TOYOPUC Programming Software PCwin

This product is a programming tool developed for programmable controller TOYOPUC PC1, PC2, PC3, PC10, and corresponds to SFC (Sequential Function Chart), Ladder and FBD (Function Block Diagram) languages, which have superior characteristics in the efficiency improvement of design work, and the maintenance and integrity improvement. PCwin is the programming tool making the best use of the characteristics of these programming languages.

Purpose of Development

In recent years, as control has become more and more complicated, it has became more difficult to design control by only a conventional ladder language. Under such circumstances there exist the needs to place the equipment system in SFC, Ladder and FBD languages to effectively carry out the maintenance work of equipment by workers. In addition, for the unification of the design tool, the improvement of design efficiency and integrity, there exist the needs to design I/O diagram and the network diagram with the same tool.

To comply with these customers' needs, PC programming tool PCwin was developed (**Fig. 1**).

Fig. 1 PCwin

Features

1) TOYOPUC from conventional PC1 series to the latest PC10, and MX are supported (**Fig. 2**).
2) The functions of TOYOPUC-GL1, Hellowin and CAD conversion are unified into PCwin.
3) PCwin is a programming tool to enable the programming in SFC, Ladder and FBD languages.
4) SFC is a programming to simply display a continuous process of the manufacturing processes by using several kinds of graphic object.
5) As for FBD, the standardization of the control circuit is made possible by packaging and storing functions at the library.
6) "The motion progress of each process of equipment," which it has been hard to understand by LD (Ladder) programming so far, can be visualized in terms of flowchart type.
7) It is possible to use the programming by LD only. The authorized operator only is entitled to edit FB library by using an optional security tool.
8) Preparation of print list based on CAD drawing is made possible.
9) I/O and network diagram editing is made possible.

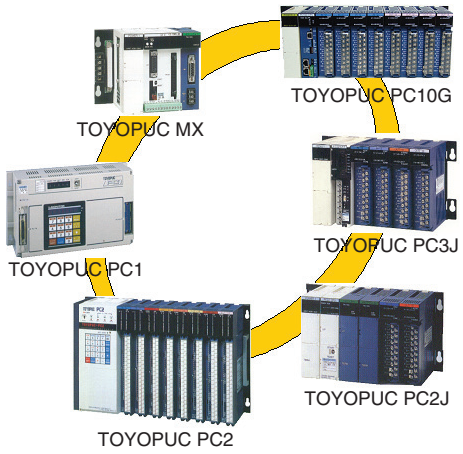

Fig. 2 Application controller of PCwin (TOYOPUC series)

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Main Function

1) SFC chart edition
   ① Simple operation by only arranging elements to SFC sheet
2) Ladder circuit edition
   ① Equipped with screen editor.
3) FB library edition
   ① It is possible to create sequence program in terms of FB.
4) I/O diagram and network diagram edition
   ① Equipped with functions for creating, editing and printing of I/O and network diagrams (**Fig. 3**).
   ② The parameter can be automatically computed from network system diagram (**Fig. 4**).
5) Multilingual changing function
   ① Indication, editing, changing and printing of three-comment languages are made possible. The writing and reading of these languages to TOYOPUC are made possible as well.
6) Monitoring function
   ① It is possible to monitor SFC and ladder circuit at the same time.
   ② The motion situation is visualized by step-and-transition color display (**Fig. 5**).
   ③ Circuit diagram monitor, CPU error monitor, FB internal monitor, FB pin monitor, register monitor and time chart monitor are installed.
7) Project management
   ① The structured program is intelligibly displayed.
   ② Comment is added to a program elements leading to improved maintenance.
8) Cooperation among SFC, Ladder and I/O diagram
   ① When monitoring as well as editing, the cooperation from SFC chart to Ladder circuit and I/O diagram is made possible (**Fig. 6**).
   ② Quick failure detection is made possible, and the cause of failures is easy to investigate.

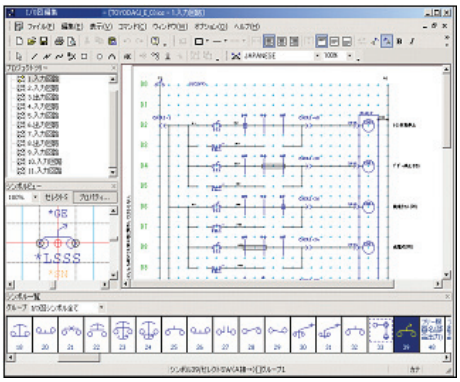

Fig. 3 I/O diagram editing function

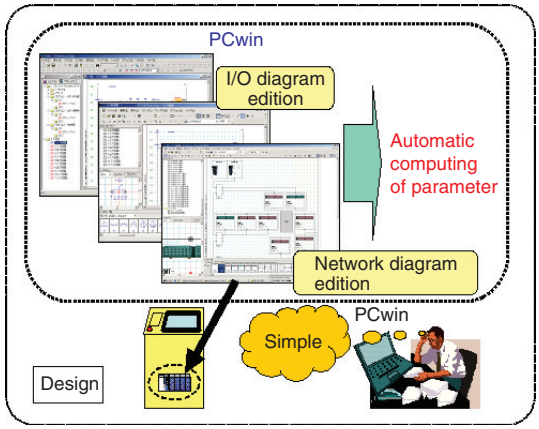

Fig. 4 Automatic computing of parameter

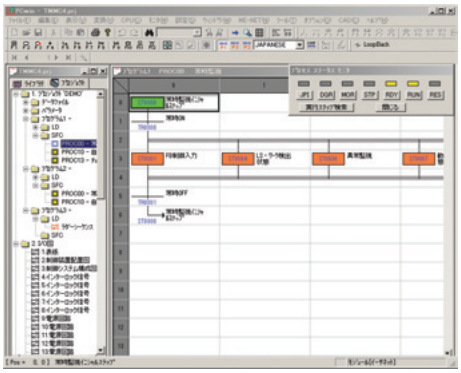

Fig. 5 Monitor screen display

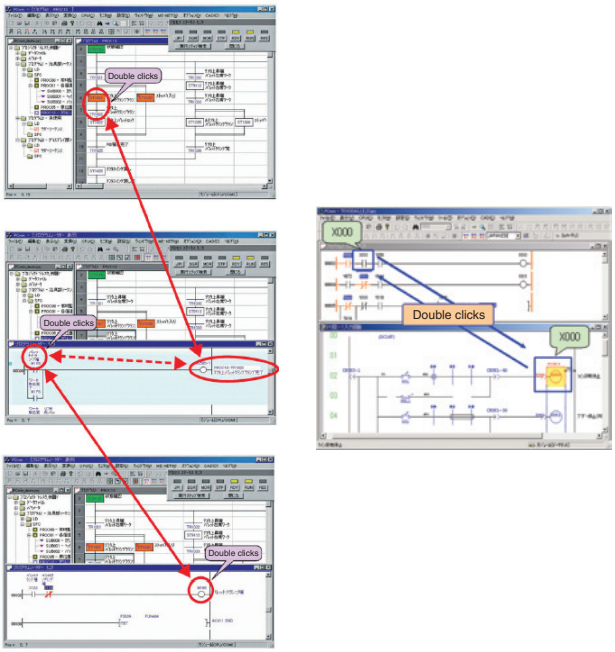

Fig. 6 Coil exploration jump

General Specifications

General specifications for this product are shown in **Table 1**.

Table 1 General specifications

Items	Specifications
Personal computer	Personal computer for Microsoft Windows 2000/XP works
CPU	Pentium Ⅲ (500 MHz) or more
Memory	512 MB or more
Disk	Space capacity of 200 MB or more is necessary.
Display	Color display of 1 024×768 dots or more (Screen property: 16 bits color or more)
Printer	Printer available for Microsoft Windows 2000/XP
OS	Microsoft Windows 2000/XP

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