

快速使用手册

**EtherNet/IP 接口编码器**



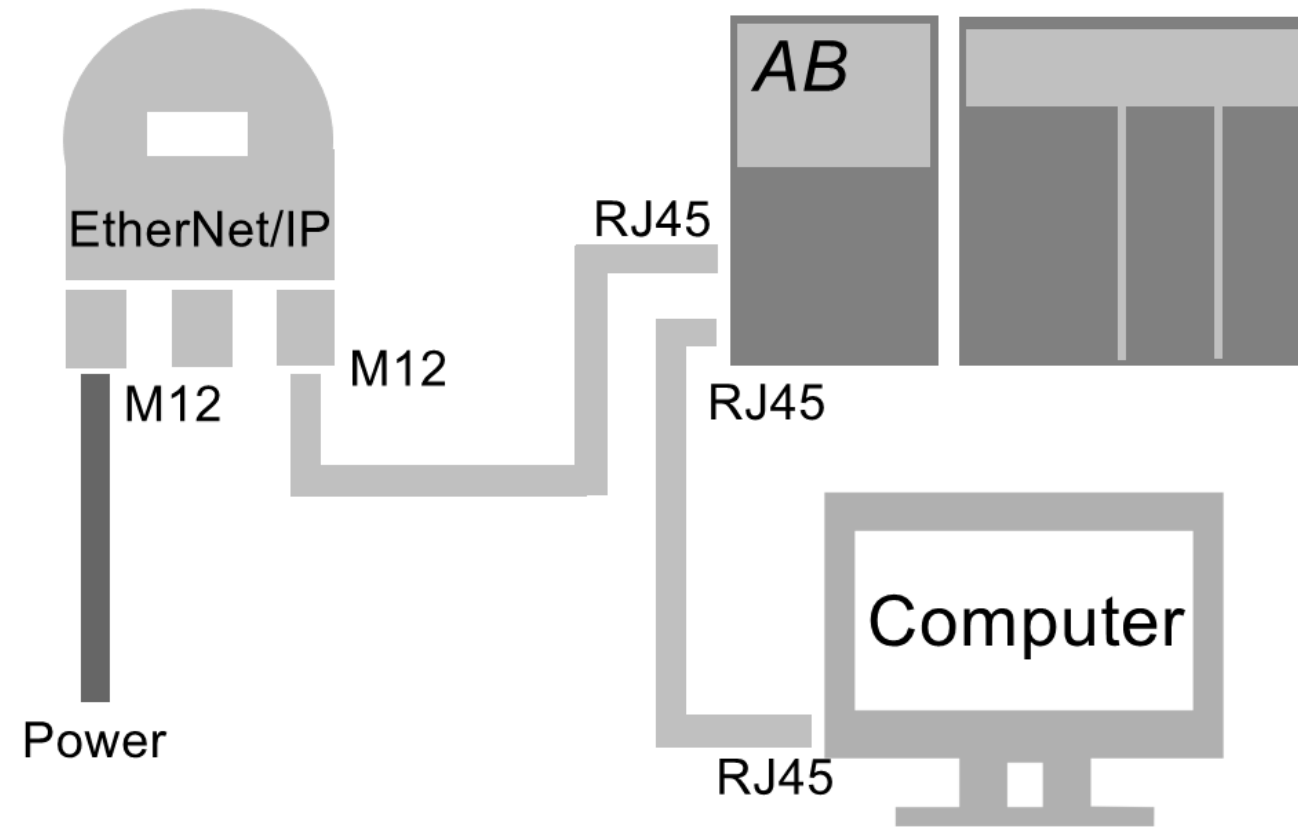
▶ 样品: **OCD-EEA1B-1213-C100-PRM**

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## ETHERNET/IP 编码器快速使用手册

### 1. 硬件连接



## ETHERNET/IP 编码器快速使用手册

Products > Absolute Encoders > Absolute Encoder Finder

IXARC Absolute Rotary Encoder

OCD-EEA1B-1213-C100-PRM



### Downloads

- Datasheet
- 2D Drawing
- Manual
- Configuration File
- Tools
- 3D Drawing Flange
- 3D Drawing Housing
- Project
- CE Certificate
- UL Certificate
- Certificate
- ISO Certificate

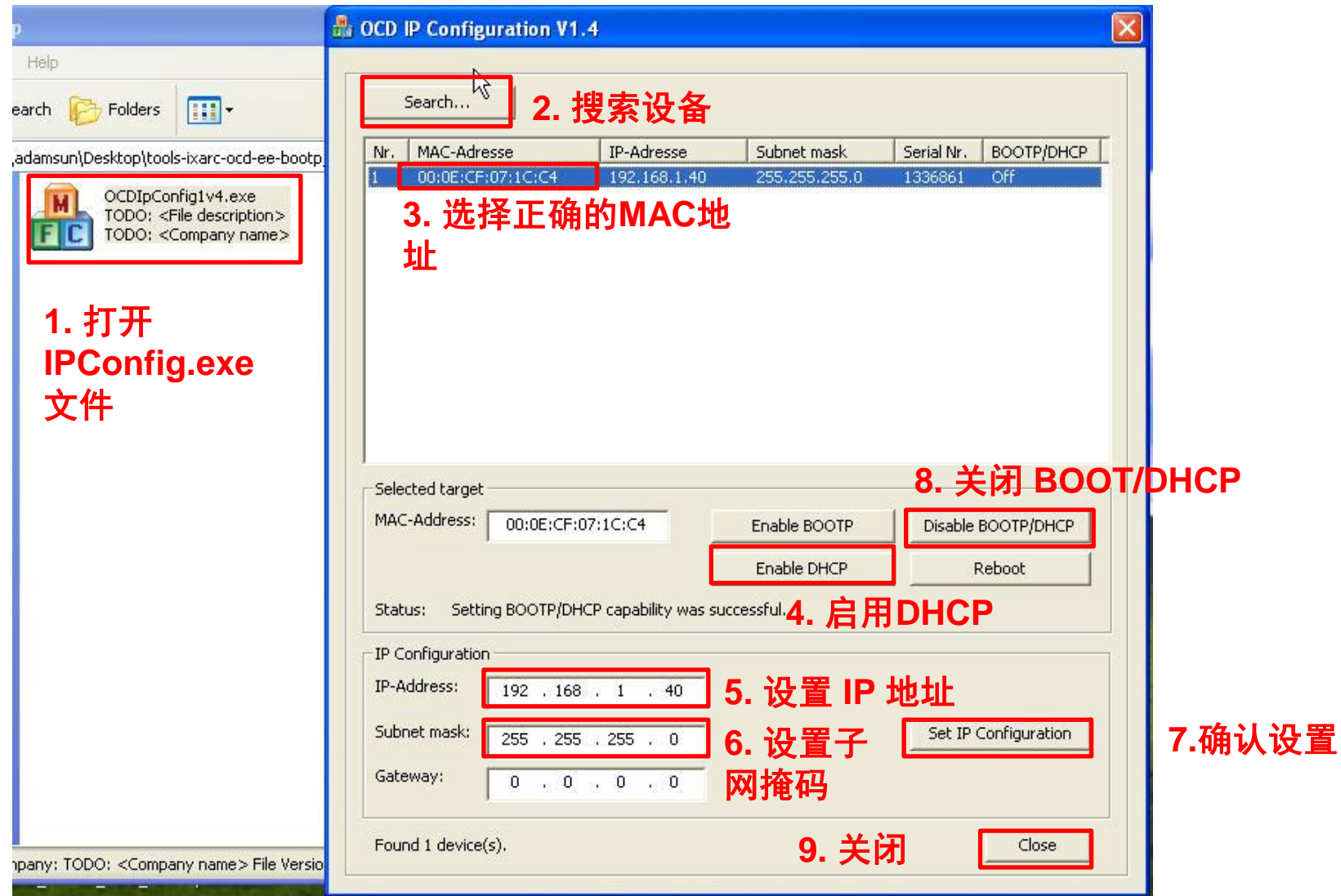
EDS文件

工具

1. 通过连接母头M12，通上电源(电压10~30VDC)
2. 通过连接母头M12连接编码器到PLC
3. 通过RJ45电缆连接PLC和计算机
4. 启动ControlLogix5563
5. 你的电脑上安装EDS，RSNetWorx, RSLogix 5000
6. 在我们的网站上，下载EDS文件和配置工具

## ETHERNET/IP 编码器快速使用手册

### 2. 设置IP地址



The screenshot shows the 'OCD IP Configuration V1.4' window. On the left, a file explorer shows 'OCDIpConfig1v4.exe' selected. The main window has a search bar at the top, a table of devices, and configuration fields for MAC address, IP address, subnet mask, and gateway. Buttons for 'Enable BOOTP', 'Disable BOOTP/DHCP', 'Enable DHCP', 'Reboot', and 'Set IP Configuration' are visible. A status message indicates 'Setting BOOTP/DHCP capability was successful.' A 'Close' button is at the bottom right.

1. 打开 IPConfig.exe 文件

2. 搜索设备

Nr.	MAC-Adresse	IP-Adresse	Subnet mask	Serial Nr.	BOOTP/DHCP
1	00:0E:CF:07:1C:C4	192.168.1.40	255.255.255.0	1336861	Off

3. 选择正确的MAC地址

4. 启用DHCP

5. 设置IP地址

6. 设置子网掩码

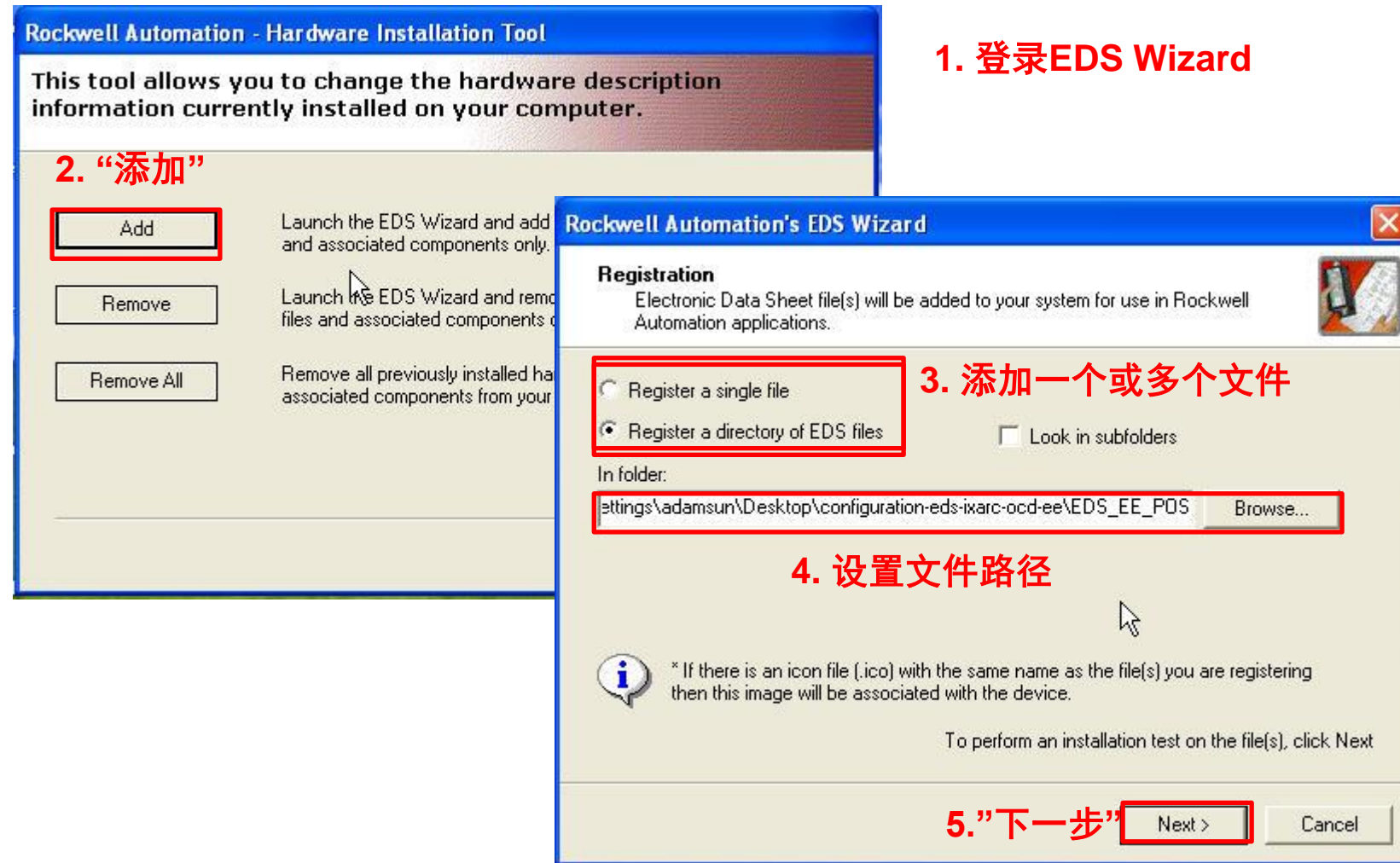
7. 确认设置

8. 关闭BOOT/DHCP

9. 关闭

## ETHERNET/IP 编码器快速使用手册

### 3. 载入EDS file



**1. 登录EDS Wizard**

**2. “添加”**

**3. 添加一个或多个文件**

**4. 设置文件路径**

**5. “下一步”**

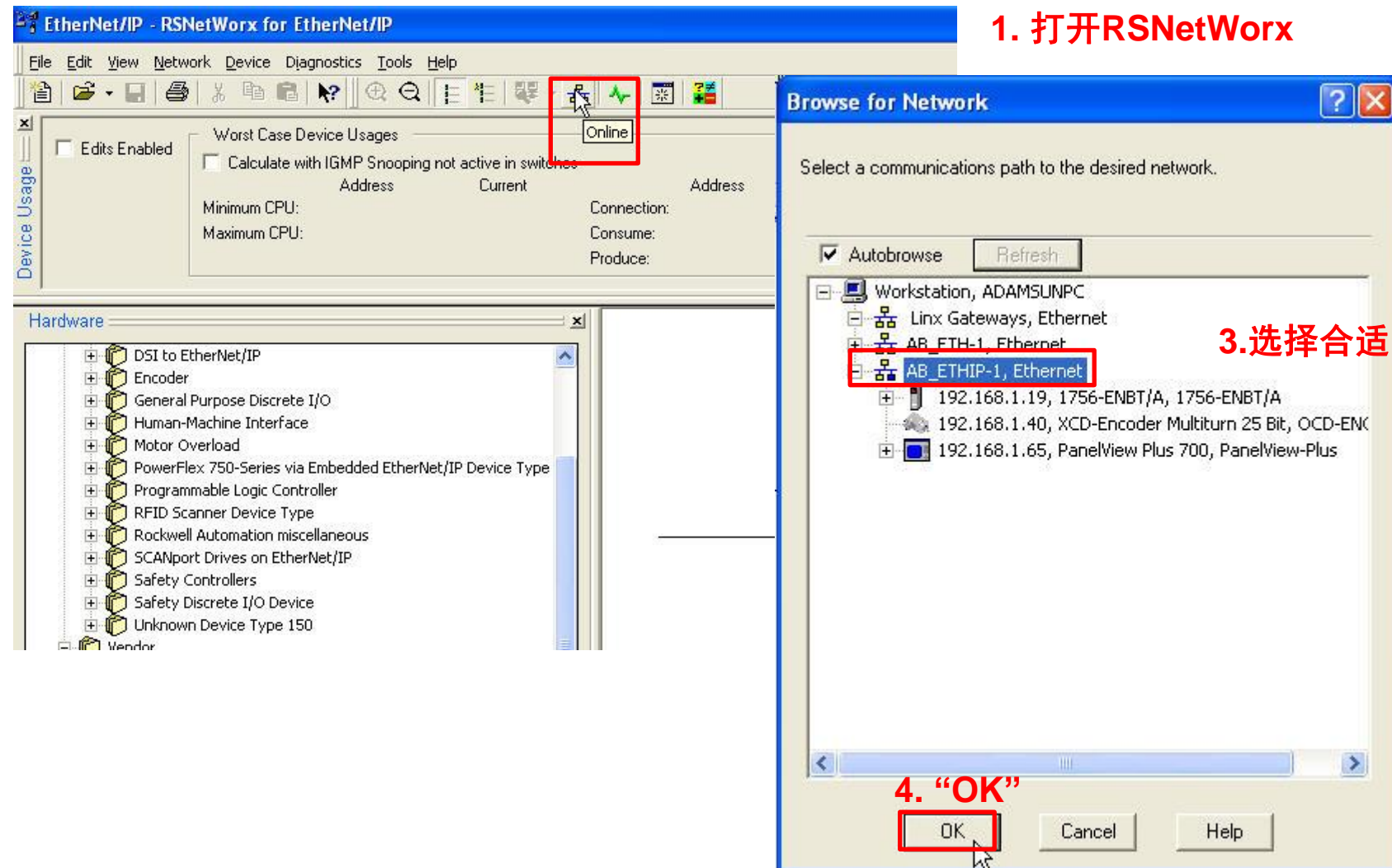
The image shows two overlapping windows from the Rockwell Automation software. The background window is titled "Rockwell Automation - Hardware Installation Tool" and contains three buttons: "Add", "Remove", and "Remove All". The "Add" button is highlighted with a red box. The foreground window is titled "Rockwell Automation's EDS Wizard" and is in the "Registration" step. It has two radio buttons: "Register a single file" and "Register a directory of EDS files", with the second one selected and highlighted by a red box. Below these is a text field for the folder path, containing "ettings\adamsun\Desktop\configuration-eds-ixarc-ocd-ee\EDS\_EE\_POS", which is also highlighted by a red box. At the bottom of the wizard, the "Next >" button is highlighted with a red box.

## ETHERNET/IP 编码器快速使用手册

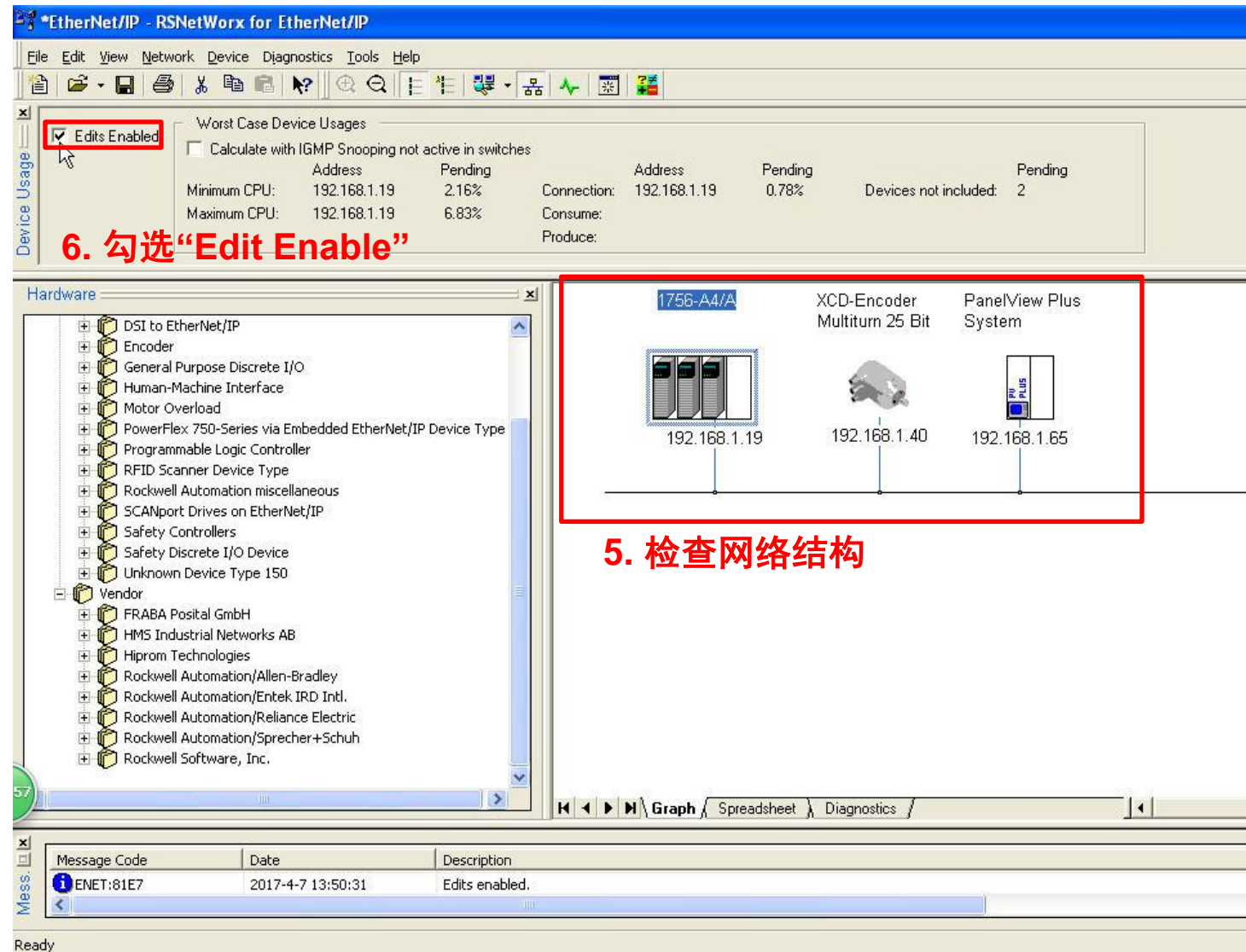
### 4. 建立网络

2. 点击“Online”

1. 打开RSNetWorx



## ETHERNET/IP 编码器快速使用手册



The screenshot shows the RSNetWorx for EtherNet/IP software interface. The top menu bar includes File, Edit, View, Network, Device, Diagnostics, Tools, and Help. The toolbar contains various icons for file operations and network management.

**6. 勾选“Edit Enable”**

In the "Device Usage" panel, the "Edits Enabled" checkbox is checked and highlighted with a red box. Below it, the "Worst Case Device Usages" section shows a table with columns for Address, Pending, Connection, and Produce. The table contains data for Minimum CPU and Maximum CPU at address 192.168.1.19, with pending values of 2.16% and 6.83% respectively. A note indicates "Calculate with IGMP Snooping not active in switches" and "Devices not included: 2".

**5. 检查网络结构**

The "Hardware" tree on the left lists various device types, including Encoder, General Purpose Discrete I/O, Human-Machine Interface, Motor Overload, PowerFlex 750-Series via Embedded EtherNet/IP Device Type, Programmable Logic Controller, RFID Scanner Device Type, Rockwell Automation miscellaneous, SCANport Drives on EtherNet/IP, Safety Controllers, Safety Discrete I/O Device, and Unknown Device Type 150. The "Vendor" list includes FRABA Posital GmbH, HMS Industrial Networks AB, Hiprom Technologies, Rockwell Automation/Allen-Bradley, Rockwell Automation/Entek IRD Intl., Rockwell Automation/Reliance Electric, Rockwell Automation/Sprecher+Schuh, and Rockwell Software, Inc.

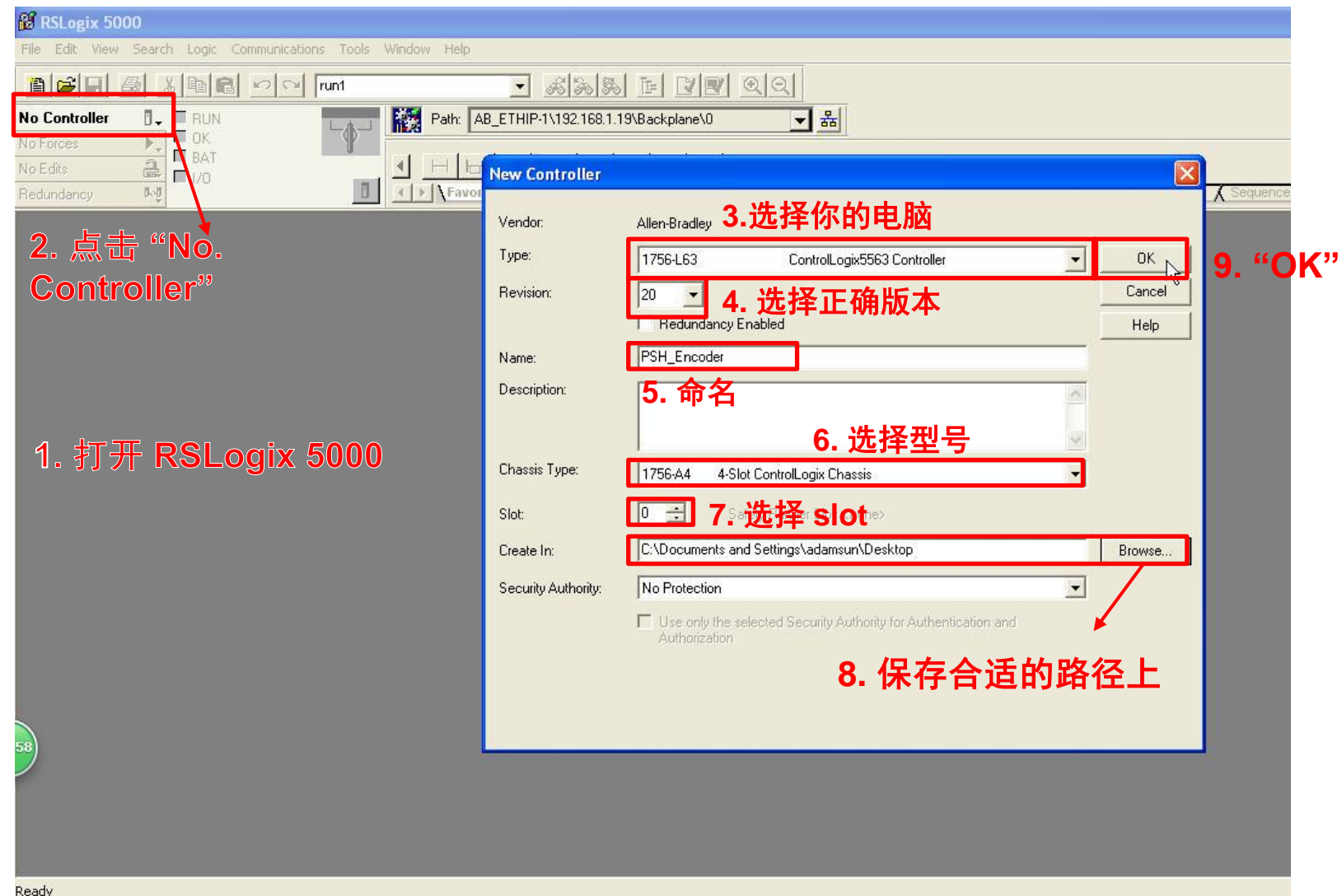
The main workspace displays a network diagram with three devices connected to a central bus:

- 1756-A4/A (DSI to EtherNet/IP) at IP 192.168.1.19
- XCD-Encoder Multitum 25 Bit at IP 192.168.1.40
- PanelView Plus System at IP 192.168.1.65

The diagram is highlighted with a red box. The bottom status bar shows "Graph", "Spreadsheet", and "Diagnostics" tabs. The message log at the bottom shows a message with code ENET:81E7, date 2017-4-7 13:50:31, and description "Edits enabled."

## ETHERNET/IP 编码器快速使用手册

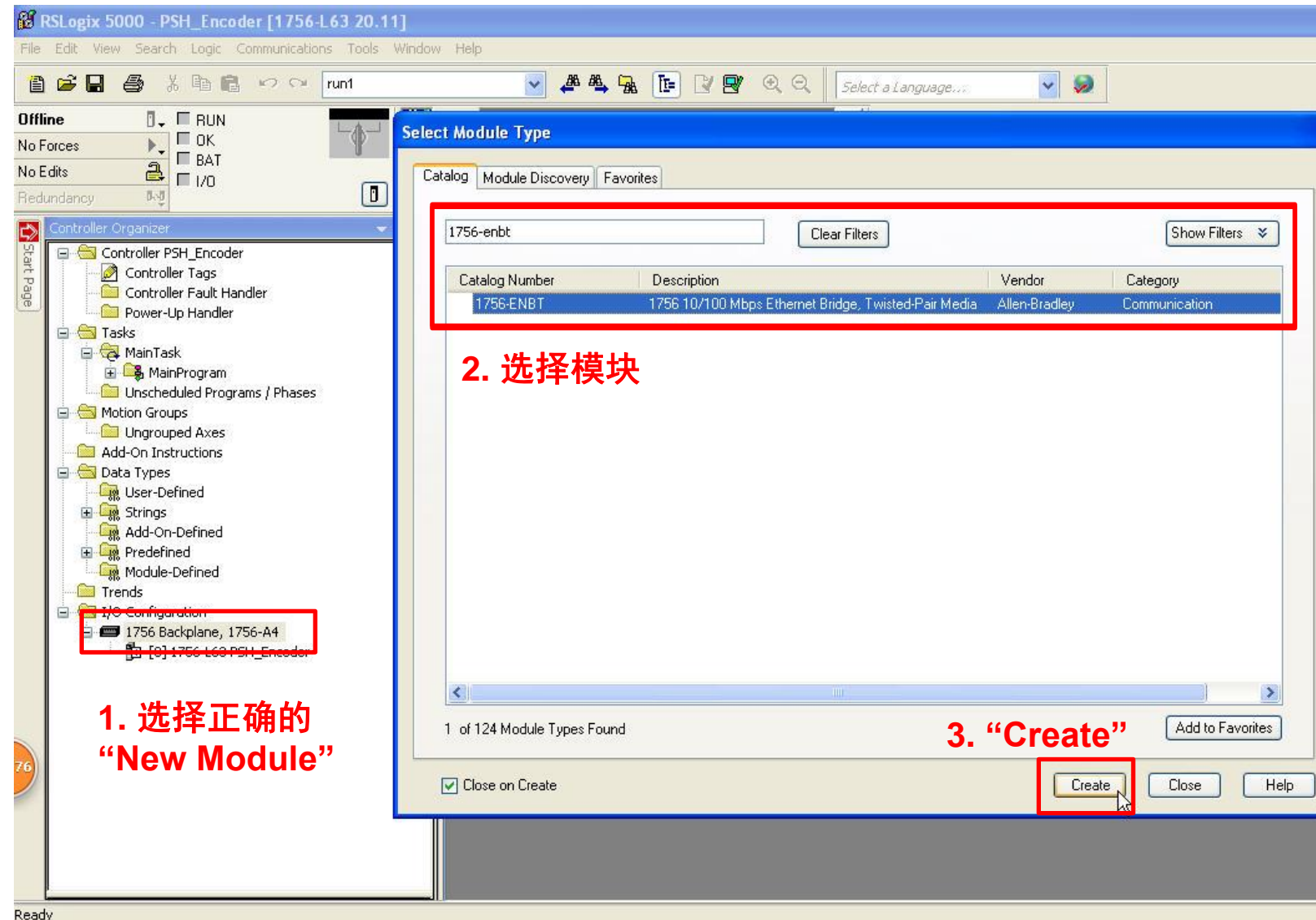
### 5. 建立新的控制器





## ETHERNET/IP 编码器快速使用手册

### 6. 创建一个新的以太网模块

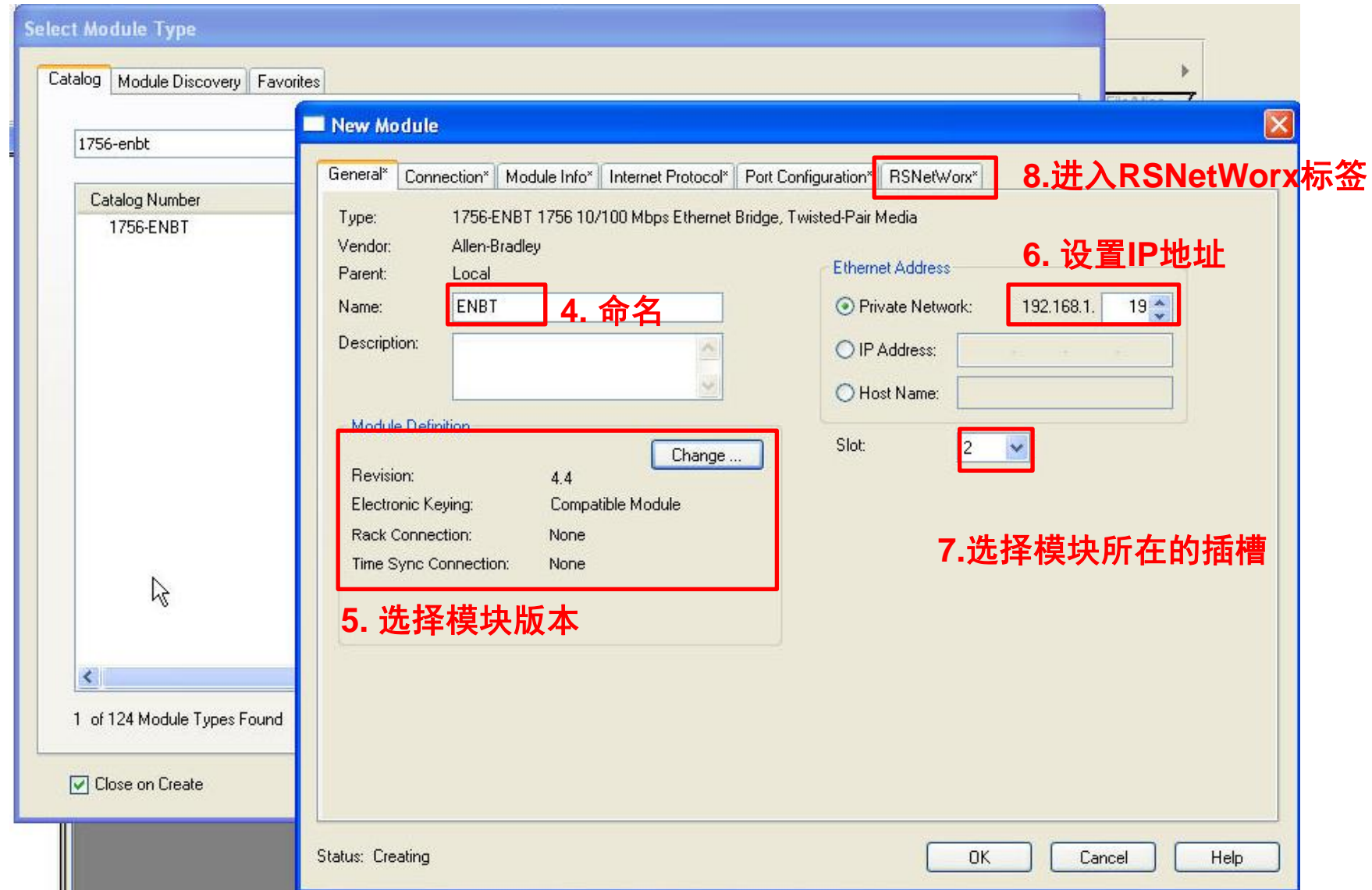


The screenshot shows the RSLogix 5000 software interface. On the left, the 'Controller Organizer' tree is visible, with '1756 Backplane, 1756-A4' highlighted. The main window displays the 'Select Module Type' dialog box. The search criteria '1756-enbt' is entered in the search field. The search results table is as follows:

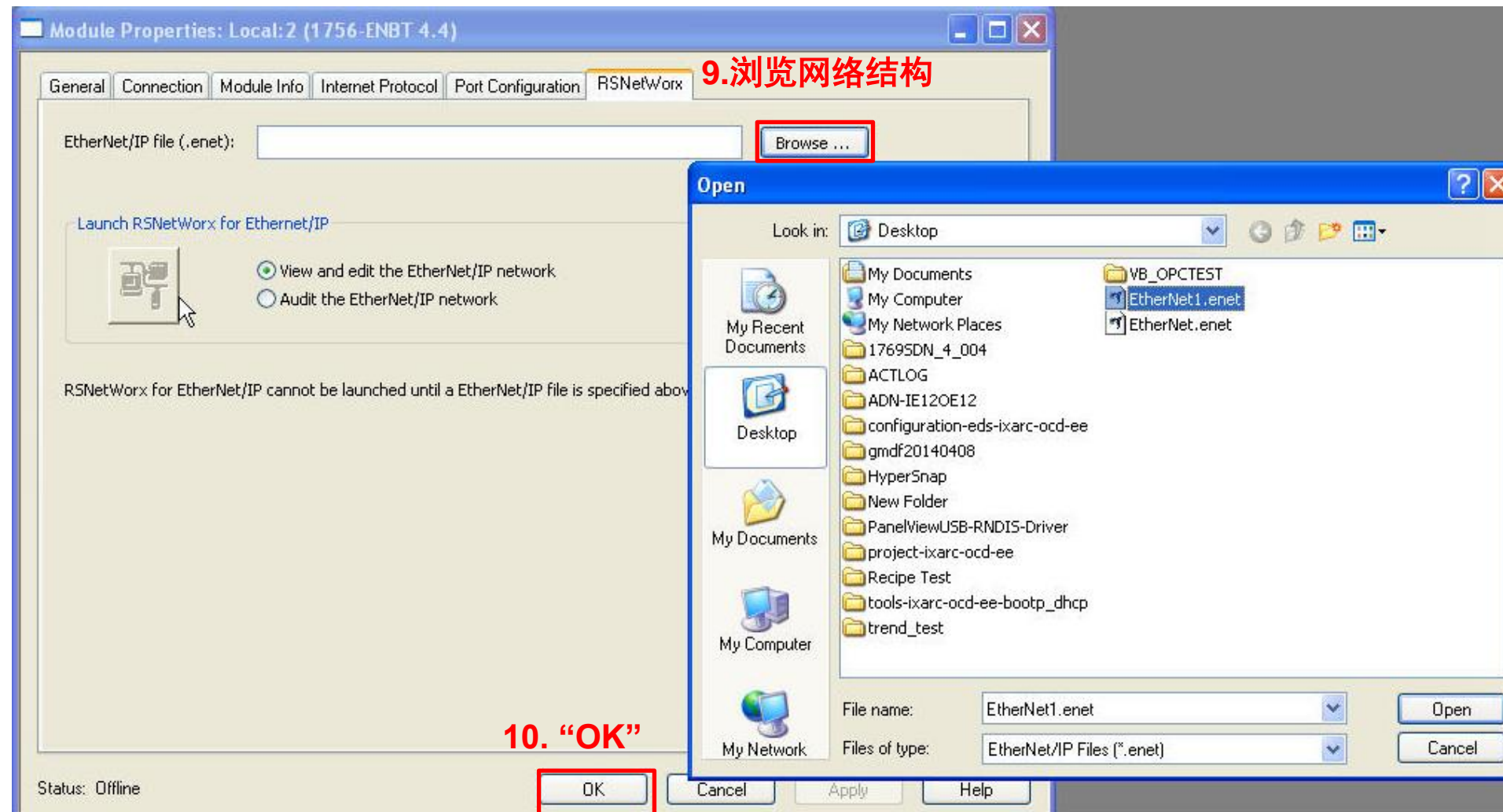
Catalog Number	Description	Vendor	Category
1756-ENBT	1756 10/100 Mbps Ethernet Bridge, Twisted-Pair Media	Allen-Bradley	Communication

The 'Create' button at the bottom of the dialog box is highlighted with a red box. The text '1. 选择正确的“New Module”' is placed near the Controller Organizer, '2. 选择模块' is placed near the search results, and '3. “Create”' is placed near the 'Create' button.

## ETHERNET/IP 编码器快速使用手册

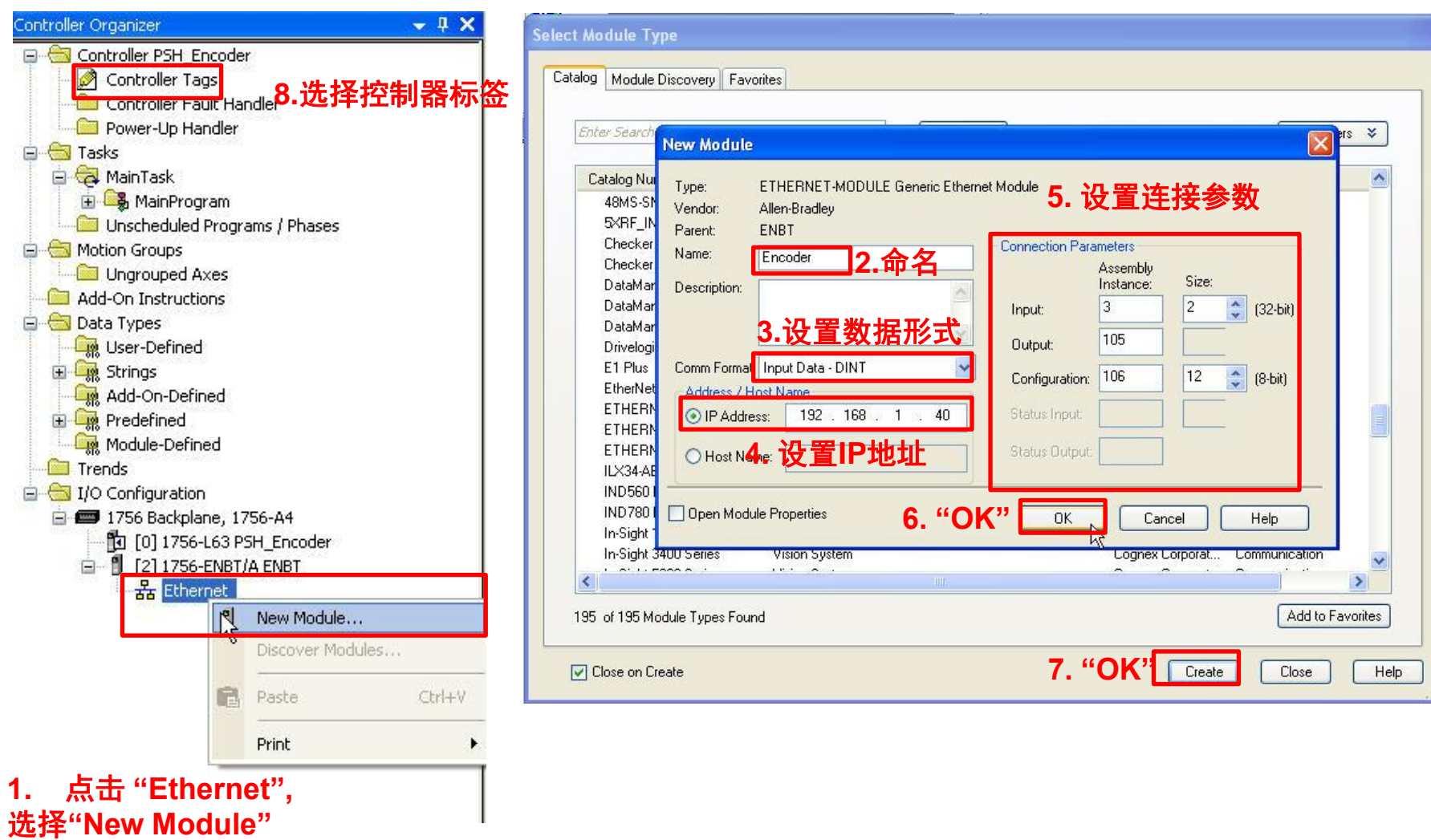


## ETHERNET/IP 编码器快速使用手册



## ETHERNET/IP 编码器快速使用手册

### 7. 创建一个新的以太网编码器模块



**1. 点击“Ethernet”，选择“New Module”**

**2. 命名**

**3. 设置数据形式**

**4. 设置IP地址**

**5. 设置连接参数**

**6. “OK”**

**7. “OK”**

**8. 选择控制器标签**

## ETHERNET/IP 编码器快速使用手册

Scope: PSH\_Encoder Show: All Tags

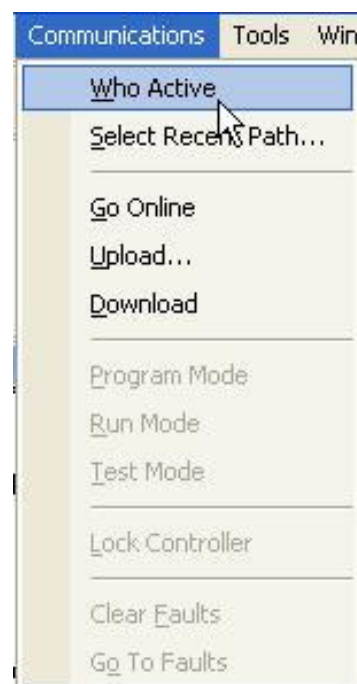
Name	Value	Force Mask	Style	Data Type	Description
Encoder:C	{...}	{...}		AB:ETHERNET_MODULE:C:0	
Encoder:C.Data	{...}	{...}	Hex	SINT[400]	
+ Encoder:C.Data[0]	16#00		Hex	SINT	Direction Counting Toggle
+ Encoder:C.Data[1]	16#00		Hex	SINT	Scaling Function Control
+ Encoder:C.Data[2]	16#00		Hex	SINT	Measuring Units per Span byte 0 (LSB)
+ Encoder:C.Data[3]	16#00		Hex	SINT	Measuring Units per Span byte 1
+ Encoder:C.Data[4]	16#00		Hex	SINT	Measuring Units per Span byte 2
+ Encoder:C.Data[5]	16#00		Hex	SINT	Measuring Units per Span byte 3 (MSB)
+ Encoder:C.Data[6]	16#00		Hex	SINT	Total Measuring byte 0 (LSB)
+ Encoder:C.Data[7]	16#00		Hex	SINT	Total Measuring byte 1
+ Encoder:C.Data[8]	16#00		Hex	SINT	Total Measuring byte 2
+ Encoder:C.Data[9]	16#00		Hex	SINT	Total Measuring byte 3
+ Encoder:C.Data[10]	16#00		Hex	SINT	Velocity 0 (LSB)
+ Encoder:C.Data[11]	16#00		Hex	SINT	Velocity 1 (MSB)
+ Encoder:C.Data[12]	16#00		Hex	SINT	
+ Encoder:C.Data[13]	16#00		Hex	SINT	
+ Encoder:C.Data[14]	16#00		Hex	SINT	
+ Encoder:C.Data[15]	16#00		Hex	SINT	
+ Encoder:C.Data[16]	16#00		Hex	SINT	
+ Encoder:C.Data[17]	16#00		Hex	SINT	
+ Encoder:C.Data[18]	16#00		Hex	SINT	
+ Encoder:C.Data[19]	16#00		Hex	SINT	
+ Encoder:C.Data[20]	16#00		Hex	SINT	
+ Encoder:C.Data[21]	16#00		Hex	SINT	
+ Encoder:C.Data[22]	16#00		Hex	SINT	

Monitor Tags / Edit Tags

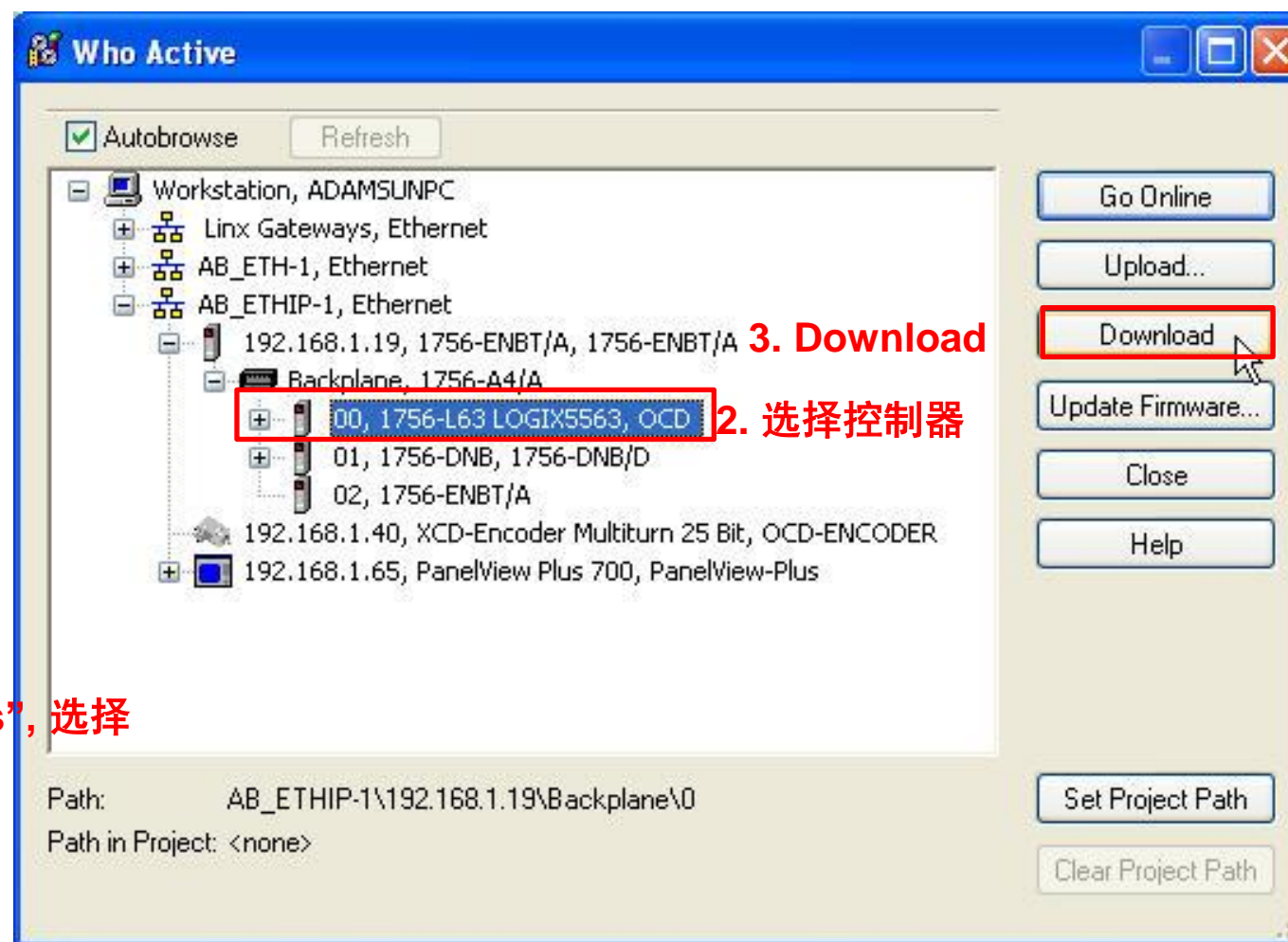
### 9.控制标签及其定义

## ETHERNET/IP 编码器快速使用手册

### 8. 下载配置

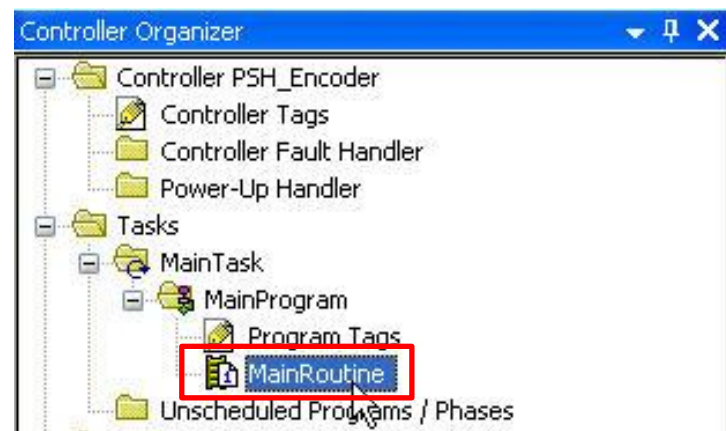
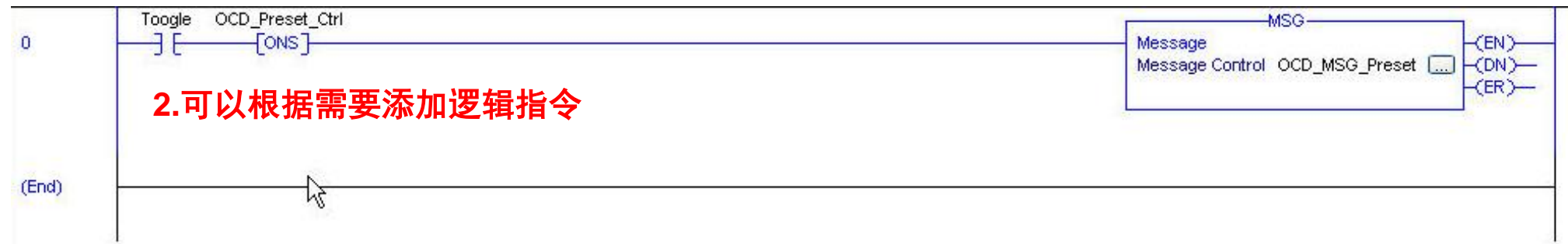


1. 点击“Communications”，选择  
“Who Active”

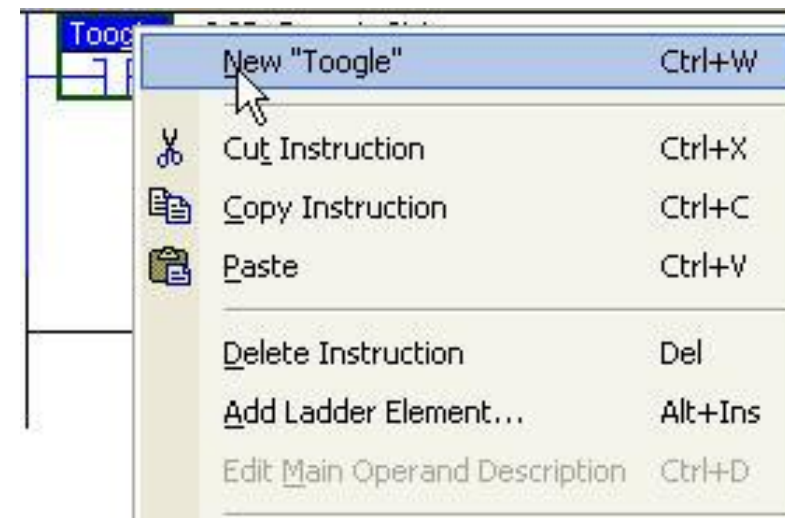


## ETHERNET/IP 编码器快速使用手册

### 9. 位置数据读取和复位



1. 选择“Main Routine”



3. 在“Toogle”，添加“New Toogle”

## ETHERNET/IP 编码器快速使用手册



**New Tag**

Name:

Description:

Usage:

Type:

Alias For:

Data Type:

Scope:

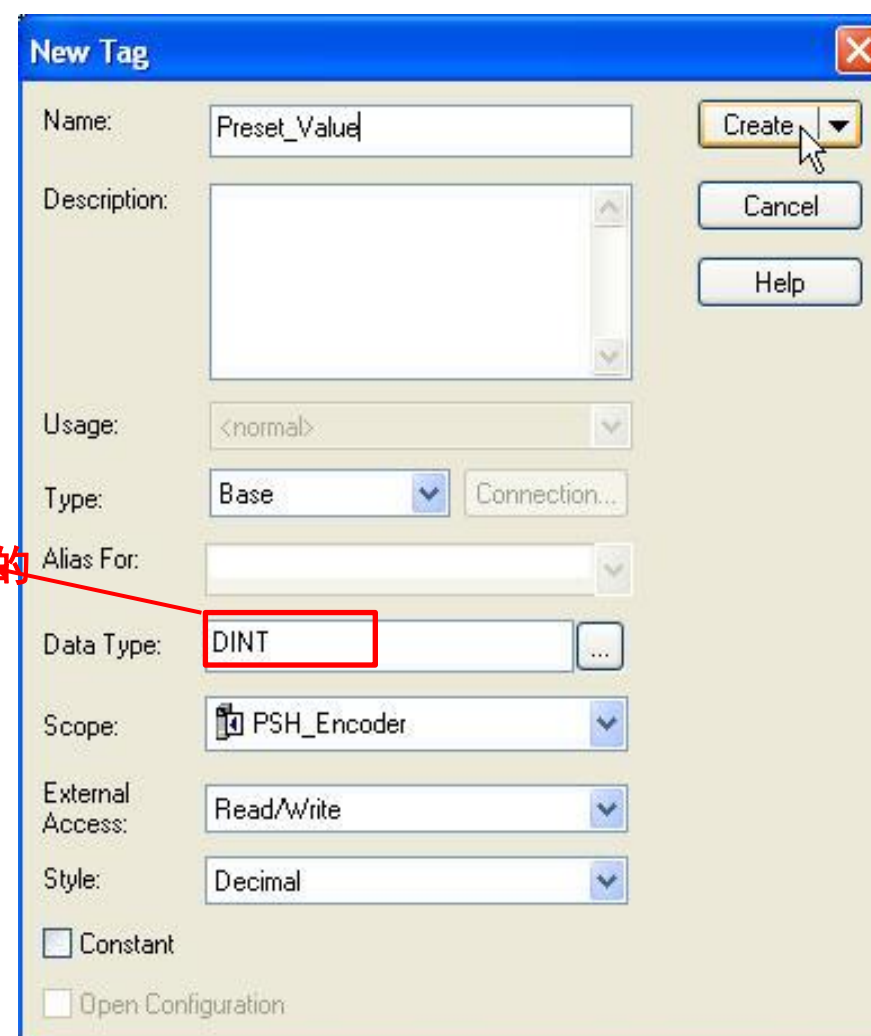
External Access:

Style:

Constant

Open MESSAGE Configuration

4. 创建OCD\_MSG\_Preset



**New Tag**

Name:

Description:

Usage:

Type:

Alias For:

Data Type:

Scope:

External Access:

Style:

Constant

Open Configuration

5. 创建一个Preset\_Value标签

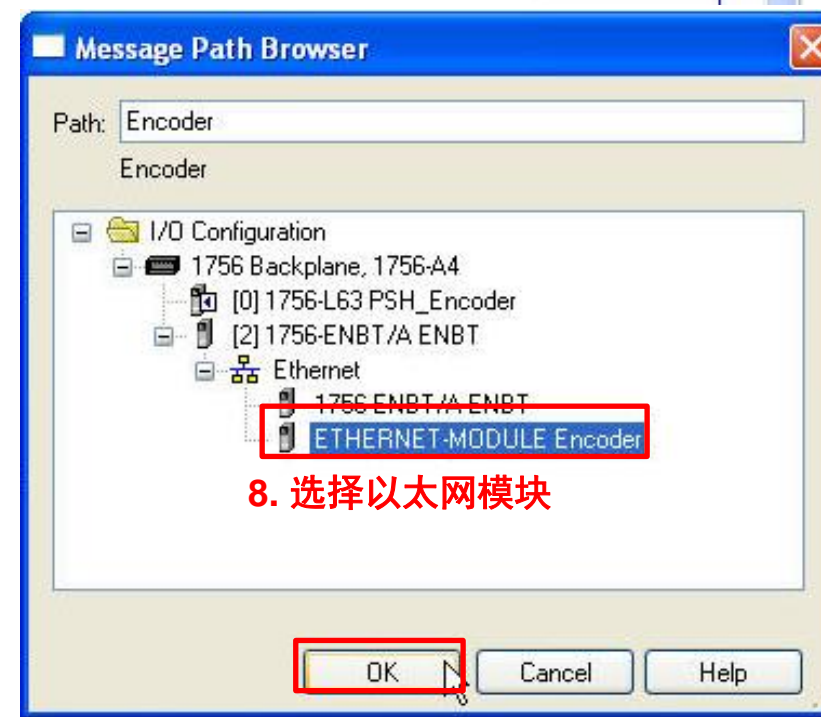
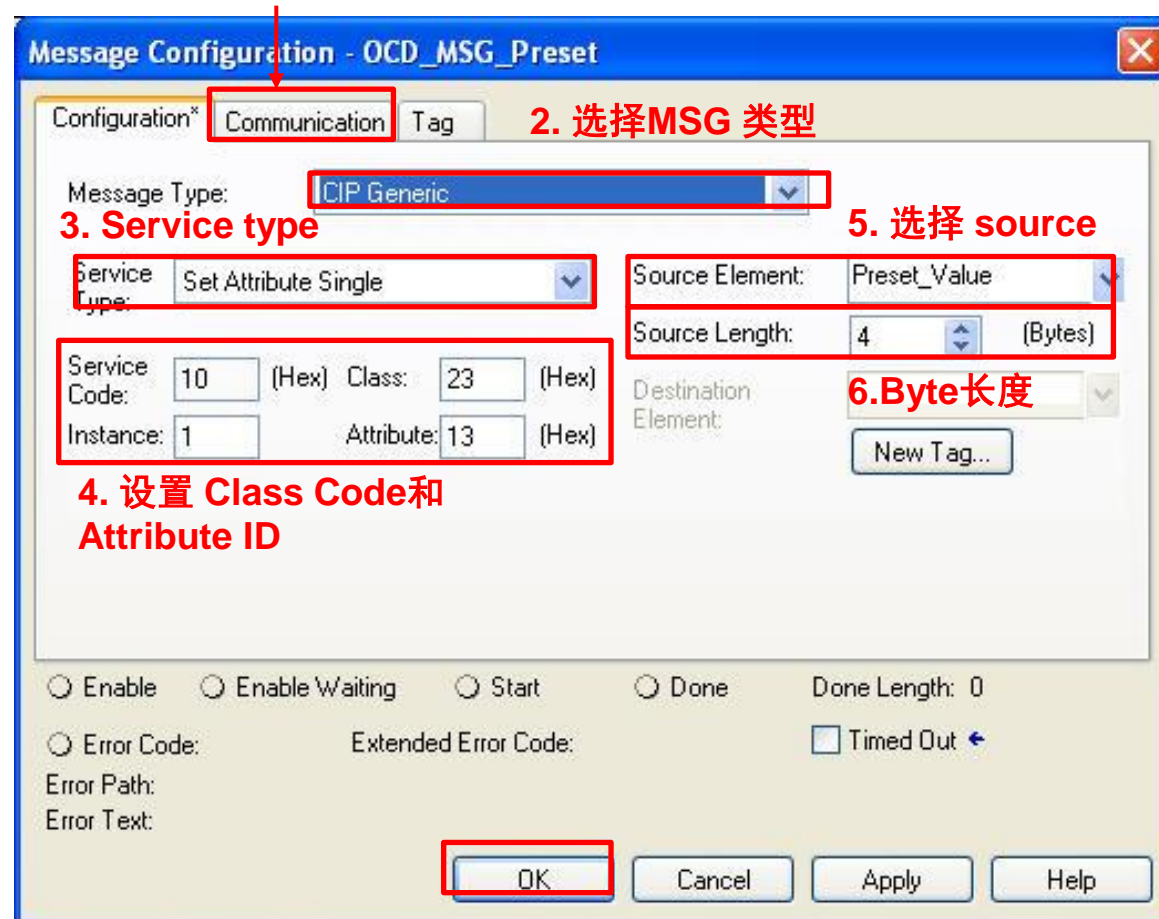
确保选择了正确的数据类型



## ETHERNET/IP 编码器快速使用手册

### 10. 配置OCD\_MSG\_Preset

7. 切换到“Communication”



## ETHERNET/IP 编码器快速使用手册

### 11. 读取位置值

Name	Value	Force Mask	Style	Data Type
Encoder:C	{...}	{...}		AB:ETHERNET_MODULE:C:0
+ Encoder:C.Data	{...}	{...}	Hex	SINT[400]
Encoder:I	{...}	{...}		AB:ETHERNET_MODULE_DIN...
- Encoder:I.Data	{...}	{...}	Decimal	DINT[2]
+ Encoder:I.Data[0]	43302		Decimal	DINT
+ Encoder:I.Data[1]	0		Decimal	DINT
Toggle	0		Decimal	BOOL
OCD_Preset_Ctrl	0		Decimal	BOOL
+ OCD_MSG_Preset	{...}	{...}		MESSAGE
+ Preset_Value	0		Decimal	DINT

1. 位置数据

2. 速度数据

## ETHERNET/IP 编码器快速使用手册

### 12. 复值指令

3. 位置值被设置为复位值

2. 设置Toggle为1

Name	Value	Force Mask	Style	Data Type
Encoder:C	{...}	{...}		AB:ETHERNET_MODULE:C:0
Encoder:C.Data	{...}	{...}	Hex	SINT[400]
Encoder:I	{...}	{...}		AB:ETHERNET_MODULE_DIN...
Encoder:I.Data	{...}	{...}	Decimal	DINT[2]
Encoder:I.Data[0]	1000		Decimal	DINT
Encoder:I.Data[1]	0		Decimal	DINT
Toggle	1		Decimal	BOOL
OCD_Preset_Ctrl	1		Decimal	BOOL
OCD_MSG_Preset	{...}	{...}		MESSAGE
Preset_Value	1000		Decimal	DINT

1. 设置需要的复位值

## ETHERNET/IP 编码器快速使用手册

### 附录

#### 2.2.2 Position Sensor Objects

Instance Attributes (Get: read, Set: write + read)

Class Code: 23<sub>hex</sub>

Attrib. ID	Access	Name	Data Type	Description
01 <sub>hex</sub>	Get	Number of Attributes	USINT	Number of supported Attributes
02 <sub>hex</sub>	Get	Attribute List	Array of USINT	List of supported Attribute
0A <sub>hex</sub>	Get	Position Value Signed	DINT	Current position signed
0B <sub>hex</sub>	Get	Position Sensor Type	UINT	Specifies the device type
0C <sub>hex</sub>	Set	Direction Counting Toggle	Boolean	Controls the code sequence clockwise or counterclockwise
0E <sub>hex</sub>	Set	Scaling Function Control	Boolean	Scaling function on/off
10 <sub>hex</sub>	Set	Measuring units per Span	UDINT	Resolution for one revolution
11 <sub>hex</sub>	Set	Total Measuring Range in Measuring Units	UDINT	Total resolution
13 <sub>hex</sub>	Set	Preset Value	DINT	Setting a defined position value
18 <sub>hex</sub>	Get	Velocity Value	DINT	Current speed in format of attribute 19 <sub>hex</sub> and 2A <sub>hex</sub>
19 <sub>hex</sub>	Set	Velocity Format	ENGUINT	Format of the velocity attributes
29 <sub>hex</sub>	Get	Operating Status	BYTE	Encoder diagnostic operating status
2A <sub>hex</sub>	Get	Physical Resolution Span	UDINT	Resolution for one revolution
2B <sub>hex</sub>	Get	Number of Spans	UINT	Number of revolutions
33 <sub>hex</sub>	Get	Offset Value	DINT	Shift position value with the calculated value
64 <sub>hex</sub>	Set	Device Type	DINT	Encoder device = 22 <sub>hex</sub> Generic device = 0 (default)
65 <sub>hex</sub>	Set	Endless Shaft	DINT	Off = 0, On = 1, Auto = 2
66 <sub>hex</sub>	Set	Velocity Filter	DINT	Fine = 0, Middle = 1, Raw = 2

#### 1.目标位置地址

## ETHERNET/IP 编码器快速使用手册

### 2.1.3.1 Data Offset

Byte Offset	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
0	Direction Counting Toggle							
1	Scaling Function Control							
2	Measuring units per Revolution (low byte)							
3								
4								
5								
6	Total Measuring Range in measuring units (low byte)							
7	Total Measuring Range in measuring units (high byte)							
8								
9	Total Measuring Range in measuring units (high byte)							
10	Velocity Format (low byte)							
11	Velocity (high byte)							

## 2. 数据定义

### 4.1.6 Velocity Format

Default value for Velocity Format is steps per second. This parameter can be set with Configuration Assembly and Explicit Messaging.

Attribute ID	Default value	Value range	Data length
19 <sub>hex</sub>	1F04 <sub>hex</sub>	1F04 <sub>hex</sub>	Steps per second
		1F05 <sub>hex</sub>	Steps per millisecond
		1F06 <sub>hex</sub>	Steps per microsecond
		1F07 <sub>hex</sub>	Steps per minute
		1F0F <sub>hex</sub>	RPM

## 3. 速度单位

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