

# T304 System 800xA using PROFIBUS/HART

## Field Device Integration with Asset Optimization

### Course Description



### Course Duration

The duration is 5 days.

### Course Type

This is an instructor led course with interactive classroom discussions and associated lab exercises. Approximately 50% of the course is hands-on lab activities.

### Course Goal

The goal of this course is to learn the planning, configuration and commissioning of automation solutions with PROFIBUS/HART devices in System 800xA. Another goal is the maintenance and optimization of these devices by using Asset Optimization and Calibration Management.

### Student Profile

This training is targeted to application and instrumentation engineers, commissioning and maintenance personnel, service engineers and system integrators.

### Prerequisites and Recommendations

Students should have attended either the Basic Configuration course T314 or the Engineering course T315 or have knowledge and experience associated with the content of these courses.

### Course Objectives

Upon completion of this course, students will be able to:

- Explain the fundamentals of Fieldbus technologies especially PROFIBUS/HART

- Design and plan the topology of a System 800xA with PROFIBUS/HART device
- Configure and commission HART devices out of the ABB Device Library
- Use DTMs and Fieldbus Builder for parameterization, diagnostic and simulation
- Configure and commission PROFIBUS devices out of the ABB Device Library
- Use PROFIBUS data in applications for alarms, graphics etc.
- Configure HART/PROFIBUS devices not within the ABB Device Library
- Calibrate field devices based on Asset Monitors
- Use the integrated Asset Maintenance workflow with connection to CMMS
- Install the required software components, optional with Asset Optimization

### Main Topics

- PROFIBUS/HART fundamentals
- System 800xA topology with PROFIBUS/HART field devices
- HART devices on Modulebus and PROFIBUS
- PROFIBUS DP slaves
- PROFIBUS PA slaves
- Devices not in ABB Device Library
- Asset Monitoring
- Calibration Management with DMS
- CMMS integration
- Installation of software extensions



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### Course Outline

Day 1	Day 2	Day 3	Day 4	Day 5
<ul style="list-style-type: none"> <li>• Course overview</li> <li>• PROFIBUS/HART fundamentals</li> <li>• System 800xA topology with PROFIBUS/HART field devices</li> <li>• HART devices on Modbus and PROFIBUS</li> </ul>	<ul style="list-style-type: none"> <li>• HART devices on Modbus and PROFIBUS (cont.)</li> <li>• PROFIBUS DP slaves</li> <li>• PROFIBUS PA slaves</li> </ul>	<ul style="list-style-type: none"> <li>• PROFIBUS PA slaves (cont.)</li> <li>• Devices not in ABB Device Library</li> </ul>	<ul style="list-style-type: none"> <li>• Asset Monitoring</li> <li>• Calibration Management with DMS</li> </ul>	<ul style="list-style-type: none"> <li>• CMMS integration</li> <li>• Installation of software extensions</li> </ul>

