA)



Houston, Texas (USA)



Boston, MA (USA)



Washington (USA)



Miami, Florida (USA)



New York City (USA)



Seattle, Washington (USA)



Washington DC (USA)



In House



Jersey, New Jersey (USA)



Toronto (Canada)

### ASIA



Baku (Azerbaijan)  
(Thailand)



Maldives (Maldives)



Doha (Qatar)



Manila (Philippines)



Bali (Indonesia)



Bangkok



Beijing (China)



Singapore (Singapore)



Sydney



Tokyo (Japan)



Jeddah (KSA)



Riyadh (KSA)



Melbourne (Australia)  
Korea



Phuket (Thailand)



Dubai (UAE)



Kuala Lumpur (Malaysia)



Kuwait City (Kuwait)



Seoul (South)



Pulau Ujong (Singapore)



Irbid (Jordan)



Jakarta (Indonesia)



Amman (Jordan)



Beirut





## Blackbird Training Cities

### AFRICA



Kigali (Rwanda)



Cape Town ( South Africa)



Accra (Ghana)



Lagos (Nigeria)



Marrakesh (Morocco)



Nairobi (Kenya)



Zanzibar (Tanzania)



Tangier (Morocco)



Cairo (Egypt)



Sharm El-Sheikh (Egypt)



Casablanca (Morocco)



Tunis (Tunisia)



## Blackbird Training Clients



MANNAI Trading  
Company WLL,  
Qatar



Alumina Corporation  
Guinea



Booking.com  
Netherlands



Oxfam GB International  
Organization,  
Yemen



Capital Markets  
Authority,  
Kuwait



Waltersmith Petroman Oil Limited  
Nigeria



Qatar National Bank  
(QNB),  
Qatar



Qatar Foundation,  
Qatar



AFRICAN UNION ADVISORY  
BOARD ON CORRUPTION,  
Tanzania



KFAS  
Kuwait



Reserve Bank of  
Malawi,  
Malawi



Central Bank of Nigeria  
Nigeria



Ministry of Interior  
Kingdom of Saudi Arabia  
KSA



Mabruk Oil Company  
Libya



Saudi Electricity  
Company,  
KSA



BADAN PENGELOLA  
KEUANGAN Haji,  
Indonesia



NATO  
Italy



ENI CORPORATE  
UNIVERSITY,  
Italy



Gulf Bank  
Kuwait



المؤسسة العامة للتأمينات الاجتماعية  
General Organization for  
Social Insurance  
KSA



Defence Space Administration  
Nigeria



National Industries  
Group (Holding),  
Kuwait



Hamad Medical  
Corporation,  
Qatar



USAID  
Pakistan



STC Solutions,  
KSA



North Oil company,



EKO Electricity



Oman Broadband



UNITED NATIONS  
UN.



هيئة تنظيم الكهرباء - عمان  
AUTHORITY FOR ELECTRICITY REGULATION, OMAN  
Authority for

UK Training  
**PARTNER**



## Blackbird Training Categories

### Management & Admin

Entertainment & Leisure  
Professional Skills  
Finance, Accounting, Budgeting  
Media & Public Relations  
Project Management  
Human Resources  
Audit & Quality Assurance  
Marketing, Sales, Customer Service  
Secretary & Admin  
Supply Chain & Logistics  
Management & Leadership  
Agile and Elevation

### Technical Courses

Artificial Intelligence (AI)  
Hospital Management  
Public Sector  
Special Workshops  
Oil & Gas Engineering  
Telecom Engineering  
IT & IT Engineering  
Health & Safety  
Law and Contract Management  
Customs & Safety  
Aviation  
C-Suite Training



International House 185 Tower Bridge  
Road London SE1 2UF United Kingdom



+44 7401 1773 35  
+44 7480 775526



[Sales@blackbird-training.com](mailto:Sales@blackbird-training.com)



[www.blackbird-training.com](http://www.blackbird-training.com)

