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Graphic Panel

GP-XGT (RS485)

Technical Support Manual

GP Series

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

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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.

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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.

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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.

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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.
- In case using the Graphic Panel touch switch for controlling, do not use the switch as an emergency switches or those related to safety that may cause physical injury or property damage in the event of a malfunction.
  Failure to follow this instruction may result in personal injury, fire, or economic loss.
- In case controlling other devices through Graphic Panel communication, and there is a possibility of malfunction due to communication error, an alternative circuit must be constructed.
  Failure to follow this instruction may result in personal injury, fire, or economic loss.
- Do not use the product in an area or an environment not specified in the manual.
  Failure to follow this instruction may result in personal injury, fire, or economic loss.
- Do not connect, repair, or inspect the unit while connected to a power source.
  Failure to follow this instruction may result in electric shock or fire.
- Do not disassemble or modify the unit. Please contact us if necessary.
  Failure to follow this instruction may result in electric shock or fire.
- Use the insulated trans to supply the rectified power.
  Failure to follow this instruction may result in electric shock or fire.
- Do not use over the rated power.
  Failure to follow this instruction may result in electric shock or fire.
- This product uses lithium battery, do not disassemble or burn up.
  Failure to follow this instruction may result in explosion or fire.
- Wire properly after checking power terminal polarity.
  Failure to follow this instruction may result in fire or product malfunction

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Caution

- Please read all notes and cautions related to installation and wiring in the manual.
  Failure to follow this instruction may result in electric shock or product malfunction.
- Make sure the ground wire of Graphic Panel is wired separately from the ground wires of other devices. Ground resistance must be less than 100Ω, and a lead wire of which sectional area is over 1.25mm^2 should be used.
  Failure to follow this instruction may result in electric shock or product malfunction.
- When connecting Graphic Panel ports and constructing input/output, check the pin number and terminal block before connecting.
  Failure to follow this instruction may result in fire or product malfunction.
- Tighten bolt on terminal block with specified tightening torque.
  Failure to follow this instruction may result in short circuit, fire or product malfunction.
- Do not press the surface of the touch panel with sharp or hard objects.
  Failure to follow this instruction may result in touch panel damage.
- Keep Graphic Panel at the specified temperature.
  Failure to follow this instruction may result in LCD panel damage due to over the rated temperature range.
- Do not inflow dust or wire dregs into the unit.
  Failure to follow this instruction may result in fire or product malfunction.
- Do not use in an area with excessive humidity or temperature.
  Failure to follow this instruction may result in product damage or shortening the life cycle of the unit.
- Do not close ventilating opening of this product.
  Failure to follow this instruction may result in product damage due to increase inner heat.
- Keep the product out of direct sunlight or excessive dust.
  Failure to follow this instruction may result in product damage or shortening the life cycle of the unit.
- Do not use or store in a place with shock or vibration.
  Failure to follow this instruction may result in product damage or shortening the life cycle of the unit.
- When liquid crystal from the broken LCD is smeared with skin, wash it for 15 minutes. If it is gotten in the eye, wash it for 15 minutes and contact with the medical specialist for more information.
- 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 electric shock or fire.
- Please separate as an industrial waste when disuse this unit.
- To change the battery, contact the store or an authorized technician.
- The manufacturer is not liable for damages that occur due to causes for which the manufacturer is not responsible, damages that occur due to an extraordinary situation, secondary damages, compensation for ac cidents, damages occurring on other products, compensation for other processes, and damage and loss of opportunity to the user due a malfunction of the product, regardless of the predictability of the accident.

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- Note that this device is KCC certified for commercial use. Make proper applications for the product..

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1 System

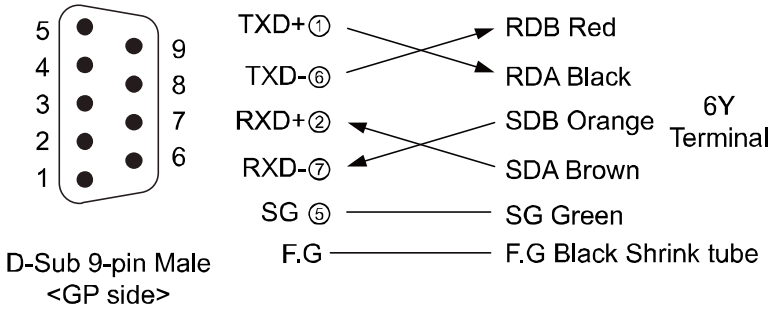
1.1 Version

Software	Version	Note
GP Editor	V4.01 (build 023)	—
GP-S070 Firmware	V1.20	Release : 2016.01.26
Ms Windows	Windows 7	—
XG 5000	V4.07	Release : 2016.03.29

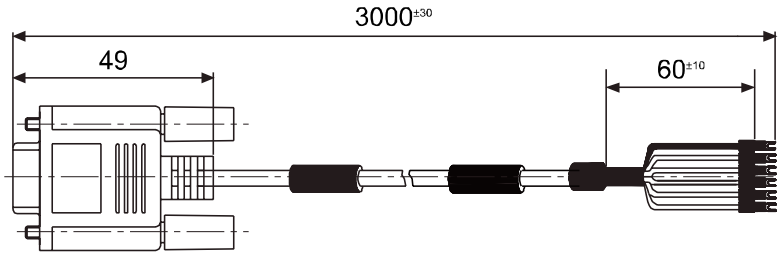
1.2 Connections

GP-S070-T9D6 **XGK-CPUE, XGL-CH2A/B**

1.3 Communication cable connection and dimensions (communication cable model: C3M5P04-D9M0-T6Y0)



D-Sub 9-pin Male
<GP side>



(unit: mm)

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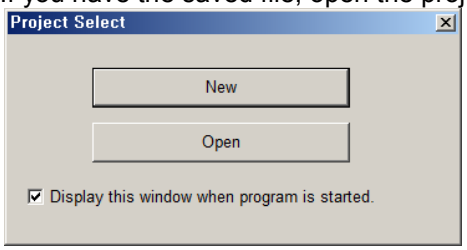
2 GP-S070 Communication Setting

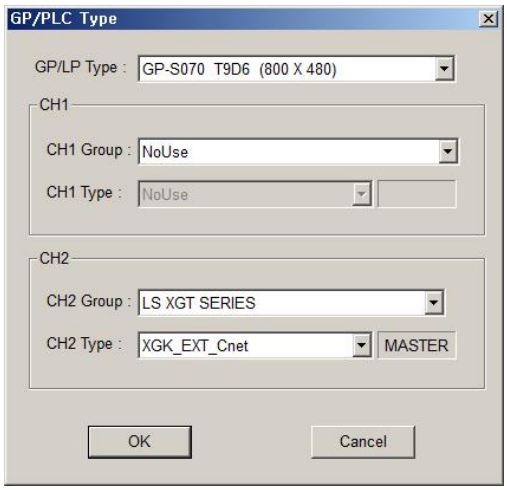
2.1 GP Editor Setting

1st Select [Project] – [New] on menu.
If you have the saved file, open the project at [Load].

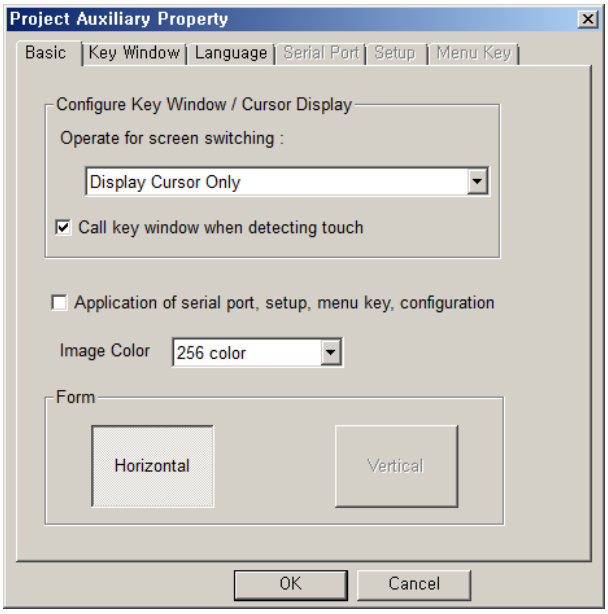


2nd At GP/PLC Type dialog box, set GP/LP Type and CH1/2 Group/Type.

Item	Setting
GP / LP Type	GP-S070 T9D6
CH1 Group / Type	No Use
CH2 Group / Type	LS XGT SERIES / XGK_EXT_Cnet



3rd At Project Auxiliary Property dialog box, click 'OK' and it changes screen to draw.



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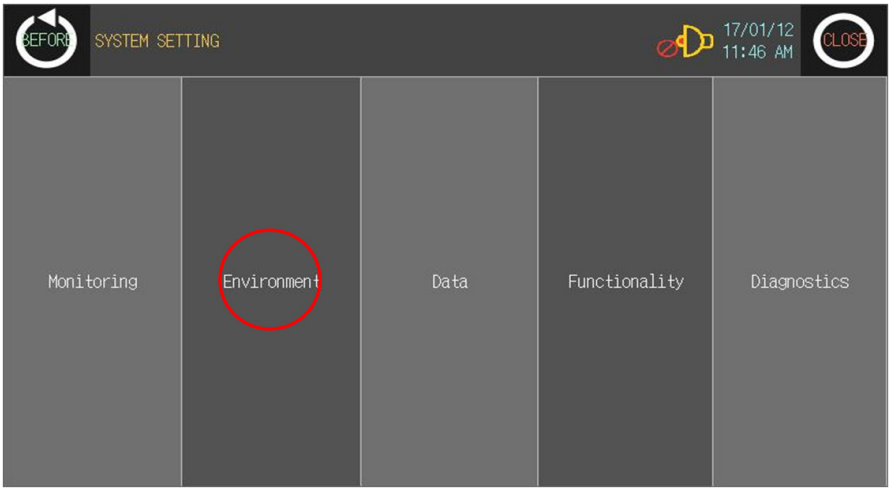
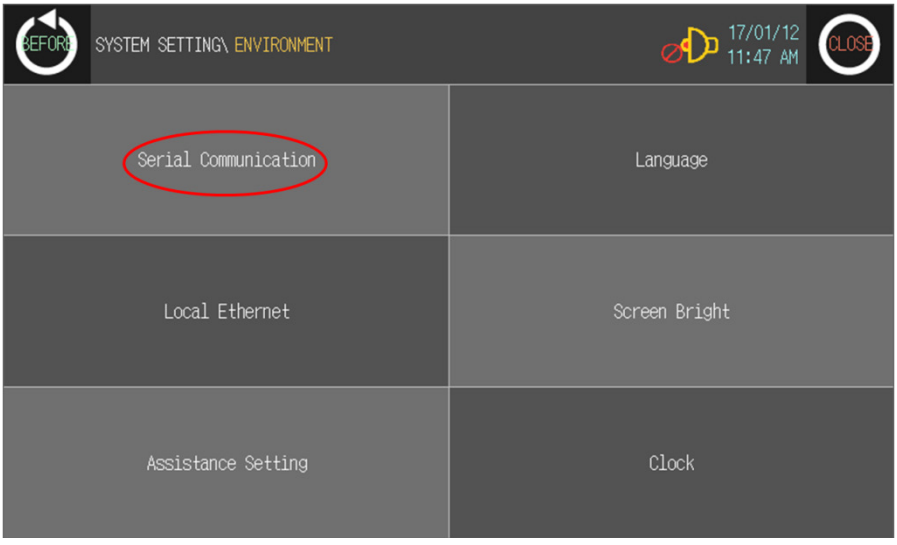
2.2 GP-S070 Setting

1st Touch top-left of the GP.

2nd Touch ‘Environment’.



3rd Touch ‘Serial Communication’.



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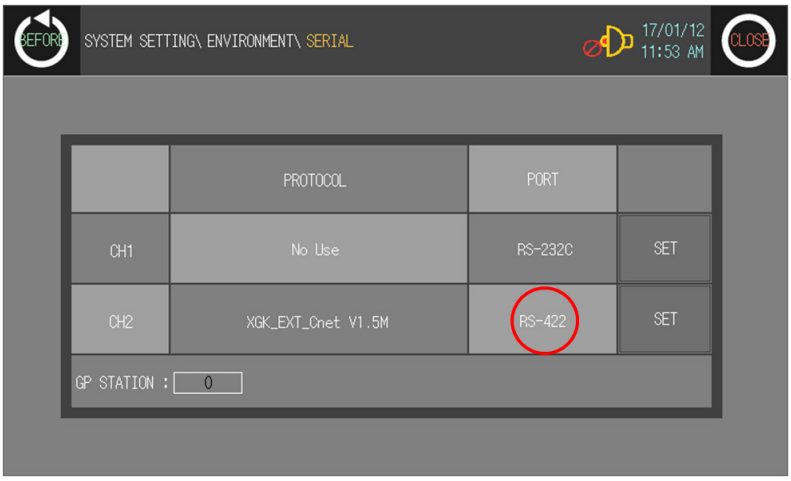
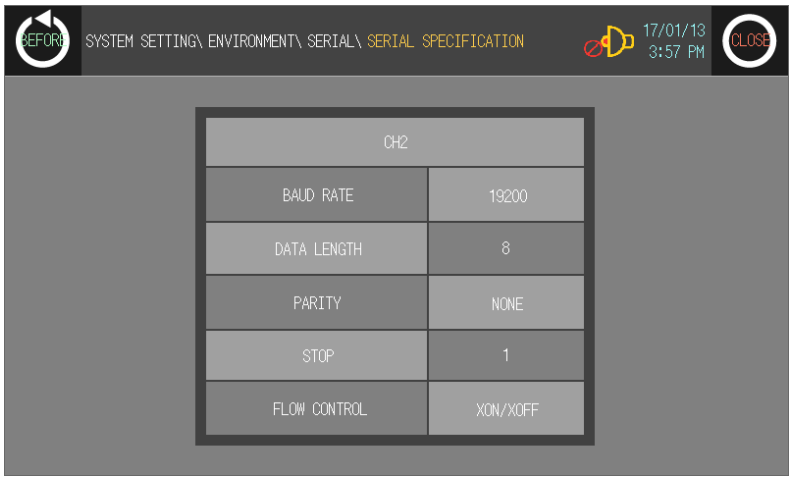
4th At serial communication, set as below. (GP address: 0)

	PROTOCOL	PORT	
CH1	No Use	RS-232C	SET
CH2	XGK_EXT_Cnet V1.5M	RS-422	SET



5th Touch right 'SET' and set as below.

Item	Setting	Note
Baud rate	19200	User setting
Flow control	XON/XOFF	Don't care
Parity bit	None	User setting
Data bit	8-bit	User setting
Stop bit	1-bit	User setting



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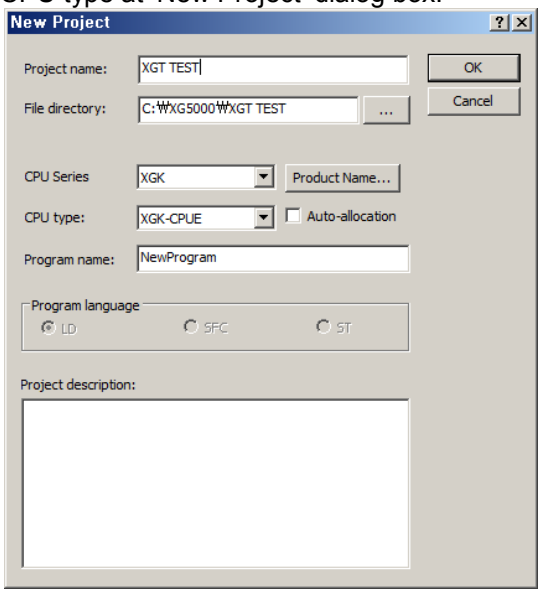
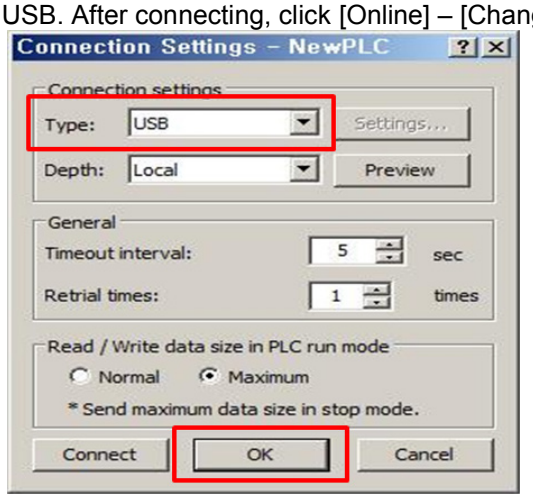
2.3 XGT Setting

1st Run XG5000 and select [Project] – [New Project] on menu. Enter project name and select CPU type at 'New Project' dialog box.



2nd Set connection method at [Online] – [Connection Settings]. This example is connection via USB. After connecting, click [Online] – [Change Mode] – [Stop].



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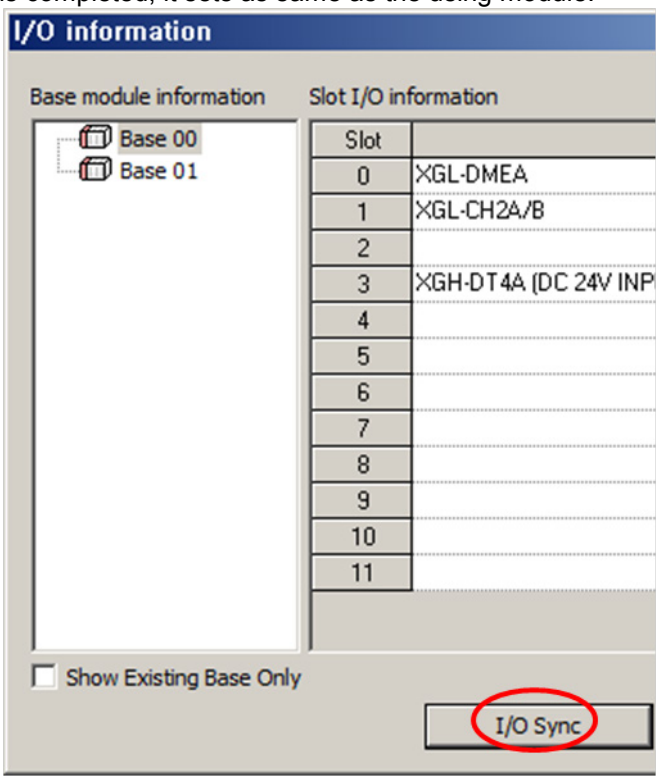
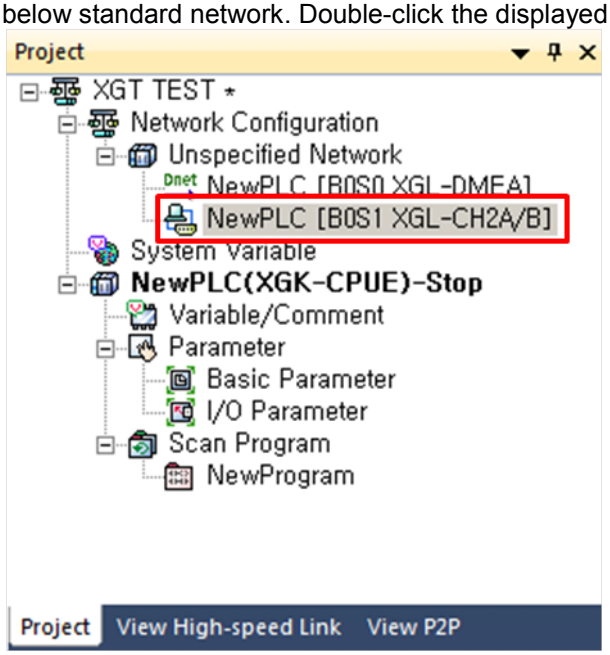
3rd Enter [Online] – [Diagnosis] – [I/O Information] and click [I/O Sync]. When I/O synchronizing is completed, it sets as same as the using module.



4th When I/O synchronizing is completed, you can check the added communication module below standard network. Double-click the displayed communication module at right.



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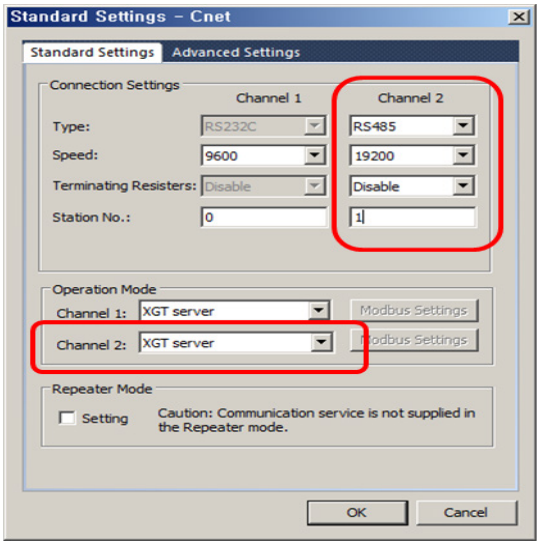
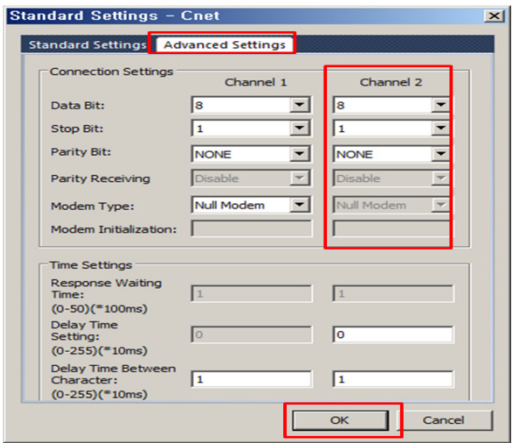
5th 'Standard Settings-Cnet' dialog box appears. Set as below.

Item		Setting	Note
Standard settings Channel 2	Communication type	RS-485	Fixed
	Communication speed	19200	User setting
	Terminating resistances	Disable	Fixed
	Station No.	1	User setting
Operation mode	Channel 2	XGT server	Mandatory



6th At advanced settings, set as below.

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



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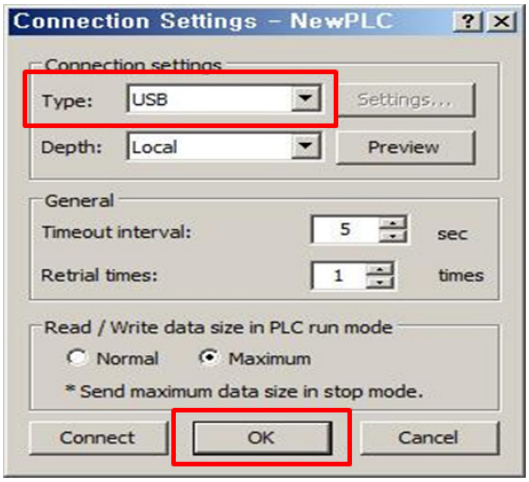
7th Select [Online] – [Connect Settings] and set connection settings for PC and PLC connection.



8th Download it via [Online] – [Write].

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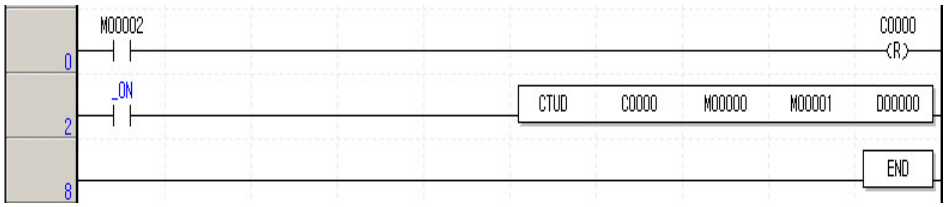
3 Examples

3.1 GP-S070 Drawing

3.2 PLC Program



3.3 GP-S070 – PLC device connection

GP-S070			PLC Device	
Item	Tag Property	Usage	Bit	Word
①	Numeral display	Counter present value	—	C0
②	Numeral input	Counter target value	—	D0
③	Touch key (momentary)	Input (Up)	M0	—
④	Touch key (momentary)	Input (Down)	M1	—
⑤	Lamp	Counter output	C0	—
⑥	Touch key (momentary)	Reset	M2	—

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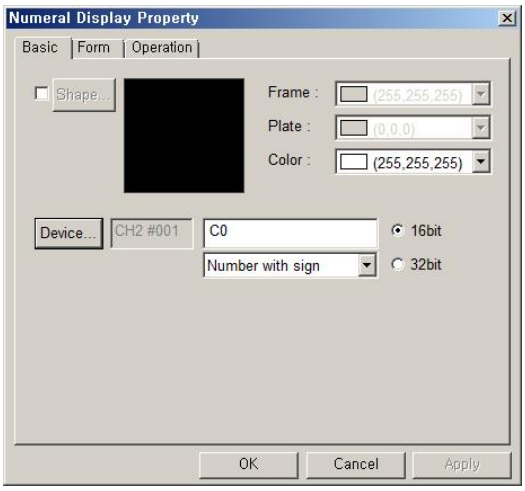
3.4 GP Editor Drawing

3.4.1 Numeral display

Select [Draw]–[Numeral Display] at menu.
Click 'Device' to set the device as below.

Items	Setting
Channel	[CH2]XGK_EXT_Cnet
Station	1
Device	C0



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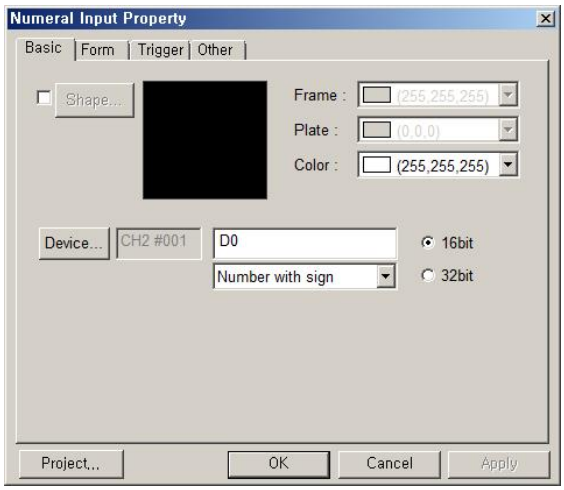
3.4.2 Numeral input

Select [Draw]–[Numeral Input] at menu.
Click 'Device' to set the device as below.

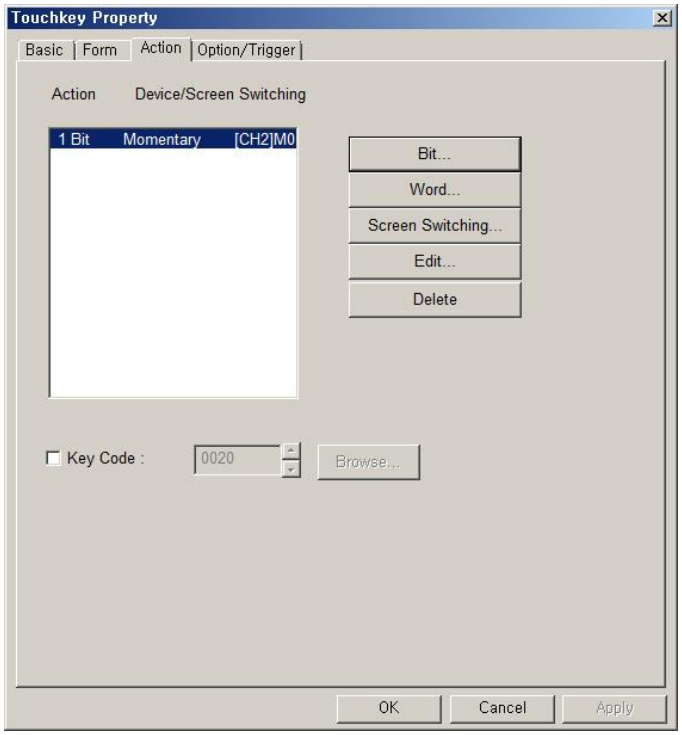
Items	Setting
Channel	[CH2]XGK_EXT_Cnet
Station	1
Device	D0



3.4.3 Touch key (Up key)

Select [Draw]–[Touch Key]–[Action]–[Bit].
Click 'Device' to set the device as below.

Items	Setting
Channel	[CH2]XGK_EXT_Cnet
Station	1
Device	M0
Action	Momentary



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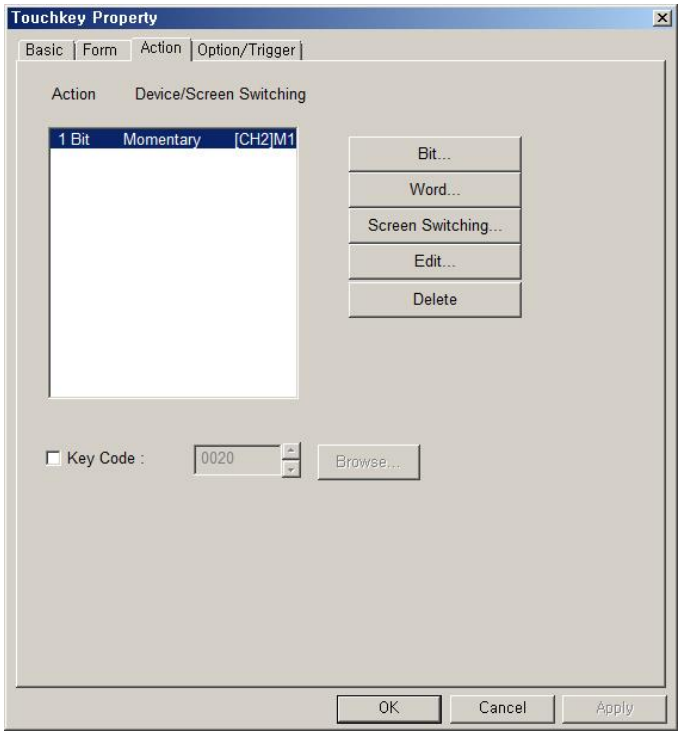
3.4.4 Touch key (Down key)

Select [Draw]–[Touch Key]–[Action]–[Bit].
Click 'Device' to set the device as below.

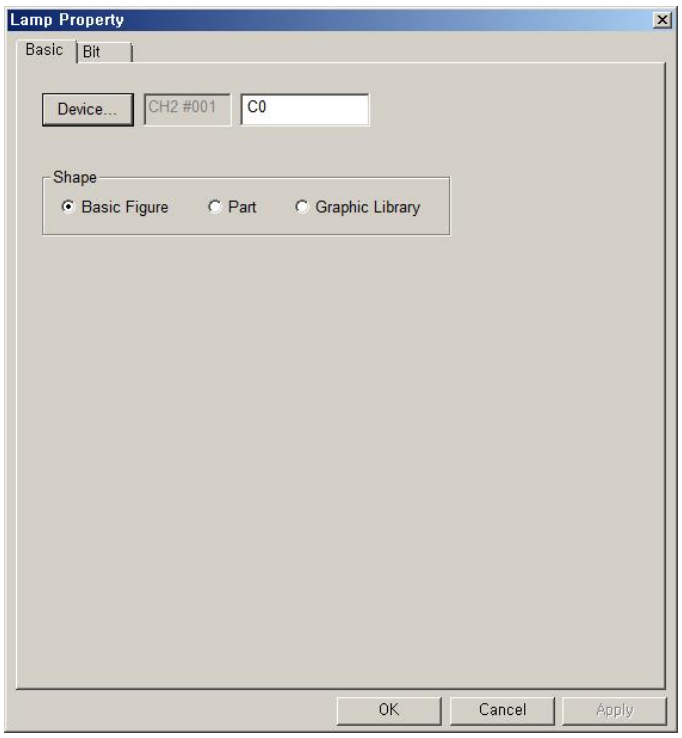
Items	Setting
Channel	[CH2]XGK_EXT_Cnet
Station	1
Device	M1
Action	Momentary



3.4.5 Lamp

Select [Draw]-[Lamp].
Click 'Device' to set the device as below.

Items	Setting
Channel	[CH2]XGK_EXT_Cnet
Station	1
Device	C0



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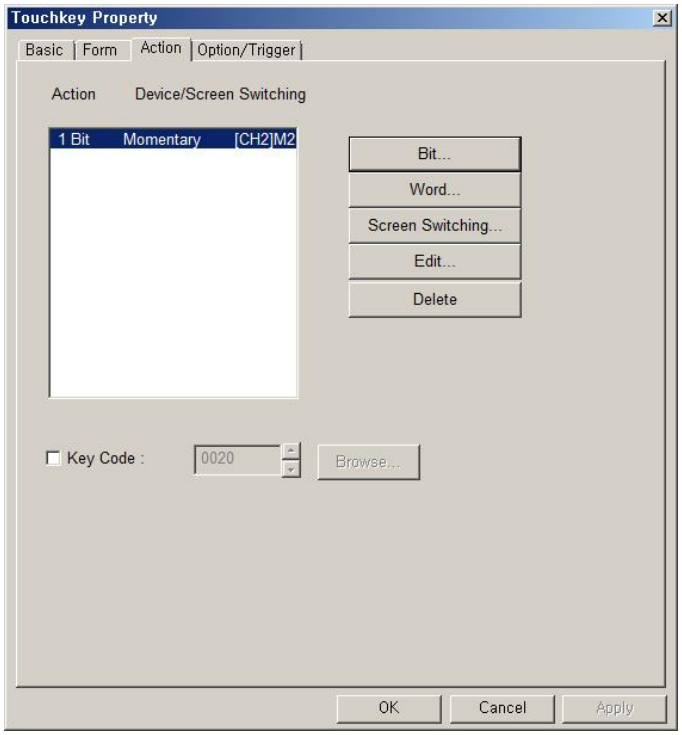
3.4.6 Touch key (Reset key)

Select [Draw]–[Touch Key]–[Action]–[Bit].
Click 'Device' to set the device as below.

Items	Setting
Channel	[CH2]XGK_EXT_Cnet
Station	1
Device	M2
Action	Momentary



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4 Appendix

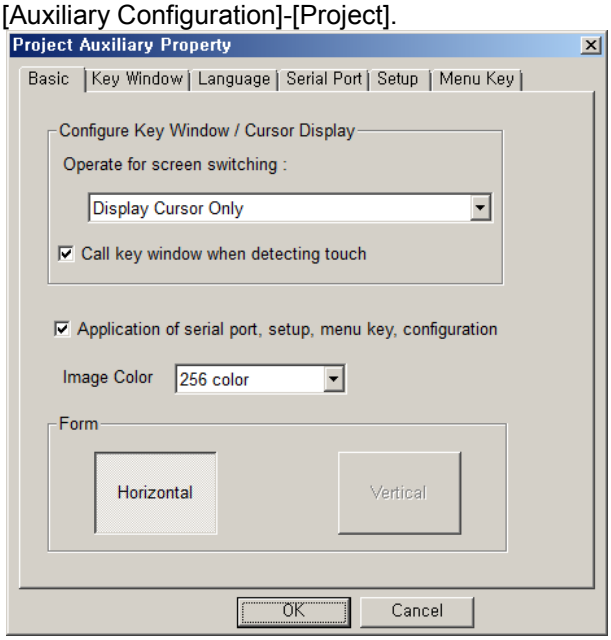
4.1 Serial setting

Serial port setting are available GP-S070 and GP Editor.

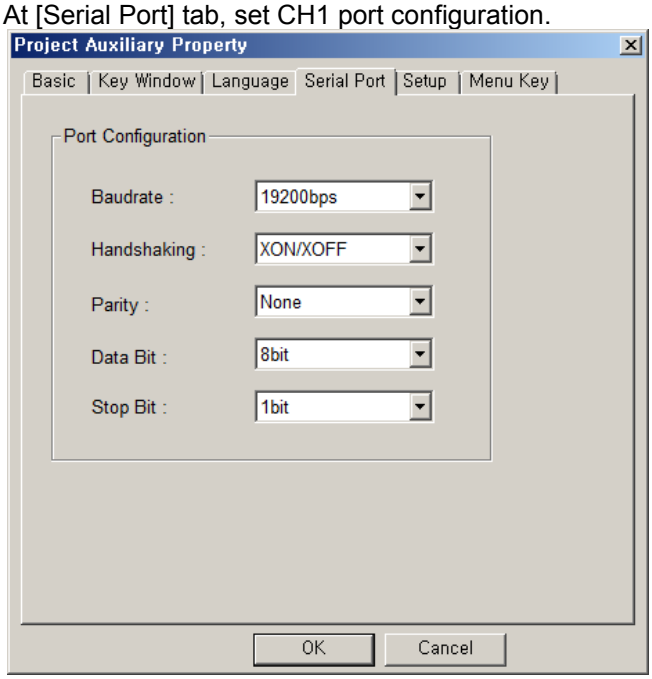
GP Editor is available only for CH1 serial port setting.

Item	Setting at GP Editor	Setting at GP-S070
CH1 comm. setting	Avaliable	Avaliable
CH2 comm. setting	Unavailable	Avaliable

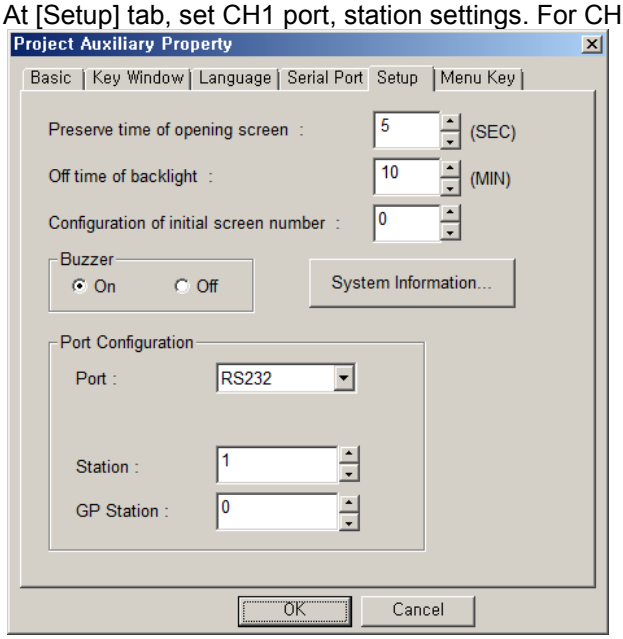
1st Check the settings; Application of serial port, setup, menu key, configuration at [Common]-[Auxiliary Configuration]-[Project].



2nd At [Serial Port] tab, set CH1 port configuration.



3rd At [Setup] tab, set CH1 port, station settings. For CH2, the left port is automatically alloted.



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·Stepper Motors/Drivers/Motion Controllers·I/O Terminal Blocks & Cables·Display Units
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Dimensions or specifications on this manual are subject to change and some models may be discontinued without notice.