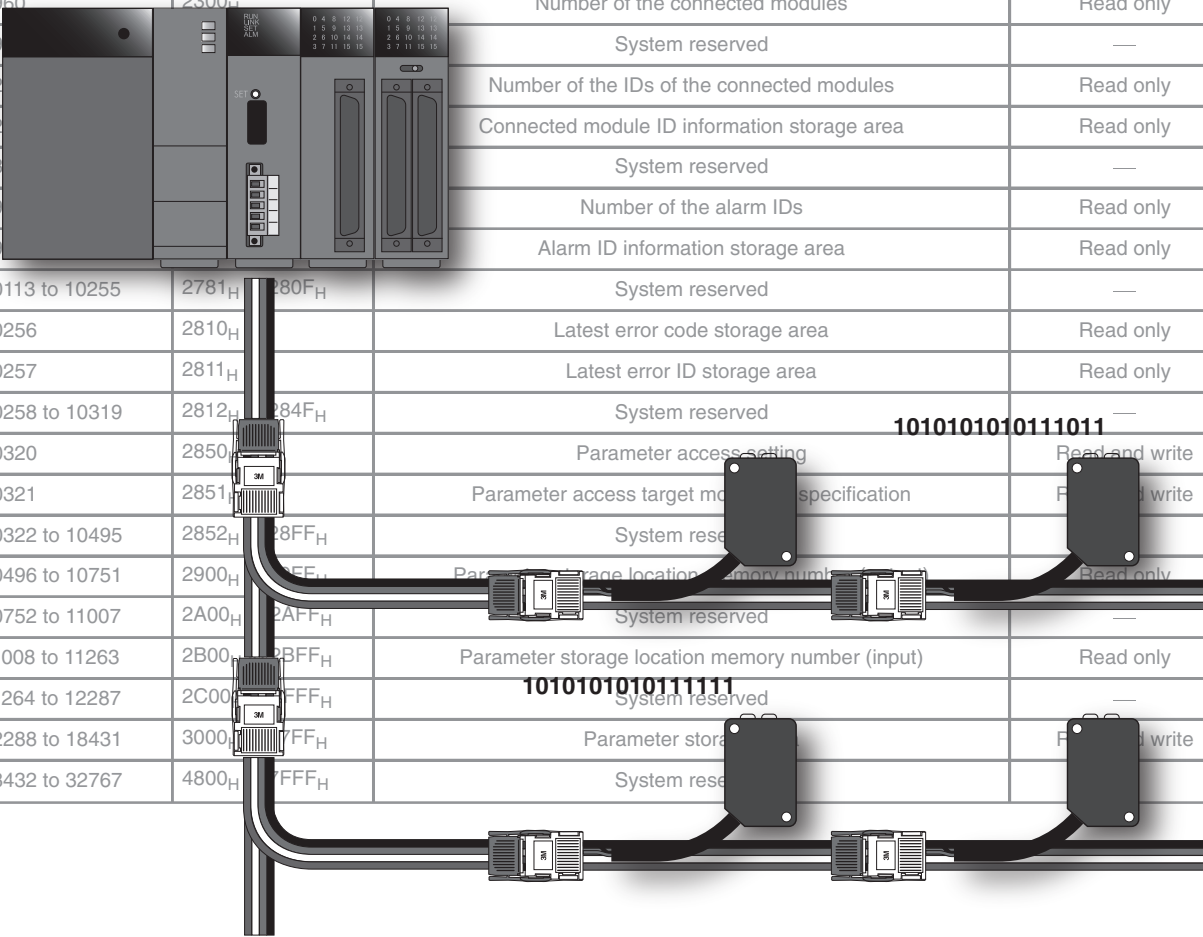


# AnyWireASLINK

## Startup Guide (Q/L-Series Master Unit Parameter Access)

Buffer memory address		Item	Allowable operation (Read/write)
Decimal	Hexadecimal		
0 to 15	0 <sub>H</sub> to F <sub>H</sub>	Input information area	Read only
16 to 4095	10 <sub>H</sub> to FFF <sub>H</sub>	System reserved	—
4096 to 4111	1000 <sub>H</sub> to 100F <sub>H</sub>	Output information area	Read and write
4112 to 8191	1010 <sub>H</sub> to 1FFF <sub>H</sub>	System reserved	—
8192	2000 <sub>H</sub>	Number of the error IDs	Read only
8193 to 8320	2001 <sub>H</sub> to 2080 <sub>H</sub>	Error ID information storage area	Read only
8321 to 8959	2081 <sub>H</sub> to 22FF <sub>H</sub>	System reserved	—
8960	2300 <sub>H</sub>	Number of the connected modules	Read only
8961	2301 <sub>H</sub>	System reserved	—
9216	2400 <sub>H</sub>	Number of the IDs of the connected modules	Read only
9217	2401 <sub>H</sub>	Connected module ID information storage area	Read only
9344	2500 <sub>H</sub>	System reserved	—
9345	2501 <sub>H</sub>	Number of the alarm IDs	Read only
9346	2502 <sub>H</sub>	Alarm ID information storage area	Read only
10113 to 10255	2781 <sub>H</sub> to 280F <sub>H</sub>	System reserved	—
10256	2810 <sub>H</sub>	Latest error code storage area	Read only
10257	2811 <sub>H</sub>	Latest error ID storage area	Read only
10258 to 10319	2812 <sub>H</sub> to 284F <sub>H</sub>	System reserved	—
10320	2850 <sub>H</sub>	Parameter access setting	Read and write
10321	2851 <sub>H</sub>	Parameter access target module specification	Read and write
10322 to 10495	2852 <sub>H</sub> to 28FF <sub>H</sub>	System reserved	—
10496 to 10751	2900 <sub>H</sub> to 2A0F <sub>H</sub>	Parameter storage location memory number	Read only
10752 to 11007	2A00 <sub>H</sub> to 2A0F <sub>H</sub>	System reserved	—
11008 to 11263	2B00 <sub>H</sub> to 2BFF <sub>H</sub>	Parameter storage location memory number (input)	Read only
11264 to 12287	2C00 <sub>H</sub> to 2CFF <sub>H</sub>	System reserved	—
12288 to 18431	3000 <sub>H</sub> to 30FF <sub>H</sub>	Parameter storage location memory number	Read and write
18432 to 32767	4800 <sub>H</sub> to 48FF <sub>H</sub>	System reserved	—



1010101010111011

1010101010111111

1010101010111110



# Introduction

---

## ■ Key point of “visualization”

## Parameter access

A difference between AnyWireASLINK and other wire-saving systems is that the AnyWireASLINK system provides the “visualization” function.

The visualization information is stored in individual remote units. During edition of the information with a program, it is loaded into the memory of the master unit, and processed with the programmable controller.

This document describes parameter information storing places and flow of read/write operations by showing concrete examples.

## ■ Contents

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# Description of terms

## ■ Address

“Address” serves as a reference to a memory area used for a remote unit.

It is necessary that addresses should be set for all remote units.

For both input and output remote units, address setting range is 0 to 255 (decimal numbers).

\* Address 255 is a number to indicate the status at shipment.

Input remote unit address: 0 to 255

Output remote unit address: 0 to 255

Because the address setting range of 0 to 255 is applied to both input and output remote units, for example, it is not clear whether “address 16” indicates address 16 of input remote unit or output remote unit.



Does “address 16” mean an address of input or output remote unit?

## ■ ID

“ID” is intended to provide a meaning of input or output to each address.

Relation between addresses and IDs is as follows:

Input remote unit address: 0 to 255

Output remote unit address: 0 to 255

Input remote unit ID: 200<sub>H</sub> to 2FF<sub>H</sub>

Output remote unit ID: 000<sub>H</sub> to 0FF<sub>H</sub>

\* In this document, ID is expressed as hexadecimal number.

“ID210<sub>H</sub>” means address 16 of input remote unit.  
“ID010<sub>H</sub>” means address 16 of output remote unit.



I see



Hint

- For ID of an I/O combined remote unit, the same concept as that for input remote unit is applied. The master unit enables differentiation between two types of remote units: “Input or I/O combined remote unit” and “output remote unit”.

## ■ Automatic address detection

During execution of automatic address detection, the master unit stores I/O configuration and address settings of normally operating remote units.

Through this operation, the master unit confirms that registered remote unit IDs exist, and enables parameter communication.

This operation is always executed during system startup, and when there is a change in system configuration.



Hint

- After storing configuration of the remote units being connected, the master unit automatically executes parameter batch read processing.



## ■ Parameter communication

Apart from 256 inputs and 256 outputs (maximum) used for control, the master unit handles variety of information (remote unit existence confirmation signals, sensors' sensing level information and set values and status of individual remote units, etc.). These operations are called “parameter communication”, for differentiation from handling of I/O signals.

“Parameter communication” comprises the following four types of operations: “Automatic update”, “Parameter batch read”, “Parameter batch write” and “Parameter access”.

- ① Automatic update  
: Updates all remote unit status and sensing level information periodically.
- ② Parameter batch read  
: Reads all the parameter values of all remote units into the buffer memory of the master unit.
- ③ Parameter batch write  
: Writes all the parameter values that have been stored in the buffer memory of the master unit into all remote units.
- ④ Parameter access  
: Reads or writes all the parameter values of the specified remote unit individually by specifying the access method (read or write) and target remote unit ID.

# Case 1

## Identification of remote unit subject to DP, DN disconnection error

### Basic

#### Program flow:

- ① Turning ON I/O signal Xn4 (DP, DN disconnection error)  
↓
- ② Checking information on the number of error IDs of buffer memory address 8192 (2000<sub>H</sub>)  
↓
- ③ Checking the error ID information storage area of buffer memory address 8193 (2001<sub>H</sub>) and subsequent address Nos.

Detailed description page

“DP, DN disconnection error flag”  
Page 15

“Number of the error IDs”  
Page 18

“Error ID information storage areas”  
Page 18

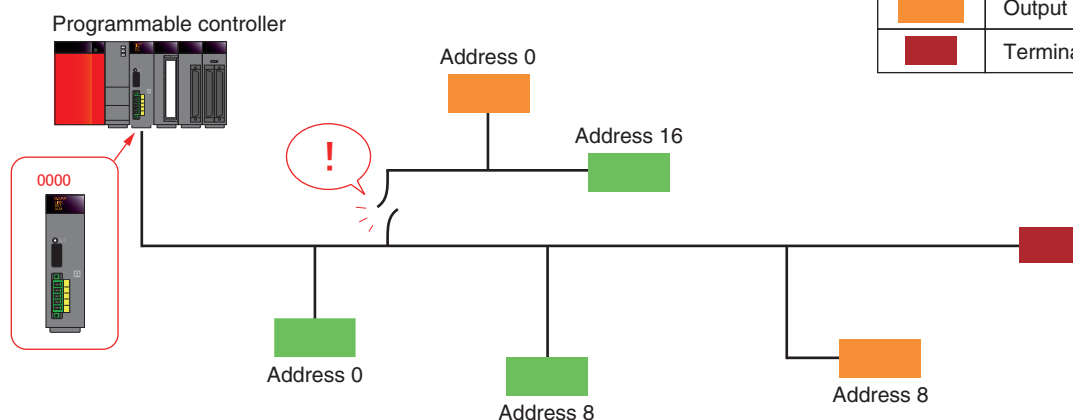
### Concrete example

#### [ System configuration ]

Head XY address of master unit: 0000

Input remote unit 3 units

Output remote unit 2 units



Symbol	Meaning
<span style="display: inline-block; width: 15px; height: 15px; background-color: green; border: 1px solid black;"></span>	Input remote unit
<span style="display: inline-block; width: 15px; height: 15px; background-color: orange; border: 1px solid black;"></span>	Output remote unit
<span style="display: inline-block; width: 15px; height: 15px; background-color: red; border: 1px solid black;"></span>	Terminating unit

#### Task

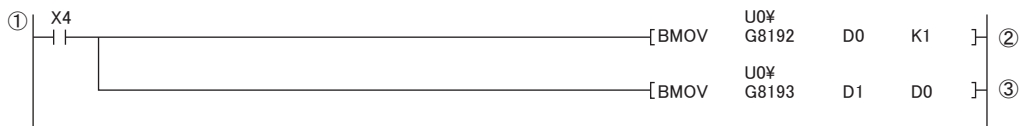
For example, consider a case that the transmission cable is disconnected at the place indicated with .

➡ For an example of reference, see the next page.





## Reference program:



## Description

- ① Turning ON X4 (DP, DN disconnection error)



- ② Transferring a value of the number of error IDs at buffer memory address 8192 (2000<sub>H</sub>) to D0.



\*In this example, “2” is stored in D0, since the response from two remote units is interrupted.

- ③ Transferring a value of error ID information storage area of buffer memory address 8193 (2001<sub>H</sub>) and subsequent address numbers, as many times as the number of error IDs (number of D0), starting from D1.

\*For the purpose of differentiation, “0” (indicating output remote unit) or “2” (indicating input remote unit) is added to the left digit of the ID number. Thus, “0<sub>H</sub>” is stored in D1, and “210<sub>H</sub>” is stored in D2.

- Device monitor screen

[illegible]

Judging from this value, the remote unit subject to disconnection error detection is identified as follows:

Output address 0

Input address 16

## Point

Be careful that because the output remote unit ID of address 0 is "0H", D1 is "0".



## Case 2

# Checking alarm details when alarm is activated with remote unit [Status details read]

## Basic

### Program flow:

- ① Checking a parameter storage location memory number of the target ID  
↓
- ② Checking contents of the buffer memory address corresponding to the 40th word (status details) in the 48-word structure, starting from the parameter storage location memory number that has been checked

Detailed description page

“Remote unit alarm signal”  
Page 15

“Number of the alarm IDs”  
Page 18

“Alarm ID information storage areas”  
Page 18

“Parameter storage location memory number”  
Page 19

“Parameter storage areas”  
Page 20

“Status details”  
Page 23

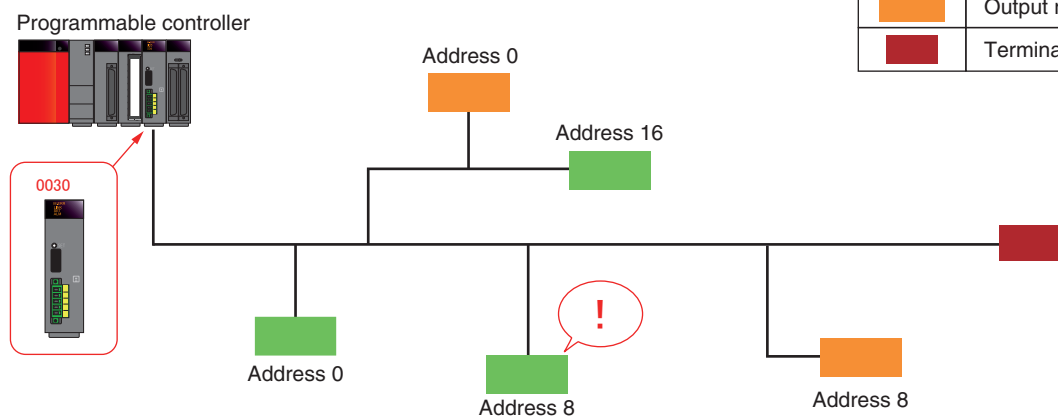
## Concrete example

### [ System configuration ]


Head XY address of master unit: 0030

Input remote unit 3 units

Output remote unit 2 units



### Task

For example, consider a case that sensing level reduction is detected with the remote unit indicated with .

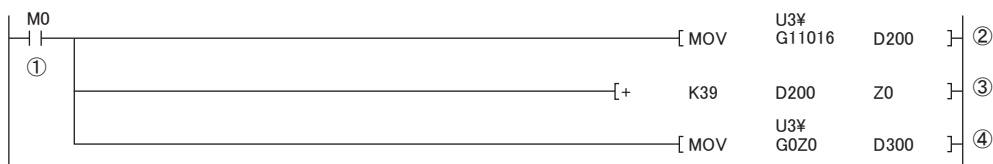
➡ For an example of reference, see the next page.





# Example of reference

## Reference program:



## Description

① Turning ON M0 (status detail read trigger)

↓

② Transferring U3¥G11016 (head address of buffer memory of ID208<sub>H</sub> parameter storage area) to D200

↓

\* In this example, "12432" is stored in D200.

③ Transferring a value of D200 plus 39 (status details) to the offset device Z0

↓

\* In the 48-word structure of parameter storage area, the 40th word from the head word indicates detailed status.

↓

\* In this example, "12471" is stored in Z0.

④ Transferring a value offset by Z0 (12471) from the head address of buffer memory to D300

↓

\* In this example, "2" is stored in D300.

Check alarm details by the value of D300.

↓

\* In this example, the value of D300 is "2", indicating that the cause of the alarm is sensing level reduction.

	Bit No.																
Device	F	E	D	C	B	A	9	8	7	6	5	4	3	2	1	0	Data
D300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2

## Case 3

## Checking sensing level of remote unit [Parameter read]

### Basic

#### Program flow:

- ① Checking a parameter storage location memory number of the target ID  
↓
- ② Checking contents of the buffer memory address corresponding to the 41th word (sensing level) in the 48-word structure, starting from the parameter storage location memory number that has been checked

Detailed description page

“Parameter storage location  
memory number” Page 19

“Parameter storage areas”  
Page 20

“48-word structure” Page 22

“Sensing level” Page 23

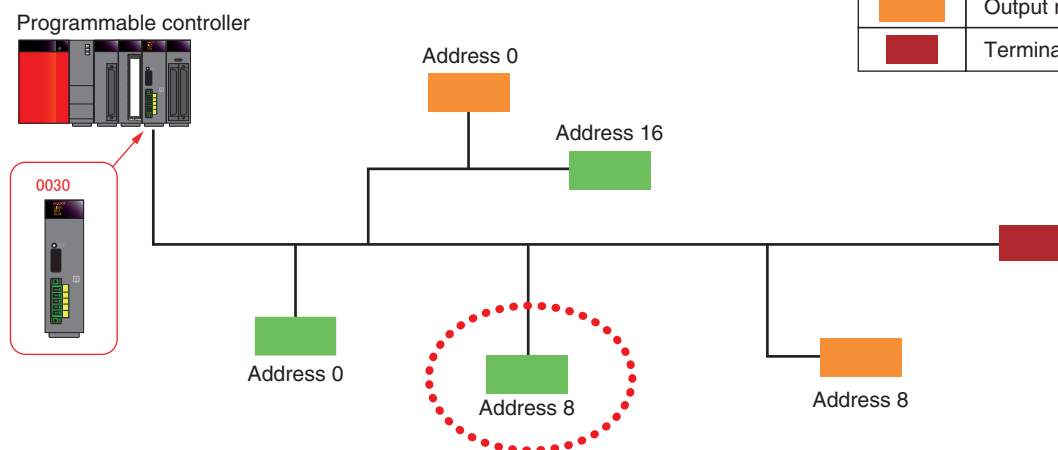
### Concrete example

#### [ System configuration ]

Head XY address of master unit: 0030

Input remote unit 3 units

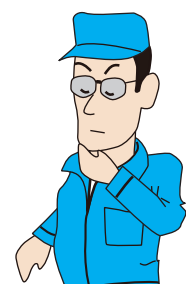
Output remote unit 2 units



#### Task

For example, consider a case to check the sensing level of the remote unit of “address 8”.

➡ For an example of reference, see the next page.

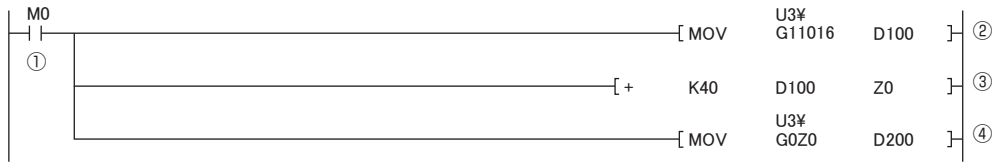






# Example of reference

## Reference program:



## Description

- ① Turning ON M0 (sensing level read trigger)

↓

- ② Transferring U3¥G11016 (head address of buffer memory of ID208<sub>H</sub> parameter storage area) to D100

↓

\* In this example, "12480" is stored in D100.

- ③ Transferring a value of D100 plus 40 to the offset device Z0

↓

\* In the 48-word structure of parameter storage area, the 41th word from the head word indicates sensing level.

↓

\* In this example, "12520" is stored in Z0.

- ④ Transferring a value offset by Z0 (12520) from the head address of buffer memory to D200

↓

The sensing level can be checked with the value of D200.

5th ID in ascending order



ID in ascending order	Parameter storage area
000 <sub>H</sub>	Un¥G12288 to Un¥G12335
008 <sub>H</sub>	Un¥G12336 to Un¥G12383
200 <sub>H</sub>	Un¥G12384 to Un¥G12431
208 <sub>H</sub>	Un¥G12432 to Un¥G12479
210 <sub>H</sub>	Un¥G12480 to Un¥G12527

### ■ Example: When the sensing level is "98"

Decimal number converted from binary

	Bit No.																
Device	F	E	D	C	B	A	9	8	7	6	5	4	3	2	1	0	Data
D200	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	98

Weight of digit for conversion  
from binary number to decimal

→

... 128 64 32 16 8 4 2 1

To convert binary number "000000001100010" to a decimal number, a weight (decimal number) shall be added to each digit of "1".

In the above example, bit Nos. 6, 5 and 1 is "1".

Weights of these digits are 64, 32 and 2. (64 + 32 + 2 = 98)



0	0	0	0	Add "1" zero times.
0	0	0	1	Add "1" once.
0	0	1	0	Add "1" twice. (= 2)
0	0	1	1	Add "1" three times.
0	1	0	0	Add "1" four times. (= 4)
0	1	0	1	Add "1" five times.
0	1	1	0	Add "1" six times.
0	1	1	1	Add "1" seven times.
1	0	0	0	Add "1" eight times. (= 8)

# Case 4

Checking device parameter of remote unit individually  
 -ASLINK sensor's threshold check  
 -SmartASLINKER disconnection information check, etc.

## Basic

### Program flow:

- ① Specifying the read command in parameter access setting (Un\G10320)  
↓
- ② Specifying an ID in parameter access target module ID specification (Un\G10321)  
↓
- ③ Turning the parameter access request command Y(n+1)4 from OFF to ON  
↓
- ④ After confirming that the parameter access completion flag turns ON,  
checking the parameter storage location memory number of the target ID  
↓
- ⑤ Checking contents of the buffer memory address corresponding to a device parameter to be  
checked in the 48-word structure, starting from the parameter storage location memory  
number that has been checked.  
↓
- ⑥ Turning the parameter access request command Y(n+1)4 from ON to OFF

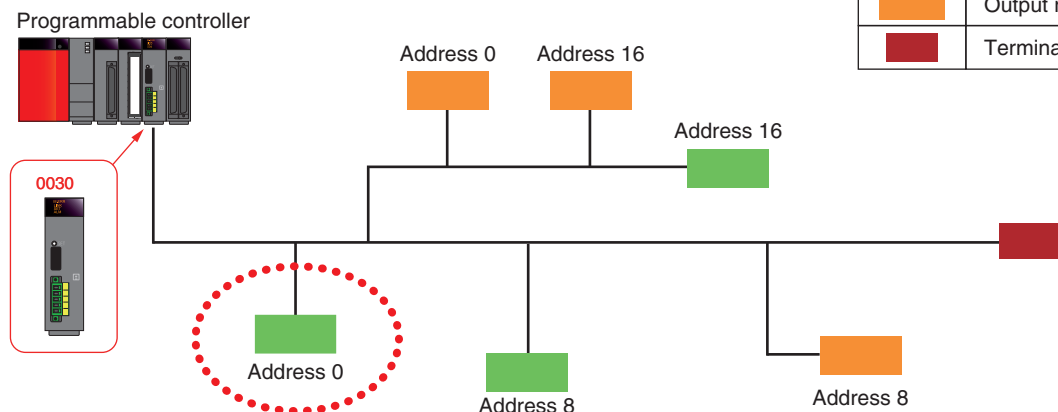
Detailed description page

"Parameter access setting"	Page 18
"Parameter access target module ID specification"	Page 18
"Parameter access request command"	Page 16
"Parameter access completion flag"	Page 15
"Parameter storage location memory number"	Page 19
"Parameter storage areas"	Page 20
"48-word structure"	Page 22

## Concrete example

### [ System configuration ]

Head XY address of master unit: 0030  
 Input remote unit 3 units  
 Output remote unit 3 units



Symbol	Meaning
	Input remote unit
	Output remote unit
	Terminating unit

### Task

For example, consider a case to check the sensing level of the input remote unit of "Address 0".

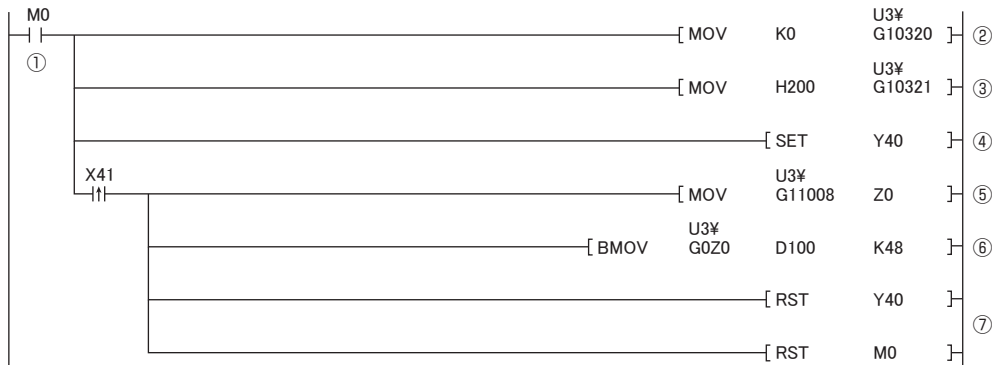
➡ For an example of reference, see the next page.





# Example of reference

## Reference program:



## Description

① Turning ON M0 (parameter read trigger)

↓

② Storing "0" in U3\G10320 (parameter access setting)

↓

\* Store "0", and specify the "read" command.

③ Storing "200<sub>H</sub>" in U3\G10321 (parameter access target module ID specification)

↓

\* Specify the ID of the remote unit to read.

④ Turning Y(n+1)0 (parameter access request command) from OFF to ON

↓

⑤ At the rising edge of X(n+1)1 (parameter access completion flag), U3\G11008 (head address of buffer memory of ID200<sub>H</sub> parameter storage area) is transferred to the offset device Z0.

↓

\* In this example, "12432" is stored in Z0. (4th ID in ascending order that has been registered in the master unit)

⑥ Transferring data of 48 words (D100 to D147) from a position offset by Z0 (12432) relative to the head address of buffer memory.

↓

\* Read all data of 48 words from the parameter storage area corresponding to ID200<sub>H</sub>

⑦ Turning Y(n+1)4 (parameter access request command) from ON to OFF

↓

Contents of each parameter in ID200<sub>H</sub> can be checked with D100 to D147.

4th ID in ascending order



ID in ascending order	Parameter storage area
000 <sub>H</sub>	Un\G12288 to Un\G12335
008 <sub>H</sub>	Un\G12336 to Un\G12383
010 <sub>H</sub>	Un\G12384 to Un\G12431
200 <sub>H</sub>	Un\G12432 to Un\G12479
208 <sub>H</sub>	Un\G12480 to Un\G12527
210 <sub>H</sub>	Un\G12528 to Un\G12575

	Bit No.																
Device	F	E	D	C	B	A	9	8	7	6	5	4	3	2	1	0	Data
D100	Module ID															200 <sub>H</sub>	
D101	Device parameter 1																
D102	Device parameter 2																
D103	Device parameter 3																
D104	Device parameter 4																
D105	Device parameter 5																
...	...																

# Case 5

Changing device parameter of remote unit individually  
 ・ASLINKSENSOR's Light ON/Dark ON mode setting changeover  
 ・SmartASLINKER disconnection error clear command, etc.

## Basic

### Program flow:

- ① Specifying the read command in parameter access setting (Un\G10320)  
↓
- ② Specifying an ID in parameter access target module ID specification (Un\G10321)  
↓
- ③ Turning the parameter access request command Y(n+1)0 from OFF to ON  
↓
- ④ After confirming that parameter access completion flag Y(n+1)1 turns ON, turning Y(n+1)0 from ON to OFF  
↓
- ⑤ Checking the parameter storage location memory number of the ID subject to change  
↓
- ⑥ Storing a value to be changed in the buffer memory address for the device parameter to be changed, starting from the parameter storage location memory number that has been checked  
↓
- ⑦ Specifying the write command in parameter access setting (Un\G10320)  
↓
- ⑧ Specifying an ID in parameter access target module ID specification (Un\G10321)  
↓
- ⑨ Turning the parameter access request command Y(n+1)0 from OFF to ON  
↓
- ⑩ After confirming that the parameter access completion flag Y(n+1)1 turns ON, turning Y(n+1)0 from ON to OFF

Detailed description page

"Parameter access setting"	Page 18
"Parameter access target module ID specification"	Page 18
"Parameter access request command"	Page 16
"Parameter access completion flag"	Page 15
"Parameter storage location memory number"	Page 19
"Parameter storage areas"	Page 20
"48-word structure"	Page 22

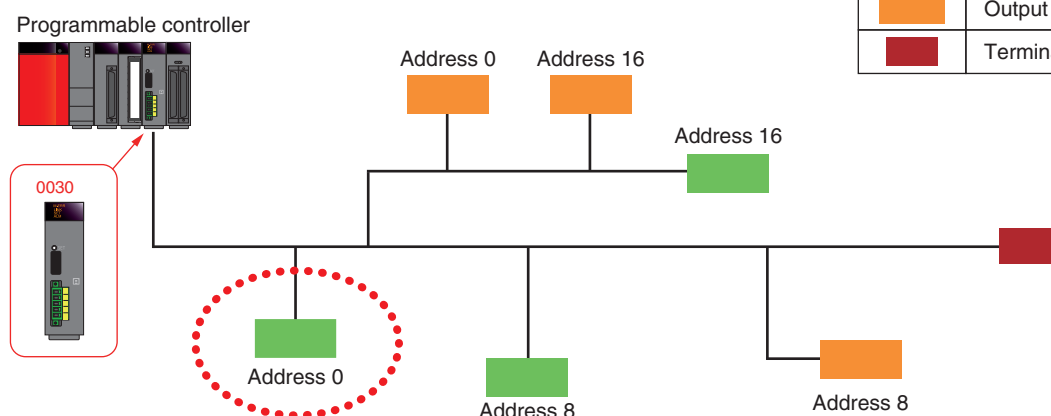
Wait! To execute write processing, is it necessary to specify a read command in advance?



## Concrete example

### [ System configuration ]

Head XY address of master unit: 0030  
 Input remote unit 3 units  
 Output remote unit 3 units



### Task

For example, consider a case to change the setting of the input remote unit (ASLINKSENSOR) of "address 0", from the Dark ON mode to the Light ON mode.

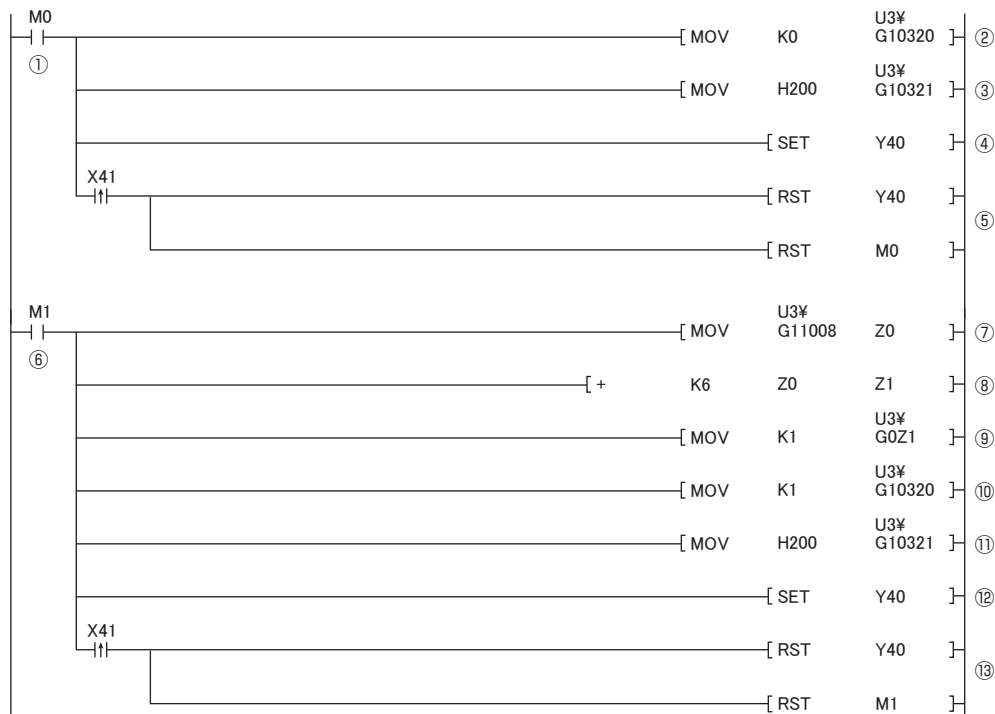


➡ For an example of reference, see the next page.



# Example of reference

## Reference program:



## Description

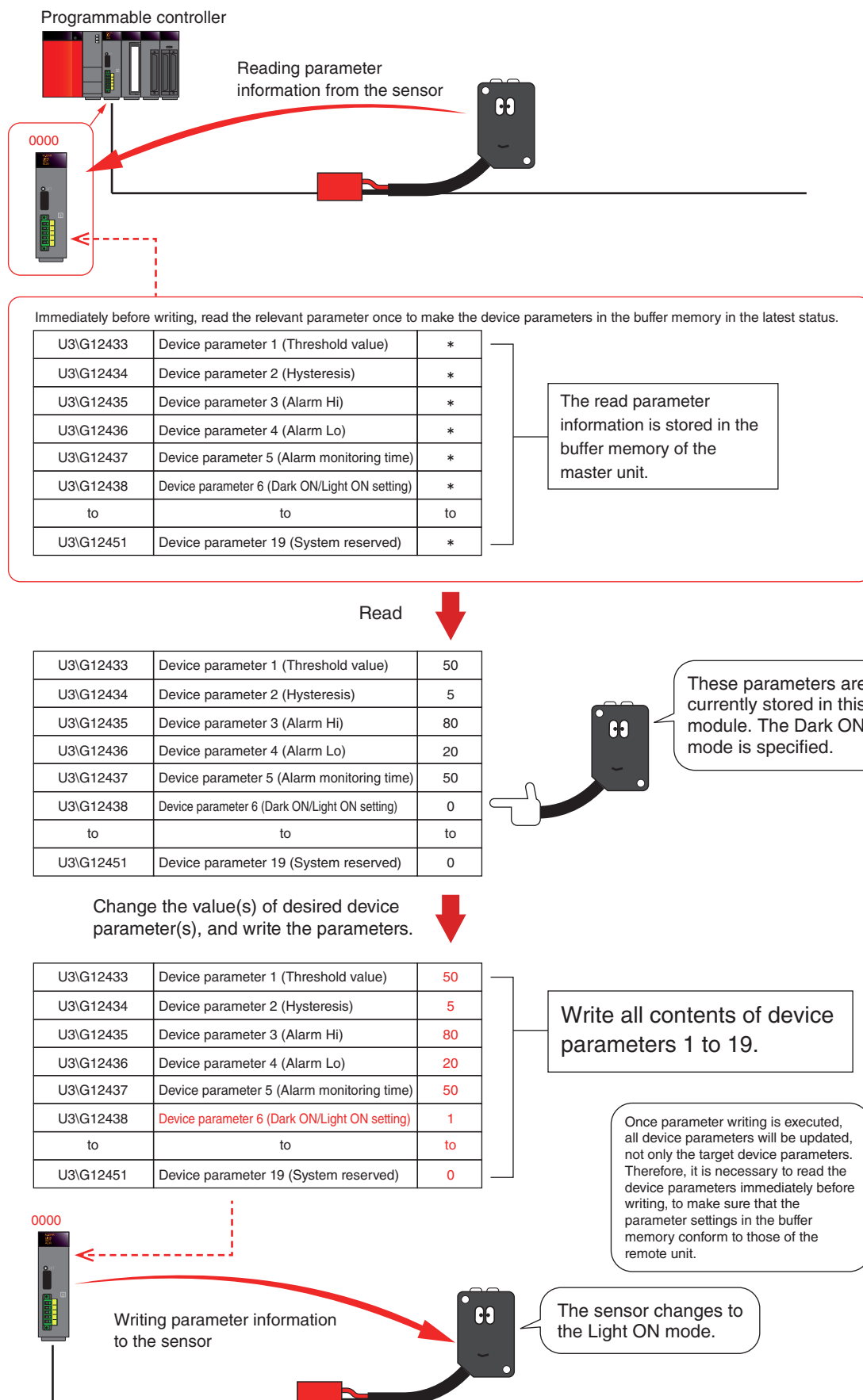
- ① Turning ON M0 (parameter read trigger)  
↓
- ② Storing "0" in U3¥G10320 (parameter access setting)  
↓ \* Store "0", and specify the "read" command.
- ③ Storing "200<sub>H</sub>" in U3¥G10321 (parameter access target module ID specification)  
↓ \* Specify a remote unit ID to read.
- ④ Turning Y(n+1)0 (parameter access command) from OFF to ON  
↓
- ⑤ At the rising edge of X(n+1)1 (parameter access completion flag), turning Y(n+1)0 and M0 from ON to OFF  
↓
- ⑥ Turning ON M1 (parameter write trigger)  
↓
- ⑦ Transferring the parameter storage location memory address of ID200<sub>H</sub> to the offset device Z0  
↓ \* In this example, "12432" is stored in Z0.
- ⑧ Storing a value of Z0 plus 6 in Z1 to specify a buffer memory address of the device parameter 06 to write.  
↓
- ⑨ Storing "1" as a value to change, in a place offset by Z1 from the head address of the buffer memory  
↓
- ⑩ Storing "1" in U3¥G10320 (parameter access setting)  
↓ \* Store "1", and specify the "write" command.
- ⑪ Storing "200<sub>H</sub>" in U3¥G10321 (parameter access target module ID specification)  
↓ \* Specify a remote unit ID to write.
- ⑫ Turning Y(n+1)0 (parameter access command) from OFF to ON  
↓
- ⑬ At the rising edge of X(n+1)1 (parameter access completion flag), turning Y(n+1)0 and M0 from ON to OFF



# Example of reference



## Description





## Supplementary reference (List of I/O signals)

Signal direction: Master unit to CPU module		Signal direction: CPU module to master unit	
Device number	Signal name	Device number	Signal name
Xn0	Module READY	Yn0	Error flag clear command
Xn1	DP-DN short error	Yn1	Automatic address detection command
Xn2	Use prohibited	Yn2 to YnF	Use prohibited
Xn3	Transmission cable voltage drop error		
Xn4	DP, DN disconnection error		
Xn5 to XnF	Use prohibited		
X(n+1)0	Remote unit alarm signal	Y(n+1)0	Parameter access request command for the remote unit
X(n+1)1	Parameter access completion flag	Y(n+1)1	Parameter batch read command for the remote unit
X(n+1)2	Parameter access error	Y(n+1)2	Parameter batch write command for the remote unit
X(n+1)3	Use prohibited	Y(n+1)3 to Y(n+1)F	Use prohibited
X(n+1)4	Automatic address detection flag		
X(n+1)5 to X(n+1)F	Use prohibited		

“n” is the head I/O number of the ASLINK master unit.

Example) when the head I/O number of the ASLINK master unit is “0030”:

Xn0 to X(n+1)F → X30 to X4F

Yn0 to Y(n+1)F → Y30 to Y4F

The above contents apply when the programmable controller has 32 inputs and 32 outputs.





## Supplementary reference (Description of I/O signals)

---

### ■ Module READY (Xn0)

This signal turns ON when the master unit becomes ready after reset of the CPU, or after the power supply is turned from OFF to ON.

### ■ DP-DN short error (Xn1) [Hold type]

This signal turns ON when a short occurs in the transmission cables (DP-DN) or the maximum supply current is exceeded.

### ■ Transmission cable voltage drop error (Xn3) [Hold type]

This signal turns ON when the 24VDC external power supply voltage drops.

### ■ DP, DN disconnection error (Xn4) [Hold type]

This signal turns ON when the master unit cannot confirm response from a remote unit in the case of transmission cable (DP, DN) disconnection, fault of the remote unit, etc.



#### Hint

- The DP, DN disconnection error signal remains ON until automatic address detection is executed after the master unit power supply is turned ON first.
- The DP, DN disconnection error signal is turned ON, if a remote unit address is changed after execution of automatic address detection.

### ■ Remote unit alarm signal (X(n+1)0) [Hold type]

This signal turns ON when a status error (including I/O disconnection and short) occurs in the remote unit or an error occurs in the address setting of the remote unit.

### ■ Parameter access completion flag (X(n+1)1)

This signal turns ON when the parameter access is completed.

### ■ Parameter access error (X(n+1)2) [Hold type]

This signal turns ON when an error occurs in the parameter access.

### ■ Automatic address detection flag (X(n+1)4)

The signal remains ON after start of automatic address detection operation until end of the operation.



#### Hint

To turn OFF the [Hold type] error signal after resetting the error status:

- Reset the CPU, or turn the power supply from OFF to ON.
- Turn the error flag clear command (Yn0) from OFF to ON, and then turn it OFF again.



## ■ Error flag clear command (Yn0)

This signal turns from OFF to ON, when ON status of the following input signals or buffer memories is turned OFF.

- DP-DN short error (Xn1)
- Transmission cable voltage drop error (Xn3)
- DP, DN disconnection error (Xn4)
- Remote unit alarm signal (X(n+1)0)
- Parameter access error (X(n+1)2)
- Number of the error IDs (Un\G8192)
- Error ID information storage area (Un\G8193 to Un\G8320)
- Number of the alarm IDs (Un\G9984)
- Alarm ID information storage area (Un\G9985 to Un\G10112)

## ■ Automatic address detection command (Yn1)

This signal is turned ON to execute the automatic address detection.

## ■ Parameter access request command for the remote unit (Y(n+1)0)

This signal is used to execute parameter read or write processing with a remote unit individually specified.



### Hint

- The DP, DN disconnection error signal remains ON until automatic address detection is executed after the master unit power supply is turned ON first.
- The DP, DN disconnection error signal is turned ON, if a remote unit address is changed after execution of automatic address detection.

## ■ Parameter batch read command for the remote unit (Y(n+1)1)

This signal turns ON when parameter read or write processing is executed with a remote unit ID specified.

## ■ Parameter batch write command for the remote unit (Y(n+1)2)

This signal turns ON when parameter read or write processing is executed with a remote unit ID specified.



## Supplementary reference (List of buffer memory addresses)

Buffer memory address		Item	Allowable operation (Read/write)
Decimal	Hexadecimal		
0 to 15	0 <sub>H</sub> to F <sub>H</sub>	Input information area	Read only
16 to 4095	10 <sub>H</sub> to FFF <sub>H</sub>	System reserved	—
4096 to 4111	1000 <sub>H</sub> to 100F <sub>H</sub>	Output information area	Read and write
4112 to 8191	1010 <sub>H</sub> to 1FFF <sub>H</sub>	System reserved	—
8192	2000 <sub>H</sub>	Number of the error IDs	Read only
8193 to 8320	2001 <sub>H</sub> to 2080 <sub>H</sub>	Error ID information storage area	Read only
8321 to 8959	2081 <sub>H</sub> to 22FF <sub>H</sub>	System reserved	—
8960	2300 <sub>H</sub>	Number of the connected modules	Read only
8961 to 9215	2301 <sub>H</sub> to 23FF <sub>H</sub>	System reserved	—
9216	2400 <sub>H</sub>	Number of the IDs of the connected modules	Read only
9217 to 9344	2401 <sub>H</sub> to 2480 <sub>H</sub>	Connected module ID information storage area	Read only
9345 to 9983	2481 <sub>H</sub> to 26FF <sub>H</sub>	System reserved	—
9984	2700 <sub>H</sub>	Number of the alarm IDs	Read only
9985 to 10112	2701 <sub>H</sub> to 2780 <sub>H</sub>	Alarm ID information storage area	Read only
10113 to 10255	2781 <sub>H</sub> to 280F <sub>H</sub>	System reserved	—
10256	2810 <sub>H</sub>	Latest error code storage area	Read only
10257	2811 <sub>H</sub>	Latest error ID storage area	Read only
10258 to 10319	2812 <sub>H</sub> to 284F <sub>H</sub>	System reserved	—
10320	2850 <sub>H</sub>	Parameter access setting	Read and write
10321	2851 <sub>H</sub>	Parameter access target module ID specification	Read and write
10322 to 10495	2852 <sub>H</sub> to 28FF <sub>H</sub>	System reserved	—
10496 to 10751	2900 <sub>H</sub> to 29FF <sub>H</sub>	Parameter storage location memory number (output)	Read only
10752 to 11007	2A00 <sub>H</sub> to 2AFF <sub>H</sub>	System reserved	—
11008 to 11263	2B00 <sub>H</sub> to 2BFF <sub>H</sub>	Parameter storage location memory number (input)	Read only
11264 to 12287	2C00 <sub>H</sub> to 2FFF <sub>H</sub>	System reserved	—
12288 to 18431	3000 <sub>H</sub> to 47FF <sub>H</sub>	Parameter storage area	Read and write
18432 to 32767	4800 <sub>H</sub> to 7FFF <sub>H</sub>	System reserved	—

In this document, buffer memory addresses are indicated as Un\G\_ (decimal number).

Example: Un\G8192 (Number of the error IDs)

“n” is the head I/O number of the ASLINK master unit.

When the head I/O number of the ASLINK master unit is “0030”,  
it is indicated as “U3\G8192”.



# Supplementary reference (Details of buffer memory)

## ■ Number of the error IDs (Un\G8192)

Used to store the number of error IDs, in the case where the master unit cannot confirm response from a remote unit due to transmission cable (DP, DN) disconnection, fault of the remote unit, etc.



Hint

- Parameter access error is also subject to the number of error IDs.
- After execution of automatic address detection, data will be updated when an error is detected.

## ■ Error ID information storage areas (Un\G8193 to 8320)

Used to store remote unit IDs subject to transmission cable (DP, DN) disconnection error and parameter access error in ascending order.



Hint

- Parameter access error is also subject to the number of error IDs.
- After execution of automatic address detection, data will be updated when an error is detected.

## ■ Number of the alarm IDs (Un\G9984)

Use to store the number of IDs relevant to alarm occurrence when a status error occurs on the remote unit or an ID or parameter setting error regarding a remote unit occurs.



Hint

- Parameter access error is also subject to the number of error IDs.
- After execution of automatic address detection, data will be updated when an error is detected.

## ■ Alarm ID information storage areas (Un\G9985 to 10112)

Used to store remote unit IDs subject to transmission cable (DP, DN) disconnection error and parameter access error in ascending order.



Hint

- Parameter access error is also subject to the number of error IDs.
- After execution of automatic address detection, data will be updated when an error is detected.

## ■ Parameter access setting (Un\G10320)

Specify the parameter access method.

000<sub>H</sub>: Read (Remote unit → Master unit)

001<sub>H</sub>: Write (Master unit → Remote unit)



Hint

- If any value other than the above is stored, it is regarded as “read”.
- When the parameter access request command for the remote unit is turned from OFF to ON, read or write processing is executed.
- If parameter batch read or parameter batch write processing is executed, this value is ignored.

## ■ Parameter access target module ID specification (Un\G10321)

Specify a target remote unit ID when the master unit accesses parameters in an individual remote unit.



Hint

- The parameter access target ID shall be specified for one remote unit. Several remote unit IDs cannot be specified.
- If parameter batch read or parameter batch write processing is executed, this value is ignored.

## ■ Parameter storage location memory number (output) (Un\G10496 to 10751)

Used to store the head address of buffer memory of the parameter storage area corresponding to each output remote unit ID.

Buffer memory address	Details	Remote unit address
Un\G10496	Head address of buffer memory of parameter storage area corresponding to ID000 <sub>H</sub>	0
Un\G10497	Head address of buffer memory of parameter storage area corresponding to ID001 <sub>H</sub>	1
Un\G10498	Head address of buffer memory of parameter storage area corresponding to ID002 <sub>H</sub>	2
to	to	to
Un\G10750	Head address of buffer memory of parameter storage area corresponding to ID0FE <sub>H</sub>	254
Un\G10751	Head address of buffer memory of parameter storage area corresponding to ID0FF <sub>H</sub>	255

Example)

To identify a parameter storage location corresponding to output remote unit address 10 (ID00A<sub>H</sub>), check “Un\G10506”.



Hint

- Each value is stored in the parameter storage location memory number for an ID that has been registered in the master unit through automatic address detection.
- For a parameter storage location memory number whose ID has not been registered (does not exist) in the master unit, “0” is stored.

## ■ Parameter storage location memory number (input) (Un\G11008 to 11263)

Used to store the head address of buffer memory of the parameter storage area corresponding to each input or I/O combined remote unit ID.

Buffer memory address	Details	Remote unit address
Un\G11008	Head address of buffer memory of parameter storage area corresponding to ID200 <sub>H</sub>	0
Un\G11009	Head address of buffer memory of parameter storage area corresponding to ID201 <sub>H</sub>	1
Un\G11010	Head address of buffer memory of parameter storage area corresponding to ID202 <sub>H</sub>	2
to	to	to
Un\G11262	Head address of buffer memory of parameter storage area corresponding to ID2FE <sub>H</sub>	254
Un\G11263	Head address of buffer memory of parameter storage area corresponding to ID2FF <sub>H</sub>	255

Example)

To identify a parameter storage location corresponding to input remote unit address 10 (ID 20A<sub>H</sub>), check “Un\G110018”.



Hint

- Each value is stored in the parameter storage location memory number for an ID that has been registered in the master unit through automatic address detection.
- For a parameter storage location memory number whose ID has not been registered (does not exist) in the master unit, “0” is stored.

# ■ Parameter storage areas (Un\G12288 to 18431)

Used to exchange parameter information on the AnyWireASLINK system.



## Hint

- It is common to all remote units that 48 words are occupied per remote unit.  
\* For details of 48 words, refer to p. 22.
- Only the remote units (ID) that have been registered in the master unit through automatic address detection enables parameter information exchange via these areas.  
At startup of the system, and after a remote unit is added or a remote unit address is changed, be sure to execute automatic address detection.
- A single storage area has 48 words and the data are sorted in ascending order of IDs.

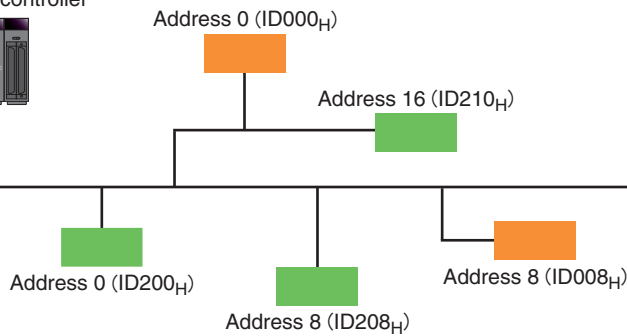
Buffer memory address	Ascending order of IDs registered in master unit
Un\G12288 to Un\G12335	1st remote unit (48 words)
Un\G12336 to Un\G12383	2nd remote unit (48 words)
to	to
Un\G18336 to Un\G18383	127th remote unit (48 words)
Un\G18384 to Un\G18431	128th remote unit (48 words)

Because the data are sorted in ascending order of IDs that have been registered in the master unit, their storing position varies depending on the system configuration even with the same ID. Thoroughly understand this point.



## Example

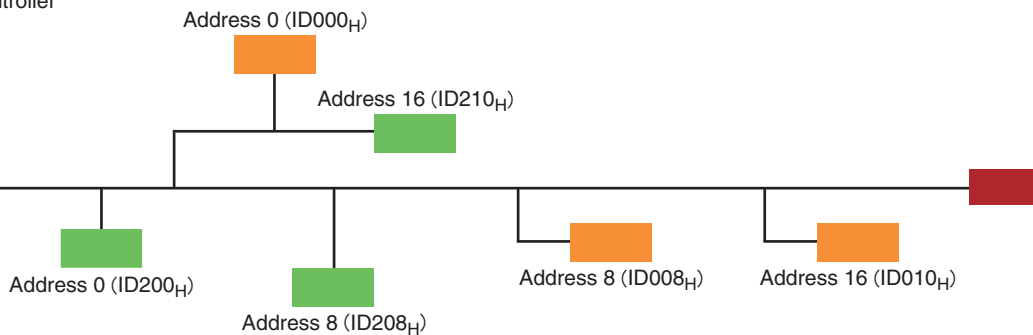
Programmable controller



Symbol	Meaning
	Input remote unit
	Output remote unit
	Terminating unit

ID in ascending order	Parameter storage area
000 <sub>H</sub>	Un\G12288 to Un\G12335
008 <sub>H</sub>	Un\G12336 to Un\G12383
200 <sub>H</sub>	Un\G12384 to Un\G12431
208 <sub>H</sub>	Un\G12432 to Un\G12479
210 <sub>H</sub>	Un\G12480 to Un\G12527

Programmable controller



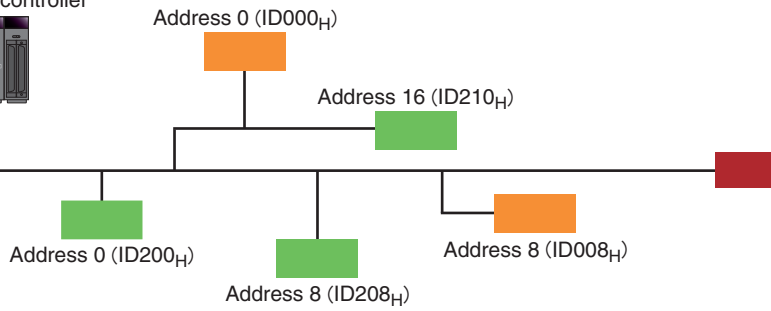
ID in ascending order	Parameter storage area
000 <sub>H</sub>	Un\G12288 to Un\G12335
008 <sub>H</sub>	Un\G12336 to Un\G12383
010 <sub>H</sub>	Un\G12384 to Un\G12431
200 <sub>H</sub>	Un\G12432 to Un\G12479
208 <sub>H</sub>	Un\G12480 to Un\G12527
210 <sub>H</sub>	Un\G12528 to Un\G12575



Buffer memory addresses can be determined according to system configuration at startup. However, assuming possibility of modification, it is better to create a program that enables parameter storage location memory number check before parameter read/write processing.

Now, see the parameter storage location memory numbers.

Programmable controller



Symbol	Meaning
	Input remote unit
	Output remote unit
	Terminating unit

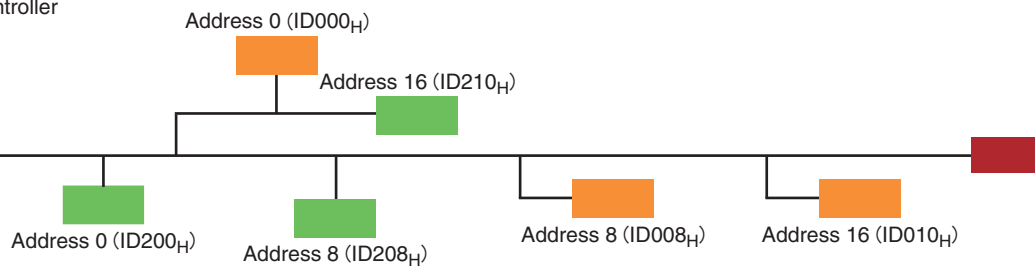
Parameter storage location memory number (output)	Description	Stored value
Un\G10496	Head address of buffer memory of parameter storage area corresponding to ID000 <sub>H</sub>	12288
to	to	to
Un\G10504	Head address of buffer memory of parameter storage area corresponding to ID008 <sub>H</sub>	12336
...	...	...

Parameter storage area
Un\G12288 to Un\G12335
to
Un\G12336 to Un\G12383
...

Parameter storage location memory number (input)	Description	Stored value
Un\G11008	Head address of buffer memory of parameter storage area corresponding to ID200 <sub>H</sub>	12384
to	to	to
Un\G11016	Head address of buffer memory of parameter storage area corresponding to ID208 <sub>H</sub>	12432
to	to	to
Un\G11024	Head address of buffer memory of parameter storage area corresponding to ID210 <sub>H</sub>	12480
...	...	...

Parameter storage area
Un\G12384 to Un\G12431
to
Un\G12432 to Un\G12479
to
Un\G12480 to Un\G12527
...

Programmable controller



Parameter storage location memory number (output)	Description	Stored value
Un\G10496	Head address of buffer memory of parameter storage area corresponding to ID000 <sub>H</sub>	12288
to	to	to
Un\G10504	Head address of buffer memory of parameter storage area corresponding to ID008 <sub>H</sub>	12336
to	to	to
Un\G10512	Head address of buffer memory of parameter storage area corresponding to ID010 <sub>H</sub>	12384
...	...	...

Parameter storage area
Un\G12288 to Un\G12335
to
Un\G12336 to Un\G12383
to
Un\G12384 to Un\G12431
...

Parameter storage location memory number (input)	Description	Stored value
Un\G11008	Head address of buffer memory of parameter storage area corresponding to ID200 <sub>H</sub>	12432
to	to	to
Un\G11016	Head address of buffer memory of parameter storage area corresponding to ID208 <sub>H</sub>	12480
to	to	to
Un\G11024	Head address of buffer memory of parameter storage area corresponding to ID210 <sub>H</sub>	12528
...	...	...

Parameter storage area
Un\G12432 to Un\G12479
to
Un\G12480 to Un\G12527
to
Un\G12528 to Un\G12575
...

## ■ 48-word structure

Buffer memory address	Bit number																Read/write	Parameter name
	F	E	D	C	B	A	9	8	7	6	5	4	3	2	1	0		
Un\G12288	Module ID																Read (Remote unit to master unit)	AnyWireASLINK parameter
Un\G12289	Device parameter 1																Read/write (Master unit to remote unit)	Device parameter
Un\G12290	Device parameter 2																	
Un\G12291	Device parameter 3																	
Un\G12292	Device parameter 4																	
Un\G12293	Device parameter 5																	
Un\G12294	Device parameter 6																	
Un\G12295	Device parameter 7																	
Un\G12296	Device parameter 8																	
Un\G12297	Device parameter 9																	
Un\G12298	Device parameter 10																	
Un\G12299	Device parameter 11																	
Un\G12300	Device parameter 12																	
Un\G12301	Device parameter 13																	
Un\G12302	Device parameter 14																	
Un\G12303	Device parameter 15																	
Un\G12304	Device parameter 16																	
Un\G12305	Device parameter 17																	
Un\G12306	Device parameter 18																	
Un\G12307	Device parameter 19																	
Un\G12308	Device parameter 1																Read (Remote unit to master unit)	
Un\G12309	Device parameter 2																	
Un\G12310	Device parameter 3																	
Un\G12311	Device parameter 4																	
Un\G12312	Device parameter 5																	
Un\G12313	Device parameter 6																	
Un\G12314	Device parameter 7																	
Un\G12315	Device parameter 8																	
Un\G12316	Device parameter 9																	
Un\G12317	Device parameter 10																	
Un\G12318	Device parameter 11																	
Un\G12319	Device parameter 12																	
Un\G12320	Device parameter 13																	
Un\G12321	Device parameter 14																	
Un\G12322	Device parameter 15																	
Un\G12323	Device parameter 16																	
Un\G12324	Device parameter 17																	
Un\G12325	Device parameter 18																	
Un\G12326	Device parameter 19																	
Un\G12327	Status details																Read (Remote unit to master unit)	AnyWireASLINK parameter
Un\G12328	Sensing level																	
Un\G12329 to Un\G12335	System reserved																—	—

## ■ Parameters

Each remote unit has two types of parameters as follows:

- Device parameter (19 types)

These parameters are unique to each remote unit. The contents of the parameters vary depending on the type of remote unit. For details, refer to the specifications of the remote unit.

- AnyWireASLINK parameter (three types)

These parameters are common to all the remote units connected to the AnyWireASLINK.

Name	Read/write	Corresponding buffer memory area	Detailed description
Module ID	Read	Un\G12288+n × 48 (n: 0 to 127) 1st of 48 words	Indicates the remote unit ID. • 000 <sub>H</sub> to 0FF <sub>H</sub> : ID of output remote units • 200 <sub>H</sub> to 2FF <sub>H</sub> : ID of an input remote unit or I/O combined remote unit
Status details	Read	Un\G12327+n × 48 (n: 0 to 127) 40th of 48 words	Indicates the status of the remote unit. The status 1) to 6) of the remote unit are indicated depending on ON or OFF of each bit as below.  <div style="text-align: center;"> <p>b15                          to                          b6    b5    b4    b3    b2    b1    b0</p> <hr style="width: 100%;"/> <p style="margin-left: 300px;">6)</p> <p style="margin-left: 550px;">5)   6)   4)   3)   2)   1)</p> </div> 1) Module power supply status ON: Remote unit voltage drop OFF: No fault 2) Sensing level status ON: Sensing level drop OFF: No fault 3) I/O disconnection ON: I/O disconnection OFF: No fault 4) I/O short-circuit ON: I/O short-circuit OFF: No fault 5) I/O power supply voltage drop ON: I/O power supply voltage drop OFF: No fault 6) Varies depending on the type of remote unit.
Sensing level	Read	Un\G12328+n × 48 (n: 0 to 127) 41st of 48 words	Displays a value of a sensor being connected. The displayed value varies depending on the remote unit being connected. (Example: When an ON/OFF sensor is connected, an analog value of 0 to 100% is displayed.)



[Address]

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