

MTC200/ISP200/TRANS200 Installation 21VRS

Application Manual

SYSTEM200

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1 General Information About Installation

1.1 Setup Program and Installation Instructions

What is going to be installed? The setup program installs the user interface MTGUI for the systems MTC200, ISP200, and TRANS200.

Who installs the program? The installation of the basic graphical user interface of the software and firmware version 21VRS requires knowledge of working with PCs and knowledge of the operating system Windows NT. Especially for the optimization of the system, settings and adjustments are necessary. This requires knowledge of the installing operating system. Administrator rights are required for the installation.

⇒ We recommend that the installation is executed by an experienced user with knowledge of operating systems and with administration rights.

Setup Program The installation program decompresses and installs the user interface and the associated files from the CD ROM onto your hard disk. The interface cannot be operated without this installation. Furthermore, updating and uninstalling the software is possible.

⇒ Execute the setup program before using the interface.

Documentation This documentation informs you about how to install and set up the interface on your hard disk and how to uninstall it.

⇒ Read these installation instructions and if necessary additional documents **before** you install the software.

1.2 System Requirements

Hardware requirements

The user interface of the software and firmware version 21VRS for MTC200, ISP200, and TRANS200 can be installed on the Rexroth Indramat BTV20 operator panels and on most standard IBM compatible PCs.

The following hardware requirements are expected:

Windows NT 4.0	Minimum	Recommended
Processor type	233 MHz	366 MHz
Main memory	64 MB	128 MB
Display	640*480, 65535 colors	
Hard disk	300 MB free space	
CD ROM drive or network	for installation	
Floppy drive	for data backup, firmware update	
Serial interface (as an option)	For connection to MTC200-R-G2, ISP200-R-G2, TRANS200	

Fig. 1-1: Hardware requirements

For the installation on a PC, at least 2 slots must be available.

Note: **TRANS200:** There are no slots required for the TRANS200.

Depending on the required option, further hardware components (such as interface modules) will be necessary.

Firmware

The firmware of version 21 can be used on the following hardware platforms:

Hardware type
MTC-P01.2-xxx
MTC-R01.1-xxx MTC-R02.1-xxx
MTS-P01.2-xx-xxx MTS-P02.2-xx-xxx
MTS-R01.2-M1-xxx MTS-R02.2-M1-xxx
TRANS-R01.2

Fig. 1-2: Supported hardware types

Software requirements

The user interface of the software and firmware version 21VRS for the system200 can only be operated under Windows NT 4.0.

For Windows NT 4.0, service pack 5 or higher is required.

The installation program checks whether the required service pack has been installed!

Furthermore the Microsoft Internet Explorer 4.01 SP2 or higher is required.

Note: The corresponding service pack must again be activated if additional operating system components (such as a network driver) will subsequently be installed.

Rexroth Indramat supplies Version 21VRS only in conjunction with Windows NT 4.0.

1.3 Before You Start Installing the User Interface

If you have ordered a completely configured **BTV20** unit with control modules, the user interface and the related firmware have already been installed when the unit is delivered. The following values are invariably entered during the installation process:

The following values are set for the interface data:

- Channel Online
- I/O address: \$31C
- Memory address: \$D000:\$0000

For user access the following values are set:

Windows NT access:

- User name: indramat
- Pass word: indramat

User interface:

- User name: Supervisor
- Pass word: 123

For the pre-installed BTV you only need the following chapters for updating the software. The user interface must be installed according to the following description if you use the BTV or a third-party PC with external control hardware or if you want to use the MTC-P and MTS-P control modules in a third-party PC.

Note: In order to function properly, the software version of the user interface and the firmware version of the MTC200/ISP200/TRANS200 must match. Before installing the user interface or to updating an existing installation, check whether the corresponding firmware version which is to be operated with the interface is available. After the installation, the firmware can be transferred into the control by executing firmware download.

2 Execute Setup

2.1 Administration Rights

- ⇒ For Windows NT 4.0 system settings and the installation of the interface, administrator rights are necessary.
- Pre-installed BTVs** BTVs delivered by Rexroth Indramat have the following access data:
- User name: indramat
 - Codeword: indramat

Log on as Administrator

When the BTV is delivered the default setting includes that Windows NT 4.0 is started automatically and the user logs on with the standard user name "indramat". The boot process must be interrupted for logging on as administrator.

- ⇒ Keep one of the two shift keys pressed during the boot process.
The log on dialog "log on information" is displayed.

Log on as administrator.

- User name: Administrator
- Codeword: indramat

2.2 Network Services

If you have installed the network services that are provided by Windows NT 4.0 without actually being connected to a network, there will be a long waiting time (approximately 2-5 seconds) when you change menus. This is caused by system-internal time-outs. There are two possibilities to solve this problem:

- ⇒ Uninstall the network services according to the Windows NT 4.0 system description
- or -

- ⇒ Use two hardware profiles (with and without network services) according to the Windows NT 4.0 system description. This will cause an option menu to be displayed upon the next system start from which you can select a configuration with or without network services. With pre-installed BTVs a second hardware profile for network operation is available.

2.3 First-Time Installation of the MTGUI

CD ROM

The MTGUI software is delivered on CD only. Therefore a CD ROM drive or network connection must be available for setup.

Local CD ROM disk drive

For installation, a portable CD ROM disk drive can be connected to the parallel port of the BTV.

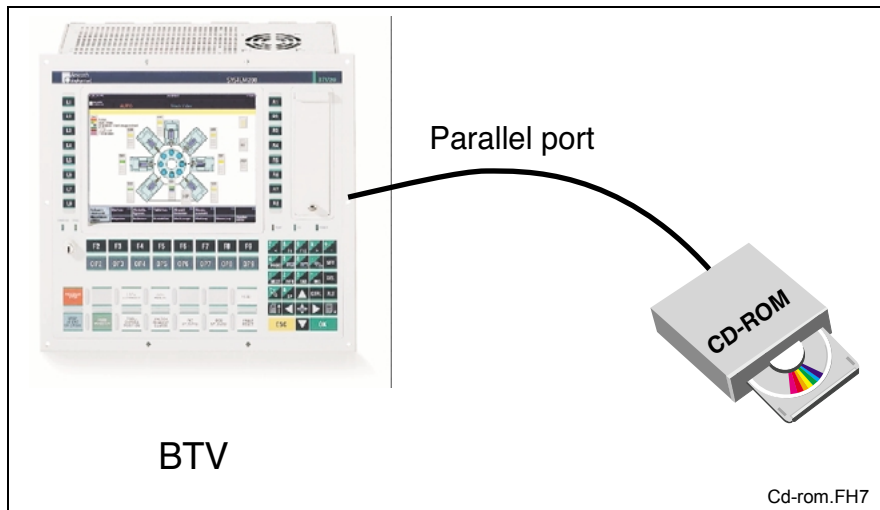


Fig. 2-1: Locally connected CD ROM disk drive

CD ROM disk drive in a network

If the BTV is connected to a network, the CD ROM disk drive of a PC included in the net can be used for installation.

1. Set up the Microsoft network.
2. Release the CD ROM disk drive of the connected PC.

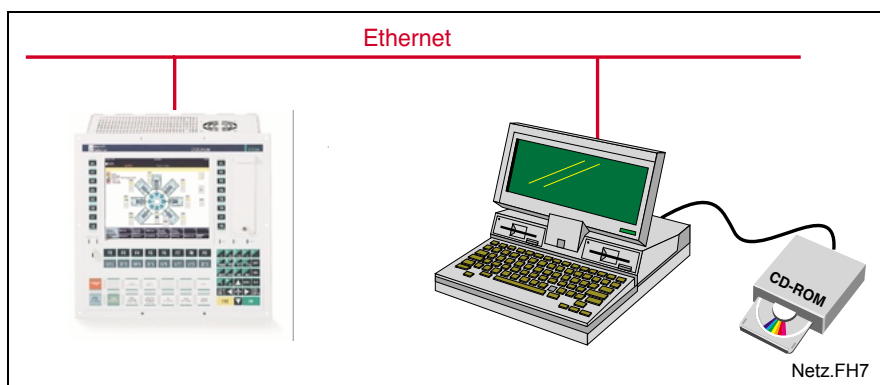


Fig. 2-2: CD ROM disk drive in a network

Execute Setup

In this description we assume that you use CD ROM drive "E" for the installation.

1. Insert the CD-ROM into the CD-ROM drive of your PC.
2. Click on **Execute** in the start menu.
3. Type the letter for the drive together with "\SETUP.EXE".

When you install your system from a CD-ROM, type, for example: "E:\SETUP.EXE".

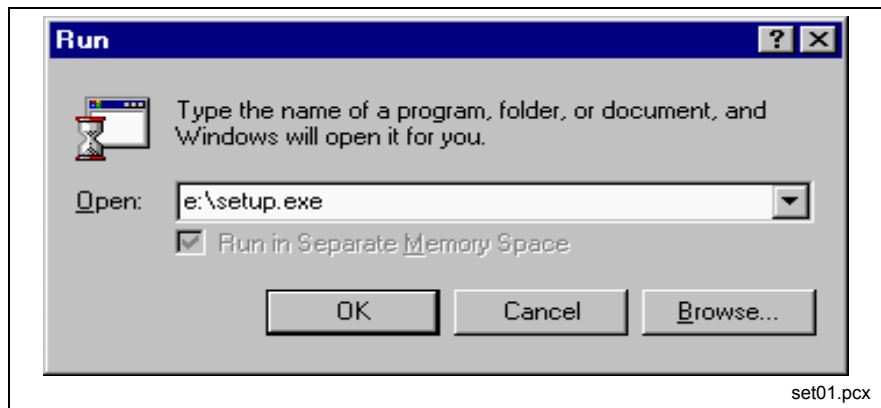


Fig. 2-3: Windows NT 4.0 "Execute" dialog

4. Then, click **OK** or confirm with **<Enter>**.
 5. Select the language for the setup program.
- The installation program is loaded.



Fig. 2-4: The installation program is loaded.

Follow the following installation instructions now. Confirm with **Yes** or **Continue** until the selection "User Information" is displayed.

Note: Please note the readme file that may be displayed. It includes the latest information that had not been available when this documentation was published.



Fig. 2-5: Company information and serial number

6. Enter name and company of the rightful user.
7. Enter the serial number of the software and confirm with **Next**.

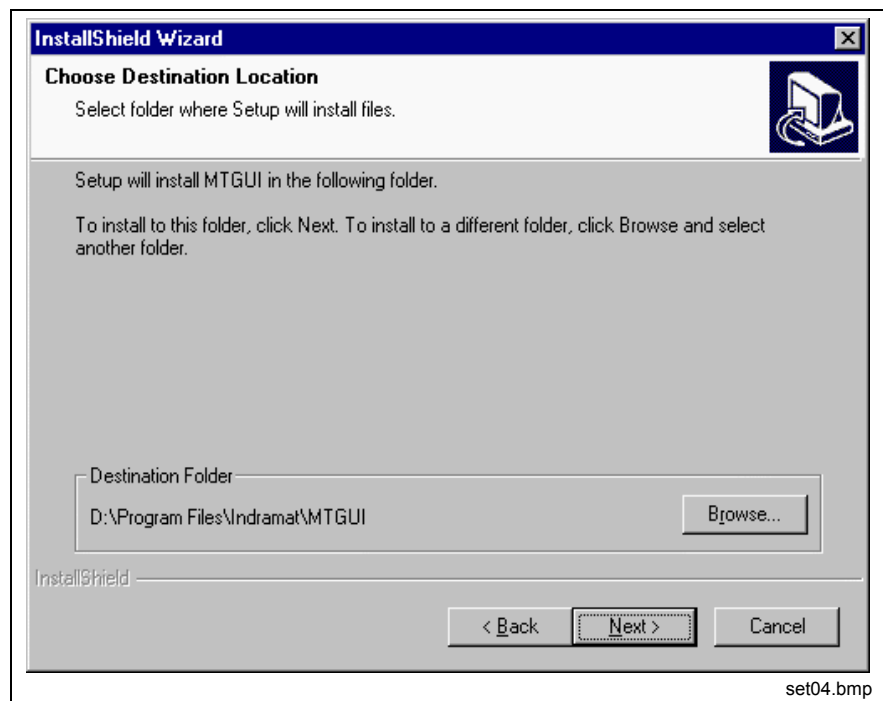


Fig. 2-6: Disk drive and destination path

8. In the next dialog select the drive and the destination path where the interface is to be installed.

Note: The hard disk in a standard BTV is divided into two partitions (C: FAT file system, D: NTFS file system). The interface **must** be installed on drive D: for safety reasons.

9. Follow the further instructions of the setup program until you are prompted to enter the folder for the program symbols.
10. Enter a name for a new program folder or select an existing folder.

Note: Ensure that you do not select the Autostart group. User interface and system configurator cannot be started simultaneously.

11. Start the copy process by clicking **Next** or return to the previous dialogs by clicking **Back**.

The copy process will be started now. The progress of the installation will be displayed in a progress bar.

After the copy process you will be prompted to restart Windows.

Note: You must restart Windows and/or your computer before you can use the program.

After initialization, the system files are updated and the required registrations are performed. A window with progress bars is displayed. No entries are necessary.

Then the installation is finished. The system configurator will be started automatically.

2.4 Further Steps Before First Operation

System configuration

Before the control is used for the first time, the system must be configured. The system configurator determines which devices are connected to the control PC, the status they have and the communication ways that are used by the devices. Please refer to chapter 3 System Configuration.

Note: After the first time installation of the MTGUI the system configurator will be started automatically when the interface is started. The system configurator can be called with the desktop icon or in the start menu in order to make further modifications of the configuration.

Load Firmware/SPS Program

After the installation of the interface it is necessary to update the firmware. For this, refer to the documentation "Setup, DOK-CONTRL-SETUP***Vxx-AW0x-DE-P".

Also the SPS program must be loaded into the control.

Note: TRANS200: Loading the SPS program is not executed with TRANS200.

Proceed as follows:

- Load firmware
- Load parameters
- Load SPS program (MTC200/ISP200 only)
- Load I/O configuration (TRANS200 only)

2.5 Updating the MTGUI

The software can be updated with the setup program.

Note: It is recommended to save the user data prior to updating the software!

1. Insert the installation CD in the drive and execute the setup program of the new software version.
2. Choose the installation language and answer the dialogs about the readme file and the license agreement.
The setup program will recognize the current software version and will display it as follows.

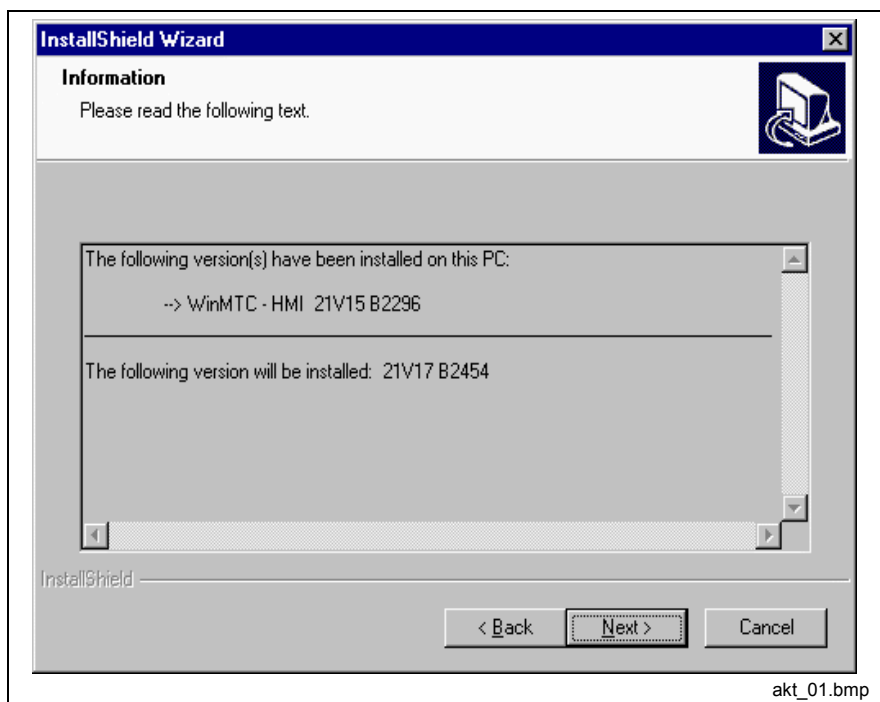


Fig. 2-7: Information about the currently installed software version

The **Next** button will take you to the installation options.

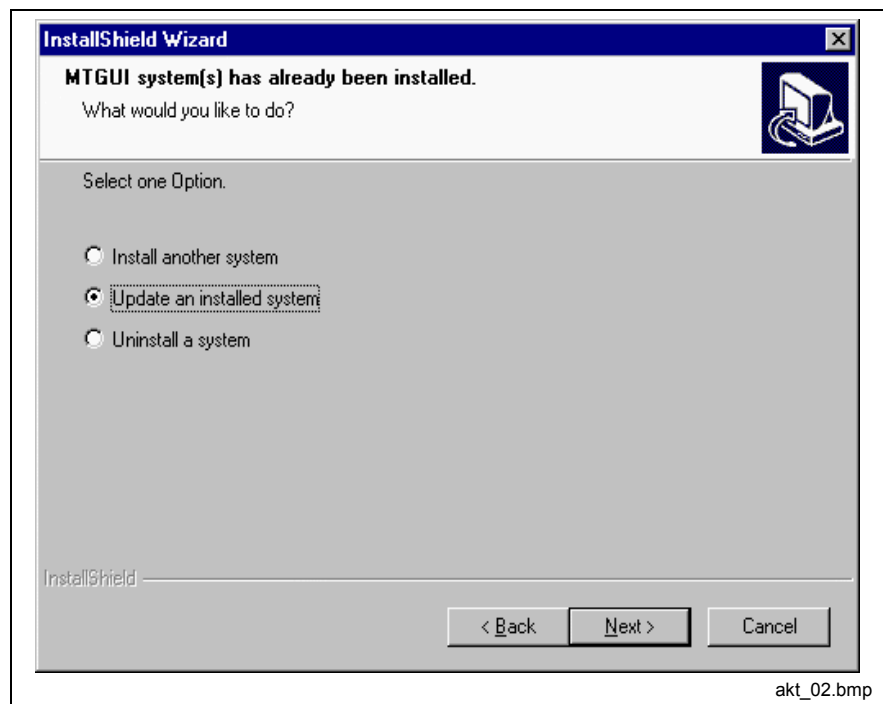


Fig. 2-8: Selection of type of installation

3. Choose updating an installed system in the dialog shown above and press **Next**.

Now the installation of the update will begin. The progress of the installation will be displayed in a progress bar.

After the copy process you will be prompted to restart Windows.

Note: You must restart Windows and/or your computer before you can use the program.

After restart the system files are updated. Then the update installation is finished.

2.6 Uninstalling the MTGUI

The user interface can be uninstalled with the setup program.



CAUTION

Loss of user data!

⇒ Make sure that you save the user data before uninstalling the software if you want to keep them.

1. Insert the installation CD in the drive and execute the setup program.
2. Choose the installation language and answer the dialogs about the readme file and the license agreement.

The setup program will recognize the current software version and will display it as follows.

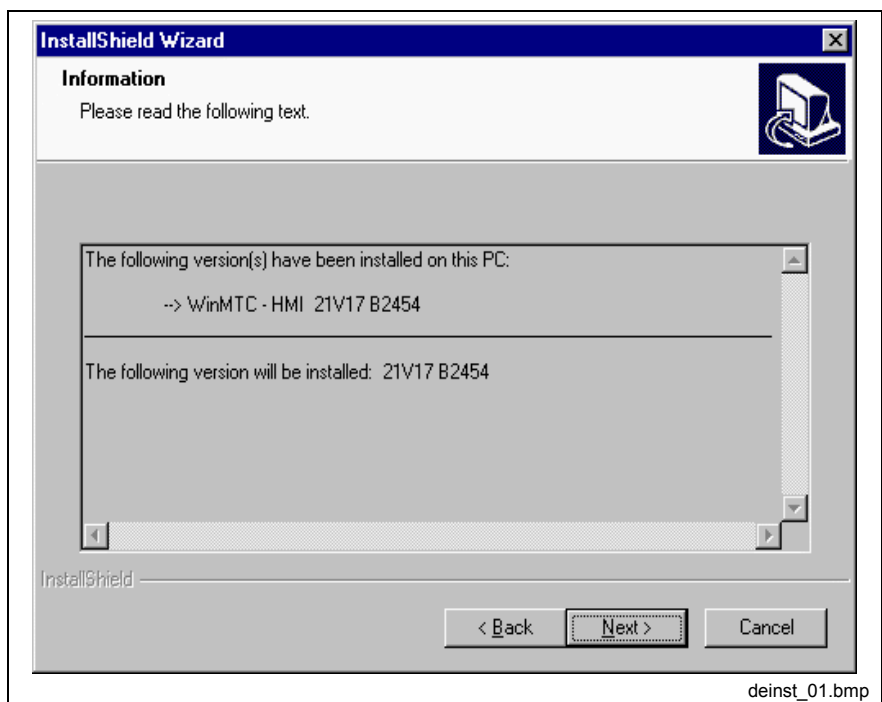


Fig. 2-9: Information about the currently installed software version

The **Next** button will take you to the installation options.

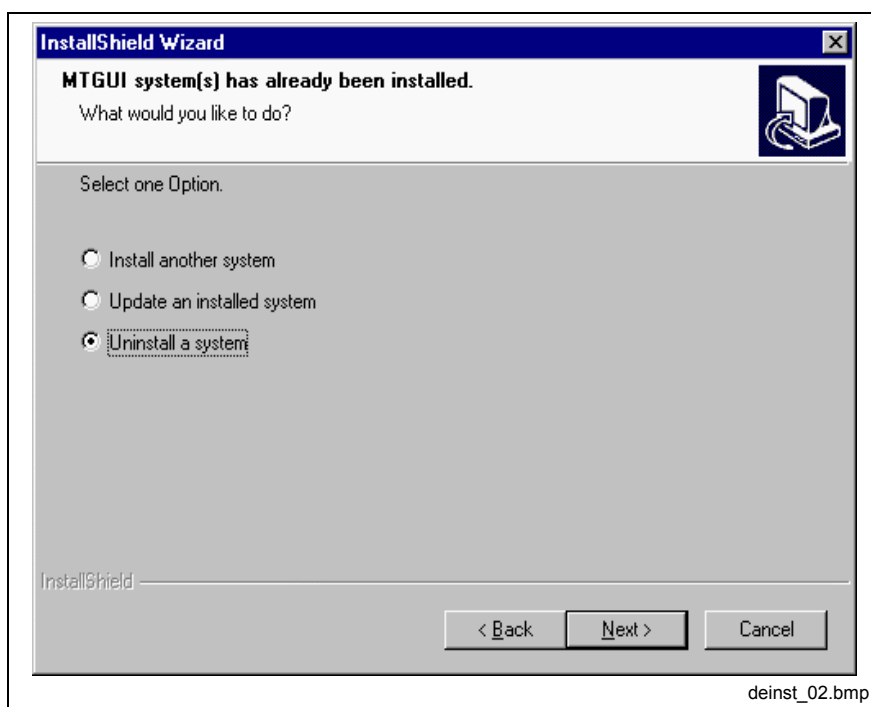


Fig. 2-10: Selection of type of installation

3. Choose uninstalling an installed system in the dialog shown above and press **Next**.
4. Answer the safety prompt with **Yes** if you want to delete the application; answer with **No** if you don't want to delete the application.

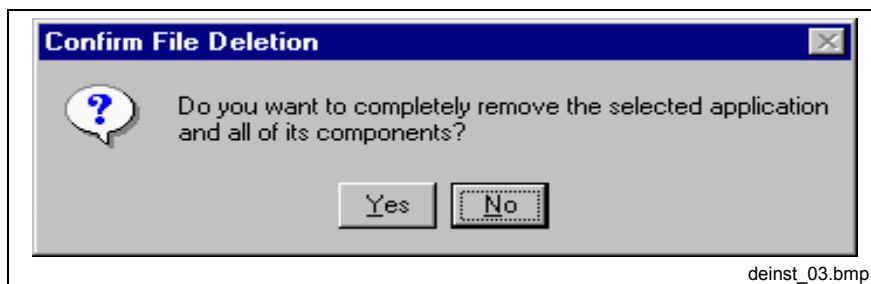


Fig. 2-11: Safety prompt for deletion of the system

This starts the deinstallation. The progress will be displayed in a progress bar.

After the process you will be prompted to restart Windows.

Note: In order to update the system files, the computer/Windows must be restarted.

After restart the system files are updated. Then the deinstallation is finished.

3 System Configuration

3.1 General View of the System Configurator

Field of application

The System Configurator is an editor which is used to describe the devices connected to the Control PC. The device address, the device type and the description of the communication path to the unit are employed for this purpose. The goal is to create an 1:1 image of the unit structure (known as the system configuration) that is connected to the controller PC. The system configuration is stored in the controller PC.

The System Configurator is used by the Function Interface and the User Interface (MTGUI) for the organization of the communication with the devices connected to the Control PC.

Menu Structure and Data Input

Menu structure The left-hand half of the screen contains a graphical representation of the configured units in a tree diagram. For the device which is selected in the tree the corresponding data is displayed on the right side of the screen.

Data input When entering data, e. g. when creating a new device, or when editing an existing device, the user will be guided by an assistant. The assistant splits the data entry into several steps.

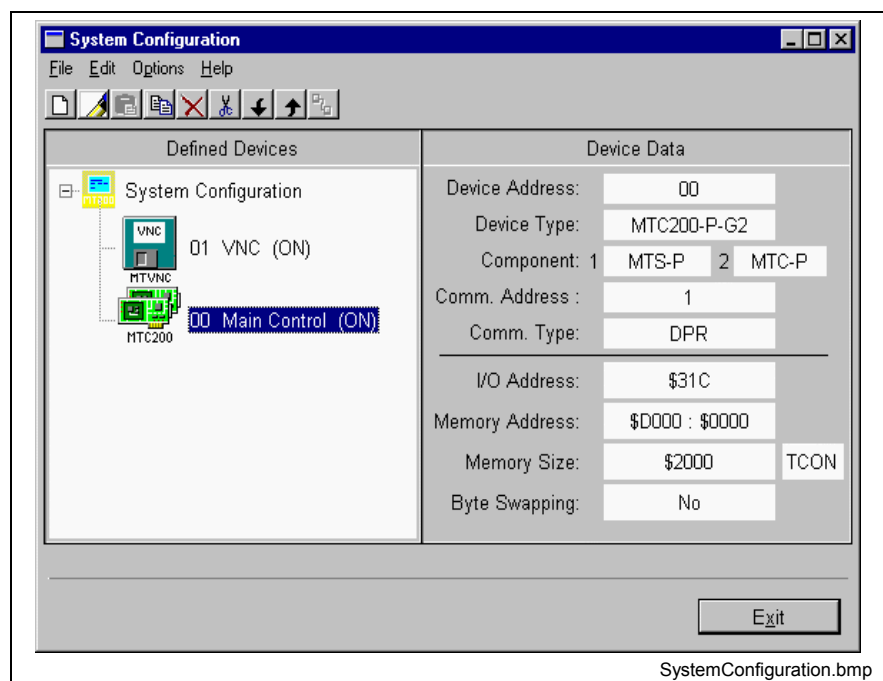


Fig. 3-1: System Configurator with two devices

Installation and Start of the System Configurator

The System Configurator is installed when installing the MTGUI. The System Configurator will be started automatically after the installation.

Note: The System Configurator is an independent program and must be started at least once before starting the MTGUI. The System Configurator and the user interface can't be active at the same time. The System Configurator also has to be finished before starting the MTGUI.

The setup program creates a link to the System Configurator on the desktop. At the same time a link will be added in the program folder Indramat of the start menu. In both possibilities the System Configurator will be started directly by the program call Syscon.exe.

Typical scenario

Connect a New Device If for example an MTC200-R-G2, address 0 selected at the selector switch, is connected via RS232 to COM2 of the Control PC, this configuration has to be entered in the System Configurator. That means a device of the type MTC200-R-G2, Device Address 0, with a Communication Address that includes the settings RS232 and COM2 etc..

Modify an existing device If the physical configuration of a device is changed, the device must be adjusted/edited in the System Configurator. If for example the connection of device 0 to the Control PC is modified from COM2 to COM1, the device 0 has to be edited in the System Configurator. This means COM1 has to be selected instead of COM2 as the Channel in the corresponding Communication Address.

3.2 Information on the System Configurator

Device type

The device types available in the current installation of the System Configuration are shown in the selection box "Device Type" in the first step of the function "New Device" (see step 1).

The following list shows device types which are available depending on the installation.

Device type	Class	Description
MTVNC	MTCX	Virtual MTC
MTC200-P-G2	MWCX	MTC with SPS PC variation
MTC200-R-G2	MWCX	MTC with SPS PECO variation
MTA200-P-G2	MTAX	MTA with WIN-SPS PC variation
ISP200-P-G2	MWSX	Standalone-WIN-SPS PC variation
ISP200-R-G2	MWSX	Standalone-WIN-SPS RECO variation
SYNAX200-P	MSYX	SYNAX as PC variation
SYNAX200-R	MSYX	SYNAX as RECO variation
SERCANS-A	MSCX	SCS-A-card
SERCANS-P	MSCX	SCS-P-card
TRA200-R	MTRX	TRANS200 as RECO variation
ECODRIVE03	MECX	ECODRIVE03

Fig. 3-2: Types and classes of devices

Device / Device Address

With a device e. g. a control hardware or a drive device is meant.

The value range for entering the device address is 0 to 63.

Checking the free serial interfaces

A check of the free serial ports is done. Occupied serial ports (e. g. mouse) will not be offered for editing Communication Addresses in the System Configurator.

The check can be disabled (Menu **Options**, Entry **Show only free COM ports**).

Communication Address

The Communication Address is a Rexroth Indramat specific data set which describes the way of communication to the device. The Communication Address has a symbolic identifier which consists of the fix part CommAddr and a number, e. g. CommAddr2. Up to 8 Communication Addresses can be created (CommAddr1 to CommAddr8).

Note: Devices which are connected to the same serial port have the same communication address.

Updating the Directory Structure

When saving the system configuration data, an update of the directory structure will be executed if necessary. The update of the directories will only be executed if devices have been deleted or new devices have been added.

File Menu

The **File** Menu offers the menu items **Save** and **Exit**.

Save The system configuration will be saved.

Exit If modifications have been made, you will be asked by a MSG-BOX whether to save and exit or exit without saving.

Options Menu

List free ports Refer to 3.2 Information on the System Configurator Checking the free serial interfaces.

Network active The server which is required for interconnection will be started the next time the interface is started.

Device interrogation cycle The device interrogation cycle will be activated or deactivated. I.e. the device status (error status, device online, ...) will be checked permanently in active state.

Furthermore, it is possible to determine how often the interrogation is executed.

3.3 Available Functions

Overview

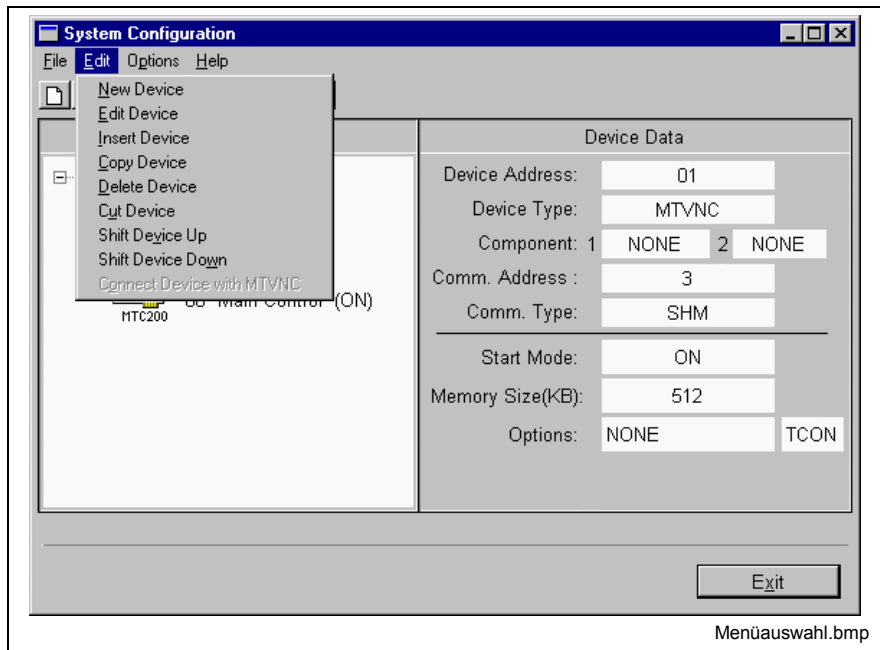


Fig. 3-3: Edit menu options

The functions can be called in the **Edit** menu with the menu items **New**, **Edit**, **Paste**, **Copy**, **Delete**, **Cut**, **Shift Device Up**, **Shift Device Down** or with the toolbar button where the command is assigned.

Note: The underlined words correspond to the function designations in the **Edit** menu.

The command **New** has the effect that this new device will be inserted before the device which is currently selected in the tree.

The content of the functions create **new** device, **edit** device and **insert** device (refer to 3.2, 3.3 and 3.8) depends on the device type. The following tables provide a short overview for this functions.

Create a New Device	Devices except MTVNC	MTVNC
Step 1	Select device type	Select device type
Step 2	Select device address	Select device address
Step 3	Enter device name and device status	Enter device name and device status
Step 4	Select component type 1/2	No selection
Step 5	Edit communication address	Configuration of the MTVNC (start mode, memory size)

Fig. 3-4: Steps for "Create new device"

Edit Device	Devices except MTVNC	MTVNC
Step 1	Enter device name and device status	Enter device name and device status
Step 2	Select component type 1/2	No selection
Step 3	Edit communication address	Configuration of the MTVNC (start mode, memory size)

Fig. 3-5: Steps for “Edit device”

Insert Device	Devices except MTVNC	MTVNC
Step 1	Select device address	Select device address
Step 2	Enter device name and device status	Enter device name and device status
Step 3	Select component type 1/2	No selection
Step 4	Edit communication address	Configuration of the MTVNC (start mode, memory size)

Fig. 3-6: Steps for “Insert device”

Create a New Device

The function can be called in the **Edit** Menu, via the menu item **New Device**, or via the toolbar button for **New Device**. The new device is inserted ahead of the device currently marked in the tree.

When entering data the user will be guided by an assistant. The assistant splits the data entry into several steps. The creation of a new device will be finished using the button **Finish** in the last Step.

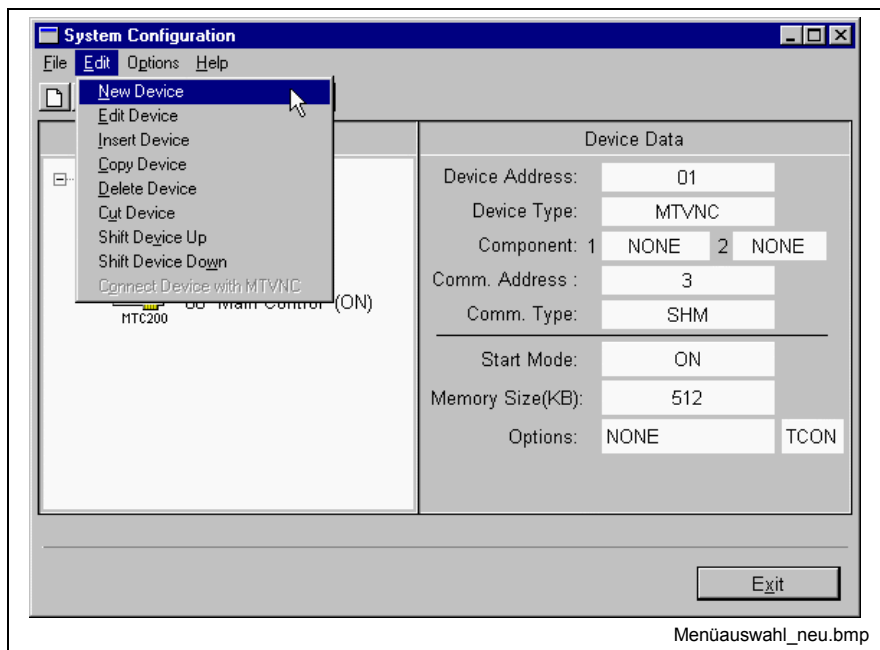


Fig. 3-7: Menu selection

Create a new device, step 1

The device type is selected in this step. The device type must correspond to the connected control PC.

Note: The device type cannot be changed after it has been created.

Create a new device, step 2

The device address is selected in this step.

If the device is connected to the Control PC by a serial connection and has a selector switch, the Device Address has to correspond to the address selected at the device by the selector switch.

Note: The device address has to be unambiguous.
The device address cannot be changed after it has been created.

Create a new device, step 3

The device name is entered and the device status is selected. The device name may comprise up to 32 characters and should not include special characters.

Note: Set the device status to ON if the device exists and is ready, else to OFF.

Create a new device, step 4

The component type is selected in this step. With the key combination ALT + ↓ the selection list can be opened.

Create a new device, step 5

Devices except MTVNC

A Communication Address is assigned to the device. First a Communication Address has to be selected in the selection box **Comm. Address**.

In the selection box only Communication Addresses will be offered which correspond to the Device Type of the currently edited device and which have not yet been used by other devices. Exceptions are devices which are connected by a serial port. Please see also the note below.

If no Communication Address exists yet, it has to be created by using the entry **New** in the selection box, or via the toolbar button New Communication Address.

The data of the Communication Address depends on the Device Type and is displayed in the corresponding entry fields. The data has to correspond to the device settings.

⇒ For further information on the devices please refer to the Technical Documentation of the device.

Note: If devices are connected to the Control PC by a serial connection, it is possible that several devices use the same communication path (the same Communication Address) e.g. when using the RS485 protocol. The devices are addressed by the Device Address (user address) selected via the selector switch.

MTVNC For devices of the type MTVNC the configuration of the MTVNC is done in this step.

The Start Mode of the MTVNC is selectable:

- ON: The MTVNC is started when starting the MUI/GUI.
- OFF: The MTVNC is not started.

Note: If the device status is ON, the start mode MTVNC of the device is automatically set to ON. The start mode of the MTVNC can only be modified if the device status is OFF.

The memory of the computer which is used by the MTVNC can be adjusted:

- Preassignment: 512KB
- Value range: from 256KB to 16383KB in steps of 1 KB

With the button "Extended" the "Options" can be accessed. The options are not needed under normal use.

Note: For the entry Options, data may only be entered according to prior agreement with Rexroth Indramat staff. Normally no data is entered!

Edit Device

The device to be edited has to be selected in the 'System Configuration' tree.

By **<Enter>** or DOUBLECLICK on the selected device or via the **Edit** Menu, entry **Edit Device** as well as via the toolbar button for **Edit Device**, the editing of the device can be started.

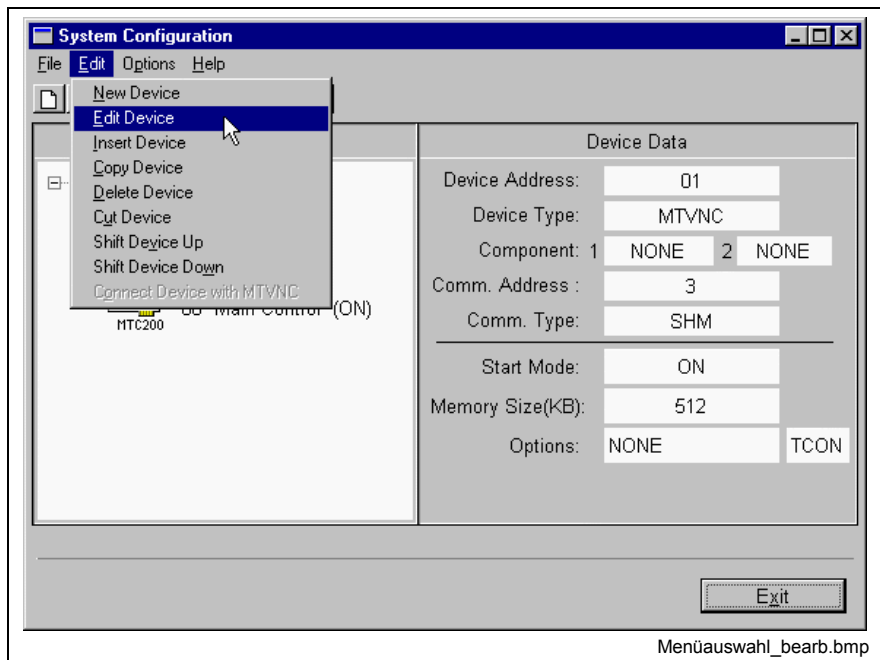


Fig. 3-8: Menu selection

The user will be guided by an assistant through editing the data. The assistant splits the data entry into several steps. The function Edit Device will be finished using the button **Finish** in the last step.

Note: Neither the Device Address nor the Device Type can be changed.

Edit device, Step 1

The device name is entered and the device status is selected. The device name may comprise up to 32 characters and should not include special characters.

Note: Set the device status to ON if the device exists and is ready, else to OFF.

Edit device, Step 2

The component type is selected in this step. With the key combination ALT + ↓ the selection list of allowed combinations can be opened.

Edit device, Step 3

Devices except MTVNC

The Communication Address data can be modified and a new Communication Address can be created. Furthermore, the Communication Address currently assigned to a device can be changed.

The Communication Address selected in the selection box **Comm. Address** is assigned to the device.

In the selection box only Communication Addresses will be offered which correspond to the Device Type of the currently edited device and which have not yet been used by other devices. Exceptions are devices which are connected by a serial port. Please see also the note below.

The data of the Communication Address depends on the Device Type and is displayed in the corresponding entry fields. The data has to correspond to the device settings. For further information on the devices please refer to the Technical Documentation of the device.

Note: If devices are connected to the Control PC by a serial connection, it is possible that several devices use the same communication path (the same Communication Address) e.g. when using the RS485 protocol. The devices are addressed by the Device Address (user address) selected via the selector switch.

MTVNC

For devices of the type MTVNC the configuration of the MTVNC is done in this step.

The start mode of the MTVNC is selectable:

- ON: The MTVNC is started when starting the MUI/GUI.
- OFF: The MTVNC is not started.

Note: If the device status is ON, the start mode MTVNC of the device is automatically set to ON. The start mode of the MTVNC can only be modified if the device status is OFF.

The memory of the computer which is used by the MTVNC can be adjusted:

- Preassignment: 512KB
- Value range: from 256KB to 16383KB in steps of 1 KB

With the button "Extended" the "Options" can be accessed. The options are not needed under normal use.

Note: For the entry Options, data may only be entered according to prior agreement with Rexroth Indramat staff. Normally no data is entered!

Delete Device

The device which is to be deleted has to be selected in the tree 'System Configuration'.

Via the **Edit** Menu, entry **Delete** Device or via the toolbar button for **Delete** Device, as well as via the key of the keyboard the selected device is deleted. Then a confirmation prompt appears.

Note: By deleting a device the data in the directory of this device will also be deleted.

Cut Devices

The device which is to be cut has to be selected in the tree 'System Configuration'.

Via the **Edit** Menu, entry **Cut** Device or via the toolbar button for **Cut** Device the selected device will be deleted, and copied into a temporary buffer. Then a confirmation prompt appears.

Copy Device

The device which is to be copied has to be selected in the tree 'System Configuration'.

Via the **Edit** Menu, entry **Copy** Device or via the toolbar button for **Copy** Device the selected device will be copied into a temporary buffer.

Paste Device

If a device is saved in the temporary buffer, it can be inserted via the function Paste Device. The device will be inserted ahead of the device currently selected in the tree 'System Configuration'.

The user must enter a device address when the device is inserted. Further settings can be modified if required. The user will be guided by an assistant. The following general procedure is valid:

- In Step 1 of Insert Device, the Device Address is assigned (refer to 'Create a New Device').

From Step 2 on, the steps as known from editing an already available device are used.

- In Step 2 the Device Name and the Device Status can be edited.
- In Step 3 the component type 1/2 will be chosen.
- In Step 4 the Communication Address can be edited or the MTVNC can be configured.

Note: Copy / Cut / Paste includes the System Configuration data of the device (Device Type etc.). It does not include data like NC-programs, message texts etc. which are located in the device directories.

Move Device upwards

The device which is to be shifted has to be selected in the tree 'System Configuration'.

Via the **Edit** Menu, entry **Shift Device Up** or via the toolbar button for **Shift Device Up**, the selected device is shifted one entry up in the tree.

Move Device upwards

The device which is to be shifted has to be selected in the tree 'System Configuration'.

Via the **Edit** Menu, entry **Shift Device Down** or via the toolbar button for **Shift Device Down**, the selected device is shifted one entry down in the tree.

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6 Service & Support

6.1 Helpdesk

Unser Kundendienst-Helpdesk im Hauptwerk Lohr am Main steht Ihnen mit Rat und Tat zur Seite. Sie erreichen uns

- telefonisch: **+49 (0) 9352 40 50 60**
über Service Call Entry Center Mo-Fr 07:00-18:00
- per Fax: **+49 (0) 9352 40 49 41**
- per e-Mail: **service@indramat.de**

Our service helpdesk at our headquarters in Lohr am Main, Germany can assist you in all kinds of inquiries. Contact us

- by phone: **+49 (0) 9352 40 50 60**
via Service Call Entry Center Mo-Fr 7:00 am - 6:00 pm
- by fax: **+49 (0) 9352 40 49 41**
- by e-mail: **service@indramat.de**

6.2 Service-Hotline

Außerhalb der Helpdesk-Zeiten ist der Service direkt ansprechbar unter

oder **+49 (0) 171 333 88 26**
+49 (0) 172 660 04 06

After helpdesk hours, contact our service department directly at

or **+49 (0) 171 333 88 26**
+49 (0) 172 660 04 06

6.3 Internet

Unter **www.indramat.de** finden Sie ergänzende Hinweise zu Service, Reparatur und Training sowie die **aktuellen** Adressen *) unserer auf den folgenden Seiten aufgeführten Vertriebs- und Servicebüros.

- Verkaufsniederlassungen
- Niederlassungen mit Kundendienst

Außerhalb Deutschlands nehmen Sie bitte zuerst Kontakt mit unserem für Sie nächstgelegenen Ansprechpartner auf.

*) <http://www.indramat.de/de/kontakt/adressen>
Die Angaben in der vorliegenden Dokumentation können seit Drucklegung überholt sein.

At **www.indramat.de** you may find additional notes about service, repairs and training in the Internet, as well as the **actual** addresses *) of our sales- and service facilities figuring on the following pages.

- sales agencies
- offices providing service

Please contact our sales / service office in your area first.

*) <http://www.indramat.de/en/kontakt/adressen>
Data in the present documentation may have become obsolete since printing.

6.4 Vor der Kontaktaufnahme... - Before contacting us...

Wir können Ihnen schnell und effizient helfen wenn Sie folgende Informationen bereithalten:

1. detaillierte Beschreibung der Störung und der Umstände.
2. Angaben auf dem Typenschild der betreffenden Produkte, insbesondere Typenschlüssel und Seriennummern.
3. Tel./Faxnummern und e-Mail-Adresse, unter denen Sie für Rückfragen zu erreichen sind.

For quick and efficient help, please have the following information ready:

1. Detailed description of the failure and circumstances.
2. Information on the type plate of the affected products, especially type codes and serial numbers.
3. Your phone/fax numbers and e-mail address, so we can contact you in case of questions.

6.5 Kundenbetreuungsstellen - Sales & Service Facilities

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