

# S314

## Symphony Plus Melody - Advanced Engineering

### PROFIBUS/HART Field Device Management



Coupling intelligent field devices to S+ Melody controllers using PROFIBUS, HART and Modbus are the topics of this course. Basics on the communication protocols as well as the implementation of the couplings in the control system will be trained.

#### 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.

#### Participant profile

S+ Melody users planning or employing the coupling of intelligent field devices using PROFIBUS, HART or Modbus.

#### Prerequisites

The participation in the courses S301M and then S313 are required. Basic knowledge of digital data transmission is an advantage.

#### Learning objectives

Upon completion of this course the participant will be able to

- Explain fieldbus technology basics, particularly PROFIBUS and HART
- Plan a Melody-System with PROFIBUS and HART devices.
- Install and configure the required software components
- Configure and commission PROFIBUS and HART devices using device specific DTMs
- Configure and commission PROFIBUS devices via gsd file.

- Configure cyclic HART communication
- Use Melody Analyzer to troubleshoot disturbances on the PROFIBUS network.
- Exchange/replace PROFIBUS and HART devices

#### Topics

- Basics on PROFIBUS / HART / Modbus
- Bus access procedure, cyclic and non-cyclic communication
- Topology of a Melody-System with PROFIBUS, HART and Modbus devices
- Coupling of HART devices via PROFIBUS-DP and S800-I/O
- Coupling of HART devices via Melody-I/O
- Configuring PROFIBUS DP Master
- Configuring PROFIBUS DP Slaves
- Configuring PROFIBUS PA Slaves
- Configuring modular field devices based on DTMs and gsd-files
- I/O function blocks for PROFIBUS and cyclic HART communication
- Installing DTMs, updating DTM library
- PROFIBUS Diagnostics using Melody Analyzer

#### Duration

4 days

Agenda			
Day 1	Day 2	Day 3	Day 4
Course Overview	PROFIBUS DP Master: Characteristics of the Melody PROFIBUS Masters, Redundancy	PROFIBUS DP Slaves: Configuring, commissioning and testing PROFIBUS devices via gsd-file and Default-DP-DTM (UMC100)	PROFIBUS PA Slaves
Basics on PROFIBUS and HART	Configuring PROFIBUS communication parameters	HART Communication: Using HART-DTMs to parameterize HART devices	OPTION: Modbus Basics, Melody-Modbus-Master (CCF10), MODBUS-TCP
Topology of a Melody- System with PROFIBUS and HART devices	Installing DTMs, Updating DTM library	HART Communication: Configuring cyclic HART communication via Melody- System-I/O and S900	OPTION: Configuring, commissioning and testing a Modbus-Communication
	PROFIBUS DP Slaves: Configuring, commissioning and testing PROFIBUS devices with devices specific DTM (S800/S900)		OPTION: Configuring devices specific diagnostics messages
	PROFIBUS diagnostics via Melody Analyzer		

We also offer this training on site – at a time convenient for your purposes. Please contact us! We look forward to preparing a customized offer for you.

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