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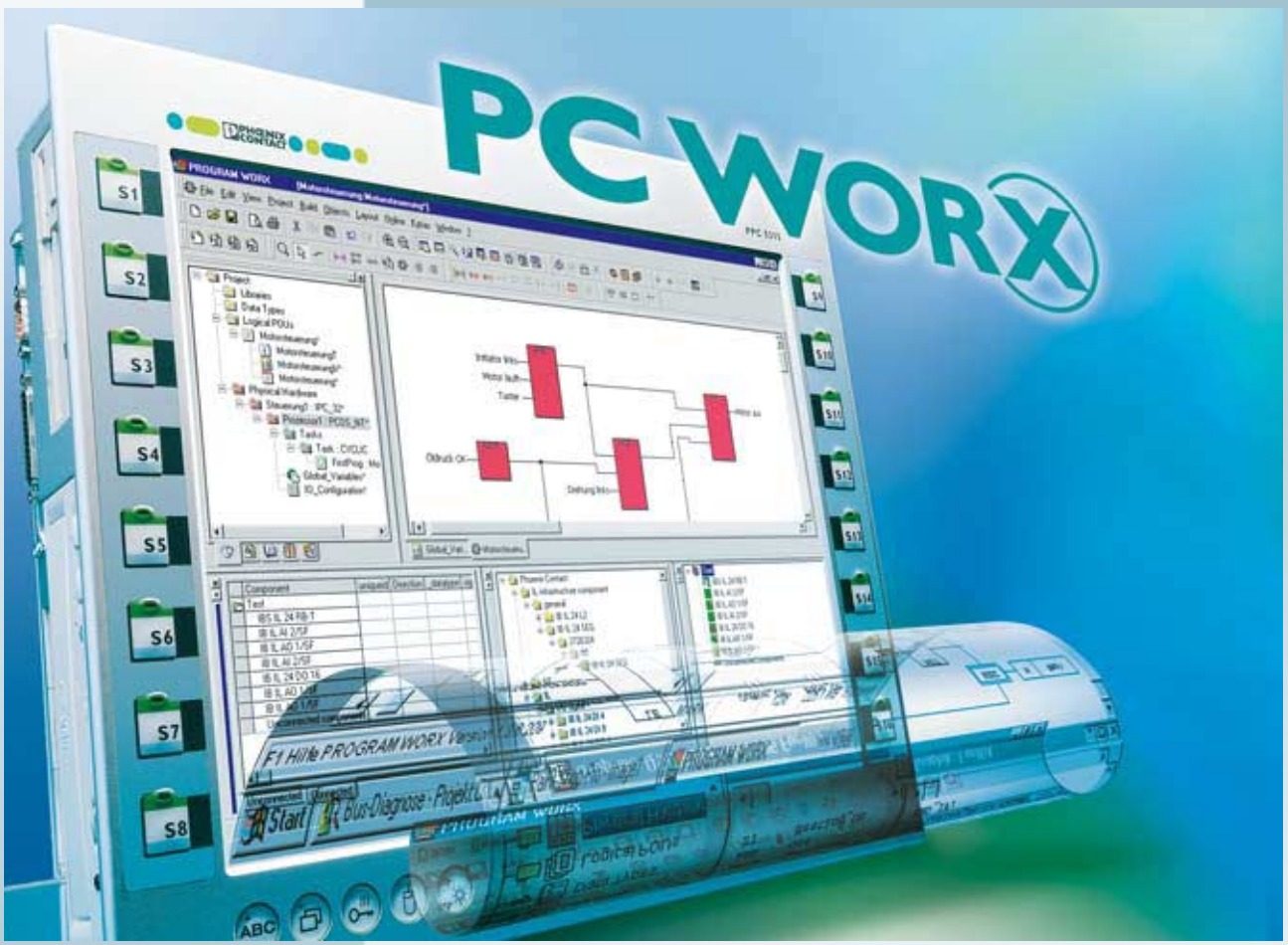
AUTOMATION



Quick Start

UM QS EN PC WORX

Order No.: —

PC WorX

PHOENIX CONTACT
INSPIRING INNOVATIONS

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	Revision
PC WorX	ab 6.10
Part of the AUTOMATIONWORX Software Suite 2010	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.

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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.

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Published by

PHOENIX CONTACT GmbH & Co. KG
Flachsmarktstraße 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.

Table of contents

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".

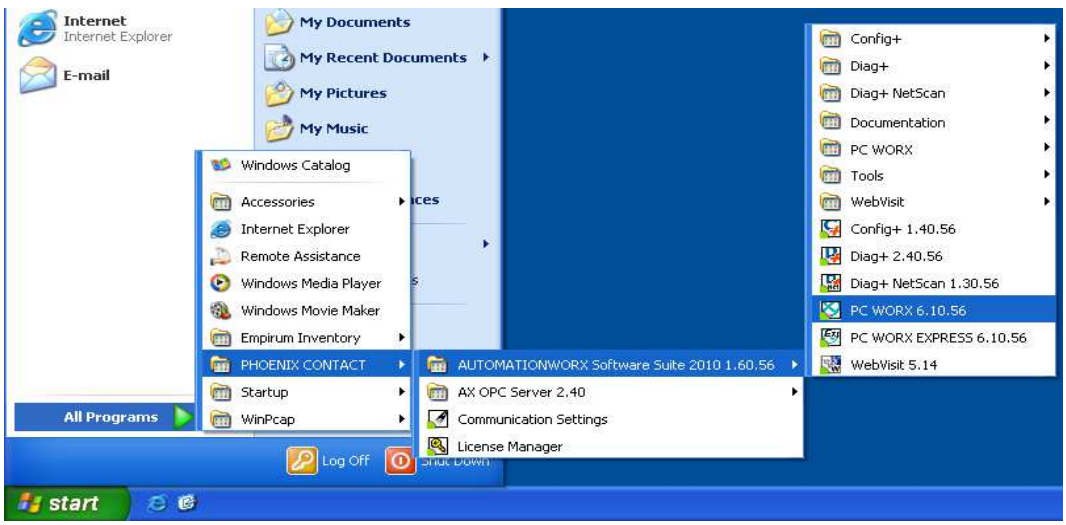

Figure 2-1 Starting PC WorX

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.

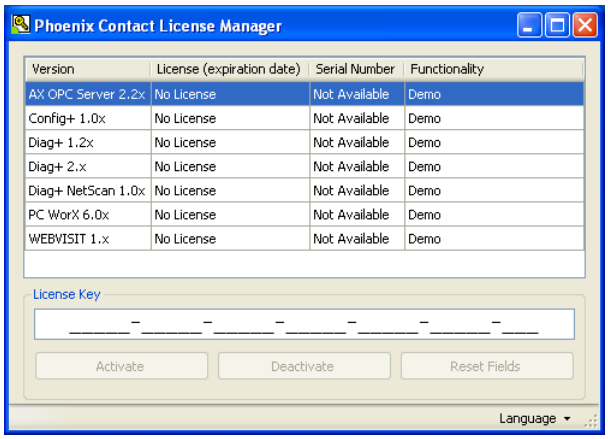

Figure 2-4 License Manager

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".

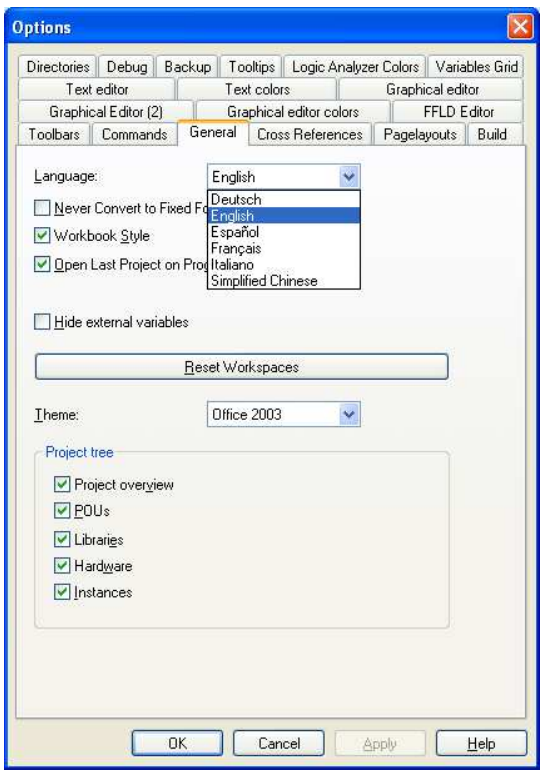

Figure 3-1 Changing the language setting

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:

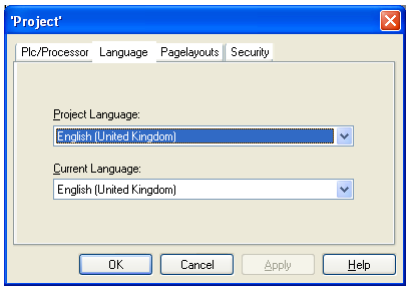

Figure 3-2 Project language

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

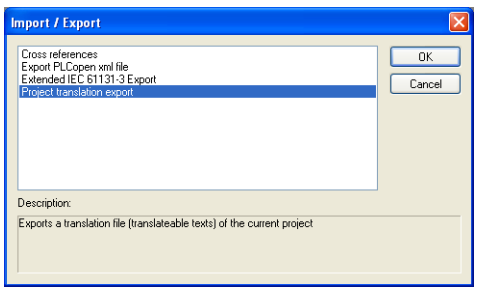

Figure 3-3 Exporting files from the project

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.

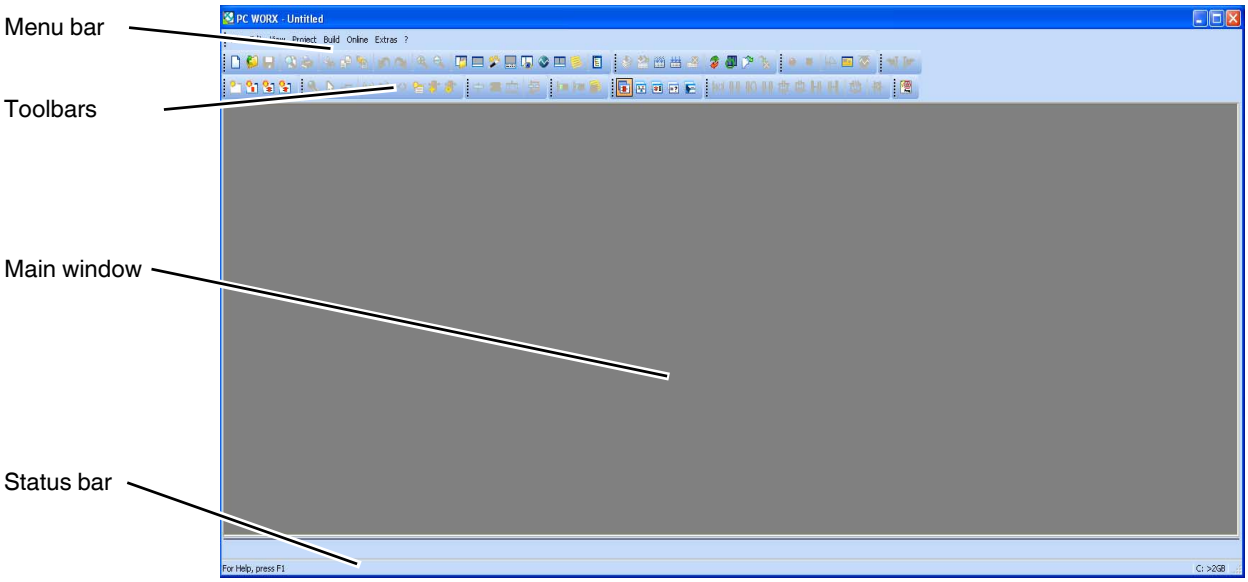

Figure 3-4 User interface

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

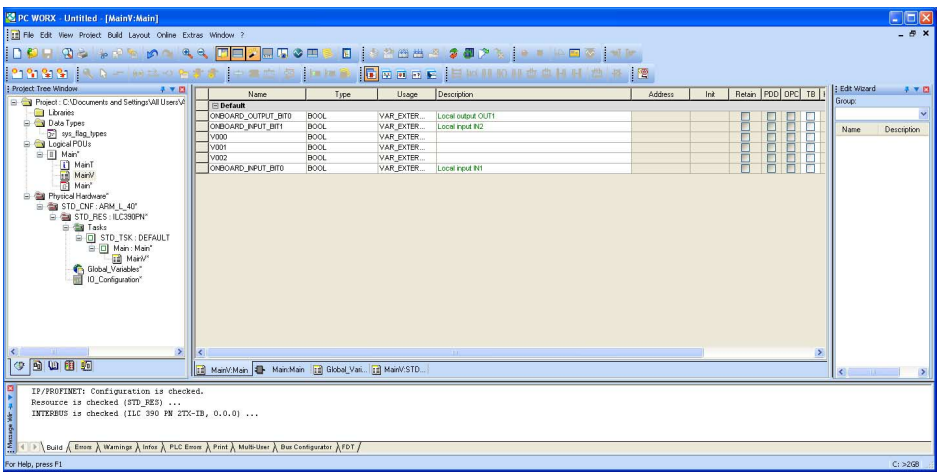

Figure 3-5 IEC programming workspace

Bus configuration workspace

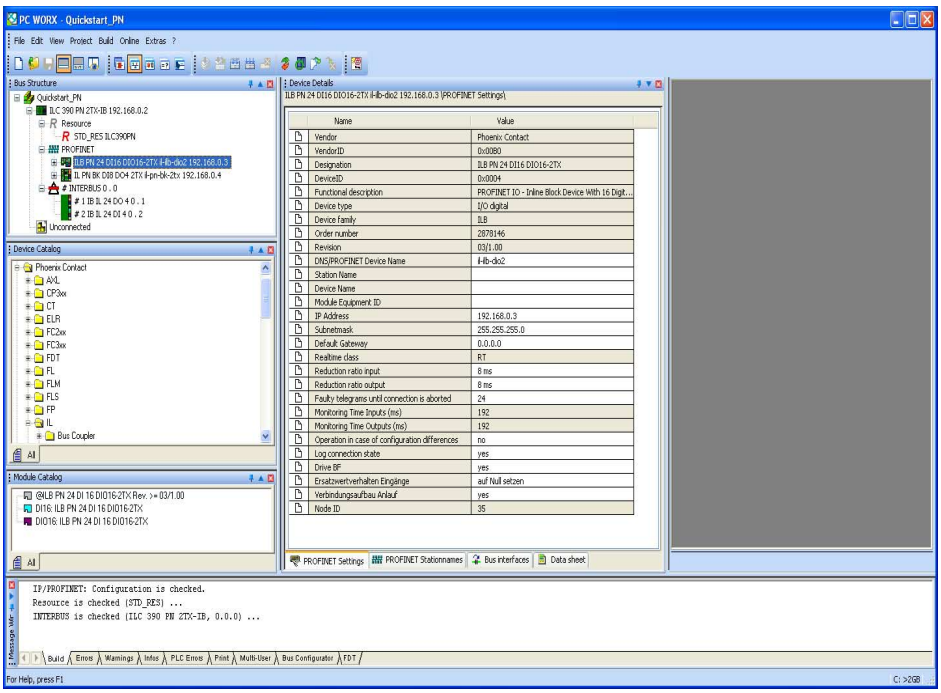

Figure 3-6 Bus configuration workspace

Process data assignment workspace

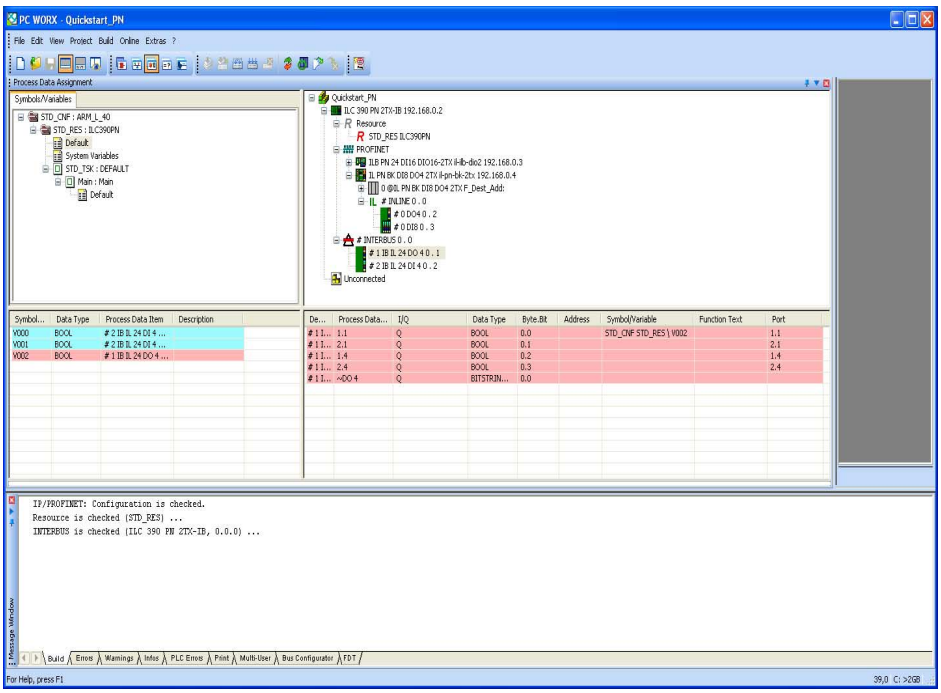

Figure 3-7 Process data assignment workspace

Project comparison workspace

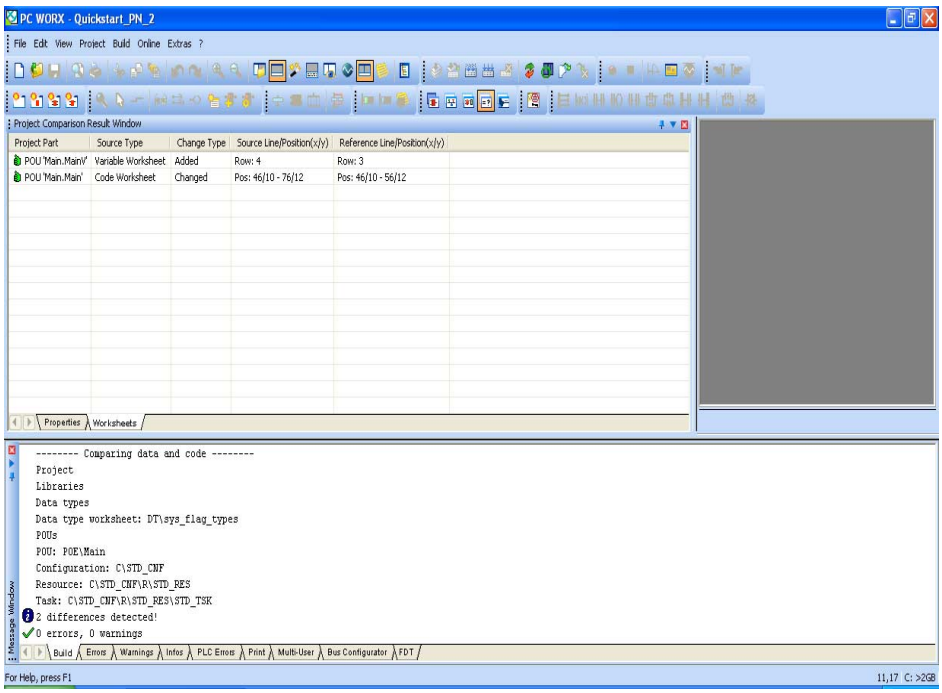

Figure 3-8 Project comparison workspace

FDT workspace

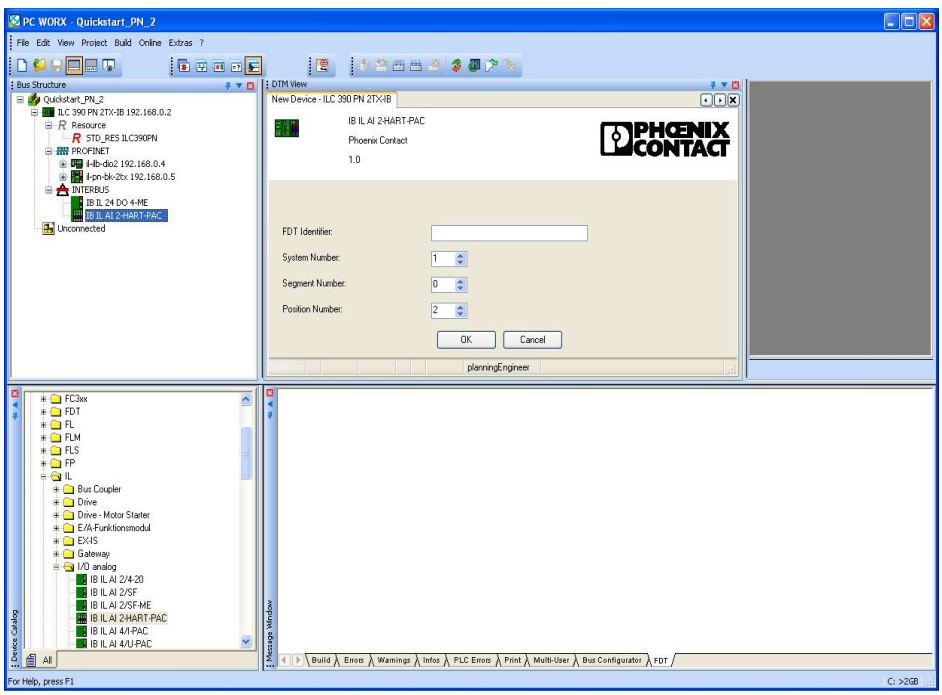

Figure 3-9 FDT workspace