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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*.



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

<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- | C 840 | 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- | C 040 | 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- | | |
| | Internal Output | WM400- | 9240 | (Word Address - 400) / 2 |
| WM700- | | 9240 | (Word Address - 400) / 2 | |
| WM960- | | 9240 | (Word Address - 400) / 2 | |
| Timer / Counter (Elapsed Value) | TC 100- | 6000 | Word Address - 100 | |
| Timer / Counter (Set Value) | TC 200- | 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 |