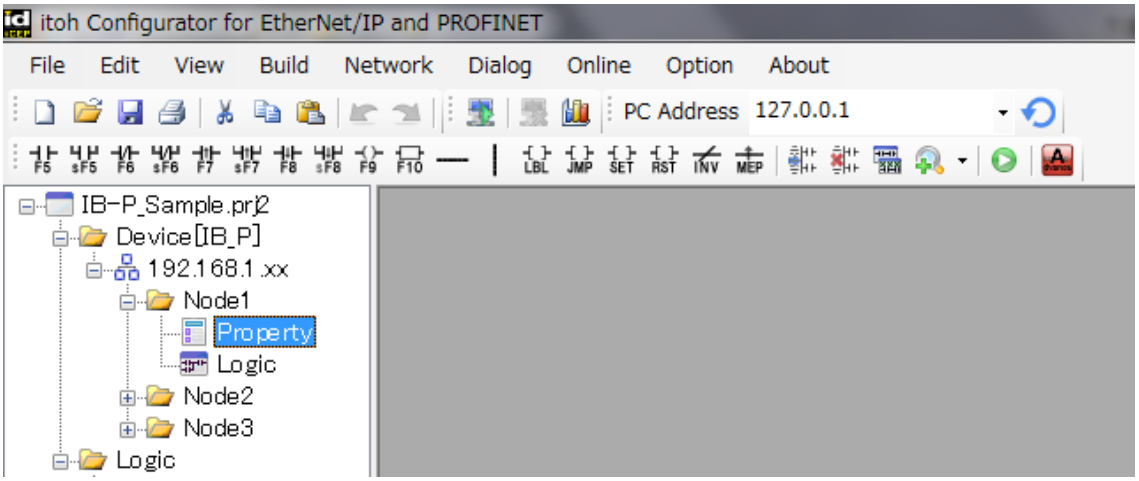
Chapter 3
Setting Properties

1 Setting Properties –Main Menu 3-2
2 Motor Settings 3-4
3 Error/Network Settings 3-7
3.1 Auto/Host Error Release 3-7
3.2 Inter-controller Communication Settings 3-8
3.2.1 Auto IP Settings 3-10
4 Acceleration/Deceleration 3-11
5 Timer Settings 3-12
6 Counter Settings 3-13
7 Pulse Counter Settings 3-14
8 Master/Slave Settings 3-15
9 All Download or Upload 3-16
10 Import and Export Property Settings 3-17

1 Setting Properties – Main Menu

Master / Slave, network and motor parameter setting can be set at Property.

Double click “Property”, and then “Property Setting” is displayed.



The functions for “Property setting” are,

(1) Select Address
IP address of IB controller in “Property Setting” is displayed.
From node tree, double click Node (IP address), and then switch node.

(2) Logic
Select IB ladder logic.

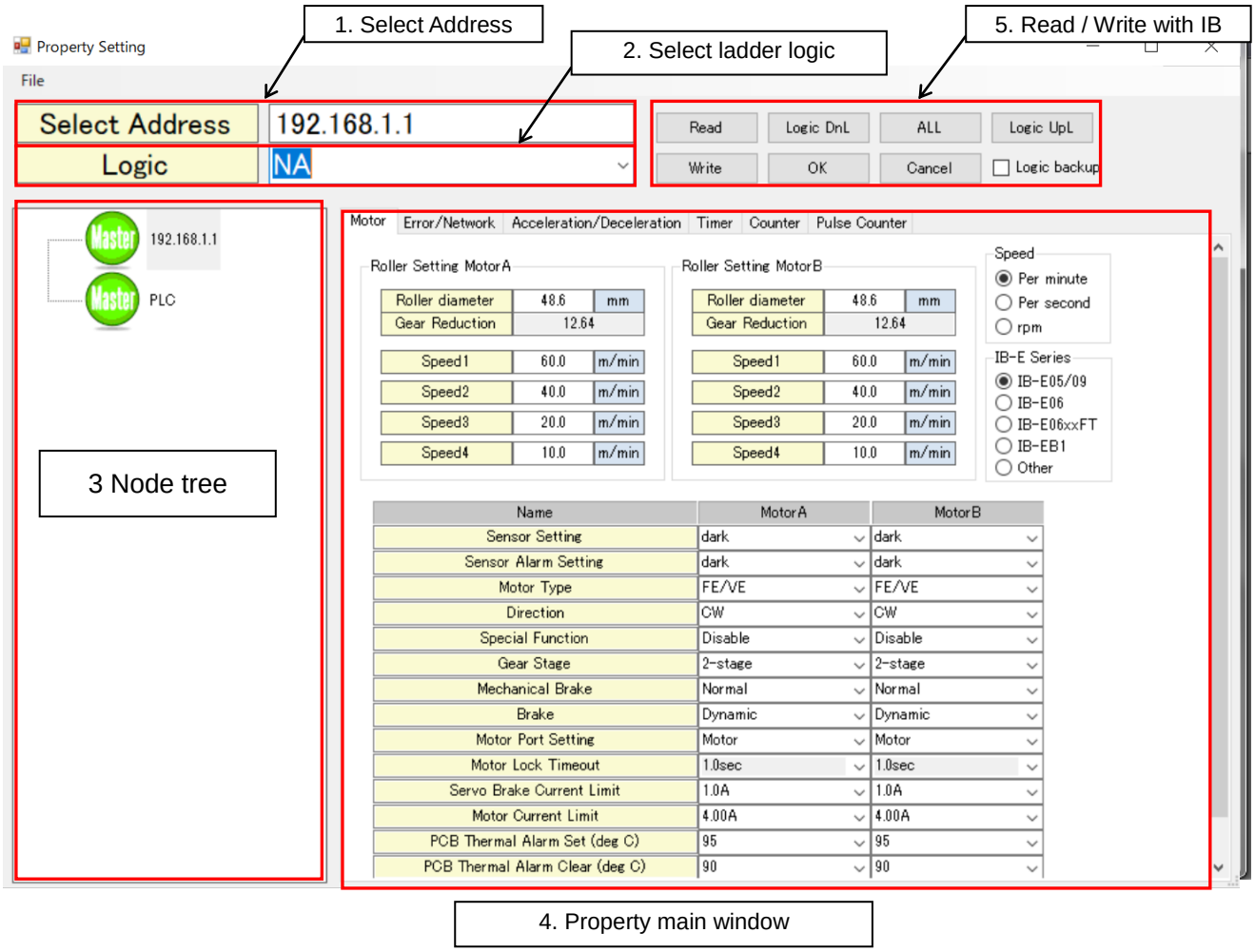
(3) Node tree
From node tree, right click IP address, and then select Master or Slave of controller.

(4) Property main window

Motor	Motor control setting
Error/Network	Error release and communication setting.
Acceleration/Deceleration	Acceleration or Deceleration setting of motor.
Timer	Timer in ladder logic setting
Counter	Counter in ladder logic setting
Pulse Counter	Pulse Count in ladder logic setting

(5) Write/Read button

Read	Read property setting from an IB	Write	Write property setting.
Logic DnL	Write ladder logic.	OK	Close the property window while saving the chaged property setting.
All	Write ladder logic and property settings into multiple IBs.	Cancel	Close property window without saving the change property setting.
Logic UpL	Read ladder logic from an IB controller.	Logic backup	Check the box to write ladder logic for reading together when [LogicDnL] is excuted.



Property window

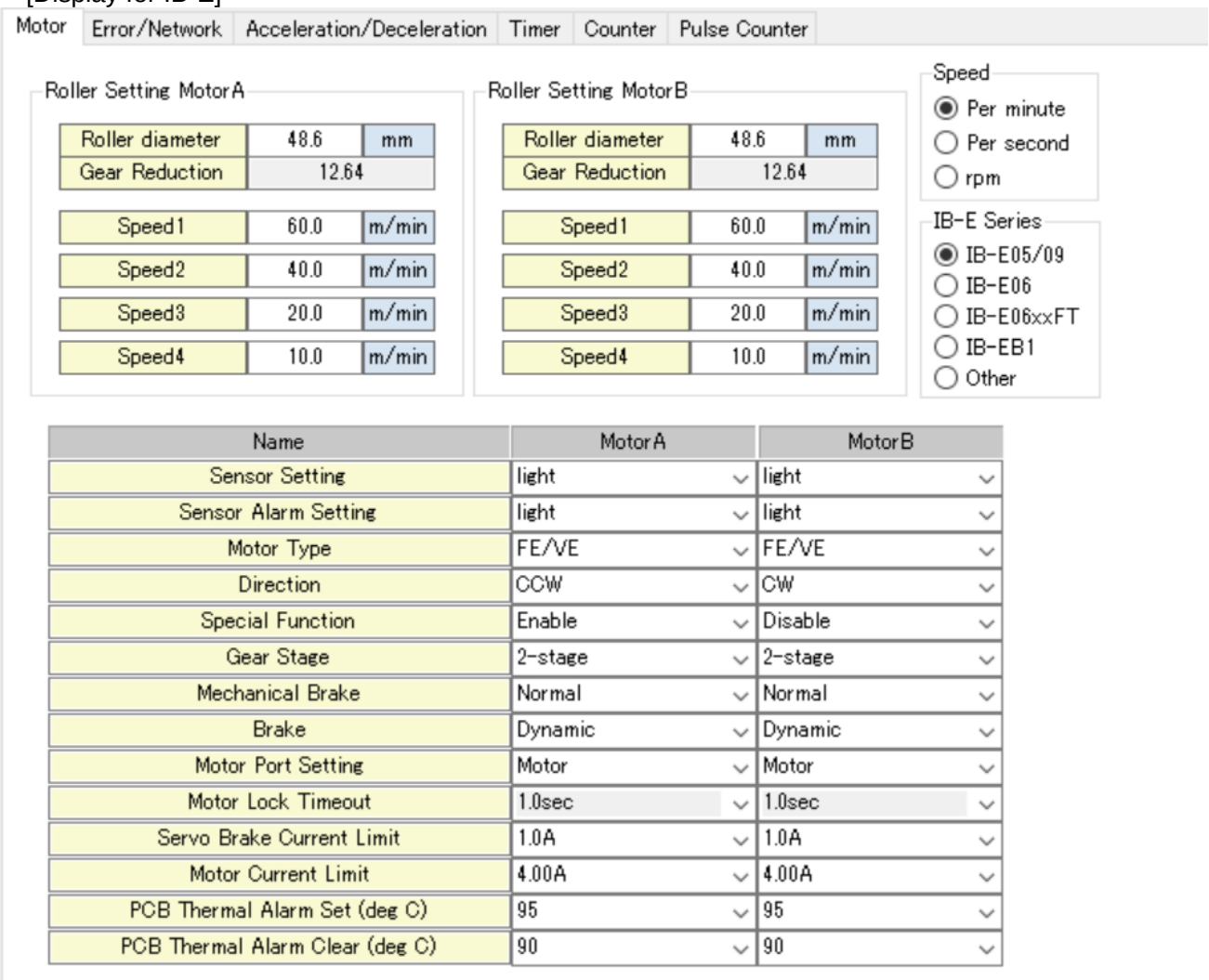
2 Motor Settings

Parameter setting for motor is available and can be modify.

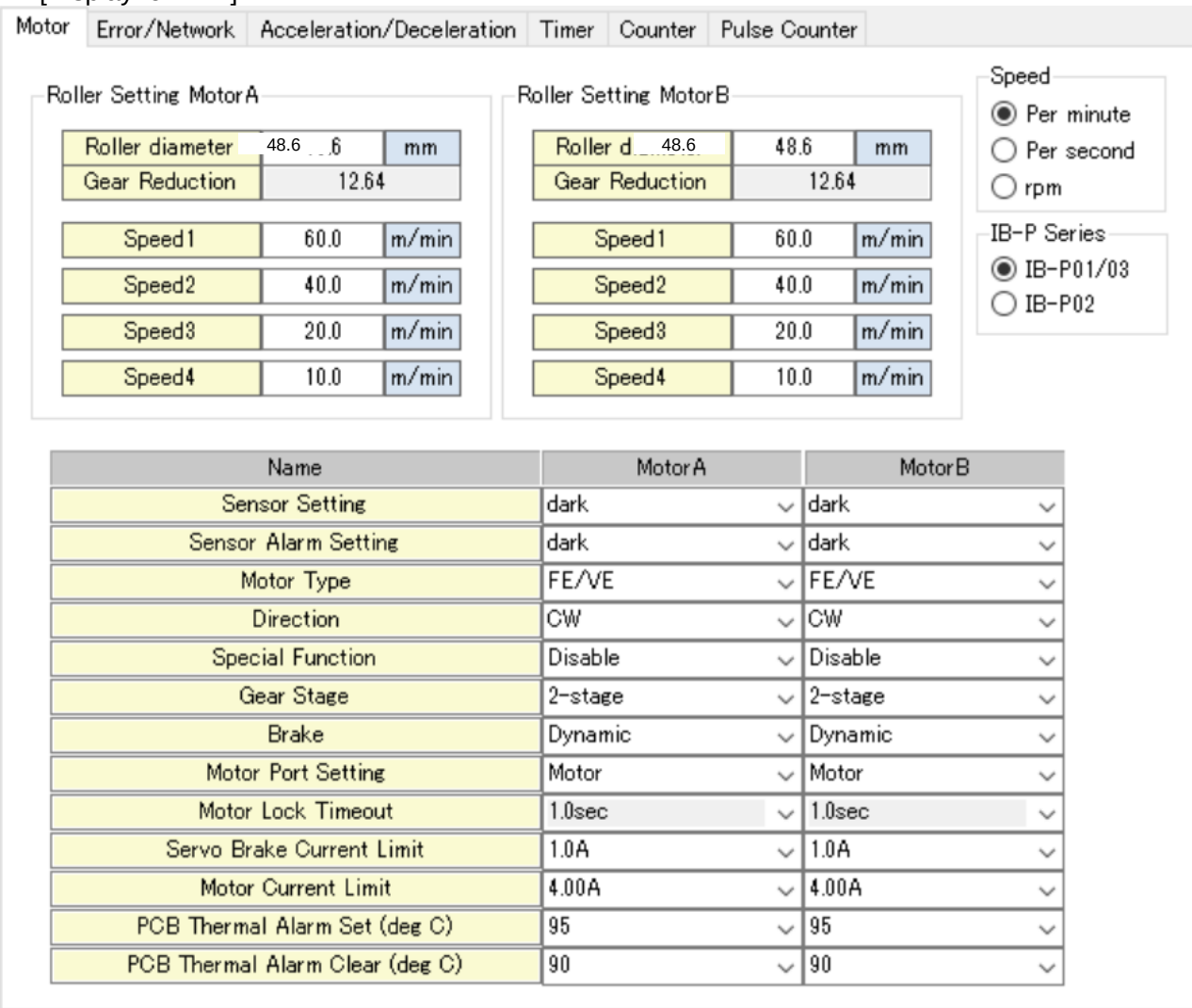
Display as start menu when open property setting.

The display of IB-E project and IB-P project is different. Refer to diagrams in below.

[Display for IB-E]



[Display for IB-P]



See next page for description of motor setting.

Motor setting items

Contents	Descriptions
Speed	Select a display unit (Per minute, Per second, or RPM) of Speed 1 to Speed 4. Entering a value cannot be in the columns of Speed 1 to Speed 4.
IB-P / E Series	Select a controller (IB-E or IB-P) to use. The settable range of each item changes accoring to which controller has been selected.
Roller diameter	Set the pipe diameter of roller to use.
Gear Reduction	Display the gear ratio of the motor set for [Motor Type]. When [Other] is set in [Motor Type], the gear reduction can be entered.
Speed 1 (*1)	Set the first speed of motor. (Setting range: 621 to 6,000 rpm)
Speed 2 (*1)	Set the second speed of motor.
Speed 3 (*1)	Set the third speed of motor.
Speed 4 (*1)	Set the fourth speed of motor.
Sensor Setting	Switch between [dark] and [light] for sensor input.
Sensor Alarm Setting	Switch between [dark] and [light] for sensor alarm input.
Motor Type	Set a motor type. Selectable motor types are different depends on selecting [IB series, IB-P or IB-E series]. Select IB-E05B unused, FE/VE, FS, FP/VP, and other Select IB-E06F unused, FH, KT, and other Select IB-E06xxFT Motor A: unused, FH,KT, and other Motor B: unused, FE/VE, FS, FP/VP, and other Select IB-P01F/03F unused, FE/VE, FP/VP, and other Select IB-P02F unused, FH,KT, and other
Direction	Set the motor rotation direction (CW/CCW).
Special Function	Invalid
Gear Stage	Set the gear number of the motor to use.
Mechanica Brake(*2)	Set the mode of mechanical brake. Yes Dynamic brake is active when motor is stopped No Mechanical brake is always opened.
Brake	Set a type of brake to use. Dynamic Dynamic brake Servo Servo brake (Do not use mechanical brake at the same time) Free Free running
Motor Port Setting	Set the mode of motor port operation. Motor Motor connection Port: Motor port output (Nchopen drain output) *set brake to free as set a port.
Motor Lock Timeout	Display the lock error occurrence time. *KT motor is locked for 0.5 sec, other motors are locked for 1sec.
Servo brake current limit	Set the current value for using the servo brake. *Setting range 0.1 to 1.0A 0.1A increment.
Motor current limit	Set the current limit. *Select IB-E05B/IB-P01B 0.50A to 4.00A 0.25A increment *Select IB-E06F 0.50A to 7.00A 0.25A increment
PCB Thermal Alarm Set	Set the threshold temperature value for causing a PCB thermal error. * Setting range 45 to 110°C, 5°C increment
PCB Thermal Alarm Clear	Set the threshold temperature value for resetting a PCB thermal error. * Setting range 40 to 105°C, 5°C increment

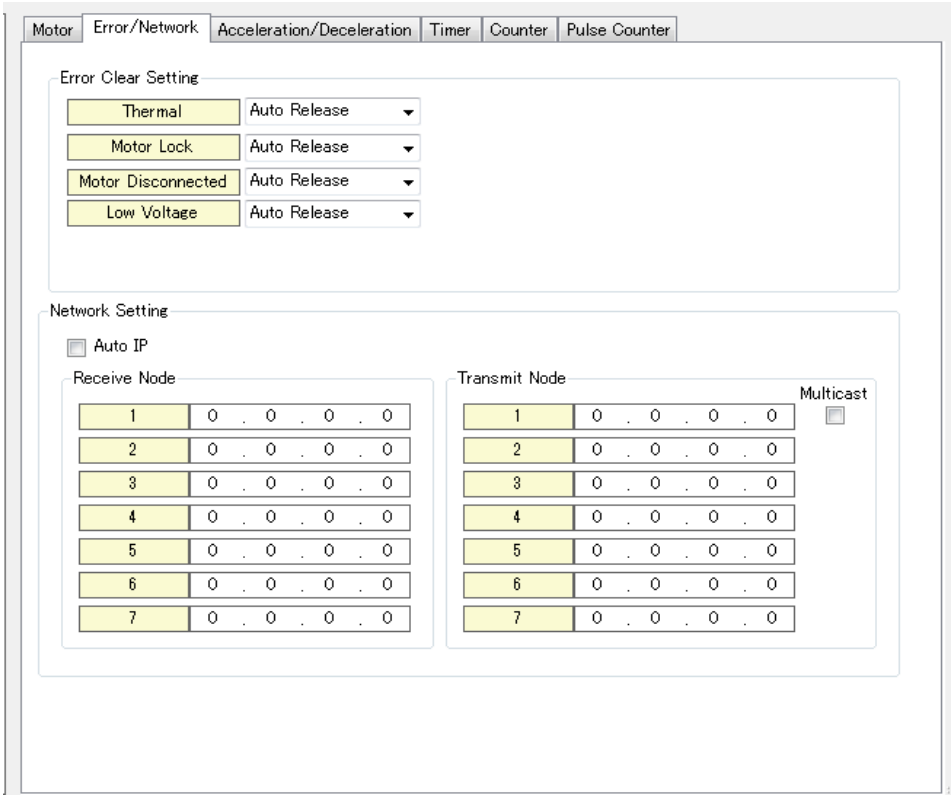
*1 Switch speed 1 to speed 4 using speed switching bit of ladder logic or I/O connection.

*2 Mechanical brake is not activated when motor with Mechanical brake is not used though active mechanical brake setting.

3 Error / Network Settings

Network setting is available by reset of error, multicast or unitcast.

From property setting click “Error/Network”.



3.1 Auto / Host Release for error clear setting

Thermal error, motor lock error, motor disconnected error and low voltage error can be switched by Auto or Host release.

- Auto Release　　Error is reset automatically when remove cause of error.
- Host Release　　Error is reset by error release signal.

> ・Reset of low voltage error is not available for IB-E05.

3.2 Inter-controller Communication Settings

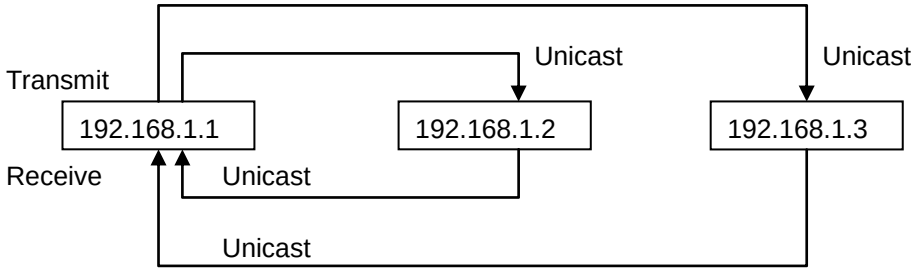
How to configure inter-controller communication settings

Set the IP address of the receiver to "Receive Node", and the IP address of the sender to "Transmit Node".

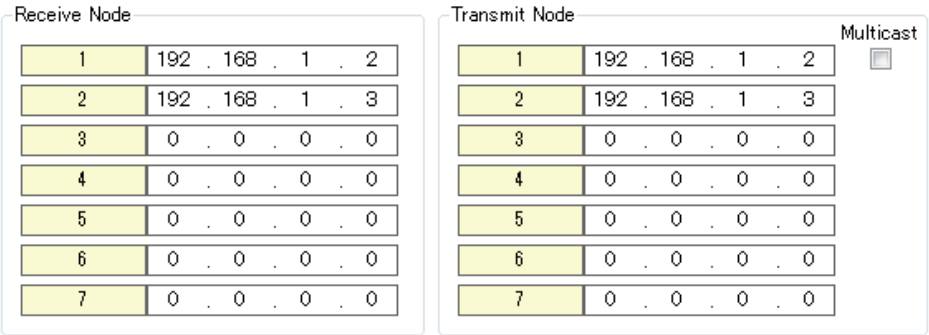
- Up to 7 IP address for each Receiving and Transmitting IP address can be registered.
- Unicast and Multicast can be set.
- No communication when enter “0.0.0.0”.

(Example 1) Communication setting in Unicast

To establish communication shown in the figure below, make the settings as follows:

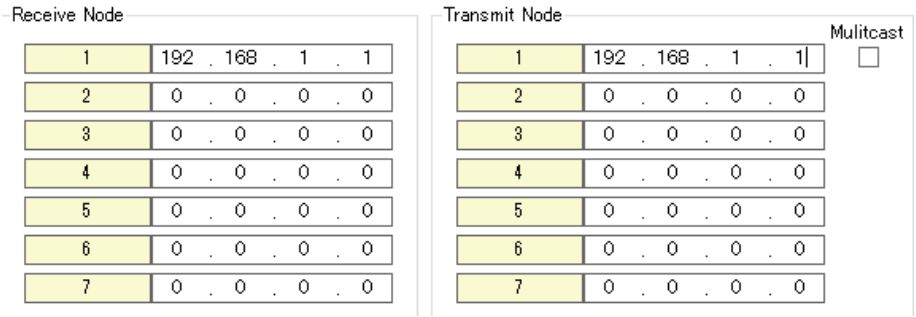


Setting of Node (IP address) 1 (192.168.1.1)



	Receive Node	Transmit Node
1	192 . 168 . 1 . 2	192 . 168 . 1 . 2
2	192 . 168 . 1 . 3	192 . 168 . 1 . 3
3	0 . 0 . 0 . 0	0 . 0 . 0 . 0
4	0 . 0 . 0 . 0	0 . 0 . 0 . 0
5	0 . 0 . 0 . 0	0 . 0 . 0 . 0
6	0 . 0 . 0 . 0	0 . 0 . 0 . 0
7	0 . 0 . 0 . 0	0 . 0 . 0 . 0

・Setting Node 2 (192.168.1.2) and Node 3(192.168.1.3)



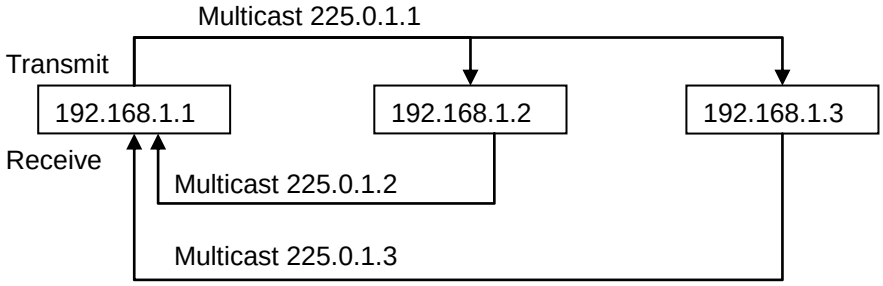
	Receive Node	Transmit Node
1	192 . 168 . 1 . 1	192 . 168 . 1 . 1
2	0 . 0 . 0 . 0	0 . 0 . 0 . 0
3	0 . 0 . 0 . 0	0 . 0 . 0 . 0
4	0 . 0 . 0 . 0	0 . 0 . 0 . 0
5	0 . 0 . 0 . 0	0 . 0 . 0 . 0
6	0 . 0 . 0 . 0	0 . 0 . 0 . 0
7	0 . 0 . 0 . 0	0 . 0 . 0 . 0

* IP address also can be registered with drag-and-drop from node tree.

Specify IP address on network at Transmit Node.

(Example 2) Communication setting in Multicast

To establish communication shown in the figure below, make the settings as follows:



・Setting of Node 1 (192.168.1.1)

Receive Node

1	225 . 0 . 1 . 2
2	225 . 0 . 1 . 3
3	0 . 0 . 0 . 0
4	0 . 0 . 0 . 0
5	0 . 0 . 0 . 0
6	0 . 0 . 0 . 0
7	0 . 0 . 0 . 0

Transmit Node

Multicast ☑

1	225 . 0 . 1 . 1
2	0 . 0 . 0 . 0
3	0 . 0 . 0 . 0
4	0 . 0 . 0 . 0
5	0 . 0 . 0 . 0
6	0 . 0 . 0 . 0
7	0 . 0 . 0 . 0

・Setting of Node 2 (192.168.1.2)

Receive Node

1	225 . 0 . 1 . 1
2	0 . 0 . 0 . 0
3	0 . 0 . 0 . 0
4	0 . 0 . 0 . 0
5	0 . 0 . 0 . 0
6	0 . 0 . 0 . 0
7	0 . 0 . 0 . 0

Transmit Node

Mulitcast ☑

1	225 . 0 . 1 . 2
2	0 . 0 . 0 . 0
3	0 . 0 . 0 . 0
4	0 . 0 . 0 . 0
5	0 . 0 . 0 . 0
6	0 . 0 . 0 . 0
7	0 . 0 . 0 . 0

・Setting of Node 3 (192.168.1.3)

Receive Node

1	225 . 0 . 1 . 1
2	0 . 0 . 0 . 0
3	0 . 0 . 0 . 0
4	0 . 0 . 0 . 0
5	0 . 0 . 0 . 0
6	0 . 0 . 0 . 0
7	0 . 0 . 0 . 0

Transmit Node

Mulitcast ☑

1	225 . 0 . 1 . 3
2	0 . 0 . 0 . 0
3	0 . 0 . 0 . 0
4	0 . 0 . 0 . 0
5	0 . 0 . 0 . 0
6	0 . 0 . 0 . 0
7	0 . 0 . 0 . 0

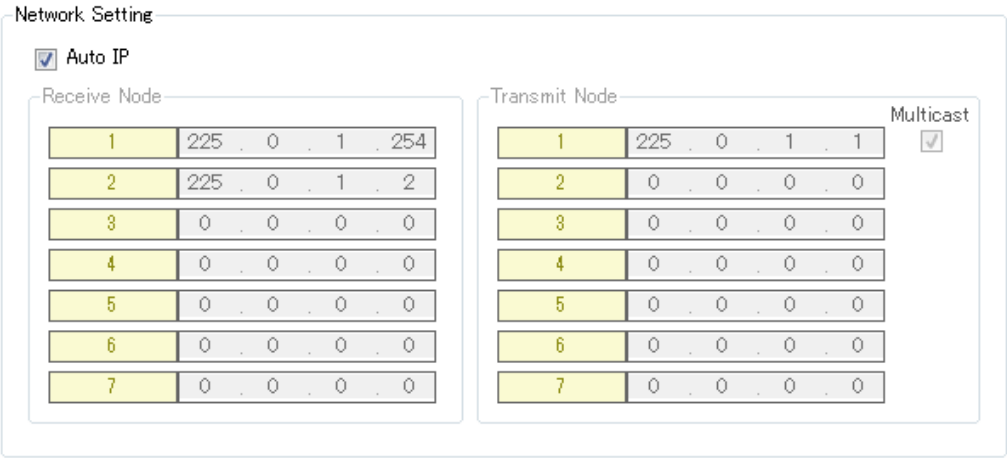
- Check the [Multicast] box to automatically enter the multicast address in No.1 column in [Transmit Node].
- Range of IP address for Multicast are “225.0.0.1” to “225.0.255.254”.

3.2.1 Auto IP Settings

Check a box of Auto IP, IP address input field is grayed out .
Receive and Transmit Node (IP address) is automatically set with “Self Node before or after”.

The controller that Auto IP mode is ON is automatically set IP address according to the IP address every input of controller power supply.

*Auto IP function is multicast, IP address is multicast setting.



Receive Node	
1	225.0.1.Self Node-1
2	225.0.1.Self Node+1
3	0.0.0.0
4	0.0.0.0
5	0.0.0.0
6	0.0.0.0
7	0.0.0.0

Transfer Node	
1	225.0.1.Self Node
2	0.0.0.0
3	0.0.0.0
4	0.0.0.0
5	0.0.0.0
6	0.0.0.0
7	0.0.0.0

- When self node is 1, Receive Node 1 is “225.0.1.254”.
- When self node is 254, Receive Node 2 is “225.0.1.1”.
- In case of setting IP address before checking Auto IP, the setting is invalided.

4 Acceleration / Deceleration

Acceleration and deceleration time for motor can be set.

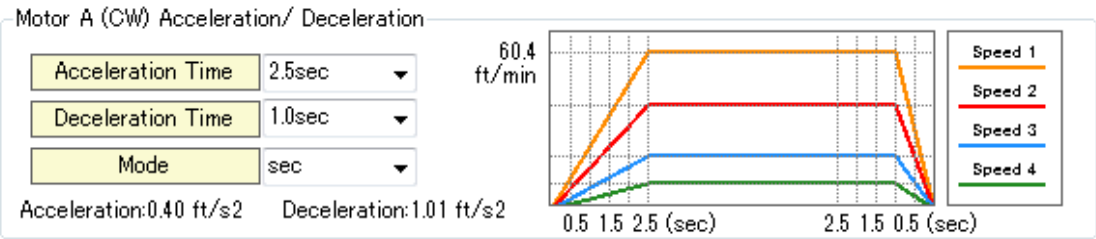
Select “Acceleration/Deceleration” from “Property Seeting”.

There are two mode is available “Time (sec)” and “Acceleration (m/s^2)”.

The setting range is 0 to 2.5sec in 0.1sec increment.

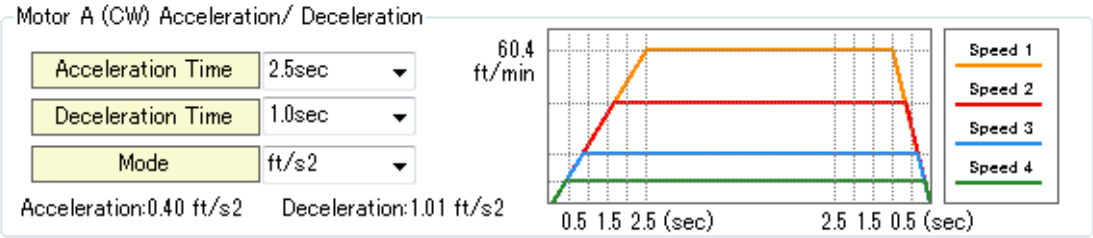
Time mode

Set target time to achive maximum speed or stop
Acceleration and Deceleration time of Speed 1 to Speed 4 are set to the same.



Acceleration mode

Acceleration and Deceleration of Speed 1 to Speed 4 are set to the same.
Acceleration and Deceleration degree is calculatedfrom Speed 1 setting.



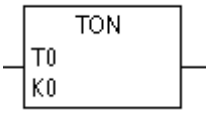
- When the other speed setting (e.g. Speed 2) is faster than Speed 1, the speed vary with Speed 1.
  At Speed 1 of 30m/min, acceleration time of 2.5 sec and Speed 2 of 60m/min, acceleration time is 2.5 sec, which is the maximun time, instead of 5 sec.
- Monitoring shows “Motor stop “during deceleration.
- Acceleration time is set as 0.2msce due to characteristics of IB controller even if the acceleration time is set to 0msec.

5 Timer Settings

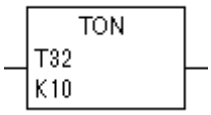
It is possible to set a time for timer used in a ladder logic.
Select “Timer” from “Property Setting”.

When the timer value is set to K0 as in (Example 1), the timer value set on the following property screen becomes valid. The timer which timer value is set to "K0", the comment field becomes white.
When setting to an unused timer and other than "K0" as in (Example 2), the comment field will be gray.
.

Example 1



Example 2



Motor | Error/Network | Acceleration/Deceleration | Timer | Counter | Pulse Counter

Timer Setting (10msec)							
T0	0.00	sec	10msec Timer_0	T32	0.00	sec	10msec Timer_32
T1	0.00	sec	10msec Timer_1	T33	0.00	sec	10msec Timer_33
T2	0.00	sec	10msec Timer_2	T34	0.00	sec	10msec Timer_34
T3	0.00	sec	10msec Timer_3	T35	0.00	sec	10msec Timer_35
T4	0.00	sec	10msec Timer_4	T36	0.00	sec	10msec Timer_36
T5	0.00	sec	10msec Timer_5	T37	0.00	sec	10msec Timer_37
T6	0.00	sec	10msec Timer_6	T38	0.00	sec	10msec Timer_38
T7	0.00	sec	10msec Timer_7	T39	0.00	sec	10msec Timer_39
T8	0.00	sec	10msec Timer_8	T40	0.00	sec	10msec Timer_40
T9	0.00	sec	10msec Timer_9	T41	0.00	sec	10msec Timer_41
T10	0.00	sec	10msec Timer_10	T42	0.00	sec	10msec Timer_42
T11	0.00	sec	10msec Timer_11	T43	0.00	sec	10msec Timer_43
T12	0.00	sec	10msec Timer_12	T44	0.00	sec	10msec Timer_44
T13	0.00	sec	10msec Timer_13	T45	0.00	sec	10msec Timer_45
T14	0.00	sec	10msec Timer_14	T46	0.00	sec	10msec Timer_46
T15	0.00	sec	10msec Timer_15	T47	0.00	sec	10msec Timer_47
T16	0.00	sec	10msec Timer_16	T48	0.00	sec	10msec Timer_48
T17	0.00	sec	10msec Timer_17	T49	0.00	sec	10msec Timer_49
T18	0.00	sec	10msec Timer_18	T50	0.00	sec	10msec Timer_50
T19	0.00	sec	10msec Timer_19	T51	0.00	sec	10msec Timer_51
T20	0.00	sec	10msec Timer_20	T52	0.00	sec	10msec Timer_52
T21	0.00	sec	10msec Timer_21	T53	0.00	sec	10msec Timer_53
T22	0.00	sec	10msec Timer_22	T54	0.00	sec	10msec Timer_54
T23	0.00	sec	10msec Timer_23	T55	0.00	sec	10msec Timer_55
T24	0.00	sec	10msec Timer_24	T56	0.00	sec	10msec Timer_56
T25	0.00	sec	10msec Timer_25	T57	0.00	sec	10msec Timer_57

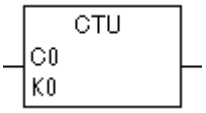
- Select 10msec timer from T0 to T63, in total 64 timer.
- The setting can be done in 0.01 sec increment. The setting range is 0 to 655.35 sec.

6 Counter Settings

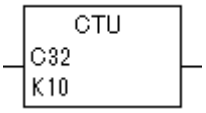
Counter setting is available to set the number of counters used in a ladder logic.
Select “Counter” from “Property Setting”.

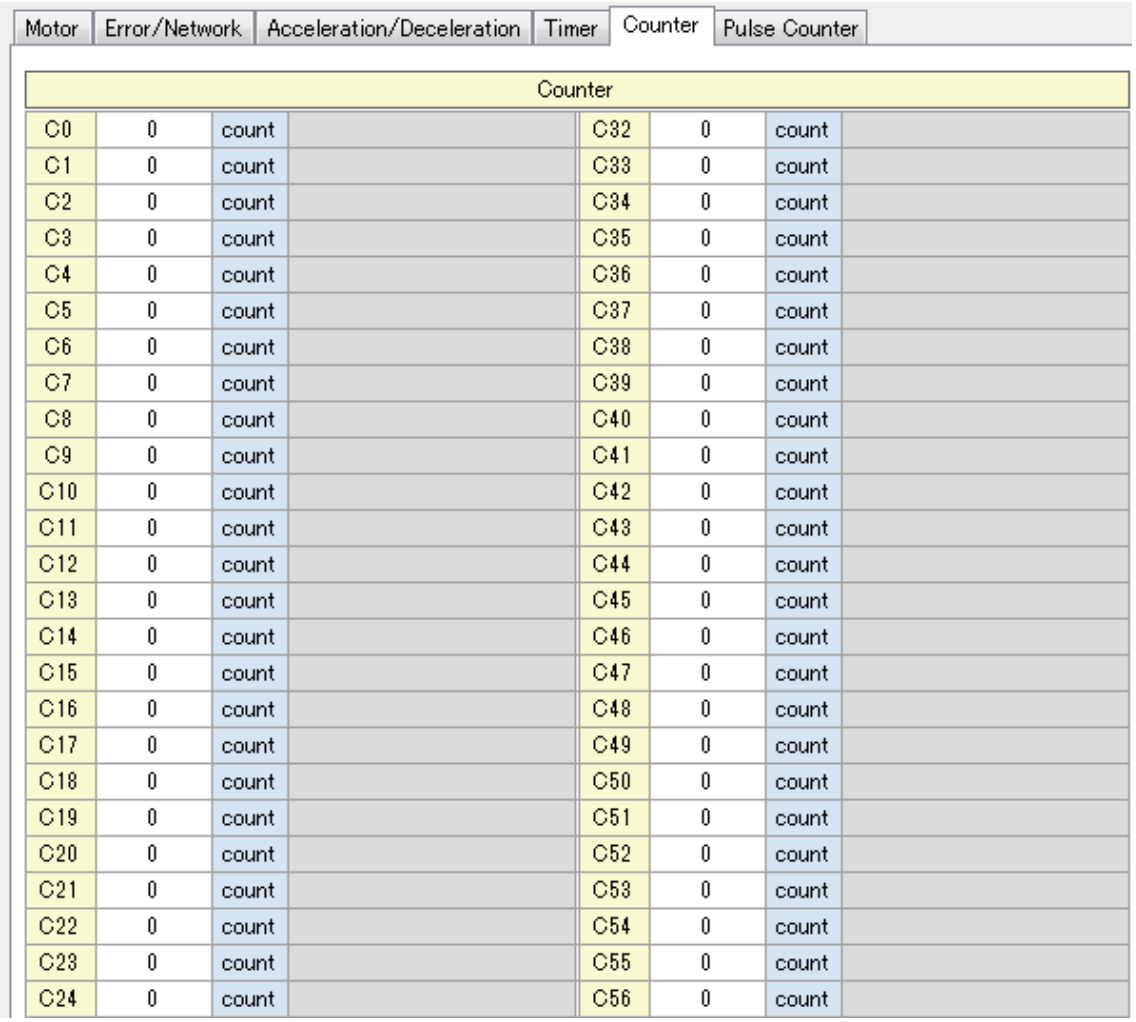
When the count value is set to K0 as in (Example 1), the count value set on the following property screen becomes valid. The counter which count value is set to "K0", the comment field becomes white. When setting to an unused counter and other than "K0" as in (Example 2), the comment field will be gray.

(Example 1)



(Example 2)





Counter							
C0	0	count		C32	0	count	
C1	0	count		C33	0	count	
C2	0	count		C34	0	count	
C3	0	count		C35	0	count	
C4	0	count		C36	0	count	
C5	0	count		C37	0	count	
C6	0	count		C38	0	count	
C7	0	count		C39	0	count	
C8	0	count		C40	0	count	
C9	0	count		C41	0	count	
C10	0	count		C42	0	count	
C11	0	count		C43	0	count	
C12	0	count		C44	0	count	
C13	0	count		C45	0	count	
C14	0	count		C46	0	count	
C15	0	count		C47	0	count	
C16	0	count		C48	0	count	
C17	0	count		C49	0	count	
C18	0	count		C50	0	count	
C19	0	count		C51	0	count	
C20	0	count		C52	0	count	
C21	0	count		C53	0	count	
C22	0	count		C54	0	count	
C23	0	count		C55	0	count	
C24	0	count		C56	0	count	

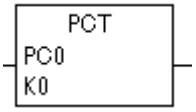
- Select counter from C0 to C63, in a total of 64 counters.
- The setting range is 0 to 65535.

7 Pulse Counter Settings

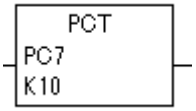
Pulse setting of Pulse counter used in lader logic is available. Setting menu is displayed by clicking pulse counter.

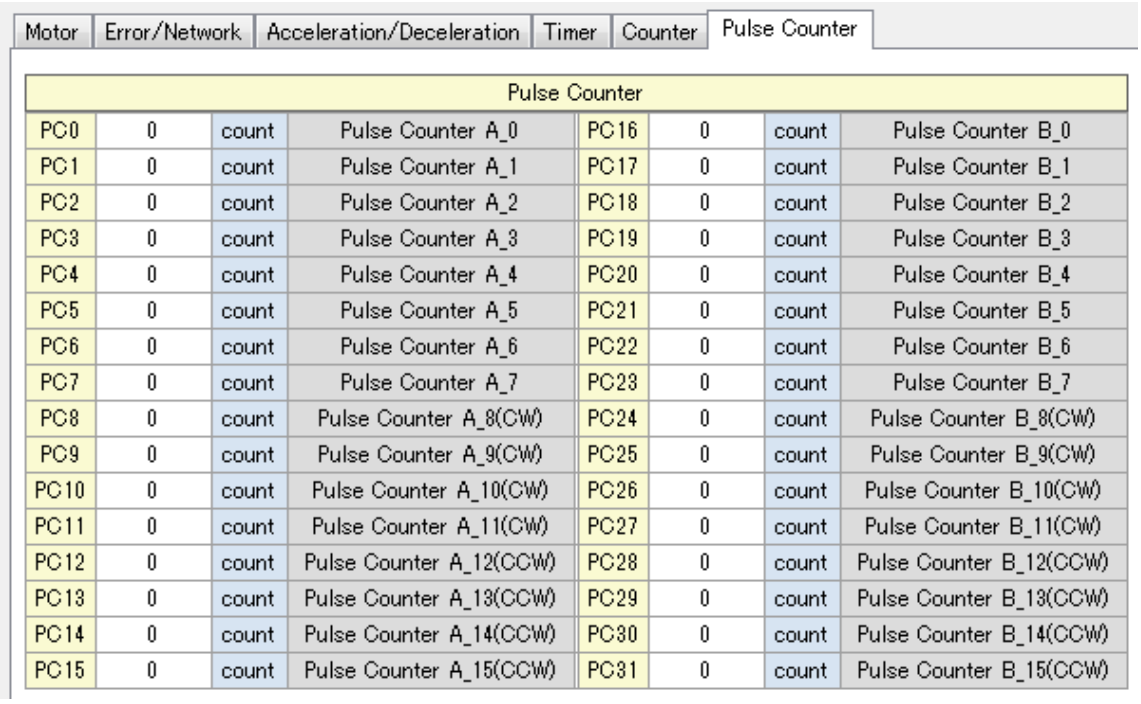
When the count value is set to K0 as in (Example 1), the count value set on the following property screen becomes valid. The pulse counter which count value is set to "K0", the comment field becomes white. When setting to an unused pulse counter and other than "K0" as in (Example 2), the comment field will be gray.

(Example 1)



(Example 2)





Motor | Error/Network | Acceleration/Deceleration | Timer | Counter | Pulse Counter

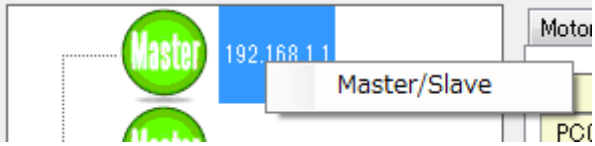
Pulse Counter							
PC0	0	count	Pulse Counter A_0	PC16	0	count	Pulse Counter B_0
PC1	0	count	Pulse Counter A_1	PC17	0	count	Pulse Counter B_1
PC2	0	count	Pulse Counter A_2	PC18	0	count	Pulse Counter B_2
PC3	0	count	Pulse Counter A_3	PC19	0	count	Pulse Counter B_3
PC4	0	count	Pulse Counter A_4	PC20	0	count	Pulse Counter B_4
PC5	0	count	Pulse Counter A_5	PC21	0	count	Pulse Counter B_5
PC6	0	count	Pulse Counter A_6	PC22	0	count	Pulse Counter B_6
PC7	0	count	Pulse Counter A_7	PC23	0	count	Pulse Counter B_7
PC8	0	count	Pulse Counter A_8(CW)	PC24	0	count	Pulse Counter B_8(CW)
PC9	0	count	Pulse Counter A_9(CW)	PC25	0	count	Pulse Counter B_9(CW)
PC10	0	count	Pulse Counter A_10(CW)	PC26	0	count	Pulse Counter B_10(CW)
PC11	0	count	Pulse Counter A_11(CW)	PC27	0	count	Pulse Counter B_11(CW)
PC12	0	count	Pulse Counter A_12(CCW)	PC28	0	count	Pulse Counter B_12(CCW)
PC13	0	count	Pulse Counter A_13(CCW)	PC29	0	count	Pulse Counter B_13(CCW)
PC14	0	count	Pulse Counter A_14(CCW)	PC30	0	count	Pulse Counter B_14(CCW)
PC15	0	count	Pulse Counter A_15(CCW)	PC31	0	count	Pulse Counter B_15(CCW)

PC0 to PC7	Count Pulse change of A motor regardless of the motor direction.
PC8 to PC11	Count Pulse change of A motor in CW direction.
PC12 to PC15	Count Pulse change of A motor in CCW direction.
PC16 to PC23	Count Pulse change of B motor regardless of the motor direction.
PC24 to PC27	Count Pulse change of B motor in CW direction.
PC28 to PC31	Count Pulse change of B motor in CCW direction.

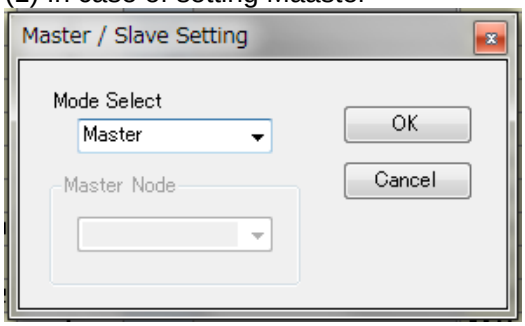
- Pulse Counter is available to use a total of 32 from PC0 to PC31.
- The setting range is 0 to 65535.

8 Master / Slave Settings

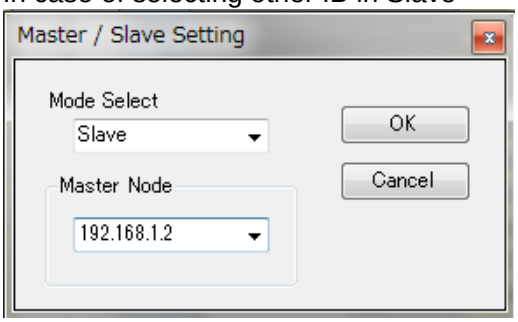
Set IB controller to Master or Slave setting.
Select [Master/Slave] from right click IP address in property setting.



(1) In case of setting Maaster

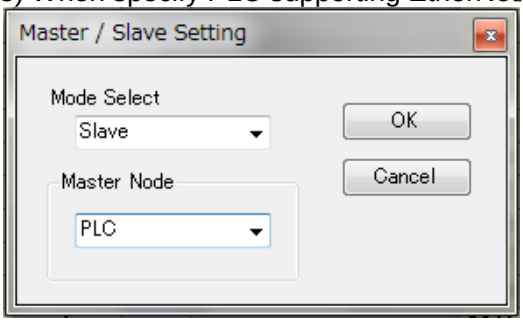


(2) In case of selecting other IB in Slave



* Selecting IP address of IB controller to be the Master in “Master Node”.

(3) When specify PLC supporting EtherNet/IP to the Master.

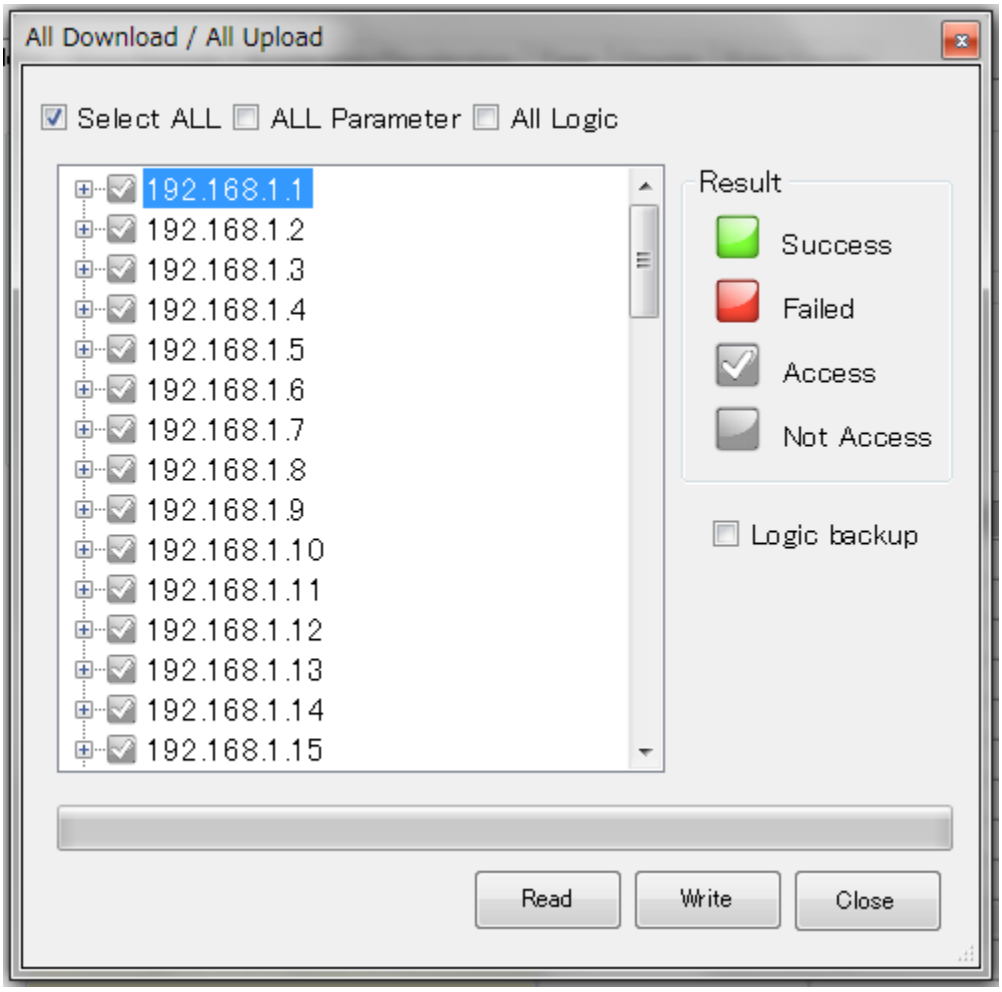


※Selecting “Master Node” to PLC.

Click “OK” to complete setting.

9 All Download / All Upload

It is possible to select IP address to be download or upload.
Select “ALL” from property setting.



The functions on the top left of image are,

- Select ALL　　Downloading logics and parameters to all of IB.
- ALL Parameter　　Downloading parameters to all of IB.
- ALL Logi　　Downloading ladder logics to all of IB.

The functions on the center on the right are,

- Logic Backup　　Downloading logic with Backup ladder logic..

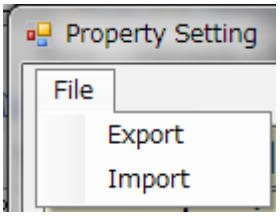
The functions on the bottom right of image are,

- Read　　Read ladder logic and parameter from selected IB.
- Write　　Write logic and parameter to selected IB.
- Close　　Close “All Download/All Upload” window.

- Property setting is updated to the uploaded setting after uploading.
- Upload a logic name only for uploading ladder logic.
- Ladder logic becomes “NA” when ladder logic uploaded is not exit.

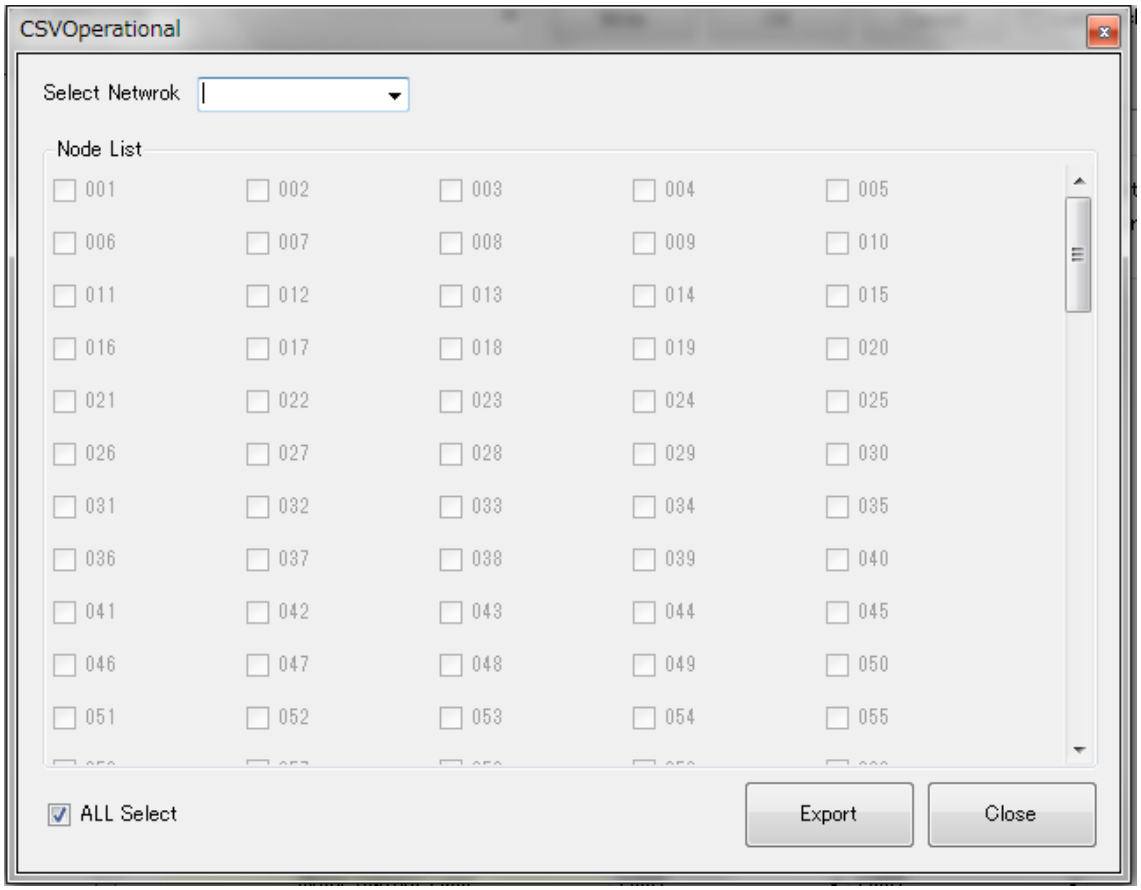
10 Import and Export Property Settings

Select [Export] or [Import] from file in property setting.



Export property setting

When selecting a network in Select Network, node (IP address) registered in the Select Network can be selected. Specify node and click [Export], and then output the property setting of the designated node in the CSV file.



The functions are,

- Select Network　　Selecting network that is registered in the project.
- Node List　　Registered node is available after selecting network.
- All Select　　Select all node.
- Export　　Output property of specified node in CSV file.
- Close　　Close CSV Import or Export setting display.

Exported CSV file

Property setting can be done easily by editing the exported data and importing it.

The exported file is as following. If changing the setting value of each node and import the edited file, the setting will be reflected.

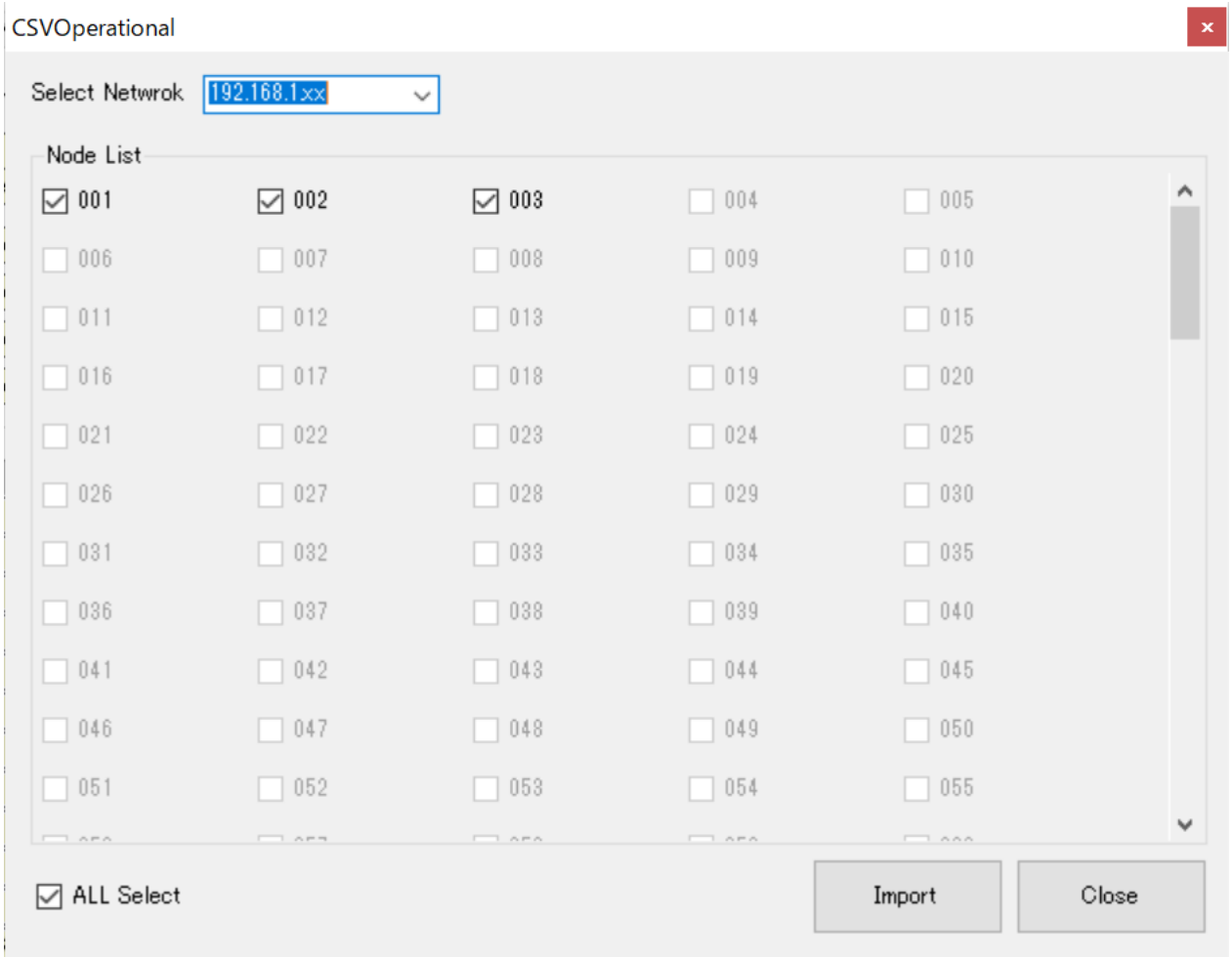
	A	B	C	D	E	F	G	H
1	Index	Name	Detail	192.168.1.1	192.168.1.2	192.168.1.3	192.168.1.4	192.168.1.5
2	[00-00]	Logic Name		NA	FRAT_1IN_3	FRAT_14IN	FRAT_14IN	FRAT_14IN
3	[01-01]	Jam Error Clear	0:Auto Release 1:Hos	0	0	0	0	0
4	[01-02]	Thermal Error Cl	0:Auto Release 1:Hos	0	0	0	0	0
5	[01-03]	Motor Lock Erro	0:Auto Release 1:Hos	0	0	0	0	0
6	[01-04]	Motor Disconne	0:Auto Release 1:Hos	0	0	0	0	0
7	[02-01]	Sensor Setting S	0:dark 1:light	0	0	0	0	0
8	[02-21]	Sensor Setting S	0:dark 1:light	0	0	0	0	0
9	[02-02]	Sensor Alarm Se	0:dark 1:light	0	0	0	0	0
10	[02-22]	Sensor Alarm Se	0:dark 1:light	0	0	0	0	0
11	[03-01]	Motor Type MA	0:NA 1:FE/VE 2:FS 3	1	1	1	1	1
12	[03-21]	Motor Type MB	0:NA 1:FE/VE 2:FS 3	1	1	1	1	1
13	[03-02]	Motor Direction	0:CW 1:CCW	0	0	0	0	0
14	[03-22]	Motor Direction	0:CW 1:CCW	1	0	0	0	0
15	[03-03]	Special Function	0:Disable 1:Enable	0	0	0	0	0
16	[03-23]	Special Function	0:Disable 1:Enable	0	0	0	0	0
17	[03-04]	Gearing MA	0:1-stage(7.5) 1:1-st	2	2	2	2	2
18	[03-24]	Gearing MB	0:1-stage(7.5) 1:1-st	1	2	2	2	2

・Name　　Setting item
・Detail　　Detail of setting value

> ・In the columns after Detail, the nodes specified at the time of export are displayed in order

Import property setting

Described network in CSV file becomes selectable by selecting CSV file for property setting.
Select node (IP address) from Node List, click “Import” bottom, and then the setting in the CSV file can be reflect as current setting.



The functions are,

- Select Network — Select network from uploaded CSV file.
- Node List — Registered node is selectable after selecting setwork.
- All Select — Select all node
- Export — The property setting of specified node is reflected in current setting.
- Close — Closing CSV import and export setting window.

> Node (IP address) with faulty CSV file is not imported.
> Node number that cannot be imported after click “Import” will be in red.