

## Training Course

# PROFIBUS configuration smartLink HW-DP



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# 1     **Getting Started**


In this training session you will learn how to view the HART devices connected to supported HART IO modules in the live list page of the smartLink HW-DP.

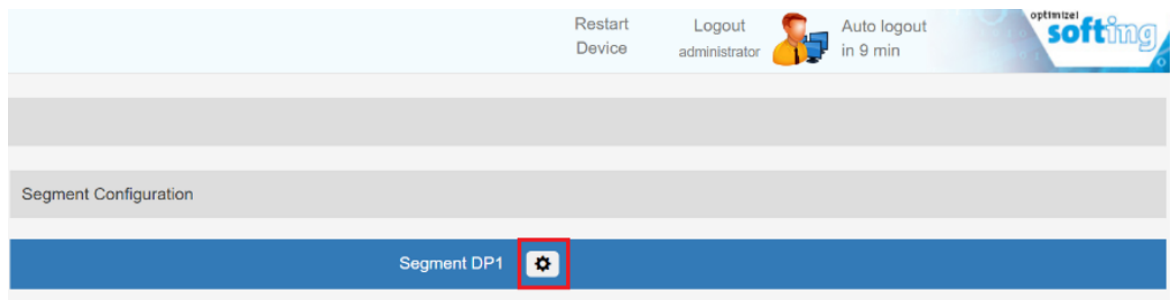
## 1.1   **Prerequisites**

- smartLink HW-DP is set up according to training course Initial Setup.
- smartLink HW-DP is connected to a PROFIBUS network.

## 2 Defining PROFIBUS bus parameters

You will start by configuring the PROFIBUS bus parameters.

1. Log on as Administrator or Maintenance user.
2. Go to **PROFIBUS → Configuration**.
3. Click the  icon in the Segment Configuration window to open the bus parameter settings.



The Project Settings section contains the configured bus parameters. To take over these parameters click **[Apply Configuration]**. The applied configuration will become effective next time the HART IP server is activated. This means that if the HART IP server is already running you have to stop and restart the HART IP server.

The Effective Settings section contains the bus parameters that the smartLink HW-DP currently uses for communication. If the HART IP Server is not activated the field will read **PROFIBUS is offline**.

4. Enter the PROFIBUS address your smartLink HW-DP will use when connecting to the PROFIBUS segment in the field **Station Address**.

Bus parameter		
	Project Settings	Effective Settings
Baudrate	1.5 MBaud	PROFIBUS is offline
Tsl [t/bit]	1200	PROFIBUS is offline
Min Tsdr [t/bit]	11	PROFIBUS is offline
Max Tsdr [t/bit]	150	PROFIBUS is offline
Ttr [t/bit]	20000	PROFIBUS is offline
Highest Station Address	126	PROFIBUS is offline
Tset [t/bit]	1	PROFIBUS is offline
Max Retry Limit	7	PROFIBUS is offline
Station Address	3	PROFIBUS is offline

Please note: The busparameters only get effective with the action "Apply Configuration".

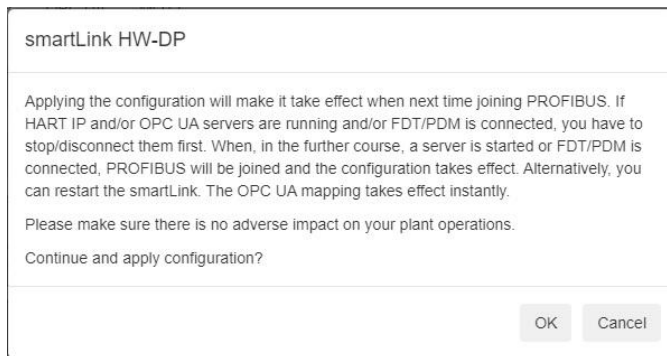
OK Cancel



### Note

Ensure that the **Station Address** is NOT used by any other node connected to the PROFIBUS network.

5. Fill in the remaining fields using the parameters of the DCS system.
6. Click **[Apply Configuration]**.
7. Click **[OK]** to confirm that you want to apply the configuration.



8. Check that the following message is shown in the status line at the bottom of the window:  
**Apply Code Info 1019: The code has been successfully applied.**
9. Select **[Save Project]**.  
A file containing the configured bus parameters is created.
10. Store the saved project file in a safe location.

**Note**

To load a saved project click **[Load Project]** and select the corresponding file to restore the configured bus parameters.

### 3 Activating the HART IP server

After configuring the PROFIBUS bus parameters this is how you can activate the HART IP server. After activation, the smartLink HW-DP starts scanning the PROFIBUS segment for available PROFIBUS and HART devices.

1. Go to **HART IP** → **Settings**.
2. Define a **Long Tag**.



**Note**

The defined Long Tag will appear in Emerson AMS Device Manager and can be used to identify a specific smartLink HW-DP if several are in use.

3. Tick the check box ☒ next to **Start HART IP server for Segment DP1**.

4. Click **[Apply]**.
5. Check that the following message is shown in the status line at the bottom of the window: **Join PROFIBUS Info 1032: PROFIBUS successfully joined**.



**Note**

In the Bus parameter settings you will now see the previously configured parameters in the **Effective Settings** section.




## Bus parameter

	Project Settings		Effective Settings
Baudrate	1.5 MBaud 		1.5 MBaud
Tsl [t/bit]	300 		300
Min Tsdr [t/bit]	11 		11
Max Tsdr [t/bit]	150 		150
Ttr [t/bit]	20000 		20000
Highest Station Address	126 		126
Tset [t/bit]	1 		1
Max Retry Limit	3 		3
Station Address	3 		3

Please note: The busparameters only get effective with the action "Apply Configuration".

## 4 Verifying connected devices

When the HART IP server has been activated verify that all expected HART devices are shown in the Live List.

1. Go to **Diagnosis** → **Live List**.
2. Select the  icon to show all modules and verify that all HART devices in your network are listed.



### Note

Only licensed devices are accessible within the Emerson AMS Device Manager. For devices that do not have a license please contact [Softing Support](#) to acquire additional licenses.

Views: Live List 47 HART device(s) License(s) occupied: 47 by HART IP, 18 by MQTT, OPC UA and PDM / DTM License(s) remaining: 310 [Reassign Licenses](#) [Refresh](#)

Settings  
Log File  
Threads  
Status  
**Live List**

4 HART device(s)

licensed	Channel	Long Tag / Message	HART Long Address	Distributor	Device Type	Device Revision	Command Revision
✓	0	ABB-CI801_35.1.0	ad e9 1e 88 89	006d (PR Electronics)	6de9	1	7
✓	1	ABB-CI801_35.1.1	ad ef 1e ec 5c	006d (PR Electronics)	6def	1	5
✓	2	ABB-CI801_35.1.2	9a 0b a8 c0 1c	001a (ABB)	1a0b	2	5
✓	3	ABB-CI801_35.1.3	ad e9 1e 88 ab	006d (PR Electronics)	6de9	1	7

HART Module (Segment DP1, Slave 35, Slot 2 = Card 35)

Segment: Segment DP1  
Slave Address: 35  
Slot: 2  
I/O channels: 8

1 HART device(s)

licensed	Channel	Long Tag / Message	HART Long Address	Distributor	Device Type	Device Revision	Command Revision
✓	0	ABB-CI801_35.2.0	93 03 5d be 4f	0013 (Fisher Controls Intl LLC)	1303	2	5

HART Module (Segment DP1, Slave 40, Slot 4 = Card 40)

Segment: Segment DP1  
Slave Address: 40  
Slot: 4

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