Pro-face

Digital Human Machine Interface

Device/PLC Connection Manuals

About the Device/PLC Connection Manuals

Prior to reading these manuals and setting up your device, be sure to read the "Important: Prior to reading the Device/PLC Connection manual" information. Also, be sure to download the "Preface for Trademark Rights, List of Units Supported, How to Read Manuals and Documentation Conventions" PDF file. Furthermore, be sure to keep all manual-related data in a safe, easy-to-find location.

A Yokogawa Electric

A.1 Maximum Number of Consecutive Device Address

The following lists the maximum number of consecutive addresses that can be read by each PLC. Refer to these tables to utilize *Block Transfer*.

Note: When the device is setup using the methods below, the Data Communication Speed declines by the number of times the device is read.

- **When consecutive addresses exceed the maximum data number range**
- **When an address is designated for *division***
- **When device types are different**

To speed up data communication, plan the tag layout in screen units, as consecutive devices. (Includes the Alarm and Trend screens.)

■ PLCs

<FACTORY ACE Series>

Device	Max. No. of Consecutive Address	Device	Max. No. of Consecutive Address
Input Relay X	1 Words	Timer (current value) TP	63 Words
Output Relay Y		Timer (setup value) TS	
Internal Relay I	63 Words	Counter (current value) CP	
Joint Relay E		Counter (setup value) CS	
Timer (contact) T	16 Words	Data Register D	
Counter (contact) C		Common Register B *1	
Special Relay M	63 Words	File Register B *1	
Link Relay L		Special Register Z	
		Link Register W	

**1 Device B becomes the Common Register when the CPU is FA500, and becomes the File Register when the CPU is FA-M3.*

◆Ethernet

<FACTORY ACE Series/FA-M3>

Device	Max.No.of Consecutive Addresses
Input Relay	1 Word
Output Relay	
Internal Relay	64 words
Common Relay	
Special Relay	
Link Relay	
Timer (contact)	16 words
Counter (contact)	
Timer (current value)	64words
Counter (current value)	
Timer (setup value)	
Counter (setup value)	
Data Register	
File Register	
Common Register	
Special Register	
Link Register	

■ Electronic Temperature Controllers

<UT2000/UT3000/Green Series>

Device	Max. No. of Consecutive Address
D	63 Words
I	63 Words

<UT100>

Device	Max. No. of Consecutive Address
D Register	32 Words

A.2 Device Codes and Address Codes

Device codes and address codes are used to specify indirect addresses for the E-tags or K-tags.

The word addresses of data to be displayed are coded and stored in the word address specified by the E-tags and K-tags. (Code storage is done either by the PLC, or with T-tag and K-tags)

■ PLCs

<FA500 (1:1 communication)*>

	Device	Word Address	Device code (HEX)	Address code
Bit Device	Input Relay	X00201~	X	X
	Output Relay	Y00201~	X	X
	Internal Relay	I0001~	9000	Save as word address value minus 1 divided by 16.
	Joint Relay	E0001~	B800	Save as word address value minus 1 divided by 16.
	Special Relay	M001~	B000	Save as word address value minus 1 divided by 16.
	Link Relay	L0001~	C000	Save as word address value minus 1 divided by 16.
Word Device	Timer (current value)	TP001~	6000	Save as word address value minus 1.
	Timer (set velue)	TS001~	6800	Save as word address value minus 1.
	Coutner (current value)	CP001~	7000	Save as word address value minus 1.
	Counter (set value)	CS001~	7800	Save as word address value minus 1.
	Data Register	D0001~	0000	Save as word address value minus 1.
	Common Register	B0001~	2000	Save as word address value minus 1.
	Special Register	Z001~	5000	Save as word address value minus 1.
	Link Register	W0001~	5800	Save as word address value minus 1.
	LS area	LS0000~	4000	Word Address

* *Only CPU No. 1 is available.*

<FA500 (1:n communication)*>

	Device	Word Address	Device code (HEX)	Address code
Bit Device	Input Relay	X00201~	X	X
	Output Relay	Y00201~	X	X
	Internal Relay	I0001~	9000	Save as word address value minus 1 divided by 16.
	Joint Relay	E0001~	B800	Save as word address value minus 1 divided by 16.
	Special Relay	M001~	B000	Save as word address value minus 1 divided by 16.
	Link Relay	L0001~	C000	Save as word address value minus 1 divided by 16.
Word Device	Timer (current value)	TP001~	6000	Save as word address value minus 1.
	Timer (set velue)	TS001~	6800	Save as word address value minus 1.
	Coutner (current value)	CP001~	7000	Save as word address value minus 1.
	Counter (set value)	CS001~	7800	Save as word address value minus 1.
	Data Register	D0001~	0000	Save as word address value minus 1.
	Common Register	B0001~	2000	Save as word address value minus 1.
	Special Register	Z001~	5000	Save as word address value minus 1.
	Link Register	W0001~	5800	Save as word address value minus 1.
	LS area	LS0000~	4000	Word Address

* *Only CPU No. 1 in station No.1 is available.*

<FA-M3 (1:1 communication)*>

	Device	Word Address	Device code (HEX)	Address code
Bit Device	Input Relay	X00201~	X	X
	Output Relay	Y00201~	X	X
	Internal Relay	I0001~	9000	Save as word address value minus 1 divided by 16.
	Joint Relay	E0001~	B800	Save as word address value minus 1 divided by 16.
	Special Relay	M0001~	B000	Save as word address value minus 1 divided by 16.
	Link Relay	L00001~	C000	Save as word address value minus 1 divided by 16.
Word Device	Timer (current value)	TP0001~	6000	Save as word address value minus 1.
	Timer (set velue)	TS0001~	6800	Save as word address value minus 1.
	Coutner (current value)	CP0001~	7000	Save as word address value minus 1.
	Counter (set value)	CS0001~	7800	Save as word address value minus 1.
	Data Register	D0001~	0000	Save as word address value minus 1.
	File Register	B00001~	2000	Save as word address value minus 1.
		B65537~	2800	Save as word address value minus 65537.
		B131073~	1000	Save as word address value minus 131073.
		B196609~	1800	Save as word address value minus 196609.
	Joint Register	R0001~	0800	Save as word address value minus 1.
	Special Register	Z001~	5000	Save as word address value minus 1.
	Link Register	W00001~	5800	Save as word address value minus 1.
	LS area	LS0000~	4000	Word Address

* *Only CPU No. 1 is available.*

<FA-M3 (1:n communication)*>

	Device	Word Address	Device code (HEX)	Address code
Bit Device	Input Relay	X00201~	X	X
	Output Relay	Y00201~	X	X
	Internal Relay	I00001~	9000	Save as word address value minus 1 divided by 16.
	Joint Relay	E0001~	B800	Save as word address value minus 1 divided by 16.
	Special Relay	M0001~	B000	Save as word address value minus 1 divided by 16.
	Link Relay	L00001~	C000	Save as word address value minus 1 divided by 16.
Word Device	Timer (current value)	TP0001~	6000	Save as word address value minus 1.
	Timer (set velue)	TS0001~	6800	Save as word address value minus 1.
	Coutner (current value)	CP0001~	7000	Save as word address value minus 1.
	Counter (set value)	CS0001~	7800	Save as word address value minus 1.
	Data Register	D0001~	0000	Save as word address value minus 1.
	File Register	B0001~	2000	Save as word address value minus 1.
	Joint Register	R0001~	0800	Save as word address value minus 1.
	Special Register	Z001~	5000	Save as word address value minus 1.
	Link Register	W0001~	5800	Save as word address value minus 1.
	LS area	LS0000~	4000	Word Address

* *Only CPU No. 1 in station No. 1 is available.*

<FA-M3 (Ethenet communication)*>

	Device	Word Address	Device code (HEX)	Address code
Bit Device	Input Relay	X00201~	X	X
	Output Relay	Y00201~	X	X
	Internal Relay	I00001~	9000	Save as word address value minus 1 divided by 16.
	Joint Relay	E0001~	B800	Save as word address value minus 1 divided by 16.
	Special Relay	M0001~	B000	Save as word address value minus 1 divided by 16.
	Link Relay	L00001~	C000	Save as word address value minus 1 divided by 16.
Word Device	Timer (current value)	TP0001~	6000	Save as word address value minus 1.
	Timer (set velue)	TS0001~	6800	Save as word address value minus 1.
	Coutner (current value)	CP0001~	7000	Save as word address value minus 1.
	Counter (set value)	CS0001~	7800	Save as word address value minus 1.
	Data Register	D0001~	0000	Save as word address value minus 1.
	File Register	B0001~	2000	Save as word address value minus 1.
		B65537~	2800	Save as word address value minus 65537.
		B131073~	1000	Save as word address value minus 131073.
		B196609~	1800	Save as word address value minus 196609.
	Joint Register	R0001~	0800	Save as word address value minus 1.
	Special Register	Z001~	5000	Save as word address value minus 1.
	Link Register	W0001~	5800	Save as word address value minus 1.
	LS area	LS0000~	4000	Word Address

** Only CPU No. 1 is available*

<STARDOM standalone type controller>

	Image Register	Word Address	Device code	Address code
Bit Device	Internal Relay	I00001~	9000	Value of "(Word Address - 1) ÷ 16"
Word Device	Data Register	D0001~	0000	Value of "Word Address - 1"
	File Register	B00001~	2000	Value of "Word Address - 1"

◆ DeviceNet Communication

	Device	Word Address	Device code (HEX)	Address code
Word Device	LS area	LS0000 ~	4000	Word Address

■ Controllers

<UT2000/UT3000/Green Series>

	Device	Word Address	Device Code (HEX)	Address Code
Word Device	D	0001 ~	0000	Word Address -1
Bit Device	I	0001 ~	9000	Save as word address -1 value divided by 16
Word Device	LS Area	LS6000 ~	4000	Woord Address

<UT100>

	Device	Word Address	Device Code (HEX)	Address Code
Word Device	D Register	d0001 ~	3000	Word Address -1
	LS Area	LS0000 ~	4000	Word Address