The invisible hand for more convenient world
Autonics sensors & controllers

Autonics
Sensors & Controllers

Intelligent Display Unit

DS/DA-□T-XGB

Technical Support Manual

CE

DS/DA Series

Thank you very much for selecting Autonics products.
For your safety, please read the following before using.

© Copyright Reserved Autonics Co., Ltd.

Preface

Thank you very much for selecting Autonics products.

Please familiarize yourself with the information contained in the **Safety Precautions** section before using this product.

This user manual contains information about the product and its proper use, and should be kept in a place where it will be easy to access.

© Copyright Reserved Autonics Co., Ltd.

Technical Support Manual Guide

- Please familiarize yourself with the information in this manual before using the product.
- This manual provides detailed information on the product's features. It does not offer any guarantee concerning matters beyond the scope of this manual.
- This manual may not be edited or reproduced in either part or whole without permission.
- This manual is not provided as part of the product package. Please visit our home-page (www.autonics.com) to download a copy.
- The manual's content may vary depending on changes to the product's software and other unforeseen developments within Autonics, and is subject to change without prior notice. Upgrade notice is provided through our homepage.
- We contrived to describe this manual more easily and correctly. However, if there are any corrections or questions, please notify us these on our homepage.

© Copyright Reserved Autonics Co., Ltd.

Technical Support Manual Symbols

Symbol	Description
Note	Supplementary information for a particular feature.
Warning	Failure to follow instructions can result in serious injury or death.
Caution	Failure to follow instructions can lead to a minor injury or product damage.
Ex.	An example of the concerned feature's use.
※1	Annotation mark.

© Copyright Reserved Autonics Co., Ltd.

Safety Precautions

- Following these safety precautions will ensure the safe and proper use of the product and help prevent accidents, as well as minimizing possible hazards.
- Safety precautions are categorized as Warnings and Cautions, as defined below:

Warning	**Warning**	Failure to follow the instructions may lead to a serious injury or accident.
Caution	**Caution**	Failure to follow the instructions may lead to a minor injury or accident.

Warning

- Fail-safe device must be installed when using the unit with machinery that may cause serious injury or substantial economic loss. (e.g. nuclear power control, medical equipment, ships, vehicles, railways, aircraft, combustion apparatus, safety equipment, crime/disaster prevention devices, etc.)
  Failure to follow this instruction may result in personal injury, fire, or economic loss.
- Do not disassemble or modify the unit. Please contact us if necessary.
  Failure to follow this instruction may result in fire.

Caution

- Do not use the unit outdoors.
  Failure to follow this instruction may result in shortening the life cycle of the unit or product malfunction.
- Use the unit within the rated specifications.
  Failure to follow this instruction may result in shortening the life cycle of the unit.
- Do not use water or oil-based detergent when cleaning the unit. Use dry cloth to clean the unit.
  Failure to follow this instruction may result in fire.
- Do not use the unit where flammable or explosive gas, humidity, direct sunlight, radiant heat, vibration, or impact may be present.
  Failure to follow this instruction may result in fire or explosion.
- Keep dust and wire residue from flowing into the unit.
  Failure to follow this instruction may result in fire or product damage.

© Copyright Reserved Autonics Co., Ltd.

Table of Contents

Preface 3
Technical Support Manual Guide 4
Technical Support Manual Symbols 5
Safety Precautions 6
Table of Contents 7
1 System 9
1.1 Version 9
1.2 Connections 9
1.3 Communication cable connection 9
2 Communication Setting 11
2.1 DS/DA Series: function set switches 11
2.2 XGB Setting 12
3 Operation Check 21

© Copyright Reserved Autonics Co., Ltd.

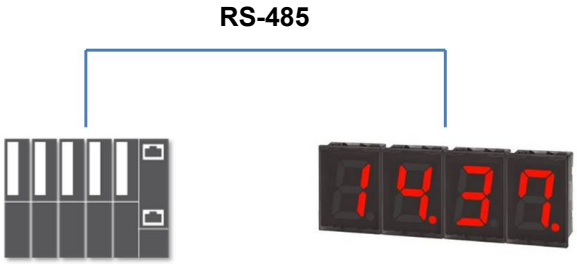
© Copyright Reserved Autonics Co., Ltd.

1 System

1.1 Version

Software	Version	Note
Operations	Windows 7	—
XG 5000	V4.07	Release : 2016.03.29

1.2 Connections



XBC-DN32H

DS(A) 16/22/40/60-□T (1 unit)
+ DS(A) 16/22/40/60-□E (3 units)

1.3 Communication cable connection

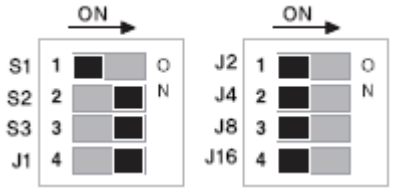
DS/DA	Cable connection	PLC (XBC – DN32H)
4 : RS – 485 A(+)		RS – 485 (+)
5 : RS – 485 B(-)		RS – 485 (-)

© Copyright Reserved Autonics Co., Ltd.

© Copyright Reserved Autonics Co., Ltd.

2 Communication Setting

2.1 DS/DA Series: function set switches



Slave Mode :

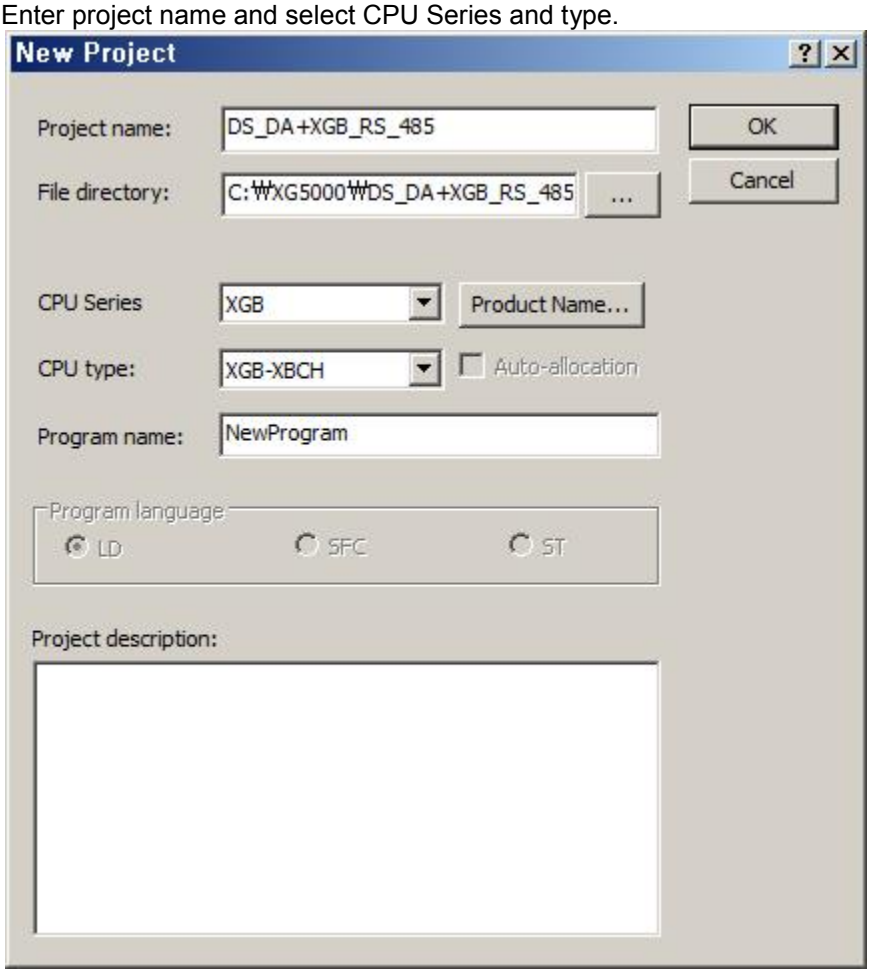
1st Function set switches: Set as the communication setting of XG5000.

No.	Function	Setting	
S1	Comm. response time	20ms	
S2	Coom. speed selection (bps)	9600	
S3			
J1	Comm. address selection	1	
J2			
J4			
J8			
J16			

© Copyright Reserved Autonics Co., Ltd.

2.2 XGB Setting

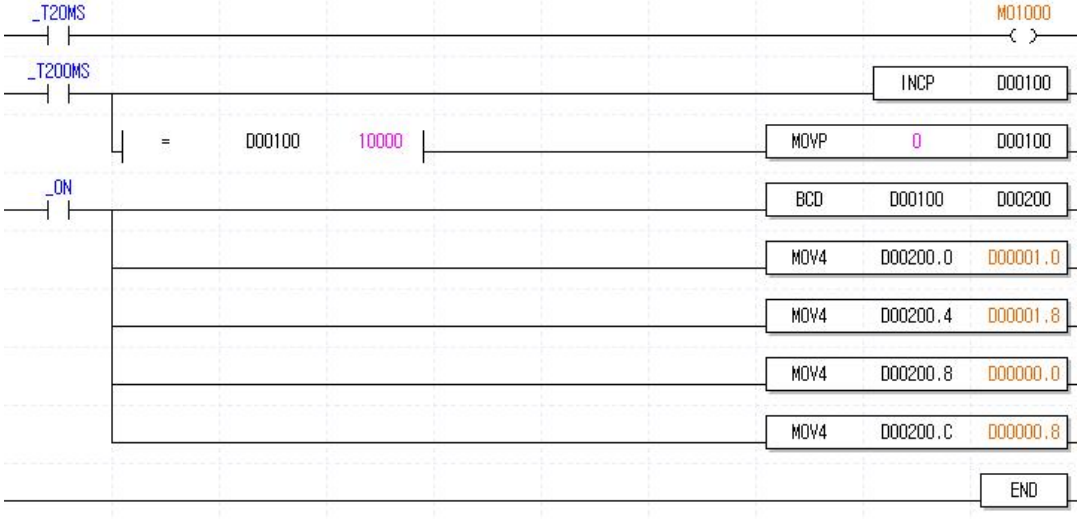
1st Run XG5000, and select [Project] – [New Project] on menu.
Enter project name and select CPU Series and type.



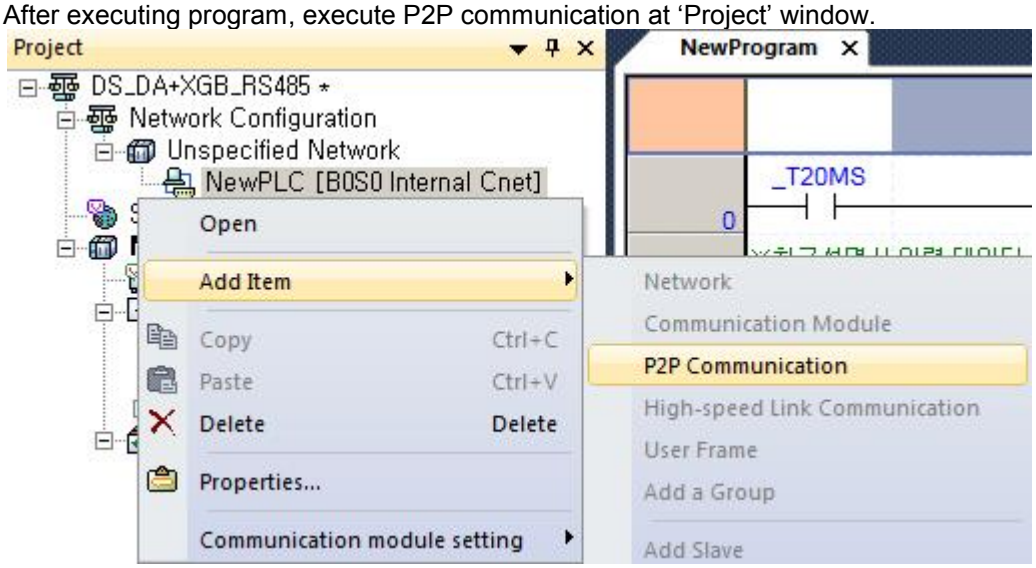
© Copyright Reserved Autonics Co., Ltd.

2nd After executing, enter the below contents at XG5000.

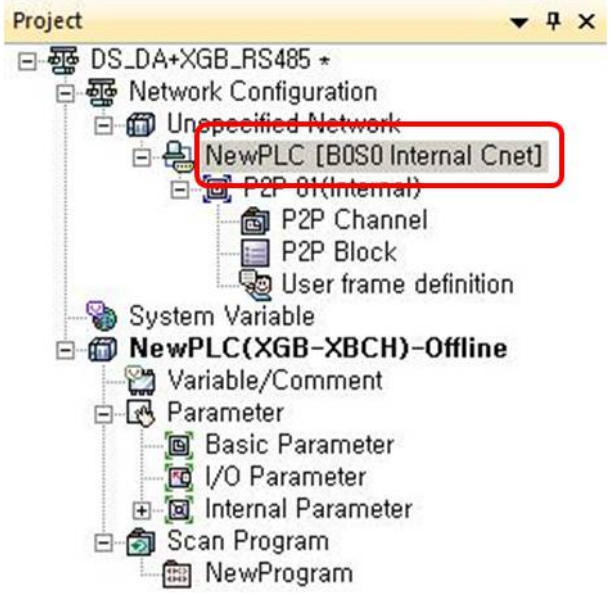
* This communication program is only for test. Before using it at field, review and test the program fully.
* This program is for DS(A) 16/22/40/60 - □T (RS485 communication input) 1 unit + DA(A) 16/22/40/60 - □E (expansion unit) 3 units.
* 16 inch size model does not support 16 segment display method.



3rd After executing program, execute P2P communication at 'Project' window.



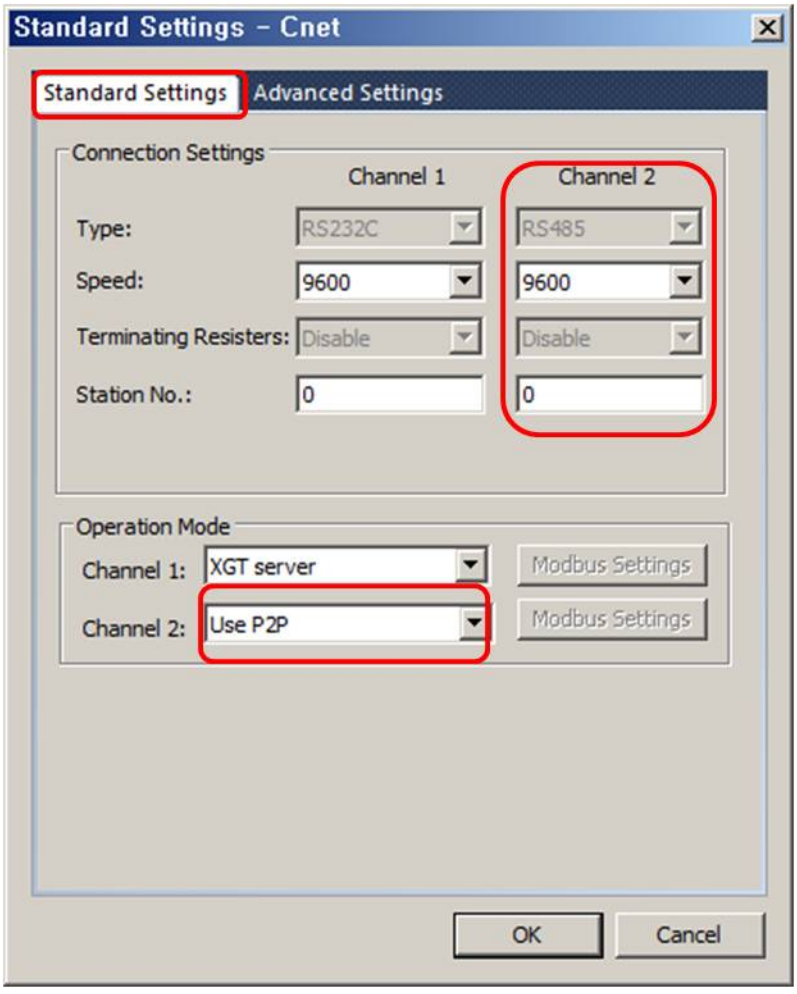
4th You can check the added P2P setting window below standard network. Doulble-click NewPLC[B0S0 Internal Cnet] and [Standard Settings–Cnet] dialog box is available.



© Copyright Reserved Autonics Co., Ltd.

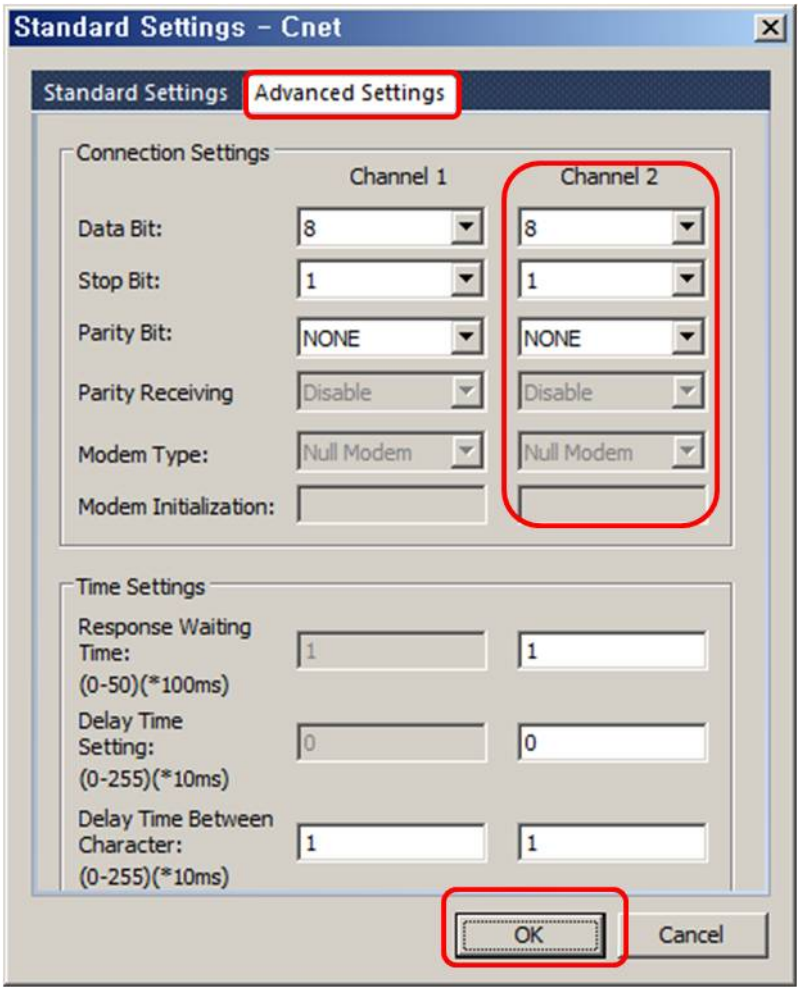
5th [Standard Settings-Cnet] dialog box appears. At standard settings, set as below.

Item		Setting	Note
Standard Settings Channel 2	Communication type	RS-485	Fixed
	Communication speed	9600	User setting
	Terminating resisters	Disable	Fixed
	Station No.	0	User setting
Operation mode	Channel 2	Use P2P	



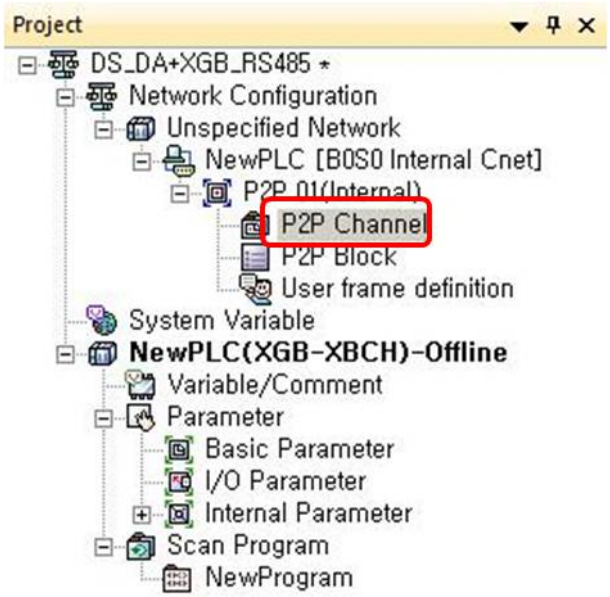
6th At advanced settings, set as below.

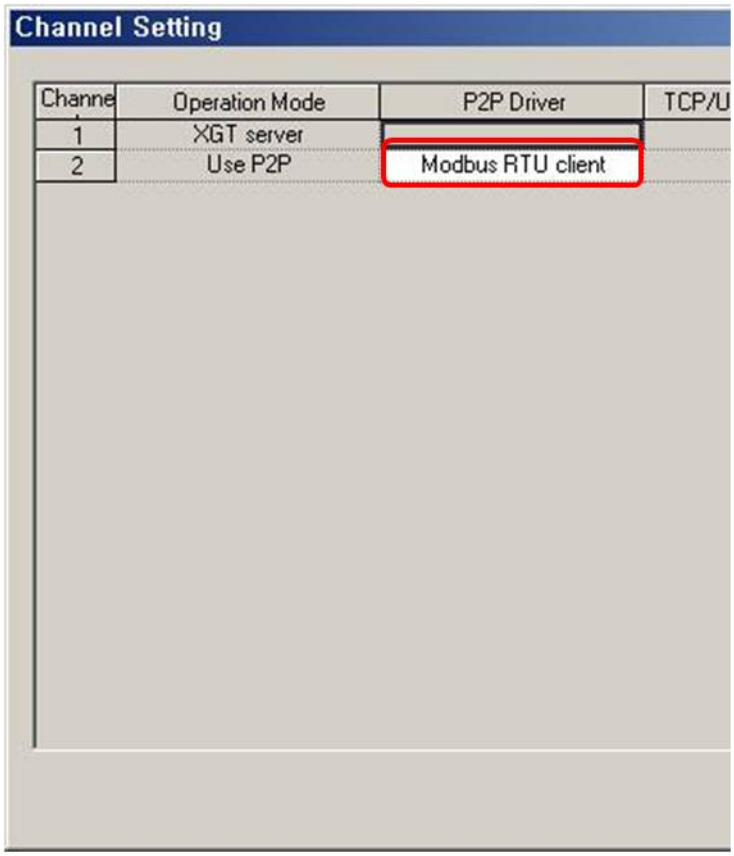
Item		Channel 2
Advanced settings	Data bit	8
	Stop bit	1
	Parity bit	NONE



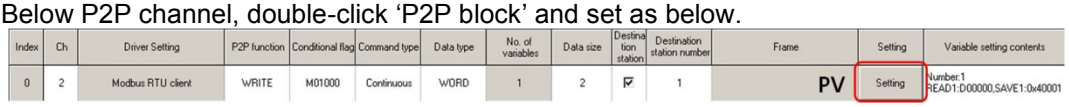
© Copyright Reserved Autonics Co., Ltd.

7th Double-click ‘P2P Channel’ and select ‘Modbus RTU client’ of ‘Use P2P’. Click ‘OK’.





8th Below P2P channel, double-click 'P2P block' and set as below.



CH	P2P function	Conditional flag	Command type	Data type	Destination station number
2	READ(PV)	M1000	2. Continuous	WORD (size: 2)	Enter destination station (1)

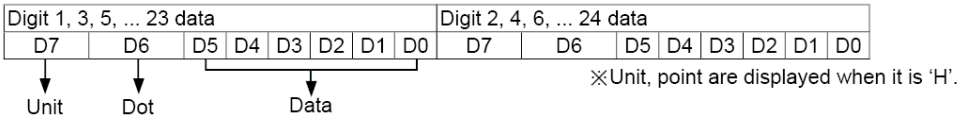
* Variable setting contents are set as belows.
Click 'Setting' to set variable.

Byte Counter	Data (400001)		Data (400002)		Data (400003)		Data (400004)		Error Check (CRC16)	
	High	Low	High	Low	High	Low	High	Low	Low	High
08H	00H	01H	01H	00H	11H	03H	08H	16H	D4H	59H

Slave Address	Function	Starting Address		No. of Register	
		High	Low	High	Low
01H	10H	00H	00H	00H	04H

E.g.) Reading 2 data from start address continuously.

Address	Function	Start address		No. of Register		Error check (CRC16)	
		High	Low	High	Low	High	Low
0x01	0x03	0x00	0x01	0x00	0x02	0x10	0x08



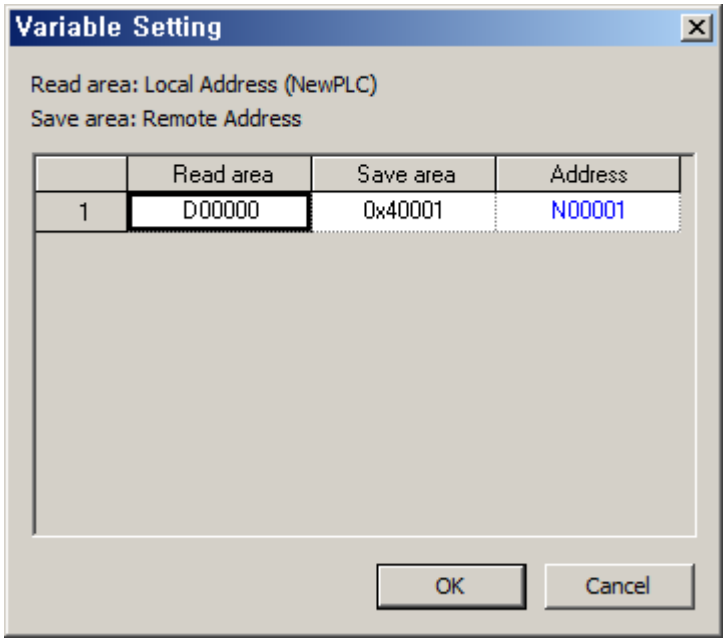
* Examples of decimal point for displaying **232**
Not using decimal point: 02 03 02
Using decimal point: 02 43 02

© Copyright Reserved Autonics Co., Ltd.

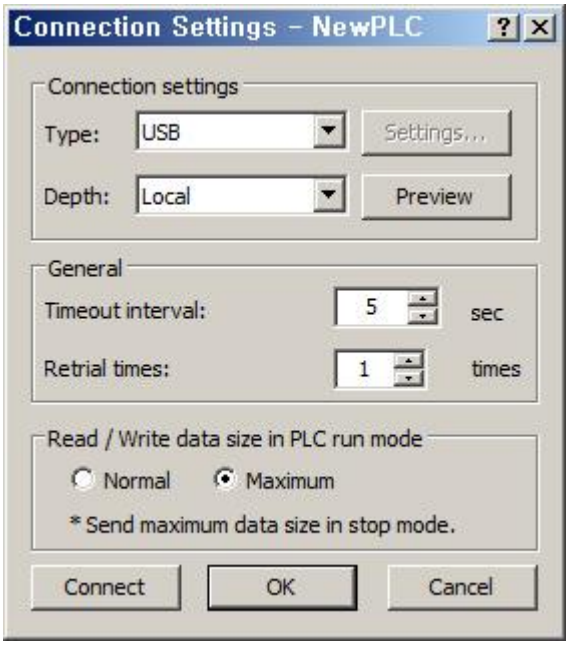
* PV Settings

Address	Reading area (setting)	Saving area (setting)	Address (fixed)
Address1	D00000	0x40001	N00001

Address	Type	Note
400002(0001)	1, 2 display data	Present value
400003(0002)	3, 4 display data	



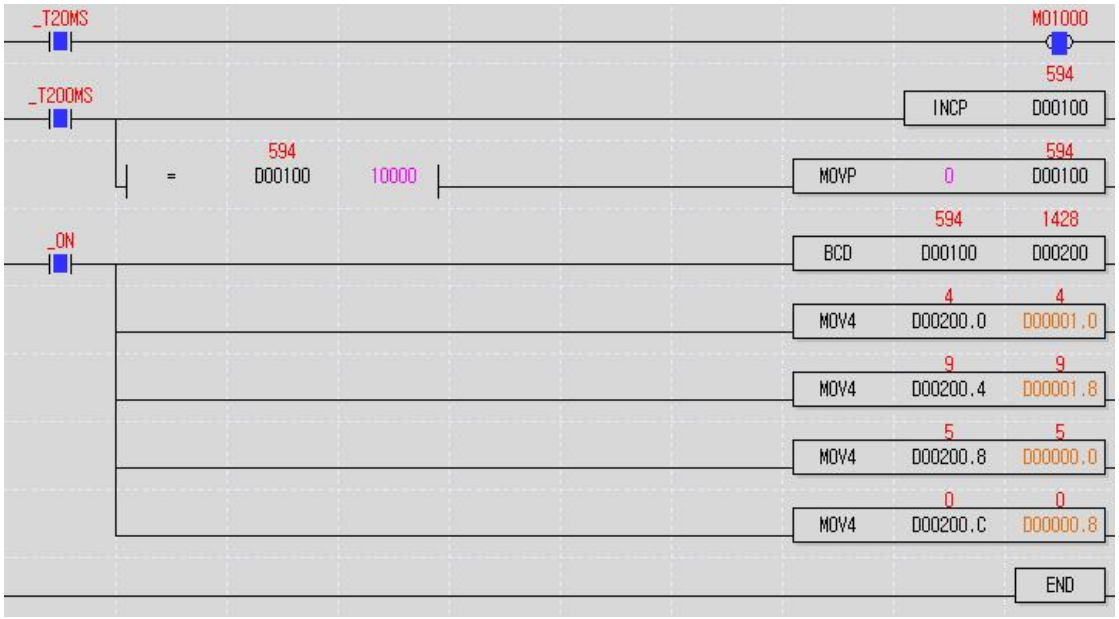
9th At [Online] – [Connection Settings], select connection type.
Select [Online] – [Write] to execute download.



© Copyright Reserved Autonics Co., Ltd.

© Copyright Reserved Autonics Co., Ltd.

3 Operation Check



Autonics

Sensors & Controllers

www.autonics.com

Distributor

■ **Major Products**

·Photoelectric Sensors·Fiber Optic Sensors·Door Sensors·Door Side Sensors·Area Sensors
·Proximity Sensors·Pressure Sensors·Connectors/Sockets·Rotary Encoders·Panel Meters
·Counters·Timers·Temperature Controllers·SSRs/Power Controllers·Sensor Controllers
·Graphic/Logic Panels·Temperature/Humidity Transducers·Switching Mode Power Supplies
·Stepper Motors/Drivers/Motion Controllers·I/O Terminal Blocks & Cables·Display Units
·Control Switches/Lamps/Buzzers·Field Network Devices·Tachometer/Pulse(Rate) Meters
·Laser Marking System(Fiber, CO_2, Nd:YAG)·Laser Welding/Cutting System

■ Any proposal for a product improvement and development: Product@autonics.com

■ **Corporate Headquarters**
18 Bansong-ro, 513 Beon-gil, Haeundae-gu, Busan, South Korea 48002
■ **Overseas Business Headquarters**
#402-303, Bucheon Techno Park, 655, Pyeongcheon-ro, Wonmi-gu, Bucheon, Gyeonggi-do, South Korea 14502
Tel: 82-32-610-2730 / Fax: 82-32-329-0728 / E-mail: sales@autonics.com
■ **Brazil – Autonics do Brasil Comercial Importadora Exportadora Ltda**
Tel: 55-11-2307-8480 / Fax: 55-11-2309-7784 / E-mail: comercial@autonics.com.br
■ **China – Autonics electronic(Jiaxing) Corporation**
Tel: 86-21-5422-5969 / Fax: 86-21-5422-5961 / E-mail: china@autonics.com
■ **India – Autonics Automation India Private Limited**
Tel: 91-22-2781-4305 / Fax: 91-22-2781-4518 / E-mail: india@autonics.com
■ **Indonesia – PT. Autonics Indonesia**
Tel: 62-21-8088-8814/5 / Fax: 62-21-8088-4442(4440) / E-mail: indonesia@autonics.com
■ **Japan – Autonics Japan Corporation**
Tel: 81-3-3950-3111 / Fax: 81-3-3950-3191 / E-mail: ja@autonics.com
■ **Malaysia – Mal-Autonics Sensor Sdn. Bhd.**
Tel: 60-3-7805-7190 / Fax: 60-3-7805-7193 / E-mail: malaysia@autonics.com
■ **Mexico – Autonics Mexico S.A. DE C.V**
Tel: 52-55-5207-0019 / Fax: 52-55-1663-0712 / E-mail: ventas@autonics.com
■ **Russia – Autonics Corp. Russia Representative Office**
Tel/Fax: 7-495-660-10-88 / E-mail: russia@autonics.com
■ **Turkey – Autonics Otomasyon Ticaret Ltd. Sti.**
Tel: 90-216-365-9117/3/4 / Fax: 90-216-365-9112 / E-mail: infotr@autonics.com
■ **USA – Autonics USA, Inc.**
Tel: 1-847-680-8160 / Fax: 1-847-680-8155 / E-mail: sales@autonicsusa.net
■ **Vietnam – Cong Ty Tnhh Autonics Vina**
Tel: 84-8-3771-2662 / Fax: 84-8-3771-2663 / E-mail: vietnam@autonics.com

Dimensions or specifications on this manual are subject to change and some models may be discontinued without notice.