Connecting Rockwell (Allen-Bradley) PLC

Controllogix 5000 Series - DF1 Serial

Communication Setting Sample

GP Settings		PLC Settings	
Speed	19200 bps	Baud Rate *1	19200 bps
Data Length	8 bit	Data Bits *1	8 bit
Stop Bit	1 bit	Stop Bit *1	1 bit
Parity	Even	Parity *1	Even
Flow Control	ER (DTR/CTS)		
SIO Type	RS-232C		
Machine No.	0	Station Address *2	0
		Mode *1	System
		Control Line *1	No Handshake
		RTS Send Delay *1	0
		RTS Off Delay *1	0
		Protocol *2	DF1 Slave
		Transmit Retries *2	3
		Slave Poll Timeout *2	3000
		EOT Suppression *2	Not Checked
		Error Detection *2	BCC
		Enable Duplicate Detection *2	Not Checked (Disable)

*1 Set in the [Serial Port] menu of the ladder software RSLogix5000 by Rockwell.

*2 Set in the [System Protocol] menu of the ladder software RSLogix5000 by Rockwell.

Communication Settings [PLC]

Two programs are required for Controllogix PLC communication settings.

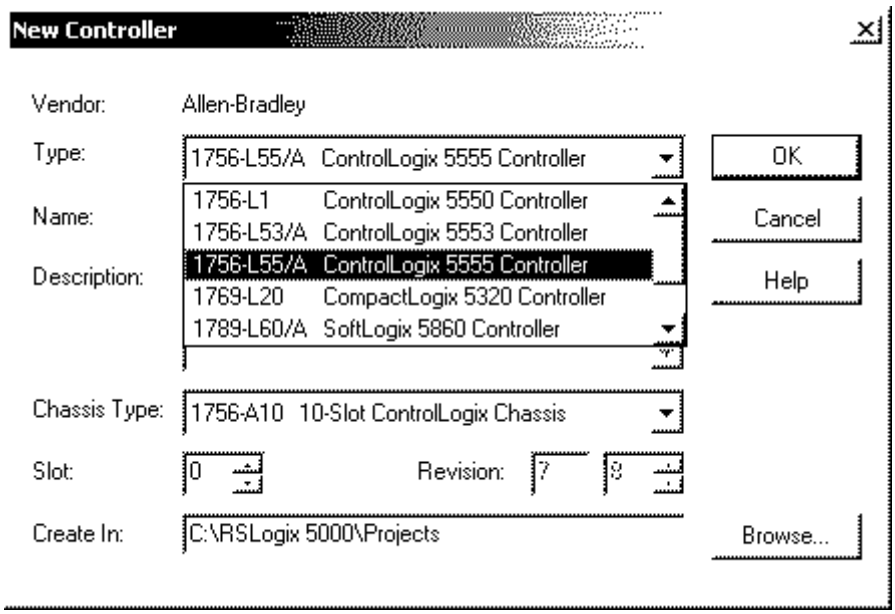
1. RSLinx – Software to connect PLC and PC with RSLogix5000 installed
   (Ver.2.41.00 is used in this sample.)
2. RSLogix5000 – Ladder Software (Ver.7.00.00 is used in this sample.)

* Communication Settings on RSLogix5000

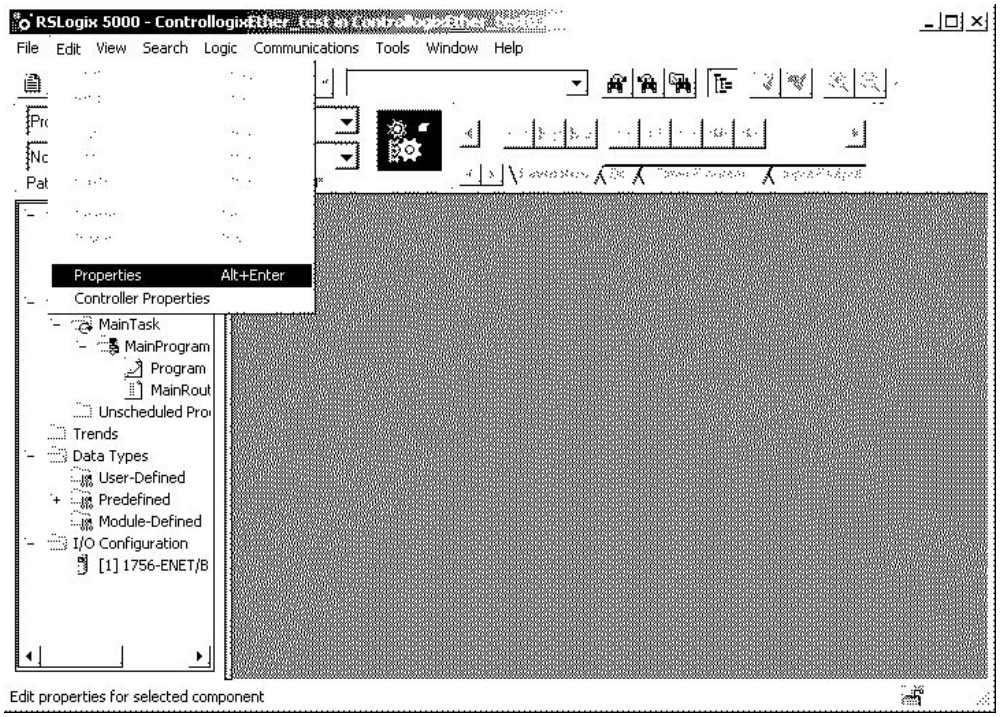
Please connect PLC and PC with RSLinx before creating a ladder. (Contact Rockwell Automation, Inc. for more details.)

1) Start up RSLogix5000.

If it is a new project, select [File] --> [New…] and set the CPU type.

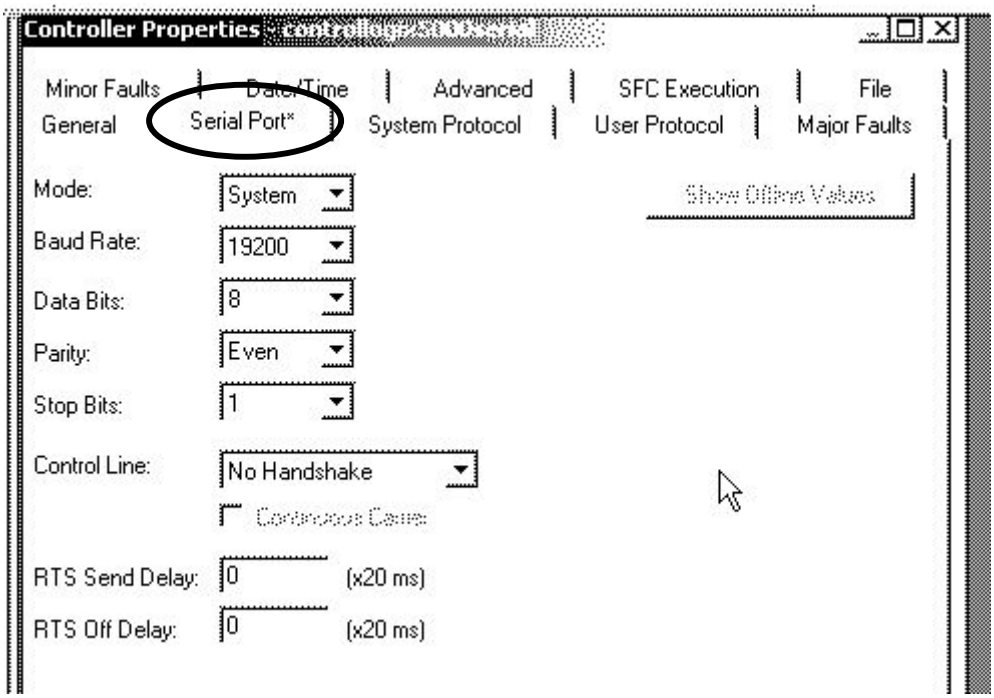


If it is an existing project, select [Edit] --> [Properties].



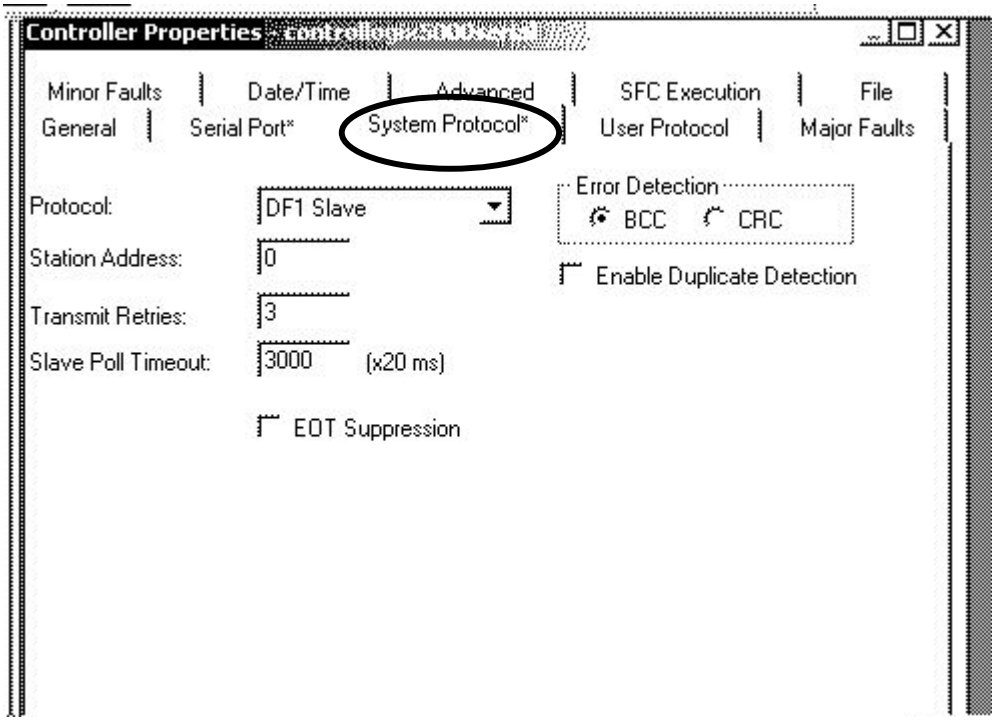
The [Controller Properties] window will appear.

2) Select the [Serial Port] tab and set as below.



Mode:	System
Baud Rate:	19200 bps
Data Bits:	8 bit
Parity:	Even
Stop Bit:	1 bit
Control Line:	No Handshake
RTS Send Delay:	0
RTS Off Delay:	0

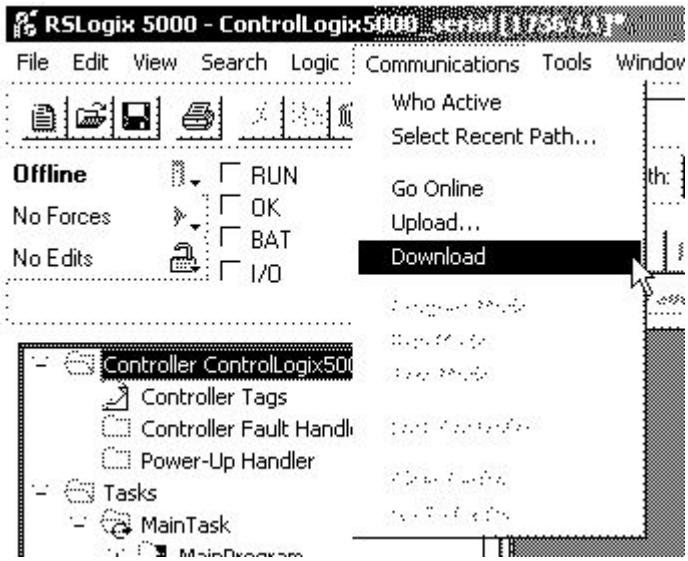
3) Select the [System Protocol] tab and set the communication settings as below.



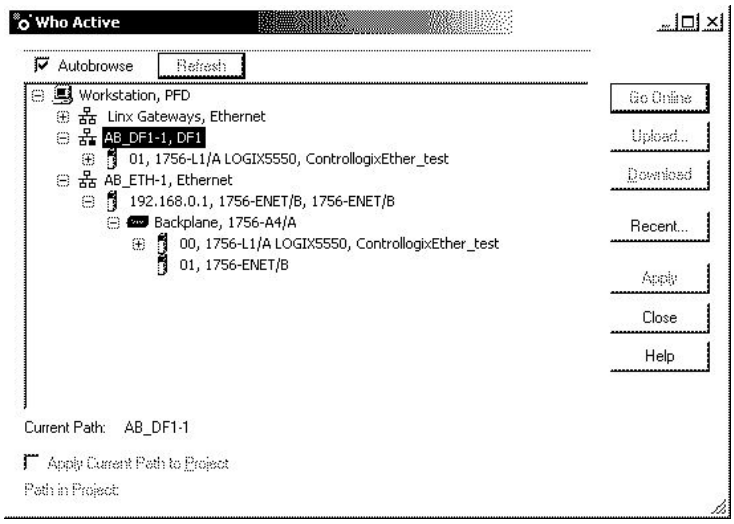
Protocol:	DF1 Slave
Station Address:	0
Transmit Retries:	3
Slave Poll Timeout:	3000
EOT Suppression:	Not Checked
Error Detection:	BCC

4) Download the serial port communication settings.

Select [Communications] --> [Download] to download the communication settings.



The PLC communication settings are here completed. Please confirm that CPU is recognized on RSLogix before downloading the project.

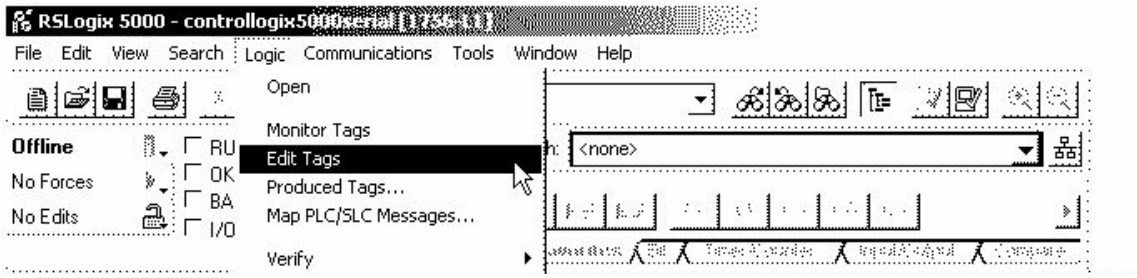


(Screen of RSLinx / Who Active)

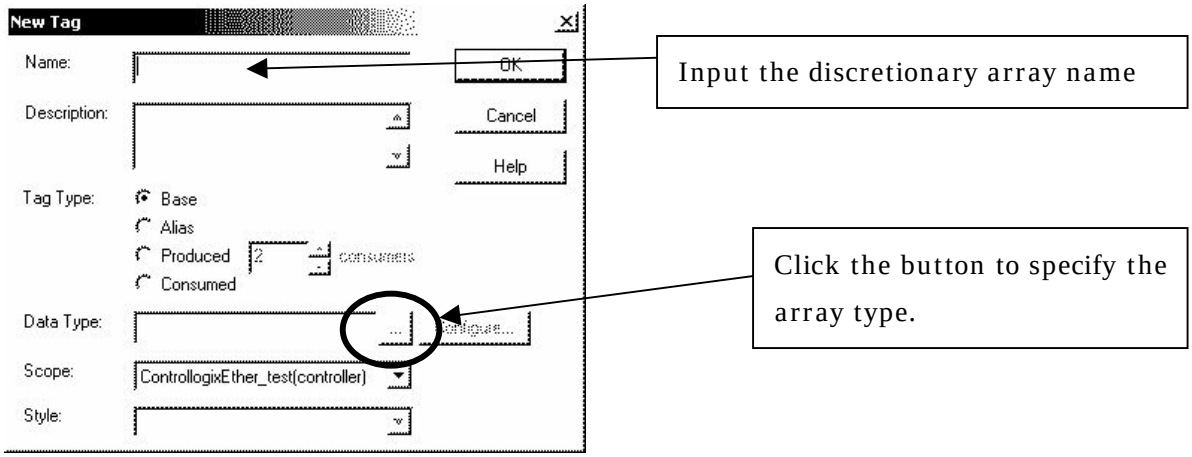
Assigning Devices

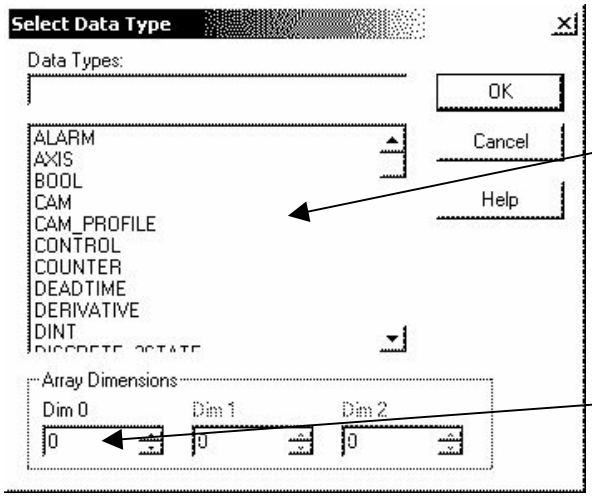
With Rockwell PLC, the required arrays and number of elements are assigned on RSLogix5000. If you connect it with GP/GLC without assigning here, a host communication error will occur.

Select [Logic] to create arrays and the number of elements.



A bar to set arrays will appear. Then right- click [Edit Tag Properties].

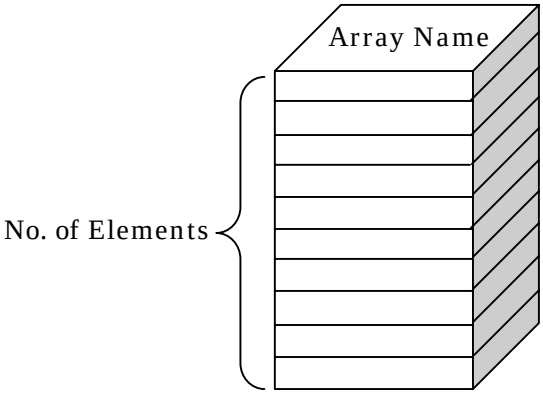




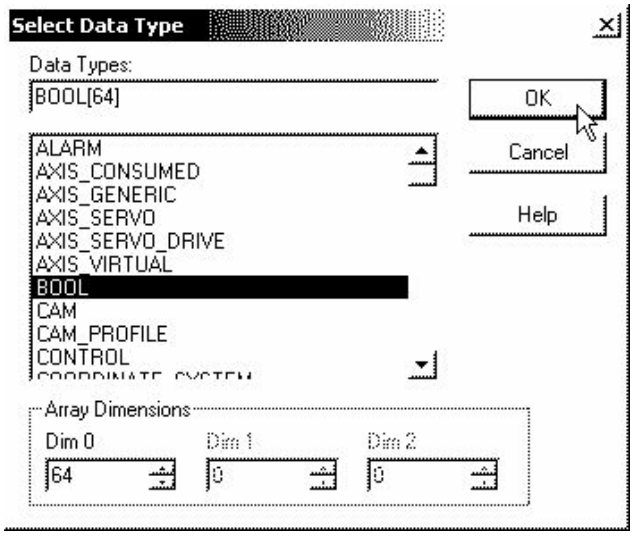
Select BOOL, SINT, INT, DINT, OR REAL for the array type.

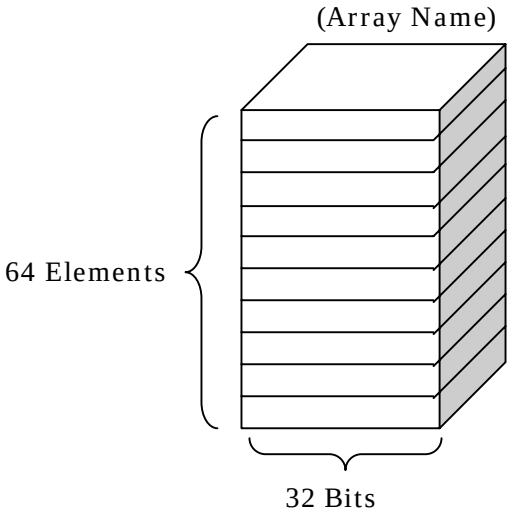
Specify the number of elements.
* Dimension 1 and Dimension 2 are not supported by GP-PRO PB/III. Do not use

By the above settings, the following array will be made.

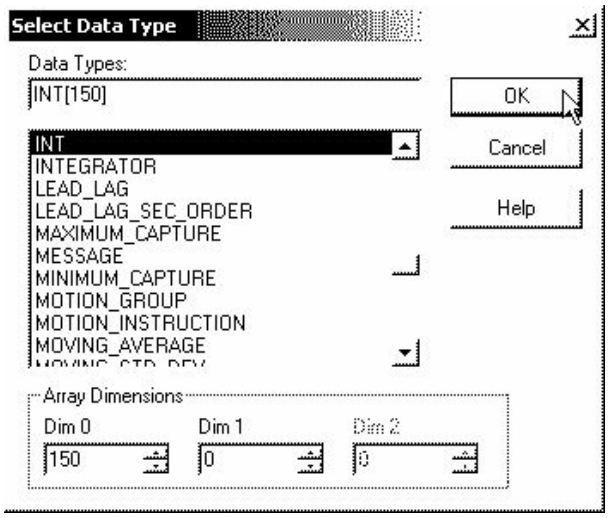


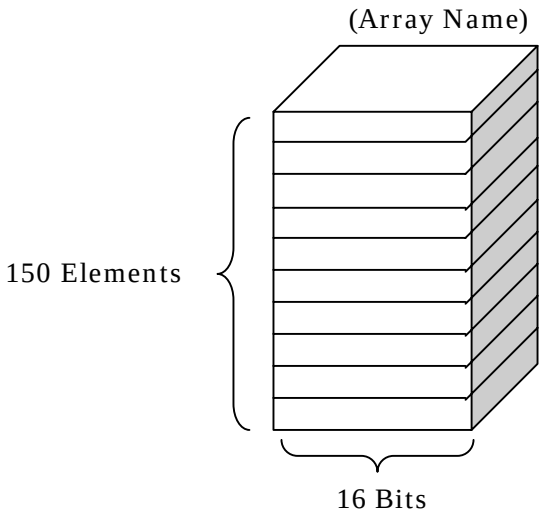
[e.g.; Specifying BOOL]



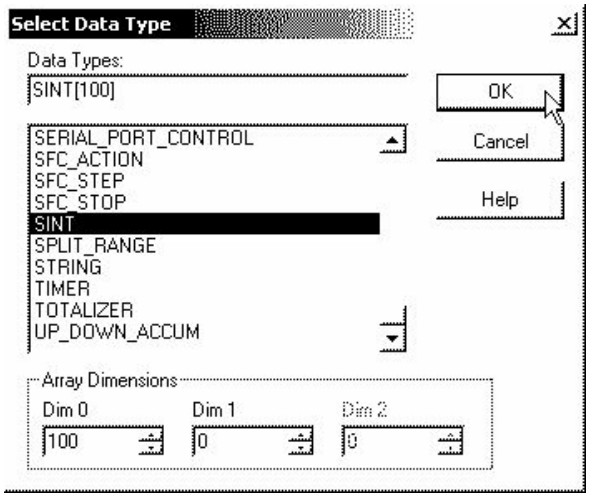


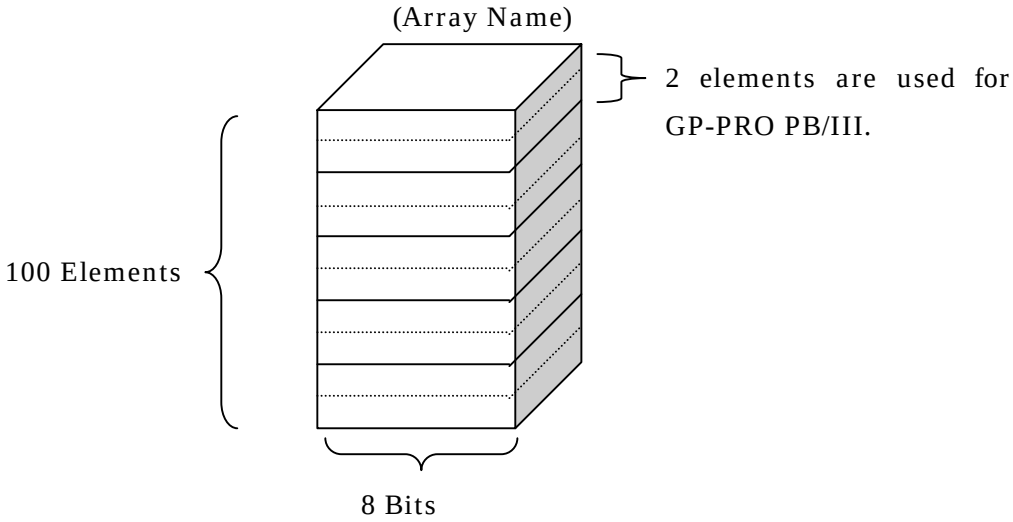
[e.g.; Specifying INT]



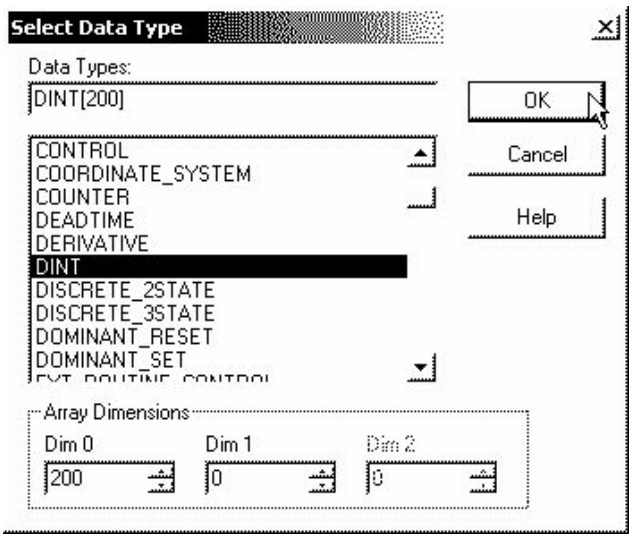


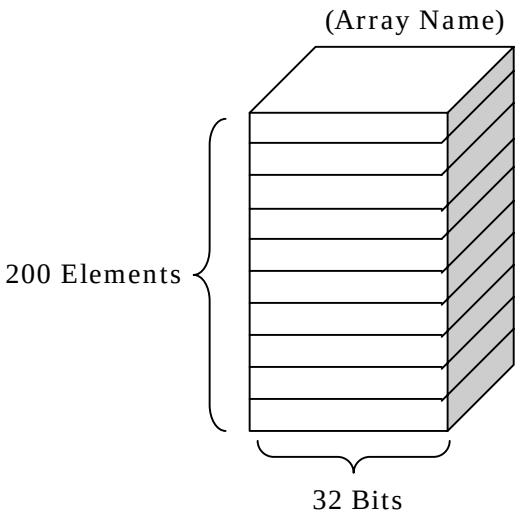
[e.g.; Specifying SINT]





[e.g.; Specifying DINT]





[e.g.; Specifying REAL（Floating Point）]