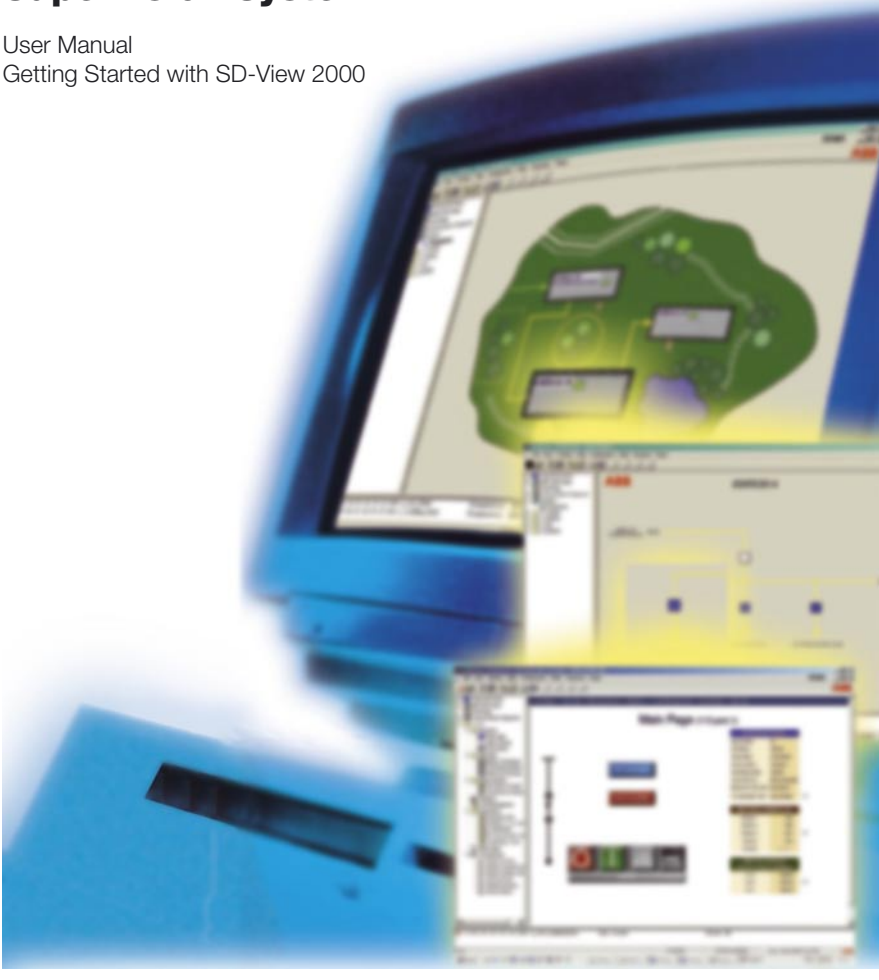
SD-View 2000

Release 2.0
July 2006

Supervision System

User Manual
Getting Started with SD-View 2000



ABB

Index

1. SD-View 2000 Setup

The aim of this Help is to lead the user to a proper installation of SD-View 2000, to the configuration of the serial ports and of the protection devices. For a correct installation of the product, the user has to follow the steps shown in this paragraph.

Warning:

It is mandatory to remove a previous version of SD-View 2000 before proceeding with a new installation. The removing procedure will delete all your current data so it is useful to backup them before continuing.

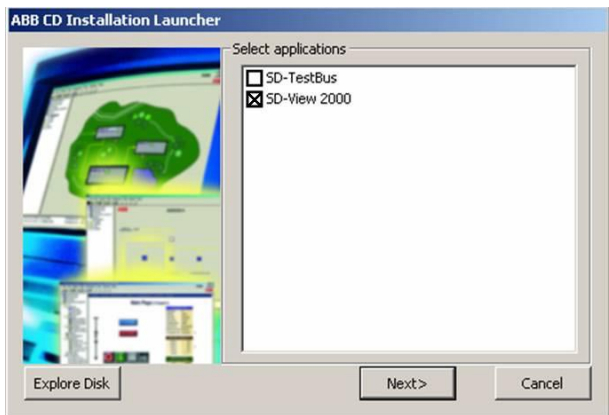
How to install SD-View 2000

1st Step

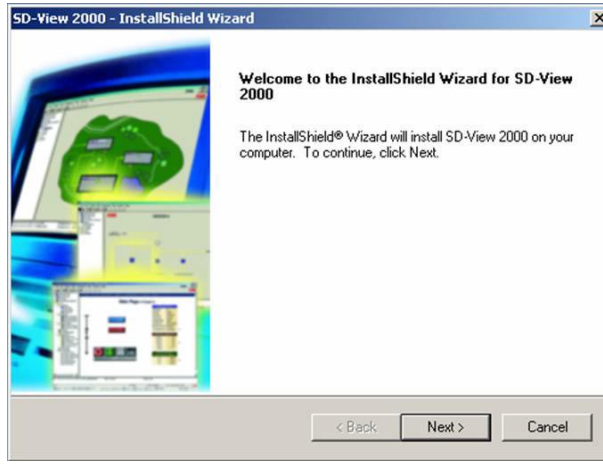
Insert the SD-View 2000 CD and wait for the Installation Launcher of ABB to auto-start. If the auto-run function is not active, proceed as follows:

- Click “My Computer” ;
- Click the CD-ROM unit where the SD-View 2000 CD has been inserted ;
- Click to run the ABB CD Installation Launcher.

Select “SD-View 2000” and click “Next” to proceed.

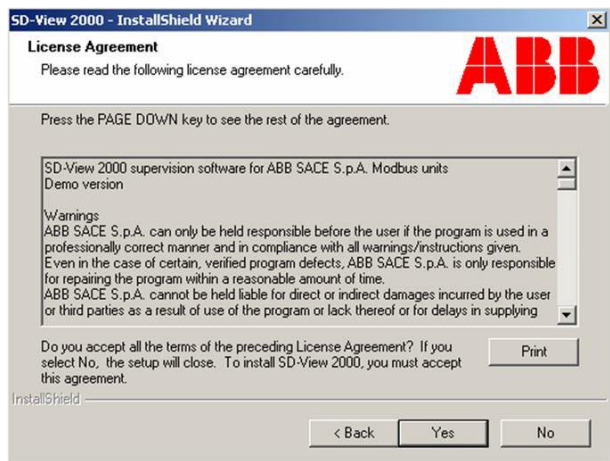


This is the first installation screenshot :



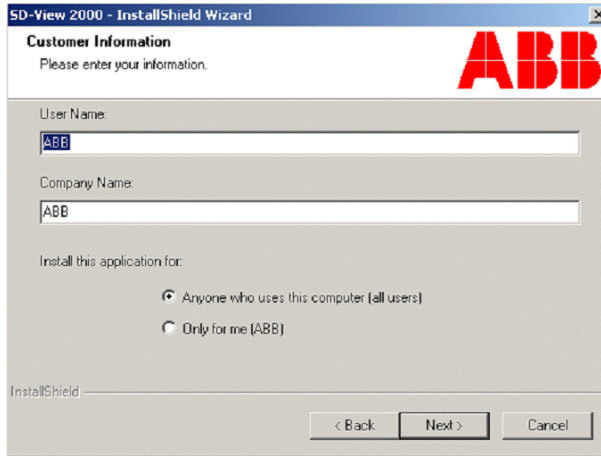
2nd Step

Before proceeding with the installation, read the license agreement and click “YES” to accept.



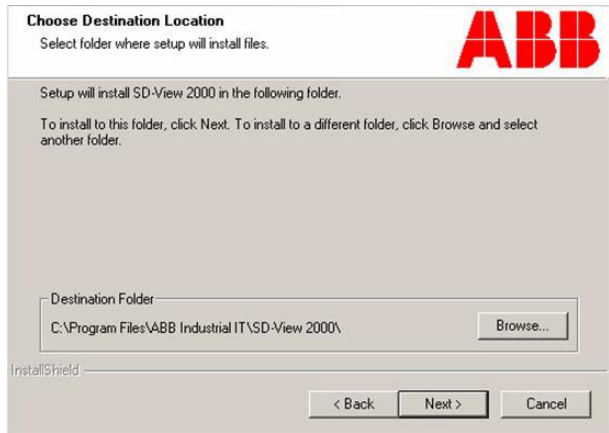
3rd Step

Insert “User Name” and “Company Name” in the default fields and click “Next”.

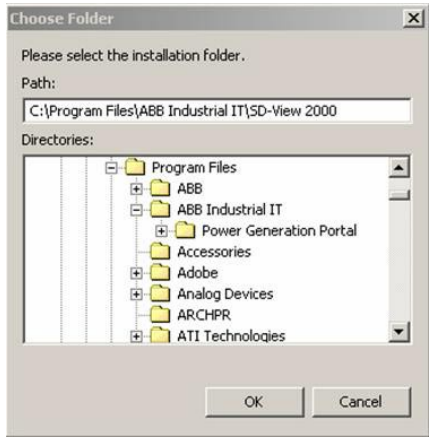


4th Step

Click “Next” to accept the default folder.



Otherwise click “Browse”, if the installation of “SD-View 2000” to a different folder from the default one is desired.



Click “OK” to choose a new path and later “Next” to proceed with the installation.

The language among the two available, Italian and English, is automatically set by the installation program according to the settings of the PC.

5th Step

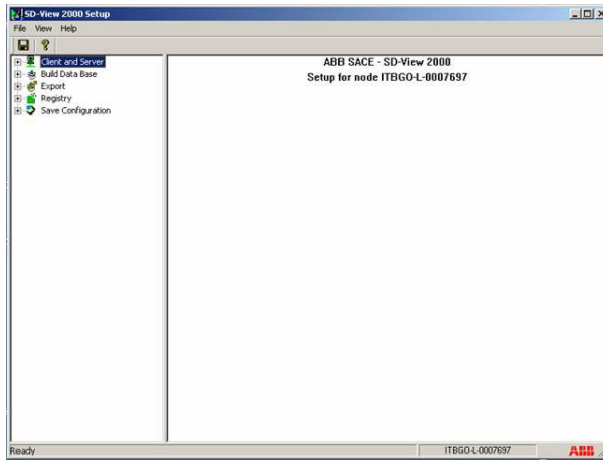
The moving bar indicates the status of the installation procedure. Wait for the installation to end and click “Finish” to complete the set-up of SD-View 2000. Click “Finish” to restart the system.

2. How to get the license

In order to proceed with the registration of the product, it is necessary to purchase the licensed version and send the identification code of the USB key to the following e-mail address: SDView2000License@it.abb.com. ABB SACE will send the ".dat" license file which has to be copied in the in the following folder "\ABB Industrial IT\SD-View 2000".

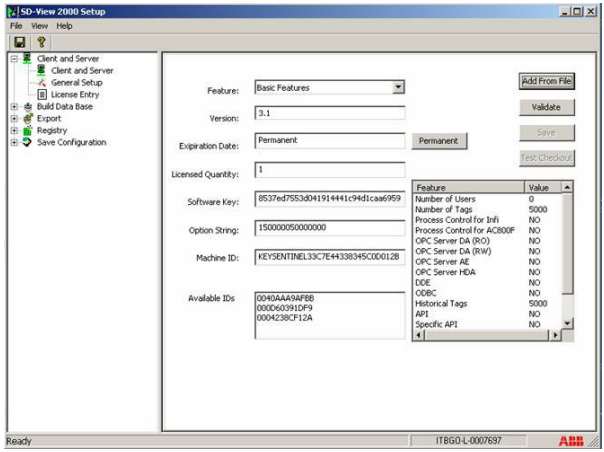
1st Step

Follow the path **Start ->Programs ->ABB->SD-View 2000->SD-View 2000 Application ->System Setup**, click the "System Setup"  icon to pop the following screenshot up:



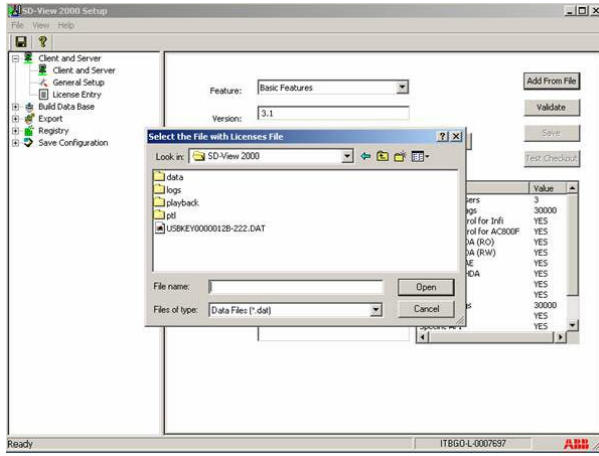
2nd Step

Click “Client and Server” and then activate the license registration screenshot by selecting “License Entry”:



3rd Step

Connect the USB-key license to the PC, click the “Add From File” button to load the license file. It is possible to choose the correct path of the license file through a pop-up menu that will be displayed.



Select the license file and click “Open”. Automatically all the form fields will be filled in according to the file loaded, as shown in the following screenshot.

4th Step

To enable the license it is necessary to validate it, to save the license settings and then to test the settings. All the mentioned operations can be enabled clicking these buttons:

- First the “Validate” button;
- Then the “Save” button;
- At the end the “Test Checkout” button.

5th Step

Select “Drivers” from the “Feature” pop-up menu and repeat the 3rd e 4th step.

6th Step

Close the “System Setup” application.

3. SD-TestBus2 Setup

Before proceeding with the SD-View 2000 configuration, the user has to scan the network status. This operation is necessary to avoid problems during the communication among SD-View 2000 and field devices.

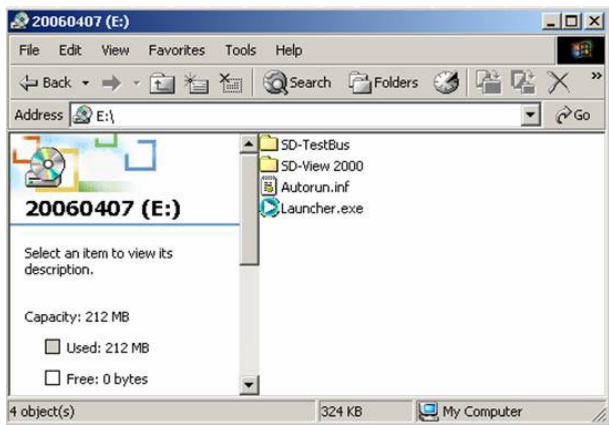
SD-TestBus2 is the product that makes it possible to verify the communication and the connections among a Modbus Master and ABB SACE field devices. The necessary steps for a correct setup of this application are listed in the following:

1st Step

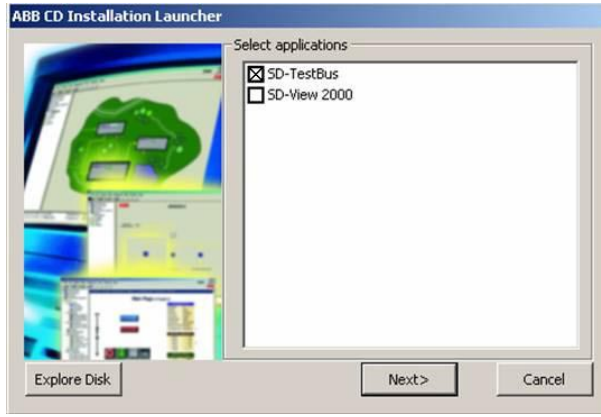
Insert the SD-View 2000 and wait for the Installation Launcher of ABB to auto-start. If the auto-run function is not active, proceed as follows:

- Click “My Computer”  ;
- Click the CD-ROM unit where the SD-View 2000 CD has been inserted  ;
- Click 

to run the ABB CD Installation Launcher.

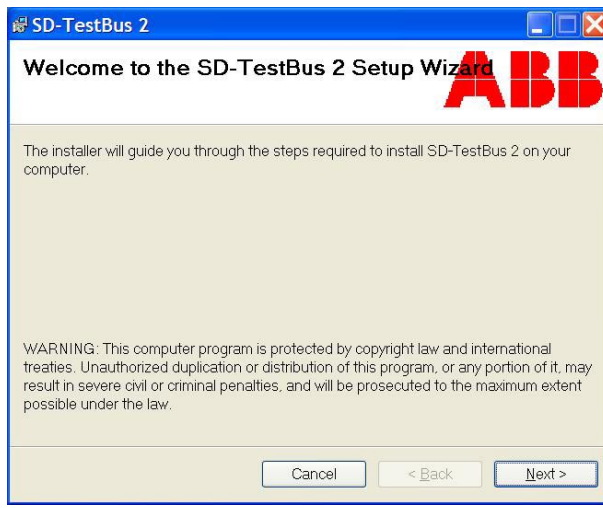


Select “SD-TestBus2” and click “Next” to proceed. This is the first installation screenshot :



2nd Step

Before proceeding with the installation, read the license agreement and click “YES” to accept.

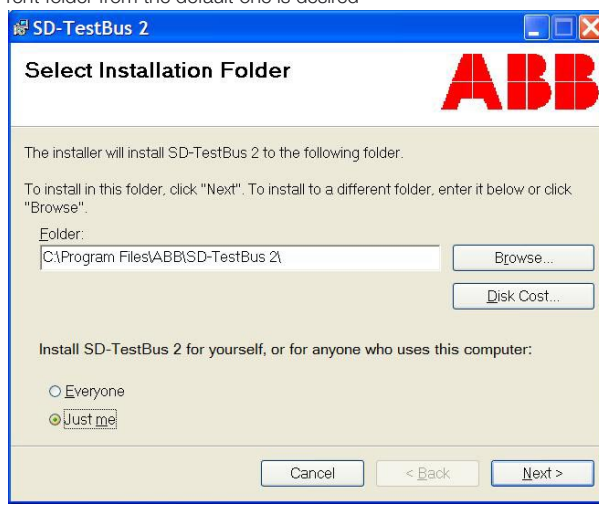


3rd Step

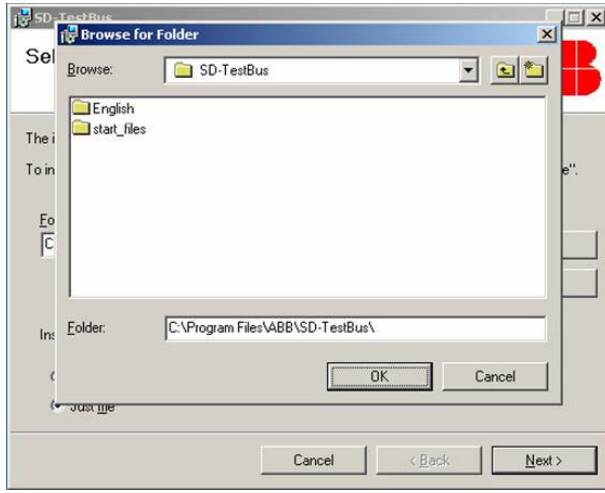
Click “Next” to accept the default folder.

4th Step

Otherwise click “Browse”, if the installation of “SD-TestBus2” to a different folder from the default one is desired



Click “OK” to choose a new path and later “Next” to proceed with the installation

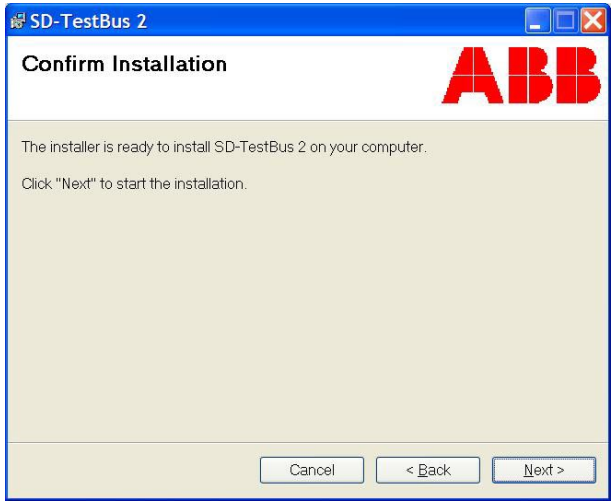


5th Step

Select one of the two available languages and click “Next” to proceed.

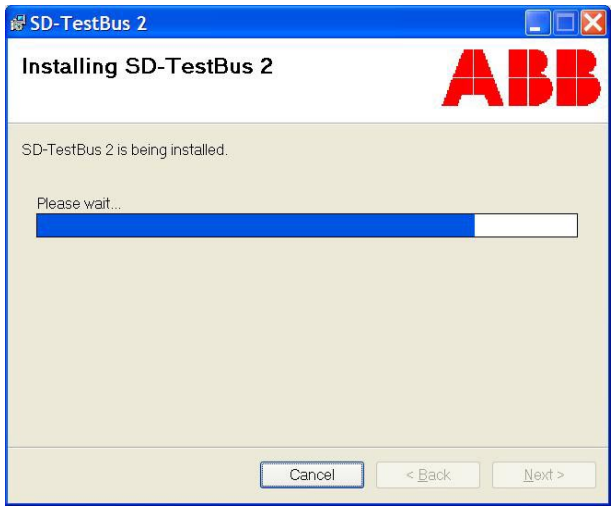
6th Step

Click “Next” to confirm the installation.



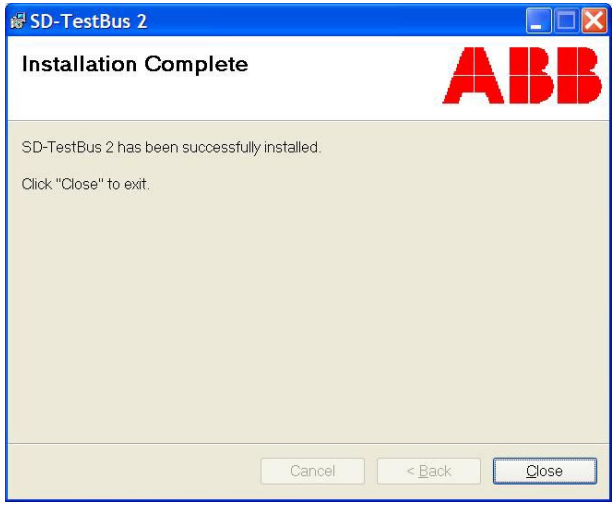
7th Step

The status of the set-up process is indicated by the “Progress Bar”.



8th Step

Click “Close” to finish the installation procedure.



4. Starting SD-TestBus2

IMPORTANT :

It is useful to read this section after having installed SD-TestBus2

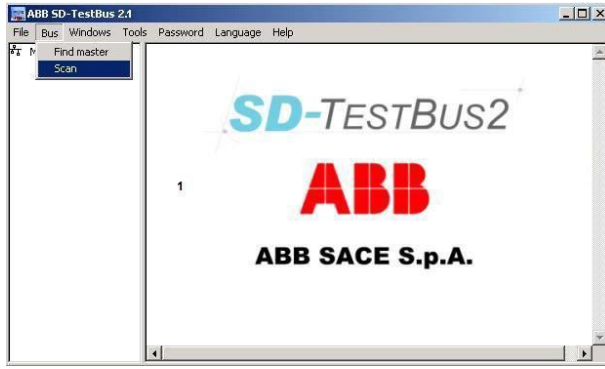
In the following steps it will be described how to start the scanning of the network and how to detect the devices or any communication problem. The properties of the product will not be fully described here but in a specific manual.

1st Step

To start “SD-TestBus2” click its icon on the desktop. 

2nd Step

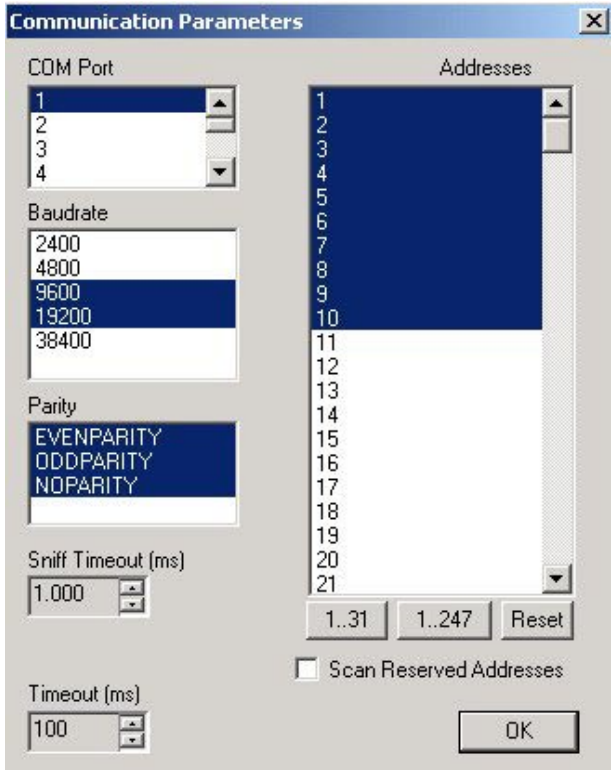
Click “Bus” in the menu and choose “Scan”.



A pop-up menu will be displayed to allow the user to select the settings for the scanning.

This is the information you can set:

- Serial Port;
- Communication Speed - 9600/19200 for ABB SACE devices;
- Even Parity for ABB SACE devices;
- Sniff Timeout (ms) with the possibility to find the Master;
- Timeout (ms);
- Modbus address/addresses selection field;
- 1..31 and 1..247 Modbus address interval buttons;
- “Restore” button to reset the settings in the address field;
- “OK” button to start scanning;

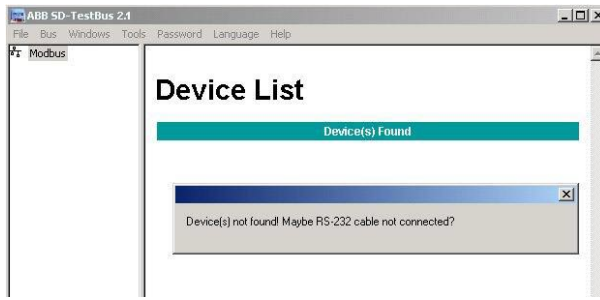

Communication Parameters
COM Port
1
2
3
4
Baudrate
2400
4800
9600
19200
38400
Parity
EVENPARITY
ODDPARITY
NOPARITY
Sniff Timeout (ms)
1.000
Timeout (ms)
100
Addresses
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
1..31
1..247
Reset
Scan Reserved Addresses
OK

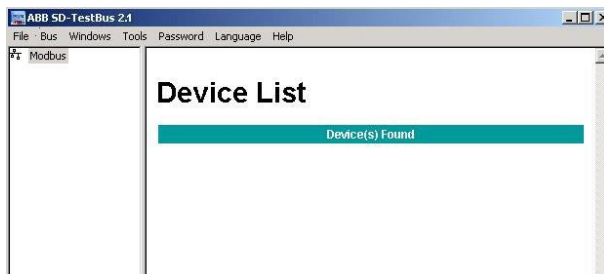
3rd Step

After selecting the scanning settings, click “OK” to start the network scanning. As it starts, the status of the scanning will be indicated by a percent increase bar, as shown here.

It is possible to stop the scanning process clicking the “STOP_SCAN!” button.

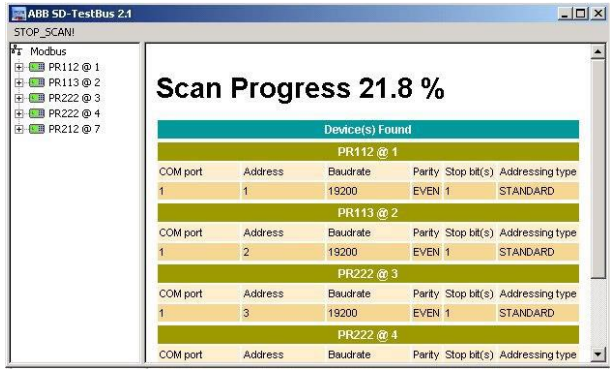
If the scanning is over and no device has been found, a pop-up menu will indicate if there are problems with the RS-232 cable.





4th Step

If during the scanning process some devices are connected, they are found with their main features.

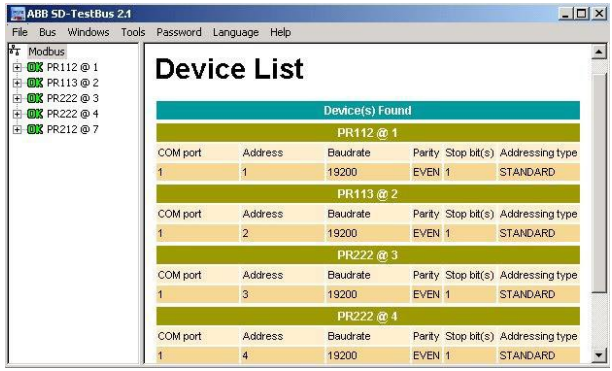


The reported information for each found device is :

- PR212 @ 3 indicating the PR212 type device and its 3 Modbus address;
- Serial port;
- Modbus address;
- Communication speed;
- Parity;
- Stop bits;
- Addressing type;

5th Step

At the end of the scanning process the complete list of the found devices will be displayed.



With the side navigation tree it's possible to work dynamically on the device options and have more information.

5. Starting SD-View 2000 Configurator

The aim of this online Help is to give the necessary information for a correct and simple use of SD-View 2000 Configurator. From now on, we will use the term Configurator as a synonym of SD-View 2000 Configurator.

The configuration process of the plant, with the help of the Configurator, is the first step for a correct use of SD-View 2000 system. A wrong setting during the configuration process can compromise the communication with the configured units of the plant.

In order to start the **Configurator** select **Start->Programs->ABB ->SD-View 2000->SD-View 2000 Configurator**

What is possible to do with the **Configurator** :

- **Unit configuration (ex. Emax, Tmax, ...)**
- **Serial Port configuration (ex. COM1, COM2, ...)**
- **Delete every single unit or serial port**
- **Delete the entire configuration**
- **Import or export an entire configuration**
- **Access to the online Help**
- **Access to Display Builder**

The advantages of the Configurator

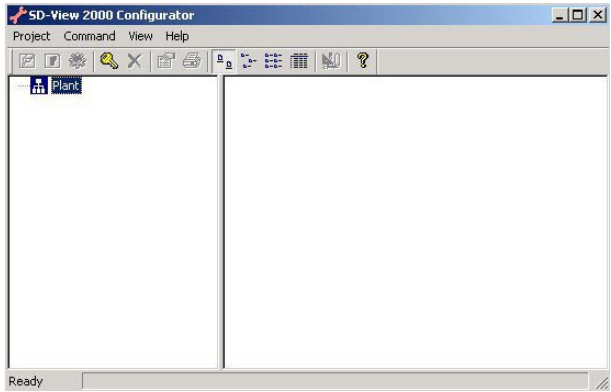
SD-View 2000 **Configurator** is a powerful tool for simplifying the plant engineering process.

It guarantees:

- Ease of use thanks to an intuitive graphic interface
- Support for system upgrade and maintenance
- Time and cost reduction in plant system installation
- Native support for a wide range of ABB products
- Easily upgradeable to new products
- Strong integration with SD-TestBus2

Configurator User Interface

The user interface for all the configuration operations is shown in the following screenshot:



The user interface is divided in two frames:

- The left frame is used for navigating through the configured items
- The right frame is used for accessing item details

The menu has the following entries:

Project Menu

- **Build:** saves the created configuration, serial ports and units
- **Import:** imports a configuration from a xml file
- **Export:** exports the configuration to a xml file
- **Exit:** exits from the application.

Command Menu

- **New Port:** creates a new serial port for the communication
- **New Unit:** creates a new unit
- **Delete:** deletes the selected item (unit, port or entire configuration)
- **Logon/Logoff:** used for user identification

View Menu

- **Toolbar:** enables/disables the toolbar;
- **Status Bar:** enables/disables the status bar;
- **Property:** allows to view the details about serial port or unit

Help Menu

- **SD-View 2000 Configurator Help:** access to this help
- **About:** information about SD-View 2000 Configurator version

The toolbar has the following entries:

New Port icon

- **New Port:** displays the dialog for the creation of a new serial port

New Unit icon

- **New Unit:** displays the dialog for the creation of a new unit

Build icon

- **Build:** saves and build the configuration created by the user

Logon/Logoff icon

- **Logon/Logoff :** allows user identification. You need the highest permission level for executing configuration actions

Delete icon

- **Delete:** deletes the selected item (unit, port or entire configuration)

Serial Port or Unit Property icon

- **Property:** displays the details of the serial port or unit

View Layout icons

- **View Layout:** allows to modify the view layout, in the right frame, of the configured items

Display Builder icon

- **Display Builder:** starts the Display Builder application for the creation of the synoptic pages

Help icon

- **Configurator Help:** displays this help

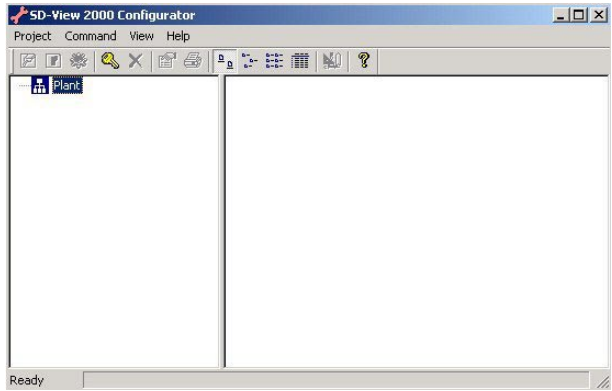
5.1 Serial Port Configuration

It is mandatory to correctly configure the serial port used for the communication among the SD-View 2000 and the Units

The steps for the configuration of a serial port are listed here.

1st Step

Start the Configurator



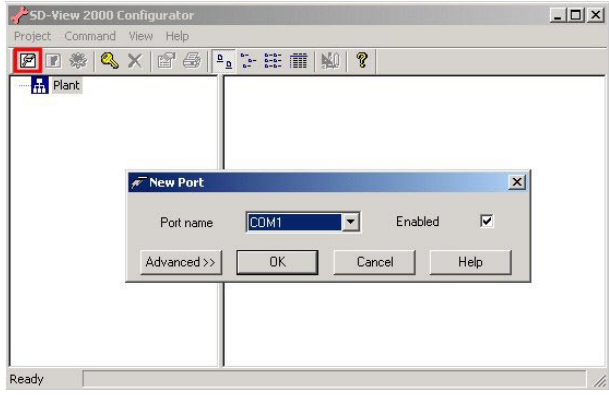
2nd Step

Click the “Logon” button to log in .

IMPORTANT: The user can configure and delete serial ports and units only if he/she has the appropriate access rights.

3rd Step

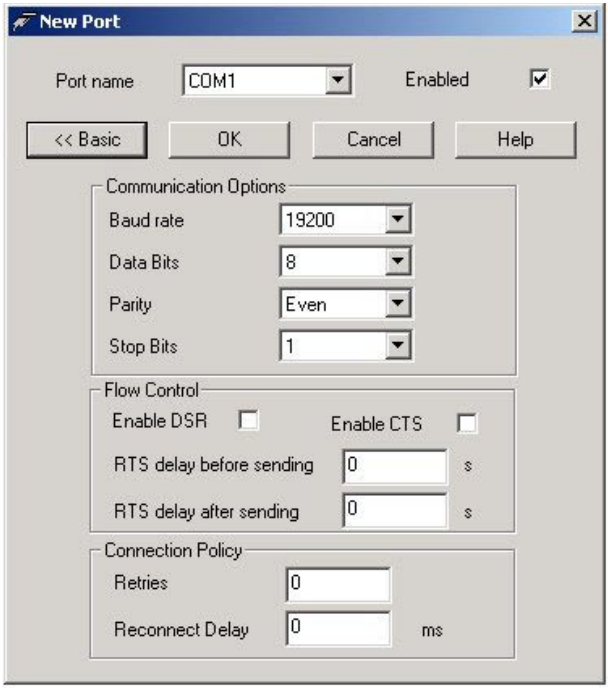
Click on the “New Port” button, a pop-up menu will be displayed. It’s possible to select from one of the available ports with the pull down menu (ex. COM1, COM2, ..., COM8).



4th Step

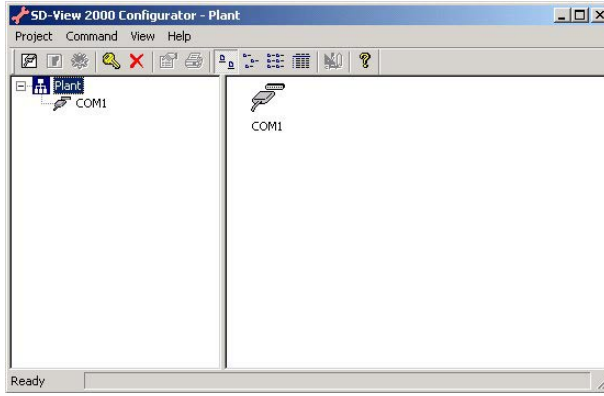
Once the serial port is selected, for example COM1, it’s necessary to proceed setting its communication parameters.

- Click “Enabled” Checkbox to enable the serial port;
- Click “Advanced” to set the following options :
  - Baud rate
  - Data bits
  - Parity
  - Stop bits



- Click “OK” to finish.

The serial port has been configured, the relevant icon will be added in the Configurator window.



5th Step

Click the “Build” button, to compile and save the configured serial port. When the operations are over, a Pop-up menu will be displayed informing the configuration has been properly saved.

Deleting a Serial Port

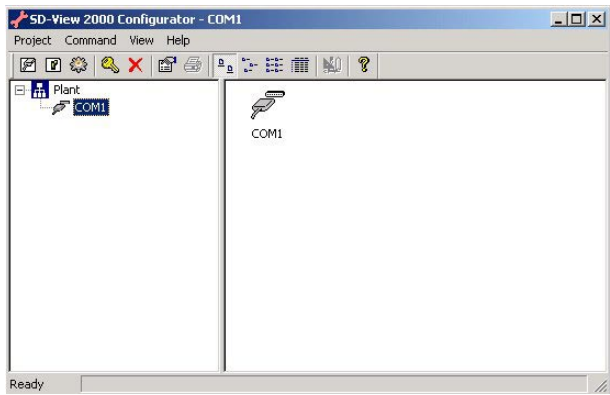
The steps to delete a previously configured serial port are listed here.

Click the “Logon” button to log in .

IMPORTANT : The user can configure and delete serial ports and units only if he/she has the appropriate access rights.

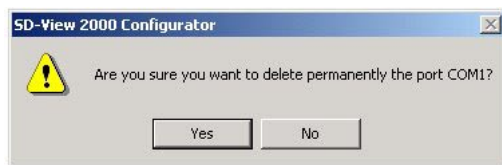
1st Step

Choose the serial port to eliminate from the **configuration** and click on the “Delete” button.



2nd Step

A pop-up menu will be displayed to confirm that the configured serial port will be deleted.



If the deleting operations are successful, this is the pop-up that will be displayed:

WARNING: If you delete a serial port all the configured Units connected to such port are eliminated from the configuration

3rd Step

Close the Configurator.

5.2 Unit Configuration

IMPORTANT : Before reading this help page, for the configuration of a single unit, it is necessary to read the page about the configuration of the serial port.

After the correct configuration at least of a serial port, it's possible to configure one or more units that will communicate with SD-View 2000.

The necessary steps for a correct configuration of a single unit are listed here. They are the same in the case of the configuration of more units.

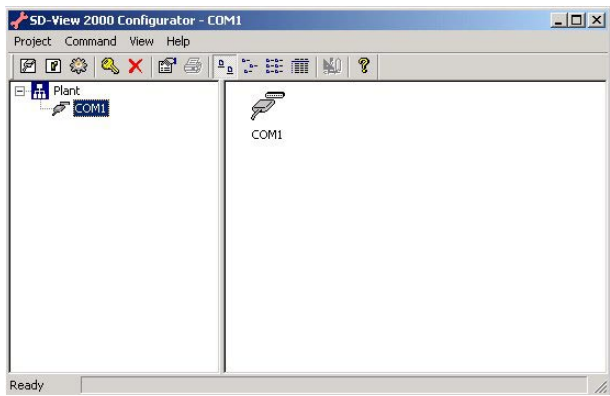
1st Step

Click on the "Logon" button to log in .

IMPORTANT : The user can configure and delete serial ports and units only if he/she has the appropriate access rights.

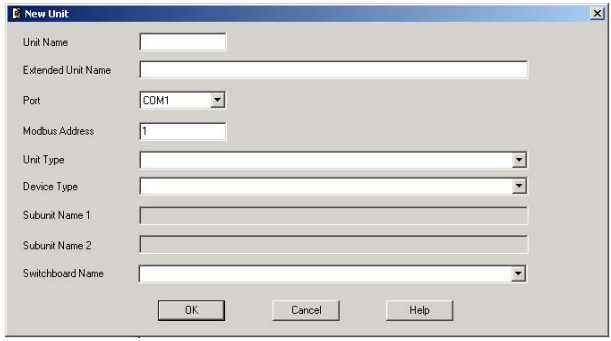
2nd Step

Click on the icon of COM1 port, the "New Unit" button will be displayed.



3rd Step

Click on the “New Unit” button , a pop-up menu will be displayed.



4th Step

A single Unit is configured using the following menu.

Unit Name

- The name of the Unit must comply with these rules :
  - Maximum extension of 6 characters
  - The accepted characters are numbers, letters, “-” and “_”
  - Special characters like “<”, “>” , “/” are not accepted

Extended Unit Name

- The extended Unit name must comply with the same rules of the Unit Name field :
  - Maximum extension of 80 characters
  - The accepted characters are numbers, letters, “-”, “_”, “(“, “)” and the space
  - Special characters like “<”, “>” , “/” are not accepted.

Port

- It reports the name of the serial port for which the unit is being configured.

Modbus Address

- The numerical value of the following field must comply with these rules:
  - Value between 1 and 247
  - It's not allowed to have two units with the same value in the same port.

Unit Type

- It enables to choose the switchboard type (Emax, Isomax, Tmax etc.).

Device Type

- It enables to choose the template of the protection device according to the chosen Unit Type field.

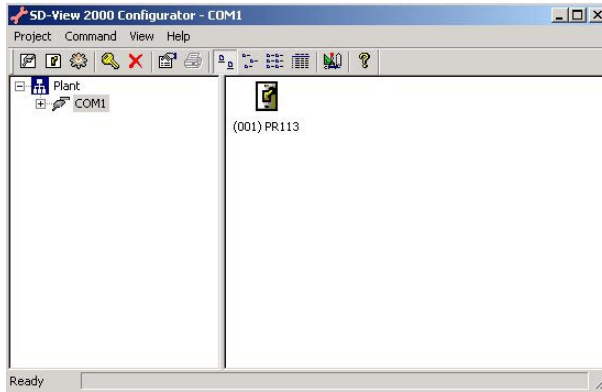
Subunit Name 1 and Subunit Name 2

- It enables to set the name of the subunits according to the type of the chosen AC31.
  - Maximum extension of 40 characters
  - The accepted characters are numbers, letters, "-", "_", "(", ")" and the space
  - Special characters like "<", ">" , "/" are not accepted.

Switchboard Name

- It enables to set the name of the switchboard to which the unit belongs or to set the name of an already existing switchboard.
  - Maximum extension of 40 characters
  - The accepted characters are numbers, letters, "-" and "_"
  - Special characters like "<", ">" , "/" are not accepted.

After having configured the Unit, the **Configurator** will appear as follows:



5th Step

Click the “Build” button to build and save the configured Unit. When the operations are over, a pop-up menu will be displayed to confirm that the configuration has been properly saved.

Deleting a unit

The necessary steps to delete a previously configured Unit are listed here.

1st Step

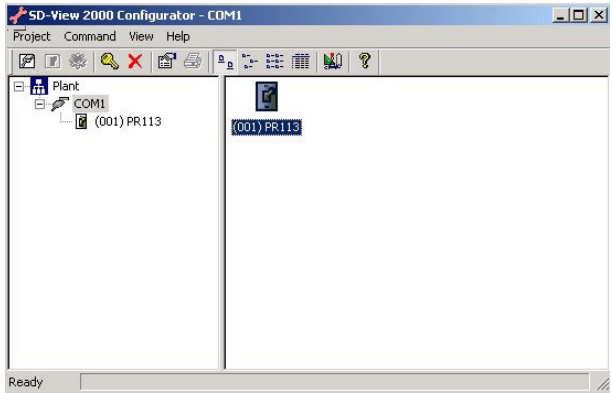
Click the “Logon” button to log in .

IMPORTANT : The user can configure and delete serial ports and Units only if he/she has the appropriate access rights.

2nd Step

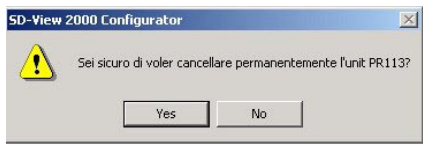
Suppose to start with a Unit already present on the COM1 serial port.

Click on the icon of the Unit. The "Delete" button will be enabled.



3rd Step

Click on the "Delete" button , a pop-up menu will be displayed. Click on 'Yes' to delete the Unit.



If the deleting operations is successful, this pop-up will be displayed:

4th Step

Close the Configurator

6. SD-View 2000 Configurator Plug-in for SD-TestBus2

Introduction

SD-View 2000 Configurator Plug-in for SD-TestBus2 is an application that allows to use the information got from a SD-TestBus2 scan process for configuring **SD-View 2000.**
This will reduce the configuration time and make the engineering process easier, more consistent and less error-prone.

Normally, the configuration engineer is required to use SD-View 2000 Configurator for configuring SD-View 2000. This is the main and most flexible procedure, but it requires to manually introduce configuration data. The plug-in can be seen as a simplified version of SD-View 2000 Configurator, where most of the configuration data is taken from SD-TestBus2.

Main features

- **Easy access from SD-TestBus2**
- **Multi-ports management support**
- **Incremental configuration building starting from existing SD-View 2000 configuration**
- **Automatic management of the following port parameters:**
  - Port name
  - Baud rate
  - Parity
  - Data bits
  - Stop bits

and the following unit parameters:

- Device type
- Modbus address

- **Suggested default values, eventually editable by the user, for the following port parameters:**
  - Number of reconnection retries
  - Reconnection delay

and the following unit parameters:

- Unit name
- Unit extended name
- Unit type
- Switchboard name

- **Support for user identification and privilege checking**

SD-View 2000 Configurator Plug-in for **SD-TestBus2** can be used even when a previous **SD-View 2000** configuration exists.
The plug-in is able to determine whether the information found by SD-TesBus2 are in conflict with what previously configured in SD-View 2000. If this is the case, the user will be alerted.

The plug-in is based on **SD-View 2000 Configurator** and it requires **SD-View 2000** to be installed on the same computer where SD-TestBus2 is running.

6.1 SD-View 2000 Configurator Plug-in for SD-TestBus2 - User's Manual

Launching the plug-in

SD-View 2000 Configurator Plug-in for SD-TestBus2 is executed from SD-TestBus2, go to "Tools --> SD-View 2000 Configurator Plug-in".

The plug-in is normally executed in two cases:

- After a SD-TestBus2 on-line scan process ("Bus --> Scan")
- After loading an off-line device configuration ("File --> Open Device List")

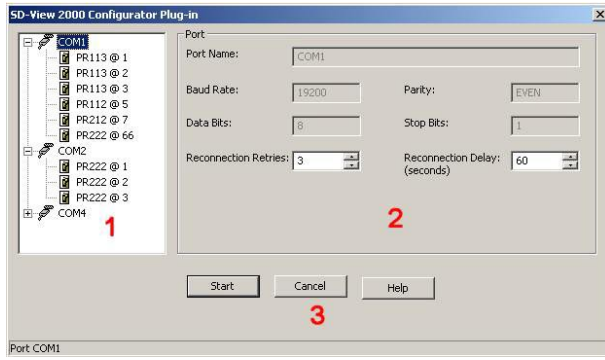
See SD-TestBus2 documentation for more information.

User identification and privilege checking

For SD-View 2000 Plug-in for SD-TestBus2 use the same user identification procedure as in SD-View 2000. In particular, you must have SD-View 2000 System Manager privileges for executing the plug-in. Note that User Name and Password may be different from SD-TestBus2 ones. Refer to **SD-View 2000** and **SD-View 2000 Configurator** documentation for more details.

Main layout

SD-View 2000 Configurator Plug-in for SD-TestBus2 has an user interface divided into 3 parts:

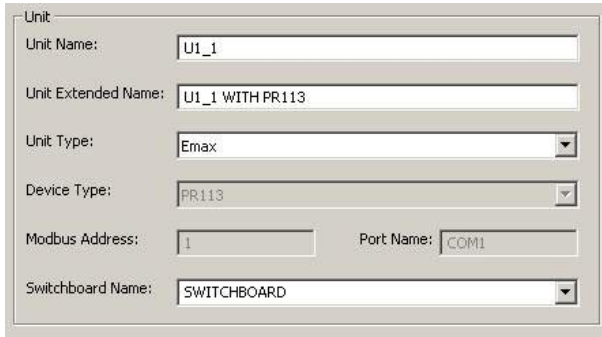


1. **Navigation Tree area.** Used for selecting one of the ports/units found by SD-TestBus2
2. **Port/Unit configuration area.** Used for reading or writing the parameters of port/device currently selected
3. **Control area.** Used for beginning the SD-View 2000 configuration process ("Start"), exiting the plug-in execution ("Cancel") or viewing this help ("Help")

Port Configuration

- **Reconnection Retries**. Identifies how many times SD-View 2000 should try to send queries to a given unit even if the unit doesn't answer (Timeout error). Values allowed are integers ranging from 1 to 6. The plug-in suggests a default value.
- **Reconnection Delay.** Identifies how many seconds SD-View 2000 should wait before reattempting to send queries to an unit that resulted unconnected. Values allowed are integers ranging from 1 to 300. The plug-in suggests a default value.

Unit Configuration



- **Unit Name.** dentifies the unit name. Maximum number of characters allowed: 6. Characters allowed: letters, numbers and '_' (underscore). Note that the unit name should be unique: no other units, even connected to different ports, should have the same Unit Name. The plug-in suggests a default value: Uxx_nn, where xx indicates the port number and nn indicates the slave address.
- **Unit Extended Name.** Identifies the unit extended name. Maximum number of characters allowed: 80. Characters allowed: letters, numbers, '-' (underscore) and space. The plug-in suggests a default value.
- **Unit Type.** Identifies the unit type. Given a definite device type, the plug-in shows in a combo box all the possible corresponding unit types select the most appropriate one. The plug-in selects a default value.
- **Switchboard Name.** Identifies the name of switchboard the unit is inserted into. Maximum number of characters allowed: 40. Characters allowed: letters, numbers and '_' (underscore). All the time you insert a new switchboard name it will be added in the combo list. The plug-in suggests a default value. Start the configuration process.

Start the configuration process

By clicking on the "Start" button, the **SD-View 2000** configuration process will start and the parameters actually set will be used. Any previous configuration will be overwritten, so be sure that **SD-View 2000** doesn't contain any important configuration data. A message box will prompt you for writing a log file or not. The log files are stored in the "logs" sub-directory of your **SD-View 2000** installation folder. At the end of the configuration process you are ready for executing SD-View 2000. Remember that you need to exit SD-TestBus2 in order to avoid conflicts on accessing communication ports.

Troubleshooting and Error Messages

Here is a list of error messages that you may encounter, followed by a brief description and a suggested solution. Contact ABB SACE service in case the suggested solution doesn't help you.

- **SD-View 2000 has not been installed on this machine**
  The plug-in doesn't detect any SD-View 2000 installation in your machine. Please install SD-View 2000.
- **Can't access SD-View 2000 registry keys**
  The plug-in doesn't detect SD-View 2000 registry keys in your machine. SD-View 2000 installation may have been damaged. We suggest to (re)install SD-View 2000.
- **Can't open unit_list.xml**
  unit_list.xml is a file the plug-in uses for getting information about the unit types managed by SD-View 2000. It should be stored into <SD-View 2000 folder>/config/Template If this message appears SD-View 2000 installation may have been damaged or the file has been deleted. We suggest to (re)install SD-View 2000.
- **Error with registering SD-View 2000 dispatch interface**
  The plug-in can't access and write Windows registry. Please be sure that SD-View 2000 has been correctly installed on your machine and you have the Administrator privileges on your machine.
- **Error with SD-View 2000 Configurator**
  Check no other SD-View 2000 Configurator instances are running or SD-View is not active. The plug-in can't execute SD-View 2000 Configurator routines. This is probably due to the fact that a task relative to SD-View 2000 Configurator or SD-View 2000 is still running on your machine. Please be sure to end all of these tasks. If you still encounter this error message, try rebooting your machine.

- **There are no units to be configured**
  SD-TestBus2 hasn't found any device or, the devices found are not valid or can't be managed by SD-View 2000. Please check SD-TestBus2 warning messages. Refer to SD-View 2000 documentation to check which unit/device types are managed by SD-View 2000.

- **There are incoherent information from the fieldbus**
  The plug-in can't be executed because SD-TestBus2 has found devices with incoherent information. Typically this happens when two or more devices are connected to the same bus even if they have different communication parameters. Please check SD-TestBus2 warning messages.

- **A previous SD-View 2000 configuration has been detected and conflicts may arise. Do you want to keep the previous configuration?**
  The plug-in has detected one or more units that has already been configured or are in conflict with what previously configured in SD-View 2000. Two units are in conflict if they have the same Modbus address and are connected to the same port. If you answer yes, the conflicting items found by SD-TestBus2 will be ignored. If you answer no, all the previous SD-View 2000 configuration will be deleted.

- **Warning.**
  There are conflicts with existing SD-View 2000 configuration about port communication parameters If this warning message appears, you have chosen to keep the previous SD-View 2000 configuration. Anyway, the plug-in has detected two or more ports are in conflict. Two ports are in conflict if they have the same port name (COM1, COM2 etc.) but they have different communication parameters (baud rate, parity, reconnection delay etc.). The conflicting ports found by SD-TestBus2 and all the units connected to them will be ignored.

7. Starting SD-View 2000

After the configuration process, it's possible to start SD-View 2000 for the remote control of the configured devices.

1st Step

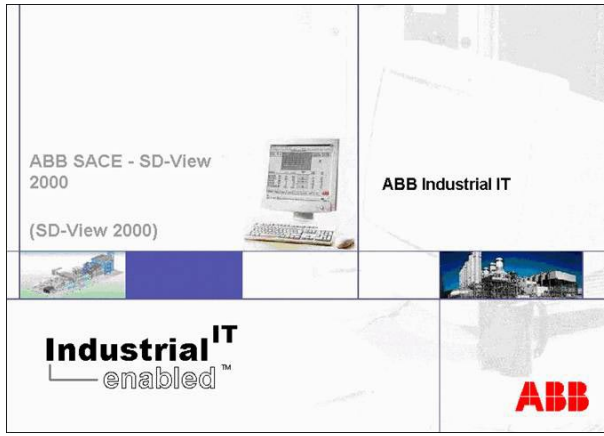
Follow the path Start->Programs->ABB ->SD-View 2000

- Click "SD-View 2000";

The loading of SD-View 2000 will be displayed with the following screenshot:

2nd Step

This is the first screenshot that will be displayed as soon as the system is ready:

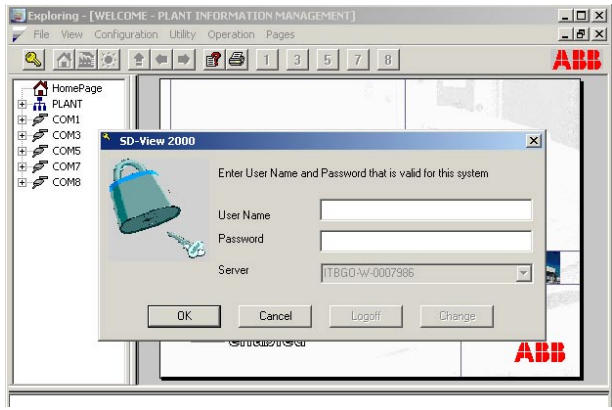


3rd Step

Click the “Login” icon and log in to the system to access to the templates of the configured devices.

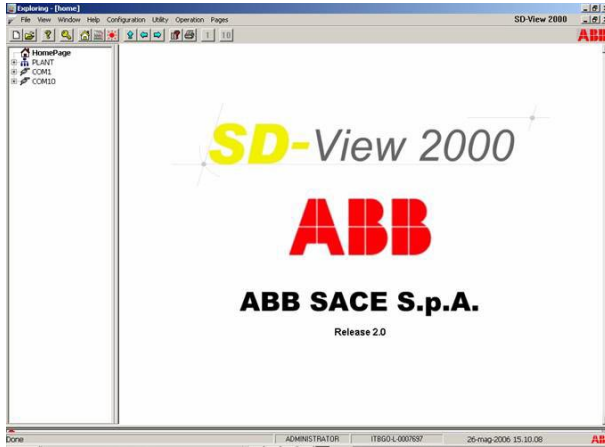
The predefined user are the following:

- User: **‘User’**, password **‘0001’**. This user is allowed to move inside the SD-View 2000 graphical pages but it is not possible to execute commands and to acknowledge alarms.
- User: **‘Administrator’**, password **‘0002’**. This user is allowed to move inside the SD-View 2000 graphical pages, to execute commands and to acknowledge alarms.



4th Step

Once the system is logged, it is possible to access to the pages fo the configured devices, by clicking on the COMx icons.



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