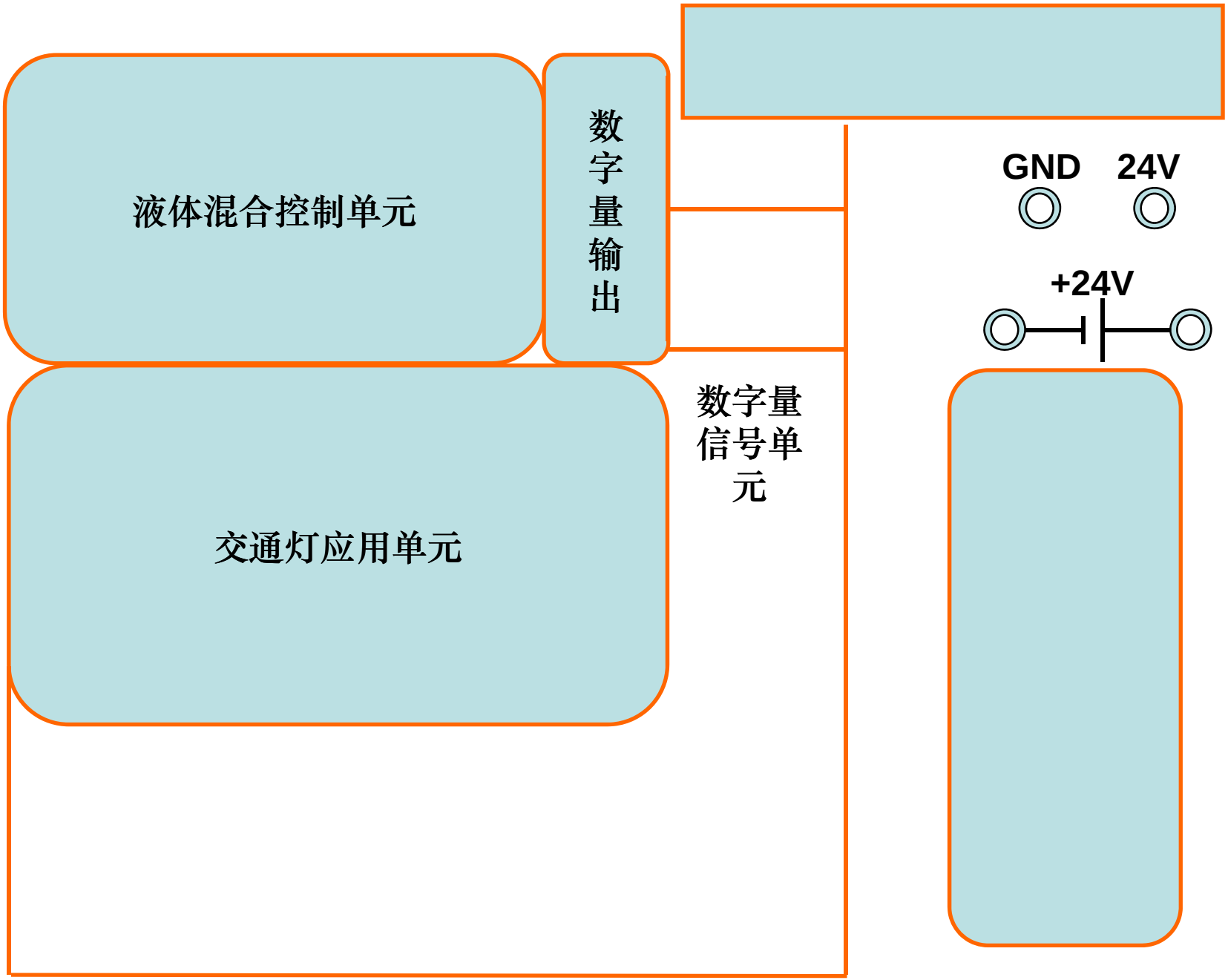
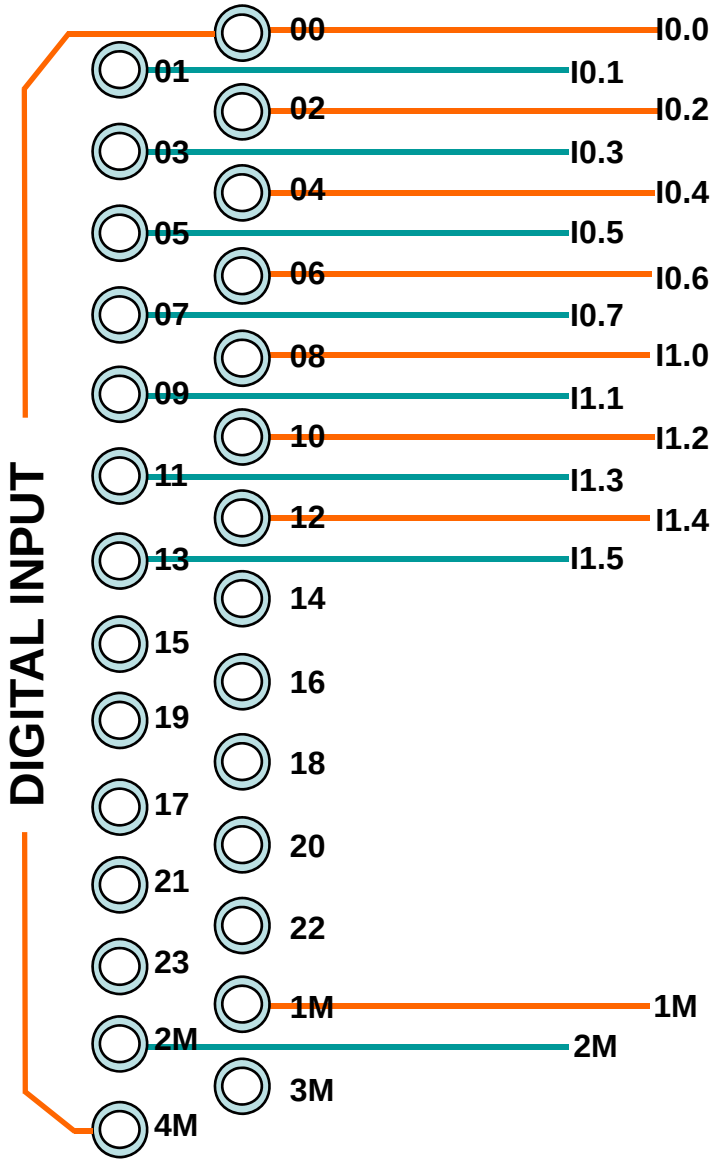
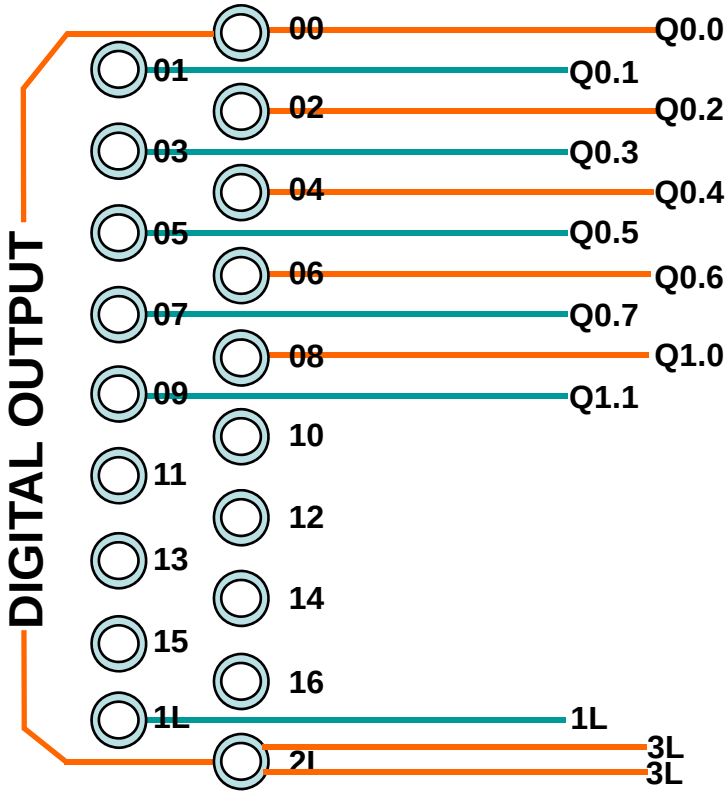
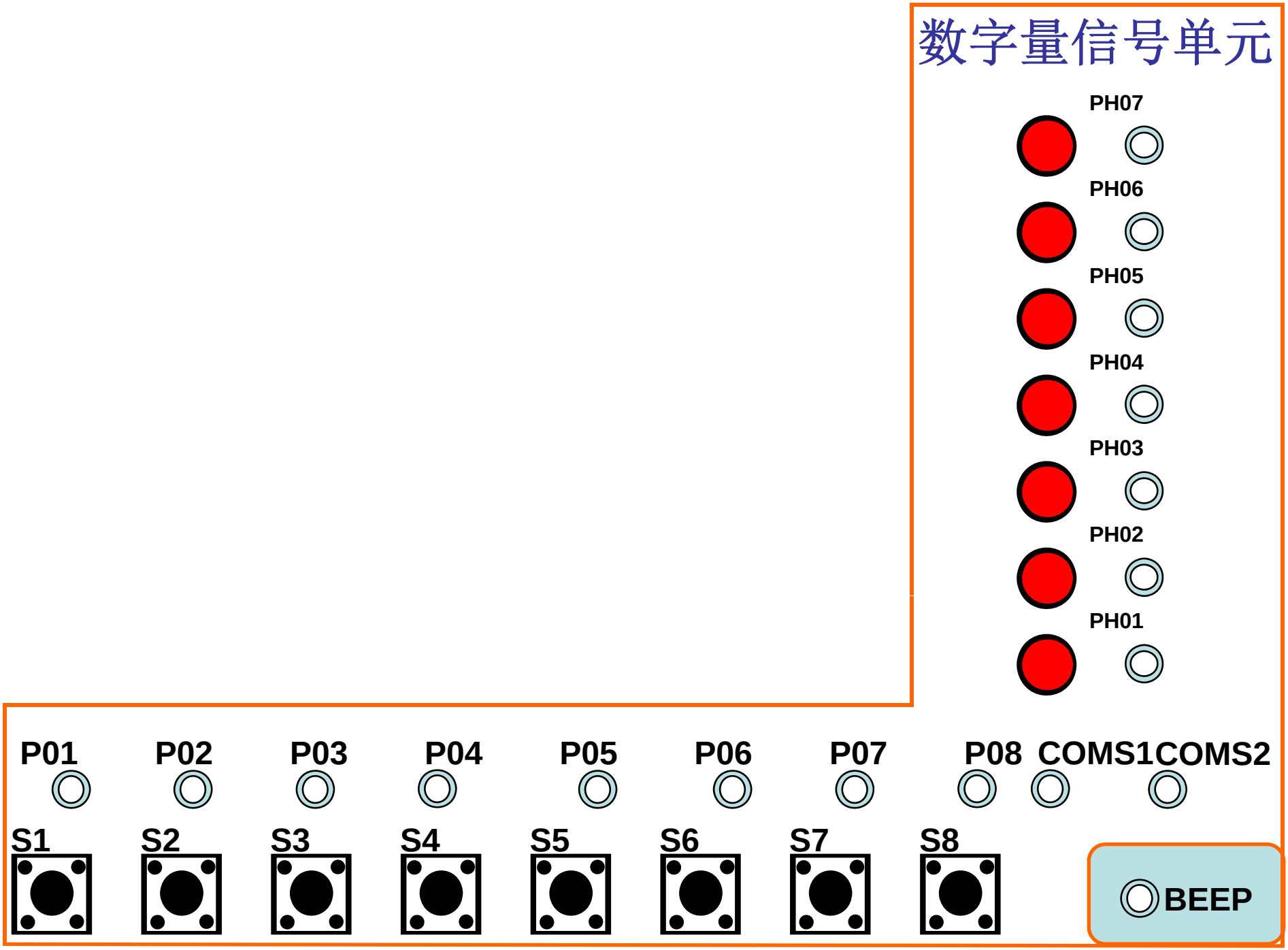
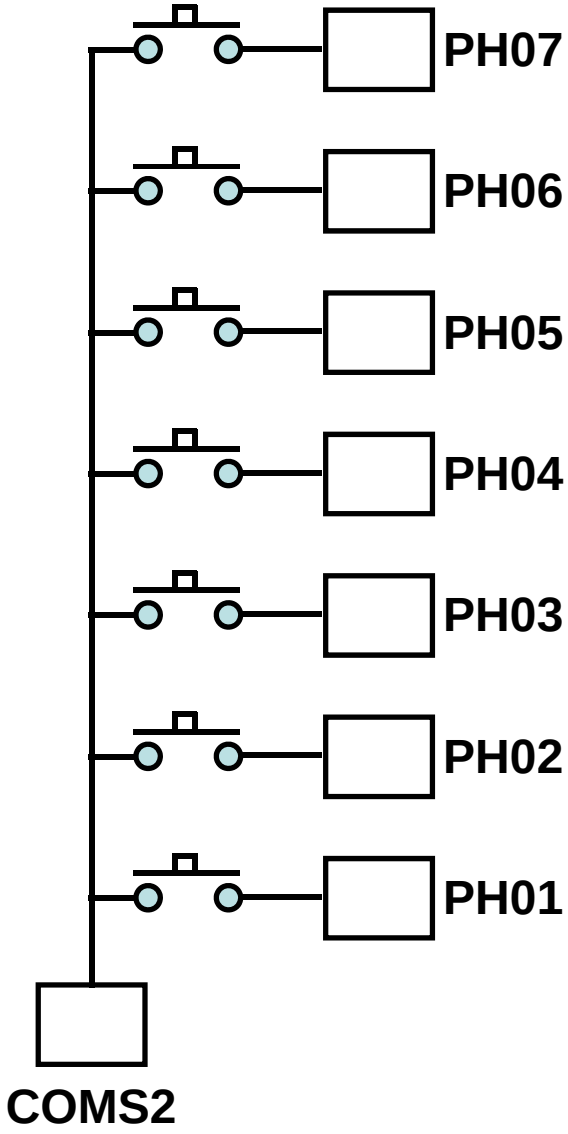
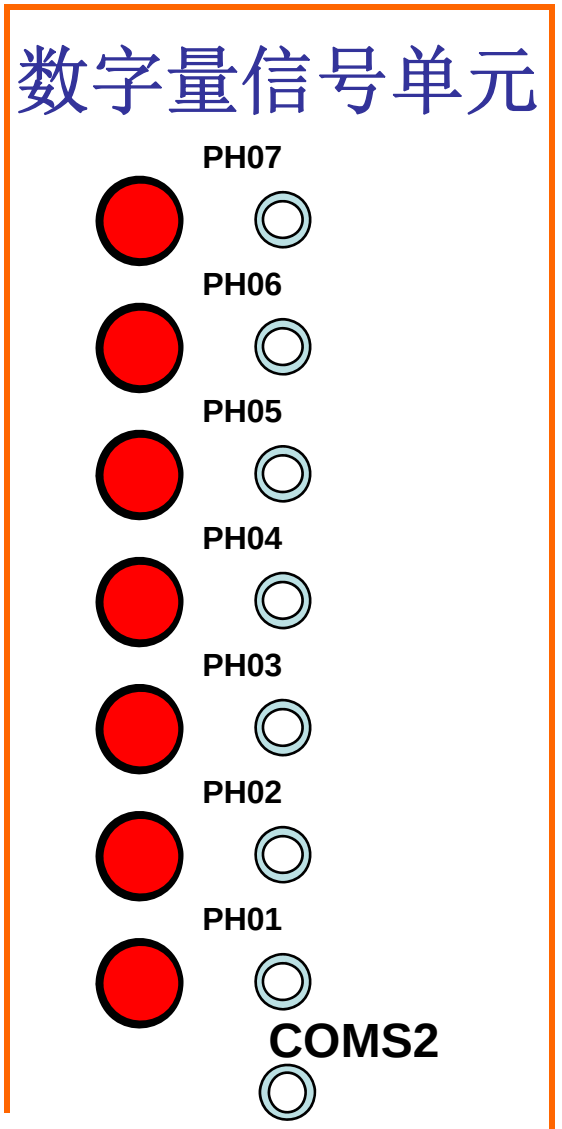

液体混合控制单元
数字量输出
数字量信号单元
交通灯应用单元
GND
24V
+24V

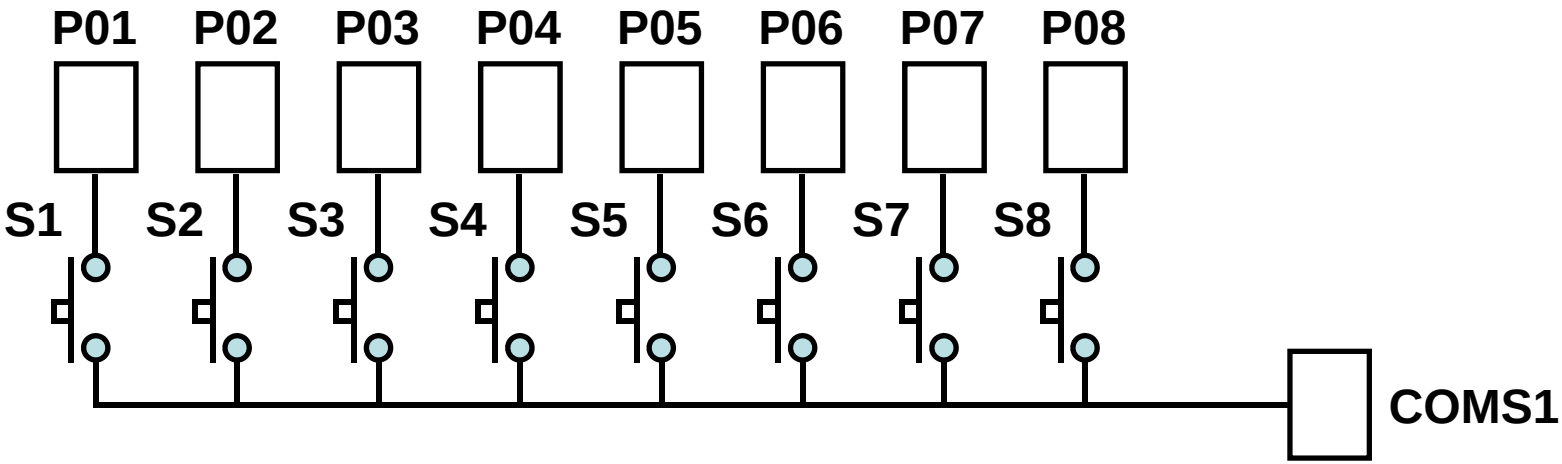

DIGITAL INPUT
00
01
02
03
04
05
06
07
08
09
10
11
12
13
14
15
16
19
18
17
20
21
22
23
1M
2M
3M
4M
I0.0
I0.1
I0.2
I0.3
I0.4
I0.5
I0.6
I0.7
I1.0
I1.1
I1.2
I1.3
I1.4
I1.5
1M
2M

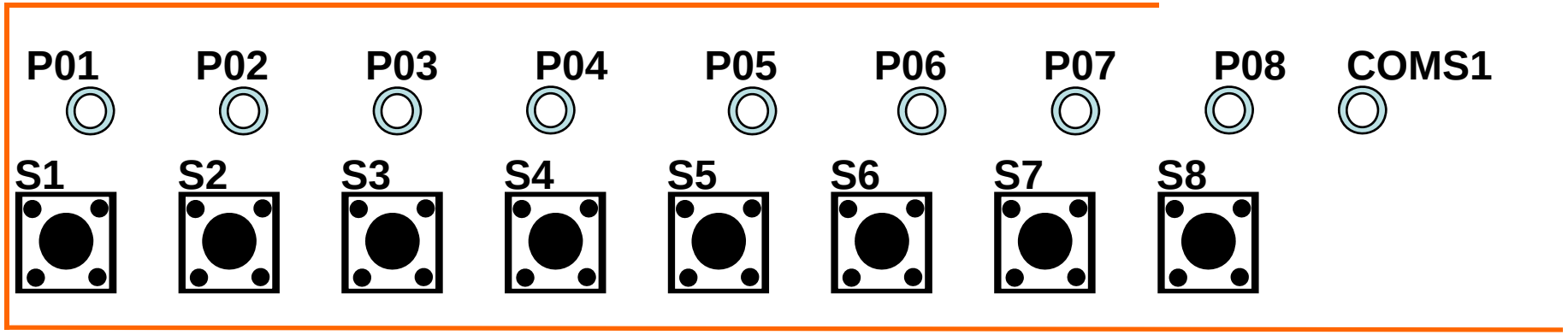

DIGITAL OUTPUT
00
Q0.0
01
Q0.1
02
Q0.2
03
Q0.3
04
Q0.4
05
Q0.5
06
Q0.6
07
Q0.7
08
Q1.0
09
Q1.1
10
11
12
13
14
15
16
1L
1L
2I
3L
3L

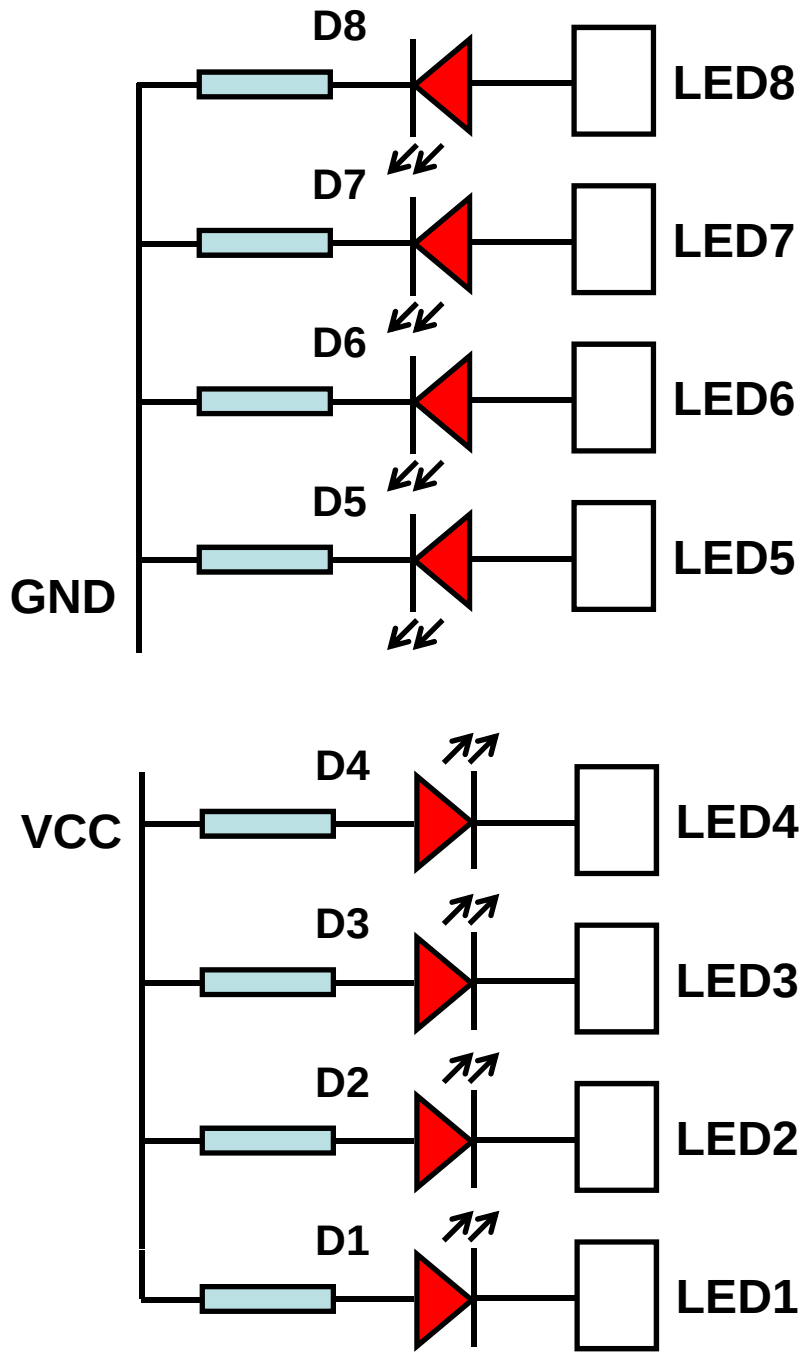

数字量信号单元
PH07
PH06
PH05
PH04
PH03
PH02
PH01
P01
P02
P03
P04
P05
P06
P07
P08
COMS1
COMS2
S1
S2
S3
S4
S5
S6
S7
S8
BEEP

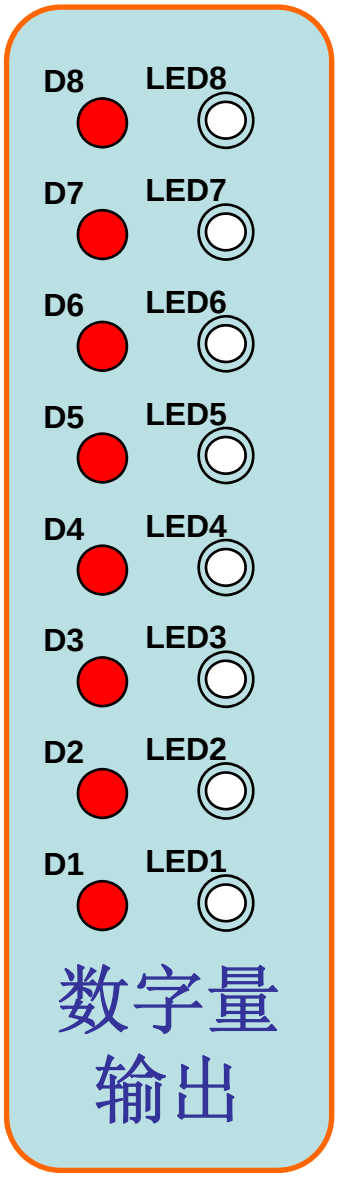

PH07
PH06
PH05
PH04
PH03
PH02
PH01
COMS2


数字量信号单元
PH07
PH06
PH05
PH04
PH03
PH02
PH01
COMS2

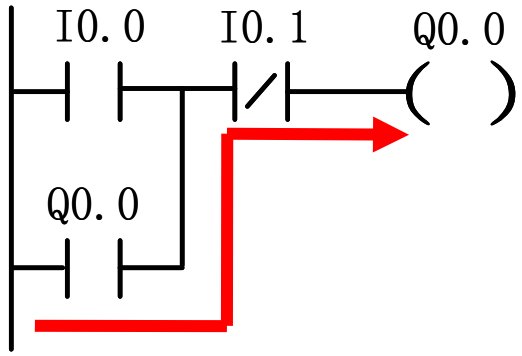

P01
P02
P03
P04
P05
P06
P07
P08
S1
S2
S3
S4
S5
S6
S7
S8
COMS1


P01
P02
P03
P04
P05
P06
P07
P08
COMS1
S1
S2
S3
S4
S5
S6
S7
S8

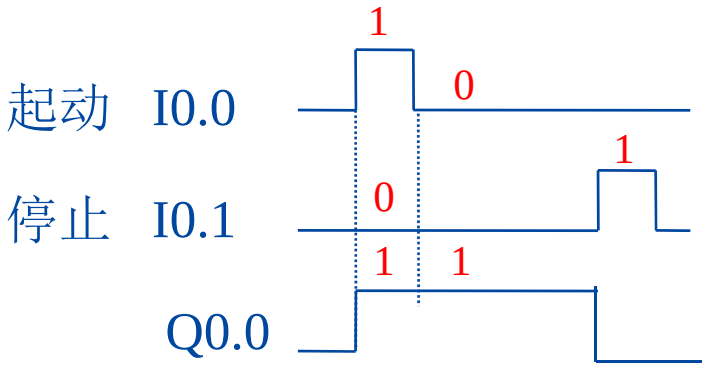

D8
LED8
D7
LED7
D6
LED6
D5
LED5
GND
D4
VCC
LED4
D3
LED3
D2
LED2
D1
LED1

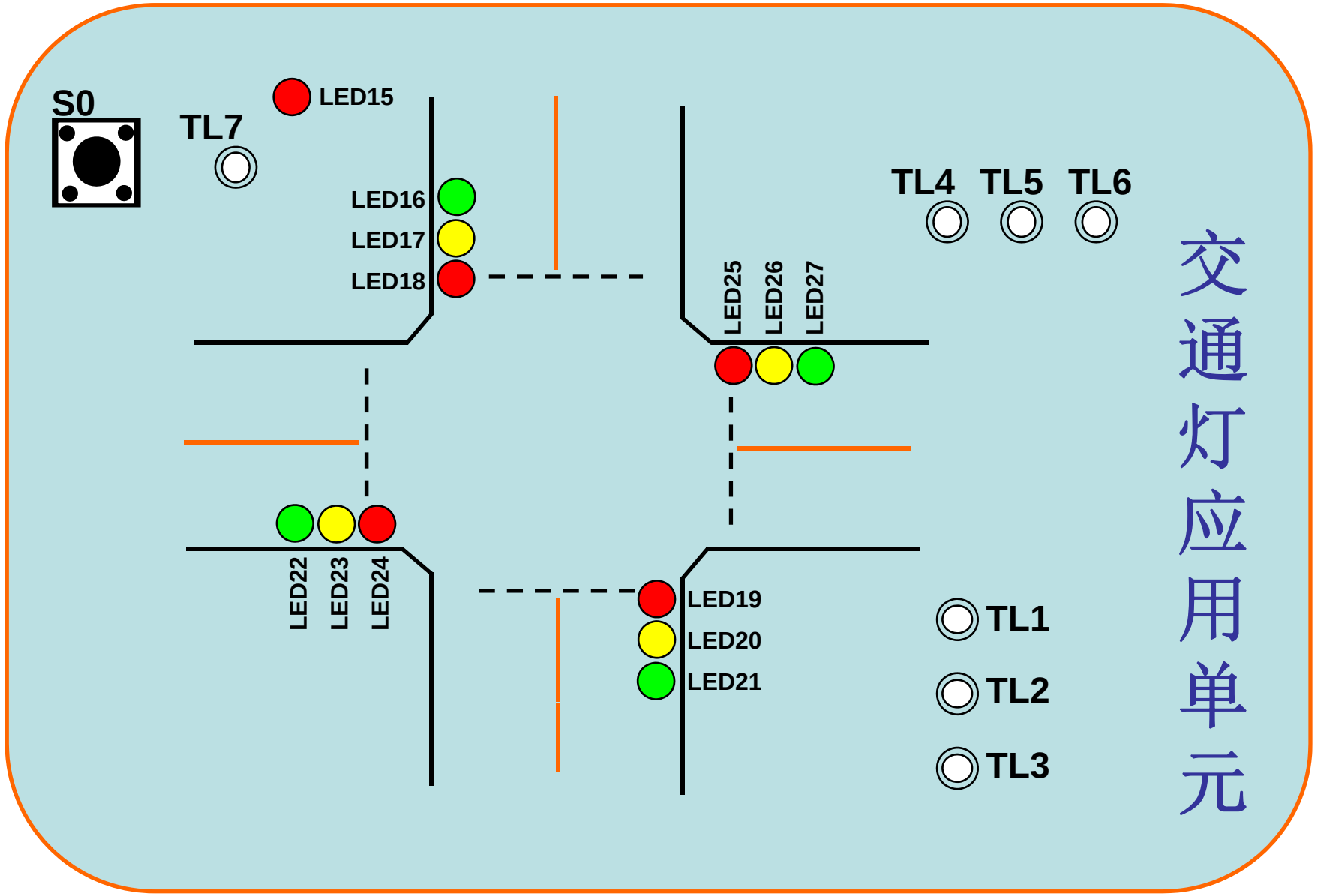

D8
LED8
D7
LED7
D6
LED6
D5
LED5
D4
LED4
D3
LED3
D2
LED2
D1
LED1
数字量
输出

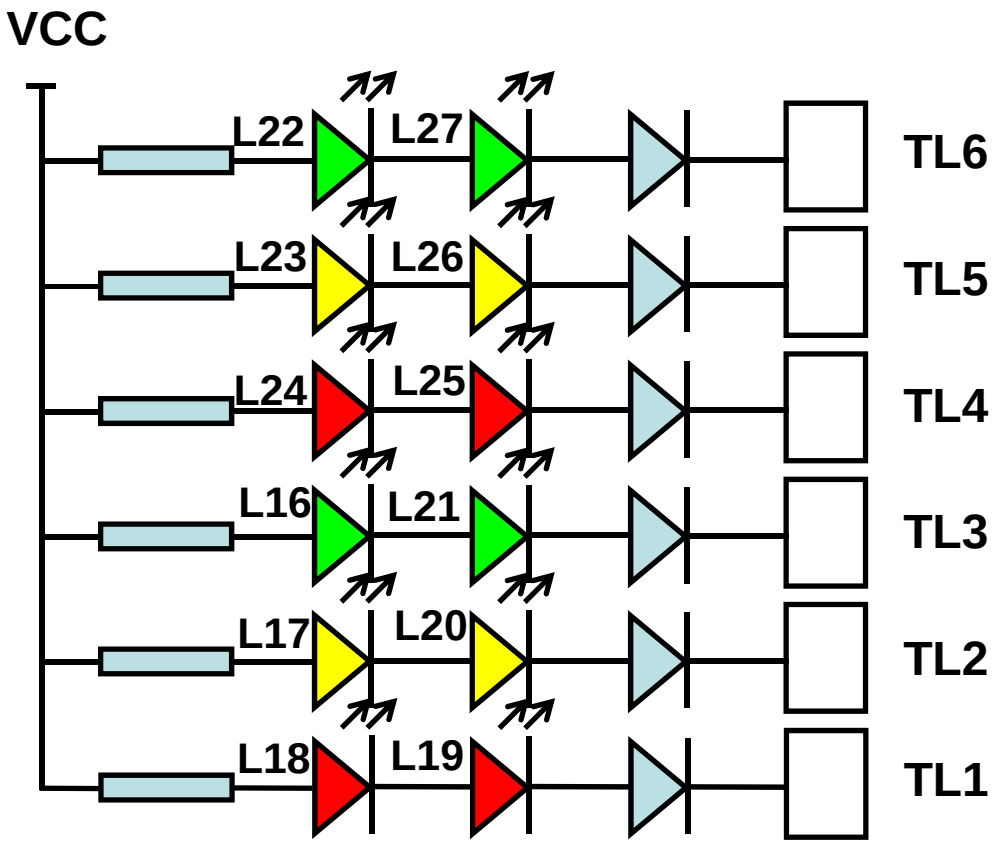
实验题：起动保持停止电路（起保停电路）

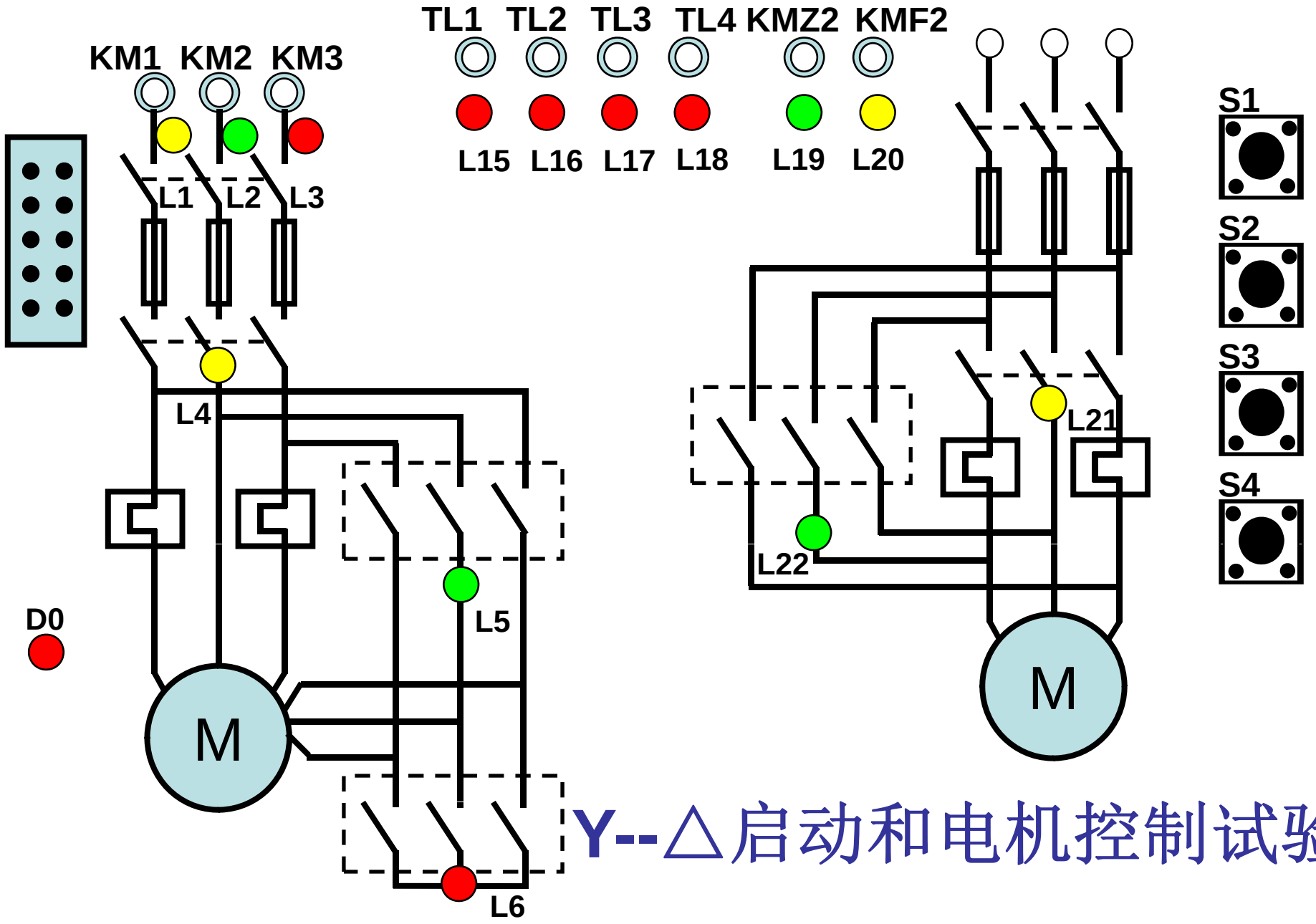



```
LD   I0.0
O    Q0.0
AN   I0.1
=    Q0.0
```

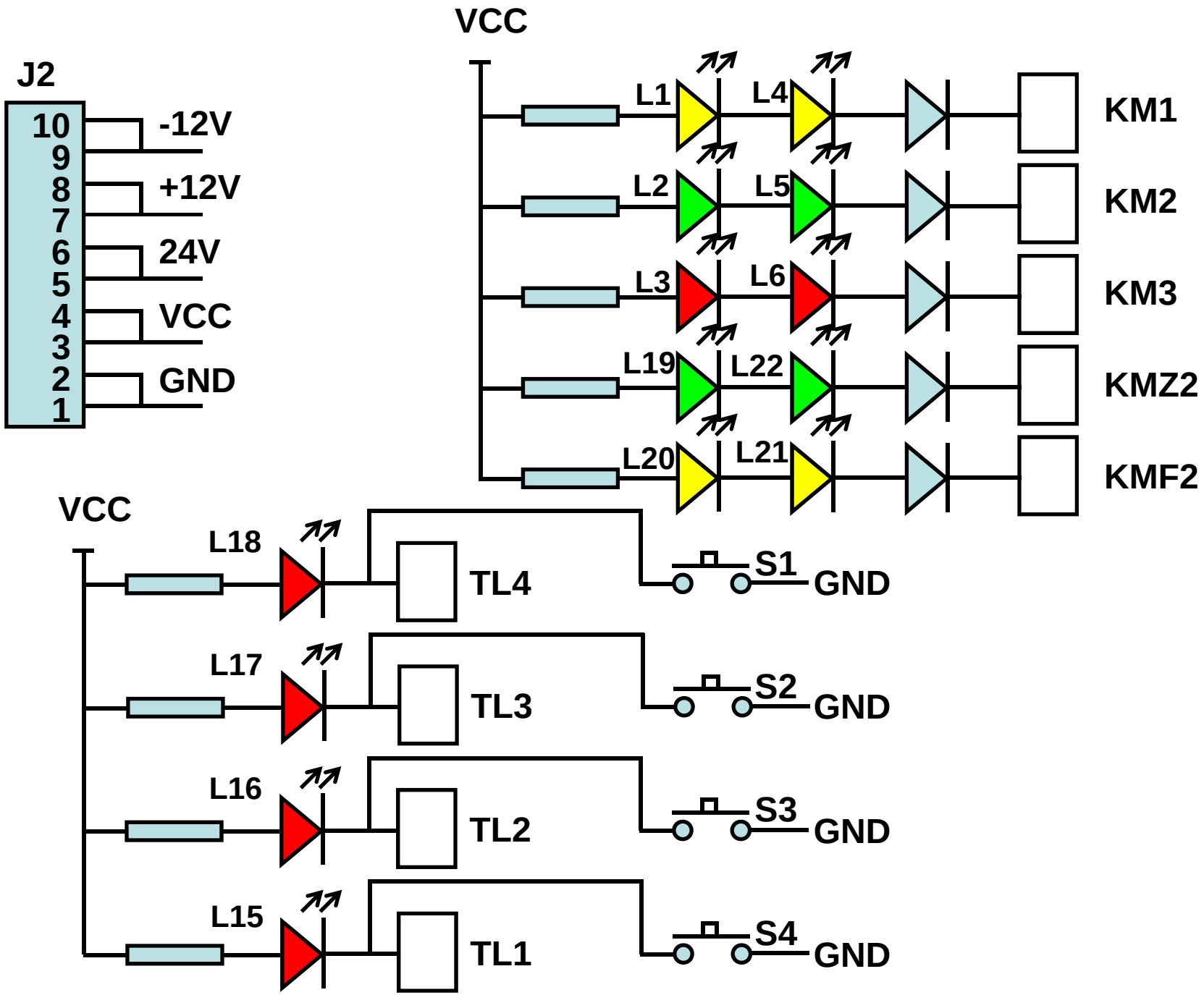



S0
TL7
LED15
LED16
LED17
LED18
TL4
TL5
TL6
LED25
LED26
LED27
LED22
LED23
LED24
LED19
LED20
LED21
TL1
TL2
TL3
交通灯应用单元


VCC
L22
L27
TL6
L23
L26
TL5
L24
L25
TL4
L16
L21
TL3
L17
L20
TL2
L18
L19
TL1

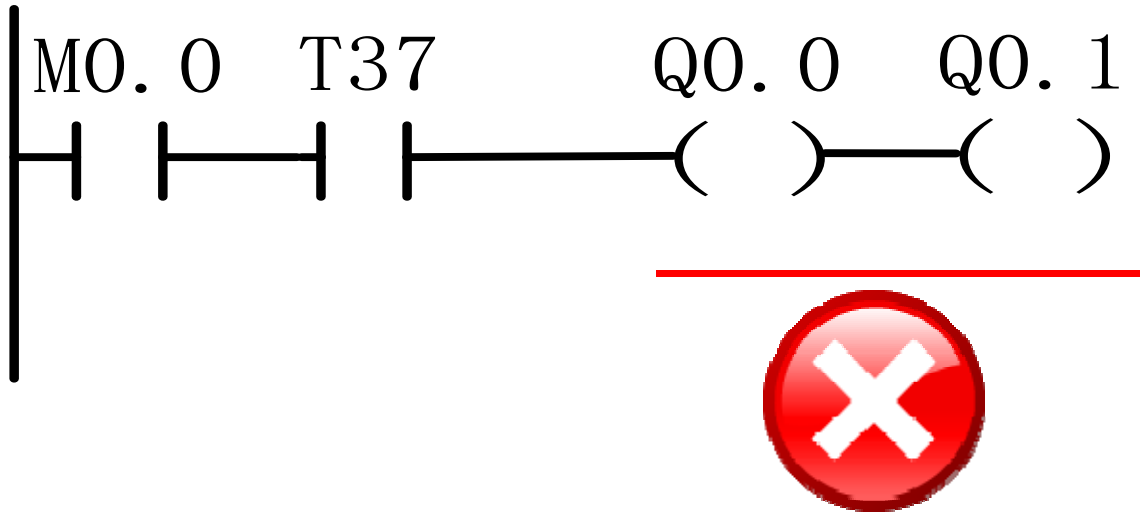

TL1 TL2 TL3 TL4 KMZ2 KMF2
KM1 KM2 KM3
L15 L16 L17 L18 L19 L20
L1 L2 L3
S1
S2
S3
S4
L4
L21
L22
L5
D0
M
M
L6

Y--△启动和电机控制试验


J2
10
9
8
7
6
5
4
3
2
1
-12V
+12V
24V
VCC
GND
VCC
L1
L4
L2
L5
L3
L6
L19
L22
L20
L21
KM1
KM2
KM3
KMZ2
KMF2
VCC
L18
L17
L16
L15
TL4
TL3
TL2
TL1
S1
S2
S3
S4
GND
GND
GND
GND

一、位操作指令介绍

注意输出线圈不能串联



S7-200 编程软件STEP7-Micro/WIN的使用

编程软件和运行环境

STEP7-Micro/WIN用于S7-200系列PLC的程序编辑

支持三种编程模式:
LAD(梯形图)
FBD(功能块图)
STL(语句表)

可编程控制器原理及应用

操作系统：

Windows 2000， SP3以上

Windows XP Home

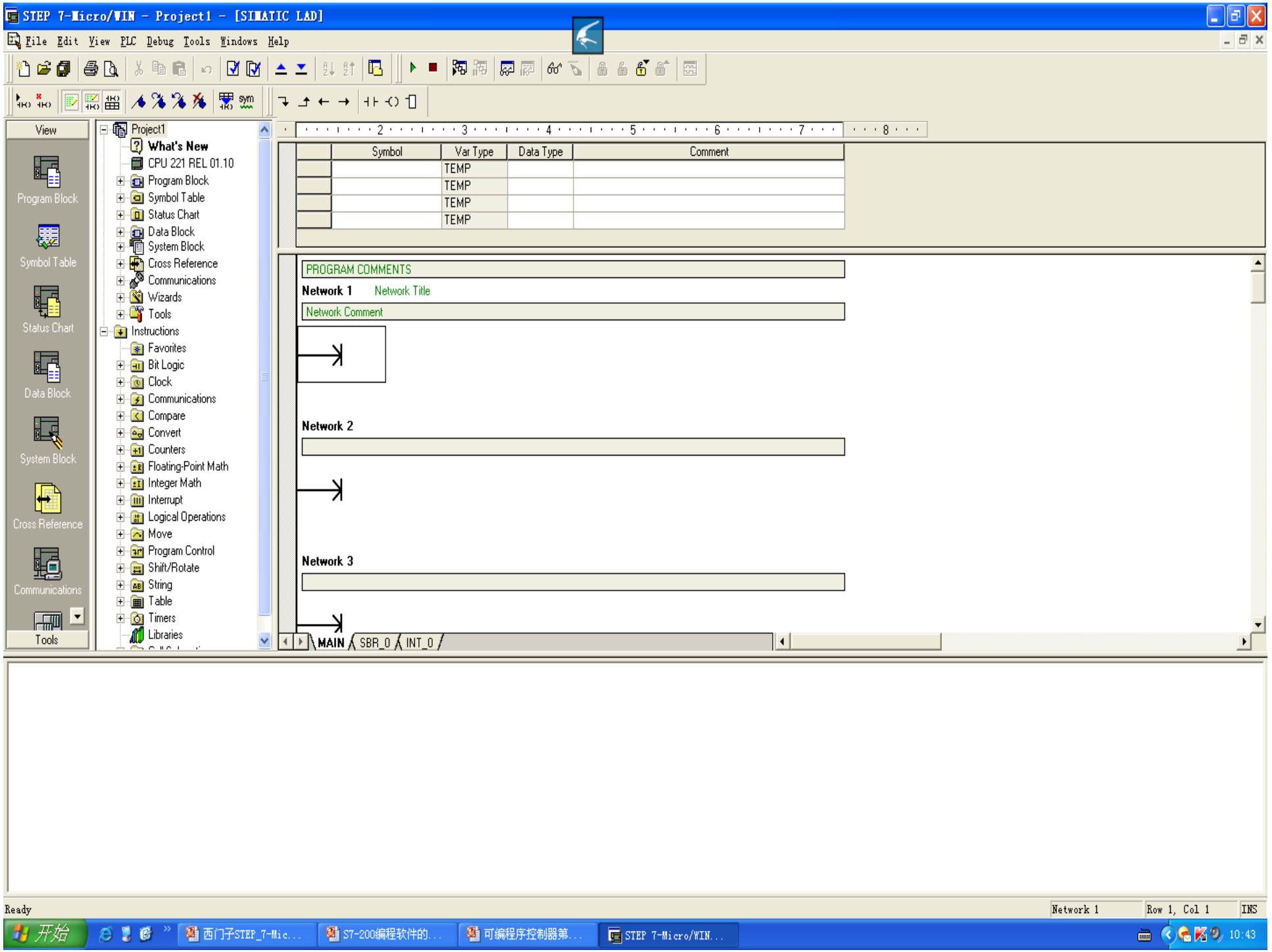
Windows XP Professional

硬件要求：

至少350M硬盘空间

屏幕显示分辨率1024 X 768，小字体

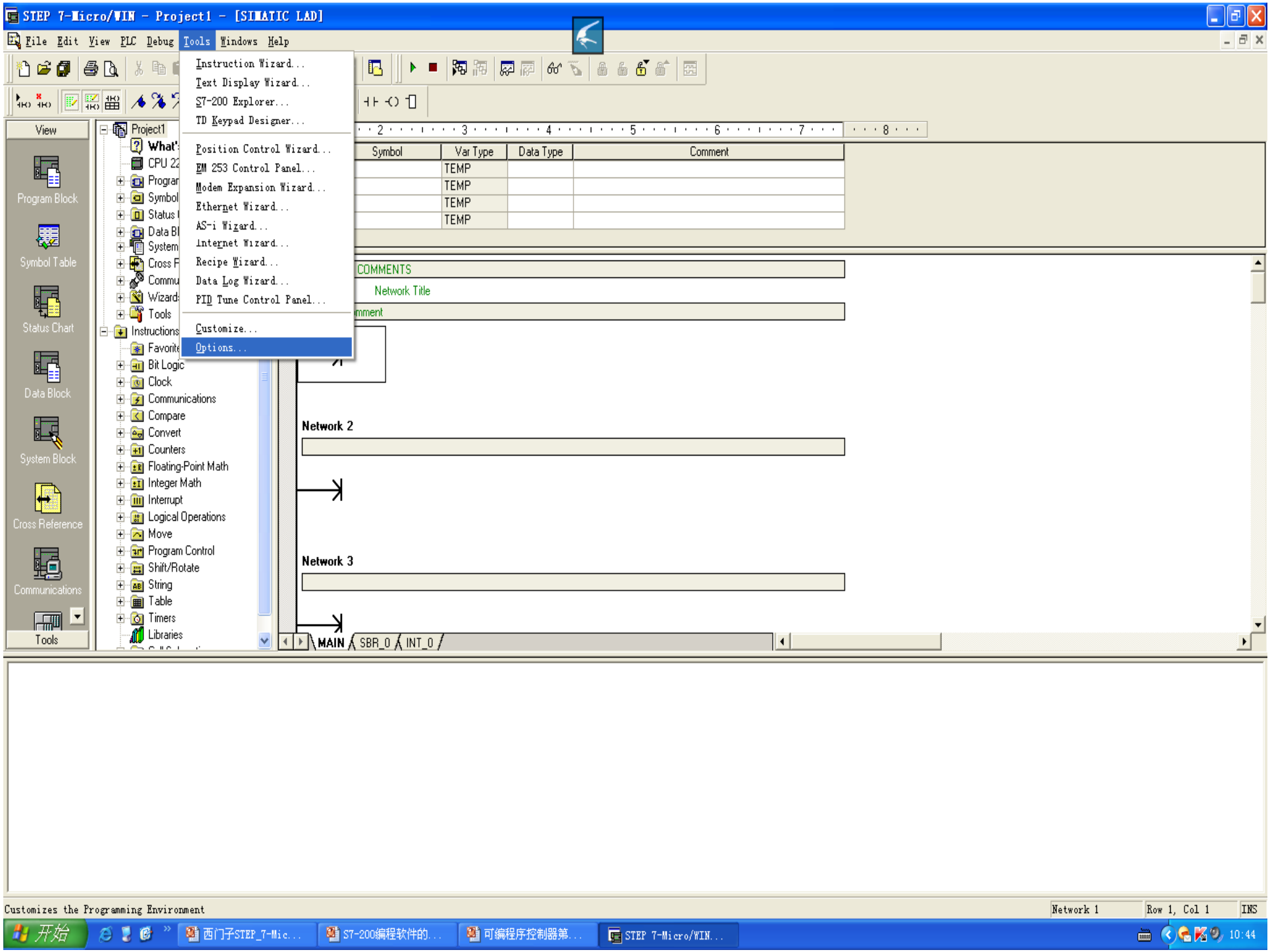
可编程控制器原理及应用

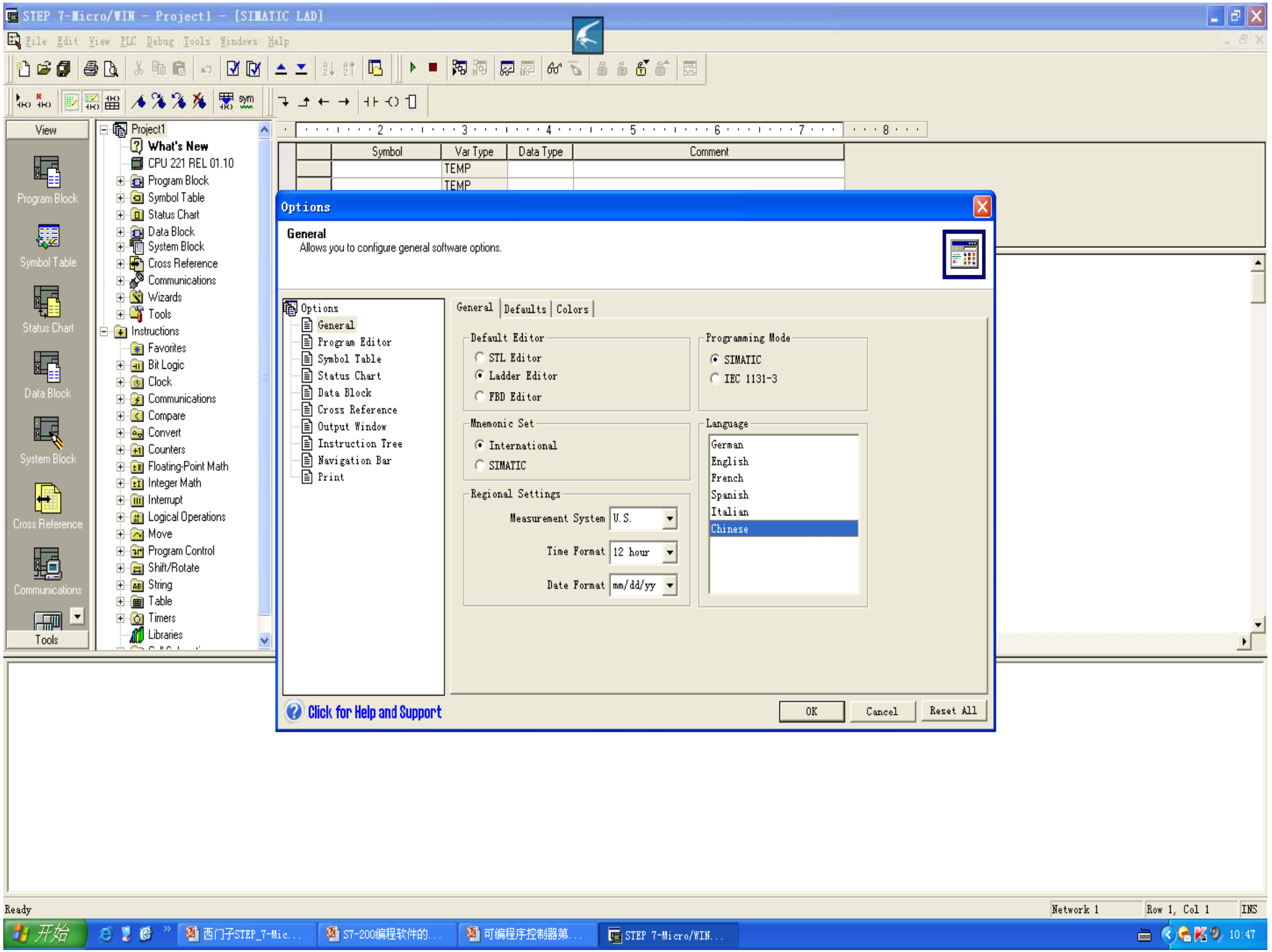

STEP 7-Micro/WIN - Project1 - [SIMATIC LAD]
File Edit View PLC Debug Tools Windows Help
View
Program Block
Symbol Table
Status Chart
Data Block
System Block
Cross Reference
Communications
Tools
Project1
What's New
CPU 221 REL 01.10
Program Block
Symbol Table
Status Chart
Data Block
System Block
Cross Reference
Communications
Wizards
Tools
Instructions
Favorites
Bit Logic
Clock
Communications
Compare
Convert
Counters
Floating-Point Math
Integer Math
Interrupt
Logical Operations
Move
Program Control
Shift/Rotate
String
Table
Timers
Libraries
Symbol
Var Type
Data Type
Comment
TEMP
TEMP
TEMP
TEMP
PROGRAM COMMENTS
Network 1
Network Title
Network Comment
Network 2
Network 3
MAIN
SBR_0
INT_0
Ready
Network 1
Row 1, Col 1
INS
开始
西门子STEP_7-Mic...
S7-200编程软件的...
可编程序控制器第...
STEP 7-Micro/WIN...
10:43

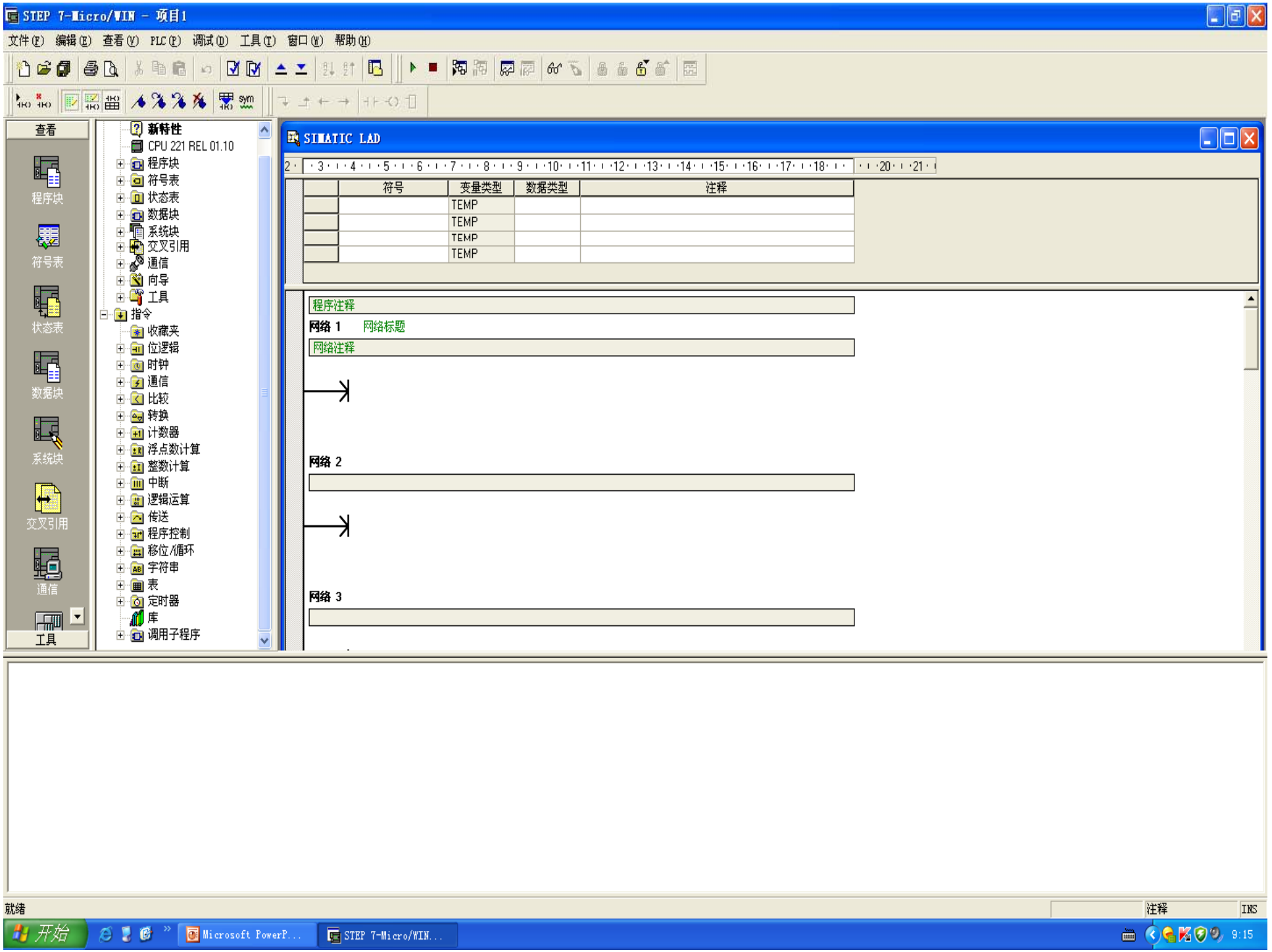
可编程控制器原理及应用

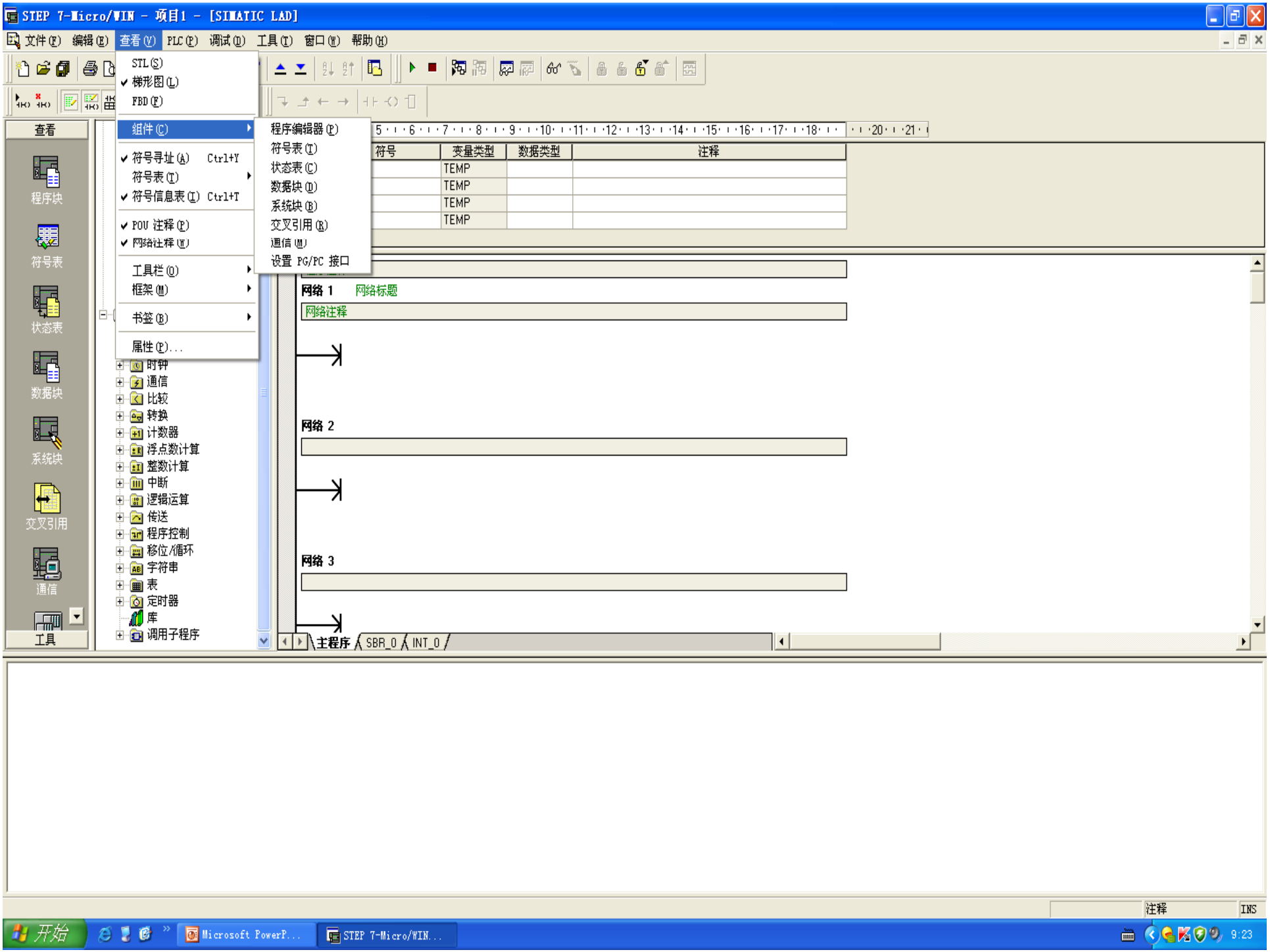
在开始安装Micro/WIN时选择的是安装程序的界面语言，选择“English”进行安装

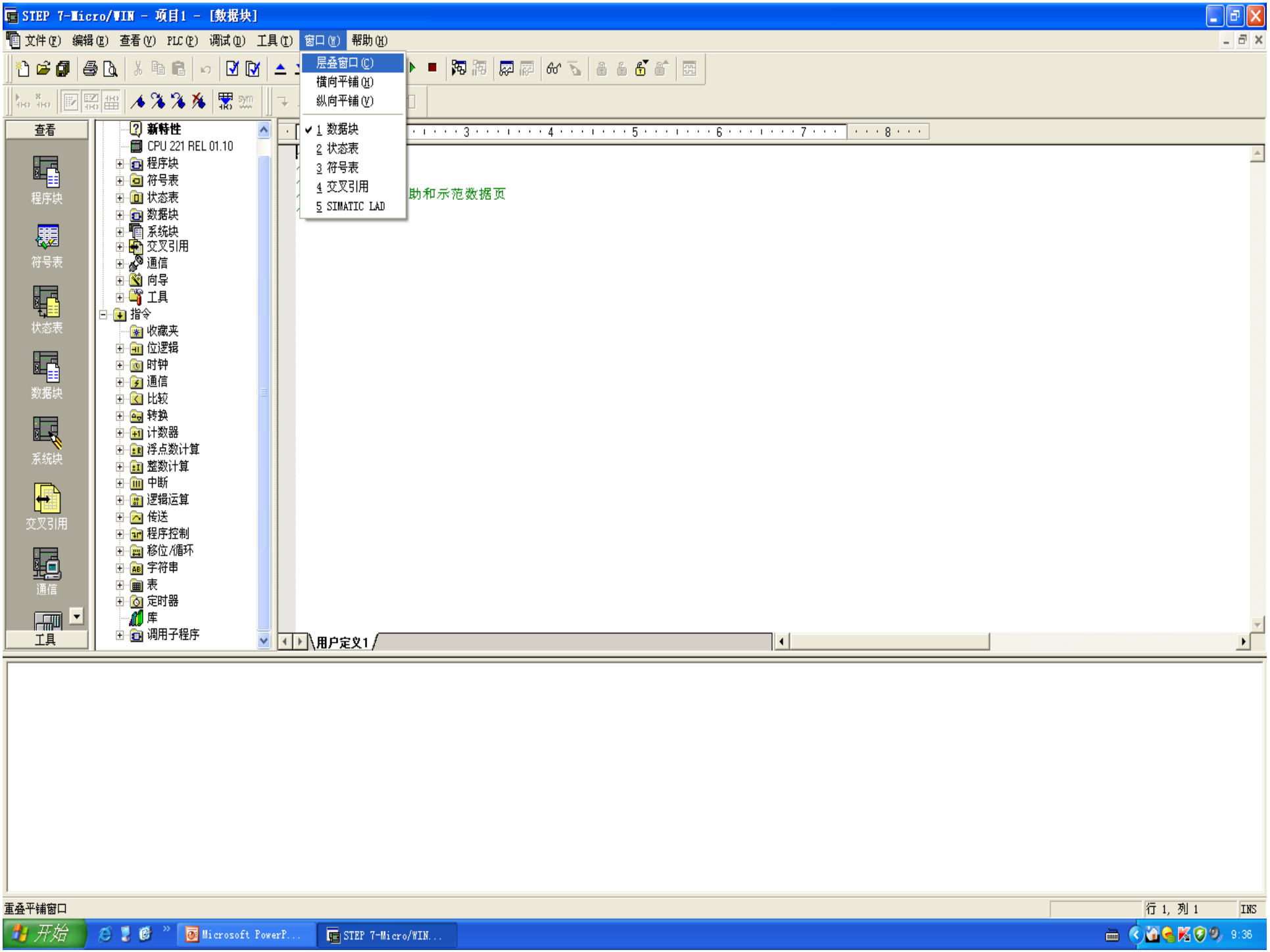
安装完成后，可以打开Tools(工具)菜单的Options(选项），在General(常规)分支中的语言选择栏中选择“chinese”，确定并关闭软件，然后重新打开后系统即变为中文界面

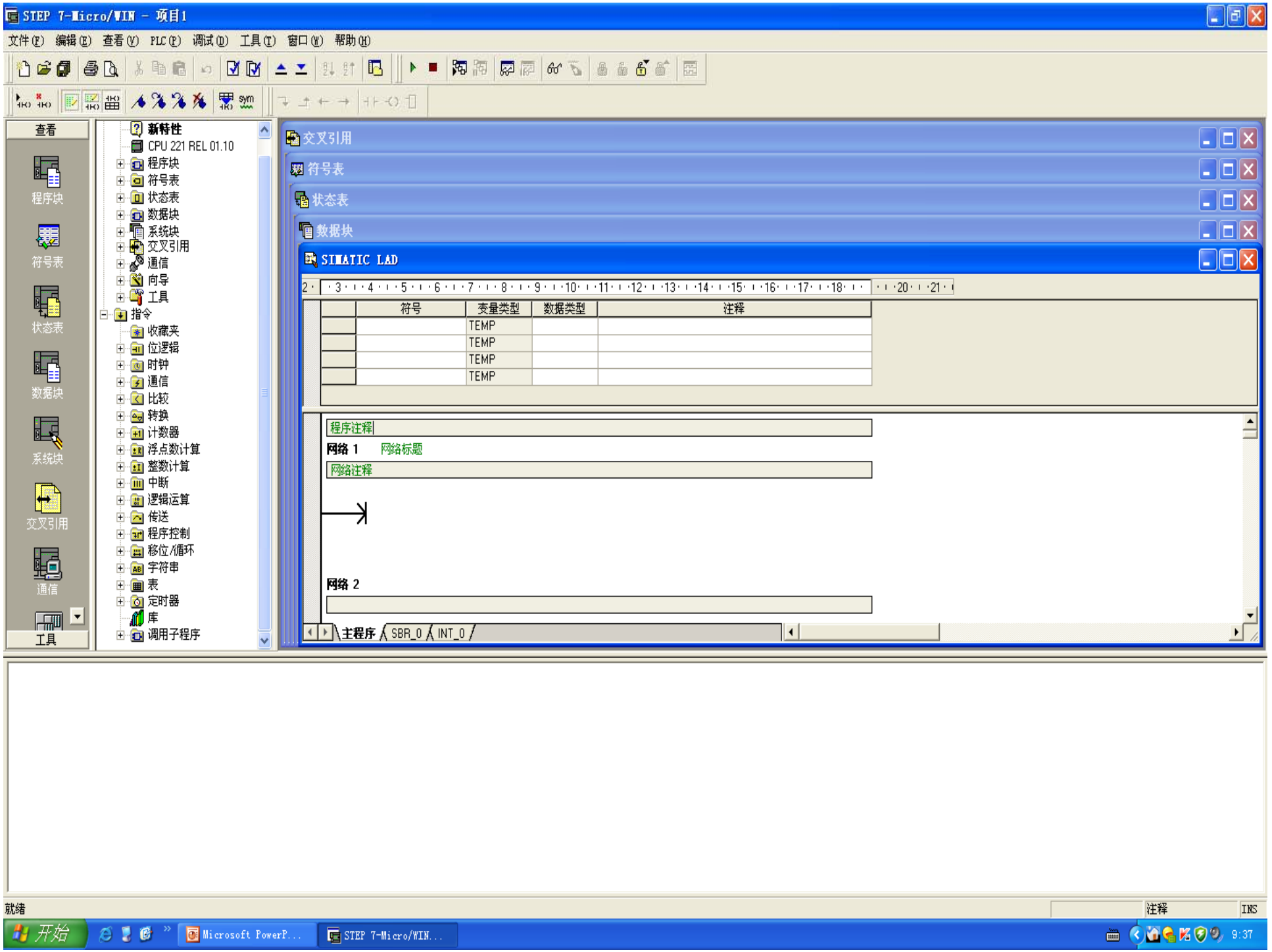

STEP 7-Micro/WIN - Project1 - [SIMATIC LAD]
File Edit View PLC Debug Tools Windows Help
Instruction Wizard...
Text Display Wizard...
S7-200 Explorer...
TD Keypad Designer...
Position Control Wizard...
EM 253 Control Panel...
Modem Expansion Wizard...
Ethernet Wizard...
AS-i Wizard...
Internet Wizard...
Recipe Wizard...
Data Log Wizard...
PID Tune Control Panel...
Customize...
Options...
View
Program Block
Symbol Table
Status Chart
Data Block
System Block
Cross Reference
Communications
Tools
Project1
Instructions
Bit Logic
Clock
Communications
Compare
Convert
Counters
Floating-Point Math
Integer Math
Interrupt
Logical Operations
Move
Program Control
Shift/Rotate
String
Table
Timers
Libraries
Symbol
Var Type
Data Type
Comment
TEMP
COMMENTS
Network Title
Network 2
Network 3
MAIN
SBR_0
INT_0
Customizes the Programming Environment
Network 1
Row 1, Col 1
INS
开始
西门子STEP_7-Mic...
S7-200编程软件的...
可编程序控制器第...
STEP 7-Micro/WIN...
10:44

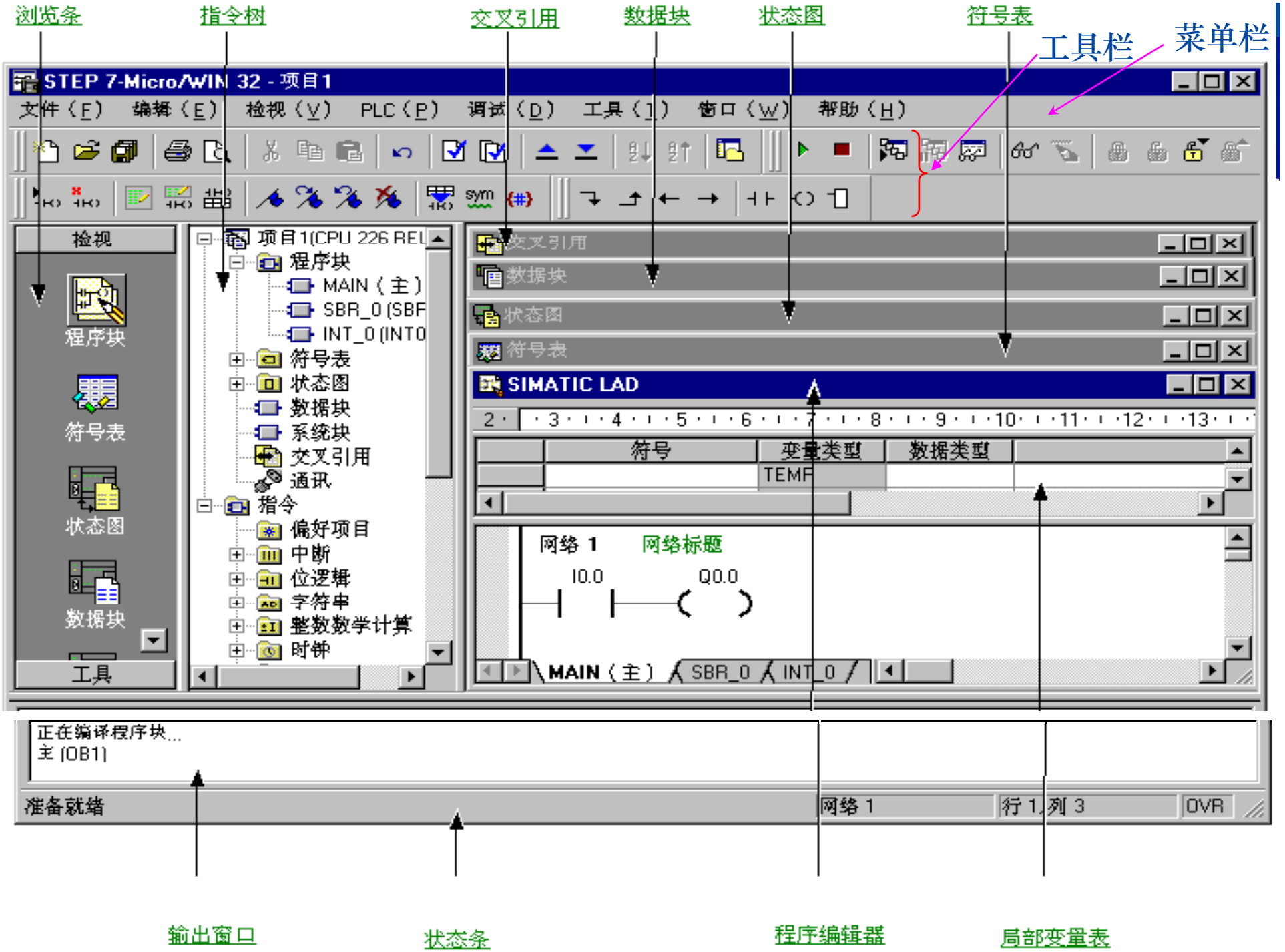

STEP 7-Micro/WIN - Project1 - [SIMATIC LAD]
File Edit View PLC Debug Tools Windows Help
View
Program Block
Symbol Table
Status Chart
Data Block
System Block
Cross Reference
Communications
Tools
Project1
What's New
CPU 221 REL 01.10
Program Block
Symbol Table
Status Chart
Data Block
System Block
Cross Reference
Communications
Wizards
Tools
Instructions
Favorites
Bit Logic
Clock
Communications
Compare
Convert
Counters
Floating-Point Math
Integer Math
Interrupt
Logical Operations
Move
Program Control
Shift/Rotate
String
Table
Timers
Libraries
Symbol
Var Type
Data Type
Comment
TEMP
TEMP
Options
General
Allows you to configure general software options.
Options
General
Program Editor
Symbol Table
Status Chart
Data Block
Cross Reference
Output Window
Instruction Tree
Navigation Bar
Print
General
Defaults
Colors
Default Editor
STL Editor
Ladder Editor
FBD Editor
Programming Mode
SIMATIC
IEC 1131-3
Mnemonic Set
International
SIMATIC
Language
German
English
French
Spanish
Italian
Chinese
Regional Settings
Measurement System
U.S.
Time Format
12 hour
Date Format
mm/dd/yy
Click for Help and Support
OK
Cancel
Reset All
Ready
Network 1
Row 1, Col 1
INS
开始
西门子STEP_7-Mic...
S7-200编程软件的...
可编程序控制器第...
STEP 7-Micro/WIN...
10:47

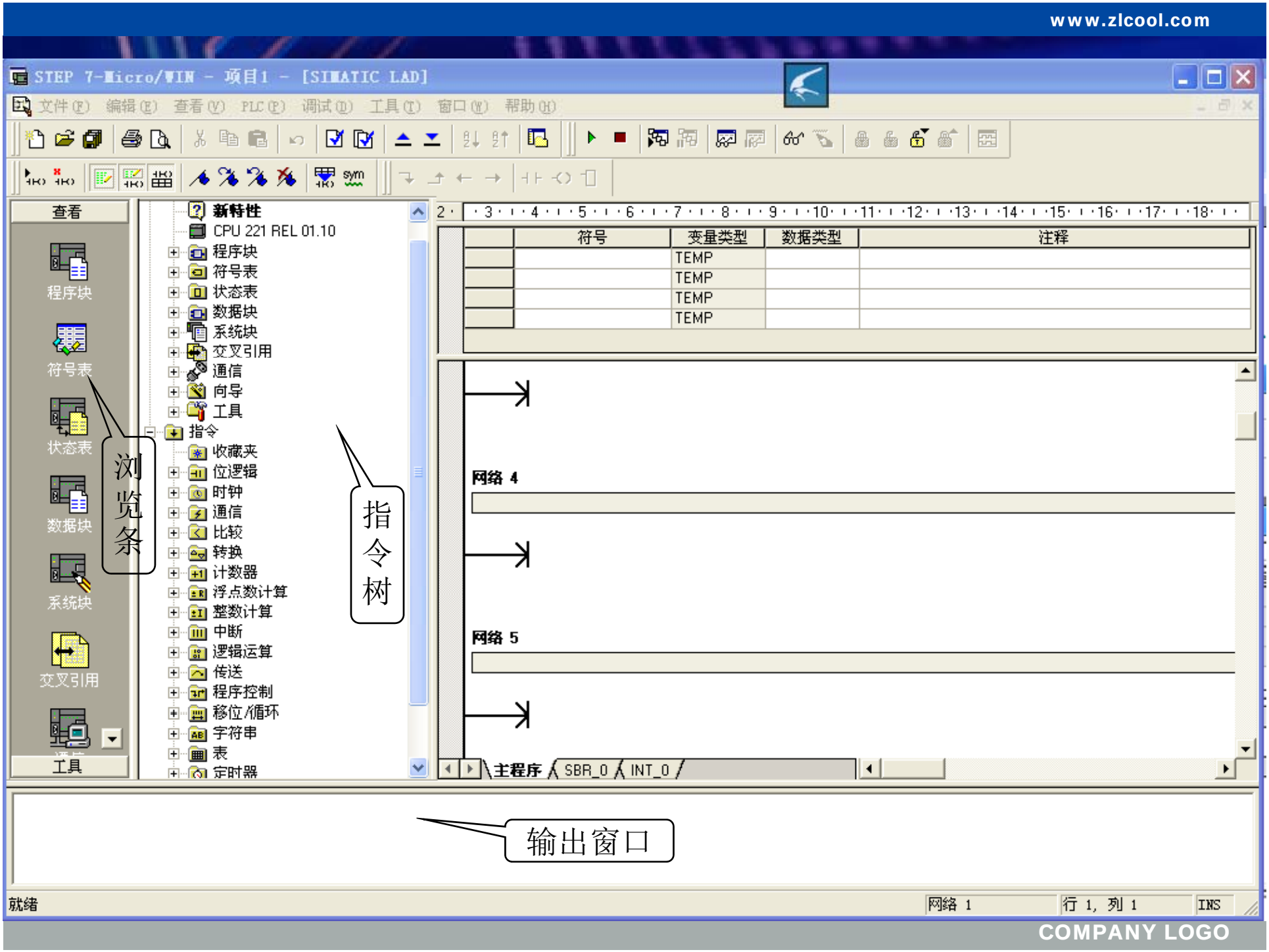

STEP 7-Micro/WIN - 项目1
文件(F) 编辑(E) 查看(V) PLC(P) 调试(D) 工具(T) 窗口(W) 帮助(H)
查看
程序块
符号表
状态表
数据块
系统块
交叉引用
通信
工具
新特性
CPU 221 REL 01.10
程序块
符号表
状态表
数据块
系统块
交叉引用
通信
向导
工具
指令
收藏夹
位逻辑
时钟
通信
比较
转换
计数器
浮点数计算
整数计算
中断
逻辑运算
传送
程序控制
移位/循环
字符串
表
定时器
库
调用子程序
SIMATIC LAD
符号
变量类型
数据类型
注释
TEMP
TEMP
TEMP
TEMP
程序注释
网络 1
网络标题
网络注释
网络 2
网络 3
就绪
注释
INS
开始
Microsoft PowerP...
STEP 7-Micro/WIN...
9:15


STEP 7-Micro/WIN - 项目1 - [SIMATIC LAD]
文件(F) 编辑(E) 查看(V) PLC(P) 调试(D) 工具(T) 窗口(W) 帮助(H)
STL(S)
梯形图(L)
FBD(F)
组件(C)
符号寻址(A) Ctrl+Y
符号表(T)
符号信息表(I) Ctrl+T
POU 注释(P)
网络注释(N)
工具栏(O)
框架(M)
书签(B)
属性(P)...
程序编辑器(P)
符号表(T)
状态表(C)
数据块(D)
系统块(B)
交叉引用(R)
通信(M)
设置 PG/PC 接口
查看
程序块
符号表
状态表
数据块
系统块
交叉引用
通信
工具
符号 变量类型 数据类型 注释
TEMP
TEMP
TEMP
TEMP
网络 1 网络标题
网络注释
网络 2
网络 3
时钟
通信
比较
转换
计数器
浮点数计算
整数计算
中断
逻辑运算
传送
程序控制
移位/循环
字符串
表
定时器
库
调用子程序
主程序 SBR_0 INT_0
注释
INS
开始
Microsoft PowerP...
STEP 7-Micro/WIN...
9:23


STEP 7-Micro/WIN - 项目1 - [数据块]
文件(F) 编辑(E) 查看(V) PLC(P) 调试(D) 工具(T) 窗口(W) 帮助(H)
层叠窗口(C)
横向平铺(H)
纵向平铺(V)
1 数据块
2 状态表
3 符号表
4 交叉引用
5 SIMATIC LAD
查看
程序块
符号表
状态表
数据块
系统块
交叉引用
通信
工具
新特性
CPU 221 REL 01.10
程序块
符号表
状态表
数据块
系统块
交叉引用
通信
向导
工具
指令
收藏夹
位逻辑
时钟
通信
比较
转换
计数器
浮点数计算
整数计算
中断
逻辑运算
传送
程序控制
移位/循环
字符串
表
定时器
库
调用子程序
助和示范数据页
用户定义1
重叠平铺窗口
行 1, 列 1
INS
开始
Microsoft PowerP...
STEP 7-Micro/WIN...
9:36


STEP 7-Micro/WIN - 项目1
文件(F) 编辑(E) 查看(V) PLC(P) 调试(D) 工具(T) 窗口(W) 帮助(H)
查看
程序块
符号表
状态表
数据块
系统块
交叉引用
通信
工具
新特性
CPU 221 REL 01.10
程序块
符号表
状态表
数据块
系统块
交叉引用
通信
向导
工具
指令
收藏夹
位逻辑
时钟
通信
比较
转换
计数器
浮点数计算
整数计算
中断
逻辑运算
传送
程序控制
移位/循环
字符串
表
定时器
库
调用子程序
交叉引用
符号表
状态表
数据块
SIMATIC LAD
符号
变量类型
数据类型
注释
TEMP
TEMP
TEMP
TEMP
程序注释
网络 1
网络标题
网络注释
网络 2
主程序
SBR_0
INT_0
就绪
注释
INS
开始
Microsoft PowerP...
STEP 7-Micro/WIN...
9:37


浏览条
指令树
交叉引用
数据块
状态图
符号表
工具栏
菜单栏
STEP 7-Micro/WIN 32 - 项目1
文件（F） 编辑（E） 检视（V） PLC（P） 调试（D） 工具（T） 窗口（W） 帮助（H）
检视
程序块
符号表
状态图
数据块
工具
项目1(CPU 226 REL
程序块
MAIN（主）
SBR_0 (SBF
INT_0 (INTO
符号表
状态图
数据块
系统块
交叉引用
通讯
指令
偏好项目
中断
位逻辑
字符串
整数数学计算
时钟
交叉引用
数据块
状态图
符号表
SIMATIC LAD
符号
变量类型
数据类型
TEMP
网络 1 网络标题
I0.0
Q0.0
MAIN（主） SBR_0 INT_0
正在编译程序块...
主 (OB1)
准备就绪
网络 1
行 1, 列 3
OVR
输出窗口
状态条
程序编辑器
局部变量表


STEP 7-Micro/WIN - 项目1 - [SIMATIC LAD]
文件(F) 编辑(E) 查看(V) PLC(P) 调试(D) 工具(T) 窗口(W) 帮助(H)
查看
程序块
符号表
状态表
数据块
系统块
交叉引用
工具
浏览条
新特性
CPU 221 REL 01.10
程序块
符号表
状态表
数据块
系统块
交叉引用
通信
向导
工具
指令
收藏夹
位逻辑
时钟
通信
比较
转换
计数器
浮点数计算
整数计算
中断
逻辑运算
传送
程序控制
移位/循环
字符串
表
定时器
指令树
符号
变量类型
数据类型
注释
TEMP
TEMP
TEMP
TEMP
网络 4
网络 5
主程序
SBR_0
INT_0
输出窗口
就绪
网络 1
行 1, 列 1
INS

可编程控制器原理及应用

1.工具栏

它提供了常用菜单命令的快捷按钮

从查看→工具栏可以显示和隐藏任意工具栏

2.浏览条

浏览条包含查看和工具窗口，通过单击可实现二者之间的切换

查看窗口为进入程序块窗口、符号表窗口等提供了快捷方式

工具窗口为进入编程向导界面提供了快捷方式，各种编程向导提高了编程软件的易用性

3. 指令树

显示所有项目对象和创建程序所需的指令

可以将指令从指令树拖到应用程序中

也可以用双击指令的方法将该指令插入到程序编辑器当前光标所在地

4.编辑器

编辑器包括程序编辑器和局部变量表

在程序辑器的底部有主程序、子程序和中断服务程标签，单击可相互切换

5. 局部变量表

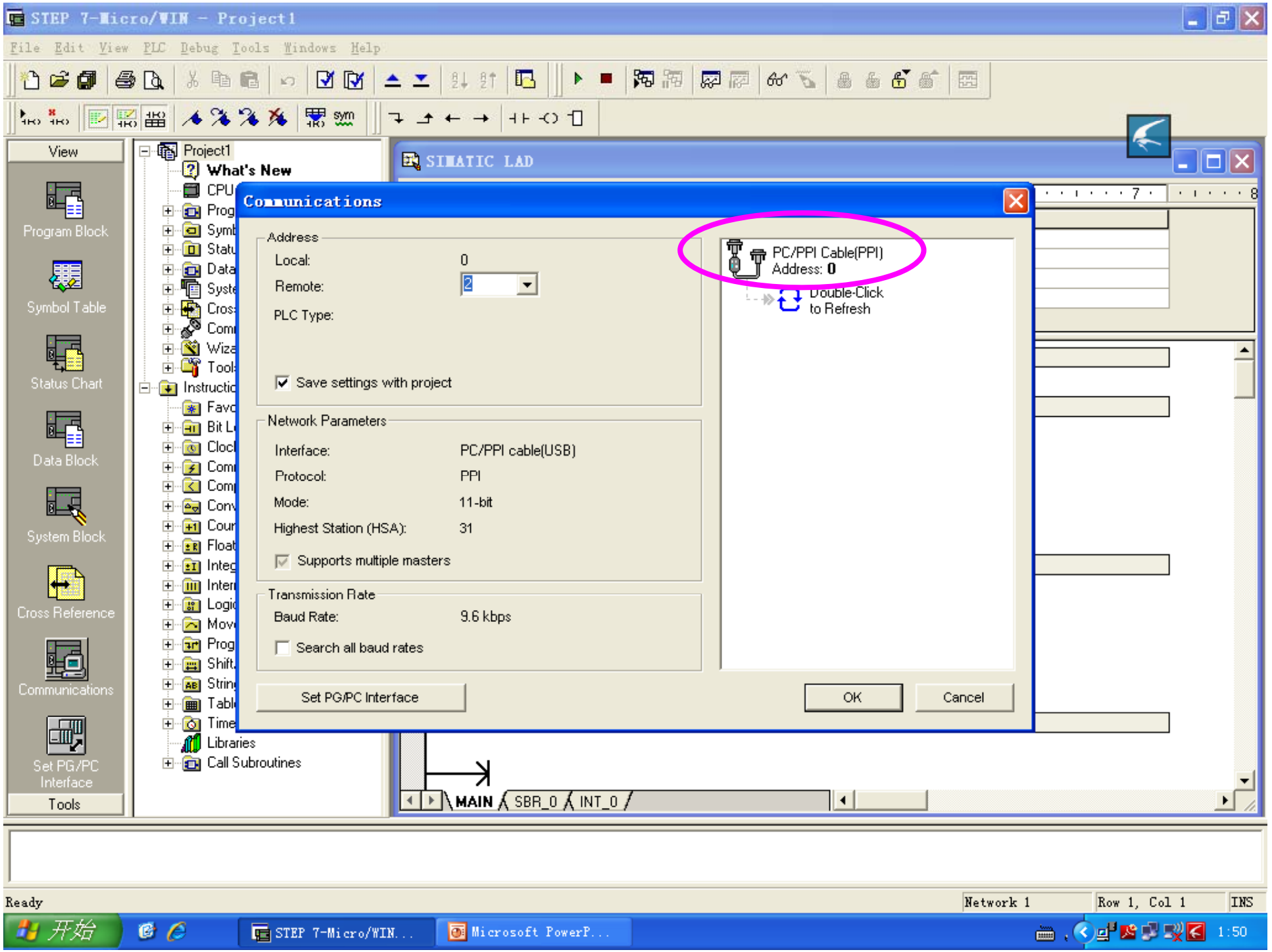
包含对局部变量所作的定义赋值（子程序和中断服务程序使用的变量）

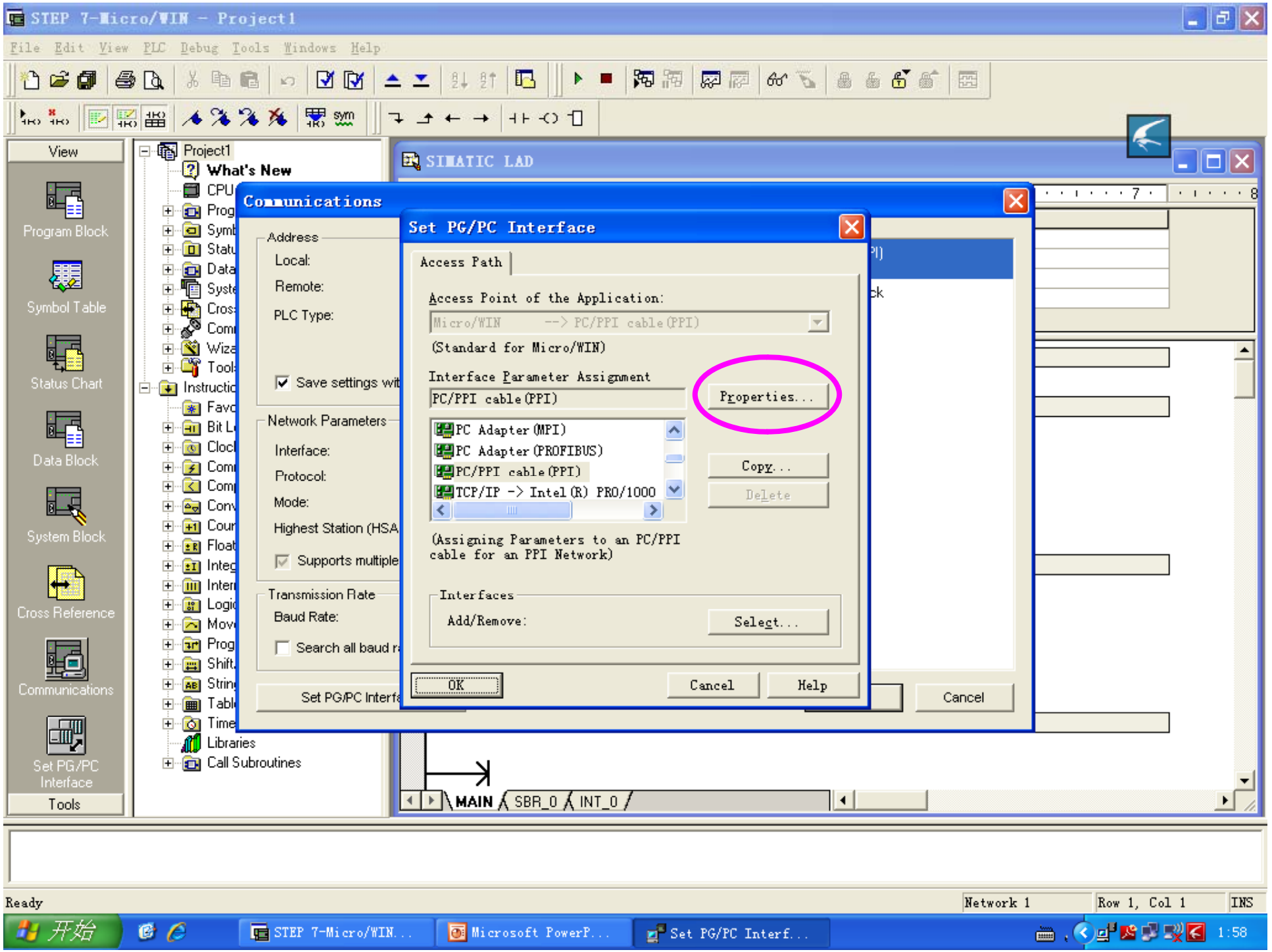
6. 输出窗口

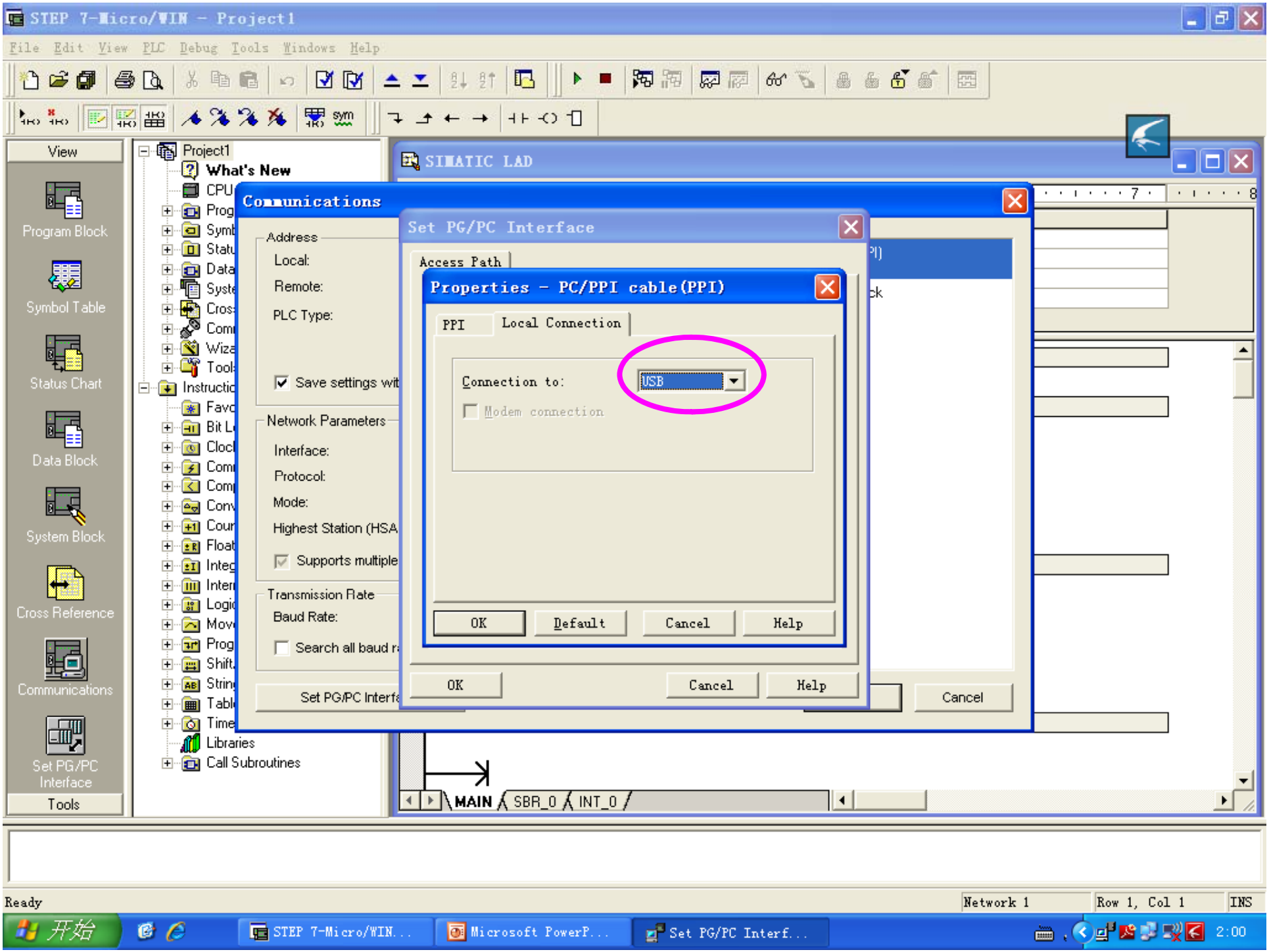
显示最近编译结果信息(所编程序的大小、占用数据块的大小等)

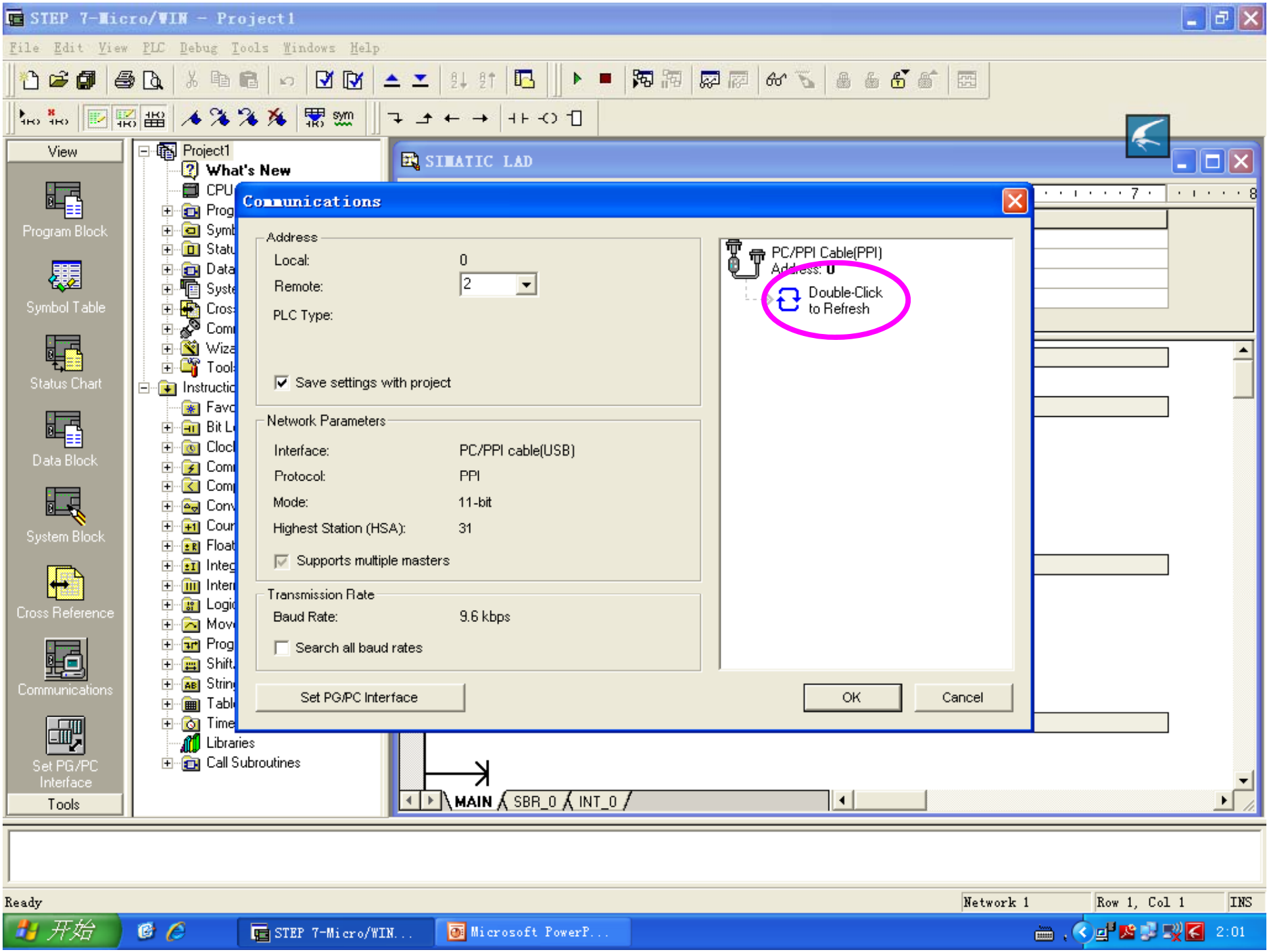
显示在编译之后检测到的错误信息

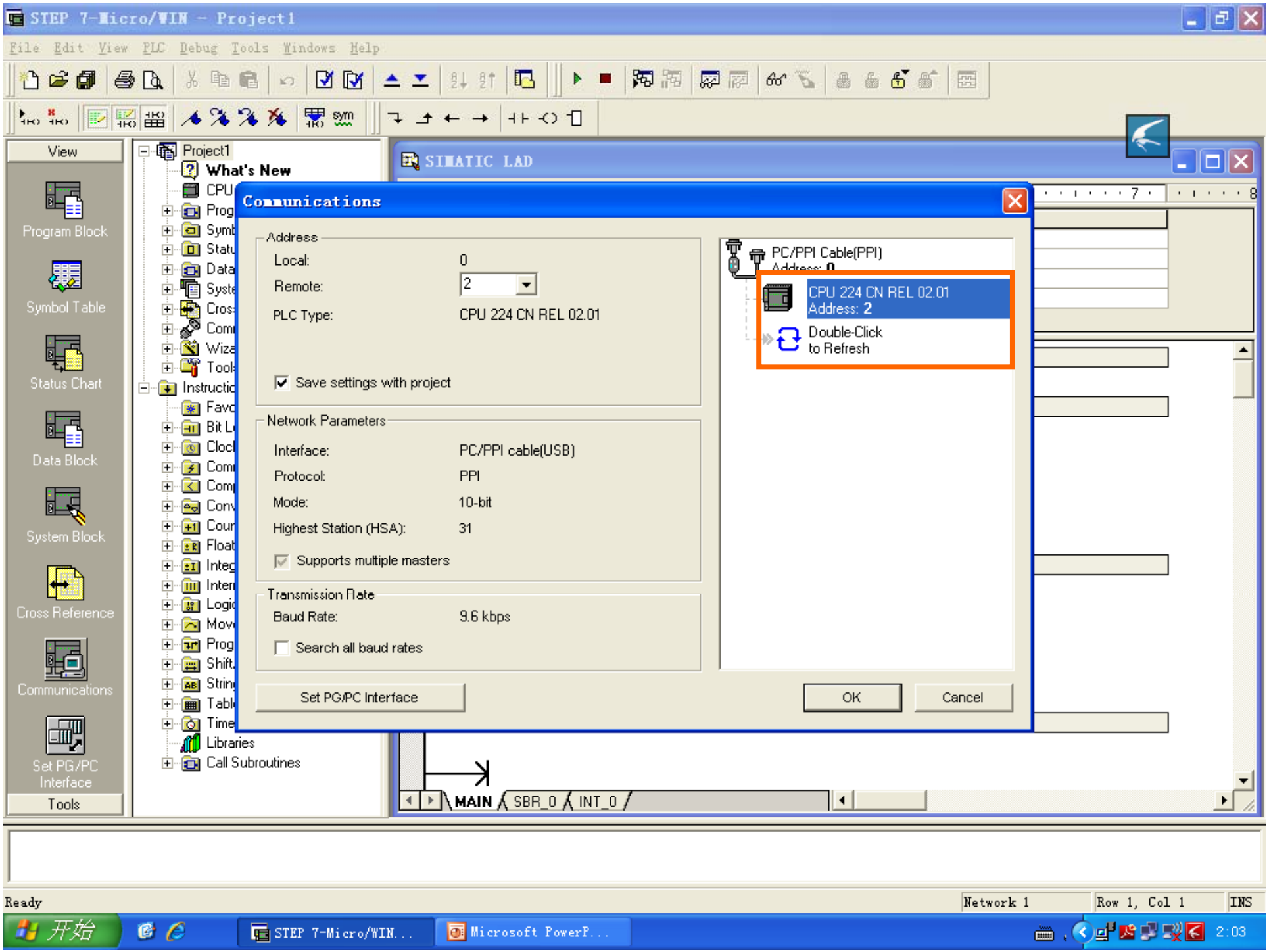
可以双击输出窗口中的错误信息，光标会自动移至有编译错误的网络

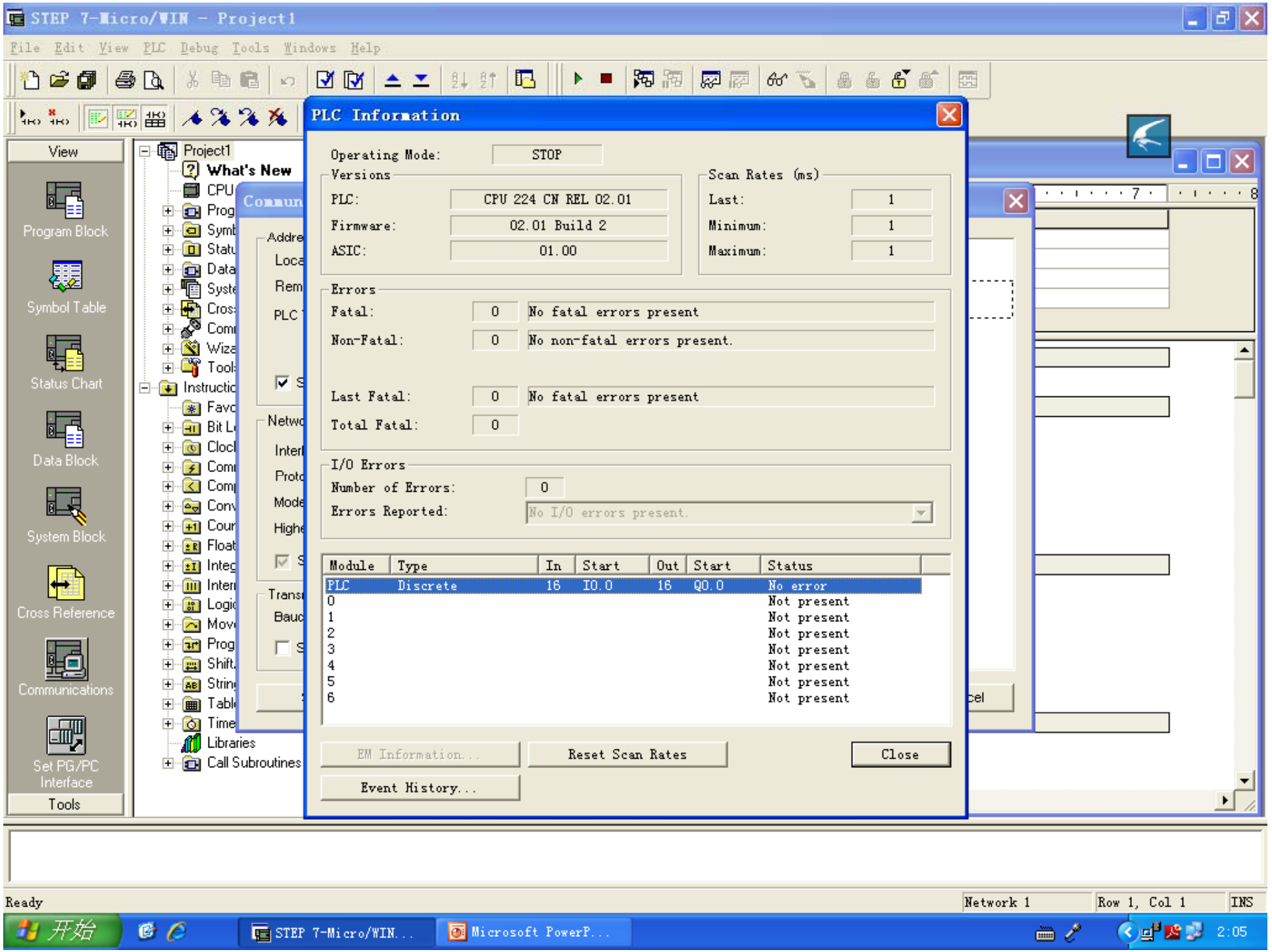

STEP 7-Micro/WIN - Project1
File Edit View PLC Debug Tools Windows Help
View
Program Block
Symbol Table
Status Chart
Data Block
System Block
Cross Reference
Communications
Set PG/PC Interface
Tools
Project1
What's New
Libraries
Call Subroutines
SIMATIC LAD
Communications
Address
Local: 0
Remote: 2
PLC Type:
Save settings with project
Network Parameters
Interface: PC/PPI cable(USB)
Protocol: PPI
Mode: 11-bit
Highest Station (HSA): 31
Supports multiple masters
Transmission Rate
Baud Rate: 9.6 kbps
Search all baud rates
PC/PPI Cable(PPI)
Address: 0
Double-Click to Refresh
Set PG/PC Interface
OK
Cancel
MAIN SBR_0 INT_0
Ready
Network 1
Row 1, Col 1
INS
开始
STEP 7-Micro/WIN...
Microsoft PowerP...
1:50

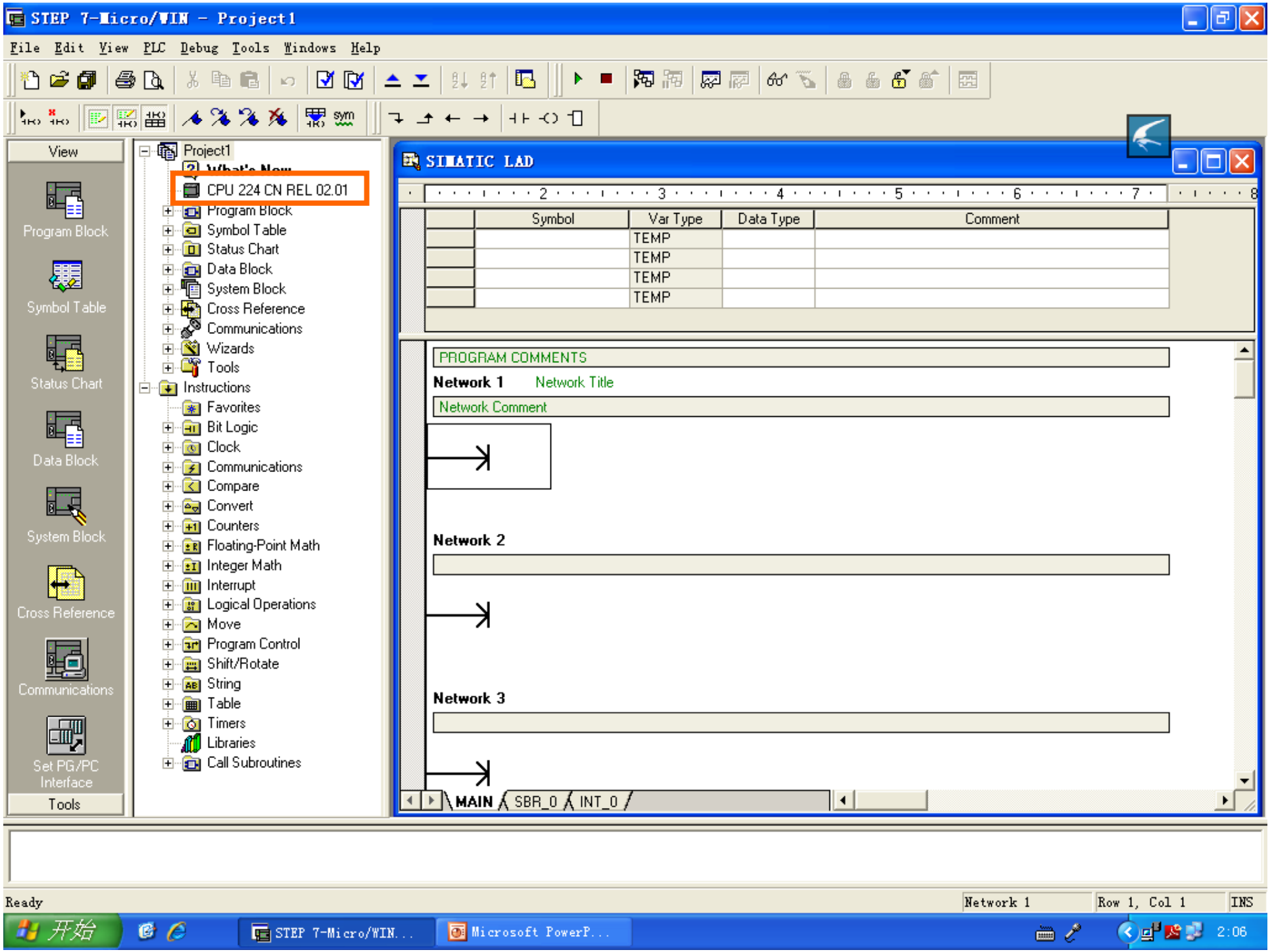

STEP 7-Micro/WIN - Project1
File Edit View PLC Debug Tools Windows Help
View
Program Block
Symbol Table
Status Chart
Data Block
System Block
Cross Reference
Communications
Set PG/PC Interface
Tools
Project1
What's New
Libraries
Call Subroutines
SIMATIC LAD
Communications
Address
Local:
Remote:
PLC Type:
Save settings wit
Network Parameters
Interface:
Protocol:
Mode:
Highest Station (HSA
Supports multiple
Transmission Rate
Baud Rate:
Search all baud r
Set PG/PC Interfa
Set PG/PC Interface
Access Path
Access Point of the Application:
Micro/WIN --> PC/PPI cable (PPI)
(Standard for Micro/WIN)
Interface Parameter Assignment
PC/PPI cable (PPI)
Properties...
PC Adapter (MPI)
PC Adapter (PROFIBUS)
PC/PPI cable (PPI)
TCP/IP -> Intel (R) PRO/1000
Copy...
Delete
(Assigning Parameters to an PC/PPI cable for an PPI Network)
Interfaces
Add/Remove:
Select...
OK
Cancel
Help
Cancel
MAIN SBR_0 INT_0
Ready
Network 1
Row 1, Col 1
INS
开始
STEP 7-Micro/WIN...
Microsoft PowerP...
Set PG/PC Interf...
1:58

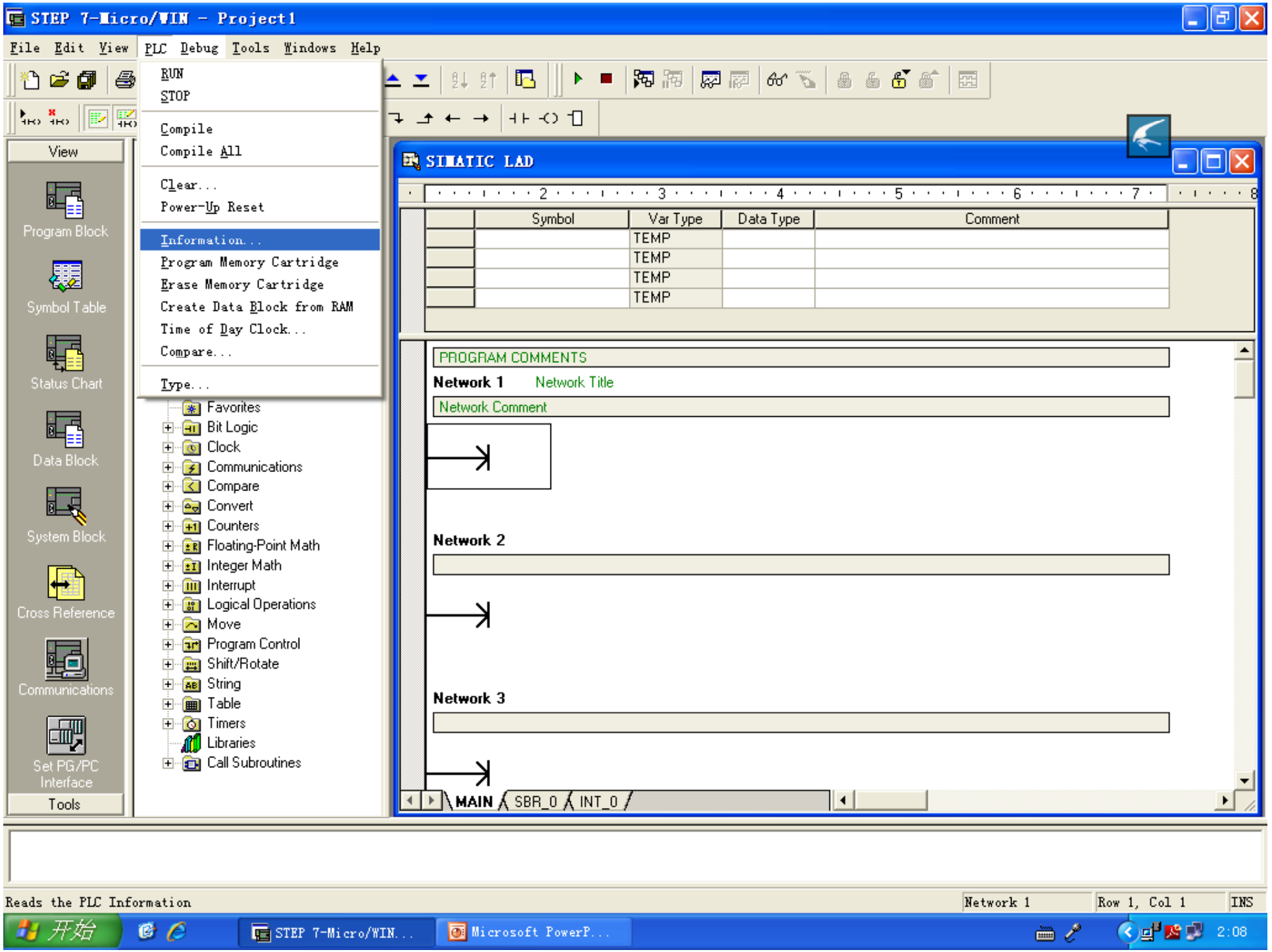

STEP 7-Micro/WIN - Project1
File Edit View PLC Debug Tools Windows Help
View
Program Block
Symbol Table
Status Chart
Data Block
System Block
Cross Reference
Communications
Set PG/PC Interface
Tools
Project1
What's New
Libraries
Call Subroutines
SIMATIC LAD
Communications
Address
Local:
Remote:
PLC Type:
Save settings wit
Network Parameters
Interface:
Protocol:
Mode:
Highest Station (HSA
Supports multiple
Transmission Rate
Baud Rate:
Search all baud r
Set PG/PC Interf
Set PG/PC Interface
Access Path
OK
Cancel
Help
Properties - PC/PPI cable(PPI)
PPI
Local Connection
Connection to:
USB
Modem connection
OK
Default
Cancel
Help
Cancel
MAIN
SBR_0
INT_0
Ready
Network 1
Row 1, Col 1
INS
开始
STEP 7-Micro/WIN...
Microsoft PowerP...
Set PG/PC Interf...
2:00

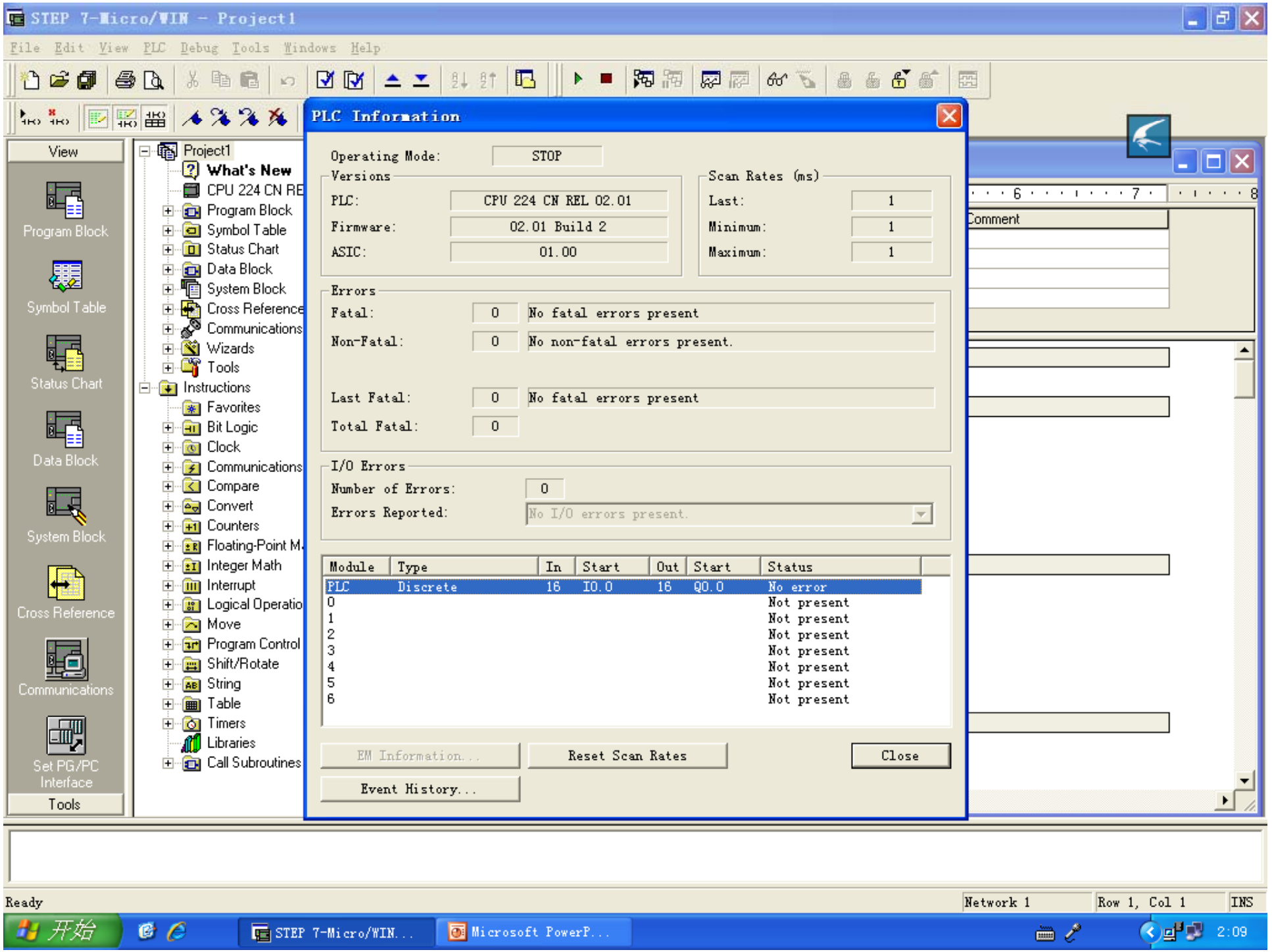

STEP 7-Micro/WIN - Project1
File Edit View PLC Debug Tools Windows Help
View
Program Block
Symbol Table
Status Chart
Data Block
System Block
Cross Reference
Communications
Set PG/PC Interface
Tools
Project1
What's New
Libraries
Call Subroutines
SIMATIC LAD
Communications
Address
Local: 0
Remote: 2
PLC Type:
Save settings with project
Network Parameters
Interface: PC/PPI cable(USB)
Protocol: PPI
Mode: 11-bit
Highest Station (HSA): 31
Supports multiple masters
Transmission Rate
Baud Rate: 9.6 kbps
Search all baud rates
Set PG/PC Interface
PC/PPI Cable(PPI)
Address: 0
Double-Click to Refresh
OK
Cancel
MAIN SBR_0 INT_0
Ready
Network 1
Row 1, Col 1
INS
开始
STEP 7-Micro/WIN...
Microsoft PowerP...
2:01

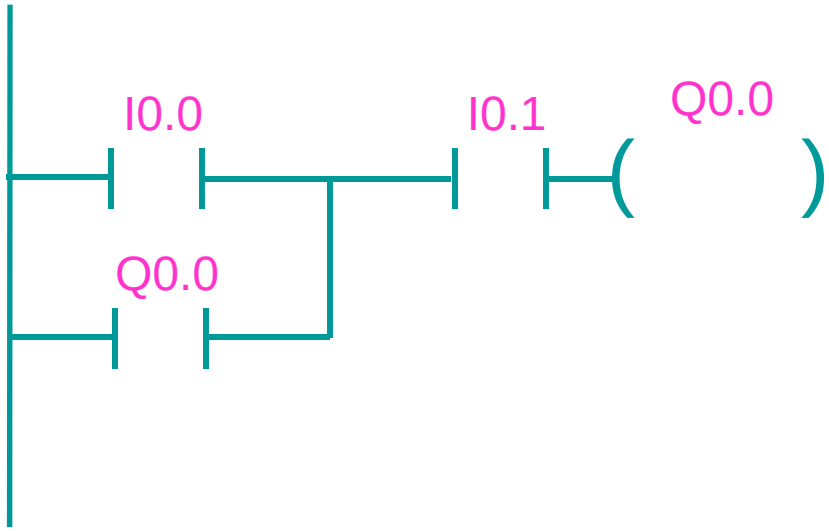

STEP 7-Micro/WIN - Project1
File Edit View PLC Debug Tools Windows Help
View
Program Block
Symbol Table
Status Chart
Data Block
System Block
Cross Reference
Communications
Set PG/PC Interface
Tools
Project1
What's New
Libraries
Call Subroutines
SIMATIC LAD
Communications
Address
Local: 0
Remote: 2
PLC Type: CPU 224 CN REL 02.01
Save settings with project
Network Parameters
Interface: PC/PPI cable(USB)
Protocol: PPI
Mode: 10-bit
Highest Station (HSA): 31
Supports multiple masters
Transmission Rate
Baud Rate: 9.6 kbps
Search all baud rates
Set PG/PC Interface
PC/PPI Cable(PPI)
CPU 224 CN REL 02.01
Address: 2
Double-Click
to Refresh
OK
Cancel
MAIN SBR_0 INT_0
Ready
Network 1
Row 1, Col 1
INS
开始
STEP 7-Micro/WIN...
Microsoft PowerP...
2:03

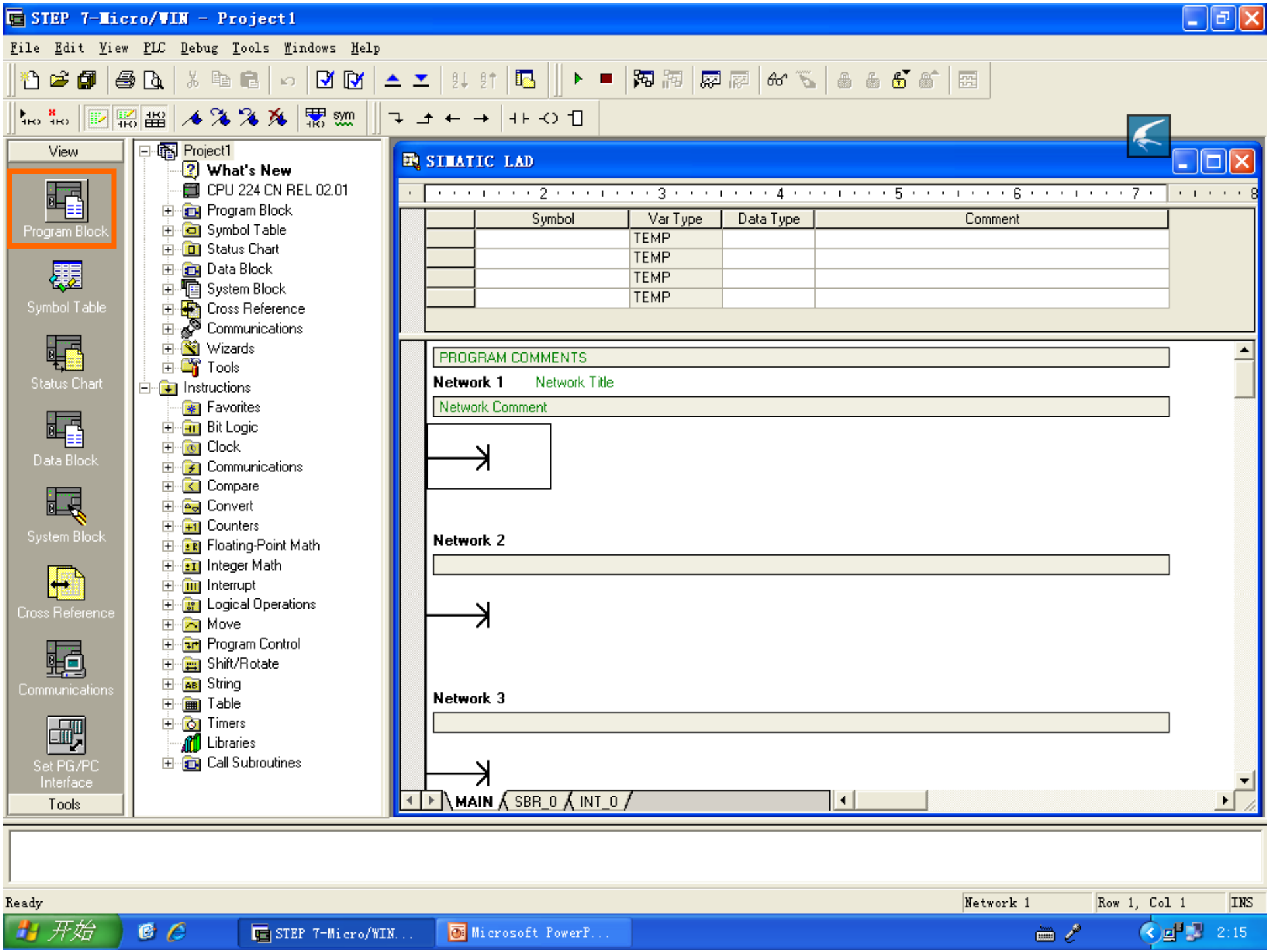

STEP 7-Micro/WIN - Project1
File Edit View PLC Debug Tools Windows Help
View
Program Block
Symbol Table
Status Chart
Data Block
System Block
Cross Reference
Communications
Set PG/PC Interface
Tools
Project1
What's New
CPU
Libraries
Call Subroutines
PLC Information
Operating Mode: STOP
Versions
PLC: CPU 224 CN REL 02.01
Firmware: 02.01 Build 2
ASIC: 01.00
Scan Rates (ms)
Last: 1
Minimum: 1
Maximum: 1
Errors
Fatal: 0 No fatal errors present
Non-Fatal: 0 No non-fatal errors present.
Last Fatal: 0 No fatal errors present
Total Fatal: 0
I/O Errors
Number of Errors: 0
Errors Reported: No I/O errors present.
Module Type In Start Out Start Status
PLC Discrete 16 I0.0 16 Q0.0 No error
0 Not present
1 Not present
2 Not present
3 Not present
4 Not present
5 Not present
6 Not present
EM Information...
Reset Scan Rates
Close
Event History...
Ready
Network 1
Row 1, Col 1
INS
开始
STEP 7-Micro/WIN...
Microsoft PowerP...
2:05

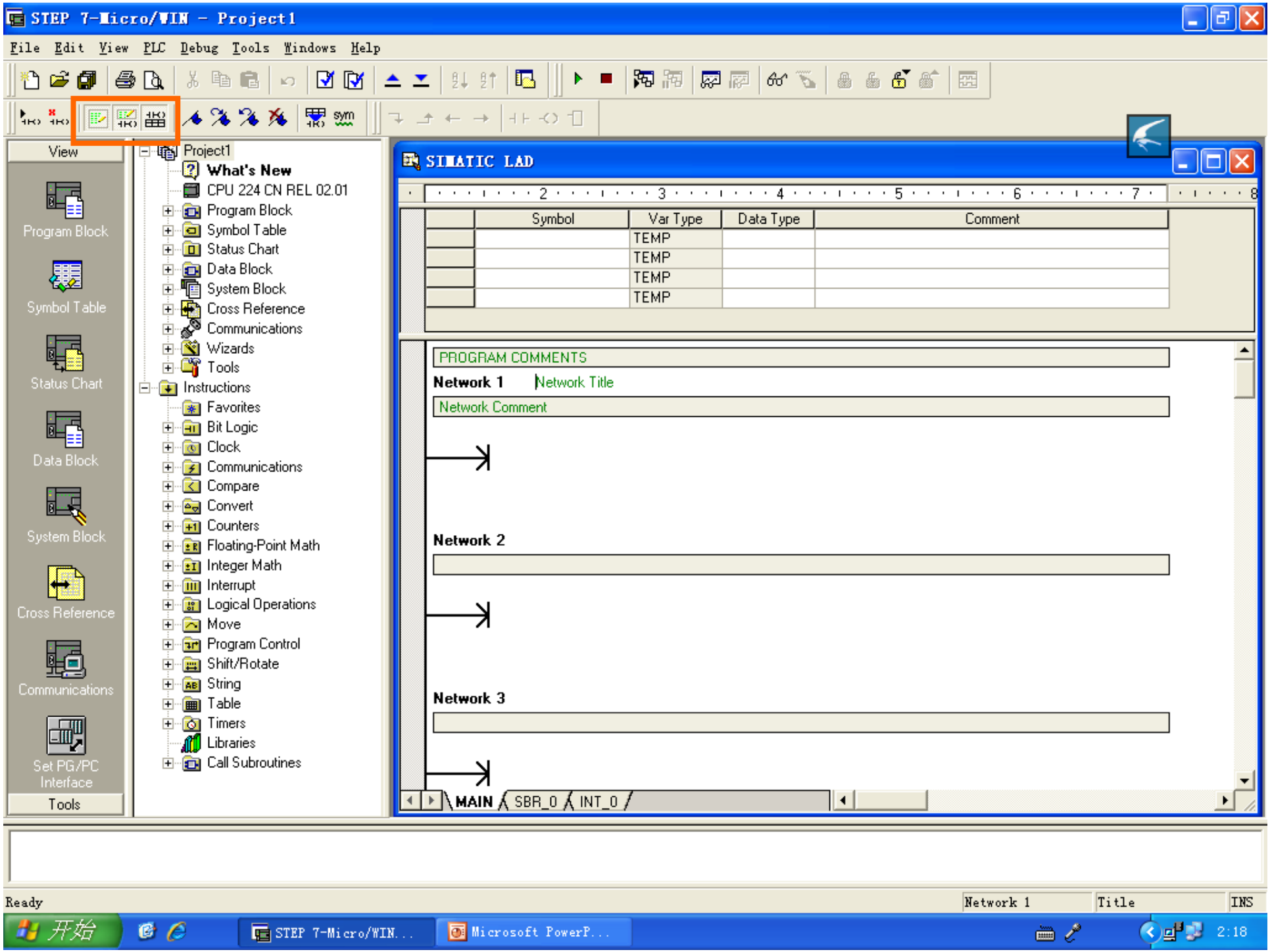

STEP 7-Micro/WIN - Project1
File Edit View PLC Debug Tools Windows Help
View
Program Block
Symbol Table
Status Chart
Data Block
System Block
Cross Reference
Communications
Set PG/PC Interface
Tools
Project1
CPU 224 CN REL 02.01
Program Block
Symbol Table
Status Chart
Data Block
System Block
Cross Reference
Communications
Wizards
Tools
Instructions
Favorites
Bit Logic
Clock
Communications
Compare
Convert
Counters
Floating-Point Math
Integer Math
Interrupt
Logical Operations
Move
Program Control
Shift/Rotate
String
Table
Timers
Libraries
Call Subroutines
SIMATIC LAD
Symbol
Var Type
Data Type
Comment
TEMP
TEMP
TEMP
TEMP
PROGRAM COMMENTS
Network 1
Network Title
Network Comment
Network 2
Network 3
MAIN
SBR_0
INT_0
Ready
Network 1
Row 1, Col 1
INS
开始
STEP 7-Micro/WIN...
Microsoft PowerP...
2:06

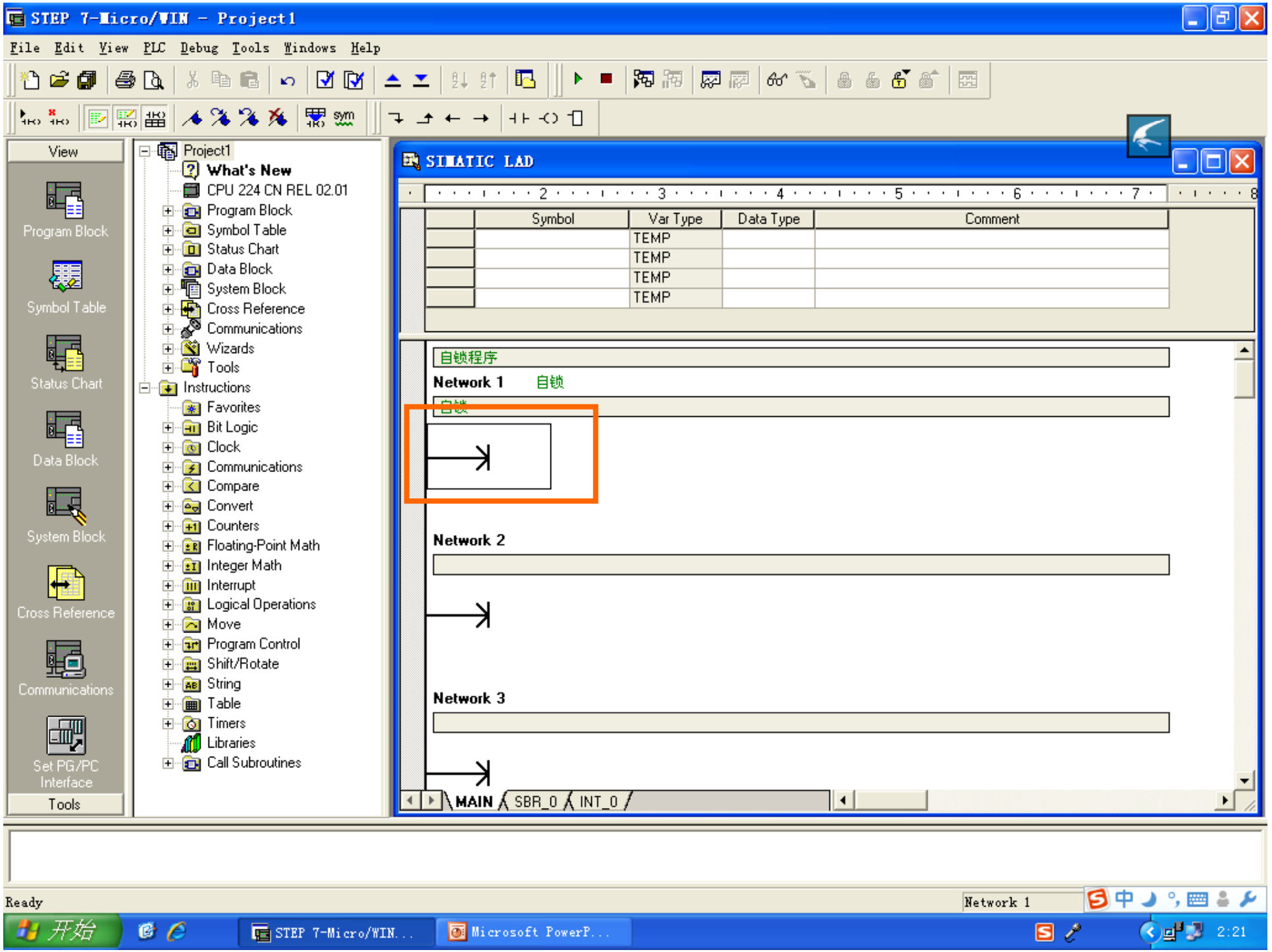

STEP 7-Micro/WIN - Project1
File Edit View PLC Debug Tools Windows Help
RUN
STOP
Compile
Compile All
Clear...
Power-Up Reset
Information...
Program Memory Cartridge
Erase Memory Cartridge
Create Data Block from RAM
Time of Day Clock...
Compare...
Type...
View
Program Block
Symbol Table
Status Chart
Data Block
System Block
Cross Reference
Communications
Set PG/PC Interface
Tools
Favorites
Bit Logic
Clock
Communications
Compare
Convert
Counters
Floating-Point Math
Integer Math
Interrupt
Logical Operations
Move
Program Control
Shift/Rotate
String
Table
Timers
Libraries
Call Subroutines
SIMATIC LAD
Symbol
Var Type
Data Type
Comment
TEMP
PROGRAM COMMENTS
Network 1
Network Title
Network Comment
Network 2
Network 3
MAIN
SBR_0
INT_0
Reads the PLC Information
Network 1
Row 1, Col 1
INS
开始
STEP 7-Micro/WIN...
Microsoft PowerP...
2:08


STEP 7-Micro/WIN - Project1
File Edit View PLC Debug Tools Windows Help
View
Program Block
Symbol Table
Status Chart
Data Block
System Block
Cross Reference
Communications
Set PG/PC Interface
Tools
Project1
What's New
CPU 224 CN RE
Program Block
Symbol Table
Status Chart
Data Block
System Block
Cross Reference
Communications
Wizards
Tools
Instructions
Favorites
Bit Logic
Clock
Communications
Compare
Convert
Counters
Floating-Point M
Integer Math
Interrupt
Logical Operatio
Move
Program Control
Shift/Rotate
String
Table
Timers
Libraries
Call Subroutines
PLC Information
Operating Mode: STOP
Versions
PLC: CPU 224 CN REL 02.01
Firmware: 02.01 Build 2
ASIC: 01.00
Scan Rates (ms)
Last: 1
Minimum: 1
Maximum: 1
Errors
Fatal: 0 No fatal errors present
Non-Fatal: 0 No non-fatal errors present.
Last Fatal: 0 No fatal errors present
Total Fatal: 0
I/O Errors
Number of Errors: 0
Errors Reported: No I/O errors present.
Module Type In Start Out Start Status
PLC Discrete 16 I0.0 16 Q0.0 No error
0 Not present
1 Not present
2 Not present
3 Not present
4 Not present
5 Not present
6 Not present
EM Information...
Reset Scan Rates
Close
Event History...
Comment
Ready
Network 1
Row 1, Col 1
INS
开始
STEP 7-Micro/WIN...
Microsoft PowerP...
2:09


I0.0
I0.1
Q0.0
Q0.0


STEP 7-Micro/WIN - Project1
File Edit View PLC Debug Tools Windows Help
View
Program Block
Symbol Table
Status Chart
Data Block
System Block
Cross Reference
Communications
Set PG/PC Interface
Tools
Project1
What's New
CPU 224 CN REL 02.01
Program Block
Symbol Table
Status Chart
Data Block
System Block
Cross Reference
Communications
Wizards
Tools
Instructions
Favorites
Bit Logic
Clock
Communications
Compare
Convert
Counters
Floating-Point Math
Integer Math
Interrupt
Logical Operations
Move
Program Control
Shift/Rotate
String
Table
Timers
Libraries
Call Subroutines
SIMATIC LAD
Symbol
Var Type
Data Type
Comment
TEMP
TEMP
TEMP
TEMP
PROGRAM COMMENTS
Network 1
Network Title
Network Comment
Network 2
Network 3
MAIN
SBR_0
INT_0
Ready
Network 1
Row 1, Col 1
INS
开始
STEP 7-Micro/WIN...
Microsoft PowerP...
2:15


STEP 7-Micro/WIN - Project1
File Edit View PLC Debug Tools Windows Help
View
Program Block
Symbol Table
Status Chart
Data Block
System Block
Cross Reference
Communications
Set PG/PC Interface
Tools
Project1
What's New
CPU 224 CN REL 02.01
Program Block
Symbol Table
Status Chart
Data Block
System Block
Cross Reference
Communications
Wizards
Tools
Instructions
Favorites
Bit Logic
Clock
Communications
Compare
Convert
Counters
Floating-Point Math
Integer Math
Interrupt
Logical Operations
Move
Program Control
Shift/Rotate
String
Table
Timers
Libraries
Call Subroutines
SIMATIC LAD
Symbol
Var Type
Data Type
Comment
TEMP
TEMP
TEMP
TEMP
PROGRAM COMMENTS
Network 1
Network Title
Network Comment
Network 2
Network 3
MAIN
SBR_0
INT_0
Ready
Network 1
Title
INS
开始
STEP 7-Micro/WIN...
Microsoft PowerP...
2:18


STEP 7-Micro/WIN - Project1
File Edit View PLC Debug Tools Windows Help
View
Program Block
Symbol Table
Status Chart
Data Block
System Block
Cross Reference
Communications
Set PG/PC Interface
Tools
Project1
What's New
CPU 224 CN REL 02.01
Program Block
Symbol Table
Status Chart
Data Block
System Block
Cross Reference
Communications
Wizards
Tools
Instructions
Favorites
Bit Logic
Clock
Communications
Compare
Convert
Counters
Floating-Point Math
Integer Math
Interrupt
Logical Operations
Move
Program Control
Shift/Rotate
String
Table
Timers
Libraries
Call Subroutines
SIMATIC LAD
Symbol
Var Type
Data Type
Comment
TEMP
TEMP
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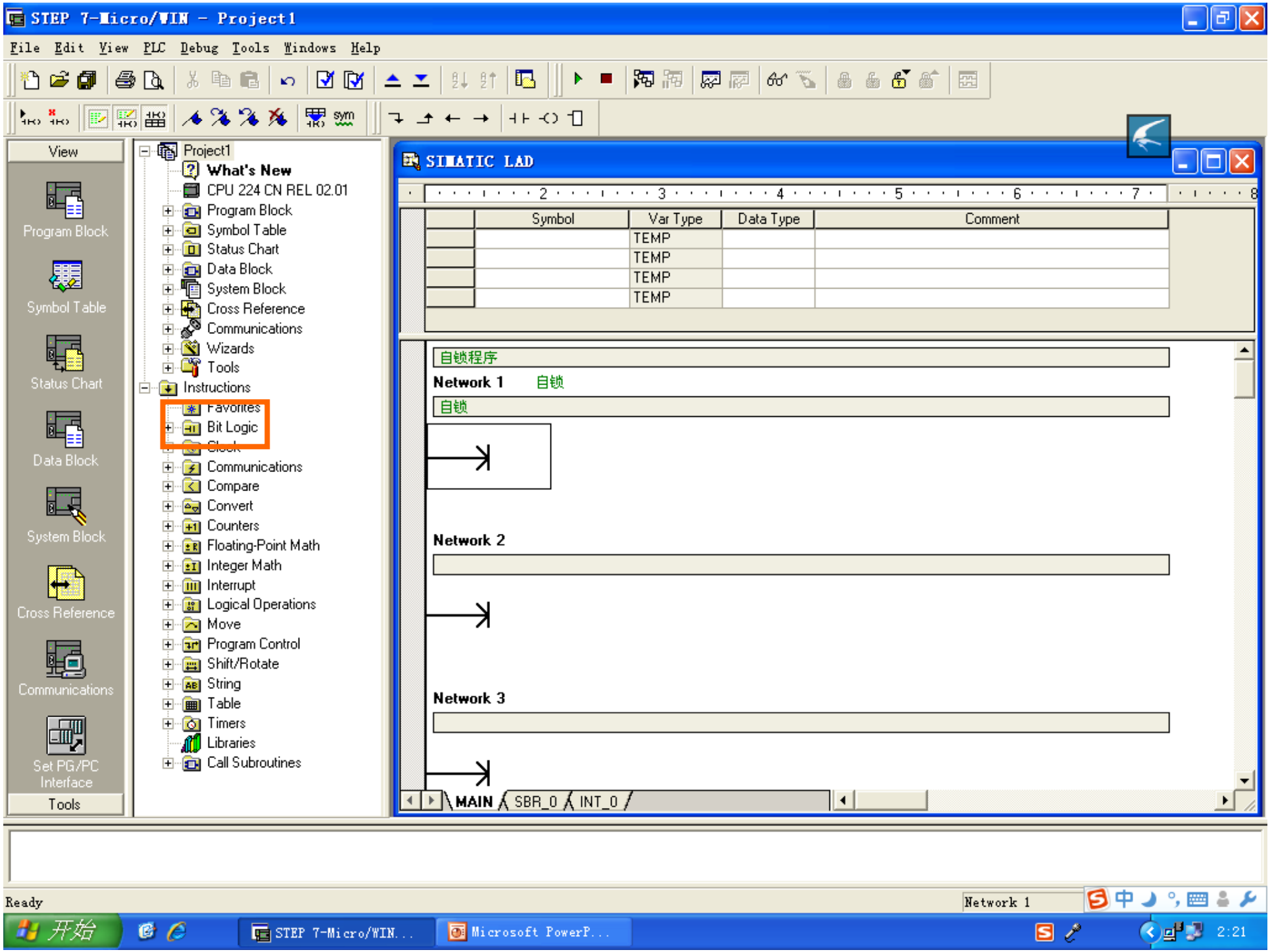
TEMP
自锁程序
Network 1
自锁
自锁
Network 2
Network 3
MAIN
SBR_0
INT_0
Ready
Network 1
开始
STEP 7-Micro/WIN...
Microsoft PowerP...
2:21


STEP 7-Micro/WIN - Project1
File Edit View PLC Debug Tools Windows Help
View
Program Block
Symbol Table
Status Chart
Data Block
System Block
Cross Reference
Communications
Set PG/PC Interface
Tools
Project1
What's New
CPU 224 CN REL 02.01
Program Block
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Favorites
Bit Logic
Communications
Compare
Convert
Counters
Floating-Point Math
Integer Math
Interrupt
Logical Operations
Move
Program Control
Shift/Rotate
String
Table
Timers
Libraries
Call Subroutines
SIMATIC LAD
Symbol
Var Type
Data Type
Comment
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自锁程序
Network 1
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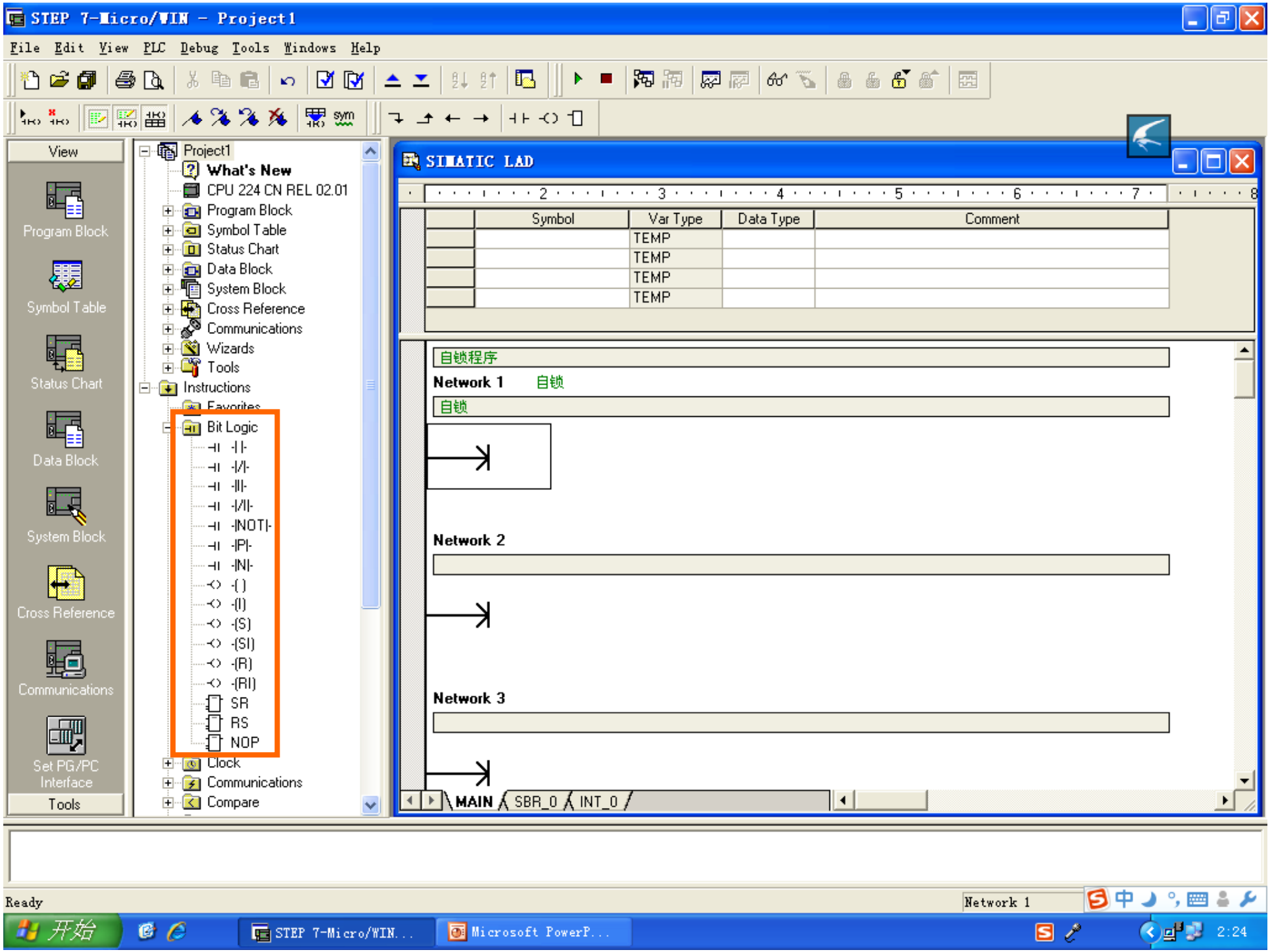
Network 2
Network 3
MAIN
SBR_0
INT_0
Ready
Network 1
开始
STEP 7-Micro/WIN...
Microsoft PowerP...
2:21


STEP 7-Micro/WIN - Project1
File Edit View PLC Debug Tools Windows Help
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Bit Logic
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RS
NOP
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Communications
Compare
SIMATIC LAD
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Var Type
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Comment
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自锁程序
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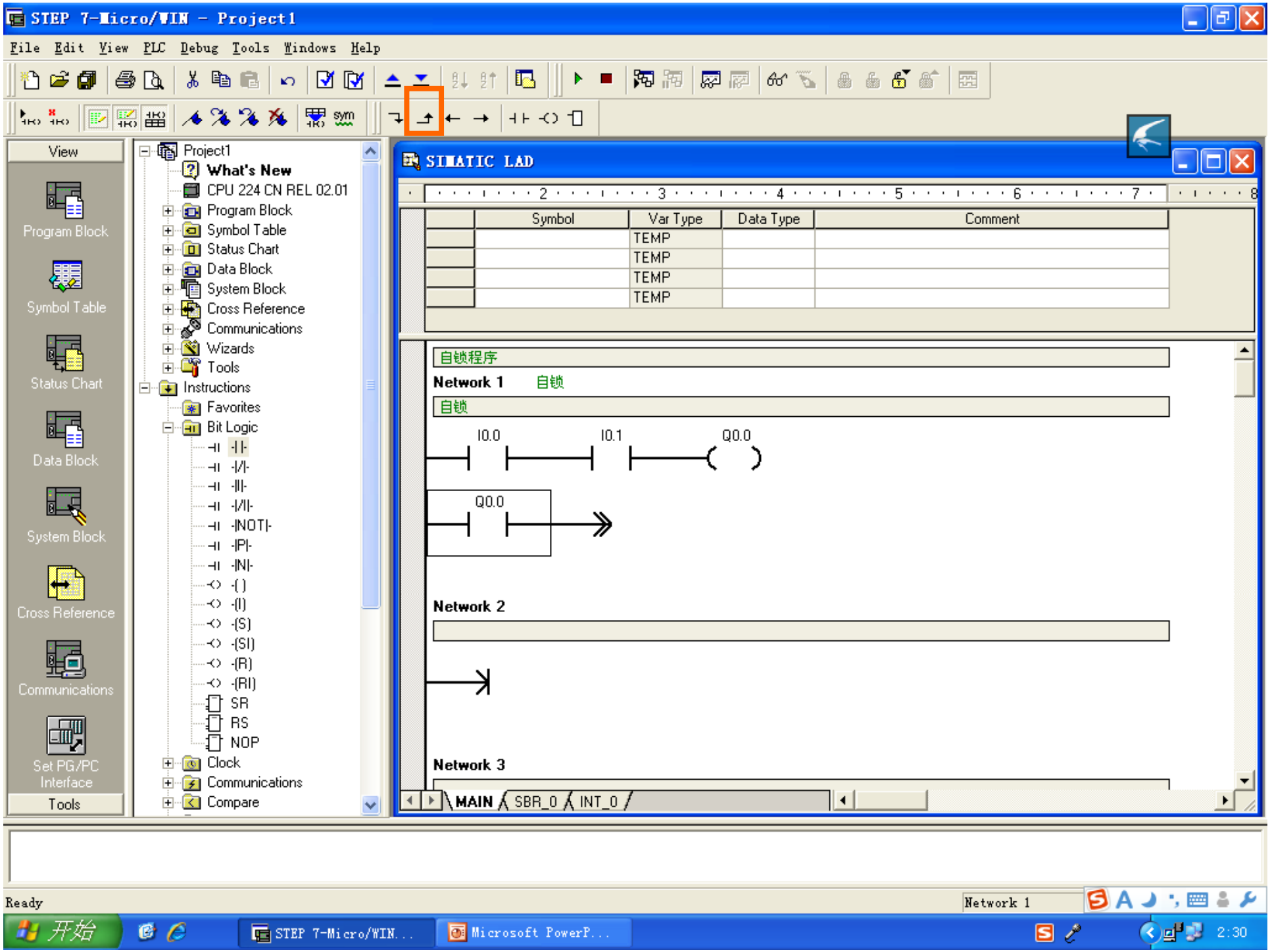
自锁
Network 2
Network 3
MAIN
SBR_0
INT_0
Ready
Network 1
开始
STEP 7-Micro/WIN...
Microsoft PowerP...
2:24


STEP 7-Micro/WIN - Project1
File Edit View PLC Debug Tools Windows Help
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Program Block
Symbol Table
Status Chart
Data Block
System Block
Cross Reference
Communications
Set PG/PC Interface
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Symbol Table
Status Chart
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Compare
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Var Type
Data Type
Comment
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自锁程序
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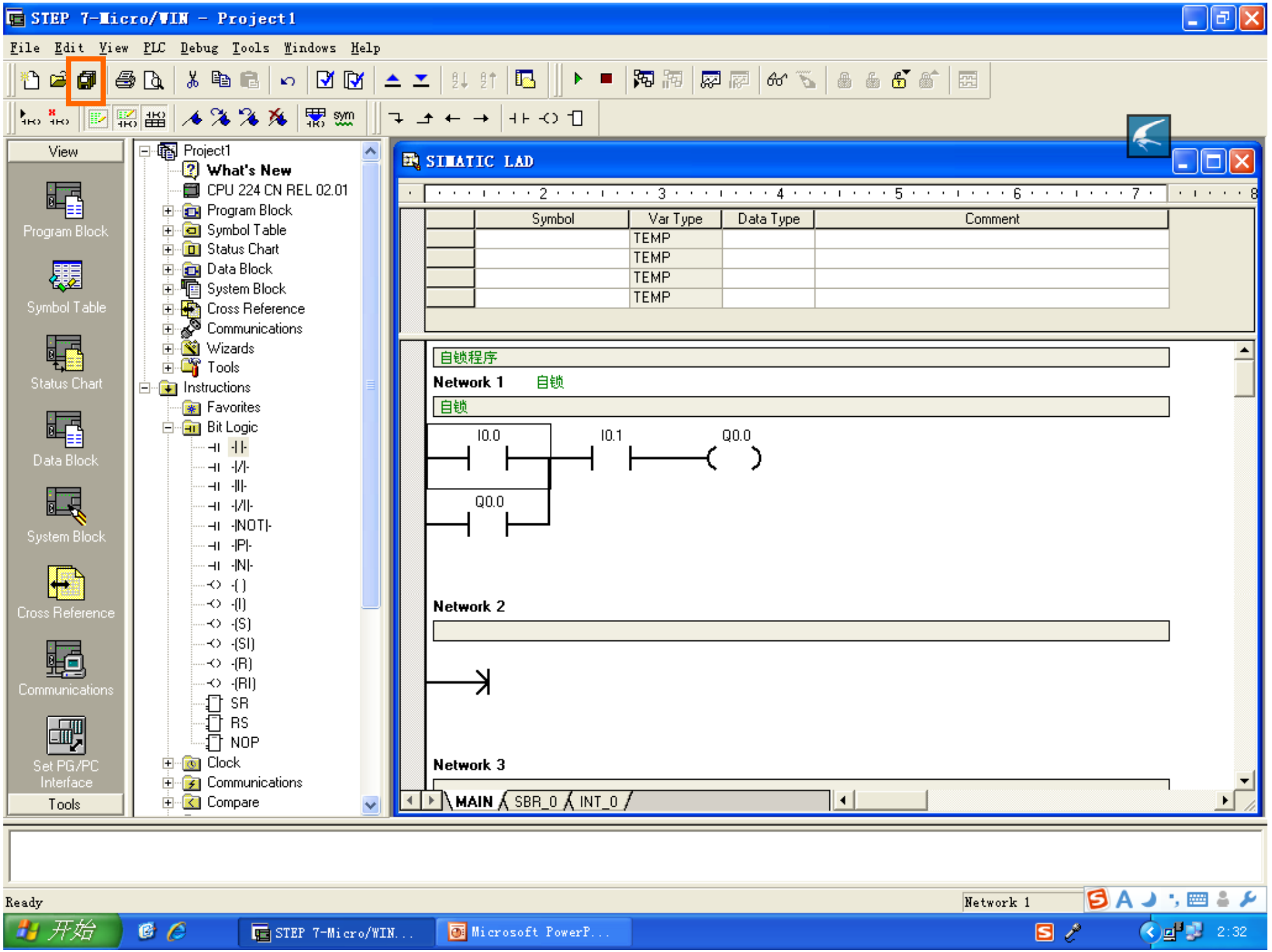
自锁
I0.0
I0.1
Q0.0
Network 2
Network 3
MAIN
SBR_0
INT_0
Ready
Network 1
开始
STEP 7-Micro/WIN...
Microsoft PowerP...
2:30


STEP 7-Micro/WIN - Project1
File Edit View PLC Debug Tools Windows Help
View
Program Block
Symbol Table
Status Chart
Data Block
System Block
Cross Reference
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Set PG/PC Interface
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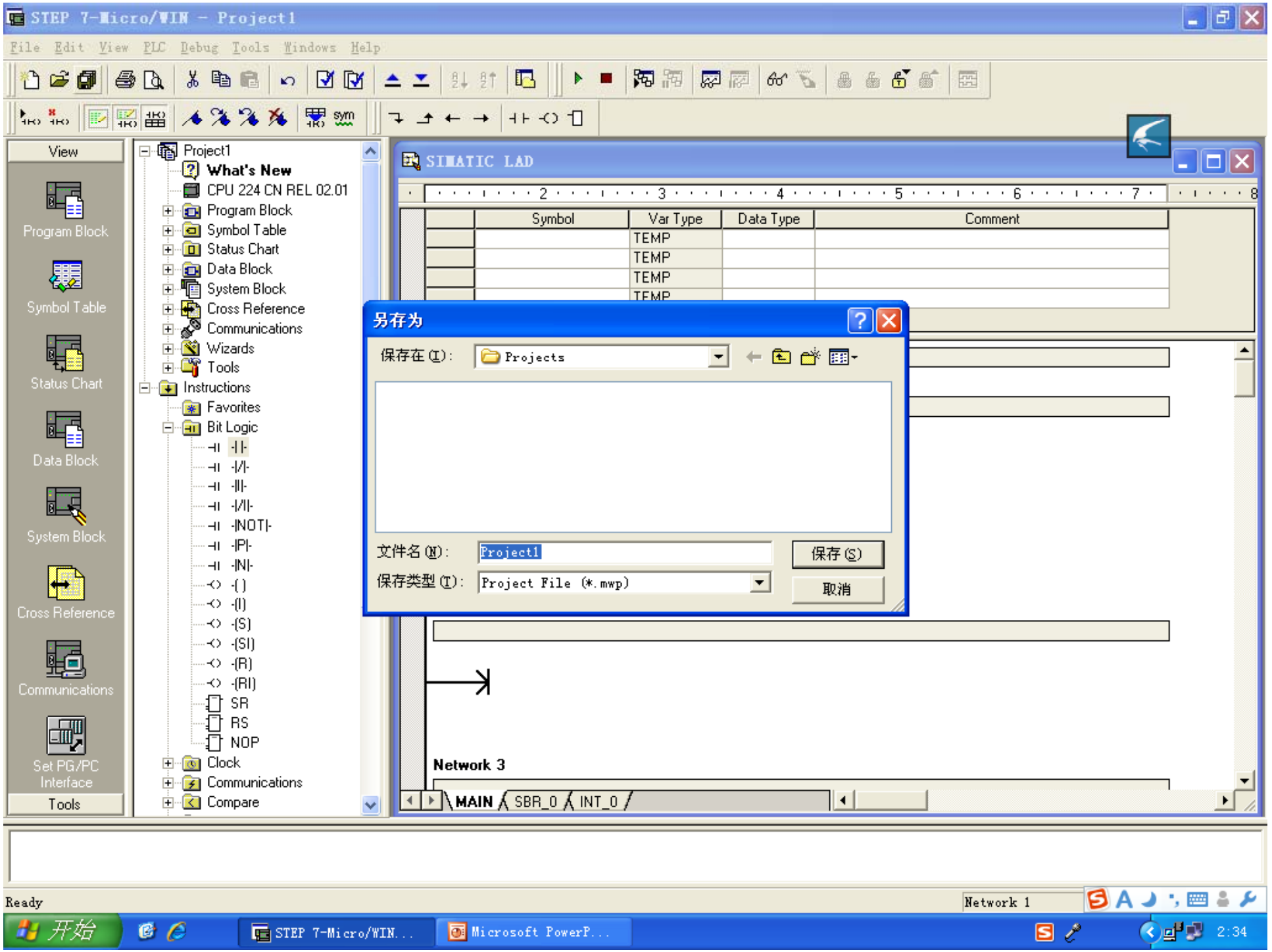
I0.1
Q0.0
Q0.0
Network 2
Network 3
MAIN
SBR_0
INT_0
Ready
Network 1
开始
STEP 7-Micro/WIN...
Microsoft PowerP...
2:32


STEP 7-Micro/WIN - Project1
File Edit View PLC Debug Tools Windows Help
View
Program Block
Symbol Table
Status Chart
Data Block
System Block
Cross Reference
Communications
Set PG/PC Interface
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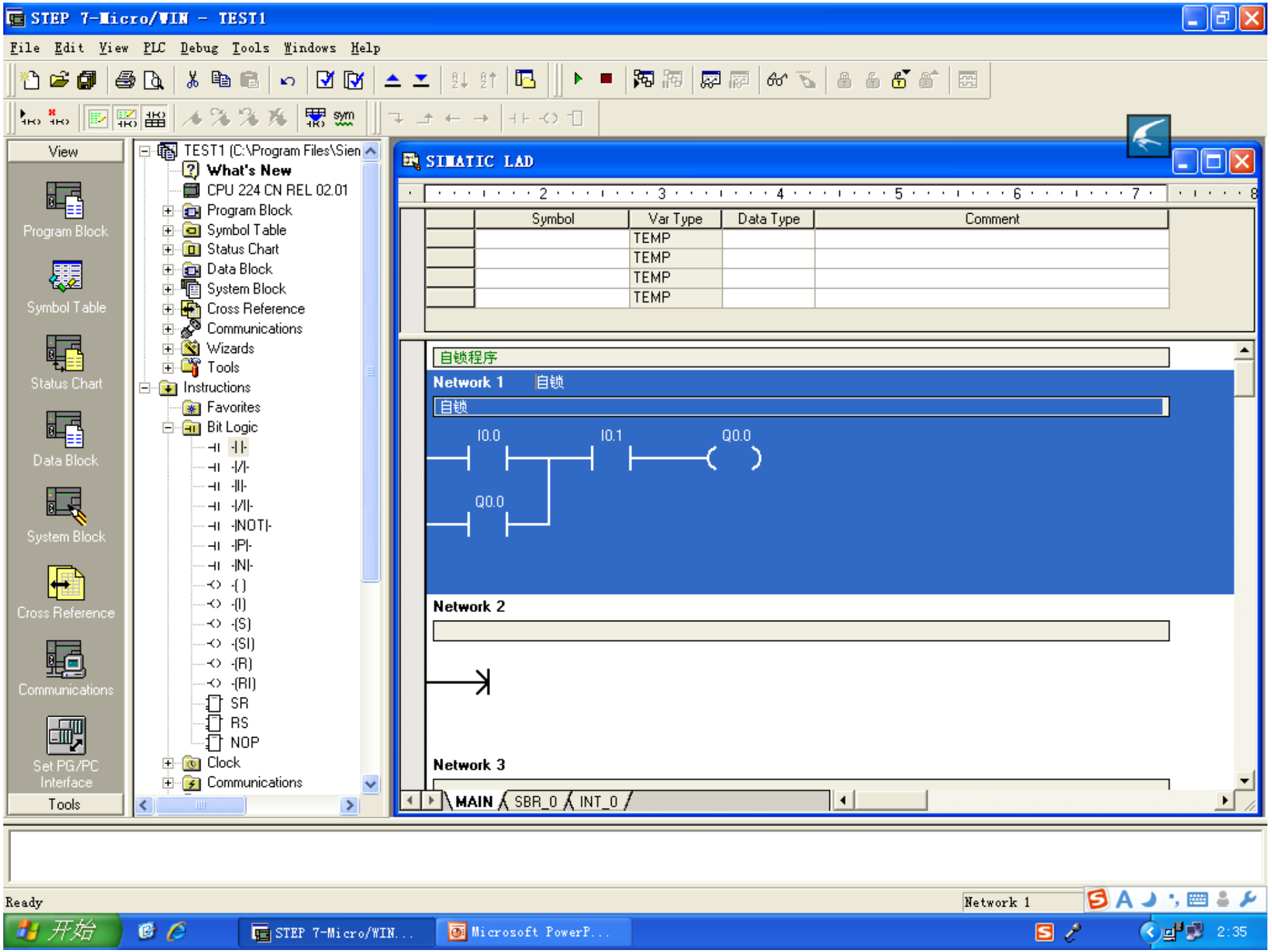
Clock
Communications
Compare
SIMATIC LAD
Symbol
Var Type
Data Type
Comment
TEMP
另存为
保存在(I):
Projects
文件名(N):
Project1
保存类型(T):
Project File (*.mwp)
保存(S)
取消
Network 3
MAIN
SBR_0
INT_0
Ready
Network 1
开始
STEP 7-Micro/WIN...
Microsoft PowerP...
2:34


STEP 7-Micro/WIN - TEST1
File Edit View PLC Debug Tools Windows Help
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Program Block
Symbol Table
Status Chart
Data Block
System Block
Cross Reference
Communications
Set PG/PC Interface
Tools
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What's New
CPU 224 CN REL 02.01
Program Block
Symbol Table
Status Chart
Data Block
System Block
Cross Reference
Communications
Wizards
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Instructions
Favorites
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SR
RS
NOP
Clock
Communications
SIMATIC LAD
Symbol
Var Type
Data Type
Comment
TEMP
TEMP
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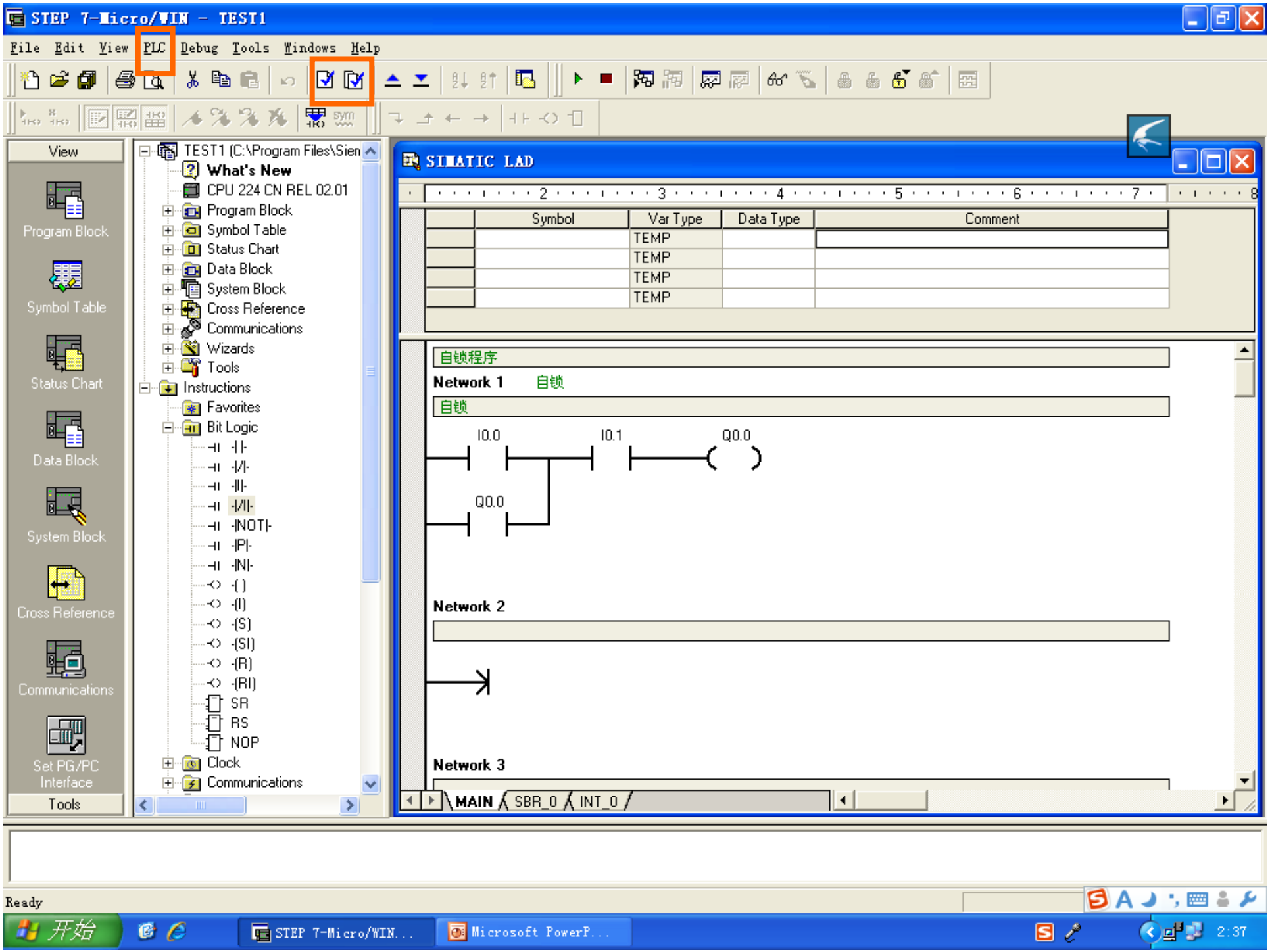
TEMP
自锁程序
Network 1
自锁
自锁
I0.0
I0.1
Q0.0
Q0.0
Network 2
Network 3
MAIN
SBR_0
INT_0
Ready
Network 1
开始
STEP 7-Micro/WIN...
Microsoft PowerP...
2:35


STEP 7-Micro/WIN - TEST1
File Edit View PLC Debug Tools Windows Help
View
Program Block
Symbol Table
Status Chart
Data Block
System Block
Cross Reference
Communications
Set PG/PC Interface
Tools
TEST1 (C:\Program Files\Sien
What's New
CPU 224 CN REL 02.01
Program Block
Symbol Table
Status Chart
Data Block
System Block
Cross Reference
Communications
Wizards
Tools
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SR
RS
NOP
Clock
Communications
SIMATIC LAD
Symbol
Var Type
Data Type
Comment
TEMP
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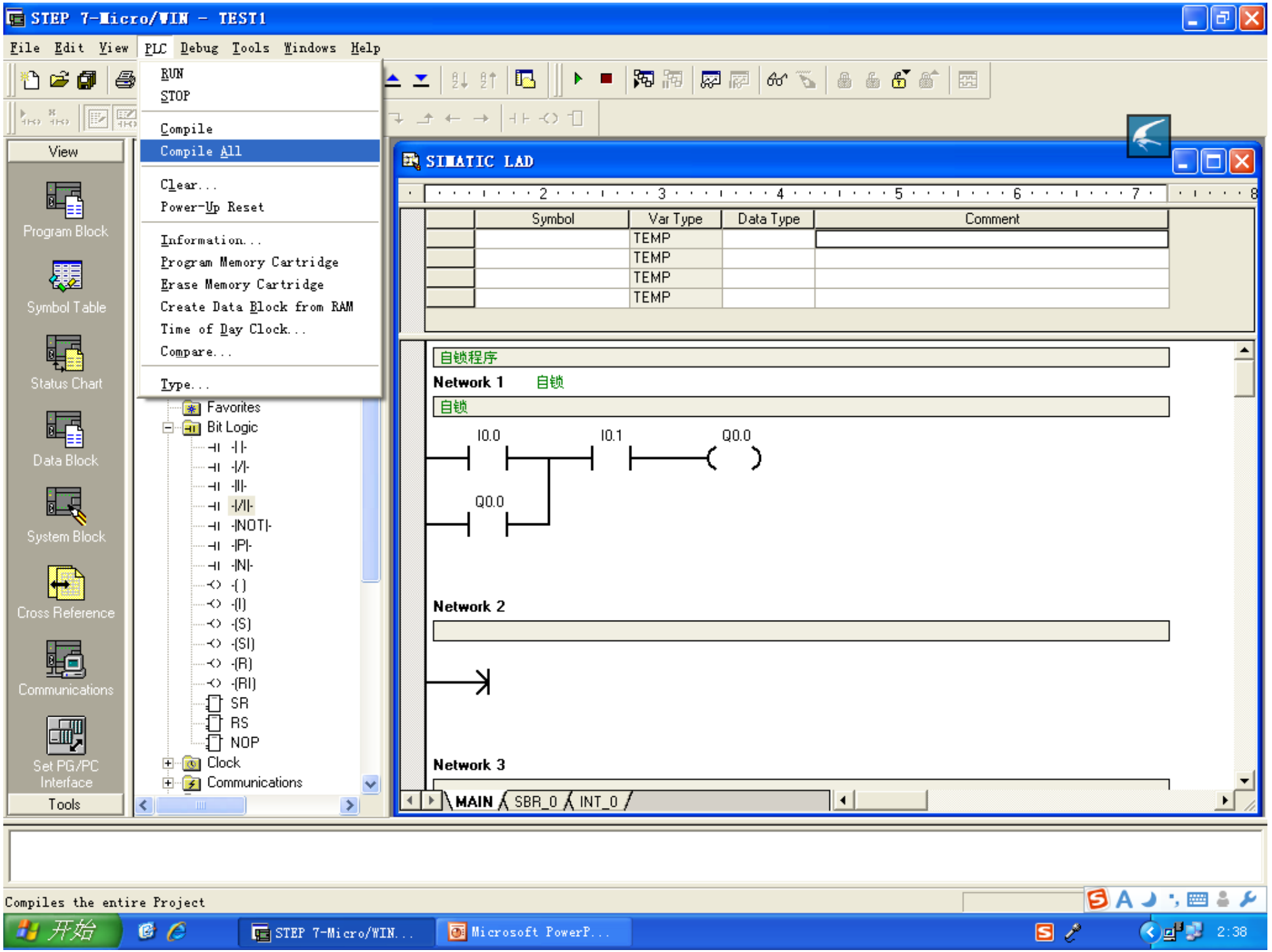
自锁程序
Network 1
自锁
自锁
I0.0
I0.1
Q0.0
Q0.0
Network 2
Network 3
MAIN
SBR_0
INT_0
Ready
开始
STEP 7-Micro/WIN...
Microsoft PowerP...
2:37


STEP 7-Micro/WIN - TEST1
File Edit View PLC Debug Tools Windows Help
RUN
STOP
Compile
Compile All
Clear...
Power-Up Reset
Information...
Program Memory Cartridge
Erase Memory Cartridge
Create Data Block from RAM
Time of Day Clock...
Compare...
Type...
View
Program Block
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Bit Logic
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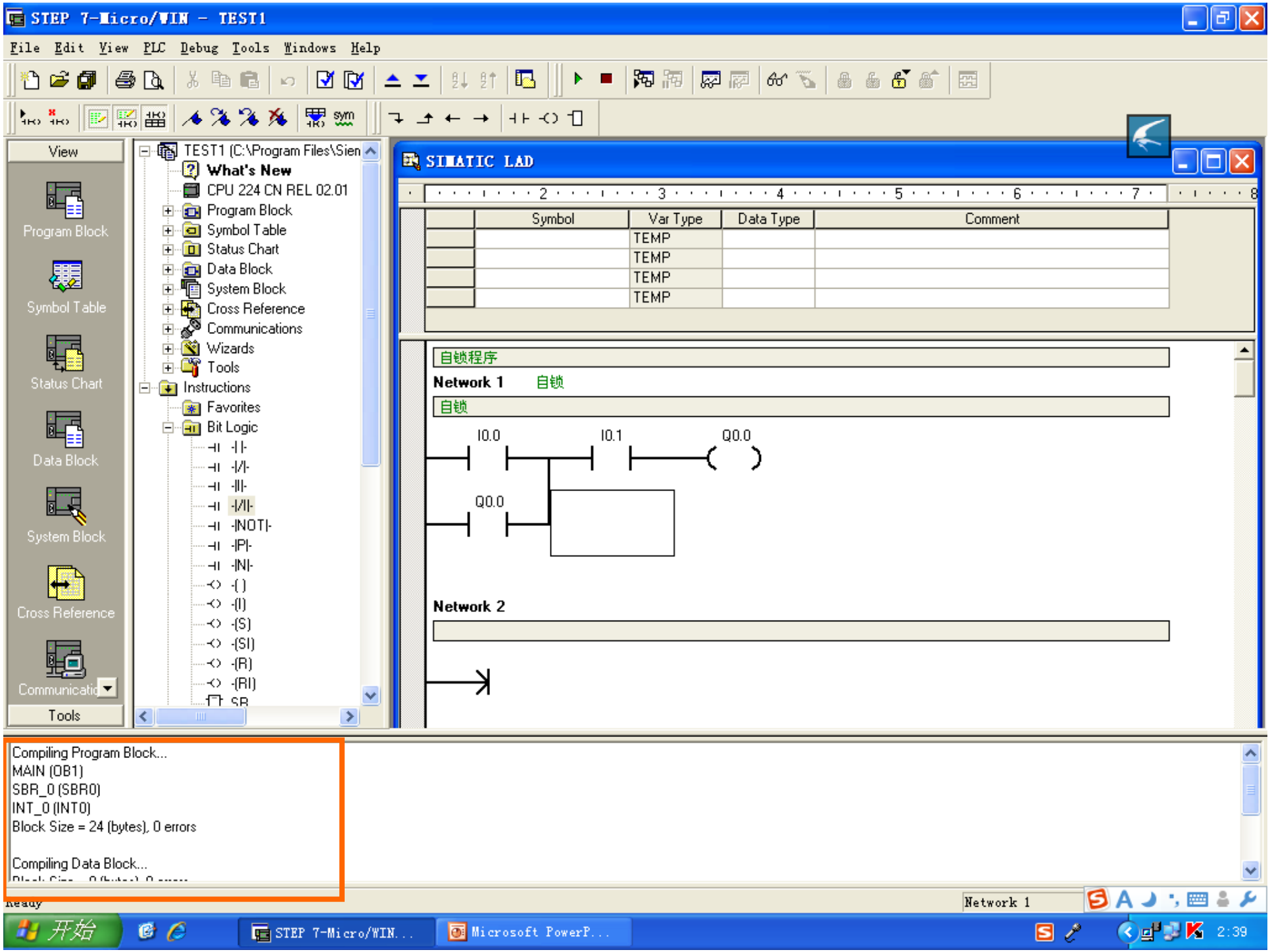
SR
RS
NOP
Clock
Communications
SIMATIC LAD
Symbol
Var Type
Data Type
Comment
TEMP
自锁程序
Network 1
自锁
I0.0
I0.1
Q0.0
Network 2
Network 3
MAIN
SBR_0
INT_0
Compiles the entire Project
开始
STEP 7-Micro/WIN...
Microsoft PowerP...
2:38


STEP 7-Micro/WIN - TEST1
File Edit View PLC Debug Tools Windows Help
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TEST1 (C:\Program Files\Sien
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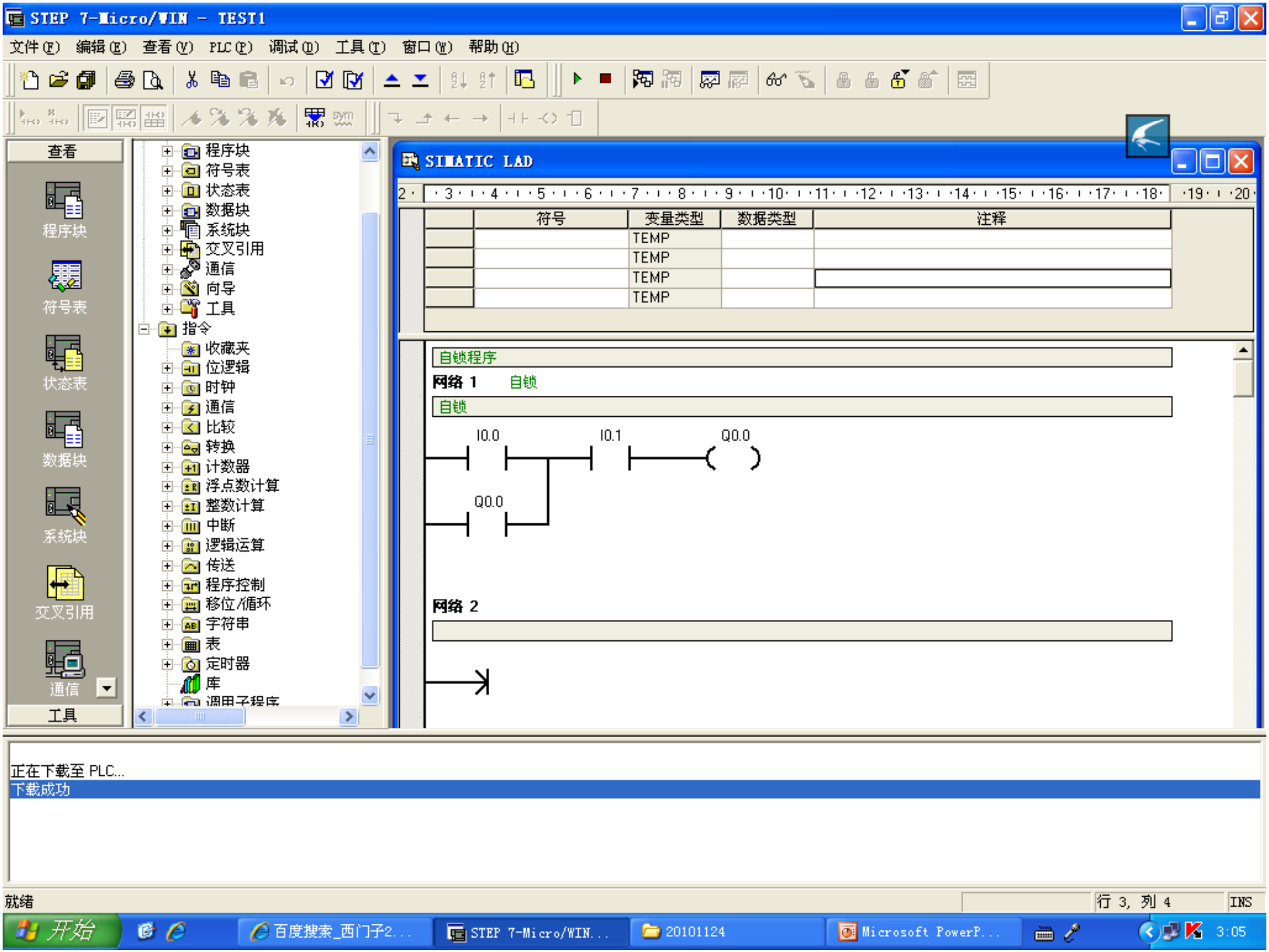
SIMATIC LAD
Symbol
Var Type
Data Type
Comment
TEMP
TEMP
TEMP
TEMP
自锁程序
Network 1
自锁
自锁
I0.0
I0.1
Q0.0
Q0.0
Network 2
Compiling Program Block...
MAIN (OB1)
SBR_0 (SBR0)
INT_0 (INT0)
Block Size = 24 (bytes), 0 errors
Compiling Data Block...
Ready
Network 1
开始
STEP 7-Micro/WIN...
Microsoft PowerP...
2:39


STEP 7-Micro/WIN - TEST1
文件(F) 编辑(E) 查看(V) PLC(P) 调试(D) 工具(T) 窗口(W) 帮助(H)
查看
程序块
符号表
状态表
数据块
系统块
交叉引用
通信
工具
程序块
符号表
状态表
数据块
系统块
交叉引用
通信
向导
工具
指令
收藏夹
位逻辑
时钟
通信
比较
转换
计数器
浮点数计算
整数计算
中断
逻辑运算
传送
程序控制
移位/循环
字符串
表
定时器
库
SIMATIC LAD
符号 变量类型 数据类型 注释
TEMP
TEMP
TEMP
TEMP
自锁程序
网络 1 自锁
自锁
I0.0
I0.1
Q0.0
Q0.0
网络 2
正在下载至 PLC...
下载成功
就绪
行 3, 列 4
INS
开始
百度搜索_西门子2...
STEP 7-Micro/WIN...
20101124
Microsoft PowerP...
3:05

实验一：与、或、非逻辑处理实验

按下 PH01 按钮，灯 LED1 亮，抬起 PH01 按钮，灯 LED1 灭；

按下 PH02 按钮，灯 LED2 灭，抬起 PH02 按钮，灯 LED2 亮；

按下 PH03 或 PH04 按钮，灯 LED3 亮，抬起 PH03 或 PH04 按钮，灯 LED3 灭

按下 PH05 与 PH06 按钮，灯 LED5 亮，抬起 PH05 与 PH06 按钮，灯 LED5 灭

实验二：定时器、计数器实验

无外部触发条件的情况下，灯 LED1 亮 1 秒，灭 3 秒

连续按下 PH01 按钮 10 次，灯 LED2 亮，按下 PH02 按钮，灯 LED2 灭

实验三：跳转分支实验

按下试验箱上的 PH01 按钮，分支 2 上的 LED 灯 1、2、3 间隔一秒，依次点亮，分支 1 的状态不变，

抬起试验箱上的 PH01 按钮，分支 1 的 LED 灯 4、5、6 间隔一秒，依次点亮，分支 2 的状态不不变

实验四：数据处理功能实验

按下试验箱上按钮 PH03，LED 灯 1、2、6 亮，其余全灭

按下试验箱上按钮 PH02，LED 灯 2、3、4 亮，其余全灭

按下试验箱上按钮 PH01，LED 灯 6、4、5 亮，其余全灭

可编程控制器原理及应用

交通灯控制实验

要求：启动开关合上

0—1s，南北红灯亮，东西红灯亮

1—4s，南北红灯亮，东西绿灯亮

4—5s，南北红灯亮，东西黄灯亮

5—6s，南北红灯亮，东西红灯亮

6—9s，南北绿灯亮，东西红灯亮

9—10s，南北黄灯亮，东西红灯亮

循环

综合实验

LED灯闪烁实验

要求：PLC上电后，LED1和LED3灯亮，其余灭

1s后，　LED2和LED4灯亮，其余灭

1s后，　LED3和LED5灯亮，其余灭

1s后，　LED4和LED6灯亮，其余灭

1s后，　LED5和LED7灯亮，其余灭

1s后，　LED6和LED8灯亮，其余灭

循环