
SITRANS LR 200 and SIMATIC PDM

Connecting SITRANS LR 200 to SIMATIC PDM using HART[®] modem

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|-------------------|---|
| Objective: | <ul style="list-style-type: none">• Become familiar with the SITRANS LR 200 wiring requirements and HART modem• Become familiar with SIMATIC PDM configuration tool |
| Equipment: | <ul style="list-style-type: none">• SITRANS LR 200 instrument• SITRANS LR 200 instruction manual• SIMATIC PDM ver. 5.2 (SP. 1)• HART modem interface• Terminal screwdriver• PC or Laptop |

While every effort was made to verify the following information, no warranty of accuracy or usability is expressed or implied.

Overview:

SIMATIC PDM is the Siemens configuration software used to set up the SITRANS LR 200. All parameters are accessed through PDM and projects containing configuration data are saved. SIMATIC PDM also provides diagnostic information, permitting the user to view echo profiles and check set points.

To ensure that SIMATIC PDM connects properly, please complete the two processes outlined in Initial Setup:

- Updating the Device Description
- De-activating Buffers

This Application Guide discusses the following

- setting up SIMATIC PDM
- setting up a HART network
- adding the SITRANS LR 200 HART to a project
- viewing and editing parameters
- using SIMATIC PDM LifeList for quick access

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Siemens Milltronics Process Instruments Inc.

1954 Technology Drive, P.O. Box 4225, Peterborough, ON Canada K9J 7B1
Tel: (705) 745-2431 Fax: (705) 741-0466 www.siemens-milltronics.com
Email: techpubs@siemens-milltronics.com

Initial Setup

Updating the Device Descriptor

NOTE: Make sure that SIMATIC PDM software is not running while the device descriptor is updated.

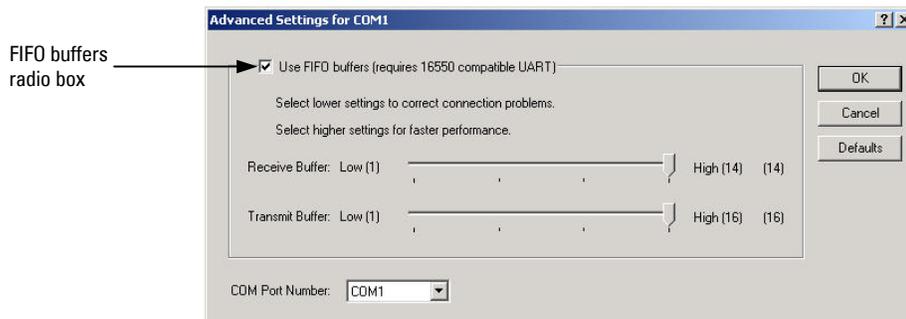
The latest SITRANS LR 200 HART device description for Simatic PDM is available for free download on www.siemens-milltronics.com:

1. Go to **Downloads** on the SITRANS LR 200 product page and select **HART Device Descriptor version 1.95 for SIMATIC PDM**.
2. Save the ZIP file to a directory on your terminal and then double click to open it.
3. In the ZIP window, double click **DeviceInstall.exe** and follow the directions in the installation wizard.
4. After installation, close and delete ZIP file.
5. Open SIMATIC PDM.

De-Activating Buffers

This de-activation is required to align SIMATIC PDM with the HART modem for Windows 2000® and Windows® XP operating Systems. (CAUTION: Professional version only. PDM does not operate in Windows XP Home version.)

1. Click **Start/Settings/Control Panel** to begin configuration.
2. Double click **System**, select the **Hardware** tab, and click the **Device Manager** button.
3. Open **Ports** folder and double click the COM Port used by the system to open the Device Manager window.
4. Select the **Port Settings** tab and double click the **Advanced** button.
5. If the Use **FIFO buffers** radio box is selected, click to unselect.



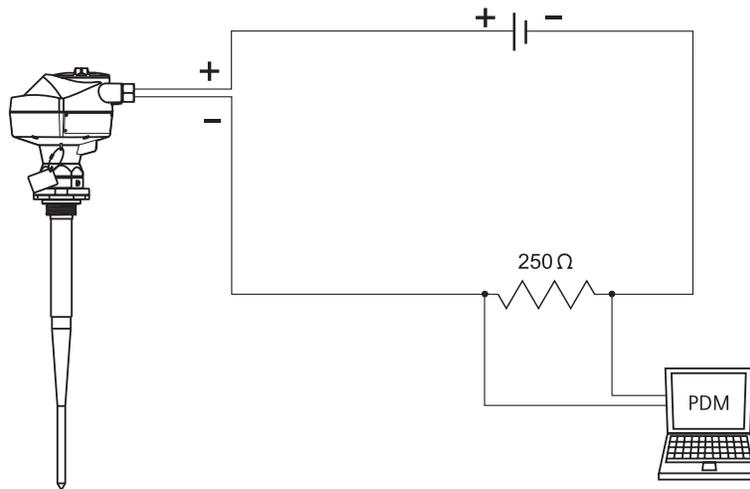
6. Click **OK** to close out. Close all screens and then reboot.

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Procedures

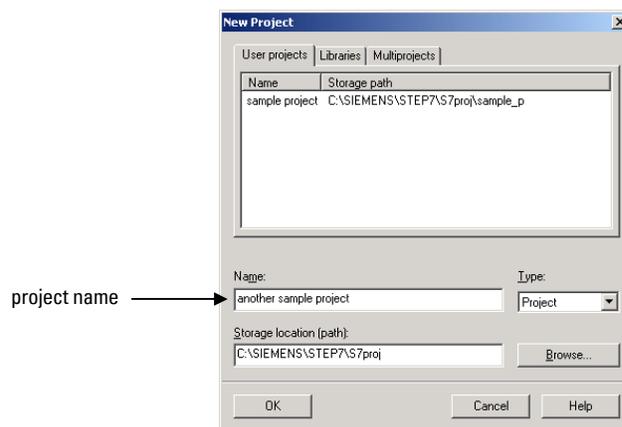
Wiring in the HART Modem

1. Using the instruction manual as a guide, terminate the wires inside the LR 200 housing to the appropriate terminals.
2. Connect the HART modem across the wires powering the SITRANS LR 200. These wires must be terminated across a 250 Ohm resistor in series with the loop.



Configuring with SIMATIC PDM

1. Double click the SIMATIC manager icon.
2. Select **FILE/NEW** to open the New Project window and then enter the project name. Click **OK**.



APPLICATION GUIDE

3. Select **VIEW/Process Device Network View** to access the Process Device Network View window.



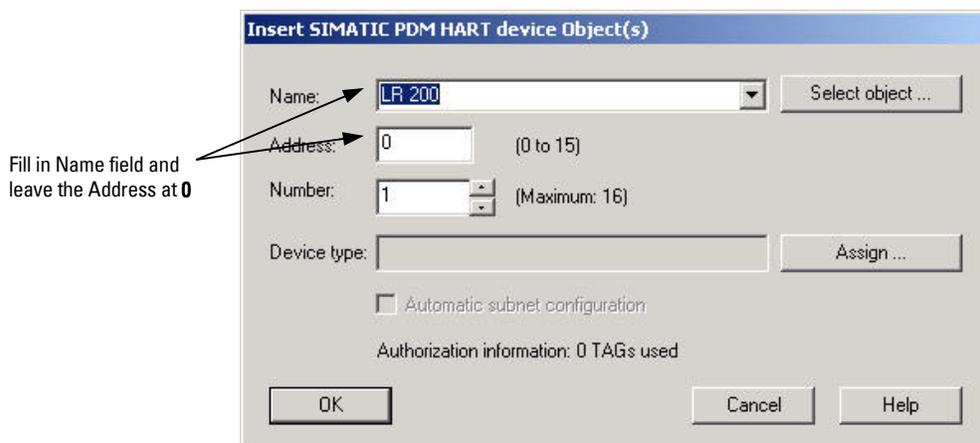
4. Right click **networks** and select **Insert New Object/HART modem**.



Verifying COM Port

If this is an initial setup, it is valuable to verify that PDM is using the correct COM Port.

- a. Open the Network tree in the left window pane by clicking the + sign.
 - b. Click the computer icon to access **Com interface 1** in the right pane.
 - c. Right click **Com interface 1** and select **Object Properties** to open the **COM interface** window.
 - d. Select **Connection** tab to verify that the selected COM-Port matches the one used by the terminal. (If not, change the COM Port number.)
 - e. Click **OK** to shut window and continue setting up HART modem.
5. Right click **HART modem** in Process Device Network View window and select **Insert New Object/HART device** to open the Insert Device Objects window.



APPLICATION GUIDE

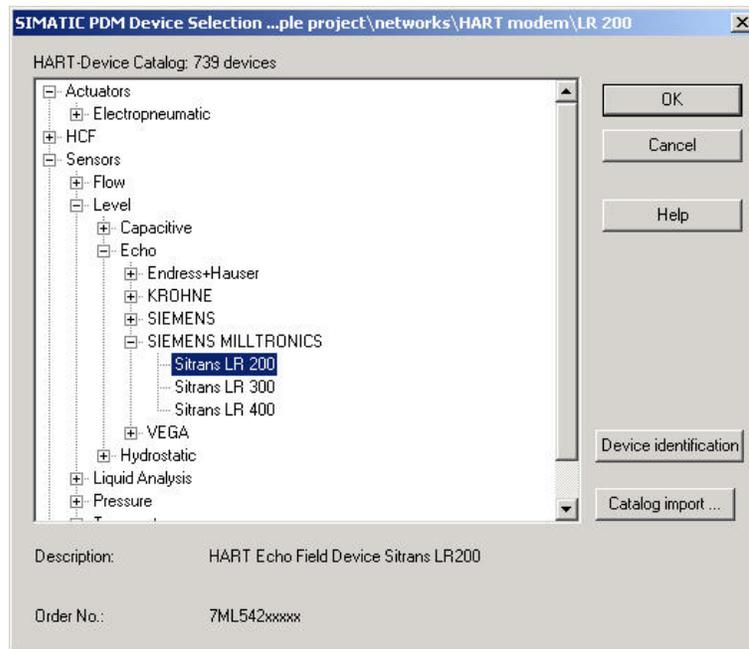
6. Click **OK** to re-open Process Device Network View window.



7. Double click **LR 200** to open the User ID window. Select **Specialist** and click **OK**.

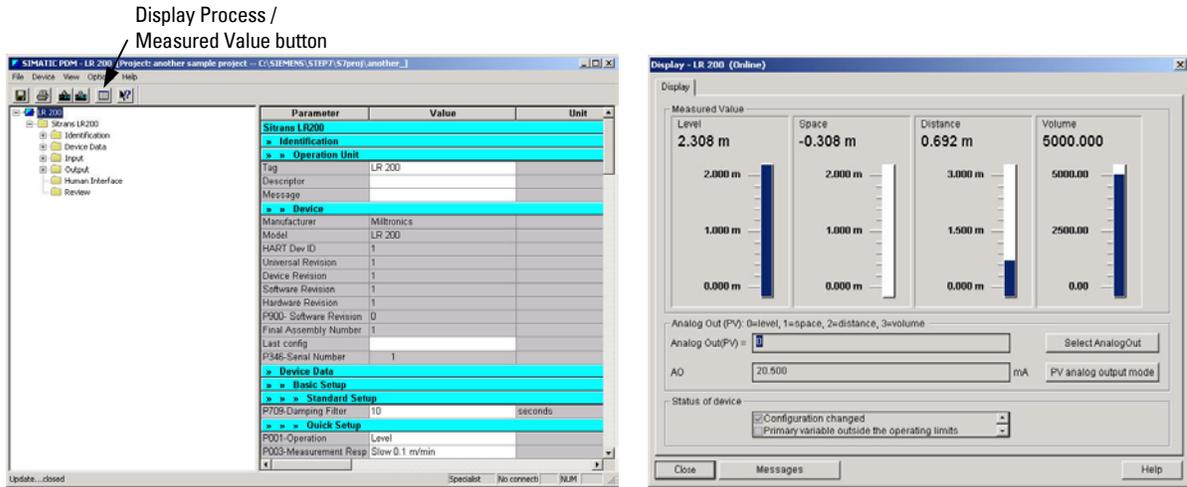


8. Go to Sensors/Level/ Echo/SIEMENS MILLTRONICS and double click Sitrans LR 200 to open the device window.



APPLICATION GUIDE

- Click **Display Process / Measured Value** button to connect to the SITRANS LR 200 and display real time information.



Viewing and Editing Parameters and Application Review

SIMATIC PDM provides full access to the SITRANS LR 200 parameters and to PDM's features. The parameters used to operate the SITRANS LR 200 are accessed through the folder tree in the left pane of the LR 200 Project Manager window. The PDM application review features are accessed through the Project Manager Window menu bar.

Parameter Viewing and Editing

- active fields are white; static fields are gray
- whenever possible, use drop down arrows to select values
- basic, detailed, and quick setup information available
- review features gives parameter setting overview
- use upload and download buttons to change device settings and to store accumulated application data

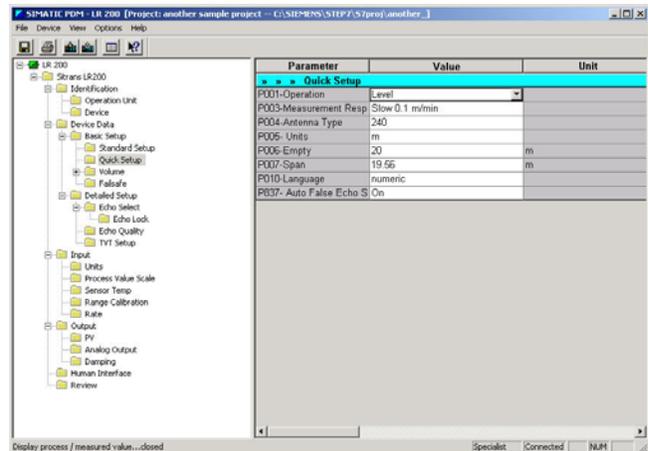
Application Review Features

Use Menu bar features, including the following, to access application data and adjust LR 200 performance:

- auto TVT
- self test
- master reset
- display value
- echo profiles

menu bar

parameter
viewing and
editing

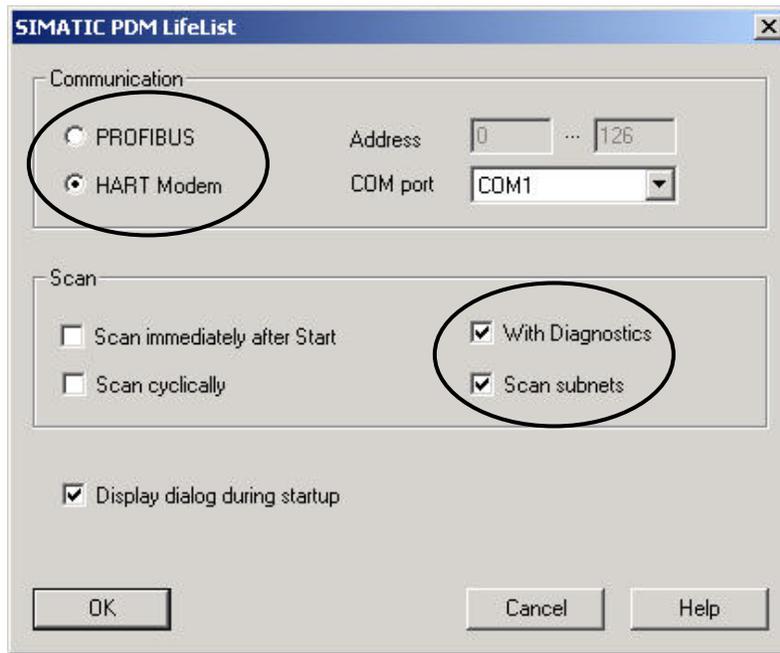


APPLICATION GUIDE

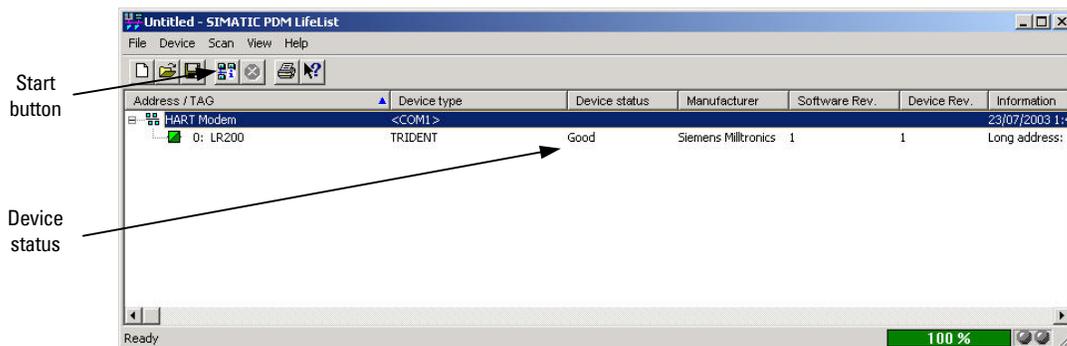
SIMATIC PDM LifeList Access

PDM LifeList gives you immediate access to the instruments connected to your terminal. Settings can be monitored and parameters can be changed; however, these changes will not be reflected in the SITRANS LR 200 permanent project file. They can be saved upon exit and may then be used to change settings after PDM is accessed in the standard fashion.

1. In your Simatic program folder, select **Step 7** and then click **SIMARIC PDM – LifeList** to select communication device.
2. In the LifeList setup window, select the following:
 - HART Modem
 - With Diagnostics
 - Scan subnets

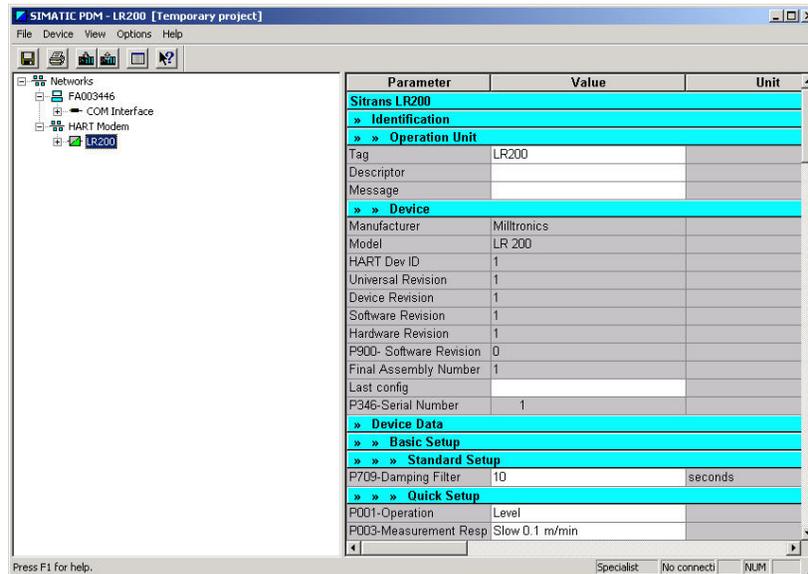


3. Click OK to open the access window.
4. Click the **Start** button (fourth from right) to access the LR 200. Note that the Device status can take several seconds to come online as it changes from **Not Validated** to **Good**.

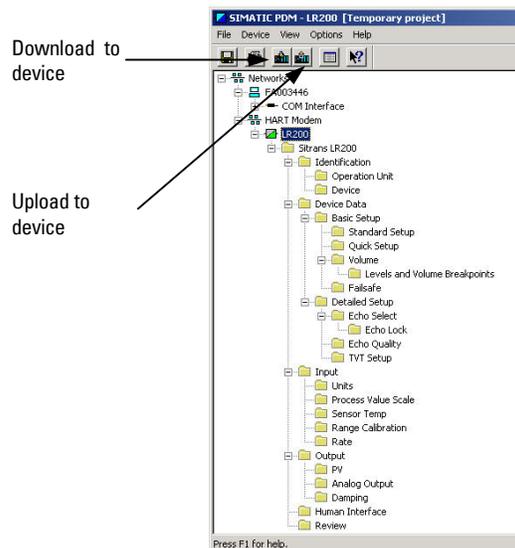


APPLICATION GUIDE

5. Double click **LR 200** to open the User ID box. Select **Specialist** and then click **OK** to open the **LR 200 Temporary Project** window.



6. Open the LR 200 folder in the left pane and select the parameter values requiring adjustment.
7. Use the Menu options to access application data and to adjust LR 200 performance.
8. Use the **Upload** and **Download** buttons to configure the unit and to get data.



9. Upon completion, click **File** on the menu bar and then click **Exit**. Although LifeList does not work in the unit's project file, you have the option to save the changes as a PDM file and import it into a project file.
10. Click **File** and then **Exit** to close the LifeList window. You have the option of saving the data as a PDM file and import it into a project file.

NOTE For information on loading information into PDM, please consult PDM Help