Communication Drivers
Installation manual

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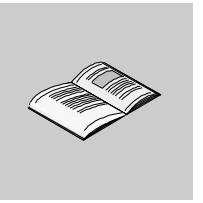
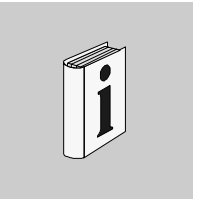


About the Book



At a Glance

Document Scope

This document deals with the installation of communication drivers for Windows 98, Windows 2000/XP and Windows NT operating systems.
These drivers are:

- Uni-Telway:
  - on the serial port,
  - with a TSXSCP114 card.
- Fip:
  - with a TSXFPC10 card,
  - with a TSXFPP20 card.
- Ethway,
- XIP on TCPIP,
- drivers for Atrium:
  - Isaway for the ISA bus,
  - PCIWAY for the PCI bus.
- Modbus,
- USB.

Validity Note

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The information in this document is subject to change without notice and should not be construed as a commitment by Schneider Electric.

Related Documents

Title of Documentation	Reference Number
X-Way Driver	TLX DI XIP M

Product Related Warnings

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User Comments

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General information on the installation of drivers

I

At a Glance

Subject of this Part

This part describes the installation principle of the various drivers using the CD ROM.

What's in this Part?

This part contains the following chapters:

Chapter	Chapter Name	Page
1	General information concerning the Drivers	11

General information concerning the Drivers

1

At a Glance

Subject of this chapter

This chapter provides general information on the drivers.

What's in this Chapter?

This chapter contains the following topics:

Installation

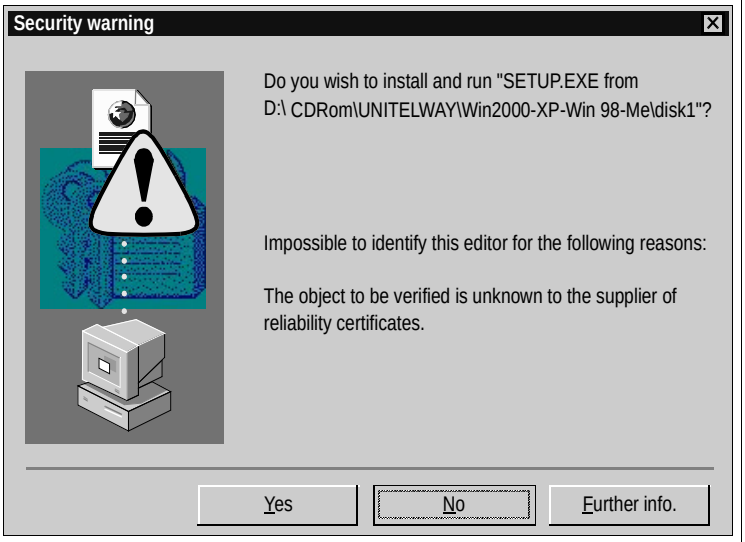
At a Glance

It is generally possible to launch the installation of all the drivers using the same procedure.

Procedure

The following procedure describes the installation principle of a driver using the CD ROM.

Step	Description
1	Insert the CD ROM in the CD ROM drive. **Result**: the **Install.htm** file launches automatically.
2	Click on the link (in blue underlined text) that corresponds to the driver you wish to install. **Result**: the **Downloading files** window appears. 
3	Choose **Run this program from its current location**.

Step	Description
4	Then click on **OK** to confirm your choice. **Result**: the **Safety warning** window appears. 
5	Click on **Yes** to go ahead with the installation. **Result**: the installation setup of the chosen driver is run.
6	Click on **Next** to go ahead with the installation.
7	Configure the driver.
8	Then click on **OK** to confirm the configuration.
9	Restart your computer.

The drivers and Unity Pro

Precautions

To ensure correct operation of the drivers using the Unity Pro software range you should install or reinstall the drivers using the CDROM version ≥ V2.0.
Drivers that normally operate using the Unity Pro software range should also be installed using Windows XP or Windows 2000.

Uni-Telway drivers

II

At a Glance

Subject of this Part

This part describes how to install the drivers associated with Uni-Telway communication for Windows 98, Windows 2000\XP and Windows NT operating systems.

What's in this Part?

This part contains the following chapters:

Serial port

2

At a Glance

Subject of this Chapter

This chapter describes installation of the Uni-Telway driver communicating in slave mode on the serial port with a remote device.

Driver installation consists of two steps:
- installation of files on the station,
- configuration of the driver.

What's in this Chapter?

This chapter contains the following topics:

How to install the driver

At a Glance

Driver installation is a standard installation. It can be launched either:
- from the drivers' CD-ROM,
- or from disks if the station has no CD-ROM drive.

Note: The installation disks are created from the CD-ROM.

How to create a set of disks

Use the following procedure to create installation disks:

Step	Action
1	Use a station with a CD-ROM drive.
2	Insert the CD-ROM into the drive.
3	Access the directory of the driver to be copied onto disk.
4	Copy the contents of the **DISK1** directory onto a disk. Repeat this step for each **DISK** directory. **Note:** it is advisable to number the disks.

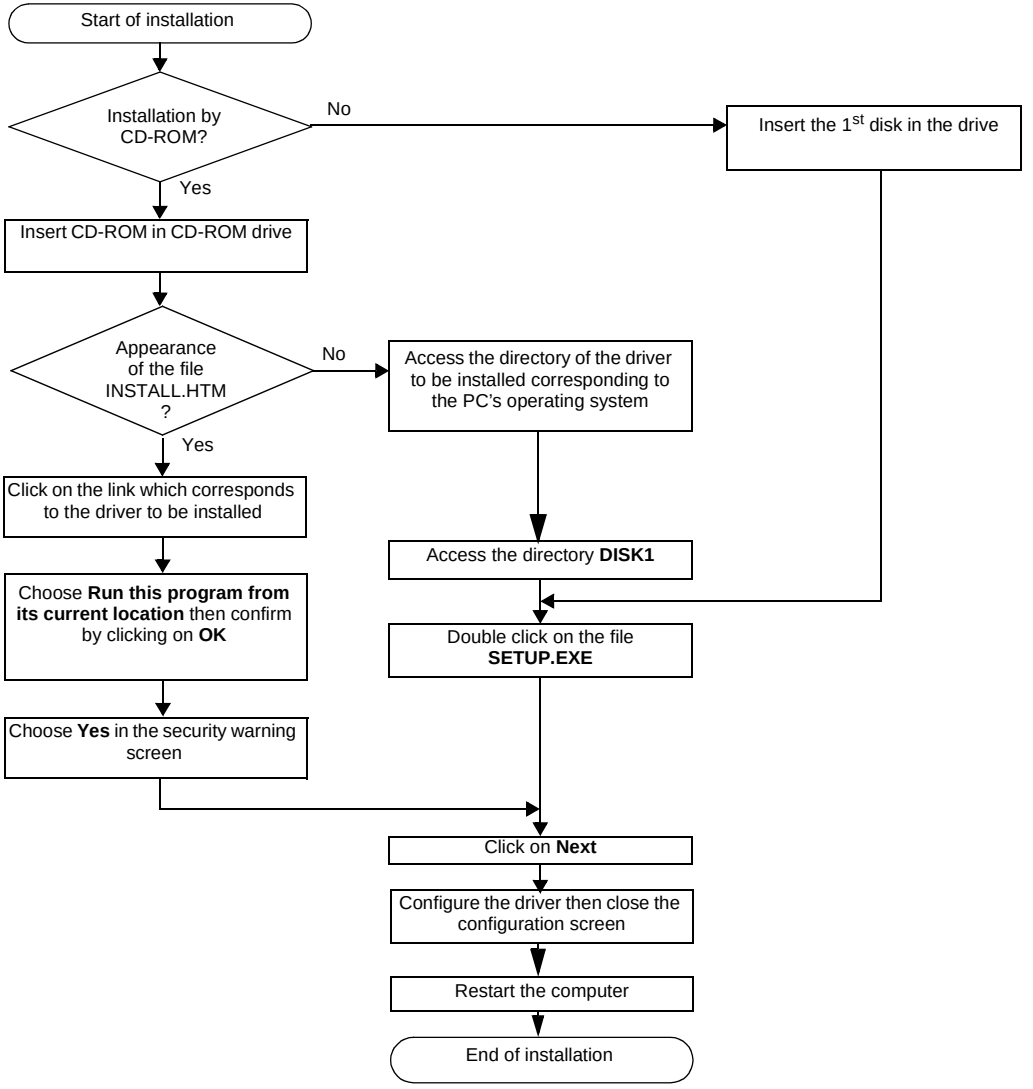
Preliminary operations

Before installing the new driver, you must check that no other version of this driver exists on the station.

If a driver does exist, you must delete it before carrying out the new installation.

A previous version can be uninstalled using:
- **Drivers Manager** software,
- or the **Control Panel** → **Add/Remove Programs**.

How to install the driver To install the driver, carry out the following procedure:



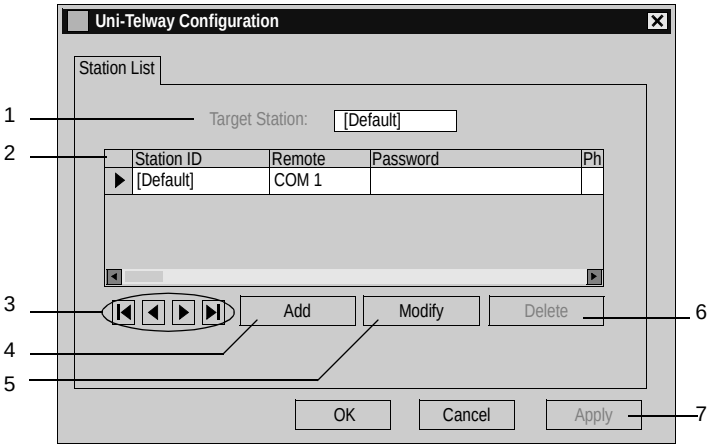
Driver configuration screens

At a Glance

The configuration tool is used to link a driver configuration profile to a remote device that communicates with the station.

Illustration

The screen dedicated to the Uni-Telway driver looks like this:



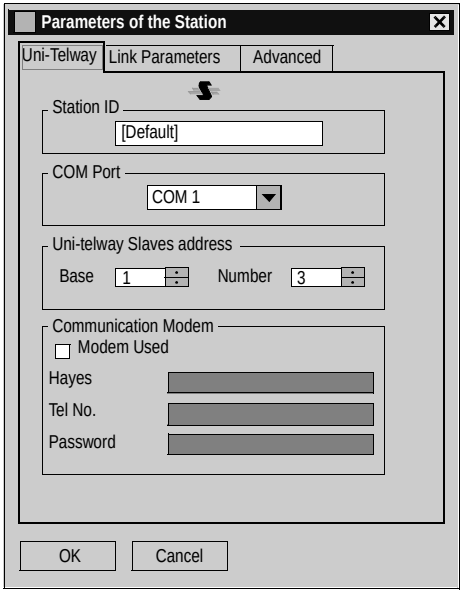
Description

This table describes the different areas which make up the configuration screen:

Number	Element
1	This field is used to display the active profile.
2	This list is used to display the driver profile associated with each remote device.
3	These buttons are used to select the driver profile.
4	This button is used to add new profiles to the list.
5	This button is used to modify the profile of the driver selected from the list.
6	This button is used to remove a profile from the list.
7	This button is used to make the profile selected with the cursor active.

Uni-Telway parameters

The parameters are presented in the following manner:



The **Station ID** window is used to name the remote device associated with the driver configuration.

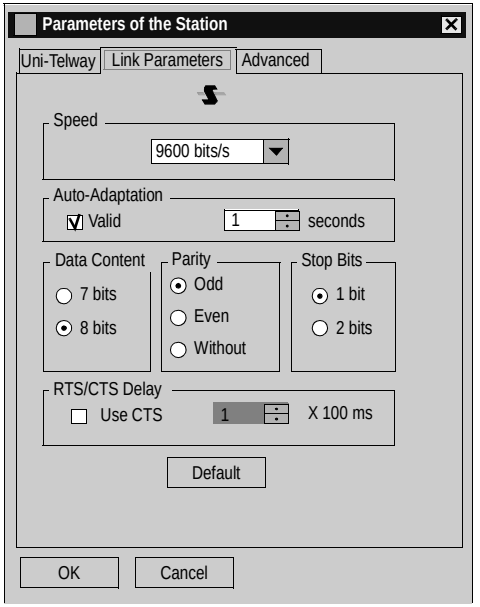
The **COM Port** window is used to select the communication port used.

The **Uni-telway Slave Address** window is used to enter:
- the standard slave address of the driver,
- the number of slave addresses used by the driver.

The **Modem Communication** window is useful when the local station is communicating via a modem. In this case, this window is used to enter:
- the HAYES string to be sent to the modem in order to initialize it,
- the call number of the remote device,
- the password to be sent to the remote device, if it has been configured with a list of callers with passwords (e.g. TSX MDM 10 card configured with passwords).

Line parameters

The parameters are presented in the following manner:



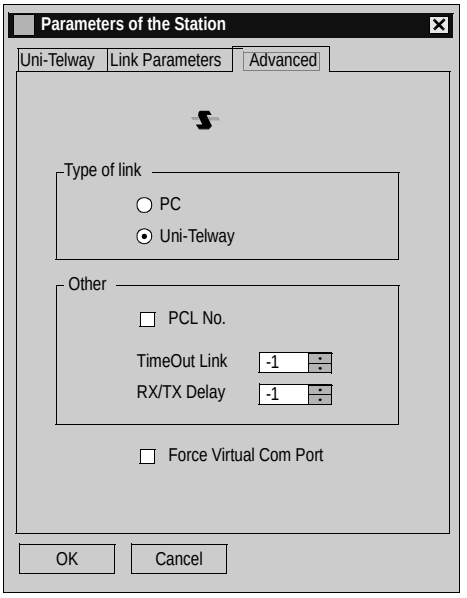
This tab is used to configure the parameters linked to transmission:

- **Speed**: transmission speed of between 300 and 115 200 bits/s,
- **Auto-Adaptation**: self-adaptation of speed (time during which the driver tries to connect at a given speed),
- **Data**: specifies the size of the data exchanged over the line,
- **Parity**: is used to set whether a parity bit is added or not, as well as its type,
- **Stop Bits**: is used to enter the number of stop bits used for communication,
- **RTS/CTS Delay**: enables the CTS signal to be used in the event of multidrop communication.

The Default button is used to reset all these parameters to their default value.

Advanced parameters

The parameters are presented in the following manner:



This tab is used to configure the line type:

- **PC**: uses the driver to connect to a series 7 PLC terminal port,
- **Uni-Telway**: default value, uses the driver to communicate in Uni-Telway,
- **Num PLC**: uses the driver to connect to NUM PLCs.
  - **RX/TX Delay**: by default set to –1; is used to extend the return time (if the station is too fast).
  - **Link Timeout**: by default set to –1; is used to set the maximum time for detecting the right transmission speed.
- **Force Virtual Com Port**: must be checked if the Unit-Telway driver uses a virtual communication port except for use with the TSX PCX 3030 cable.

How to configure the driver

At a Glance

During driver installation, a default profile is proposed. This profile can be modified or a new one created.

How to create a new profile

From the driver configuration screen.

Step	Action
1	Click on the **Add...** button. see *Uni-Telway parameters, p. 21*.
2	Enter station name.
3	Select **COM port**.
4	Define the driver slave address.
5	If the driver uses a modem to communicate, select the **Use modem** box and enter the different fields associated with it.
6	Select the **Line parameters** (See *Line parameters, p. 22*) tab.
7	Configure the transmission parameters according to the remote device (baud rate, parity, data bits, etc.).
8	If the driver requires specific configuration, click on the **Advanced** (See *Advanced parameters, p. 23*) tab and configure the parameters according to the remote device.
9	Accept the configuration by clicking on **Ok**. **Result:** the new configuration appears in the list.

How to modify a profile

From the driver configuration screen.

Step	Action
1	Select a configuration profile from the list. **Result:** the cursor moves to the selected line.
2	Click on the **Modifier** button; see *Uni-Telway parameters, p. 21*.
3	Modify the parameters according to the remote device.
4	Select the **Line parameters** (See *Line parameters, p. 22*) tab and modify the transmission parameters according to the remote device (speed, parity, data, etc.).
5	If the driver requires specific configuration, click on the **Advanced** (See *Advanced parameters, p. 23*) tab and modify the parameters according to the remote device.
6	Accept the configuration by clicking on **Ok** . **Result:** the new configuration appears in the list.

How to remove a profile

From the driver configuration screen.

Step	Action
1	Select a configuration profile from the list. **Result:** the cursor moves to the selected line.
2	Click on **Delete**.
3	Press the **Yes** button to confirm your choice. **Result:** the configuration is removed from the list.

How to activate a profile

From the driver configuration screen.

Step	Action
1	Select a profile from the list. **Result:** the cursor moves to the selected line.
2	Click on the **Apply** button.

TSX SCP 114 card

3

At a Glance

Subject of this Section

This chapter describes installation of the Uni-Telway driver communicating in slave mode via the PCMCIA TSX SCP 114 card with a remote device.

Driver installation consists of three steps:
- installation of files on the station,
- configuration of the driver
- configuration of the operating system to recognize the driver.

What's in this Chapter?

This chapter contains the following topics:

How to install the driver

At a Glance

Driver installation is a standard installation. It can be launched either:

- from the drivers' CD-ROM,
- or from disks if the station has no CD-ROM drive.

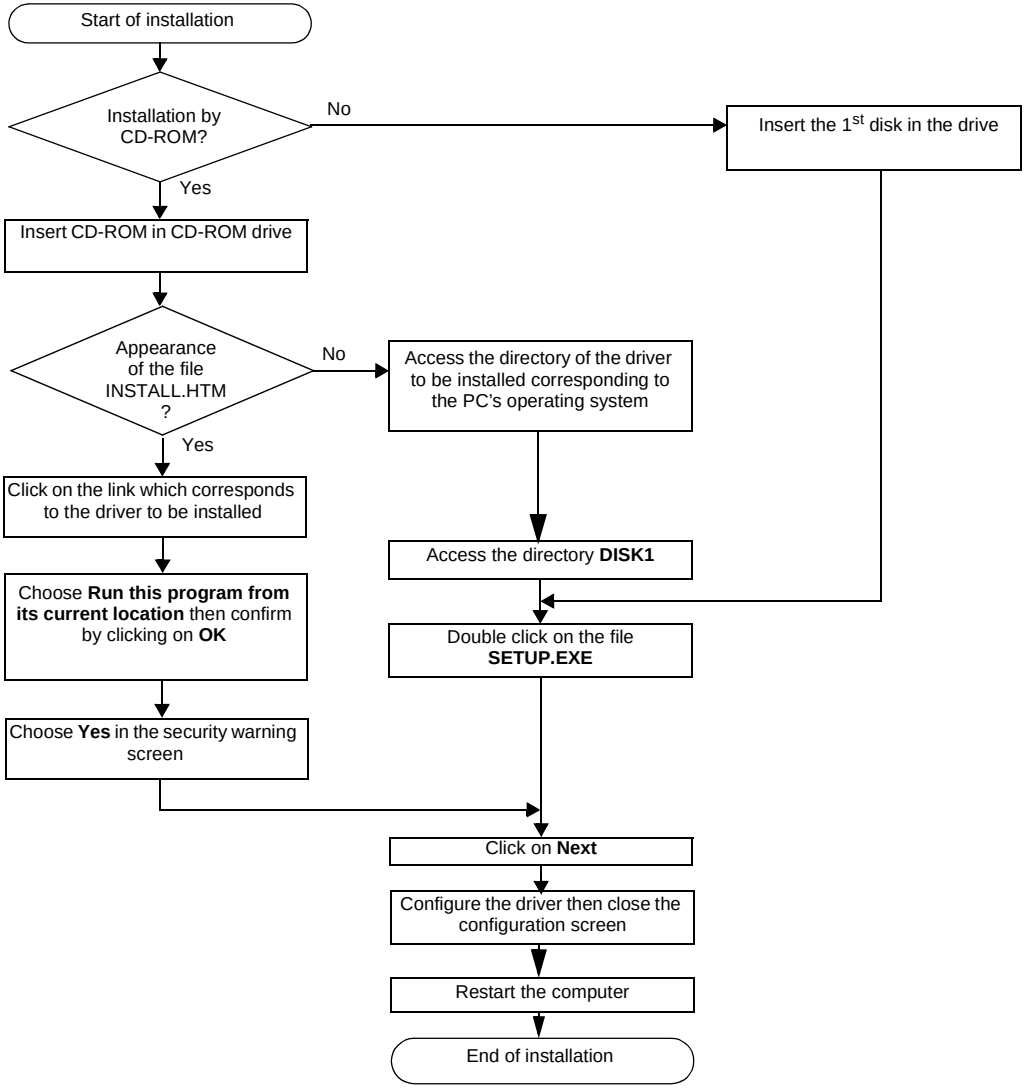
Note: The installation disks are created from the CD-ROM.

How to create a set of disks

Use the following procedure to create installation disks:

Step	Action
1	Use a station which has a CD-ROM drive.
2	Insert the CD-ROM into the drive.
3	Access the directory of the driver to be copied onto disk.
4	Copy the contents of the **DISK1** directory onto a disk. Repeat this step for each **DISK** directory. **Note:** it is advisable to number the disks.

How to install the driver To install the driver, carry out the following procedure:



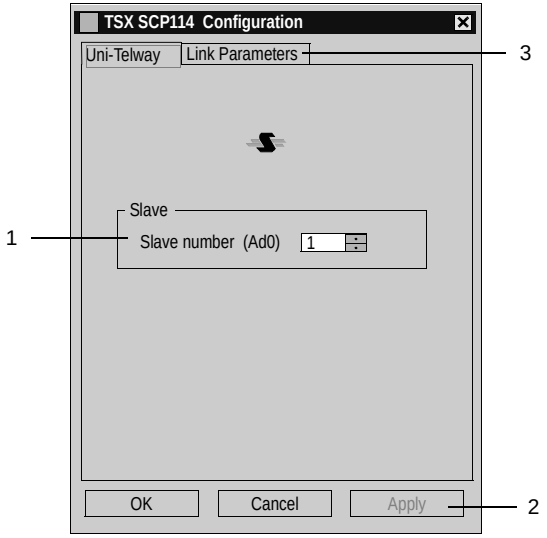
Driver configuration screens

At a Glance

The configuration tool is used to configure the TSX SCP 114 card Uni-Telway driver.

Illustration

The screen dedicated to the Uni-Telway driver looks like this:

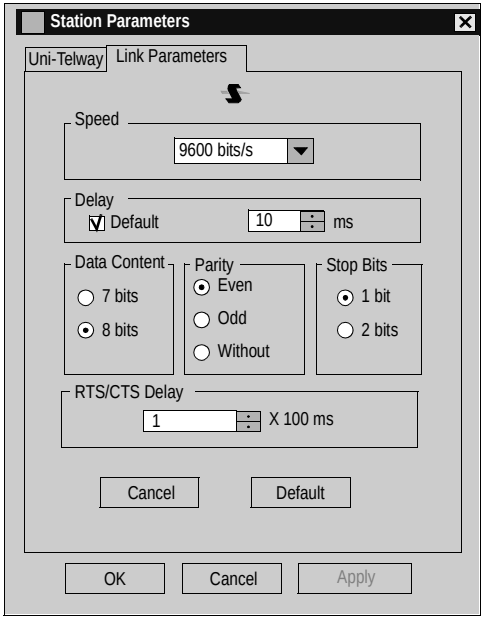


Description

This table describes the different areas which make up the configuration screen:

Number	Element
1	This window is used to set the standard slave address (Ad0) used by the card.
2	This button is used to recognize the address.
3	This tab is used to access the configuration of transmission parameters.

Line parameters The parameters are presented in the following manner:



This tab is used to configure the parameters linked to transmission:

- transmission speed of between 300 and 19,200 bits/s,
- Time-out,
- Number of data bits: specifies the size of the data exchanged over the line,
- parity: is used to set whether a parity bit is added or not, as well as its type,
- number of **Stop** bits: is used to enter the number of stop bits used for communication,
- **RTS/CTS** delay: enables the CTS signal to be used in the event of multidrop communication.

The **Default** button is used to reset all these parameters to their default value.

Configuration of the Windows 98 operating system

At a Glance

After the driver installation and configuration phase, the operating system shall recognize the TSX SCP 114 card and its driver.

Note: So that the driver is loaded when the card is inserted, it is essential that the station is restarted to update the registry.

How to configure the operating system

The following procedure describes how to configure the operating system:

Step	Action
1	Install and configure the driver.
2	Restart the station.
3	Insert the PCMCIA card into its slot. **Result:** The system automatically detects the card and the following window is displayed: 
4	Select the option **Windows default driver**.
5	Confirm using the **Ok** button.

Configuration of the Windows 2000\XP operating system

At a Glance

After the driver installation and configuration phase, the operating system shall recognize the TSX SCP 114 card and its driver.

Note: When configuring the system, it is not necessary to restart the station.

How to configure the operating system

The following procedure describes how to configure the operating system:

Step	Action
1	Install and configure the driver.
2	Insert the PCMCIA card into its slot. **Result:** The system automatically detects the card and loads the card driver.

Configuration of Win NT operating system

At a Glance

After the driver installation and configuration phase, the operating system shall recognize the TSX SCP 114 card and its driver.

Note: So that the driver is loaded when the card is inserted, it is essential that the station is restarted to update the registry.

How to configure the operating system

The following procedure describes how to configure the operating system:

Step	Action
1	Install and configure the driver.
2	Shutdown your machine.
3	Insert the PCMCIA card into its slot. **Result:** The system automatically detects the card and loads the driver.

Case in which the driver does not start

One possibility is that the default **IRQ3** is busy, in which case another one must be used:
Follow the steps below to detect an available IRQ:

Step	Action
1	In the taskbar, select **"Start ->Run"**.
2	enter the command **"Winmsd"**
3	Select the tab **"Resources"**, choose an available IRQ and confirm with OK.
4	Edit the DSCP114.REG file and modify the value of **"InterruptNumber"**
5	In the taskbar, select **"Start ->Run"**, enter the command **"DSCP114**" and confirm.
6	Restart your machine.

FIP drivers

III

At a Glance

Subject of this Part

This part describes how to install the drivers associated with FIP communication for Windows 98, Windows 2000\XP and Windows NT operating systems.

What's in this Part?

This part contains the following chapters:

TSX FPP 20 card

4

At a Glance

Subject of this Chapter

This chapter describes installation of the driver used to communicate in Fipway\Fipio mode via the TSX FPP K200 connection kit with a remote device.

Driver installation consists of three steps:
- installation of files on the station,
- configuration of the driver,
- configuration of the operating system to recognize the driver.

What's in this Chapter?

This chapter contains the following topics:

How to install the driver

At a Glance

Driver installation is a standard installation. It can be launched either:
- from the drivers' CD-ROM,
- or from disks if the station has no CD-ROM drive.

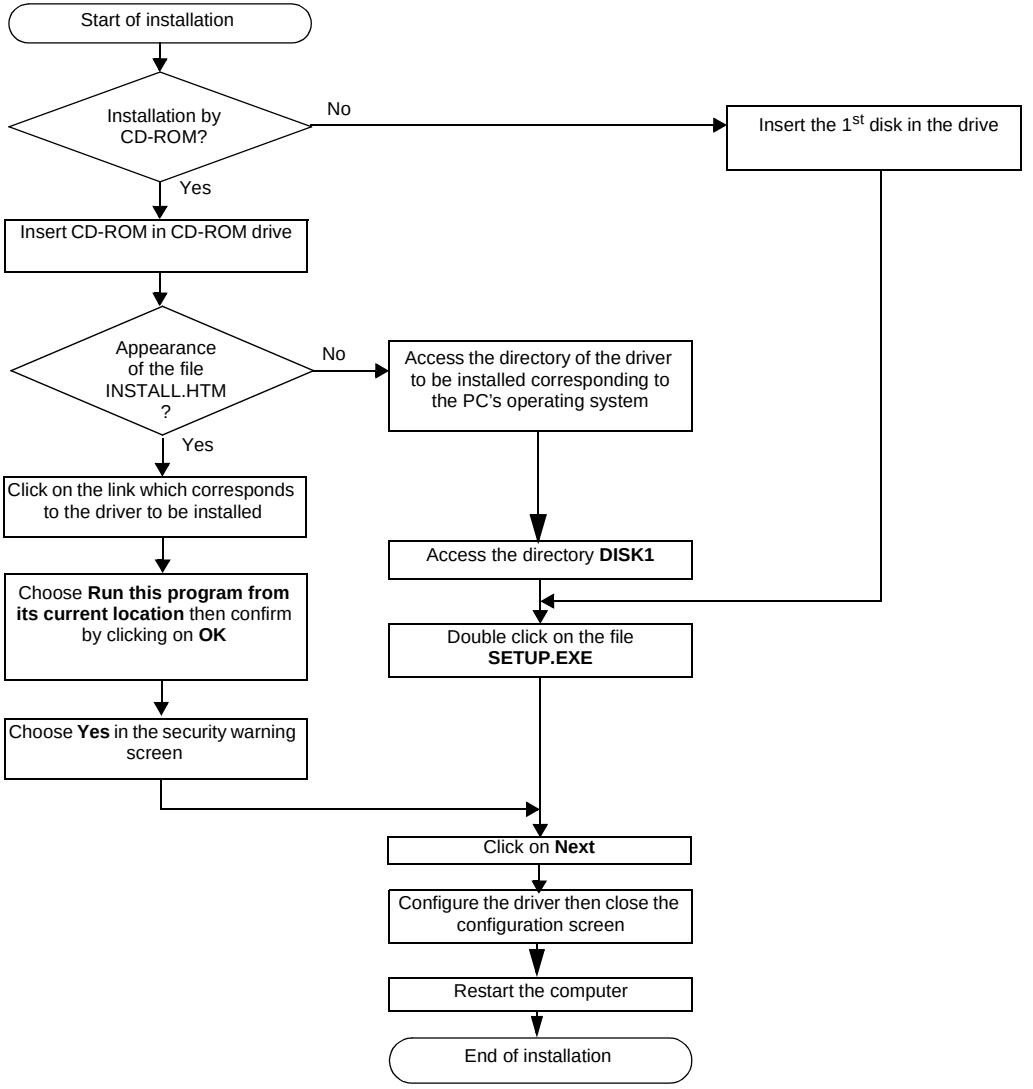
Note: The installation disks are created from the CD-ROM.

How to create a set of disks

Use the following procedure to create installation disks:

Step	Action
1	Use a station which has a CD-ROM drive.
2	Insert the CD-ROM into the drive.
3	Access the directory of the driver to be copied onto disk.
4	Copy the contents of the **DISK1** directory onto a disk. Repeat this step for each **DISK** directory. **Note:** it is advisable to number the disks.

How to install the driver To install the driver, carry out the following procedure:



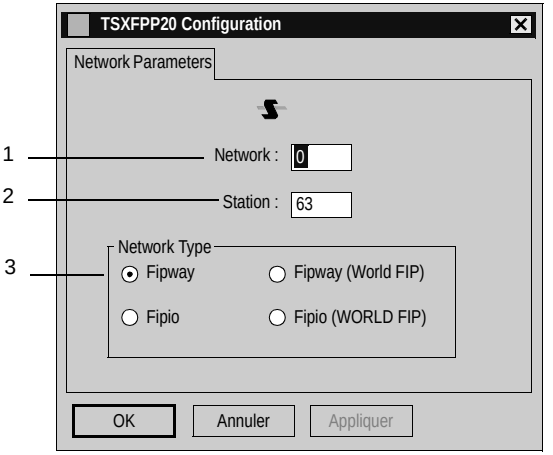
How to install the driver

At a Glance

The configuration tool is used to configure the driver in Fipway or Fipio mode to use the TSX FPP 20 card.

Illustration

The screen dedicated to the card driver looks like this:



Description

This table describes the different areas which make up the configuration screen:

Number	Element
1	This field is used to set the network address.
2	This field is used to set the station address.
3	This window is used to select the type of Fipway or Fipio connection.

Configuration of the Windows 98 operating system

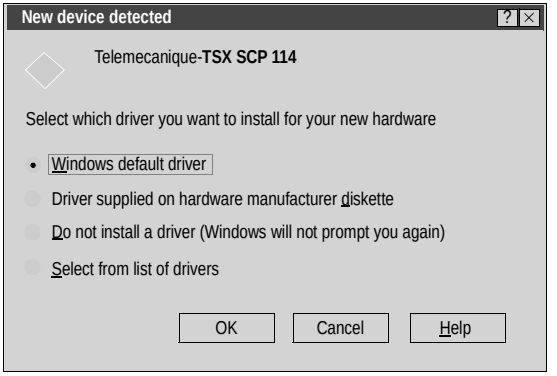
At a Glance

After the driver installation and configuration phase, the operating system shall recognize the TSX FPP 20 card and its driver.

Note: So that the driver loads up when the card is inserted, it is essential that the station is restarted to allow Windows to update the registry.

How to configure the operating system

The following procedure describes how to configure the operating system:

Step	Action
1	Install and configure the driver.
2	Restart the station.
3	Insert the PCMCIA card into its slot. **Result:** The system automatically detects the card and the following window is displayed: 
4	Select the option **Windows default driver**.
5	Confirm using the **Ok** button.

Configuration of the Windows 2000\XP operating system

At a Glance

After the driver installation and configuration phase, the operating system shall recognize the TSX FPP 20 card and its driver.

Note: When configuring the system, it is not necessary to restart the station.

How to configure the operating system

The following procedure describes how to configure the operating system:

Step	Action
1	Install and configure the driver.
2	Insert the PCMCIA card into its slot. **Result:** The system automatically detects the card and loads the card driver.

Configuration of the Windows NT operating system

At a Glance

After the driver installation and configuration phase, the operating system shall recognize the TSX FPP 20 card and its driver.

Note: When configuring the system, it is not necessary to restart the station.

How to configure the operating system

The following procedure describes how to configure the operating system:

Step	Action
1	Install and configure the driver.
2	Shutdown your machine.
3	Insert the PCMCIA card into its slot. **Result:** The system automatically detects the card and loads the driver.

Case in which the driver does not start

One possibility is that the default **IRQ3** is busy, in which case another one must be used:
Follow the steps below to detect an available IRQ:

Step	Action
1	In the taskbar, select **"Start ->Run"**.
2	enter the command **"Winmsd"**
3	Select the tab **"Resources"**, choose an available IRQ and confirm with OK.
4	Edit the DSCP114.REG file and modify the value of **"InterruptNumber"**
5	In the taskbar, select **"Start ->Run"**, enter the command **"DFPP20**" and confirm.
6	Restart your machine.

TSX FPC 10 ISA card

5

At a Glance

Subject of this Chapter

This chapter describes installation of the driver communicating in Fipway/Fipio mode via the ISA TSX FPC 10 card and a remote device.

Driver installation consists of three steps:
- installation of files on the station,
- configuration of the driver,
- configuration of the operating system to recognize the driver.

What's in this Chapter?

This chapter contains the following topics:

How to install the driver

At a Glance

Driver installation is a standard installation. It can be launched either:
- from the drivers' CD-ROM,
- or from disks if the station has no CD-ROM drive.

Note: The installation disks are created from the CD-ROM.

How to create a set of disks

Use the following procedure to create installation disks:

Step	Action
1	Use a station which has a CD-ROM drive.
2	Insert the CD-ROM into the drive.
3	Access the directory of the driver to be copied onto disk.
4	Copy the contents of the **DISK1** directory onto a disk. Repeat this step for each **DISK** directory. **Note:** it is advisable to number the disks.

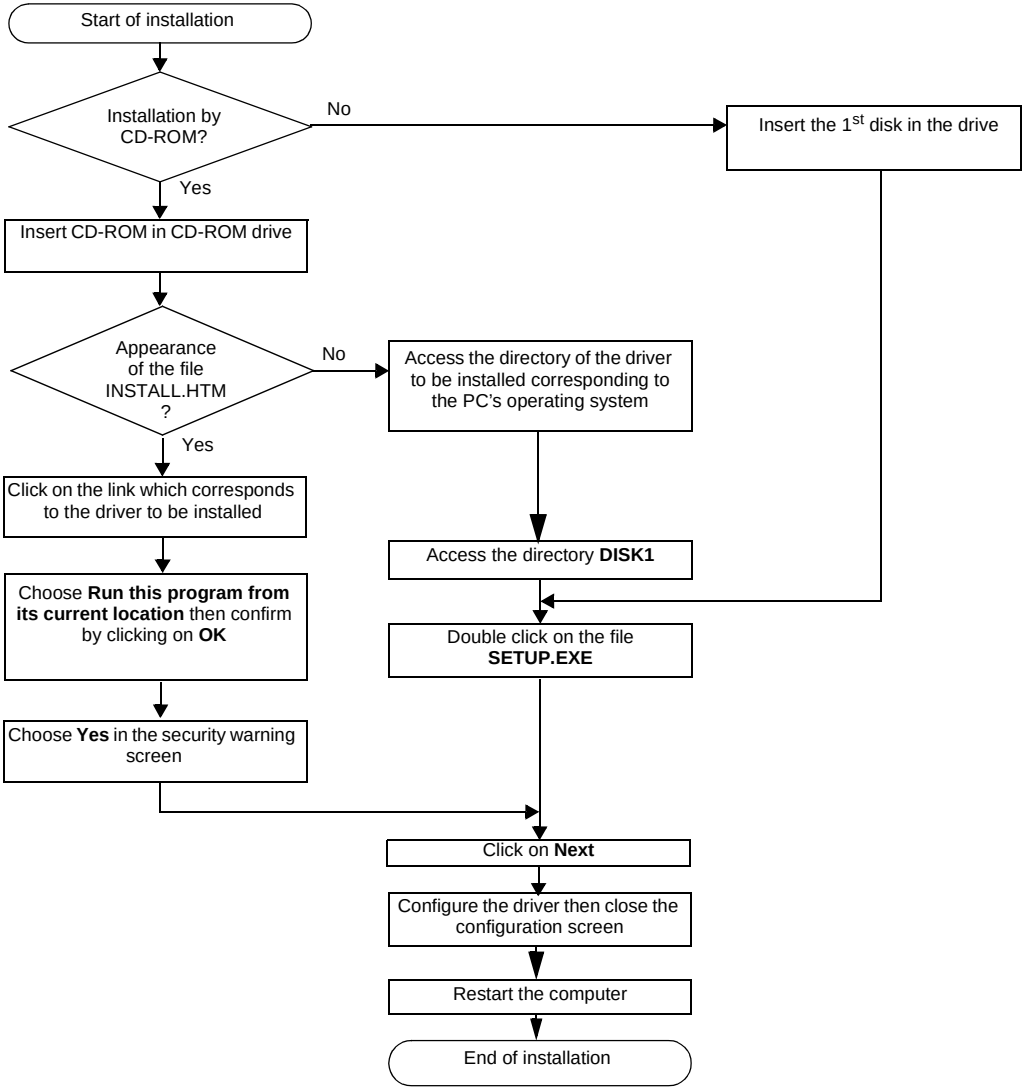
Preliminary operations

Before installing the new driver, you must check that there is no previous version on the station.

If a driver does exist, you must delete it before carrying out the new installation.

The previous version of the driver can be uninstalled using:
- **Drivers Manager** software,
- or the **Control Panel** → **Add/Remove Programs**.

How to install the driver To install the driver, carry out the following procedure:



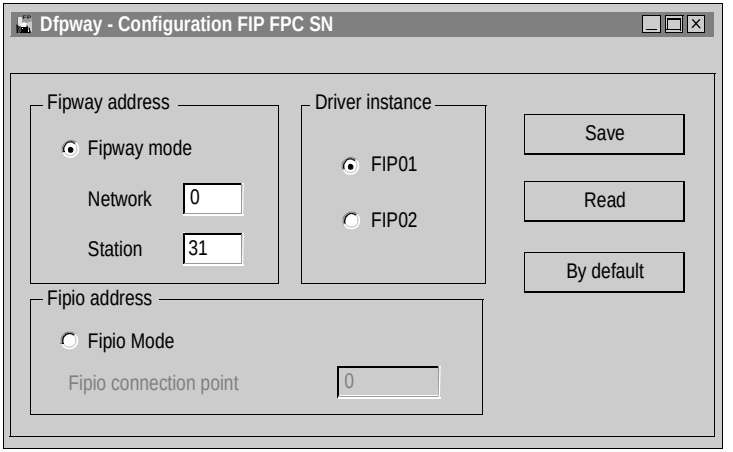
Driver configuration screen for Windows NT

At a Glance

The configuration tool is used to configure the driver in Fipway or Fipio mode to use a ISA TSX FPC 10 card.

Illustration

The screen dedicated to the card driver looks like this:



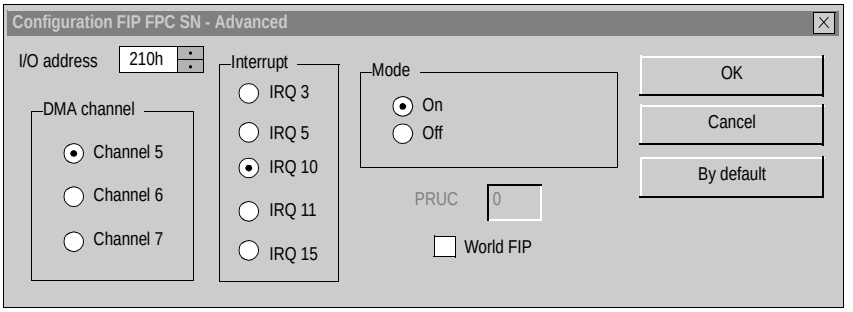
Description

This table describes the different areas and buttons which make up the configuration screen:

Zone	Description
Fipway address	This area is used to define the network address of the station when the driver is configured in Fipway mode.
Fipio address	This area is used to define the connection point number when the driver is configured in Fipio mode.
Driver instance	This area is used to select the instance of the driver used (max. 2).
Save	Used to save the configuration of the driver that has just been entered.
Read	Used to read the configuration of the driver saved previously.
By default	Allows default automatic entry of the driver configuration.

Advanced configuration

To access the advanced configuration screen use the commands **"File->Advanced Configuration"** .
The following window is displayed:



The following table describes the different areas and buttons in the window.

Zone	Description
I/O address	Used to choose the address in the storage area with which the driver can find the Fipway FPC10 module. This address must be included between 100h and 3F0h and be identical to the address configured in the module.
DMA channel	Used to select the DMA resource shared by the driver and the module. This information must be identical to that configured on the module.
Interrupt	Used to select the interrupt shared by the driver and the communication module. This information must be identical to that configured on the module.
Mode	Used to disable the driver by checking the "OFF" box. This is usually the case for the second instance of the driver. (FIP02).
WorldFip	Allows use of frames in WorldFip profile A format whose CRC calculation complies with the IECSC65C105 standard.
Cancel button	Used to return to the previous window.
By default button	Used to configure the different areas with default parameters.
OK button	Used to acknowledge the new configuration parameters.

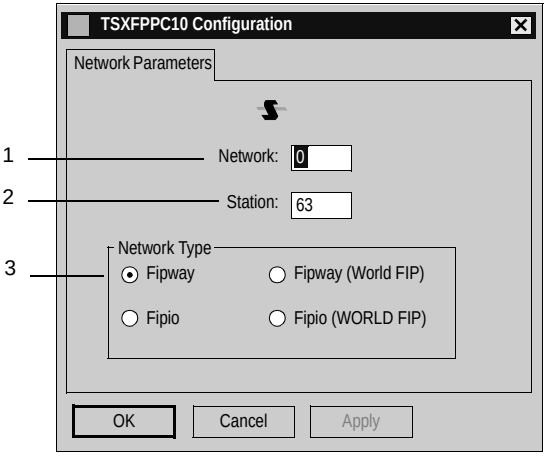
Driver configuration screen for Windows 98\2000\XP

At a Glance

The configuration tool is used to configure the driver in Fipway or Fipio mode to use a ISA TSX FPC 10 card.

Illustration

The screen dedicated to the card driver looks like this:



Description

This table describes the different areas which make up the configuration screen:

Number	Element
1	This field is used to set the network address.
2	This field is used to set the station address.
3	This window is used to select the type of Fipway or Fipio connection.

Configuration of the operating system using the TSX FPC 10 card

At a Glance

After the driver installation and configuration phase, the operating system shall recognize the ISA TSX FPC 10 card and its driver.

Installation principles

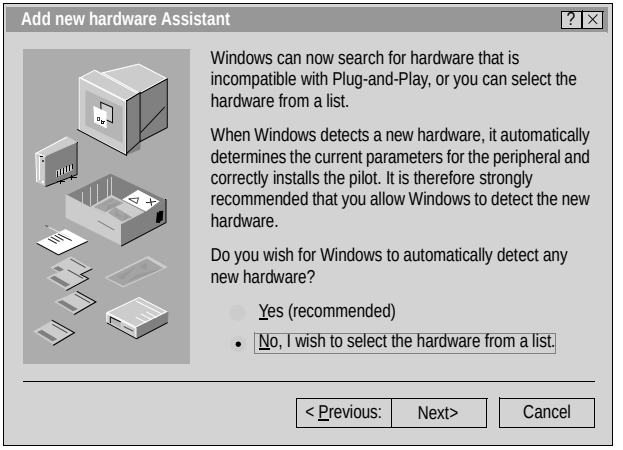
As this card is not automatically recognized by the operating system, the following phases must be carried out:

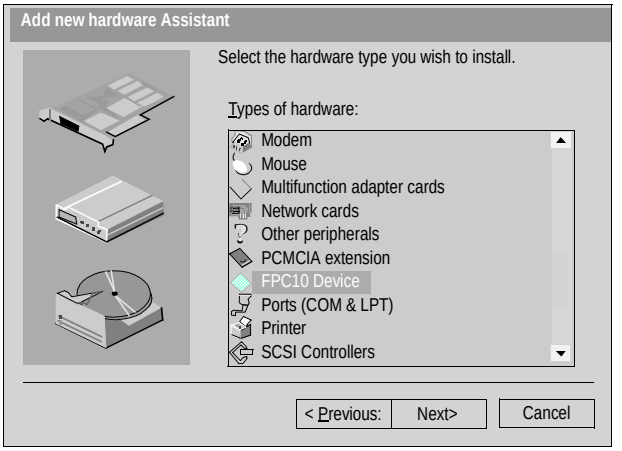
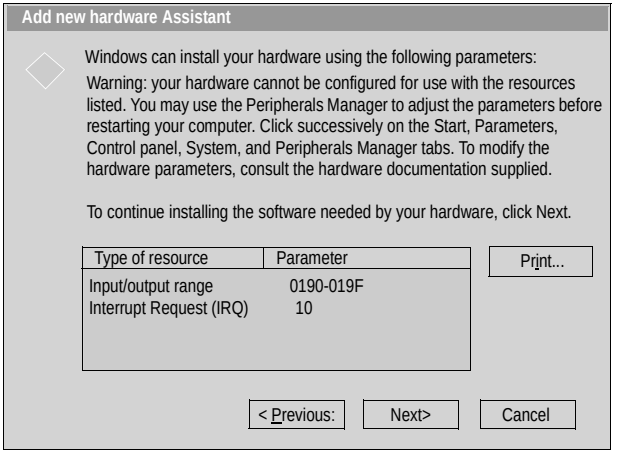
Step	Action
1	Select the hardware type: ● for Win 98 see *How to select the hardware type for Windows 98, p. 52*, ● for Win 2000/XP see *How to select the hardware type for Windows 2000\XP, p. 55*, ● for Win NT no operation is required.
2	Configure the parameters of the operating system to recognize the card: ● for Win 98 see *How to configure hardware parameters for Windows 98, p. 58*, ● for Win 2000/XP see *How to configure hardware parameters for Windows 2000\XP, p. 60*, ● for Win NT no operation is required.
3	Switch off the PC.
4	Adjust the card parameters (See *How to adjust the ISA TSX FPC 10 card parameters, p. 63*): ● the standard I/O address, ● the IRQ interrupt address.
5	Connect the card to the ISA bus.
6	Turn the PC back on. **Result:** the driver is operational.

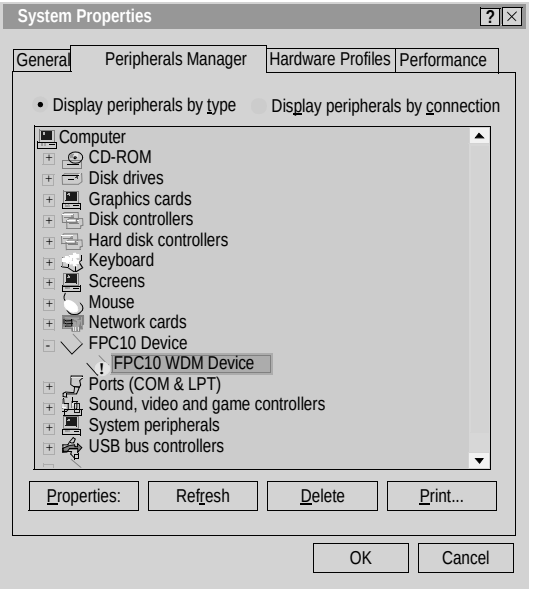
How to select the hardware type for Windows 98

Procedure

After having installed and configured the driver, carry out the following procedure to select the hardware type.

Step	Action
1	In the initial window which is displayed, click on **Next**. **Result** The following window appears: 

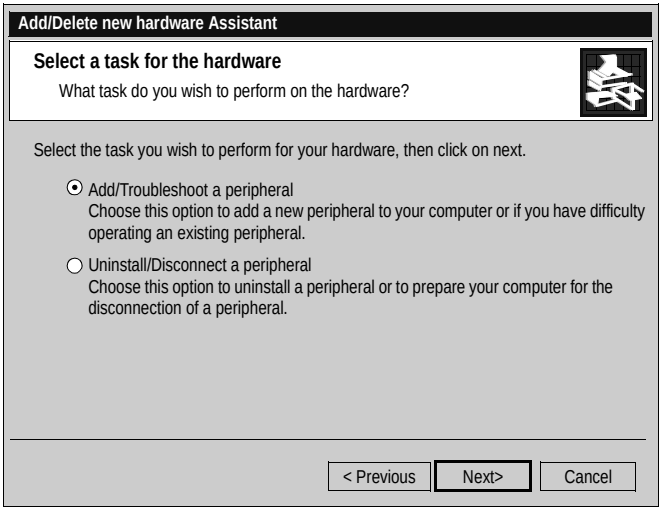
Step	Action
2	Answer **No** to the question **Do you want Windows to search for your new hardware?** **Result** The following window appears: 
3	Select **FPC10 Device** from the list then click on **Next**.
4	Select **FPC10 WDM Device** from the list then click on **Next**. **Result** The operating system suggests the hardware parameters that you must adjust on the card. 

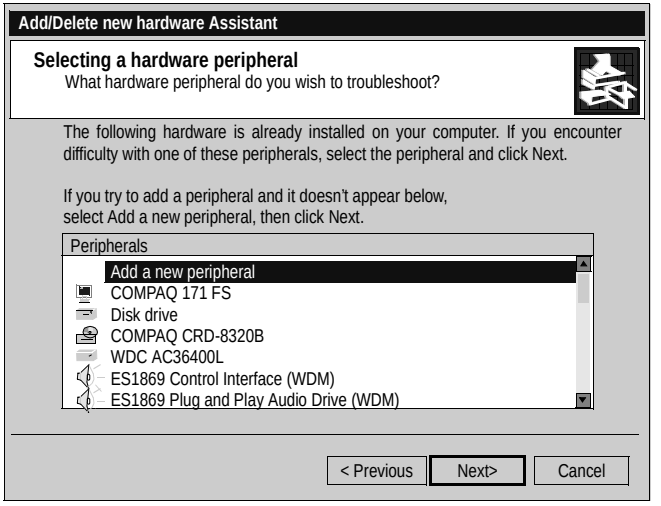
Step	Action
5	Click on **Next**.
6	Answer **No** to the question **Do you want to restart your computer now?** **Result** The following window appears and the card is shown in the station's hardware configuration. 
7	Do you want to modify the parameters? ● If yes, go to the procedure: how to modify hardware parameters (See *How to configure hardware parameters for Windows 98, p. 58*), ● If no, click on **Ok** then restart the station with the card.

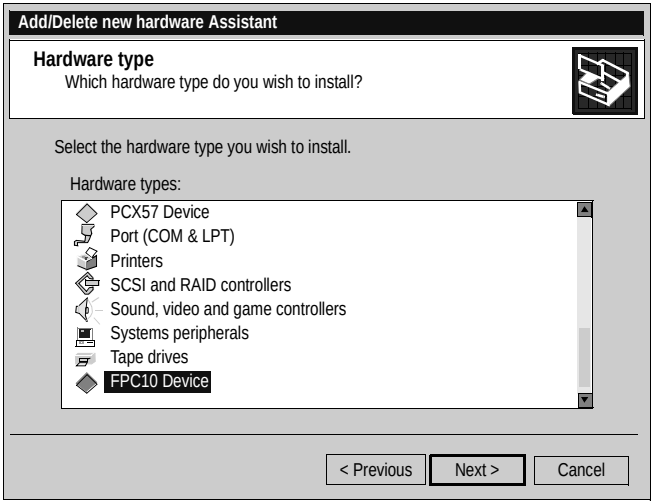
How to select the hardware type for Windows 2000\XP

Procedure

After having installed and configured the driver, carry out the following procedure to select the hardware type.

Step	Action
1	In the initial window which is displayed, click on **Next**. **Result** The following window appears: 

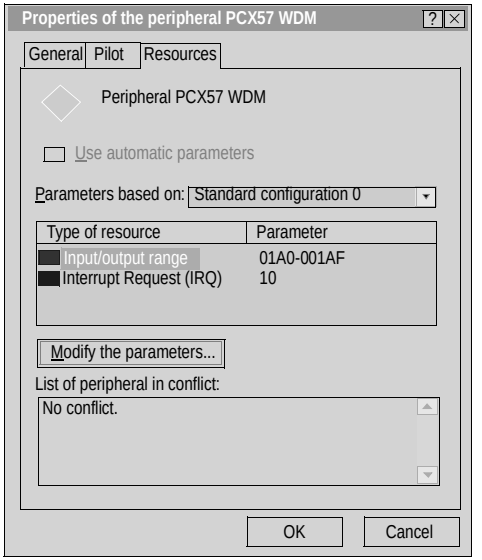
Step	Action
2	Select the option **Add/Troubleshoot a peripheral** then click **Next**. **Result** The following window appears: 
3	Select the option **Add a new peripheral** then click **Next**.
4	Answer **No** to the question **Do you want Windows to search for your new hardware?**

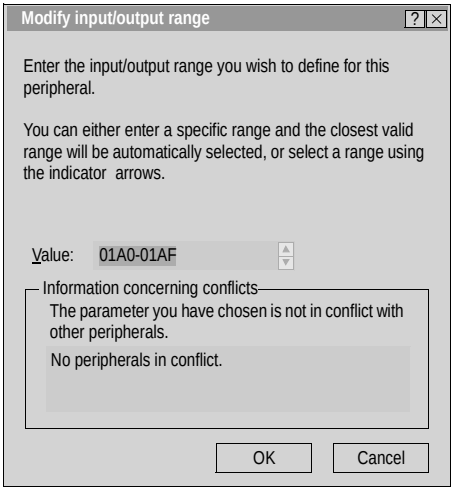
Step	Action
5	Click on **Next**. **Result** The following window appears: 
6	Select **FPC10 Device** from the list then click on **Next**.
7	Select **FPC10 WDM Device** from the list then click on **Next**. **Result**: an information window appears.
8	A window informs the user that the hardware parameters of the card must be entered by the user. Click on OK and go to the next procedure: how to configure hardware parameters (See *How to configure hardware parameters for Windows 2000\XP, p. 60*).

How to configure hardware parameters for Windows 98

Procedure

When you want to modify the hardware parameters, carry out the following procedure.

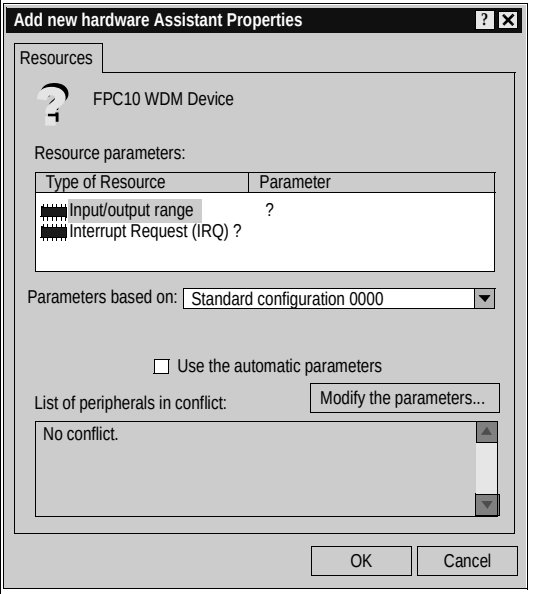
Step	Action
1	Click on **Properties**. **Result** The following window appears: 
2	Uncheck the box **Use automatic settings**.
3	Select **Input/Output Range** from the list.

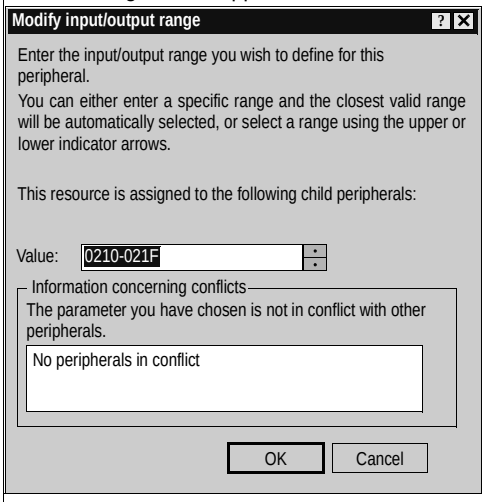
Step	Action
4	Click on **Change settings**. **Result** The following window appears: 
5	From the **Value** list, select the non-conflicting address range. **Note:** note the values because they must be coded onto the ISA card.
6	Confirm with **OK**.
7	Carry out steps 5 to 8 selecting **Interrupt Request** from the list.
8	Confirm with **Ok** then restart the station with the card connected.

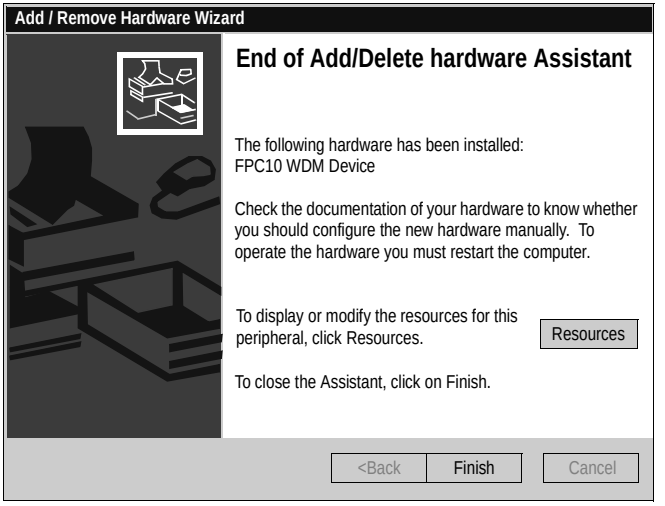
How to configure hardware parameters for Windows 2000\XP

Procedure

After having selected the hardware type, carry out the following procedure to configure the parameters.

Step	Action
1	Click on the **Resources** button.
2	Click on **Manual Configuration**. **Result** The following window appears: 
3	Uncheck the box **Use automatic settings**.
4	Select **Input/Output Range** from the list.

Step	Action
5	Click on **Change settings**. **Result** The following window appears: 
6	From the **Value** list, select the non-conflicting address range. **Note:** note the values because they must be coded onto the ISA card.
7	Confirm with **OK**. **Result:** a confirmation window appears.
8	Confirm with **Yes**.
9	Carry out steps 4 to 8 selecting **Interrupt Request** from the list.

Step	Action
10	Accept the configuration with **OK**. **Result** The following window appears: 
11	Click on **Finish** to confirm hardware configuration.

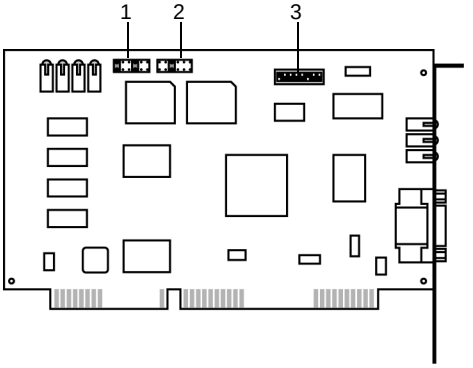
How to adjust the ISA TSX FPC 10 card parameters

At a Glance

Before installing the TSX FPC 10 card, you must adjust the following parameters:
- the standard I/O address,
- the IRQ interrupt address.

Illustration

This card comprises the following elements:



Numbers and elements

The following table describes the different parameters to be adjusted:

Number	Element
1	Jumpers (SW1) are used to select the DMA channel (Direct Access Memory) (no object).
2	A jumper (SW2) is used to select the IRQ (Interrupt Request) level.
3	The micro-switches (SW3) are used to select the standard address of the card in the I/O space.

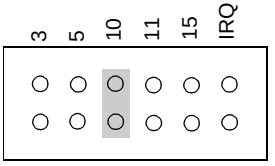
Procedure

To adjust the parameters, proceed in the following manner:

Step	Action
1	Set the IRQ interrupt jumper to comply with the address provided by the windows 98 (See *How to configure hardware parameters for Windows 98, p. 58*) or 2000/XP (See *How to configure hardware parameters for Windows 2000\XP, p. 60*) operating systems.
2	Code the standard I/O address provided by the operating system windows 98 (See *How to configure hardware parameters for Windows 98, p. 58*) or 2000/XP (See *How to configure hardware parameters for Windows 2000\XP, p. 60*) with the micro-switches.

Example of IRQ selection

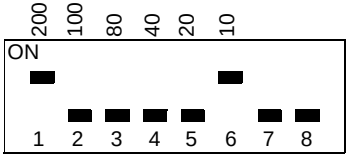
The interrupt address provided by the system is 10:



Note: The jumper must not be set in the IRQ position.

Example of standard address selection

The standard address provided by the system is equal to 210 in hexadecimal:



ETHWAY driver

IV

At a Glance

Subject of this Part

This part describes how to install the drivers associated with ETHWAY communication for Windows 2000\XP and Windows NT operating systems.

What's in this Part?

This part contains the following chapters:

Installation

6

At a Glance

Subject of this Chapter

This driver is used to communicate via an Ethernet card using the ETHWAY protocol. Driver installation consists of two main steps:

- installation of files on the station,
- configuration of the driver.

What's in this Chapter?

This chapter contains the following topics:

How to install the driver for Windows 2000\XP

At a Glance

The ETHWAY protocol is installed from:

- from the drivers' CD-ROM,
- or from disks if the station has no CD-ROM drive.

Note: The installation disks are created from the CD-ROM.

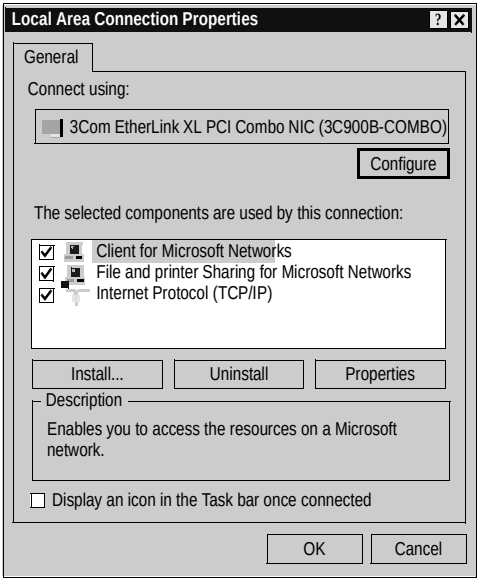
How to create a set of disks

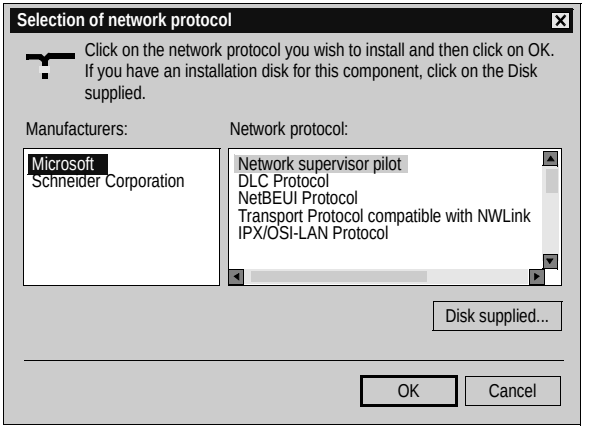
Use the following procedure to create installation disks:

Step	Action
1	Use a station which has a CD-ROM drive.
2	Insert the CD-ROM into the drive.
3	Access the directory of the driver to be copied onto disk.
4	Copy the contents of the **DISK1** directory onto a disk. Repeat step for each **DISK** directory. **Note:** it is advisable to number the disks.

How to install the driver

The ETHWAY driver is installed in accordance with the following procedure:

Step	Action
1	Insert the CD-ROM or the first disk.
2	Access the **Control Panel** in Windows.
3	Double-click on the **Network connections and Remote access** icon.
4	Select the icon **Local connection** then by right-clicking select the command **Properties**. **Result** The following window appears: 
5	Click on the **Install** button.

Step	Action
6	In the **Select Network Component Type** window, select the type **Protocol** then click on **Add**. **Result** The following window appears: 
7	Click on **Have Disk**.
8	Select the access path of the files to be installed from the CD-ROM or the disk using the **Browse** button.
9	Click on **Ok**.
10	In this window select the **ETHWAY Protocol** then click on **OK**.
11	Select the **ETHWAY protocol** then click on **Properties**.
12	In the configuration screen (See *Driver configuration tool, p. 73*), configure the protocol then click on **OK**.
13	Complete the installation by clicking on **OK**.

How to install the driver for Windows NT

At a Glance

The ETHWAY protocol is installed from:
- from the drivers' CD-ROM,
- or from disks if the station has no CD-ROM drive.

Note: The installation disks are created from the CD-ROM.

How to create a set of disks

Use the following procedure to create installation disks:

Step	Action
1	Use a station which has a CD-ROM drive.
2	Insert the CD-ROM into the drive.
3	Access the directory of the driver to be copied onto disk.
4	Copy the contents of the **DISK1** directory onto a disk. Repeat step for each **DISK** directory. **Note:** it is advisable to number the disks.

How to install the driver

The ETHWAY driver is installed in accordance with the following procedure:

Step	Action
1	Insert the CD-ROM or the first disk.
2	Access the **Control Panel** in Windows.
3	Launch the **Networks** icon.
4	Select the **Protocols** tab and click on **Add**.
5	In the protocol selection window click on **Have Disk...**
6	Confirm your choice of diskette or CD-ROM and then choose **ETHWAY Protocol**. The driver files are copied onto the PC.
7	Select the **Links** tab and check the link of the ETHWAY protocol with the Ethernet card(s) installed on the PC. ETHWAY can be linked selectively to 1 or 2 Ethernet cards.
8	Return to the **Protocols** tab, select **ETHWAY Protocol**and click on **Properties**.
9	Enter the ETHWAY Network-Station address in the **Network** and **Station** fields. If 2 Ethernet cards are installed on the PC, repeat this operation for each entry in the **Adapter name** list.
10	Confirm the ETHWAY parameters, the **network** window, then restart the machine.

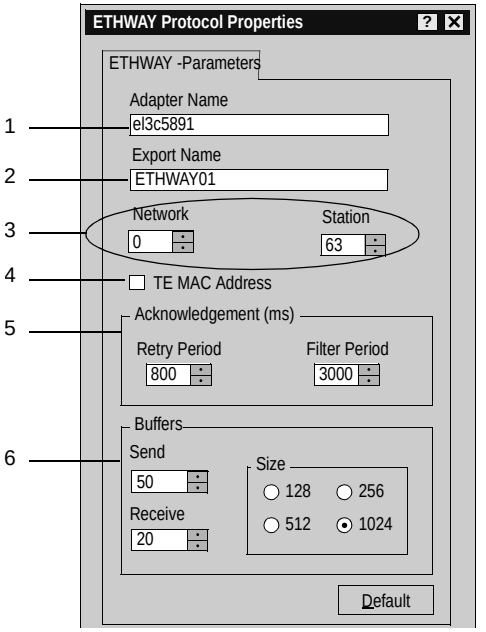
Driver configuration tool

At a Glance

The configuration tool is used to configure the Ethernet card to communicate according to the ETHWAY protocol.

Illustration

The card configuration screen looks like this:



Description

This table describes the different areas which make up the configuration screen:

Number	Element
1	This field is used to select the Ethernet card (useful if there are several Ethernet cards). This field cannot be modified under Windows 2000\XP.
2	This field is used to select the ETHWAY driver instance. This field cannot be modified under Windows 2000\XP.
3	These windows are used to define the address {Network.Station} of the Ethernet card used.
4	This box is used to replace the Ethernet card's MAC address with the SCHNEIDER MAC address (00 80 F4 Network Station).
5	This window is used to configure the reception acknowledgment by defining: ● the retransmission period between two frames if the remote device is not responding, ● the storage time of a frame originating from the remote device (useful for loaded networks). **Note:** in general, storage time is three times the retransmission period.
6	This window is used to configure the transmission and reception buffer size in bytes.

XIP driver on TCP/IP

V

At a Glance

Subject of this Part

This part describes how to install the drivers associated with X-Way communication on TCP/IP for Windows 98, Windows 2000\XP and Windows NT operating systems.

Note: The installation of this driver is the same on all operating systems installed.

What's in this Part?

This part contains the following chapters:

Installation

7

At a Glance

Subject of this Chapter

This driver is used to communicate via an Ethernet card using the X-Way protocol on TCP/IP.

This chapter describes driver installation, which consists of two steps:
- installation of files on the station,
- configuration of the driver.

What's in this Chapter?

This chapter contains the following topics:

How to install the driver

At a Glance

Driver installation is a standard installation. It can be launched either:

- from the drivers' CD-ROM,
- or from disks if the station has no CD-ROM drive.

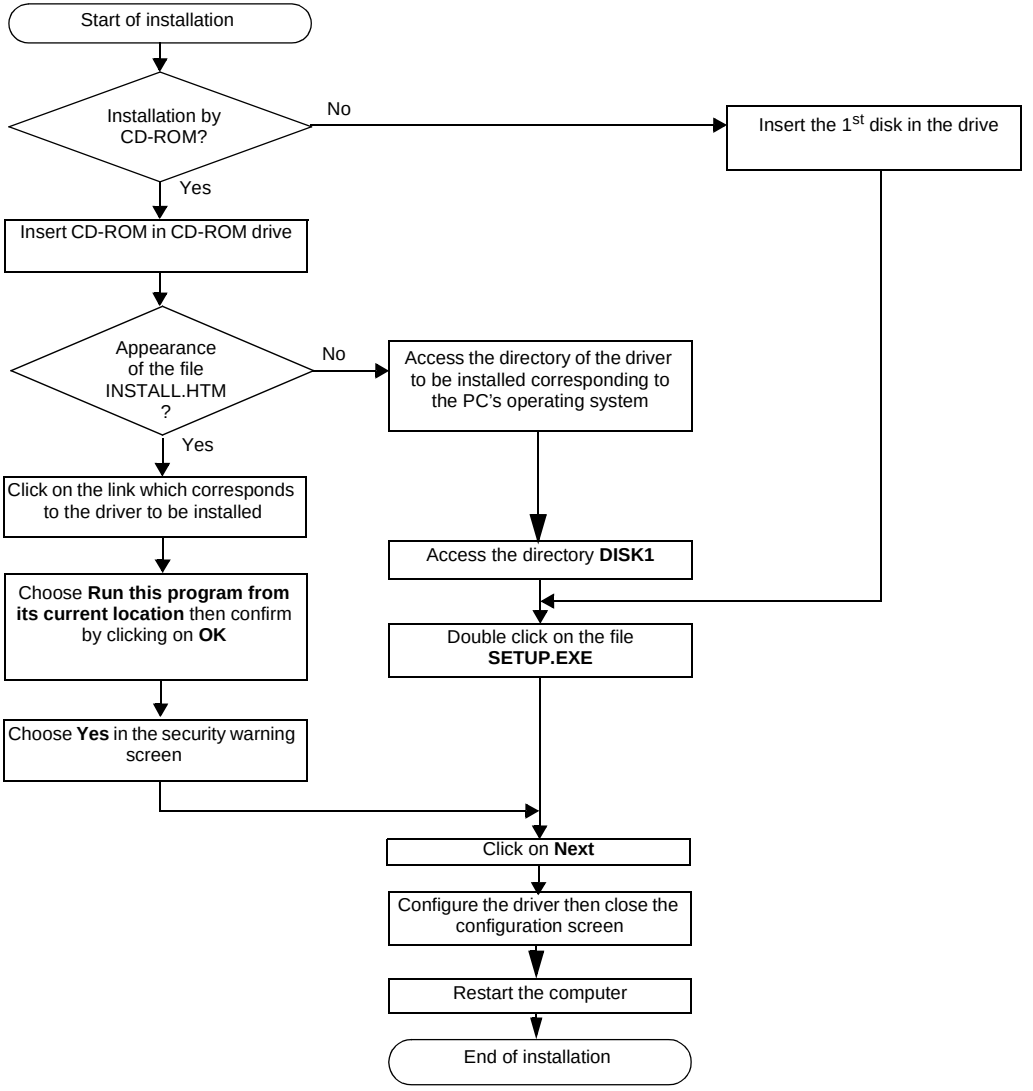
Note: The installation disks are created from the CD-ROM.

How to create a set of disks

Use the following procedure to create installation disks:

Step	Action
1	Use a station which has a CD-ROM drive.
2	Insert the CD-ROM into the drive.
3	Access the directory of the driver to be copied onto disk.
4	Copy the contents of the **DISK1** directory onto a disk. Repeat this step for each **DISK** directory. **Note:** it is advisable to number the disks.

How to install the driver To install the driver, carry out the following procedure:



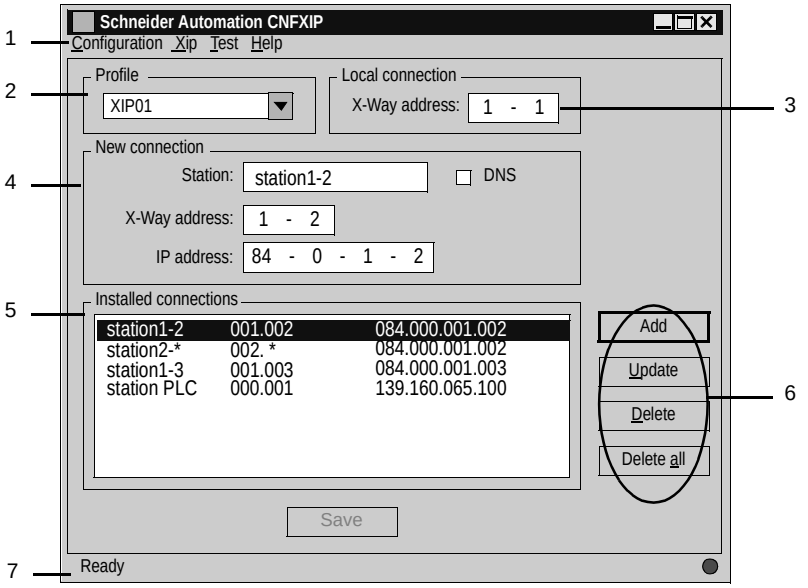
Driver configuration screen

At a Glance

The configuration tool is used to link a driver configuration profile to a remote device that communicates with the station.

Illustration

The screen dedicated to the XIP driver looks like this:



Description

This table describes the different areas which make up the configuration screen:

Number	Element
1	All software functions can be accessed using this menu bar: ● **Configuration** : creation or deletion of a profile ● **Xip** : start, stop or reinitialize the driver ● **Test** : test request transmissions with options ● **Aide** : information on the software
2	The profile used by the driver is selected from this list.
3	The X-Way address of the station is configured from this window.
4	The new connections with remote devices associated with the driver are set from this window.
5	Existing connections with remote devices can be viewed via this list.
6	Connections can be added, removed or redefined with these buttons.
7	This status bar is an operating indicator (driver stopped or started) with a comment zone.

How to configure the driver

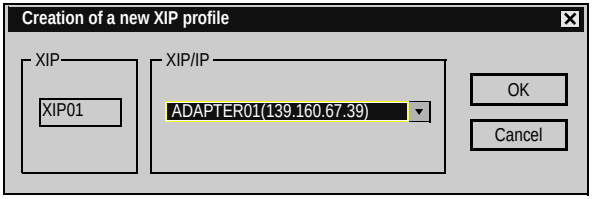
At a Glance

During driver installation, a default configuration profile is proposed. You are able to modify this profile or create a new one.

Note: If all the network connections are in use or if there are none on the station, a profile cannot be created.

How to create a new profile

From the driver configuration screen,

Step	Action
1	Select the menu **Configuration** → **Create a profile**. **Result** The following window appears: 
2	From the **TCP/IP** drop-down menu, select the TCP/IP connection to the network.
3	Click **Ok** .

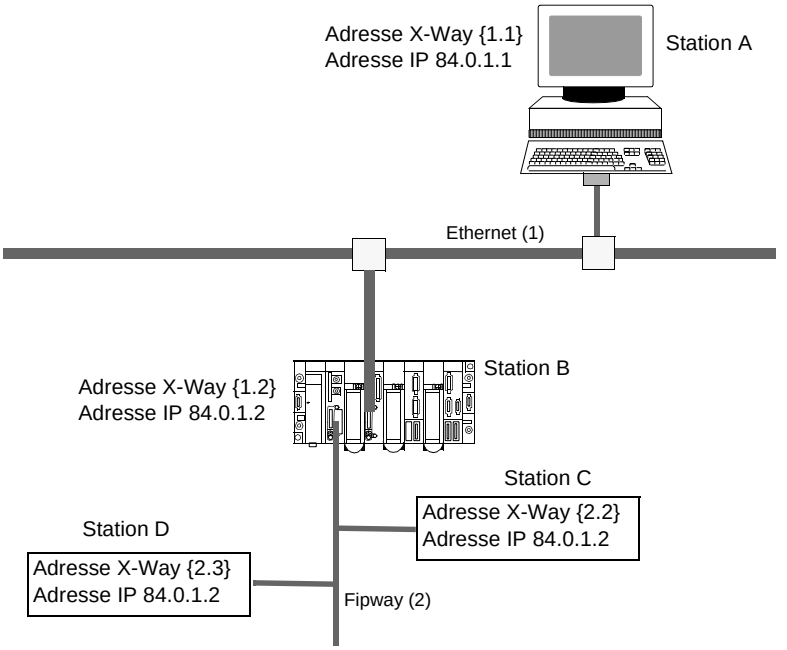
How to remove a profile

From the driver configuration screen,

Step	Action
1	Select the menu **Configuration** → **Create a profile**.
2	From the drop-down menu, select the profile to be removed.
3	Confirm deletion with **Ok** .

Example

The architecture below describes the addressing of stations on Ethernet and Fipway networks:



Access to stations

To directly access all the stations on the Ethernet 1 network from station **A**, enter the X-Way address {1.*****} and the IP address 84.0.1.1.
In order for station **A** to be able to access station **B**, enter for connection the X-Way address {1.2} and the IP address 84.0.1.2.
In order for station **A** to be able to access station **B**, enter the X-Way address {2.3} and the IP address of the bridge 84.0.1.2.

How to add a connection

From the configuration screen,

Step	Action
1	In the **New connection** window, enter: ● the name of the remote station or bridge, ● the address of the remote station or bridge, ● the IP address of the remote station or bridge,
2	Click **Add**.
3	Click **Save**. **Note:** the configuration is saved for the current profile.

How to remove a connection

From the configuration screen,

Step	Action
1	In the **Connections installed** window, select the name of the remote station to be removed.
2	Click **Delete**.
3	Click **Save**. **Note:** the configuration is saved for the current profile.

How to modify a connection

From the configuration screen,

Step	Action
1	In the **Installed Connections** window, select the name of the remote station to be modified.
2	In the **New connection** window, modify: ● the name of the remote station or bridge, ● the address of the remote station or bridge, ● the IP address of the remote station or bridge,
3	Click **Update**.
4	Click **Save**. **Note:** the configuration is saved for the current profile.

XIP Instances

Once installed, configure the XIP driver and reboot the computer. All XIP profile instances are initialized.
For each XIP profile configured a corresponding icon appears in the task bar.

Drivers for Atrium Processors

VI

At a Glance

Subject of this Part

This part describes how to install the drivers associated with the TPCX 57 and TSX PCI 57 processors for operating systems.
These drivers are:

- the ISAWAY driver for the TPCX 57 processors,
- the PCIWAY driver for the TSX PCI 57 processors.

What's in this Part?

This part contains the following chapters:

ISAWAY driver for TPCX 57 processors

8

At a Glance

Subject of this Chapter

This driver makes it possible to use the TPCX 57 processor on the ISA bus.

Driver installation consists of two steps:
- installation of files on the station,
- configuration of the operating system so that it is recognized.

What's in this Chapter?

This chapter contains the following topics:

How to install the driver

At a Glance

Driver installation is a standard installation. It can be launched either:
- from the drivers' CD-ROM,
- or from disks if the station has no CD-ROM drive.

Note: The installation disks are created from the CD-ROM.

How to create a set of disks

Use the following procedure to create installation disks:

Step	Action
1	Use a station which has a CD-ROM drive.
2	Insert the CD-ROM into the drive.
3	Access the directory of the driver to be copied onto disk.
4	Copy the contents of the **DISK1** directory onto a disk. Repeat this step for each **DISK** directory. **Note:** it is advisable to number the disks.

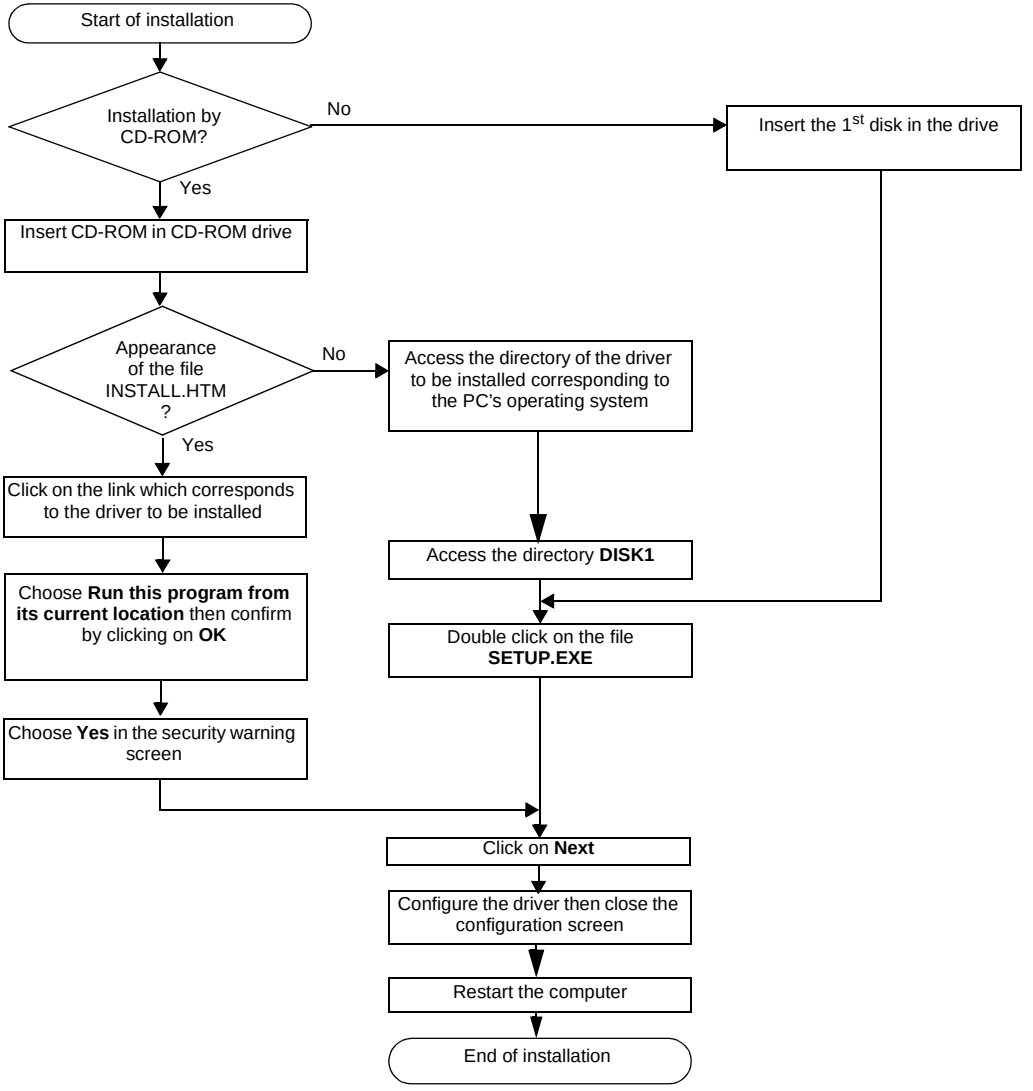
Preliminary operations

Before installing the new driver, you must check that there is no previous version of Windows NT4 on the station.

If a driver does exist, you must delete it before carrying out the new installation.

A previous version can be uninstalled using:
- **Drivers Manager** software,
- or the **Control Panel** → **Add/Remove Programs**.

How to install the driver To install the driver, carry out the following procedure:

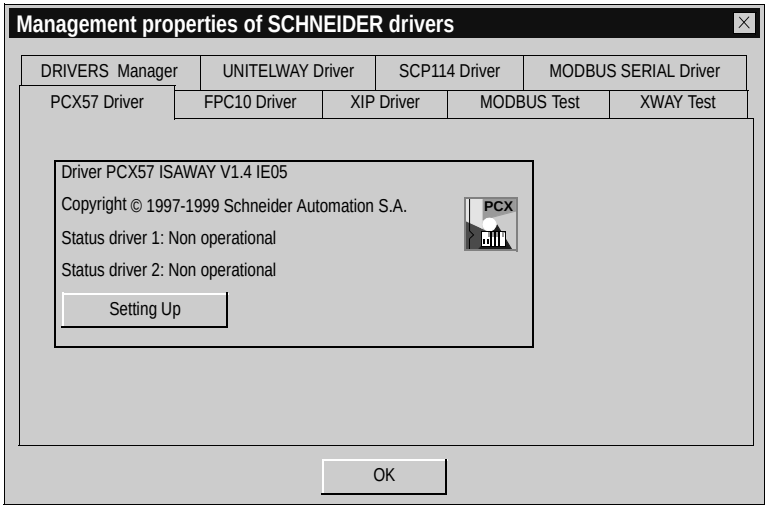


Configuration of the ISAWAY driver for Windows NT

Access to the configuration tool

The configuration tool can be accessed from the taskbar **"Start->Programs-> Schneider Electric->Drivers Manager "**.

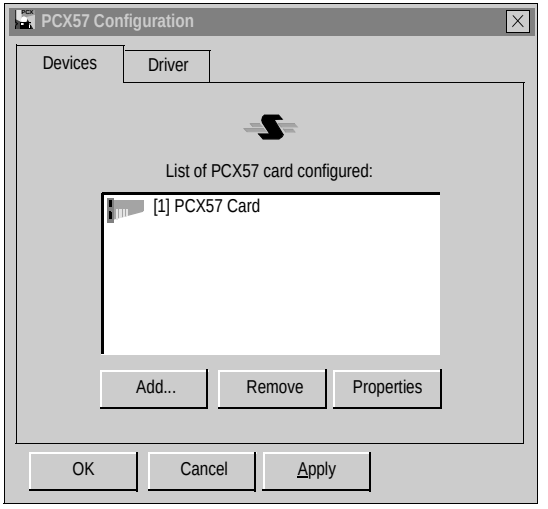
Select the tab **"PCX57 Driver"** to display the following window:



This window shows information on the version and STATUS of the driver installed.

Driver configuration

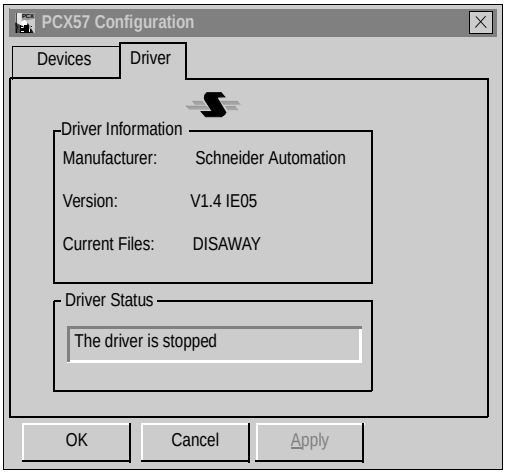
Press the **Configuration** button to display the following window:



The table below describes the different commands in the tab **"Devices"** :

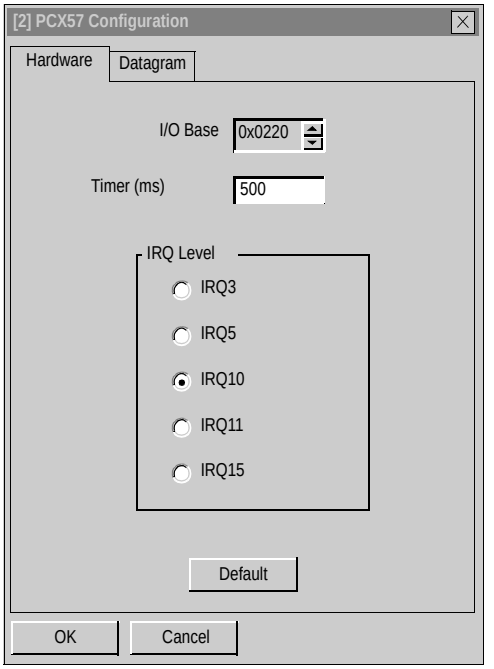
Button	Action
Add...	Allows a T PCX 57 processor card with default parameters (IRQ =10, base address I/O=H'220', timer=500ms, buffer size=256 bytes) to be added to the PC. The maximum number of cards is 2.
Remove	Allows a selected T PCX 57 processor card to be deleted.
Properties	Allows the properties of a processor card to be defined, see: *Properties, p. 93*.
Apply	Allows configuration parameters to be applied; the tool saves the parameters, then reinitializes the driver.
Cancel	Allows the user to exit without acknowledging the modified parameters.
OK	Allows the user to exit while acknowledging the modified parameters.

Click the tab **"Driver"** to display the following window:



This window displays general information on the driver

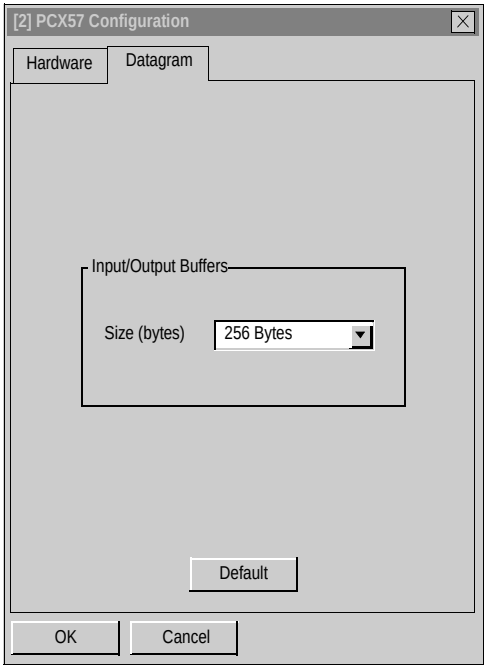
Properties Press the **Properties** button to display the following window:



The table below describes the different areas:

Area	Description
I/O Base	This is the address of the PCX57 card in hexadecimal, which should correspond to the address configured on the processor card
Timer(ms)	Represents the watchdog refreshment period, which is updated by the driver.
Default	Displays the default configuration of the card (IRQ=10, I/O Base=H'220', Timer=500ms).
Cancel	Cancels a modification, and returns to the previous screen.
OK	Validates the configuration; the parameters displayed are stored and the previous screen is displayed.

Click the **Datagram** tab to display the following window:



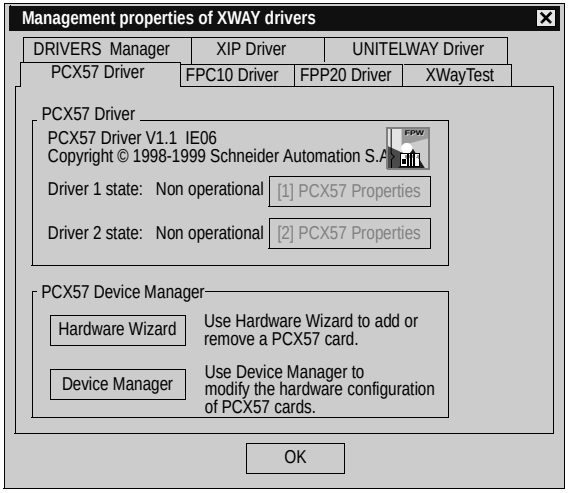
The table below describes the different areas:

Area	Description
Input/Output buffer	Allows the size of the buffers for the interface between the PCX57 card and the driver to be configured. The size may be set at between 160 and 256 bytes.
Default	Allows default selection of the card (256 bytes)
Cancel	Cancels a modification, and returns to the previous screen.
OK	Validates the configuration; the parameters displayed are stored and the previous screen is displayed.

Configuration of ISAWAY driver for Windows 98\2000\XP

At a Glance

The management tool tab is as follows:



Elements

The **Properties** button is used to access the driver configuration screen for card 1 and card 2 respectively.

The **Hardware Wizard** button is used to add or remove an ISA TSX FPC 10 card using the Add/Remove Hardware Wizard.

Note: a maximum of two cards can be connected.

The **Device Manager** button activates the **System Properties** window and is used to view or modify the card hardware parameters.

Configuration of the operating system

At a Glance

After the driver installation and configuration phase, the operating system shall recognize the TPCX 57 card and its driver.

Installation principles

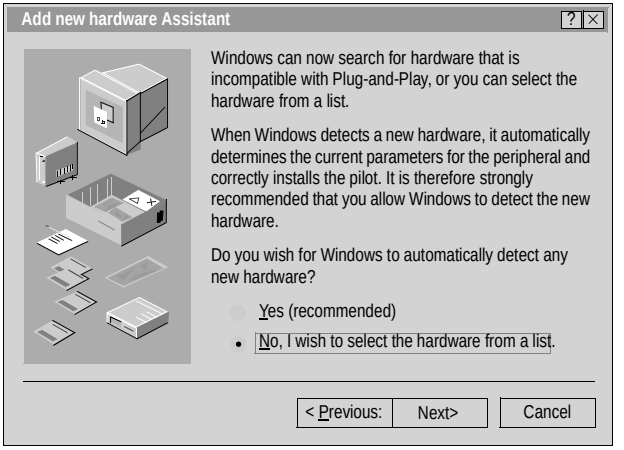
As this card is not automatically recognized by the operating system, the following phases must be carried out:

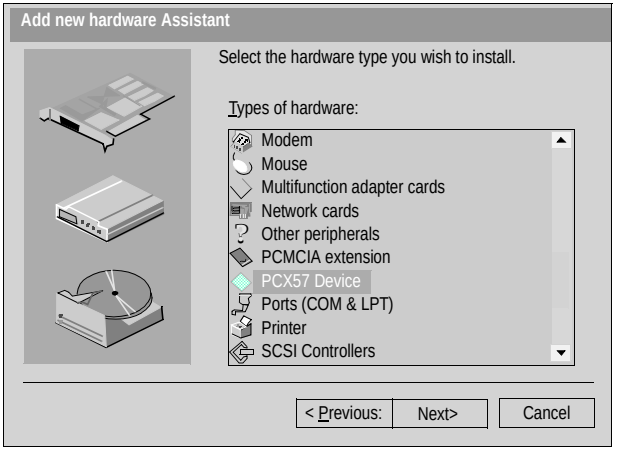
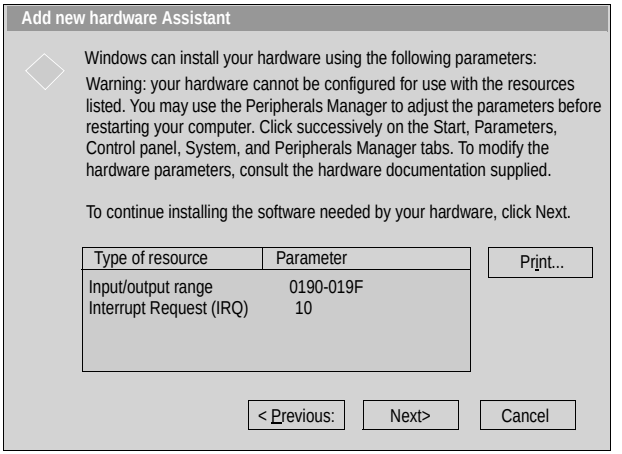
Step	Action
1	Select the hardware type: ● for Windows 98 see *How to select the hardware type for Windows 98, p. 97*, ● for Windows 2000 see *How to select the hardware type for Windows 2000\XP, p. 100*, ● for Windows NT no operation is required.
2	Configure the parameters of the operating system to recognize the card: ● for Windows 98 see *How to configure hardware parameters for Windows 98, p. 103*, ● for Windows 2000 see *How to configure hardware parameters for Windows 2000\XP, p. 105*, ● for Windows NT no operation is required.
3	Switch off the station.
4	Adjust the card parameters: See *How to adjust the ISA TPCX 57 card parameters, p. 108*. ● the standard I/O address, ● the IRQ interrupt address.
5	Connect the card to the ISA bus.
6	Turn the station back on. **Result:** the driver is operational.

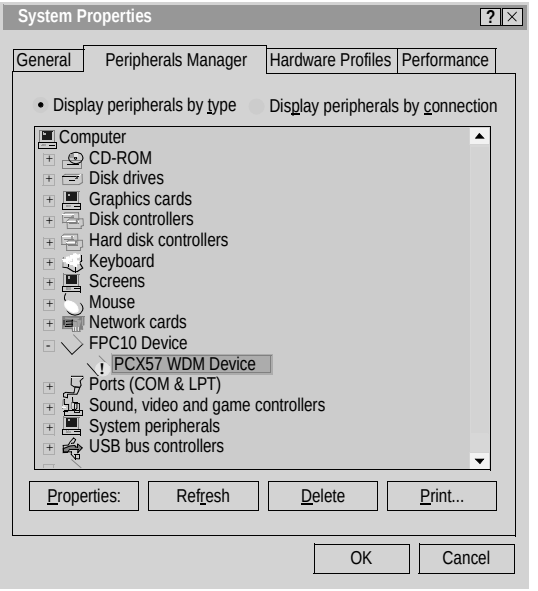
How to select the hardware type for Windows 98

Procedure

After having installed and configured the driver, carry out the following procedure to select the hardware type.

Step	Action
1	In the initial window which is displayed, click on **Next**. **Result** The following window appears: 

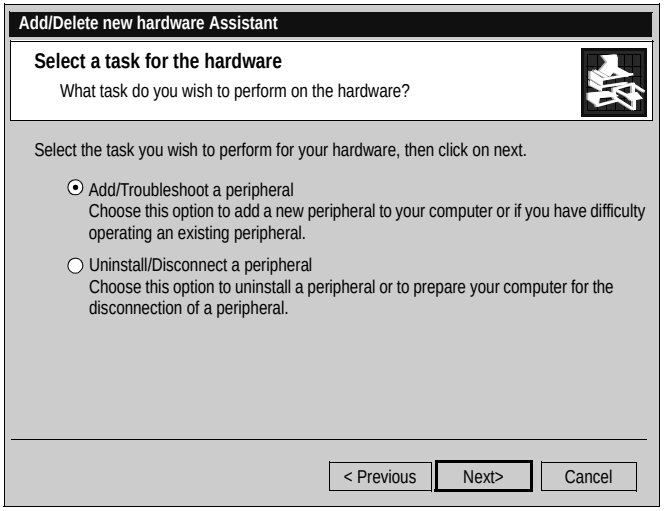
Step	Action
2	Answer **No** to the question **Do you want Windows to search for your new hardware?** **Result** The following window appears: 
3	Select **PCX57 Device** from the list then click on **Next**.
4	Select **PCX57 WDM Device** from the list then click on **Next**. **Result** The operating system suggests the hardware parameters that you must configure on the card. 

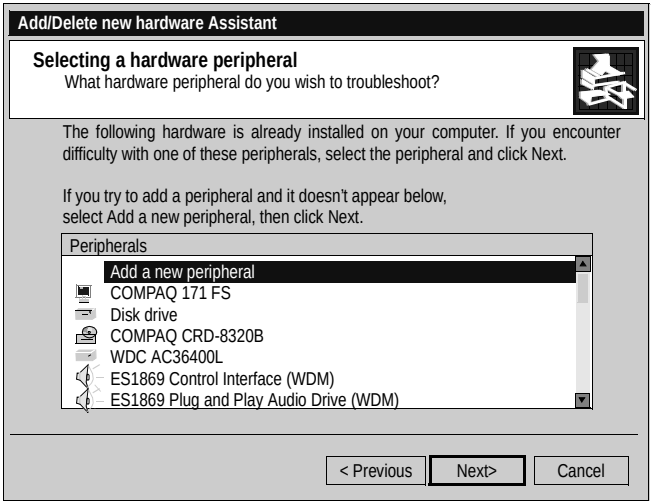
Step	Action
5	Click on **Next**.
6	Answer **No** to the question **Do you want to restart your computer now?** **Result** The following window appears and the card is shown in the station's hardware configuration. 
7	Do you want to modify the parameters? • If yes, go to the procedure: how to modify hardware parameters (See *How to configure hardware parameters for Windows 98, p. 103*), • If no, click on OK then restart the station with the card connected.

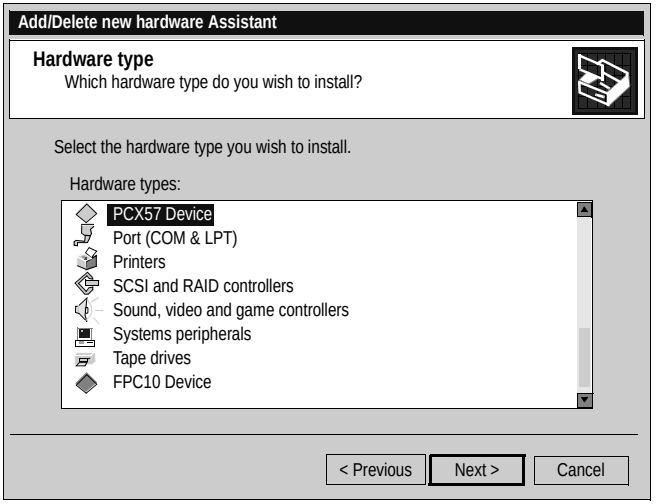
How to select the hardware type for Windows 2000\XP

Procedure

After having installed and configured the driver, carry out the following procedure to select the hardware type.

Step	Action
1	In the initial window which is displayed, click on **Next**. **Result** The following window appears: 

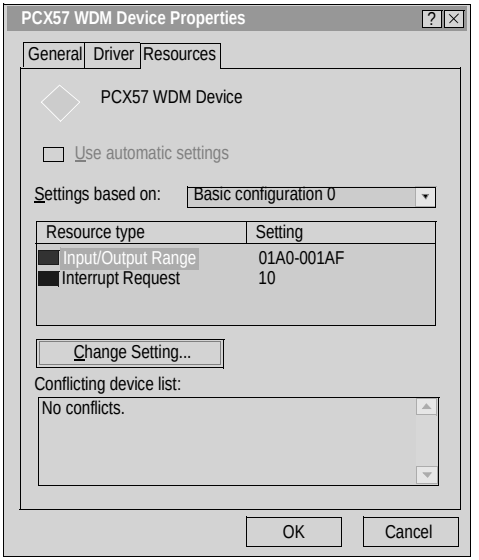
Step	Action
2	Select the option **Add/Troubleshoot a peripheral** then click **Next**. **Result** The following window appears: 
3	Select the option **Add a new peripheral**. Then click on **Next**.
4	Answer **No** to the question **Do you want Windows to search for your new hardware?**

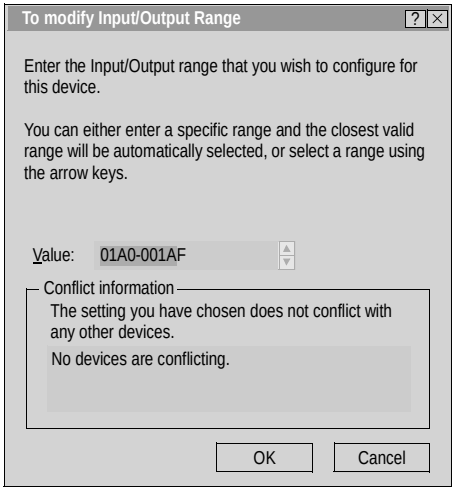
Step	Action
5	Click on **Next**. **Result** The following window appears: 
6	Select **PCX57 Device** from the list then click on **Next**.
7	Select **PCX57 WDM Device** from the list then click on **Next**.
8	Go to the next procedure: how to configure hardware parameters (See *How to configure hardware parameters for Windows 2000\XP, p. 105*).

How to configure hardware parameters for Windows 98

Procedure

When you want to modify the hardware parameters, carry out the following procedure.

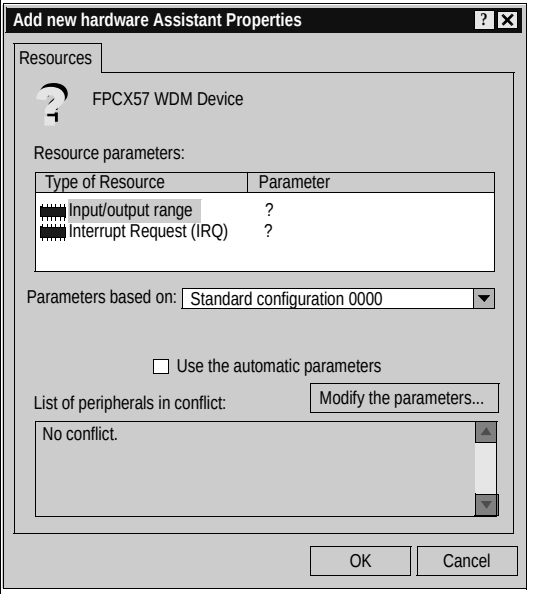
Step	Action
1	Click on **Properties**. **Result** The following window appears: 
2	Uncheck the box **Use automatic settings**.
3	Select **Input/Output Range** from the list.

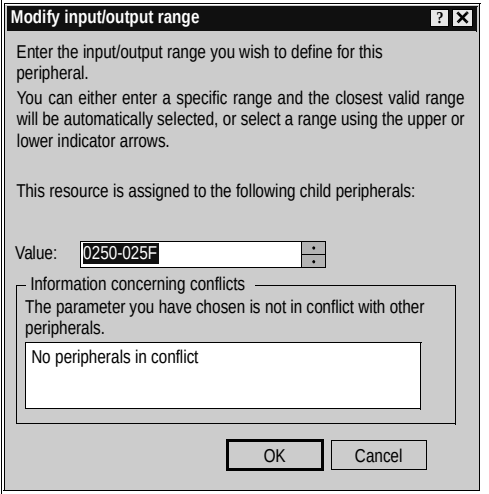
Step	Action
4	Click on **Change Settings**. **Result** The following window appears: 
5	From the **Value** list, select the non-conflicting address range. **Note:** note the values because they must be coded onto the ISA card.
6	Confirm using the **Ok** button.
7	Carry out steps 5 to 8 selecting **Interrupt Request** from the list.
8	Confirm with **OK** then restart the station with the card connected.

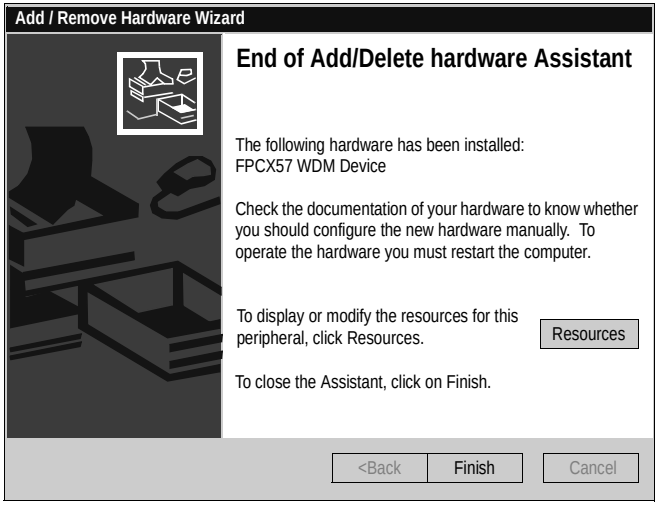
How to configure hardware parameters for Windows 2000\XP

Procedure

After having selected the hardware type, carry out the following procedure to configure the parameters.

Step	Action
1	Click on the **Resources** button.
2	Click on **Manual Configuration**. **Result** The following window appears: 
3	Uncheck the box **Use automatic settings**.
4	Select **Input/Output Range** from the list.

Step	Action
5	Click on **Change settings**. **Result** The following window appears: 
6	From the **Value** list, select the non-conflicting address range. **Note:** note the values because they must be coded onto the ISA card.
7	Confirm with **OK**. **Result:** a confirmation window appears.
8	Confirm with **Yes**.
9	Carry out steps 4 to 8 selecting **Interrupt Request** from the list.

Step	Action
10	Accept the configuration with **OK**. **Result** The following window appears: 
11	Click on **Finish** to confirm hardware configuration.

How to adjust the ISA TPCX 57 card parameters

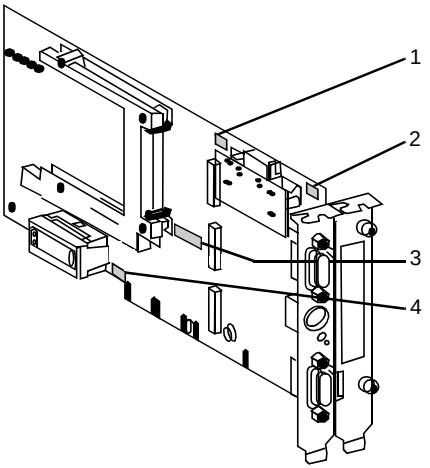
At a Glance

Before installing the TPCX 57 card, you must adjust the following parameters:

- the rack number and the processor position,
- the standard I/O address,
- the IRQ interrupt address.

Illustration

This card comprises the following elements:



Numbers and elements

The following table describes the different parameters to be adjusted:

Number	Element
1	The processor's rack position can be coded with the micro-switches.
2	The address of the rack which contains the processor can be coded with the micro-switches.
3	The standard address of the processor can be coded on the ISA bus with the micro-switches.
4	The IRQ (Interrupt Request) level can be coded with the micro-switches.

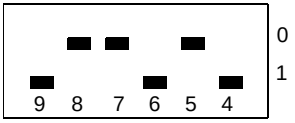
Procedure

To adjust the parameters, proceed in the following manner:

Step	Action
1	Code the number of the rack which contains the processor.
2	Code the processor position.
3	Code the standard I/O address provided by the operating system with the micro-switches.
4	Code the interrupt level provided by the operating system with the micro-switches.

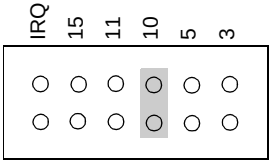
Example of standard address selection

The standard address provided by the system is equal to 250 in hexadecimal:



Example of IRQ selection

The interrupt address provided by the system is 10:



Note: The jumper must not be set in the IRQ position.

PCIWAY driver for TSX PCI 57 ••• processors

9

At a Glance

Subject of this Chapter

This driver makes it possible to use TSX PCI 57 ••• processors on the PCI bus

Driver installation consists of two steps:
- installation of files on the station,
- configuration of the operating system so that it is recognized.

What's in this Chapter?

This chapter contains the following topics:

How to install the driver

At a Glance

Driver installation is a standard installation. It can be launched either:
- from the drivers' CD-ROM,
- or from disks if the station has no CD-ROM drive.

Note: The installation disks are created from the CD-ROM.

How to create a set of disks

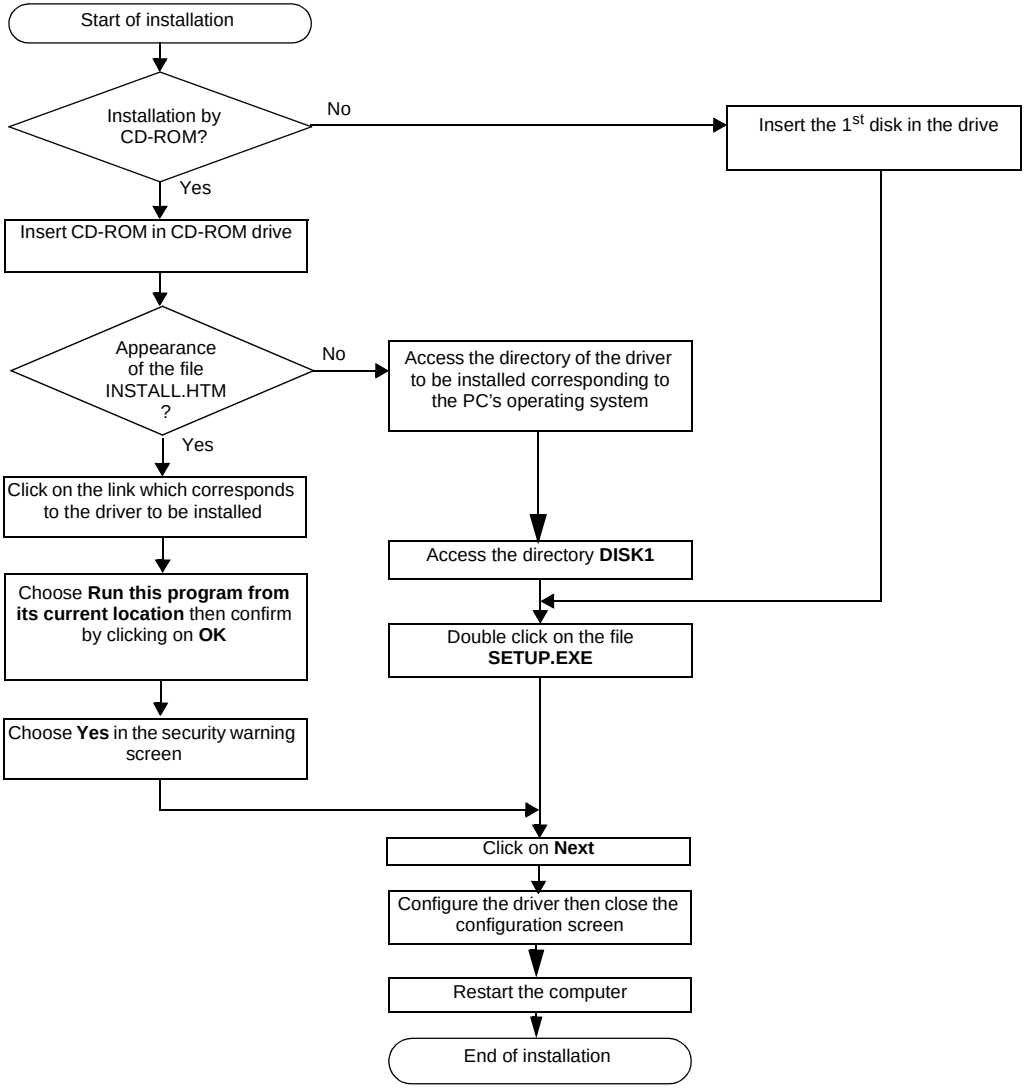
Use the following procedure to create installation disks:

Step	Action
1	Use a station which has a CD-ROM drive.
2	Insert the CD-ROM into the drive.
3	Access the directory of the driver to be copied onto disk.
4	Copy the contents of the **DISK1** directory onto a disk. Repeat this step for each **DISK** directory. **Note:** it is advisable to number the disks.

Preliminary operations

You must have administrator access rights for the machine in order to install the driver.

How to install the driver To install the driver, carry out the following procedure:

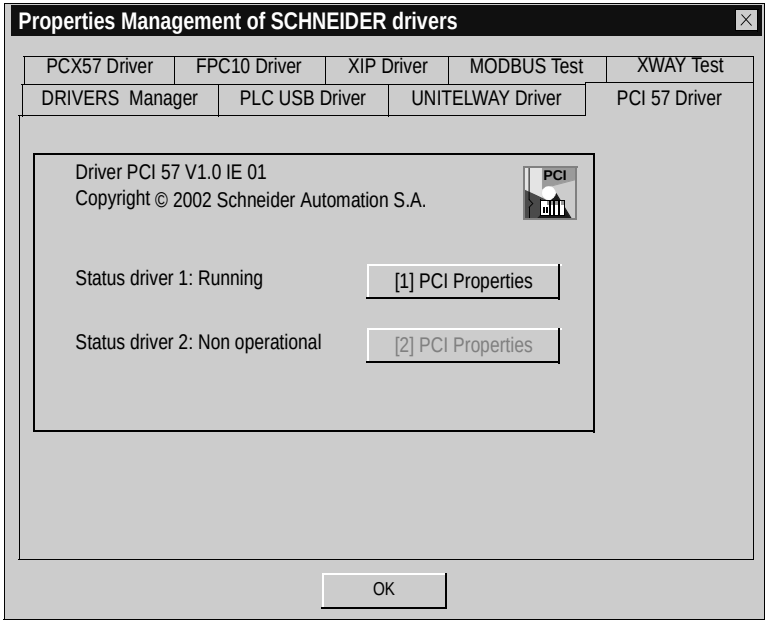


Configuring the PCIWAY driver for windows 2000\XP

Access to the configuration tool

The configuration tool can be accessed from the taskbar **"Start->Programs-> Schneider Electric->Drivers Manager "**.

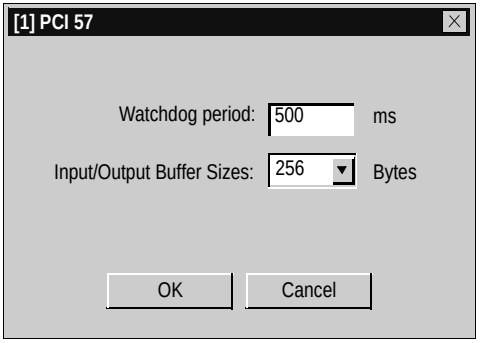
Select the **PCI 57 Driver** tab to display the following window:



This window shows information on the version and STATUS of the driver installed.

Properties

Press the **PCI Properties** button to display the following window:



The table below describes the different areas:

Area	Description
Input/Output Buffer Sizes	Allows the size of the buffers for the interface between the TSX PCI 57 card and the driver to be configured. The size may be set at between 160 and 256 bytes.
Watchdog period	Represents the refresh period of the watchdog.
Cancel	Cancels a modification, and returns to the previous screen.
OK	Validates the configuration; the parameters displayed are stored and the previous screen is displayed.

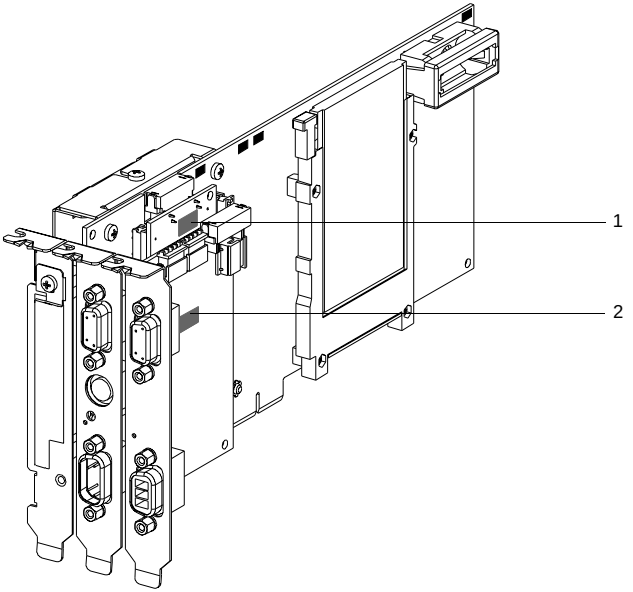
How to adjust the parameters of the TSX PCI 57 ••• card

At a Glance

Before installing the TSX PCI 57 ••• card, you must:
- install the PCI 57 driver,
- code the rack number on the X Bus,
- code the position of the processor in the rack.

Illustration

This card comprises the following elements:



Numbers and elements

The following table describes the different parameters to be adjusted:

Number	Element
1	The address of the rack on the X Bus can be coded with the micro-switches.
2	The processor's rack position can be coded with the micro-switches.

Procedure

To adjust the parameters, proceed in the following manner:

Step	Action
1	Code the number of the rack on the X-BUS.
2	Code the position of the processor in the rack.

Modbus driver

VII

At a Glance

Subject of this Part

This part describes how to install the Modbus driver for the Windows 98, Windows 2000\XP and Windows NT operating systems.

What's in this Part?

This part contains the following chapters:

Installation

10

At a Glance

Subject of this Chapter

This chapter describes Modbus driver installation. This installation procedure can be broken down into two steps:

- installation of files on the station,
- configuration of the driver.

What's in this Chapter?

This chapter contains the following topics:

How to install the driver

At a Glance

Driver installation is a standard installation. It can be launched either:

- from the drivers' CD-ROM,
- or from disks if the station has no CD-ROM drive.

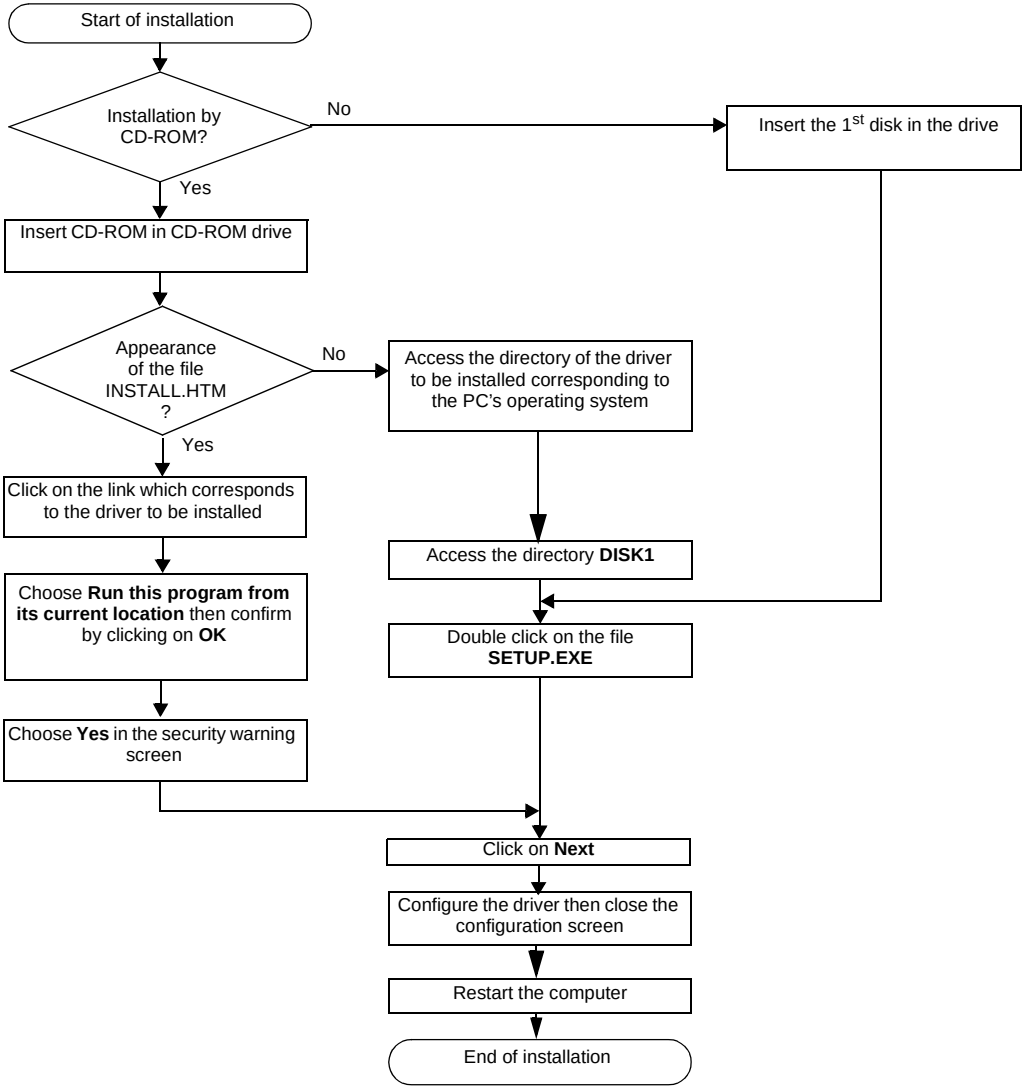
Note: The installation disks are created from the CD-ROM.

How to create a set of disks

Use the following procedure to create installation disks:

Step	Action
1	Use a station which has a CD-ROM drive.
2	Insert the CD-ROM into the drive.
3	Access the directory of the driver to be copied onto disk.
4	Copy the contents of the **DISK1** directory onto a disk. Repeat this step for each **DISK** directory. **Note:** it is advisable to number the disks.

How to install the driver To install the driver, carry out the following procedure:



Driver configuration screen

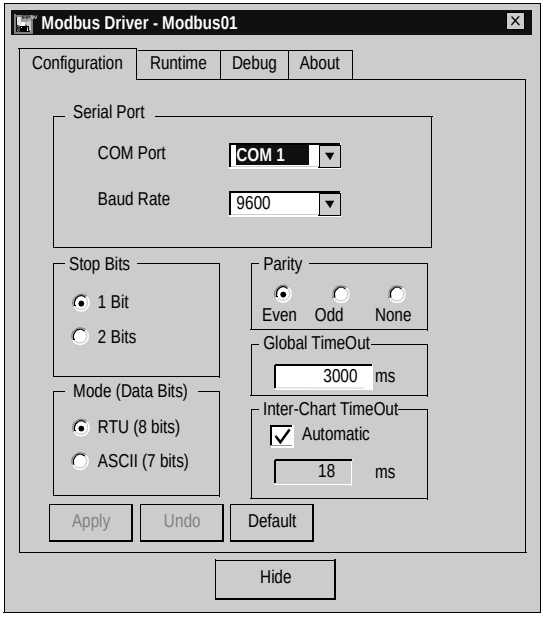
At a Glance

The configuration tool is not outside the driver, but constitutes an embedded graphic interface in the driver.

This graphic interface is accessible from the Windows workstation **"Start ->Programs -> "Schneider Electric ->Drivers Manager->Modbus Serial Driver"**.

Illustration

The configuration screen dedicated to the Modbus driver looks like this:



Description

This table describes the different areas which make up the configuration screen:

Area	Element
Serial Port	**COM Port** : provides a choice for the communication port to be used, by default COM1. **Baud rate**: provides a choice for transmission speed between 300 and 19200 bits/second, by default 9600b/s.
Stop bits	Allows entry of the number of stop bits used for communication, by default 1 stop bit.
Parity	Is used to set whether a parity bit is added or not, as well as its type, such as: ● **Even** , for even parity (default selection), ● **Odd** , for odd parity, ● **None** , for no parity bit
Global TimeOut	Allows Reception Time-Out to be defined (in milliseconds) while the driver is waiting for the response from the polled Modbus slave.
Inter-Char TimeOut	Allows quiet time to be defined (in milliseconds), permitting detection of a Modbus end delimiter. If the **Automatic** box is checked, the value is automatically calculated according to speed (Baud Rate).
Mode (Data Bits)	**RTU** : the characters are coded on 8 bits in binary. This mode is the default mode. **ASCII**: the characters are coded on 7 bits in ASCII.
Apply button	Allows the configuration to be saved; the file **ModbusConf.ini** is created.
Undo button	Allows the latest modifications not to be acknowledged.
Default button	Allows parameters to be set for the different fields with default values.
Hide button	Allows configuration parameters to be acknowledged, and represents the window by an icon.

Modbus Instances

Once installed, configure the Modbus driver and reboot the computer. All Modbus instances are initialized.
For each Modbus instance configured a corresponding icon appears in the task bar.

Driver control screen

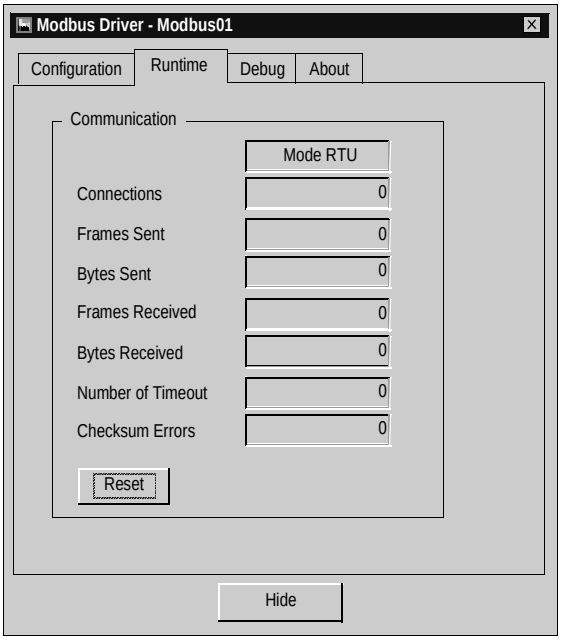
At a Glance

This screen is used to view information concerning driver operation.

The refreshment period for this information is defined in a driver screen. See *Driver debug screen, p. 128*.

Illustration

The control screen dedicated to the Modbus driver looks like this:



Description

This table describes the different information concerning driver operation:

Element	Description
Mode	Displays the driver operating mode: ● RTU Mode, ● Mode ASCII.
Connections	Contains the number of clients using the driver
Frames Sent	Contains the number of frames sent since the last Reset.
Bytes Sent	Contains the number of bytes sent since the last Reset.
Frames Received	Contains the number of frames received since the last Reset.
Bytes Received	Contains the number of bytes received since the last Reset.
Number of TimeOut	Contains the number of Time-Outs reached; the value is defined in the "Global Delay" configuration screen.
Checksum Errors	Contains the number of checksum errors detected.
Reset	This button is used to reset the different counters in the control screen to 0.
Hide	This button allows the window to be represented as an icon.

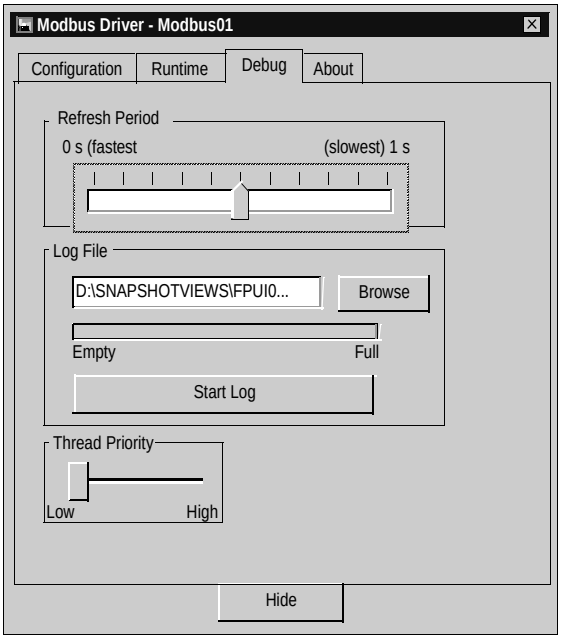
Driver debug screen

At a Glance

This screen is used to deactivate the saving of certain operations carried out by the communication driver in a trace file.

Illustration

The debug screen dedicated to the Modbus driver looks like this:



Description

This table describes the different areas which make up the debug screen:

Area	Description
Refresh Period	Allows the screen refreshing period for the driver control screen to be defined within a range of 0s to 1s.
Log File	This area contains: ● the description of the path where the trace file has been saved, ● a bar graph showing the fill level of the trace file. ● a button to start or stop saving in the trace file.
Thread Priority	Adjusts the priority of the driver with regard to other tasks executed in Windows. The default setting is "Low" .
Hide	This button allows the window to be represented as an icon.

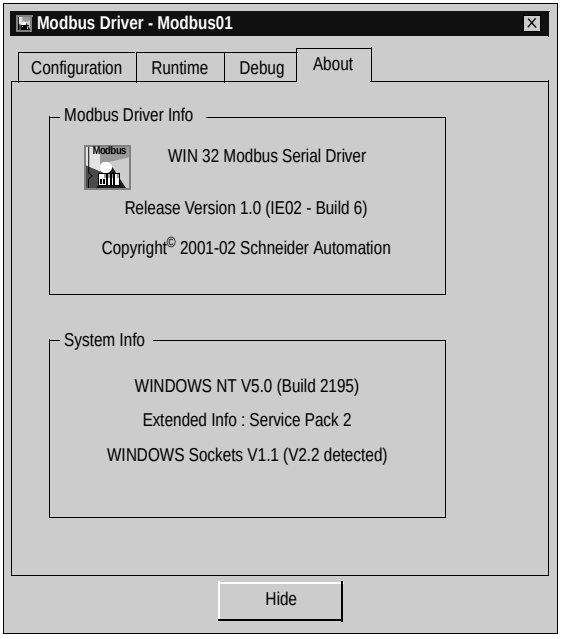
Information screen

At a Glance

This screen provides general information on the communication driver and on the operating system installed.

Illustration

The screen dedicated to the Modbus driver looks like this:



Description

This table describes the different areas which make up the information screen:

Area	Element
Modbus Driver Info	This area contains: ● the driver version, ● the Schneider Electric Copyright.
System Info	This area contains: ● the Windows operating system version, ● additional information, ● the Winsock interface version.
Hide	This button allows the window to be represented as an icon.

USB driver

VIII

At a Glance

Subject of this Part

This part describes how to install the USB driver for the Windows 2000\XP operating systems.

What's in this Part?

This part contains the following chapters:

Installation

11

At a Glance

Subject of this Chapter

This chapter describes USB driver installation. This installation procedure can be broken down into two steps:

- installation of files on the station,
- configuration of the driver.

What's in this Chapter?

This chapter contains the following topics:

How to install the driver

At a Glance

Driver installation is a standard installation. It can be launched either:

- from the drivers' CD-ROM,
- or from disks if the station has no CD-ROM drive.

Note: The installation disks are created from the CD-ROM.

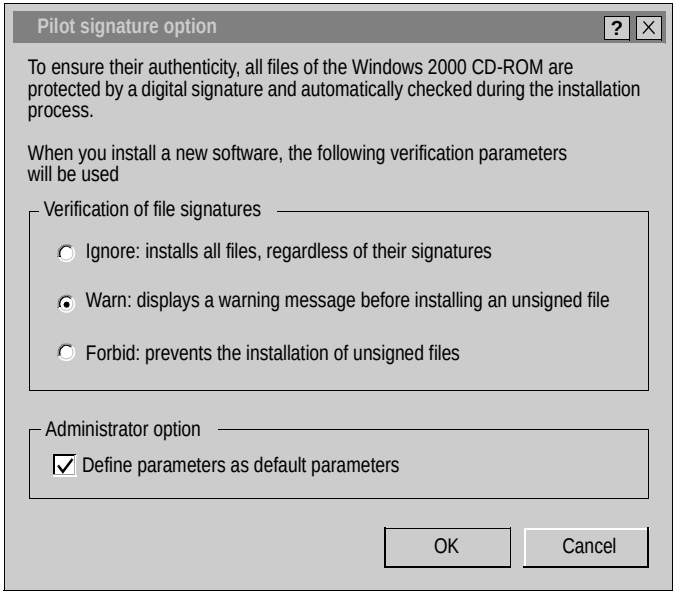
How to create a set of disks

Use the following procedure to create installation disks:

Step	Action
1	Use a station which has a CD-ROM drive.
2	Insert the CD-ROM into the drive.
3	Access the directory of the driver to be copied onto disk.
4	Copy the contents of the **DISK1** directory onto a disk. Repeat this step for each **DISK** directory. **Note:** it is advisable to number the disks.

Checks

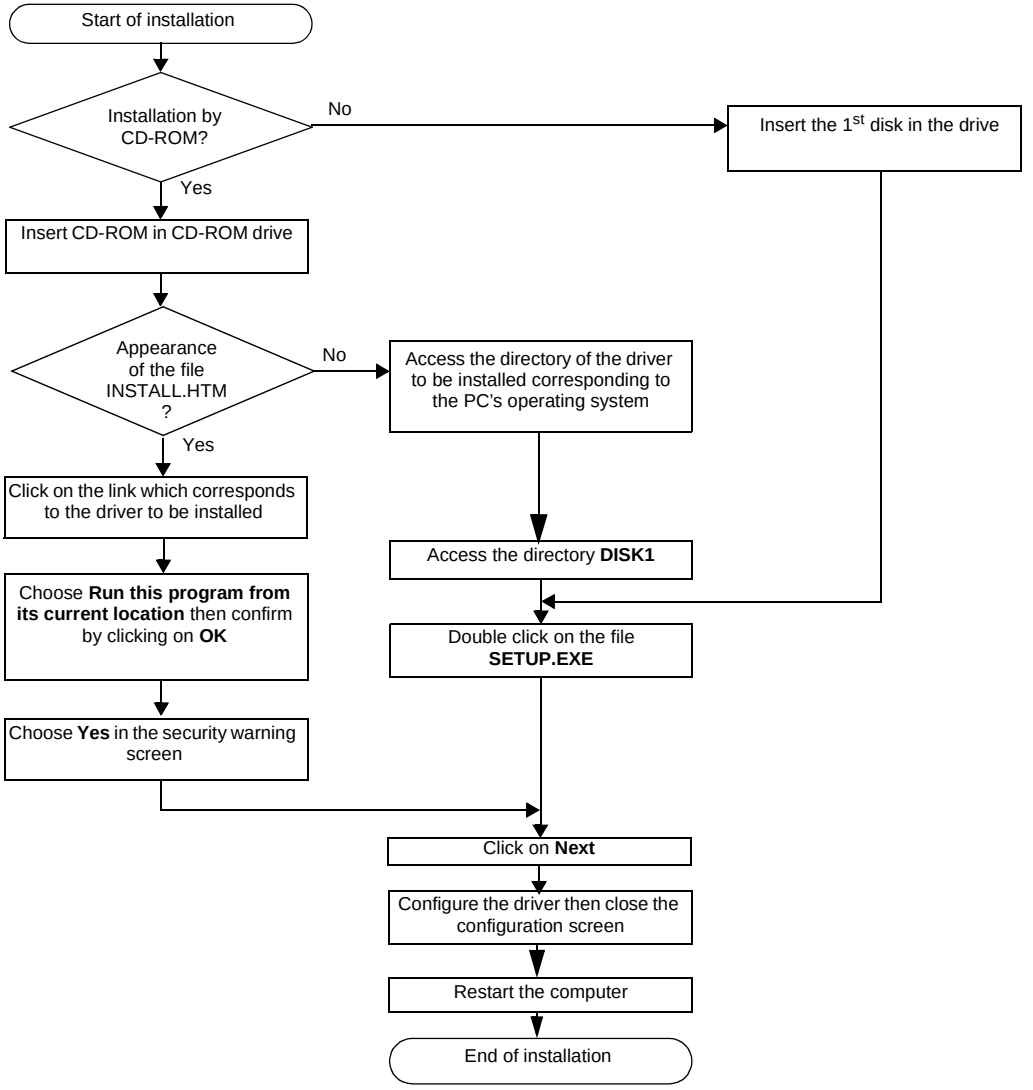
When using **Windows 2000\XP**, you must check whether it is possible to install unsigned drivers on the station.
To do this, perform the following actions:

Step	Action
1	Right-click on My Computer and select **"Properties"**.
2	In the "System Properties" window, select the **"Hardware"** tab.
3	Press "Driver Signing Options...". The following window is displayed: 
4	Select **"Warn - Display..."**, then confirm by clicking **OK.**

How to install the driver

Before starting the installation, **check that the USB cable is not connected to the PLC**.

To install the driver, carry out the following procedure:

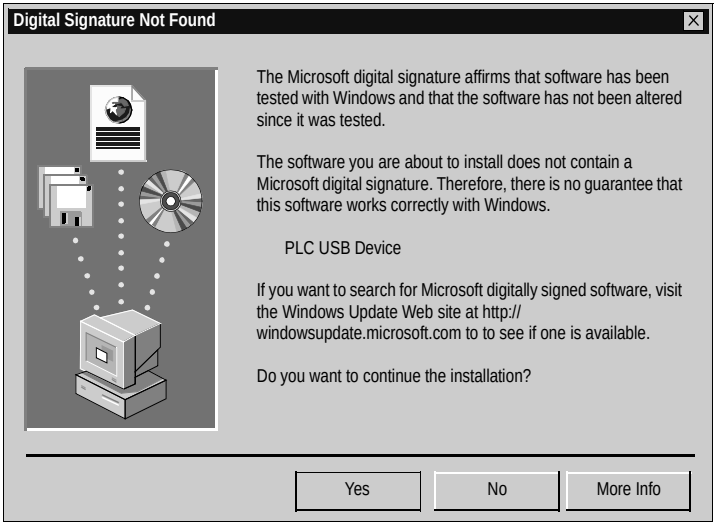


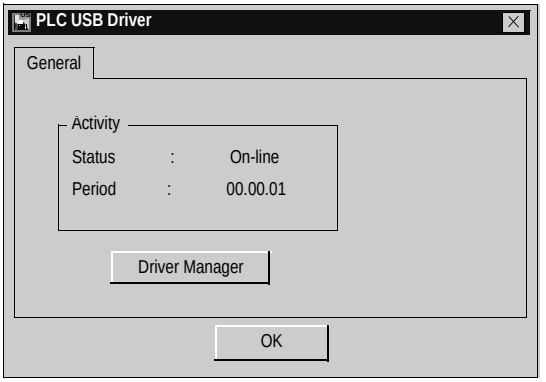
Configuration screens for Win 2000\XP

At a Glance

After rebooting the PC you will have to configure the USB driver, the USB cable must be connected to the PLC, and then Windows will detect the PLC and install the driver.

Perform the following actions:

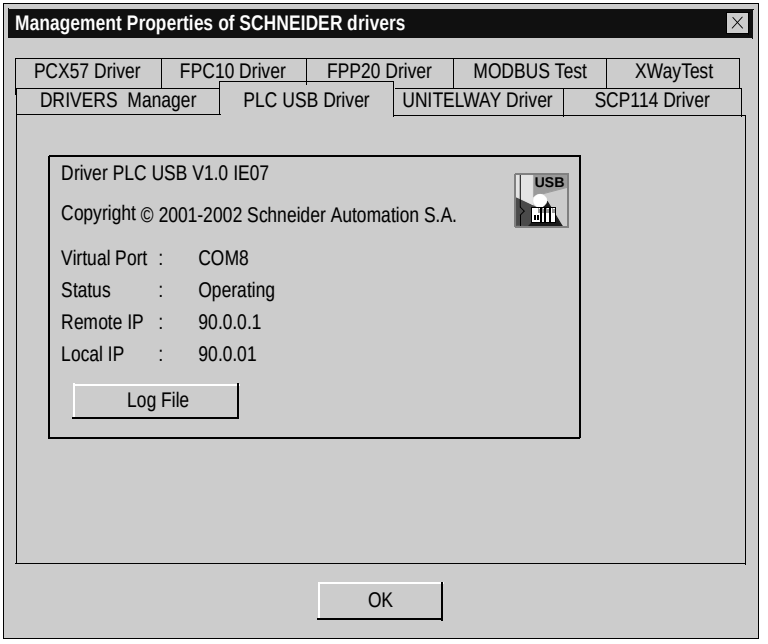
Step	Action
1	The following screen will be displayed: 
2	Click on **YES** 

Step	Action
3	An icon is displayed in the task bar. Double clicking on it when the USB link with the PLC is operational calls up the window.  Clicking on **" Driver Manager "** launches the tool. Clicking on **"OK"** makes an icon appear in the task bar.

State of the USB link

At a Glance

This window informs the user of the state of the driver:



Description:

Field	Description
Virtual Port	Name of the COM port used by the driver.
Line status	Contains **"In service"** data if the driver is operating, otherwise it contains **"Non operational"** data.
Remote IP\Local IP	IP addresses used by the PC and PLC to communicate.
Log File	Button allowing access to a *.log file containing connection/ disconnection events on the USB line.

Drivers manager

IX

At a Glance

Subject of this Part

This part describes the **Drivers manager** tool that is used to configure the different drivers installed on Windows 98, Windows 2000\XP and Windows NT.

What's in this Part?

This part contains the following chapters:

Functions

12

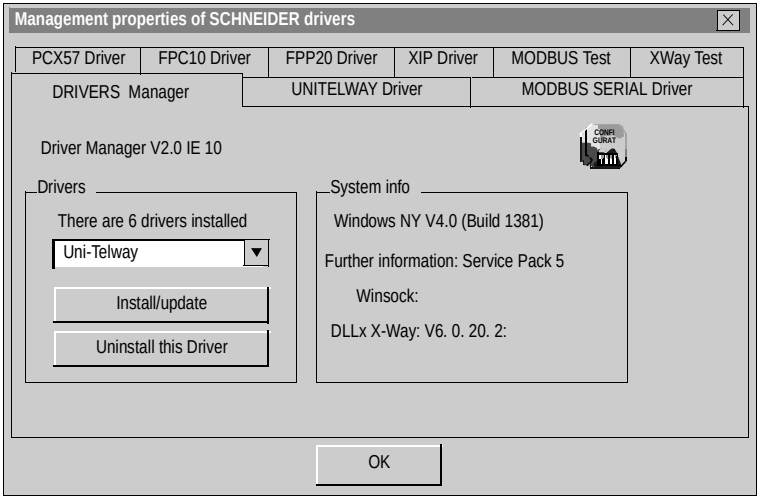
Management of X-Way drivers

At a Glance

The X-WAY drivers can be accessed using the **Drivers Manager** management tool. This is used to install, update, configure and test the different drivers in a centralized manner.

Accessing the Drivers Management tool

From the Start menu, go to **"Start->Programs->Schneider Electric->Drivers Manager"**.
The following window is displayed:

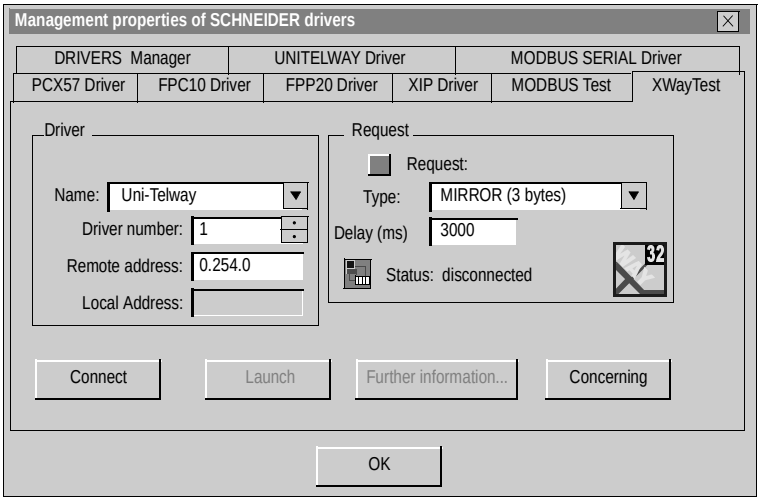


Drivers Manager tab

This tab (window above) is used to:

- view the list of installed drivers,
- install or update a driver,
- delete a driver.

X-Way Test tab This tab is used to test the basic operation of an X-Way driver:



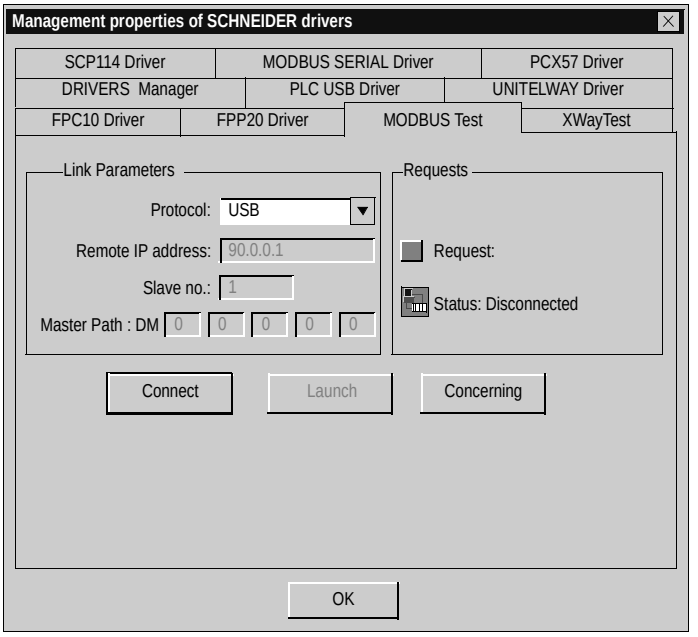
The table below describes the different zones of the window:

Driver Group	
Field	**Description**
Name	Name of driver to be used for the test (Uni-Telway, FPC10, etc).
Driver number	Instance number of driver to be used for the test (usually 1).
Remote Address	X-Way remote station address in the format "network.station.gate". The address "0.254.0" is the default address (terminal port for example). For a network connection, (such as Fipway), the user must complete this field: "3.5.0" to address station 5 of network 3. Gate 0 corresponds to the system server gate of the station in question.
Local Address	Internal address used locally by the driver. The driver completes this field automatically for information purposes when the connection becomes effective.

Request Group	
Field	**Description**
Request	Name of driver to be used for the test (Uni-Telway, FPC10).
Type	Type of request. Different sizes of mirror requests are suggested, as well as reading the PLC %S6 system bit.
Delay	Wait timeout in ms for the response to the transmitted request (time out).
Status	Status of connection, " disconnected ", " connecting... " or " connected ".

Command buttons	
Object	**Description**
Connect	Opens an internal communication channel on the selected driver.
Launch	Launch request transmission to the station defined in the **Remote address** field of the **Driver** group.
Further information...	Displays system information about the driver. This button is active in online mode only.
Concerning	Displays X-Way Manager version and copyright details.

Modbus Test tab This tab is used to test the basic operation of a Modbus driver:



The table below describes the different zones of the window:

Link Parameters Group	
Field	**Description**
Protocol	Name of protocol used (USB, TCP, Serial Modbus, Modbus Plus).
Remote IP address	If TCP is being used, then the IP address or machine name is shown here
Slave No.	If Serial Modbus protocol is being used, then the slave no. is shown here.

Link Parameters Group	
Field	**Description**
Master Path : DM	If Modbus Plus protocol is being used, then the station address is shown here.

Request Group	
Field	**Description**
Request	
Status	Status of connection, "disconnected", " connecting... " or "connected".

Command buttons	
Object	**Description**
Connect	Opens an internal communication channel on the selected driver.
Launch	Launch request transmission to the station defined in the **Remote IP address** field of the **Link Parameters** group.
Concerning	Displays X-Way Manager version and copyright details.

Other tabs

The windows corresponding to these tabs are described in the description of the configuration for each driver:

- for the Uni-Telway driver tab:
  - if using a serial port see *Driver configuration screens, p. 20*,
  - if using a TSXSCP114 card see *Driver configuration screens, p. 30*,
- for the FPC10 driver tab see *Driver configuration screen for Windows NT, p. 48*,
- for the FPP20 driver tab see *How to install the driver, p. 40*,
- for the XIP Driver see *Driver configuration screen, p. 80*,
- for the PCX 57 Driver tab:
  - when using Windows NT see *Configuration of the ISAWAY driver for Windows NT, p. 90*,
  - when using Windows 98\2000\XP see *Configuration of ISAWAY driver for Windows 98\2000\XP, p. 95*,
- for the PCI 57 driver tab see *Configuring the PCIWAY driver for windows 2000\XP, p. 114*,
- for the USB Driver tab see *State of the USB link, p. 139*.

Appendices

At a Glance

Subject of this Part

This part describes the installation and configuration of drivers for the cable TSX PCX 3030 with windows 2000\XP. This cable is a USB/RS-485 Serial link converter.

What's in this Appendix?

The appendix contains the following chapters:

The drivers of the TSX PCX 3030 cable

A

At a Glance

Subject of this Chapter

This Chapter describes the installation and configuration of drivers for the cable TSX PCX 3030 with windows 2000\XP.

What's in this Chapter?

This chapter contains the following topics:

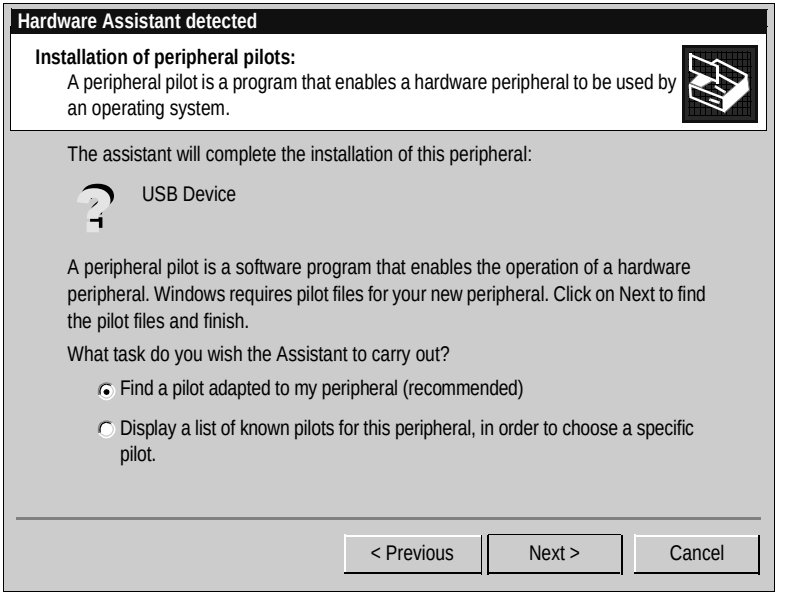
Installing the drivers of the TSX PCX 3030 cable

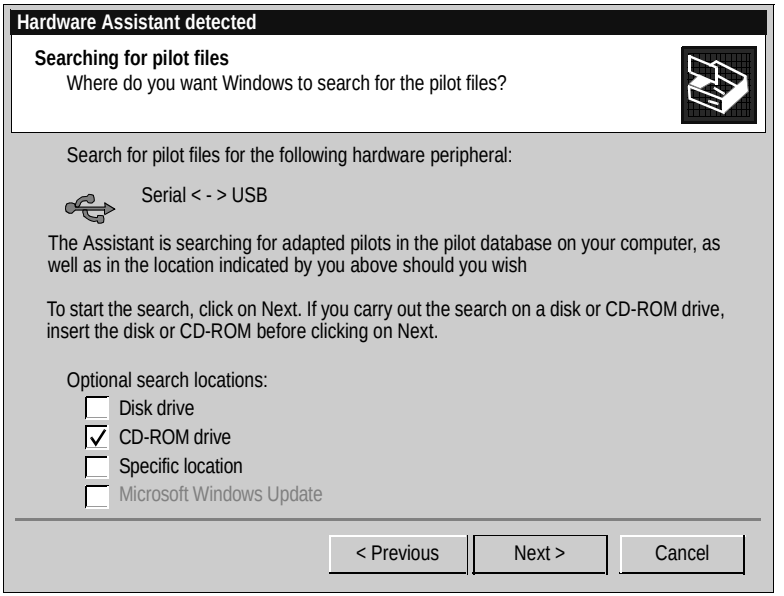
At a Glance

The TSX PCX 3030 cable is a USB/RS485 link converter. It enables a device to be connected to a PLC via the USB port using its terminal port.
The cable is "plug 'n' play". When you connect the cable via the USB port, Windows 2000 or XP finds a new device and tries to install the corresponding driver.
It is necessary to install two drivers:

- the USB bus driver,
- and the virtual serial port driver.

Installation The following table describes the procedure to install both drivers required to use the TSX PCX 3030 cable.

Step	Action
1	Connect the cable to the USB port of your device. **Result**: Windows detects the new hardware and displays the assistant for installing the hardware driver.
2	Click on **Next**. **Result**: The following window is displayed: 

Step	Action
3	Choose the **Automatic driver search** option and click on **Next**. **Result**: The following window is displayed: 
4	Before selecting the **CDROM drive** option, insert the CDROM Drivers in the CDROM drive. Or if you have copied the content of the CD-ROM in a specific location, select the **Specific location** option and indicate the location of the driver.
5	Click on **Next**. **Result**: the bus driver has been found.
6	Click on **Next**. **Result**: a window indicates that the installation has been successfully completed.
7	Click on **Finish**. **Result**: a new window appears for installing the serial port driver.
8	Click on **Next**. **Result**: the **New hardware search assistant** window appears.
9	Choose the **Automatic driver search** option and click on **Next**.
10	Before selecting the **CDROM drive** option, insert the CDROM Drivers in the CDROM drive. Or if you have copied the content of the CD-ROM in a specific location, select the **Specific location** option and indicate the location of the driver.
11	Click on **Next**. **Result**: the bus driver has been found.

Step	Action
12	Click on **Next**. **Result**: a window indicates that the installation has been successfully completed.
13	Click on **Finish**. **Result**: installation of the drivers is completed.

Configuration screens for drivers using the TSX PCX 3030 cable.

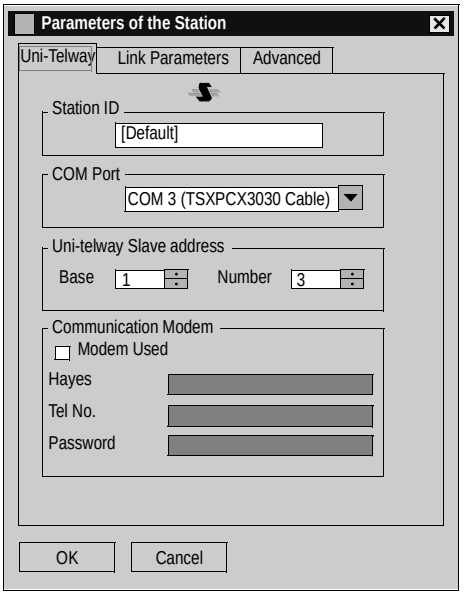
At a Glance

Once the drivers of the TSX PCX 3030 cable are installed, you must select the cable with the drivers that can use it. The compatible drivers are:

- Uni-Telway driver, version ≥ V1.5,
- Modbus driver, version ≥ V1.1.

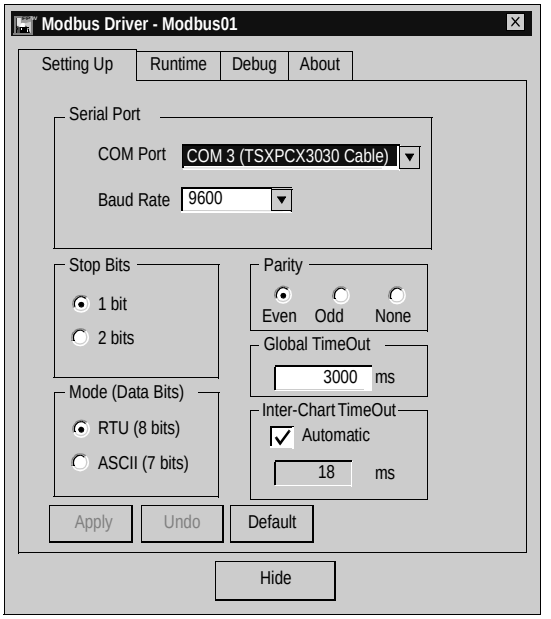
Uni-Telway driver

The following table describes the procedure for declaring the cable with a Uni-Telway driver.

Step	Action
1	From the **Drivers Manager**, select the **Uni-Telway Driver** tab.
2	Click on the **Configuration** button.
3	Click on the **Edit** button. **Result**: the Station parameters window appears 
4	Select from the **Com Port** zone, the communication port associated with the cable. For example **COM3 (TSXPCX3030 Cable)**.

Modbus Driver

The following table describes the procedure for declaring the cable with a Modbus driver.

Step	Action
1	From the **Drivers Manager**, select the **Modbus Serial Driver** tab.
2	Click on the **Configuration** button. **Result**: the Modbus Driver window appears 
3	Select from the **Serial Port** zone, the communication port associated with the cable. For example **COM3 (TSXPCX3030 Cable)**.

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