# Panasonic

# Control FPWIN Pro

## PLC programming software: one tool for all applications

**Control FPWIN Pro is the universal software for all PLCs from Panasonic**

Control FPWIN Pro is the Panasonic programming software developed according to the international standard IEC 61131-3 and aimed at achieving compatibility and reusability. Control FPWIN Pro allows the migration of time-tested programs and software solutions so that programmers can switch for example to the new FP7 series and still use all their knowledge and know-how.

Structured text (ST) programming editor

Toolbar contains icons for frequently used program functions

Declaration of variables



Navigators provide an overview, even for very complex projects

Ladder diagram (LD) programming editor

Selection of instructions

## Low engineering cost and short time to market

• Reuse of time-tested software parts and programming units

• Universal software for scalable and long-term available hardware platforms

• Simple licensing

## Simple to learn – gets you there faster – little maintenance necessary

• Intuitive user interface thanks to clear navigator structure and simple project management

• 5 different programming languages, user interface in 8 languages

• Multi-language Unicode support

• Comprehensive remote diagnosis, programming, maintenance and control via Ethernet, USB, RS232C interface, or modem

The clear graphic representation of the project hierarchy in the navigator provides an overview even for very complex projects. To access any object of the project, simply double click it.

## The navigator
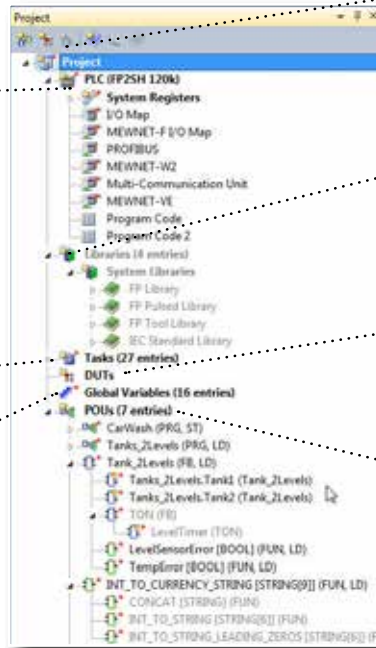
● Toolbar for main functions.

System registers:
PLC hardware configuration can be adapted to the current project via the system registers.
Examples:
– Change available number of timers/ counters
– Change number of hold and non-hold internal flags
– COM port settings

● Libraries:
For storing, linking, and reusing functions and function blocks in the project

● DUT (Data Unit Type):
DUTs can be defined by the programmer for recipes, positioning application tables, etc.

Task pool:
Program tasks and interrupt tasks can be enabled in the task pool.

● Program Organization Units (POUs):
Programs, functions and function blocks are organized in POUs.

Global variables:
Assignment and definition of global variables for the entire project.
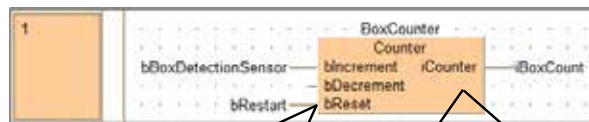
## Higher efficiency thanks to reuse of functions and function blocks

Reusing functions and function blocks saves programming and debugging time. We offer ready-made libraries for all PLCs including online help and programming examples for standard routines and special applications.
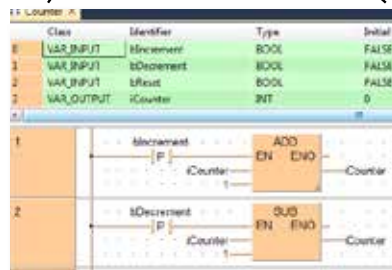
**Examples of function blocks:**
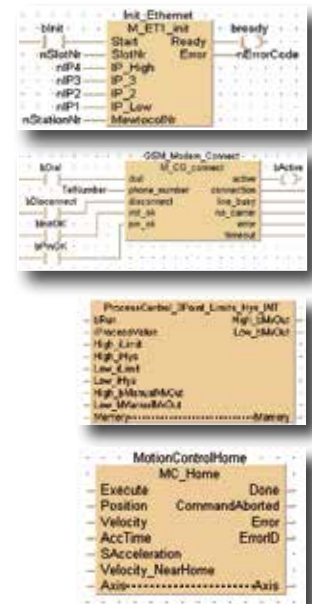
Function block programming

1. Define inputs and outputs

2. Program inside of function block

## Free download of comprehensive and powerful libraries

Over the years, Panasonic has developed a large collection of function blocks and libraries in a worldwide cooperation. The continually expanded collection is available to customers for free. They cover drive technology, communication, and safety engineering. Currently high in demand:

The **Control FPWIN Pro Web-Server library** allows you to take advantage of the FP Web-Server functions quickly and easily, e.g. sending an email, controlling an FTP client, establishing a PPP connection, or synchronizing the clock with NTP.

The **Control FPWIN Pro Motion Control library** shortens the time required for commissioning, resets the motion controller, motor or an external encoder in regards to the PLC and, thanks to a high output frequency range, enables exact positioning and movement.
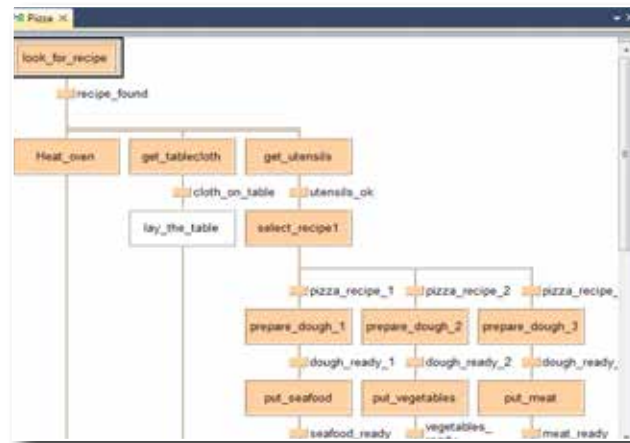
## Ladder diagram (LD)
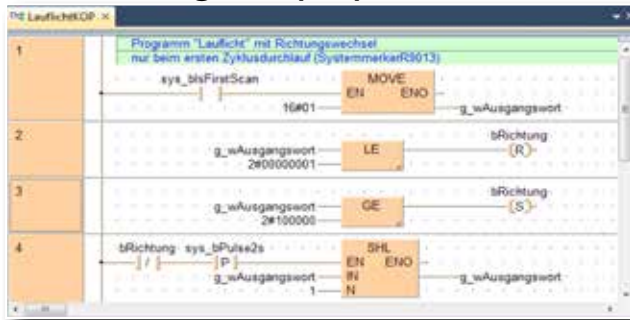


## Instruction list (IL)
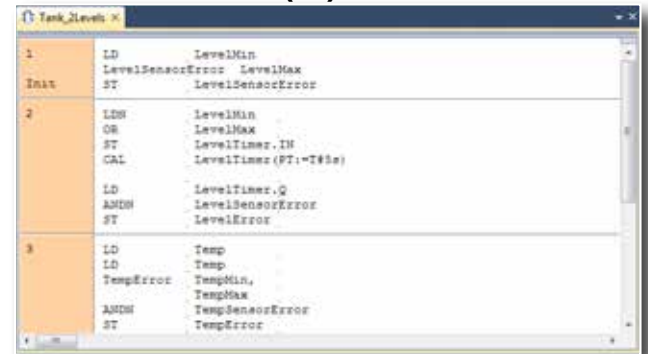


## Sequential function chart (SFC)
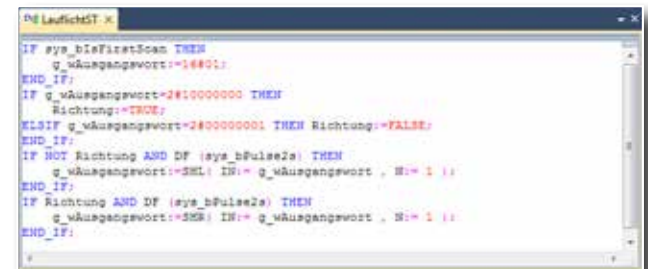


## Structured text (ST)



## Function block diagram (FBD)
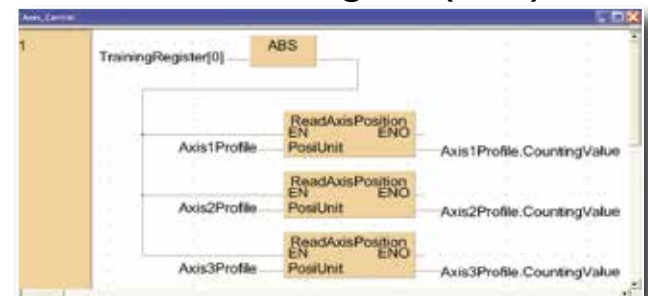


## Comprehensive help system

A flexible choice of editors (instruction list IL, function block diagram FBD, ladder diagram LD, sequential function chart SFC, structured text ST) decreases programming time considerably, allowing you to choose the programming language with which you are most familiar or that best suits your project's structure.

## Useful tool tips



Tool tips provide information quickly, e.g. current values, data types, comments or addresses.

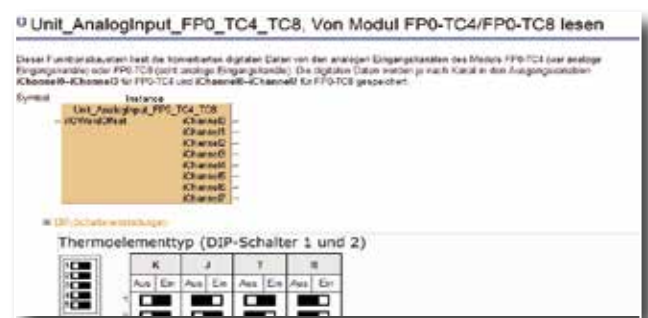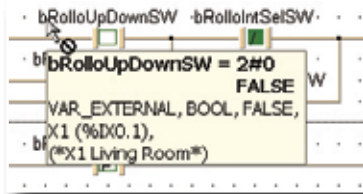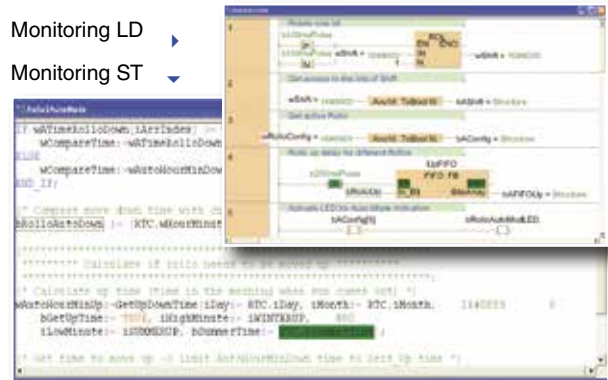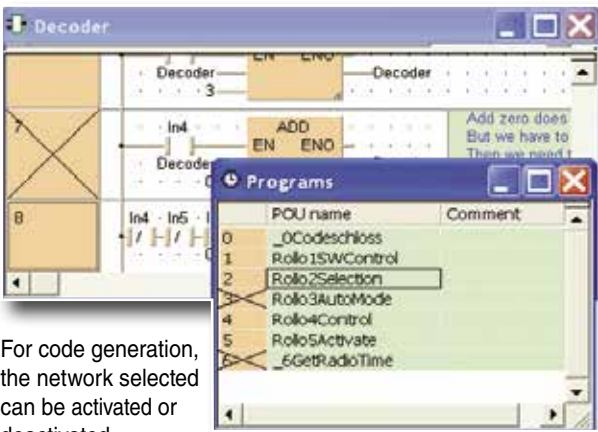## Deactivate / activate networks and program tasks



For code generation, the network selected can be activated or deactivated.

Deactivated networks are crossed out in the network information area or network list.

## Easy configuration



Control FPWIN Pro offers easy-to-use dialogs to comfortably configure the PLC, e.g. the screen display of the FP-e.

## Data monitor

Monitoring LD ▶

Monitoring ST



When you have opened a POU body on your screen, the variables in the corresponding POU can be monitored in online mode at the same time.

Monitoring trends and sampling traces ▼



Contact conditions and/or variable values can be displayed on a time axis. Up to 16 contacts or variables may be displayed in a window.

For additional monitoring trends use the FP Data Analyzer!

## Powerful compiler options
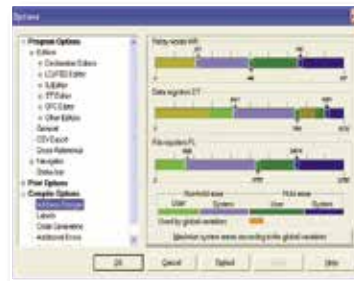


You can specify the memory areas by simply adjusting the sliders.

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Control FPWIN Pro offers a wealth of additional advanced functions that will help you save costs and increase productivity from the initial project planning to everyday operation.

■ Print preview of your entire project
■ Sophisticated online help
■ Upload of complete projects from the PLC, including comments
■ Recipe editor
■ Complex data types, e.g. STRING or DATE, for all PLCs
■ Useful syntax coloring and other color settings

## Multi-language Unicode support

Because Control FPWIN Pro supports Unicode, comments, names of variables, functions, function blocks, and programs can be entered in any language. Umlauts and special characters containing accents or other diacritical marks are displayed correctly. No need to change any settings in Windows. Just use your normal keyboard.



## Conditional compilation

With conditional compilation, users can define conditions when to execute preprocessing instructions or translate certain parts of the program. This is the purpose of the preprocessing instruction #if, which works like the if statements in C.

The #if instruction is particularly helpful during debugging as it allows the user to exclude whole parts of the program from the compilation.

Thanks to conditional compilation it is possible to create programs with the new features in Control FPWIN Pro 7 that are still compatible with older PLC versions not supporting the new features.

Some of the typical usages of conditional compilation are:

• outputting a compiler error for certain PLC types

• code generation that depends on the existence of a system variable

• code generation if a system instruction is supported, which depends on the activation of a certain pulse output channel

Programming example: Output of a compiler error for certain PLC types

```
(* Check the current plc type and output a compiler error *)
#if ((SYS_CURRENT_PLC AND (SYS_FP2 OR SYS_FP2SH))<>0) #then
    OutputCompilerError('Wrong PLC type FP2, FP2SH');
#end_if;
```

## Software support

As expected, the latest version of the software includes even more commands to help you efficiently program your PLC.

Among the innovations contained in the new version are many features that have been implemented for the FP7:

• Clock/calendar function can now be configured in the software

• Full support of IEC standard with POUs, data types, and instructions, etc.

• New family of overloaded and type-safe instructions usable for 32-bit type PLCs (FP7) and 16-bit type PLCs

• SD card instructions

Additional instructions for simplifying work with analog values, e.g.:

• Scaling

• Averaging

• Assigning addresses for expansion units

Together with the FP7, the new functions have simplified data handling even more. Data can be transmitted via Ethernet communication or stored on SD cards. Special logging and trace instructions help with data and process monitoring.



## Control FPWIN Pro and other software tools

• FP OPC Server

  The standard interface for data exchange between the PLCs of the FP series

• FP Data Analyzer

  The software for reading and displaying PLC data

• PCWAY

  Microsoft Excel add-in for data monitoring, logging and visualization

• Control FP Connect

  The ActiveX control for integrating Panasonic PLCs into applications

• Control Configurator MS

  Software tool for quick setup of GSM alarm message systems

• FP Web Designer

  Editor for creating websites and for visualizing process data collected by FP Web-Server

• FPGT Loader

  The software for easy upload of complete programs to touch panels or FP series PLCs

## Years of experience ensure competence and innovation

For us, consistent quality management for all phases of development from design to implementation and maintenance has the highest priority. This is why our processes are certified according to ISO 9001. It goes without saying that our programming system is fully compliant with the IEC 61131-3 standard.

Control FPWIN Pro 7, a structured, easy-to-use software with a simple software licensing system

| Product | Order number: |
|---|---|
| Control FPWIN Pro programming software, version 7, version for all FP series PLCs | FPWINPRO7S |
| Control FPWIN Pro upgrade to version 7 | FPWINPRO7S-UPGRADE |

| User libraries | Order number: |
|---|---|
| PTC library for process and temperature control, incl. English and German help | NCLPTCLIBDM |
| Modbus library for FPΣ-SDU, FP2/FP2SH, incl. English, German, and Italian help | NCL-MODBUS-LIBD |
| Modem communication library for dial-up and leased-line communication (analog, GSM), incl. English and German help | MODEM3-LIB |
| GSM/SMS library for communication via SMS, incl. English and German help | NCLCCMSLIB |
| GPRS library for GPRS communication, incl. English and German help | TB-GPRS |
| 3964R library for 3964R/RK512 procedure, incl. English and German help | TB-3964R |
| PLC-controlled solar tracking system (free of charge) | NCL-SUN-LIB |
| For more user libraries and ready-made functions please see our website www.panasonic-electric-works.com. | |

Programmers benefit from an extensive set of function blocks and user libraries, which have been developed on a European level over many years and which can be downloaded for free.

Visit us on www.panasonic-electric-works.com

Here, you find our comprehensive user libraries and a free demo version of Control FPWIN Pro 7 (10000 steps).

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