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.

Hitachi Ltd. - Appendix

A.1 Maximum Number of Consecutive Device Addresses

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

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

<HIDIC-S10a/S10 mini/S10V Series>

Device	Max. No. of Consecutive Addresses	Device	Max. No. of Consecutive Addresses
Input Relay X	256 Words	Receive Register Q	256 Words
Output Relay Y		Extended Internal Register M	
Internal Relay R		On-Delay Timer (Setup Value) TS	
Global Link G		On-Delay Timer (Calculated Value) TC	
Event E		One Shot Timer (Setup Value) US	
Keep Relay K		One Shot Timer (Calculated Value) UC	
On-Delay Timer T		Up/Down Counter (Setup Value) CS	
One Shot Timer U		Up/Down Counter (Calculated Value) CC	
Up/Down Counter C		Word Register FW	
E Word EW		Data Register DW	
Transfer Register J		Extended Register MS	

<HIZAC EC Series>

Device		Max. No. of Consecutive Addresses	
		Address	Vertical Address
Bit Device	External Input X	16 Words	1 Word
	External Output Y		
	Internal Output M		
	Timer, or Counter TC000 ~ TC095		---
Word Device	External Input WX	8 Words	1 Word
	External Output WY		
	Internal Output WM		
	Timer, or Counter TC100 ~TC195 TC200 ~ TC295		---

◆ Ethernet

<S10V Series>

Device	Maximum No. of Connectable Devices
External Input	256 Words
External Output	
Internal Register	
Global Link Register	
Event Register	
Keep Relay	
System Register	
On-delay Register	
One-shot Timer	
Up/Down Counter	
Transfer Resistor	
Receive Register	
Extended Internal Register	
Extended Internal Register	
Timer Calculation Value	
Timer Setting Value	
One-shot Timer Calculation value	
One-shot Timer Setting Value	
Counter Calculation Value	
Counter Setting Value	
Work Register	
Data Register	
Work Register	
Data Converter Special Work Register	
Data Converter Special Work Register (Edge)	
Word Special Work Register	
Long Word Special Work Register	
Single Precision Floating Decimal Point Work Register	
Word Work Register (Power-cut Retain)	
Long Word Work Register (Power-cut Retain)	
Single Precision Floating Decimal Point Work Register (Power-cut Retain)	

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

<HIDIC S10 a/S10 mini/S10V Series>

	Device	Word Address	Device code (HEX)	Address code
Bit Device	Input Relay	XW000~	8040	Save as word address value, with the tenths position "0" removed.
	Output Relay	YW000~	8840	Save as word address value, with the tenths position "0" removed.
	Internal Relay	RW000~	9040	Save as word address value, with the tenths position "0" removed.
	Global Link	GW000~	C840	Save as word address value, with the tenths position "0" removed.
	System Register	SW000~	B040	Save as word address value, with the tenths position "0" removed.
	E Word	EW400~	X	X
	Event	EW000~	A040	Save as word address value, with the tenths position "0" removed.
	Keep Relay	K0000~	C040	Save as word address value, with the tenths position "0" removed.
	On-Delay Timer	TW000~	E040	Save as word address value, with the tenths position "0" removed.
	One Shot Timer	UW000~	E240	Save as word address value, with the tenths position "0" removed.
	Up/Down Counter	CW000~	F040	Save as word address value, with the tenths position "0" removed.
	Transfer Register	JW000~	9240	Save as word address value, with the tenths position "0" removed.
	Receive Register	QW000~	9440	Save as word address value, with the tenths position "0" removed.
	Extended Internal Register	MW000~	B240	Save as word address value, with the tenths position "0" removed.
Word Device	On-Delay Timer (Calculated Value)	TC000~	6000	Word Address
	On-Delay Timer (Setup Value)	TS000~	6800	Word Address
	One Shot Timer (Calculated Value)	UC000~	6200	Word Address
	One Shot Timer (Setup Value)	US000~	6A00	Word Address
	Up/Down Counter (Calculated Value)	CC000~	7000	Word Address
	Up/Down Counter (Setup Value)	CS000~	7800	Word Address
	Data Register	DW000~	0040	Word Address
	Word Register	FW000~	0840	Word Address
	Extended Register	MS000~	3040	Word Address
	LS area	LS0000~	4040	Word Address

<HIZAC EC Series >

	Device	Word Address	Device code (HEX)	Address code
	External Input	WX000~	8240	Word Address
		WX020~		
		WX040~		
		WX060~		
		WX080~		
		WX100~		
		WX120~		
		WX140~		
		WX160~		
		WX180~		
	External Output	WY200~	8A40	Word Address - 200
		WY220~		
		WY240~		
		WY260~		
		WY280~		
		WY300~		
		WY320~		
		WY340~		
		WY360~		
		WY380~		
	Internal Output	WM400~	9240	(Word Address - 400) / 2
		WM700~	9240	(Word Address - 400) / 2
		WM960~	9240	(Word Address - 400) / 2
	Timer / Counter (Elapsed Value)	TC100~	6000	Word Address - 100
	Timer / Counter (Set Value)	TC200~	6400	Word Address - 200
	LS Area	LS0000~	4040	Word Address

◆ DeviceNet Communication

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

◆ Ethernet

<S10V Series>

Device	Word Address	Device Code	Address Code
External Input	XW000~	8040	Remove word address value's right-most "0".
External Output	YW000~	8840	Remove word address value's right-most "0".
Internal Register	RW000~	9040	Remove word address value's right-most "0".
Global Link Register	GW000~	C840	Remove word address value's right-most "0".
Event Register	EW000~	A040	Remove word address value's right-most "0".
Keep Relay	KW000~	C040	Remove word address value's right-most "0".
System Register	SW000~	B040	Remove word address value's right-most "0".
On-delay Register	TW000~	E040	Remove word address value's right-most "0".
One-shot Timer	UW000~	E240	Remove word address value's right-most "0".
Up/Down Counter	CW000~	F040	Remove word address value's right-most "0".
Transfer Resistor	JW000~	9240	Remove word address value's right-most "0".
Receive Register	QW000~	9440	Remove word address value's right-most "0".
Extended Internal Register	MW000~	B240	Remove word address value's right-most "0".
Extended Internal Register	AW000~	B440	Remove word address value's right-most "0".
Timer Calculation Value	TC000~	6000	Word Address
Timer Setting Value	TS000~	6800	Word Address
One-shot Timer Calculation Value	UC000~	6200	Word Address
One-shot Timer Setting Value	US000~	6A00	Word Address
Counter Calculation Value	CC000~	7000	Word Address
Counter Setting Value	CS000~	7800	Word Address
Work Register	FW000~	0840	Word Address
Data Register	DW000~	0040	Word Address
Work Register	LBW0000~	9640	Word Address
Data Converter Special Work Register	LRW0000~	9840	Word Address
Data Converter Special Work Register (Edge)	LVW0000~	9A40	Word Address
Word Special Work Register	LWW0000~	0A40	Word Address
Long Word Special Work Register	LLL0000~	0C80	Word Address
Single Precision Floating Decimal Point Work Register	LF0000~	0E80	Word Address
Word Work Register (Power-cut Retain)	LXW0000~	1040	Word Address
Long Word Work Register (Power-cut Retain)	LML0000~	1280	Word Address
Single Precision Floating Decimal Point Work Register (Power-cut Retain)	LG0000~	1480	Word Address