User Manual
for Communication

HMI

GP/LP Series
(SIEMENS)

Thank you for purchasing an Autonics 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.

www.autonics.com

Autonics

Preface

Thank you for purchasing Autonics product.
Please familiarize yourself with the information contained in the Safety Considerations 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.

User 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.
- A user manual is not provided as part of the product package. Please visit our website (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 website.
- We contrived to describe this manual more easily and correctly. However, if there are any corrections or questions, please notify us these on our website.
- Inner device of this user manual for communication is based on GP.
  If you use LP, refer to "LP user manual" for inner device of LP.

User 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.

v

Reference Manual for Each Configuration
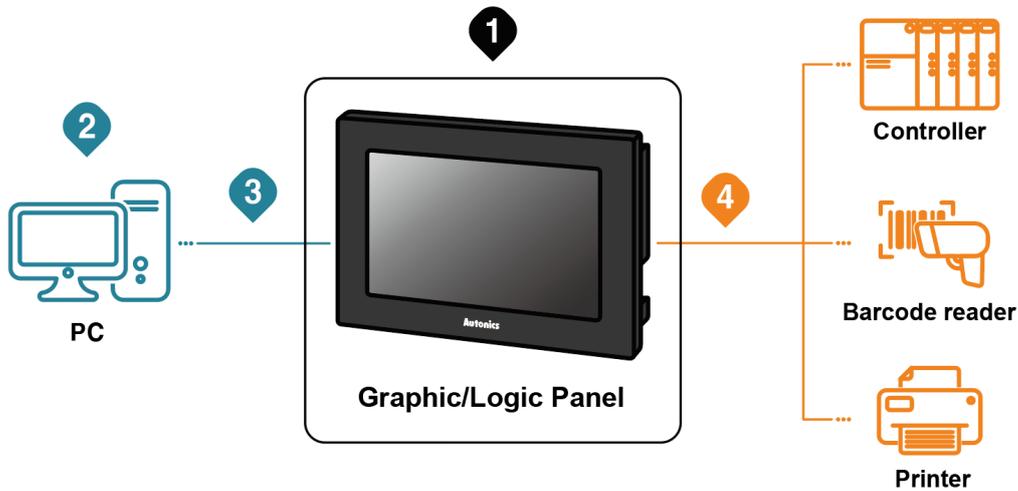
① **Graphic/Logic panel device specification, installation, maintenance, management, firmware update and system configuration**

Hardware Manual	A Series	GP-A Series User Manual, LP-A Series User Manual
	S Series	GP-S070 User Manual, GP-S044/057 User Manual, LP-S070 User Manual, LP-S044 User Manual

② **Project drawing, programming**

Software Manual	Drawing	atDesigner User Manual, GP Editor User Manual
	Programming	atLogic User Manual, atLogic Programming Manual

③ **Project Upload/Download**

Hardware Manual	A Series	GP-A Series User Manual, LP-A Series User Manual
	S Series	GP-S070 User Manual, GP-S044/057 User Manual, LP-S070 User Manual, LP-S044 User Manual

④ **Connected device setting, communication setting**

Software Manual	Drawing	atDesigner User Manual, GP Editor User Manual
	Programming	atLogic User Manual, atLogic Programming Manual
Hardware Manual	A Series	GP-A Series User Manual, LP-A Series User Manual
	S Series	GP-S070 User Manual, GP-S044/057 User Manual, LP-S070 User Manual, LP-S044 User Manual

④ **Check connectable device, connection cable model name and protocol**

Communication Manual	GP/LP Communication Manual

Table of Contents

1   System Organization

GP/LP can be connected with various controller, barcode reader and printer via RS232C, RS422, Ethernet, CAN amd USB HOST port.

Controller
(PLC, etc.)

Barcode reader

Printer

1.1   1:1 Communication

A GP/LP can communicate with a single controller A.

Controller
(PLC, etc.)

(1) Communication configuration by GP/LP model

The communication configuration by GP/LP model is listed below.
For detailed information about the communication configuration, please refer to 'GP/LP User Manual'.

- GP/LP-S Series

Series	Chanel	Connecting port	Description
GP/LP-S044, GP-S057	CH1	RS232C/RS422	Direct communication available
	CH2	RS422/RS485	Link device[※1] communication available
GP/LP-S070	CH1	RS232C/RS422	Direct communication available Link device[※1] communication available
	CH2	RS422/RS485	Direct communication available Link device[※1] communication available

- GP/LP-A Series

Series	Connecting port	Description
GP/LP-A070	RS422 or RS232C-A port, RS232C or RS232C-B port, Ethernet port	Direct communication available Link device[※1] communication available
GP/LP-A104	RS422 or RS232C-A port, RS232C or RS232C-B port, Ethernet port, CAN[※2] port	Direct communication available Link device[※1] communication available

※1: Please refer to 'GP Editor User Manual' for Link device instruction.

※2: Only Autonics' ARD Series can be connected to CAN port.

1.2   1:N Communication of Same Controllers

1:N communication stands for one LP communicating with multiple of controllers.
The GP/LP observes the connected controllers or relays data between controllers.
A GP/LP can communicate with the multiple of controller As.
The controller has to be able to set address of each device, and the address should not be duplicated.

Controller A-1
(PLC, etc.)

Controller A-2
(PLC, etc.)

Controller A-1
(PLC, etc.)

Controller A-2
(PLC, etc.)

Controller A-n
(PLC, etc.)
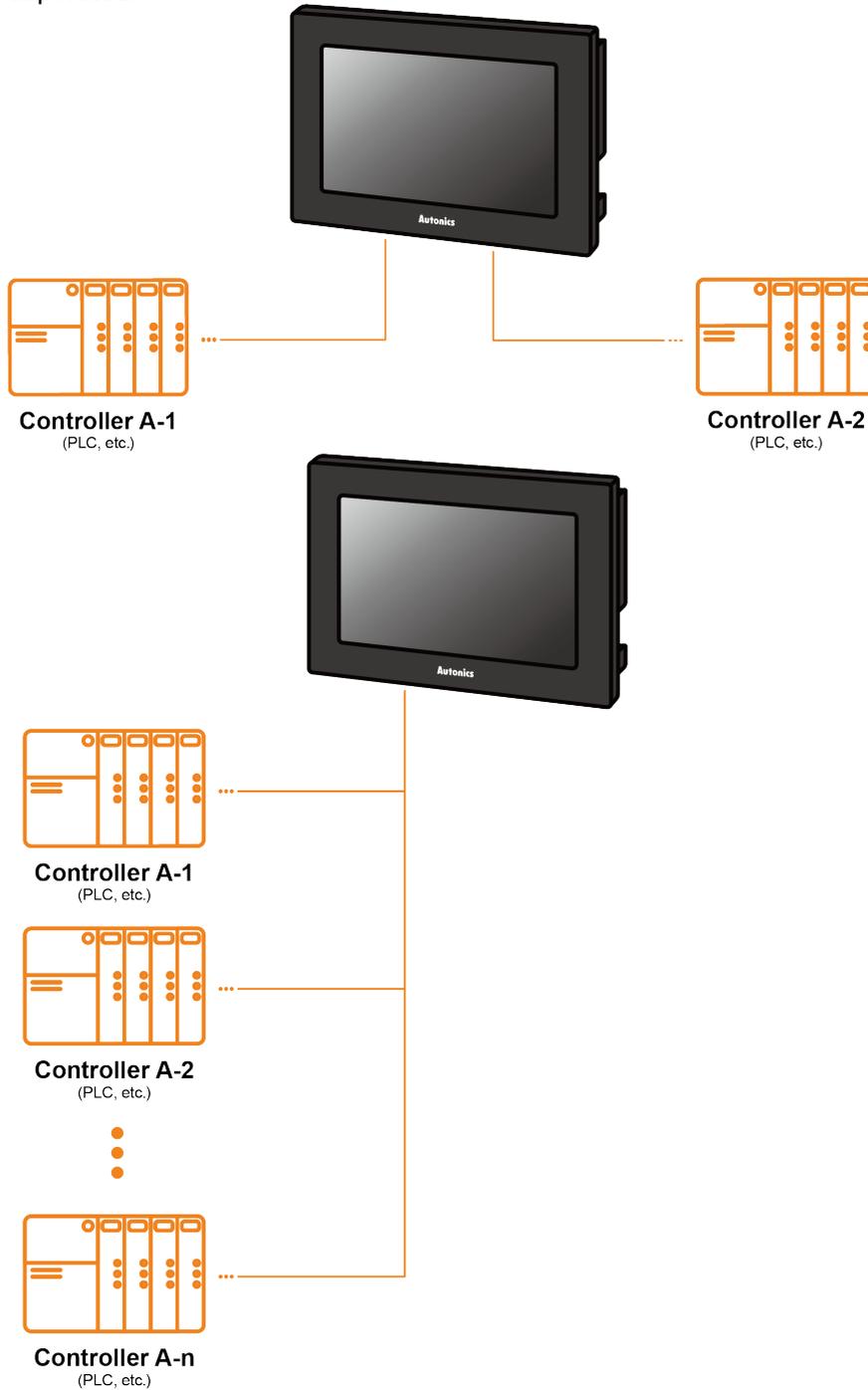
(1) Communication configuration by GP/LP model

The communication configuration by GP/LP model is listed below.
For detailed information about the communication configuration, please refer to 'GP/LP User Manual'.

- GP/LP-S Series

Series	Chanel	Connecting port	Description
GP/LP-S044, GP-S057	CH1	-	Multiple connection unavailable
	CH2	RS422	Link device[※1] communication available
GP/LP-S070	CH1 or CH2	RS422	Direct communication available Link device[※1] communication available

- GP/LP-A Series

Series	Connecting port	Description
GP/LP-A070	RS422 or RS232C-A port, RS232C or RS232C-B port, Ethernet port	Direct communication available Link device[※1] communication available
GP/LP-A104	RS422 or RS232C-A port, RS232C or RS232C-B port, Ethernet port, CAN[※2]port	Direct communication available Link device[※1] communication available

※1: Please refer to 'GP Editor User Manual' for Link device instruction.

※2: Only Autonics' ARD Series can be connected to CAN port.

(2) RS422 communication connection diagram

1.3　1:N Communication of Different Controllers

1:N communication stands for one GP/LP communicating with multiple of controllers.
The GP/LP observes the connected controllers or relays data between controllers.
The GP/LP can communicate with the multiple of different controllers.

1.3.1　1:1:1 Communication

A GP/LP can communicate with a signle controller A and a signle controller B.
The GP/LP relays communications between the controller A and B.

Controller A
(PLC, etc.)

Contoller B
(PLC, etc.)

(1) Communication configuration by GP/LP model

The communication configuration by GP/LP model is listed below.
For detailed information about the communication configuration, please refer to 'GP/LP User Manual'.

- GP/LP-S Series

Series	Chanel	Connecting port	Description
GP/LP-S044, GP-S057	CH1	RS232C/RS422	Direct communication available
	CH2	RS422/RS485	Link device[1] communication available
GP/LP-S070	CH1 or CH2	RS422/RS485	Direct communication available Link device[1] communication available

- GP/LP-A Series

Series	Connecting port	Description
GP/LP-A070	RS422 or RS232C-A port, RS232C or RS232C-B port, Ethernet port	Direct communication available Link device[1] communication available
GP/LP-A104	RS422 or RS232C-A port, RS232C or RS232C-B port, Ethernet port, CAN[2] port	Direct communication available Link device[1] communication available

※1: Please refer to 'GP Editor User Manual' for Link device instruction.

※2: Only Autonics' ARD Series can be connected to CAN port.

1.3.2 1:1:N Communication

A GP/LP can communicate with a single controller A and the multiple of controller Bs..
The GP/LP relays communication between the controller A and B.
The controller has to be able to set address of each device, and the address should not be duplicated.

Controller A
(PLC, etc.)

Controller B-1
(PLC, etc.)

Controller B-2
(PLC, etc.)

Controller B-n
(PLC, etc.)
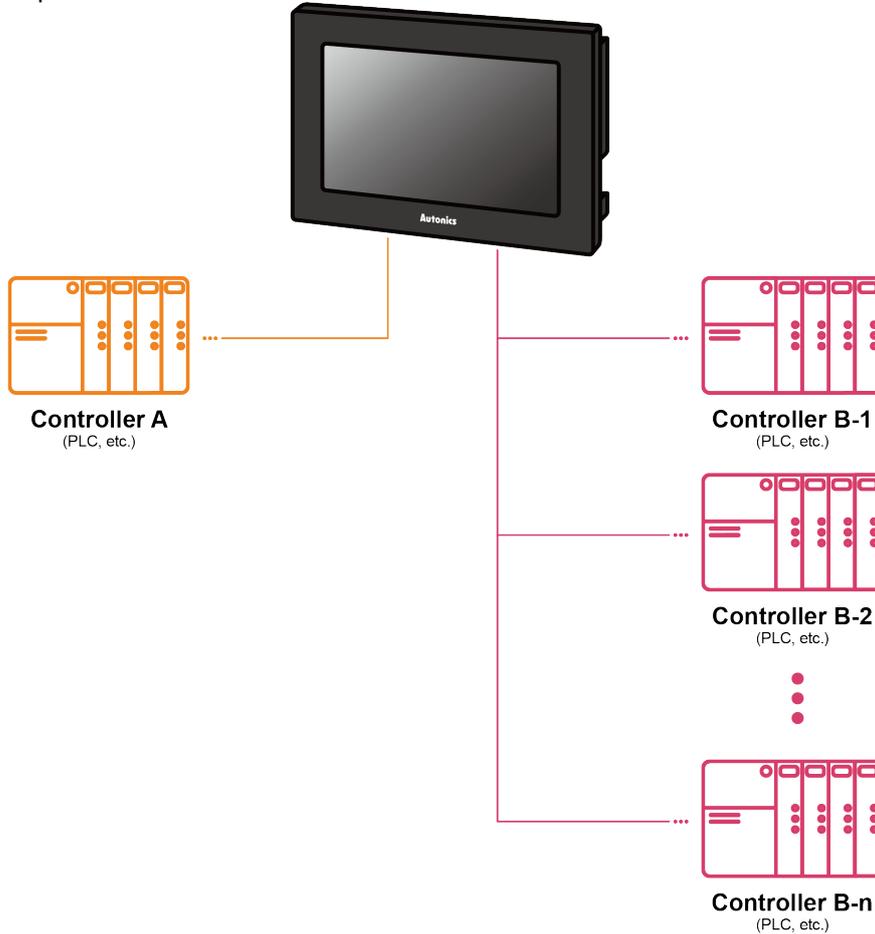
(1) Communication configuration by GP/LP model

The communication configuration by GP/LP model is listed below.
For detailed information about the communication configuration, please refer to 'GP/LP User Manual'.

- GP/LP-S Series

Series	Chanel	Connecting port	Description
GP/LP-S044, GP-S057	CH1	RS232C	Single direct communication available
	CH2	RS422/RS485	Link device[1] multiple communication available
GP/LP-S070	CH1 or CH2	RS232C	Single direct communication available Link device[1] single communication available
		RS422/RS485	Multiple direct communication available Link device[1] multiple communication available

- GP/LP-A Series

Series	Connecting port	Description
GP/LP-A070	RS422 or RS232C-A port, RS232C or RS232C-B port, Ethernet port	Direct communication available Link device※1 communication available
GP/LP-A104	RS422 or RS232C-A port, RS232C or RS232C-B port, Ethernet port, CAN※2 port	Direct communication available Link device※1 communication available

※1: Please refer to 'GP Editor User Manual' for Link device instruction.

※2: Only Autonics' ARD Series can be connected to CAN port.

(2) RS422 communication connection diagram

1.3.3   N:1:N Communication

A GP/LP can communicate with the multiple of controller As and Bs.
The LP relays comnmunication between the controller A and B.
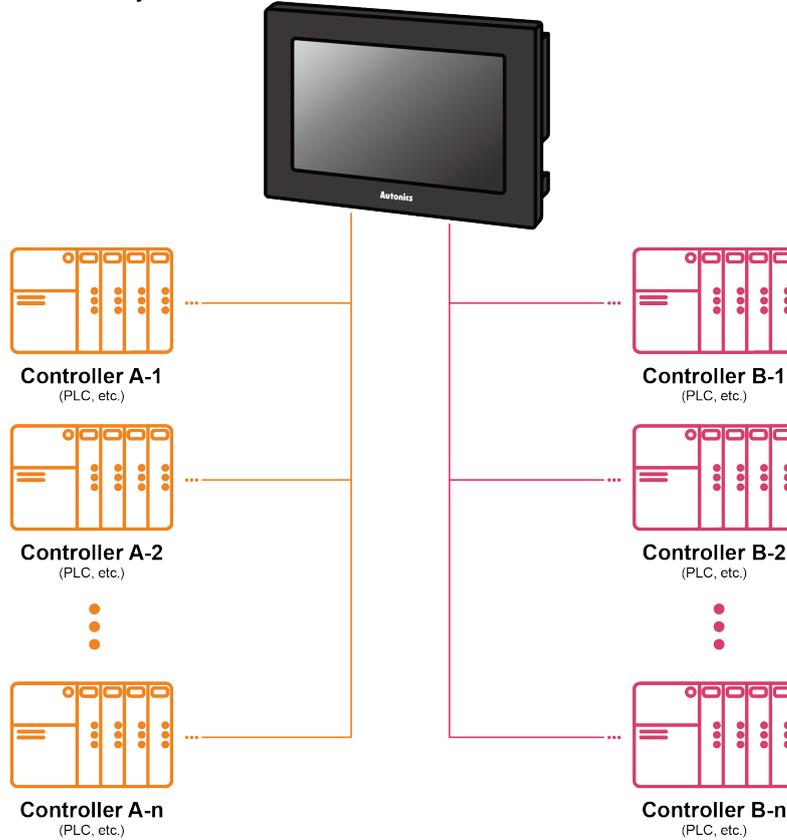
Controller A-1
(PLC, etc.)

Controller A-2
(PLC, etc.)

Controller A-n
(PLC, etc.)

Controller B-1
(PLC, etc.)

Controller B-2
(PLC, etc.)

Controller B-n
(PLC, etc.)

(1) Communication configuration by GP/LP model

The communication configuration by GP/LP model is listed below.
For detailed information about the communication configuration, please refer to 'GP/LP User Manual'.

- GP/LP-S Series

Series	Chanel	Connecting port	Description
GP/LP-S070	CH1 or CH2	RS232C/RS422	Multiple direct communication available Link device$^{※1}$ multiple communication available

- GP/LP-A Series

Series	Connecting port	Description
GP/LP-A070	RS422 or RS232C-A port, RS232C or RS232C-B port, Ethernet port	Direct communication available Link device$^{※1}$ communication available
GP/LP-A104	RS422 or RS232C-A port, RS232C or RS232C-B port, Ethernet port, CAN$^{※2}$ port	Direct communication available Link device$^{※1}$ communication available

※1: Please refer to 'GP Editor User Manual' for Link device instruction.

※2: Only Autonics' ARD Series can be connected to CAN port.

1.4   Barcode Reader, Printer Communication

A GP/LP can communicate with the barcode reader and printer.
Connect the barcode reader to utilize the barcode data.
Connect the printer to print the alarm log or the screen.

- GP/LP-S Series: printing alarm log
- GP/LP-A Series: print alarm log and screen
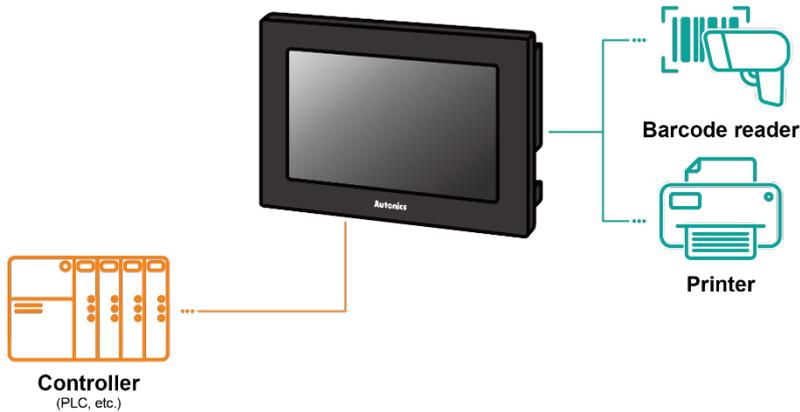
1.4.1   Communication Configuration

1.4.1.1 Barcode Reader

(1) Connected communication port

- GP/LP-S Series

Series	Connected device	Communication port		
		RS232C※	**RS422**※	**USB Host**
GP/LP-S044, GP-S057	Controller	◯	◯	-
	Barcode reader	◯	◯	-
GP/LP-S070	Controller	◯	◯	-
	Barcode reader	◯	◯	-

- GP/LP-A Series

Series	Connected device	Communication port		
		RS232C※	**RS422**※	**USB Host**
GP/LP-A070 GP/LP-A104	Controller	◯	◯	-
	Barcode reader	◯	◯	◯

※RS232C/422 converter allows to opposite communication.

(2) Configuration method

1st Set the items related to the use of bar codes in the project in the drawing program, GP Editor/atDesigner.

Series	Description	Drawing program menu
GP/LP-S	Device setting for data storage	Common > Barcode
	System device setting for action control	Common > System Information > System Signal 1
GP/LP-A	Device setting for connection port/data storage	Project > Project Property > Special Device Setting

※For detailed information about system device setting, please refer to 'GP Editor/atDesigner User Manual'.

2nd Download the set project in the drawing program , GP Editor/atDesigner, to GP/LP device.

3rd Make communication settings for each port in the GP/LP system menu.

※For detailed information about communication setting, please refer to 'GP/LP User Manual'.

(3) Communication specification

Item	Specification
Baud rate	300, 600, 1200, 3200, 4800, 9600, 19200, 38400, 57600, 115200bps
Data length	7, 8 bit
Parity	None, Odd, Even
Stop bit	1, 2 bit
Flow control	DSR/DTR, XON/XOFF

1.4.1.2 Printer

(1) Connected communication port

- GP/LP-S Series

Series	Connected device	Communication port		
		RS232C※	RS422※	USB Host
GP/LP-S044, GP-S057	Controller	○	○	-
	Printer	○	○	-
GP/LP-S070	Controller	○	○	-
	Printer	○	○	-

- GP/LP-A Series

Series	Connected device	Communication port		
		RS232C※	RS422※	USB Host
GP/LP-A070, GP/LP-A104	Controller	○	○	-
	Printer	-	-	○

(2) Configuration method

1st Set screen printing/alarm log printing device and touch key/switch in drawing program, GP Editor/atDesigner.

Series	Description	Drawing program menu
GP/LP-S	System device setting for action control	Common > System Information > System Signal
GP/LP-A	Device setting for screen print control	Project window > Right-click menu of the screen to print > Screen Printer Setting
	Device setting for alarm log print	Project window > Alarm History > Use Print

2nd Download the set project in the drawing program , GP Editor/atDesigner, to GP/LP device.

3rd Make communication settings for each port in the GP/LP system menu.

※ For detailed information about communication setting, please refer to 'GP/LP User Manual'.

(3) Communication specification

Item	Specification
Baud rate	300, 600, 1200, 3200, 4800, 9600, 19200, 38400, 57600 bps
Data length	7, 8 bit
Parity	None, Odd, Even
Stop bit	1, 2 bit
Flow control	DSR/DTR, XON/XOFF

2 Communication Configuration by Devices

2.1 SIEMENS S7 Series Connection

GP/LP is able to communicate with SIEMENS S7 Series.

2.1.1 Connection Support PLC Model

PLC type		Communication method	Communication type	Baud rate (bps)
S7 Series	200	PPI	CPU direct Loader	9600
	300	MPI	CPU direct Loader	38400

2.1.2 Connectable GP/LP Model

Connected devices	Connection method	GP/LP Model								
		GP-2480 (under V2.70)	GP-2480 (over V3.00)	GP-S057	GP/LP-S044	GP/LP-S070	GP-S057 (V2)	GP/LP-S044 (V2)	GP/LP-S070 (V2)	GP/LP-A Series
CPU221	CPU direct Loader	×	○	○	○	○	○	○	○	○
CPU222	CPU direct Loader	×	○	○	○	○	○	○	○	○
CPU224	CPU direct Loader	×	○	○	○	○	○	○	○	○
CPU224XP	CPU direct Loader	×	○	○	○	○	○	○	○	○
CPU224XP si	CPU direct Loader	×	○	○	○	○	○	○	○	○
CPU226	CPU direct Loader	×	○	○	○	○	○	○	○	○
CPU312	CPU direct Loader	×	×	○	○	○	○	○	○	○
CPU312C	CPU direct Loader	×	×	○	○	○	○	○	○	○
CPU313C	CPU direct Loader	×	×	○	○	○	○	○	○	○
CPU313C-2	CPU direct Loader	×	×	○	○	○	○	○	○	○
CPU314	CPU direct Loader	×	×	○	○	○	○	○	○	○
CPU314C-2	CPU direct Loader	×	×	○	○	○	○	○	○	○
CPU315-2	CPU direct Loader	×	×	○	○	○	○	○	○	○
CPU317-2	CPU direct Loader	×	×	○	○	○	○	○	○	○

2.1.3   System Organization

GP/LP Series

Exclusive cable for SIEMENS

S7-200/300

SIEMENS S7-200 uses PPI(Point to point interface) communication of SIEMENS and SIEMENS S7-300 uses MPI(Mutil point interface) communication of SIEMENS.
It executes RS232C communication with dedicated cable of SIEMENS. It executes also RS-422 communication with RS-232/422 converter.

2.1.4   Communication Cable

Use the dedicated cable sold by SIEMENS.

2.1.5   Available Device

The device range differs depending on the PLC model and the number of I/O contacts.
The available PLC model in GP/LP are as follows.
For detailed information about each device, please refer to the manuals provided by each manufacturer and

For detailed information about GP/LP internal device, please refer to ´atLogic Programing Manual´.

2.1.5.1   Device Structure

I	00	0

① Device name   ② Word address   ③ Bit address

Type	①	②	③	Note
Bit	I	Decimal	Octonal	S7-200 / S7-300
	Q	Decimal	Octonal	S7-200 / S7-300
	V	Decimal	Octonal	S7-200
	M	Decimal	Octonal	S7-200 / S7-300
	SM	Decimal	Octonal	S7-200
	T	Bit address (Decimal)		S7-200
	C	Bit address (Decimal)		S7-200
Word	IW	Word address (Decimal)	None	S7-200 / S7-300
	QW	Word address (Decimal)	None	S7-200 / S7-300
	VW	Word address (Decimal)	None	S7-200
	MW	Word address (Decimal)	None	S7-200 / S7-300
	SM	Word address (Decimal)		S7-200(Special register)
	T	Word address (Decimal)		S7-200 (Counter setting value)
	C	Word address (Decimal)		S7-200 (Timer current value)

📖 **Ex.**

Word I0 = bit I0 to I17, Word UW10 = UB100 to UB10F

2.1.5.2 Device Range

(1) S7-200

- CPU 221 type

Type	Device	Mark	Range	
			Start	**End**
Bit	Input relay	I	I0	I157
	Output relay	Q	Q0	Q157
	Internal relay	V	V0	V20477
	Auxiliary relay	M	M0	M317
	Special relay	SM	SM0	SM1857
	Timer contact	T	T0	T255
	Counter contact	C	C0	C255
Word	Input register	IW	IW0	IW14
	Output register	QW	QW0	QW14
	Internal register	VW	VW0	VW2046
	Auxiliary register	MW	MW0	MW30
	Special register	SM	SM0	SM184
	Timer current value	T	T0	T255
	Counter current value	C	C0	C255

- CPU 222 type

Type	Device	Mark	Range	
			Start	**End**
Bit	Input relay	I	I0	I157
	Output relay	Q	Q0	Q157
	Internal relay	V	V0	V20477
	Auxiliary relay	M	M0	M317
	Special relay	SM	SM0	SM2997
	Timer contact	T	T0	T255
	Counter contact	C	C0	C255
Word	Input register	IW	IW0	IW14
	Output register	QW	QW0	QW14
	Internal register	VW	VW0	VW2046
	Auxiliary register	MW	MW0	MW30
	Special register	SM	SM0	SM298
	Timer current value	T	T0	T255
	Counter current value	C	C0	C255

- CPU 224 type

Type	Device	Mark	Range	
			Start	End
Bit	Input relay	I	I0	I157
	Output relay	Q	Q0	Q157
	Internal relay	V	V0	V81917
	Auxiliary relay	M	M0	M317
	Special relay	SM	SM0	SM5497
	Timer contact	T	T0	T255
	Counter contact	C	C0	C255
Word	Input register	IW	IW0	IW14
	Output register	QW	QW0	QW14
	Internal register	VW	VW0	VW8190
	Auxiliary register	MW	MW0	MW30
	Special register	SM	SM0	SM548
	Timer current value	T	T0	T255
	Counter current value	C	C0	C255

- CPU 224XP, 224XPsi, 226 type

Type	Device	Mark	Range	
			Start	End
Bit	Input relay	I	I0	I157
	Output relay	Q	Q0	Q157
	Internal relay	V	V0	V102397
	Auxiliary relay	M	M0	M317
	Special relay	SM	SM0	SM5497
	Timer contact	T	T0	T255
	Counter contact	C	C0	C255
Word	Input register	IW	IW0	IW14
	Output register	QW	QW0	QW14
	Internal register	VW	VW0	VW10238
	Auxiliary register	MW	MW0	MW30
	Special register	SM	SM0	SM548
	Timer current value	T	T0	T255
	Counter current value	C	C0	C255

(2) S7-300

- CPU 312 type

Type	Device	Mark	Range	
			Start	**End**
Bit	Input relay	I	I0	I10237
	Output relay	Q	Q0	Q10237
	Auxiliary relay	M	M0	M2557
Word	Input register	IW	IW0	IW1022
	Output register	QW	QW0	QW1022
	Auxiliary register	MW	MW0	MW254

- CPU 312C type

Type	Device	Mark	Range	
			Start	**End**
Bit	Input relay	I	I0	I10237
	Output relay	Q	Q0	Q10237
	Auxiliary relay	M	M0	M2557
Word	Input register	IW	IW0	IW1022
	Output register	QW	QW0	QW1022
	Auxiliary register	MW	MW0	MW254

- CPU 313C type

Type	Device	Mark	Range	
			Start	**End**
Bit	Input relay	I	I0	I10237
	Output relay	Q	Q0	Q10237
	Auxiliary relay	M	M0	M2557
Word	Input register	IW	IW0	IW1022
	Output register	QW	QW0	QW1022
	Auxiliary register	MW	MW0	MW254

- CPU 313C-2 type

Type	Device	Mark	Range	
			Start	**End**
Bit	Input relay	I	I0	I20477
	Output relay	Q	Q0	Q20477
	Auxiliary relay	M	M0	M2557
Word	Input register	IW	IW0	IW2046
	Output register	QW	QW0	QW2046
	Auxiliary register	MW	MW0	MW254

- CPU 314 type

Type	Device	Mark	Range	
			Start	End
Bit	Input relay	I	I0	I10237
	Output relay	Q	Q0	Q10237
	Auxiliary relay	M	M0	M2557
Word	Input register	IW	IW0	IW1022
	Output register	QW	QW0	QW1022
	Auxiliary register	MW	MW0	MW254

- CPU 314C-2 type

Type	Device	Mark	Range	
			Start	End
Bit	Input relay	I	I0	I20477
	Output relay	Q	Q0	Q20477
	Auxiliary relay	M	M0	M2557
Word	Input register	IW	IW0	IW2046
	Output register	QW	QW0	QW2046
	Auxiliary register	MW	MW0	MW254

- CPU 315-2 type

Type	Device	Mark	Range	
			Start	End
Bit	Input relay	I	I0	I20477
	Output relay	Q	Q0	Q20477
	Auxiliary relay	M	M0	M20477
Word	Input register	IW	IW0	IW2046
	Output register	QW	QW0	QW2046
	Auxiliary register	MW	MW0	MW2046

- CPU 317-2 type

Type	Device	Mark	Range	
			Start	End
Bit	Input relay	I	I0	I81917
	Output relay	Q	Q0	Q81917
	Auxiliary relay	M	M0	M40957
Word	Input register	IW	IW0	IW8190
	Output register	QW	QW0	QW8190
	Auxiliary register	MW	MW0	MW4094

- CPU 319-3 type

Type	Device	Mark	Range	
			Start	**End**
Bit	Input relay	I	I0	I81917
	Output relay	Q	Q0	Q81917
	Auxiliary relay	M	M0	M81917
Word	Input register	IW	IW0	IW8190
	Output register	QW	QW0	QW8190
	Auxiliary register	MW	MW0	MW8190

2.1.6   Monitorable Device in GP/LP

GP/LP is able to monitor PLC device and change the status.

The following is avilable device list of this menu, please refer to 'Available device' for available device range.

Type	Mark	Device	Note
Bit	I	Input relay	Read only
	Q	Output relay	Write only
	V	Internal relay	Variable memory
	M	Auxiliary relay	Bit memory
	SM	Special relay	Special memory (Read only)
	T	Timer contact	
	C	Counter contact	
Word	IW	Input register	Read only
	QW	Output register	Write only
	VW	Internal register	Variable memory
	MW	Auxiliary register	Bit memory
	SM	Special register	Special memory (Read only)
	T	Timer current value	
	C	Counter current value	

2.2 SIEMENS S7-1200 Series Communication Module Connection

GP/LP is able to communicate with SIEMENS S7-1200 Series via communication module CM1241 RS422/485.

2.2.1 Connection Support PLC Model

PLC type		Connection method	Communication method	Communication module
S7-1200 Series	CPU1211C	Communication module	RS-485	CM1241 RS422/485
	CPU1212C			
	CPU1214C			
	CPU1215C			
	CPU1217C			

2.2.2 Connectable GP/LP Model

Connected devices	Connection method	GP/LP Model								
		GP-2480 (under V2.70)	GP-2480 (over V3.00)	GP-S057	GP/LP-S044	GP/LP-S070	GP-S057 (V2)	GP/LP-S044 (V2)	GP/LP-S070 (V2)	GP/LP-A Series
CPU1211C	Communication module	×	×	×	×	×	○	○	○	○
CPU1212C	Communication module	×	×	×	×	×	○	○	○	○
CPU1214C	Communication module	×	×	×	×	×	○	○	○	○
CPU1215C	Communication module	×	×	×	×	×	○	○	○	○
CPU1217C	Communication module	×	×	×	×	×	○	○	○	○

2.2.3 System Organization

2.2.4 Communication Cable

- Applied cable: C3M5P03-D9M0-T4Y0
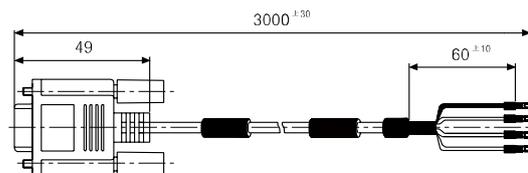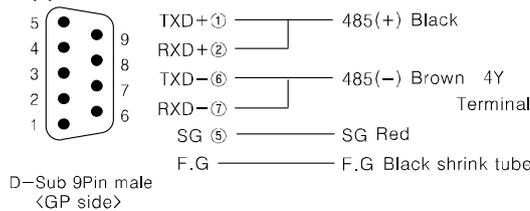
2.2.5 Communication Configuration

The communication condition is set as the default value of the PLC specification as follows and can be changed.

Item	Setting
Baud rate	9,600bps
Data Bit	8 bits
Stop Bit	1 bits
Parity	None

To connect SIEMENS S7-1200 Series and GP/LP, use communication module CM1241 RS422/485, set communication configuration of SIEMENS CPU as Modbus Slave.
Use editing program by SIEMENS for communication configuration.

(1) Adding Communication module

This process is for configure the PLC and communication module model.
1st Open saved project from 'Open existing project' or create new project on 'Create new project'.
2nd When 'First steps' window displays, Click 'Open the project view'.
3rd Click 'Add new device' on the left side 'Project tree'.
4th When 'Add new device' window displays, add the using PLC according to the item.
(e.g. Select SIMATIC S7-1200 > CPU 1212C DC/DC/DC > 6ES7 212-1AE40-0XB0, then click OK butoon)
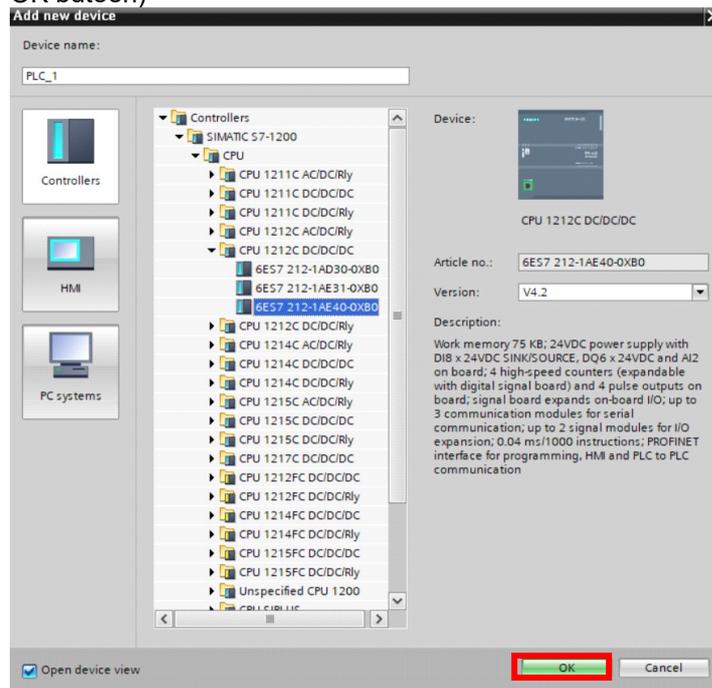
5th Check the corresponding PLC is added to 'Project view' in the center.
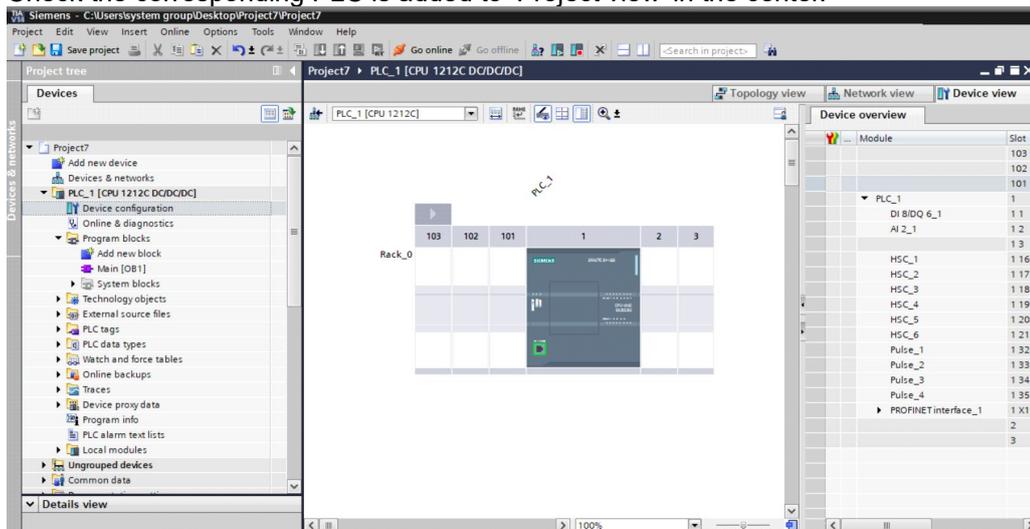
6th Find the communication module's model name to be conneced on the right side 'Hardware catalog' to add communication module.
(e.g. Select 'Communications modules > Point-to-Point > CM1241(RS422/485) > 6ES7 241-1CH32-0XB0, Drag and drop to 101 in the center 'Project view')
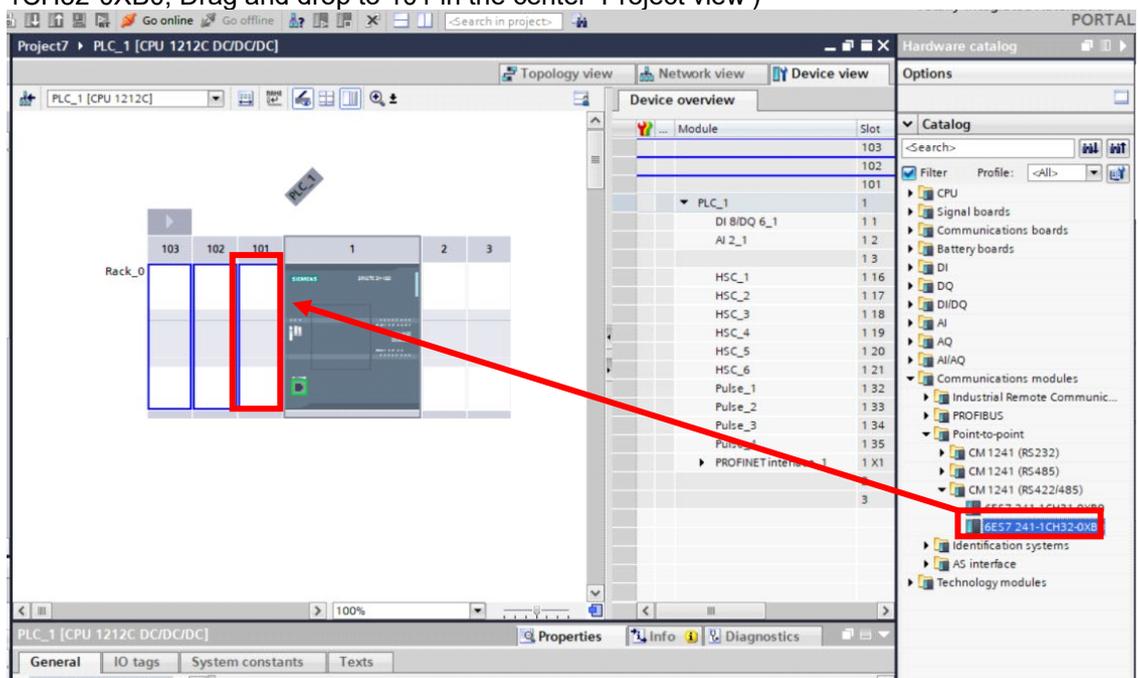
(2) Set as Modbus Slave

This process is for entering the parameter value after adding commands to set as Modbus Slave.

1st 'Project tree' Double click 'Program blocks > Main [OB1] in the left side of 'Project tree'.
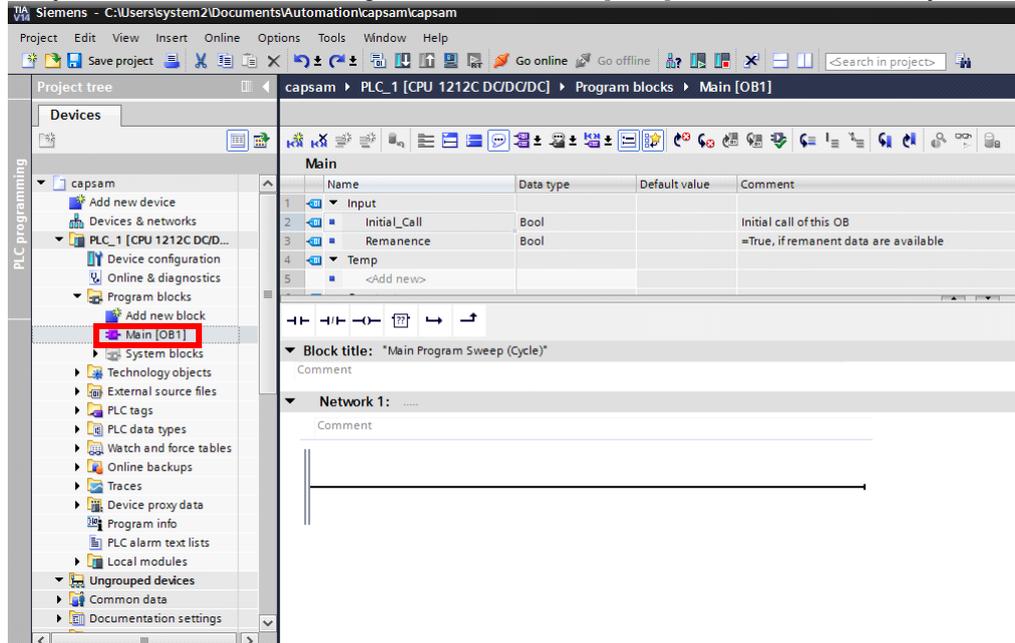
2nd Select 'Basic instructions > Move operations > Move' on the right side 'Instructions', drag and drop to 'Project view'-'Network 1'.
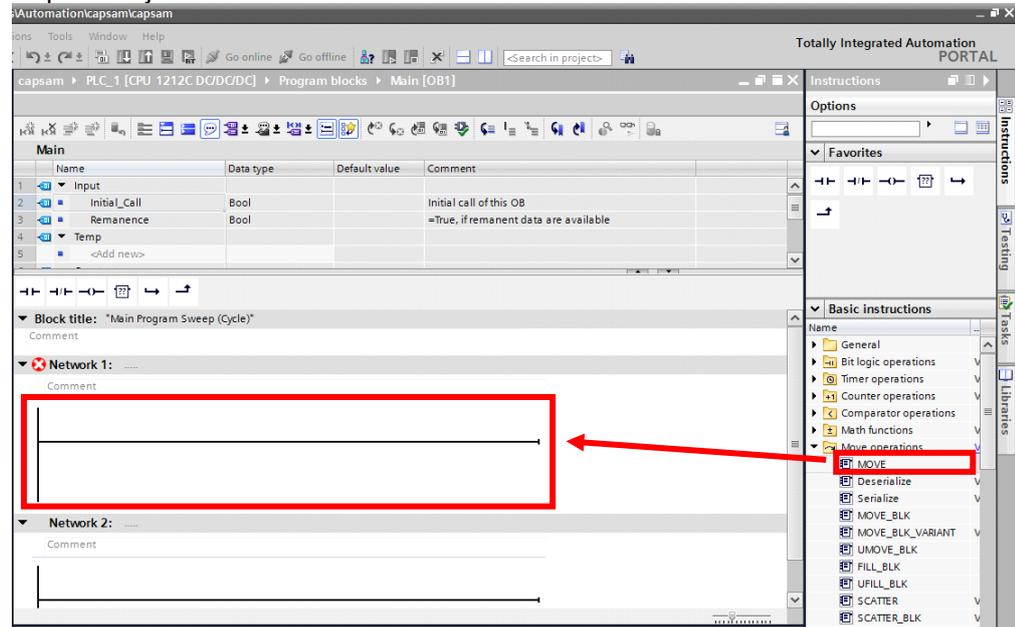
3rd Select 'Communication > Communication processor > MODBUS (RTU) > Modbus_Comm_Load' on the right side 'Instruction', drag and drop to 'Project view'-'Network 2'.
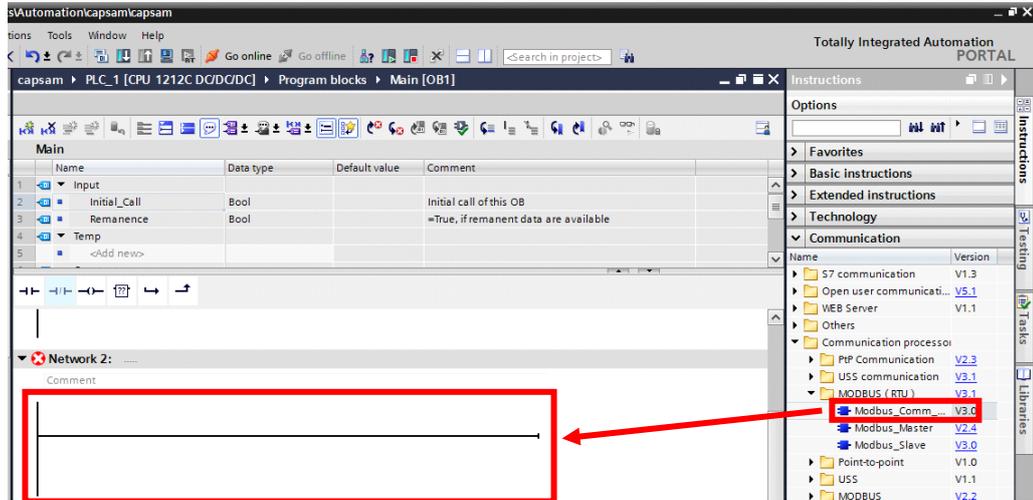
4th Select 'Communication > Communication processor > MODBUS (RTU) > Modbus_Slave' on the right side 'Instructions', drag and drop to 'Project view'-'Network 3'.
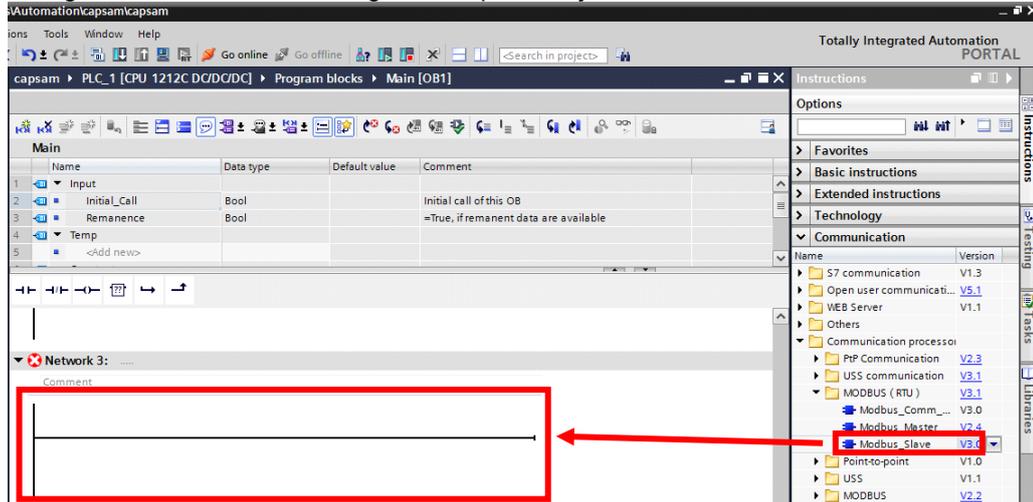
5th Enter the following in to 'Network 1: MOVE' command parameter.

Parameter	Input value	Description
IN	4	Set communication mode input value
OUT	Modbus_Comm_Load_DB.MODE	Select communication mode parameter

- IN
  Enter '4' in the input window that appears when click IN Parameter of MOVE command.
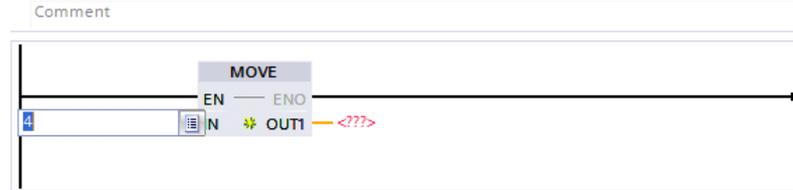
- OUT
  Select 'Modbus_Comm_Load_DB > MODE' in the menu that appears when click OUT Parameter of Move command.
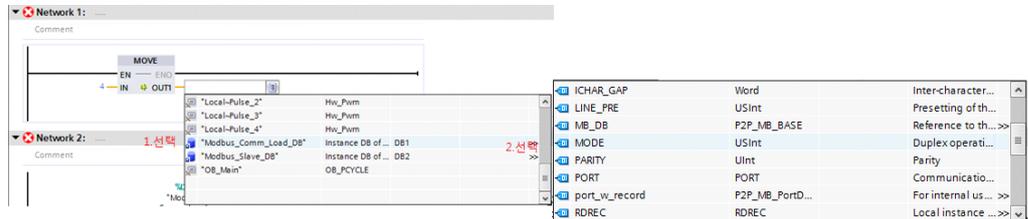
6th Enter the following in to 'Network 2: Modbus_Comm_Load' command parameter.

7th Maintain the the table below as default value for the parameter.

Parameter	Input value	Description
REQ	#Initial_Call (Select in Input list)	Communication configuration command execution condition
PORT	Local to CM_1241_(RS422_485…)	Set communication module
MB	Modbus_Slave_DB.MB_DB	Specify communication configuration target.
STATUS	Set word area e.g. MW1000	Display communication command status
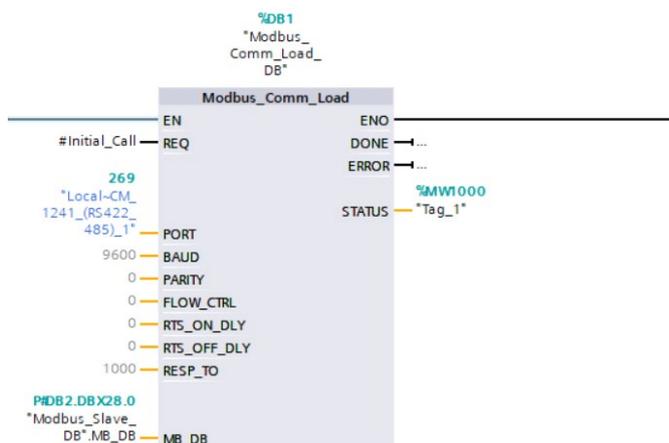
8th Enter the following in to 'Network 3: Modbus_Slave' command parameter.

Parameter	Input value	Description
MB_ADDR	1	Enter Communication Address
MB_HOLD_REG	P#M0.0 WORD 2050	Set MW area
STATUS	Set Word area e.g. MW200	Display communication command status
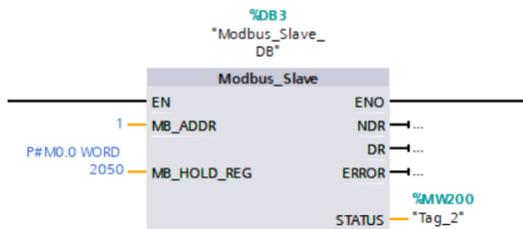
2.2.6   Available Device

The device range differs depending on the PLC model and the number of I/O contacts.
The available PLC model in GP/LP are as follows.
For detailed information about each device, please refer to the manuals provided by each manufacturer and

For detailed information about GP/LP internal device, please refer to ′atLogic Programing Manual′.

2.2.6.1 Device Structure

I	0000	0

① Device name   ② Word address   ③ Bit address

Type		①	②	③
Bit	I		Decimal	Octonal
	Q		Decimal	Octonal
Word	IW		Word address (Decimal)	-
	MW		Word address (Decimal)	-

✎ Note

Set the device address of word device IW, MW to even number .

2.2.6.2 Device Range

Type	Device	Mark	Range			
			S Series		**A Series**	
			Start	**End**	**Start**	**End**
Bit	Input relay	I	I0	I10237	I0.0	I1023.7
	Output relay	Q	Q0	Q10237	Q0.0	I1023.7
Word	Input register	IW	IW0	IW1020	IW0	IW1020
	Auxiliary register	MW	MW0	MW2046	MW0	MW2046

2.2.7 Monitorable Device in GP/LP

GP/LP is able to monitor PLC device and change the status.

The following is avilable device list of this menu, please refer to ʹAvailable deviceʹ for available device range.

Type	Mark	Device
Bit	I	Input relay
	Q	Output relay
Word	IW	Input register
	MW	Auxiliary register

.

Make Life Easy : Autonics