



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

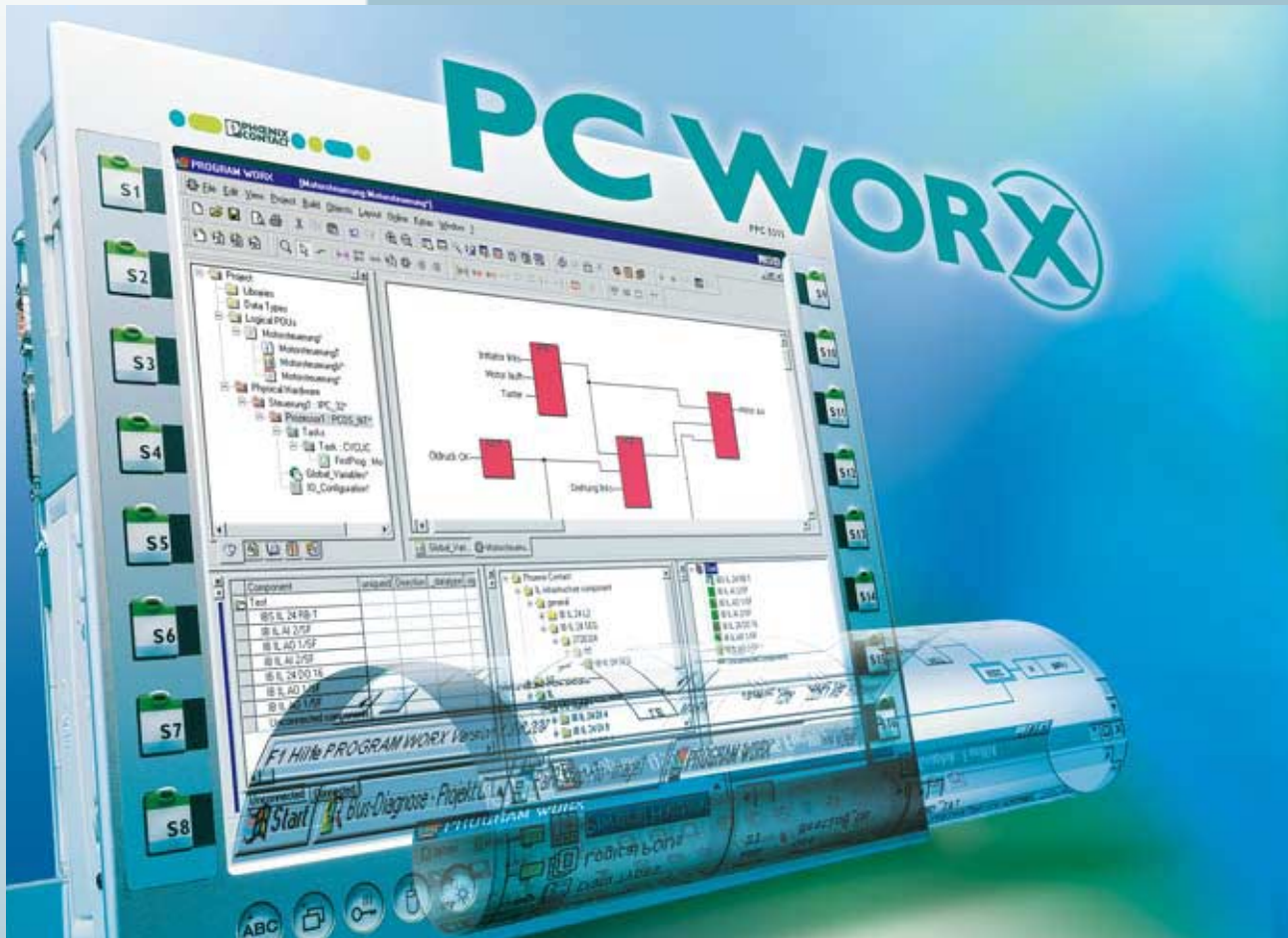
Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China





**AUTOMATION**



Quick Start

**UM QS EN PC WORX**

Order No.: —

PC WorX



# AUTOMATION

## Quick Start

### PC WorX

2011-07-27

---

Designation: UM QS EN PC WORX

Revision: 03

Order No.: —

This user manual is valid for:

Designation

PC WorX

Part of the AUTOMATIONWORX Software Suite 2010

Revision

ab 6.10

ab 1.60

## Please observe the following notes

In order to ensure the safe use of the product described, you have to read and understand this manual. The following notes provide information on how to use this manual.

### User group of this manual

The use of products described in this manual is oriented exclusively to qualified application programmers and software engineers, who are familiar with the safety concepts of automation technology and applicable standards.

Phoenix Contact accepts no liability for erroneous handling or damage to products from Phoenix Contact or third-party products resulting from disregard of information contained in this manual.

### Explanation of symbols used and signal words



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



#### **DANGER**

This indicates a hazardous situation which, if not avoided, will result in death or serious injury.



#### **WARNING**

This indicates a hazardous situation which, if not avoided, could result in death or serious injury.



#### **CAUTION**

This indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

The following types of messages provide information about possible property damage and general information concerning proper operation and ease-of-use.



#### **NOTE**

This symbol and the accompanying text alerts the reader to a situation which may cause damage or malfunction to the device, either hardware or software, or surrounding property.



This symbol and the accompanying text provides additional information to the reader. It is also used as a reference to other sources of information (manuals, data sheets, literature) on the subject matter, product, etc.

---

### **General terms and conditions of use for technical documentation**

Phoenix Contact reserves the right to alter, correct, and/or improve the technical documentation and the products described in the technical documentation at its own discretion and without giving prior notice, insofar as this is reasonable for the user. The same applies to any technical changes that serve the purpose of technical progress.

The receipt of technical documentation (in particular data sheets, installation instructions, manuals, etc.) does not constitute any further duty on the part of Phoenix Contact to furnish information on alterations to products and/or technical documentation. Any other agreement shall only apply if expressly confirmed in writing by Phoenix Contact. Please note that the supplied documentation is product-specific documentation only and that you are responsible for checking the suitability and intended use of the products in your specific application, in particular with regard to observing the applicable standards and regulations. Although Phoenix Contact makes every effort to ensure that the information content is accurate, up-to-date, and state-of-the-art, technical inaccuracies and/or printing errors in the information cannot be ruled out. Phoenix Contact does not offer any guarantees as to the reliability, accuracy or completeness of the information. All information made available in the technical data is supplied without any accompanying guarantee, whether expressly mentioned, implied or tacitly assumed. This information does not include any guarantees regarding quality, does not describe any fair marketable quality, and does not make any claims as to quality guarantees or guarantees regarding the suitability for a special purpose.

Phoenix Contact accepts no liability or responsibility for errors or omissions in the content of the technical documentation (in particular data sheets, installation instructions, manuals, etc.).

The aforementioned limitations of liability and exemptions from liability do not apply, in so far as liability must be assumed, e.g., according to product liability law, in cases of premeditation, gross negligence, on account of loss of life, physical injury or damage to health or on account of the violation of important contractual obligations. Claims for damages for the violation of important contractual obligations are, however, limited to contract-typical, predictable damages, provided there is no premeditation or gross negligence, or that liability is assumed on account of loss of life, physical injury or damage to health. This ruling does not imply a change in the burden of proof to the detriment of the user.

### Statement of legal authority

This manual, including all illustrations contained herein, is copyright protected. Use of this manual by any third party is forbidden. Reproduction, translation, and public disclosure, as well as electronic and photographic archiving or alteration requires the express written consent of Phoenix Contact. Violators are liable for damages.

Phoenix Contact reserves all rights in the case of patent award or listing of a registered design, in as far as this concerns software of Phoenix Contact that meets the criteria of technicality or has technical relevance. Third-party products are always named without reference to patent rights. The existence of such rights shall not be excluded.

Windows 3.x, Windows 95, Windows 98, Windows NT, Windows 2000, Windows XP, and Windows Vista are trademarks of the Microsoft Corporation.

All other product names used are trademarks of the respective organizations.

### How to contact us

#### Internet

Up-to-date information on Phoenix Contact products and our Terms and Conditions can be found on the Internet at:

[www.phoenixcontact.com](http://www.phoenixcontact.com).

Make sure you always use the latest documentation.

It can be downloaded at:

[www.phoenixcontact.net/catalog](http://www.phoenixcontact.net/catalog).

#### Subsidiaries

If there are any problems that cannot be solved using the documentation, please contact your Phoenix Contact subsidiary.

Subsidiary contact information is available at [www.phoenixcontact.com](http://www.phoenixcontact.com).

#### Published by

PHOENIX CONTACT GmbH & Co. KG  
Flachmarktstraße 8  
32825 Blomberg  
Germany  
Phone +49 - (0) 52 35 - 3-00  
Fax +49 - (0) 52 35 - 3-4 12 00

PHOENIX CONTACT  
P.O. Box 4100  
Harrisburg, PA 17111-0100  
USA  
Phone +1-717-944-1300

Should you have any suggestions or recommendations for improvement of the contents and layout of our manuals, please send your comments to

[tecdoc@phoenixcontact.com](mailto:tecdoc@phoenixcontact.com).

# Table of contents

1	General.....	1-1
1.1	Introduction.....	1-1
1.2	Information about this manual.....	1-1
1.3	System requirements.....	1-2
1.4	Ordering data .....	1-2
2	Installing and enabling the software.....	2-1
2.1	Prior to installation .....	2-1
2.2	AUTOMATIONWORX Software Suite .....	2-1
2.3	Starting the installation program .....	2-2
2.4	Starting PC WorX .....	2-2
2.5	Enabling the PC WorX license.....	2-3
2.6	License Manager.....	2-4
3	Helpful information about PC WorX .....	3-1
3.1	Online help .....	3-1
3.2	Selecting the language .....	3-1
3.3	The PC WorX user interface.....	3-3
3.4	Toolbars .....	3-4
3.5	Workspaces .....	3-5
3.5.1	Windows in the workspaces .....	3-8
3.5.2	Toggling windows on/off and docking/undocking windows .....	3-9
3.5.3	Auto-hide function .....	3-9
3.6	"Bus Structure" window .....	3-10
3.6.1	Icons in the "Bus Structure" window .....	3-10
3.6.2	Display in the "Bus Structure" window .....	3-12
3.7	"EXCEL Link" window.....	3-14
3.8	"Diag+" window .....	3-15
3.9	Visualization .....	3-19
3.10	FDT (Field Device Tool) workspace .....	3-20
3.10.1	Introduction .....	3-20
3.10.2	General .....	3-20
3.10.3	Installing DTM libraries .....	3-21
3.10.4	Creating a project and integrating DTMs in PC WorX .....	3-24
3.10.5	Reading in the bus configuration and/or manually inserting devices .....	3-25
3.11	Calling DTM functions .....	3-27
3.11.1	General DTM functions .....	3-27
3.11.2	DTM functions of the controller .....	3-28
3.11.3	DTM functions of devices .....	3-30



4	Sequence for creating a project .....	4-1
4.1	Sequence for creating a project.....	4-2
4.2	Creating a new project.....	4-3
4.3	Specifying project information .....	4-4
4.4	Preparing the PC for communication .....	4-6
4.5	Checking/modifying IP settings for the controller.....	4-7
4.6	Decision: Working online or offline .....	4-8
4.7	Inserting PROFINET IO devices .....	4-8
4.8	Checking/modifying the PROFINET settings for PROFINET IO devices .....	4-10
4.9	Manually inserting INTERBUS devices.....	4-12
4.9.1	Manually inserting INTERBUS devices - General .....	4-12
4.9.2	Inserting INTERBUS devices below an INTERBUS proxy .....	4-15
4.9.3	Inserting Inline terminals below a PROFINET IO bus coupler .....	4-15
4.9.4	INTERBUS devices below the PROFINET IO controller .....	4-15
4.10	Compiling after completing the bus topology .....	4-16
4.11	Creating the program.....	4-17
4.12	Compiling after creating the program.....	4-17
4.13	Generating variables and assigning process data .....	4-18
4.13.1	Generating variables .....	4-18
4.13.2	Assigning process data .....	4-19
4.14	Setting the communication path: EasySim simulation .....	4-22
4.15	Switching to working with the system (online).....	4-23
4.16	Assigning the IP address for the controller .....	4-23
4.16.1	Address assignment via the PC WorX BootP server .....	4-23
4.16.2	Address assignment with PC WorX via the serial interface .....	4-25
4.17	Setting the communication path .....	4-26
4.17.1	Communication via the serial interface .....	4-27
4.17.2	Communication via Ethernet .....	4-28
4.18	Reading in and importing PROFINET IO devices .....	4-29
4.18.1	Reading in PROFINET IO devices .....	4-29
4.18.2	Importing PROFINET IO devices into the project .....	4-31
4.18.3	Naming PROFINET IO devices without a PROFINET device name ..	4-31
4.18.4	Bus configuration with read in PROFINET IO devices .....	4-32
4.18.5	Subsequent naming of a PROFINET IO device .....	4-33
4.19	Checking/modifying the PROFINET settings for PROFINET IO devices .....	4-34
4.20	Transferring PROFINET device names and IP settings to PROFINET IO devices.....	4-35
4.21	Reading in INTERBUS .....	4-36
4.22	Compiling after reading in the bus topology.....	4-39
4.23	Creating the program.....	4-39

	4.24 Compiling after creating the program.....	4-39
	4.25 Assigning process data .....	4-39
	4.26 Compiling and sending a project, and performing a cold restart .....	4-40
	4.26.1 Compiling a project .....	4-40
	4.26.2 Sending a project .....	4-40
	4.26.3 Performing a cold restart .....	4-43
	4.27 Operation.....	4-45
	4.27.1 Setting the task properties .....	4-45
	4.27.2 Debug mode .....	4-47
	4.27.3 PLC stop/run .....	4-48
	4.28 Switching from simulation to real hardware .....	4-49
<b>5</b>	<b>Example project for an INTERBUS system.....</b>	<b>5-1</b>
	5.1 Project description.....	5-1
	5.2 Sequence for creating the INTERBUS project.....	5-2
	5.3 Creating a new project.....	5-4
	5.4 Specifying project information .....	5-4
	5.5 Checking/modifying IP settings for the controller.....	5-4
	5.6 Assigning the IP address for the controller .....	5-5
	5.7 Setting the communication path .....	5-5
	5.8 Reading in INTERBUS .....	5-6
	5.9 Compiling after completing the bus topology.....	5-6
	5.10 Creating the program.....	5-6
	5.11 Compiling after completing the program.....	5-7
	5.12 Assigning process data .....	5-7
	5.13 Compiling and sending a project, and performing a cold restart.....	5-8
	5.14 Operation.....	5-8
<b>6</b>	<b>Example project for a system consisting of PROFINET IO and INTERBUS.....</b>	<b>6-1</b>
	6.1 Project description.....	6-1
	6.2 Sequence for creating the PROFINET project.....	6-3
	6.3 Creating a new project.....	6-5
	6.4 Specifying project information .....	6-5
	6.5 Preparing the PC for communication .....	6-5
	6.6 Checking/modifying IP settings for the PROFINET IO controller.....	6-6
	6.7 Assigning the IP address for the PROFINET IOcontroller.....	6-7
	6.8 Setting the communication path .....	6-7
	6.9 Reading in and importing PROFINET IO devices .....	6-8
	6.10 Checking/modifying the PROFINET settings for PROFINET IO devices .....	6-9

6.11	Transferring PROFINET device names and IP settings to PROFINET IO devices .....	6-10
6.12	Reading in INTERBUS .....	6-11
6.13	Compiling after completing the bus topology .....	6-12
6.14	Creating the program.....	6-12
6.15	Compiling after creating the program.....	6-12
6.16	Assigning process data .....	6-13
6.17	Compiling and sending a project, and performing a cold restart .....	6-14
6.18	Operation.....	6-15
6.19	Additional information.....	6-15
6.19.1	Changing the PROFINET device name .....	6-15
6.19.2	Renumbering devices .....	6-18
6.19.3	Assigning IP parameters for the PROFINET IO device .....	6-19
7	Example project for a simulation with processor type "IPC" controllers.....	7-1
7.1	Project description.....	7-1
7.2	Sequence for creating the simulation project.....	7-2
7.3	Creating a new project.....	7-4
7.4	Specifying project information .....	7-4
7.5	Checking/modifying IP settings for the controller .....	7-4
7.6	Manually inserting INTERBUS devices.....	7-5
7.7	Compiling after completing the bus topology .....	7-5
7.8	Creating the program.....	7-6
7.9	Compiling after creating the program.....	7-6
7.10	Assigning process data .....	7-6
7.11	Setting the communication path .....	7-8
7.12	Compiling and sending a project, and performing a cold restart .....	7-8
7.13	Operation.....	7-10
7.13.1	Setting the task properties .....	7-10
7.13.2	Simulation and debug mode .....	7-12
7.14	Switching from simulation to real hardware .....	7-16
8	Example program .....	8-1
8.1	Program description .....	8-1
8.2	Function blocks used.....	8-2
8.3	Programming.....	8-4
8.4	Setting the initial value.....	8-9
8.5	Additional options for PROFINET .....	8-9

<b>A</b>	<b>Additional software functions</b> .....	<b>A-1</b>
	A 1    Setting the realtime clock.....	A-1
	A 2    Options for modifying a project.....	A-2
	A 2.1    Download Changes .....	A-2
	A 2.2    Online modifications .....	A-5
	A 3    Extended retain handling.....	A-8
	A 4    Simulation.....	A-9
	A 5    Comparing projects .....	A-9
	A 6    Visualization .....	A-9
	A 7    Replacing a controller (hardware replacement).....	A-9
	A 8    Device description files.....	A-16
	A 8.1    Phoenix Contact device description files .....	A-16
	A 8.2    Device description files for Inline Controllers .....	A-17
	A 8.3    Device description files from other manufacturers (GSD files) .....	A-18
	A 8.4    Creating device description files .....	A-18
	A 9    Ethernet topology .....	A-19
	A 10   INTERBUS topology.....	A-20
<b>B</b>	<b>Status information for a PROFINET IO system</b> .....	<b>B-1</b>
	B 1    Status of the PROFINET IO controller .....	B-1
	B 2    Status of a PROFINET IO device.....	B-2
	B 3    INTERBUS registers.....	B-3
	B 4    Setting all PROFINET IO devices to a defined state .....	B-4
<b>C</b>	<b>AX OPC Server and WebVisit</b> .....	<b>C-1</b>
	C 1    AX OPC Server.....	C-1
	C 1.1    Preparatory tasks in PC WorX .....	C-1
	C 1.2    OPC Configurator .....	C-2
	C 1.3    OPC Test Client .....	C-4
	C 2    WebVisit .....	C-6
<b>D</b>	<b>Phoenix Contact controllers</b> .....	<b>D-1</b>



# 1 General

## 1.1 Introduction

PC WorX is the automation software, which combines programming according to IEC 61131, fieldbus configuration, and diagnostics.

The programming system is based on modern 32-bit Windows technology and enables easy handling for the user by means of zooming, drag & drop, and dockable windows. IEC configuration elements can be processed and libraries can be integrated. In addition, the programming system has a powerful debugging system. In PC WorX, all functions can be easily accessed via the menu and you can create a project using only a few dialog boxes. You can then immediately start developing your program.

## 1.2 Information about this manual

This document helps you to parameterize a bus configuration and to program the application program (according to IEC 61131-3) using example projects.

It is assumed the user has knowledge of and experience in the operation of PCs and Windows operating systems, and knowledge of IEC 61131 and Ethernet basics.



More detailed information about the individual functions of PC WorX can be found in the online help for the program. The entire help function can be called via "Help" in the menu bar. Help for specific functions can be called via F1.



Functions and commands requiring communication with the controller cannot be executed without a physical bus configuration. However, complete parameterization is possible in the "offline" state. The application program can also be created and compiled.



### 1.3 System requirements

PC system, requirements	
Supported operating systems	MS Windows® XP Professional SP3 MS Windows® Vista Business MS Windows® 7 Professional (32-bit; 64-bit as of AUTOMATIONWORX Software Suite 1.60 SP1)
Hardware requirements	
CPU	Pentium 4/Celeron 1.6 GHz (minimum), 2 GHz (recommended)
Main memory	1 GB (minimum), 2 GB (recommended)
Hard disk space	2 GB free memory space
DVD-ROM drive	Yes
Interfaces	1 x Serial (V.24 (RS-232)), 1 x Ethernet (TCP/IP)
Monitor	XGA, resolution of 1024 x 768 pixels (minimum); SXGA, resolution of 1280 x 1024 pixels (recommended)
Operating devices	Keyboard, mouse
Web browser	Internet Explorer Version 7 or later

### 1.4 Ordering data

#### Products

Description	Type	Order No.	Pcs. / Pkt.
PC WORX DEMO license (software DVD), contains all 5 IEC languages, with MSFC compiler, maximum of 16 bytes of I/O data (mix)	PC WORX DEMO	2985725	1
PC WORX BASIC license, contains all 5 IEC languages, without MSFC compiler, maximum of 256 bytes of I/O data (mix), version-specific license key	PC WORX BASIC LIC	2985275	1
PC WORX PRO license, contains all 5 IEC languages, with MSFC compiler, maximum of 128 kbytes of I/O data (mix), version-specific license key	PC WORX PRO LIC	2985385	1
PC WORX PRO license, contains all 5 IEC languages, with MSFC compiler, maximum of 128 kbytes of I/O data (mix), version-specific license key, upgrade of an existing basic license to a full license with MSFC compiler	PC WORX BASIC-PRO LIC	2985259	1
PC WORX BASIC update, version update for PC WORX BASIC LIC (e.g., from 5.xx to 6.xx), maximum of 256 bytes of I/O data (mix), version-specific license key	PC WORX BASIC UPD	2985262	1
PC WORX PRO update, version update for PC WORX PRO LIC (e.g., from 5.xx to 6.xx), maximum of 128 kbytes of I/O data (mix), version-specific license key	PC WORX PRO UPD	2985372	1



All PC WorX versions support all five IEC programming languages according to IEC 61131-3.

## 2 Installing and enabling the software

### 2.1 Prior to installation



Prior to installation, close all open Windows applications.  
This PC WorX version can be installed parallel to an existing earlier version.

### 2.2 AUTOMATIONWORX Software Suite

PC WorX is part of the AUTOMATIONWORX Software Suite.

The AUTOMATIONWORX Software Suite includes the following programs:

- **Config+**  
Easy configuration and startup of INTERBUS networks
- **Diag+**  
User-friendly network diagnostics during startup and operation
- **Diag+ NetScan**  
User-friendly monitoring of multiple INTERBUS networks
- **PC WorX**  
Uniform IEC 61131 programming environment for all Phoenix Contact controllers
- **PC WorX Express**  
Easy-to-use version of the PC WorX software tool designed to provide a more friendly introduction to the world of IEC 61131 programming using controller class 100 (ILC 1xx) from Phoenix Contact
- **AX OPC Server**  
Software used for data exchange between distributed INTERBUS networks and visualization systems
- **WebVisit**  
Tool for creating web pages for web-based operator panels from Phoenix Contact

The desired programs can be selected individually or simultaneously for installation.

Diag+ should only be selected if you wish to use it independently of PC WorX. When installing PC WorX, Diag+ is installed as part of PC WorX.

When one of the software suite programs is started for the first time, it runs in demo mode with limited resources. A registration code is required to enable the full version. You will receive the registration code when a full version of the relevant program is purchased.

### 2.3 Starting the installation program

- Insert the "AUTOMATIONWORX Software Suite" DVD in your DVD-ROM drive. The installation program usually starts automatically after a few seconds.
- If it does not, start the "SETUP.EXE" file from the "[Drive]:\SETUP\" directory on the DVD-ROM. This file calls the installation wizard, which guides you through the installation process.
- Follow the instructions in the installation program.

The installation program generates all the directories required for operation and copies the files for the selected programs.



#### Restart the PC

Following successful installation, you must restart your computer for the changes to the configuration files to take effect. To do this, click "Finish" at the end of the installation process.

- To restart the PC, click "Finish" at the end of the installation process.

### 2.4 Starting PC WorX

- For installation using the default settings, start PC WorX via "Start, All Programs, PHOENIX CONTACT, AUTOMATIONWORX Software Suite 201x 1.6x, PC WORX 6.1x".

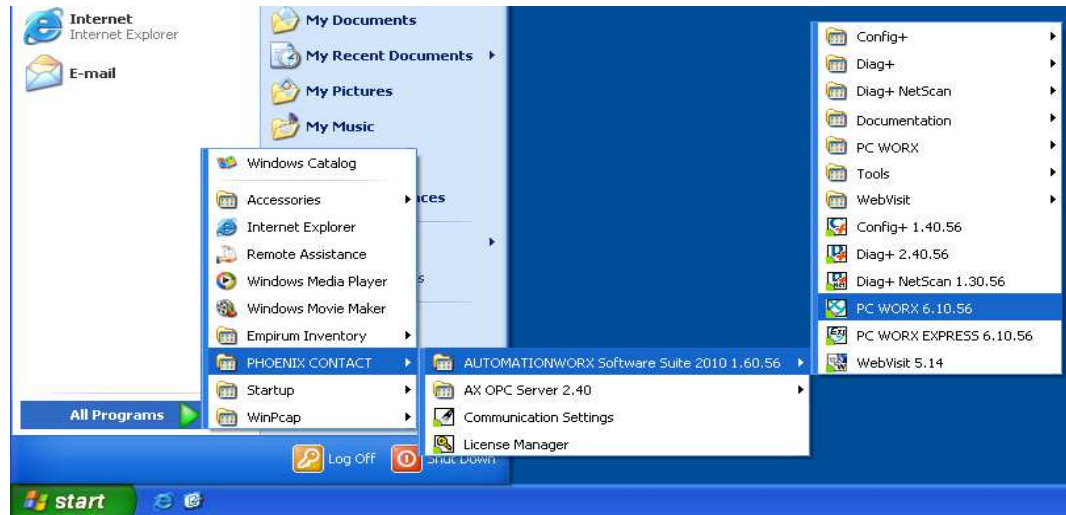


Figure 2-1 Starting PC WorX



When PC WorX is started for the first time, it runs in demo mode with limited resources. A maximum of 16 bytes is available for I/O data.

If the upper limits for demo mode are exceeded, the following error messages are generated **when compiling**:

- Too many inputs/outputs in I/O configuration (16 maximum, XXXXX specified)! PC WORX running with limited resources.
- Resource file cannot be compiled!

Regardless of the bus configuration, these error messages always appear when compiling for various controllers (e.g., RFC 470S PN 3TX) in demo mode as all system variables are entered in the I/O configuration.

If you wish to switch from demo mode to the full version, enable your PC WorX license.

## 2.5 Enabling the PC WorX license

After starting PC WorX, proceed as follows to enable your license:

- Select the "Register..." command in the "?" menu.

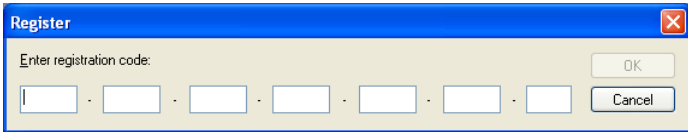


Figure 2-2 Registration dialog box for entering the license code

- Enter your registration code.
- Confirm your entry with "OK".



Figure 2-3 Registration dialog box for entering the license code



Alternatively, you can also license PC WorX via the License Manager in the AUTOMATIONWORX Software Suite.

Registration comes into effect the next time PC WorX is started.

## 2.6 License Manager

The License Manager can be used to enable all programs in the AUTOMATIONWORX Software Suite. Select the relevant program to be licensed and then enter the corresponding license key in the field provided.

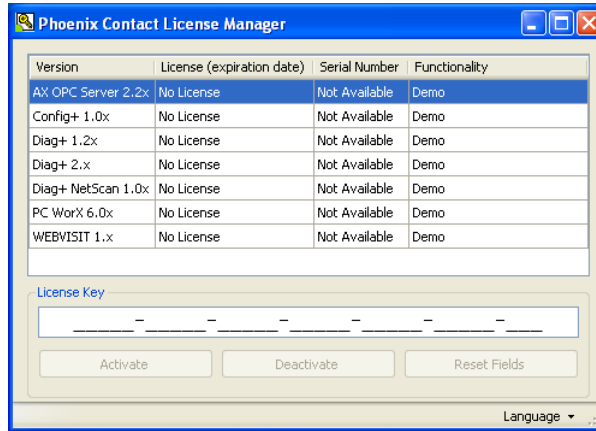


Figure 2-4 License Manager

## 3 Helpful information about PC WorX

### 3.1 Online help

More detailed information about the individual functions of PC WorX can be found in the online help for the program. The entire help function can be called via "Help" in the menu bar. Help for specific functions can be called via F1.

### 3.2 Selecting the language

When installing the software, the language in which PC WorX should be started can be selected. The program language can be changed at any time.

- Select the "Extras, Options..." menu.
- Select the "General" tab.
- Select the language.
- Confirm your selection with "Apply" and "OK".

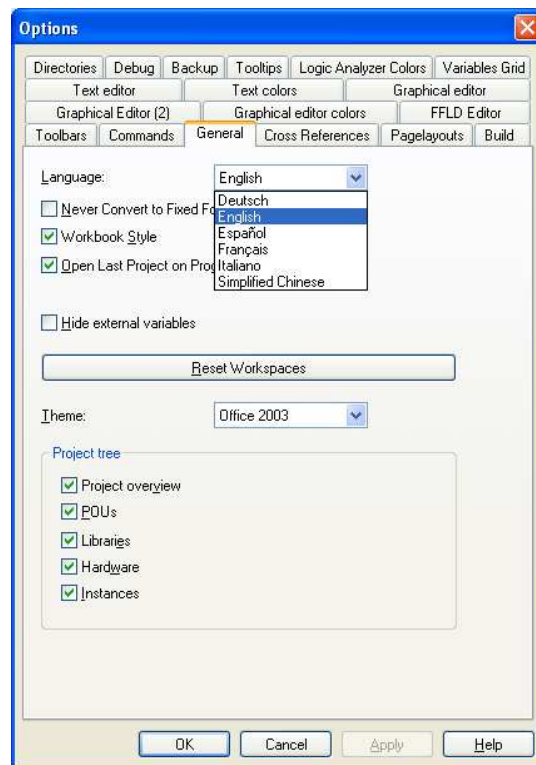


Figure 3-1 Changing the language setting



The selected language is activated the next time PC WorX is started.





The "Theme" element can be used to change the design of the PC WorX user interface. Default setting: "Office 2003".

- Close and restart the program.

**Exporting texts/importing translations**

Texts previously created in one language can be exported and translated. The translated texts can then be imported back into PC WorX.

Please ensure that the project language has been set:

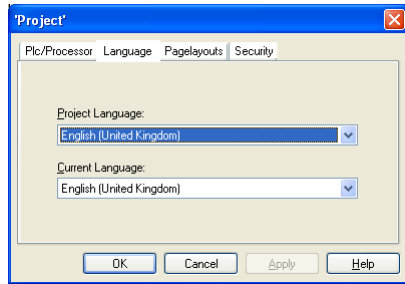


Figure 3-2 Project language

- Open the "File, Export..." menu.
- Select the data you wish to export.
- Confirm your selection with "OK".

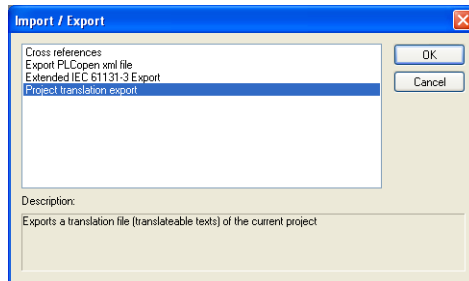


Figure 3-3 Exporting files from the project

Once the files have been translated:

- Open the "File, Import..." menu.
- Select the data you wish to import.
- Confirm your selection with "OK".
- Specify the path for the data to be imported.
- Confirm your selection with "Import".

### 3.3 The PC WorX user interface

The user interface consists of the following main components: menu bar, toolbars, main window, and status bar. The contents of the main window depend on the workspace.

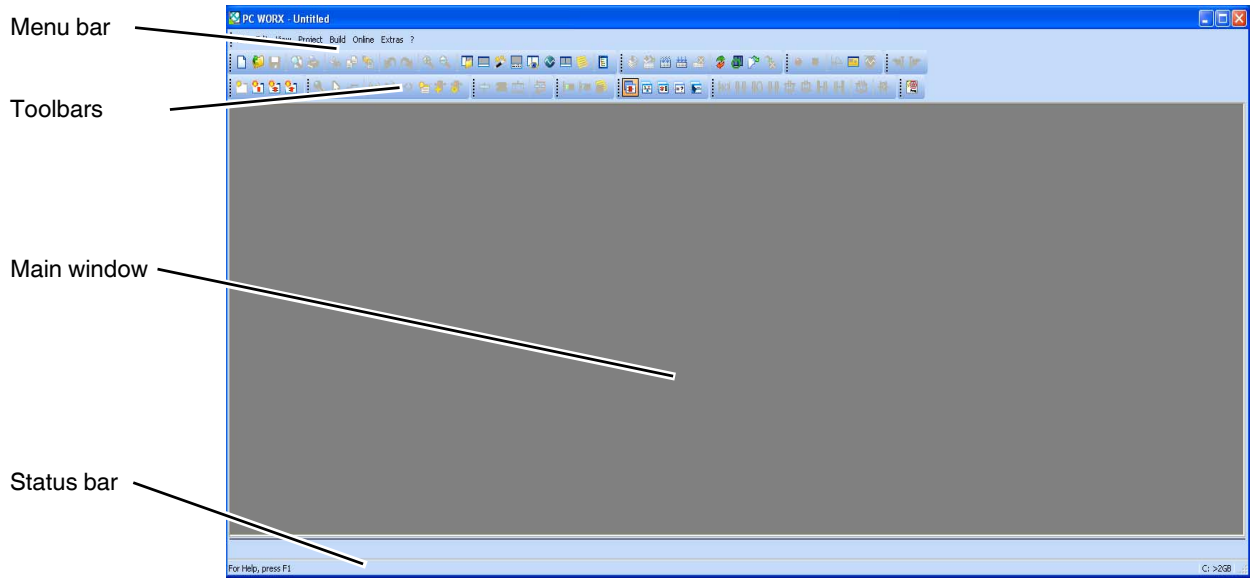


Figure 3-4 User interface

## 3.4 Toolbars

The program contains several toolbars with different icons, which enable frequently used operations to be executed quickly. Alternatively, these operating steps can be called via menu items or predefined shortcuts.

By default, all the toolbars are shown. To display or hide a specific toolbar, use the "Extras, Options" dialog box.

When the mouse pointer is placed over an icon (without clicking on it), a tool tip appears. The tool tip displays the name of the current icon. In addition, a short function description appears in the status bar. If tool tips are not displayed, this feature can be activated in the "Extras, Options, Toolbars" dialog box.

### Icons for selecting the workspace

The workspace can be changed via the icons in the toolbar:



Activate IEC programming workspace.



Activate bus configuration workspace.



Activate process data assignment workspace.



Activate project comparison workspace.



Activate FDT (Field Device Tool) workspace.



Which windows will actually be displayed depends on which windows have been toggled on (see also "Windows in the workspaces" on page 3-8). The last setting for each workspace is saved when the program is closed and restored when it is started again.

### Frequently used icons for compiling and debugging



Online modifications.



Make (compile project; corresponds to "Build, Make" in the menu bar).



Rebuild project (corresponds to "Build, Rebuild Project" in the menu bar).



Switch debug mode on/off.



Display project control dialog box.

## 3.5 Workspaces

PC WorX is divided into five workspaces:

- IEC programming
- Bus configuration
- Process data assignment
- Project comparison
- FDT (Field Device Tool)

The "View" menu or the corresponding icon in the toolbar can be used to switch between the workspaces. Following initial installation, the IEC programming workspace is the default setting.

Figure 3-5 to Figure 3-9 below show the default workspaces. Table 3-1 on page 3-8 provides an overview of the windows that can be usefully added to the default setting.

### IEC programming workspace

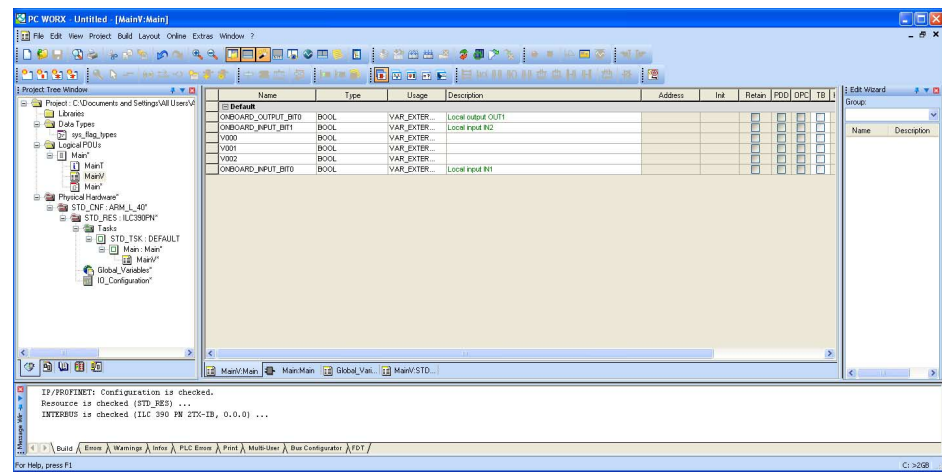


Figure 3-5 IEC programming workspace

### Bus configuration workspace

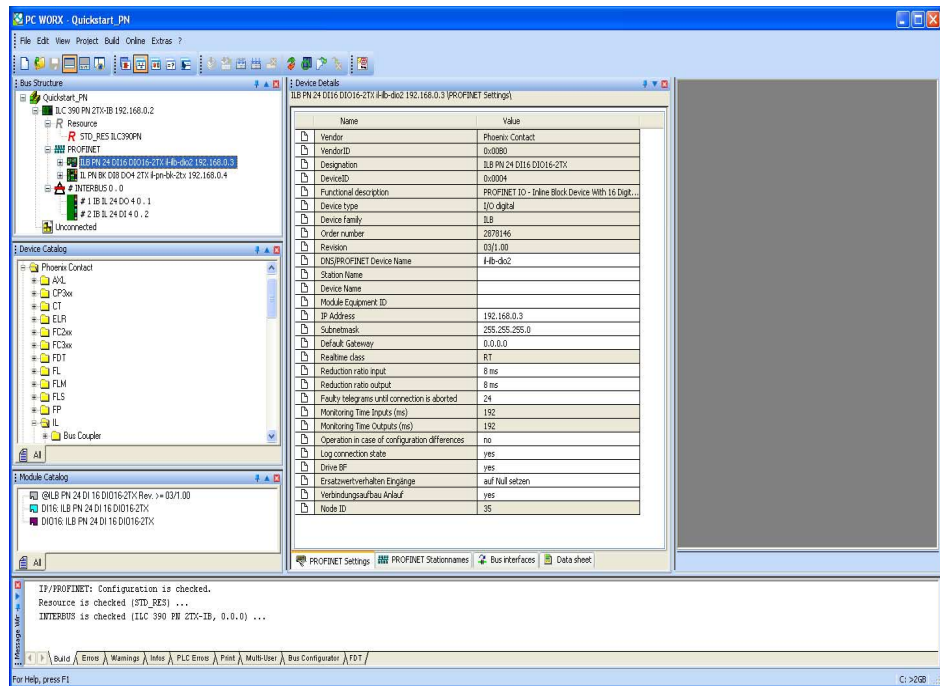


Figure 3-6 Bus configuration workspace

### Process data assignment workspace

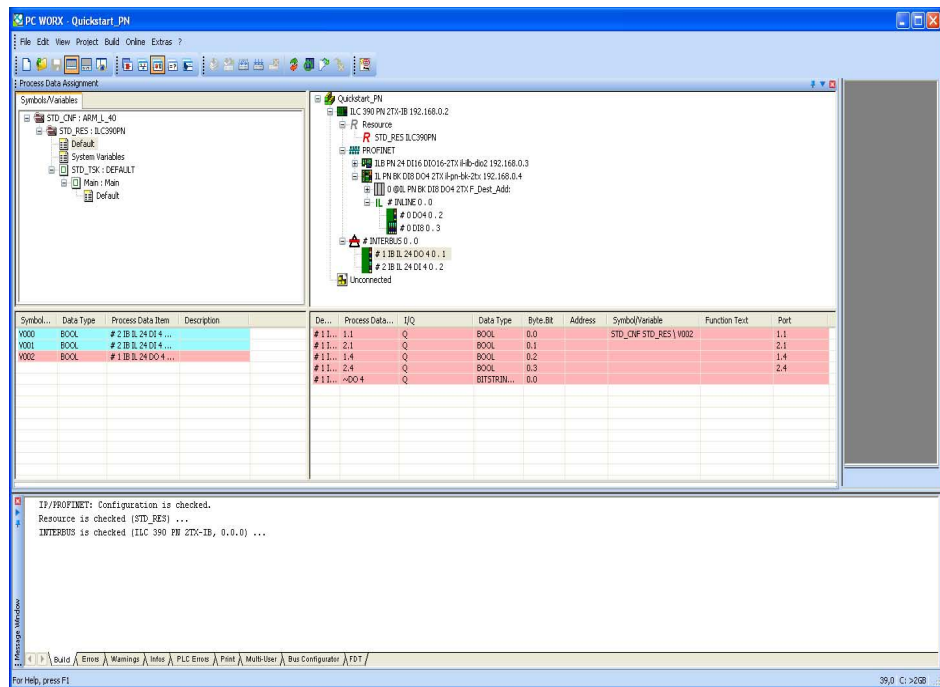


Figure 3-7 Process data assignment workspace

### Project comparison workspace

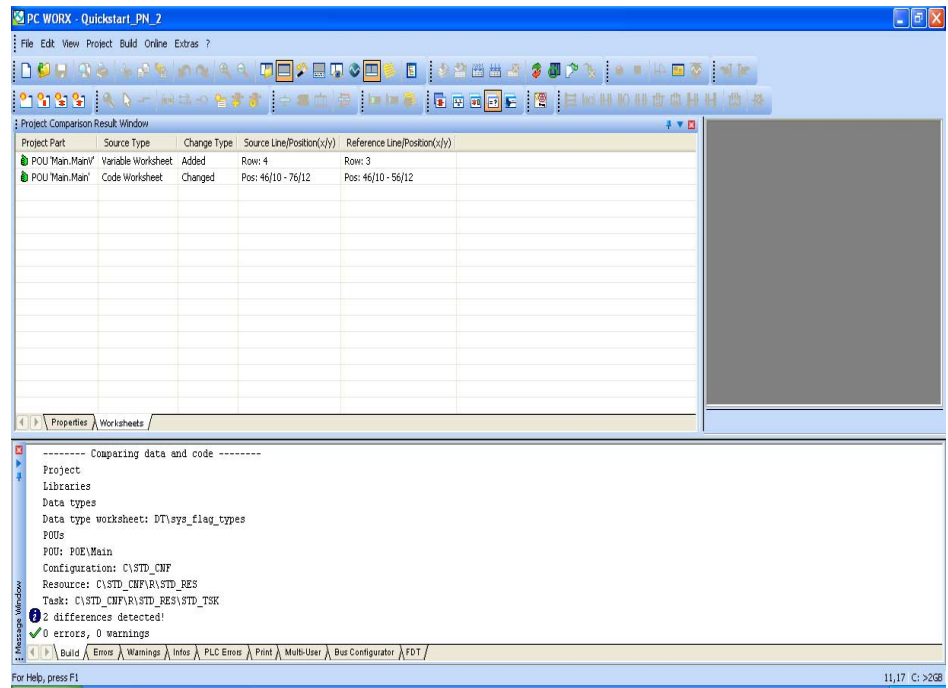


Figure 3-8 Project comparison workspace

### FDT workspace

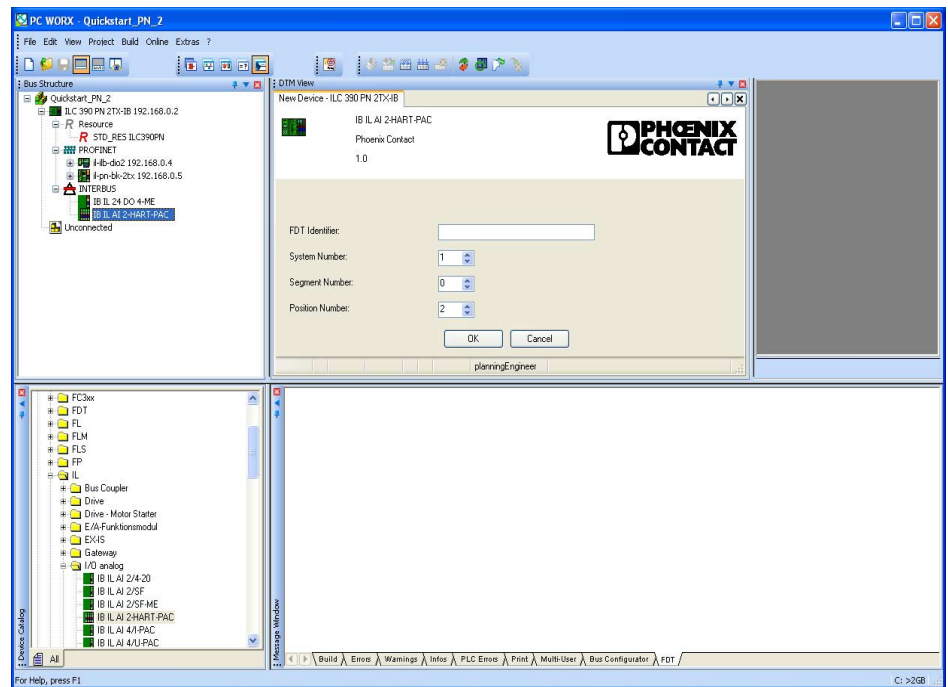


Figure 3-9 FDT workspace