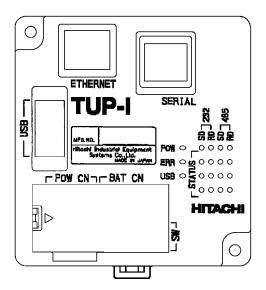
Instruction Manual for LAN Communication TUP-I Ethernet Communication

HITACHI J Printer



Thank you for purchasing Hitachi IJ Printer.

This instruction manual describes the Ethernet communication (LAN Communication TUP-I) function. For other features of the printer, please refer to Instruction manual or Technical manual.

If the printer is improperly handled or maintained, it may not operate smoothly and may become defective or cause an accident. It is therefore essential that you read this manual to gain a complete understanding of the printer and use it correctly.

After thoroughly reading the manual, properly store it for future reference.

[Model RX/RX2/UX]



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1. Ethernet communication (LAN communication TUP-I) function

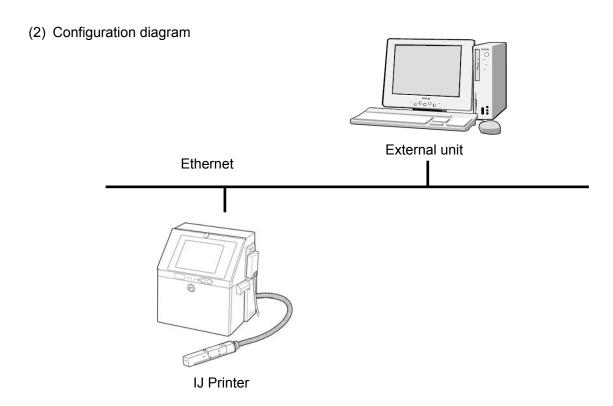
(1) Overview

- Function for Ethernet communication between the IJ Printer and external unit employing a LAN environment.
- Type of Ethernet communication can be selected from Modbus communication.
- Modbus communication require development of a communication program on the external unit side.

For the development purpose of communication program, IJP control library will be provided as a development kit.

List of functions

Ī	No.	Function name	Description	
	1	Modbus communication	Supports Modbus protocol. Because Modbus protocol is one type of protocol commonly used by industrial equipment, if Modbus communication is employed for other unit, you can create a communications program for the external unit using this asset. When the communication program is newly developed, its development schedule will be shortened with use of IJP control library.	



Standard specifications

Item	Specifications
Ethernet standards IEEE802.3 compatible, 10BASE-T, 100BAS	
Protocol	TCP/IP
Connection cable	Category 5 UTP or STP cable

(3) Notice

• The time from when the signal is transmitted from an external unit to when the IJ Printer receives the signal cannot be strictly defined in the same way as with serial communications.

2. Preparations

• If connecting the IJ Printer with external unit, use a LAN connection cable.

2.1 Network connection preparations (1) Connect to Intranet LAN

No.	Work	Remarks
1	You should obtain the IP address from the Information	
	Systems Department of your company.	
2	You should consult with the Information Systems Department	
	of your company concerning network settings such as	
	gateway.	

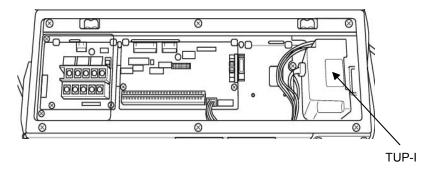
(2) Connect from outside the company

	• .	nom oddado tro company				
N	١o.	Work	Remarks			
	1	After concluding a contract with a provider, you should obtain				
		a fixed IP address from the provider.				
	2	If using a telephone line, a contract for service such as ADSL is required. If not using a telephone line, a mobile environment is required. You also need a router that supports a mobile card.				
	3	Set the network settings as instructed by the provider's				
		manual.				

2.2 IJ Printer preparations

No.	Work	Remarks
1	Make sure the IJ Printer is equipped with a built-in	
	TUP-I.	
2	Connect the IJ Printer to the Ethernet (computer or	Refer to 2.3 LAN cable
	hub, etc.) with a LAN cable.	connection.
3	Conduct a connection test if necessary.	Refer to
	-	3.Connection test.
4	Set the communication environment on the IJ	Refer to
	Printer's screen.	4. Setting the communication
		environment.

2.3 LAN cable connection



[I/O section (with cover removed)]

On RX Connected to the EZJ110 board. On RX2/UX Connected to the EZJ127 board.

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TUP-I appearance

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POW CN - BAT CN

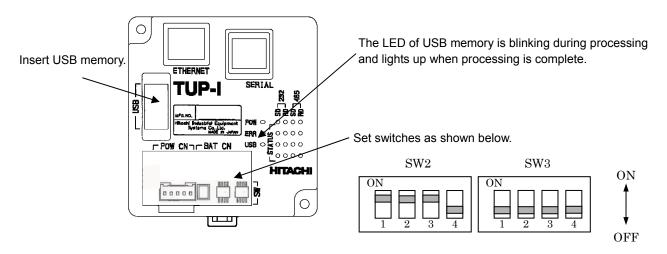
[Precautions when installing TUP-I]

- Be sure to turn off the main power when installing TUP-I.
- Connect the connectors securely.

2.4 TUP-I Communication setup

TUP-I Commnication setup can be changed as follows. First output the setup information in a electronic file into USB memory, edit it and then reinstall it into TUP-I. When this option is used, please be sure to follow the procedures described below.

Please set the switches as shown below. Then insert USB memory into TUP-I and power ON IJ Printer. Please wait for a moment until LED of USB memory lights up. The setup information will be output in a file of "configw.txt".



2 Power OFF the printer and remove USB memory from TUP-I. Edit "configw.txt" in USB memory on PC. The setup information is output in hexadecimal number. The IP address of TUP-I is set to 192.168.0.1 in the example below.

Table: Items of Setup Information (1/2)

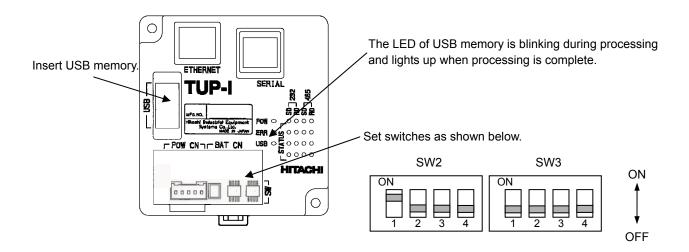
No.	Item	Set value (Factory- default)	Edited to:	Description
1	Mode	0010	_	Do NOT change these values which are the mandatory
2	Protocol	0001	_	items for Modbus communication.
3	IPAdd_1	00C0	00C0	IP address will be set.
4	IPAdd_2	00A8 —	→ 00A8	It is set to 192.168.0.1 (00C0.00A8.0000.0001) in this
5	IPAdd_3	0000 -	• 0000	example. Set it in the range of 0 (0000) to 255(00FF).
6	IPAdd_4	0001	0001	
7	SubMask_1	00FF -	→ 00FF	Subnet mask will be set.
8	SubMask_2	00FF -	00FF	It is set to 255.255.255.0 (00FF.00FF.00FF.0000) in this
9	SubMask_3	00FF -	→ 00FF	example. Set it in the range of 0 (0000) to 255(00FF).
10	SubMask_4	0000 —	• 0000	
11	DefGaWay_1	0000 -	0000	Default gateway will be set.
12	DefGaWay_2	0000 -	0000	It is set to 0.0.0.0 (0000.0000.0000.0000) in this
13	DefGaWay_3	0000	0000	example. Set it in the range of 0 (0000) to 255(00FF).
14	DefGaWay_4	0000	0000	
15	Modbus_Port	01F6 _	● 01F6	Port number which is used in Modbus communication will be set. It is set to 502 (01F6) in this example. Set it to 502 (01F6) or in the range of 1024 (0400) to 65535(FFFF).
16	EtherSpeed	0010	_	Do NOT change this value which is a mandatory item for Modbus communication.
17	EtherTimeout	0BB8 <u> </u>	→ 0000	The time duration for an automatic disconnection between PC and IJ Printer is set. The time is set to 10ms x "Set Value". It is set to 0 in this example, where the connection will NOT be disconnected. When it is set to 1 (0001) to 65535 (FFFF), Modbus communication will be automatically disconnected when the time elapses unless PC issues inquiries periodically within the time specified.

Table: Items of Setup Information (2/2)

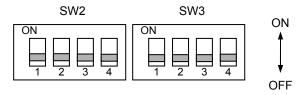
		0.1.1		
No.	Item	Set value (Factory- default)	Edited to:	Description
18	ComPort	0001	_	Do NOT change these values which are the mandatory
19	ComSpeed	0020	_	items for Modbus communication.
20	Topology	0001	_	
21	ComFormat	0001 _	→ 0004	This is a mandatory item for Modbus communication. Please set it to 0004.
22	ComAdd	0001		Do NOT change this value which is a mandatory item for Modbus communication.
23	ComTimeout	000A <u> </u>	01F4 ->	Time-out value for IJ Printer response will be set. Time-out value is set to 10ms x "Set Value". It is set to 5000ms which is 10ms x 01F4 in this example. It is recommended to set to 5000ms or longer because there are some processes which require 5000ms or longer.
24	ComWaitTime	000A	_	Do NOT change these values which are the mandatory
25	NTP_Use	0001	_	items for Modbus communication.
26	NTP_Add_1	00C0	_	
27	NTP_Add_2	00A8	_	
28	NTP_Add_3	0000	_	
29	NTP_Add_4	0002	_	
30	NTP_Port	007B	_	
31	NTP_Hr_Min	0100	_	
32	TimeZone	001B	_	
33	NTP_Slave_Use	0001	_	
34	Slave_Use_Time	000A		
35	Log_Time	003C	_	
36	Err_Led	0000	_	
37	Firm_Ver	0000	_	

^{*} Size of the setup information file is 814 bytes.

- 3 Find the file of "configw.txt" in USB memory and change its name to "config.txt".
- A Set the switches as shown below. Then insert USB memory into TUP-I and power ON IJ printer. Please wait for a moment until LED of USB memory lights up. The data in "config.txt" will be set to TUP-I.



Decided Power OFF IJ printer, remove USB memory and set ALL switches to OFF position. This is the end of TUP-I communication setup.



Terminology	Explanation	
IP address	The IP address is a 32-bit ID number allotted to equipment	
(Internet protocol address)	connected to the Internet. The 32-bit number of the IP address is	
	usually divided into four 8-bit segments for display. The IP	
	address consists of a "network address" that identifies the	
	network and a "host address" that identifies the individual pieces	
	of equipment connected in the network.	
Subnet mask	The subnet mask is a 32-bit number that defines what bits of the	
	IP address are used for the network address. The network	
	address segment of the IP address is determined by calculating	
	the logical AND of the IP address and subnet mask.	
Default gateway	The default gateway is equipment such as a router that functions	
	as the "gateway" to the network. When there is communication	
	between different networks and there is no unique path for the	
	equipment to be accessed, the default gateway is used to	
	connect them.	
Port number	The port No. is the sub-address that specifies one of several	
	programs running on equipment specified by the IP address.	
	Port numbers 502 or 1024-65535 are used as the sub-address.	

3. Connection test

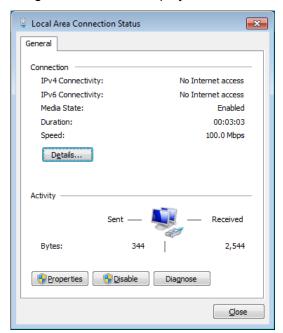
Directly connect the IJ Printer to a PC and check the connection.

3.1 Procedure for connection test

- Directly connect the IJ Printer to the PC with a LAN cable.
- Set the network settings of external unit by steps 2 to 5.

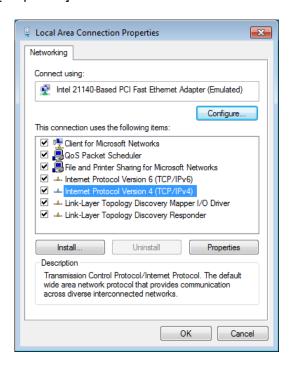
 Click the Start menu, and double-click [Control Panel] > [View network status and tasks] > [Change adapter settings] > [Local Area Connection].

 The following window is then displayed.

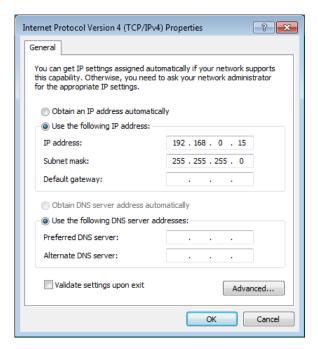


(Example using Windows 7 OS)

3 Click [Properties].

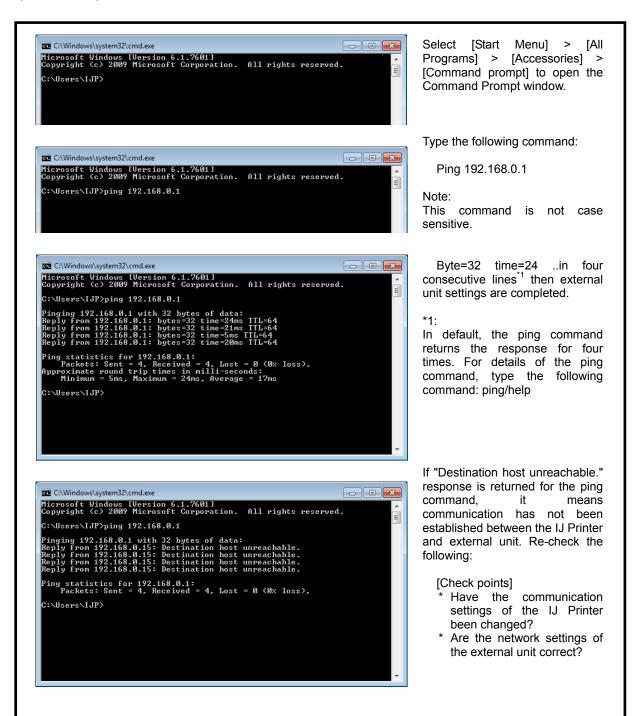


4 Click [Internet Protocol Version 4 (TCP/IPv4)].



Select [Use the following IP address], and enter an IP address other than 192.168.0.1 and 192.168.0.255 (the example shown in the figure uses 192.168.0.15) and then enter 255.255.255.0 in the Subnet mask field. Click [OK].

Follow the steps below to confirm that the network connection is properly established. The following steps describe procedures for Windows 7.



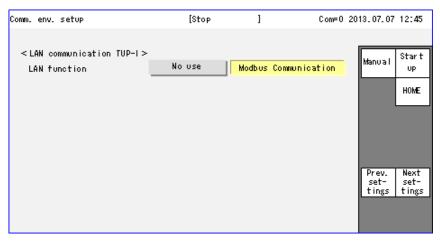
4. Setting the communication environment

4.1 Setting the communication environment

 Set the LAN function on communication environment setup screen to "Modbus communication".

Setting item of communication environment setup screen

Setting item	Description	
LAN function	 No use: Modbus communication function cannot be used. Modbus Communication: Modbus communication function 	
	can be used.	



Example communication environment setup screen

4.2 Usage precautions

(1) Optional software listed below can not be setup with this optional software at the same time.

List of optional software which can not be setup with this optional software at the same time

No	Optional software			
1	1 MOBA coding machine interface (SOP-07)			
2	Barcode Reader Connection (SOP-08)			
3	Ethernet communication(IJP LAN UNIT) (SOP-13)			

(2) Functions listed below are not operational during the use of this optional software.

List of functions which are not operational during the use of this optional software

No	Screen	Item	Note
1	Comm. env. setup	Buffer function	[Disable] Fixed
2		Data exchange	[Reflect at once] Fixed

(3) Functions listed below are not supported by this optional software.

List of functions which are not supported by this optional software

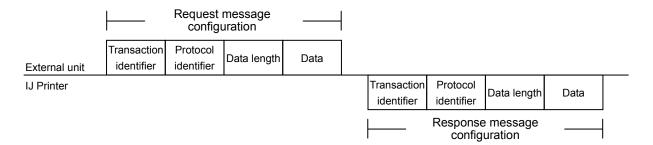
No	Function					
1	More than one of Calendar/Count blocks can not be set in one item.					
2	Barcode can not be set in Calendar/Count block.					
3	"Overall setup" of "Format setup" can Not be used.					
4	Kanji characters can not be used.					
5	Line spacing expansion (SOP-09) can not be used.					
6	Product Speed Matching "Enhance" (SOP-15-19) can not be used.					
7	Last print data display (SOP-15-21) can not be used.					
8	"Last day of the month" printing (SOP-15-22) can not be used.					
9	Meter count (SOP-15-24) can not be used.					

5. Modbus communication

5.1 Overview

- Function that supports Modbus protocol. Modbus protocol specifications have been globally disclosed; Modbus protocol is one of the most common types of communication protocol.
- Modbus protocol does not support messages autonomously output by the IJ Printer such as status or printing contents.

5.2 Transmission procedure



No.	Name	Size	Setting range	Description
1	Transaction identifier	2 bytes	0x0000	Sets transaction identifier. Set transaction identifier to 0x0000. The IJ Printer returns the transaction identifier received from external unit as it is.
2	Protocol identifier	2 bytes		The IJ Printer returns the protocol identifier received from external unit as it is. You should use the identifier to manage messages for external unit.
3	Data length	2 bytes	0x0000 to 0x00FF	Sets number of bytes for request data and response data.
4	Data	3 to 255 bytes	-	Because data configuration differs according to the function code specified, data size is variable. For data configuration, see 5. 3 Message format.

5.3 Message format

(1) Function code

The IJ Printer supports the function code given in the following table.

Function code

No.	Function code	Function			
1	0x10	Write Multiple Registers			
2	0x06	Write Single Register			
3	0x03	Read Holding Registers			
4	0x04	Read Input Registers			

- (2) Message format for Write Multiple Registers (Function code: 0x10)
 - Writes contents in the Holding Register to reflect it in the IJ Printer.
 - The maximum number of bytes that can be written in the Holding Register per time is 246 bytes; if this number is exceeded, you must divide the data into smaller segments while updating the starting address each time.
 - When the writing operation onto Holding Registers is made more than once, 0x0001 (Start) shall be written first on the control flag which is placed in the first address 0x0000 of Holding Registers. Then conduct writing more than once and finally write 0x0002 (Stop) onto the control flag. When 0x0002 (Stop) is written on the control flag, the data being written on Holding Registers will be reflected to IJ printer.

No.	Name	Size	Range	Description
1	Device address	1 byte	0x01	Sets device address. Set device address to 0x01.
2	Function code	1 byte	0x10	Sets function code (Write Multiple Registers).
3	Start address	2 bytes	0x0000 to 0xFFFF	Sets writing start address. Address is set in word units.
4	No. of words to be written	2 bytes	1 to 123	Sets number of words to be written.
5	No. of bytes to be written	1 byte	1 to 246	Sets number of bytes to be written.
6	Data to be written	2 to 246 bytes	0x0000 to 0xFFFF	Sets data to be written (variable length of 2 to 246 bytes). 0x00 is added to the end when data of uneven byte length is set.

Response message data configuration (normal)

No.	Name	Size	Range	Description
1	Device address	1 byte	0x01	Sets device address received as it is.
2	Function code	1 byte	0x10	Sets function code received as it is.
3	Start address	2 bytes	0x0000 to 0xFFFF	Sets start address received as it is.
4	No. of words to be written	2 bytes	1 to 123	Sets No. of words to be written received as it is.

Response message data configuration (abnormal)

No.	Name	Size	Range	Description
1	Device address	1 byte	0x01	Sets device address received as it is.
2	Function code	1 byte	0x90	Adds 0x80 to function code received.
3	Error code	1 byte	0x01 to 0x03	Sets error code. Error code differs according to cause.

- (3) Message format for Write Single Register (Function code: 0x06)
 - Write a content in the Holding Register to reflect it in the IJ Printer.
 - The number of bytes that can be written in the Holding Register per time is fixed to 2 bytes.

No.	Name	Size	Range	Description
1	Device address	1 byte	0x01	Sets device address. Set device address to 0x01.
2	Function code	1 byte	0x06	Sets function code (Write Single Register).
3	Writing address	2 bytes	0x0000 to 0xFFFF	Sets writing address. Address is set in word units.
4	Data to be written	2 bytes	0x0000 to 0xFFFF	Sets data to be written.

Response message data configuration (normal)

No.	Name	Size	Range	Description
1	Device address	1 byte	0x01	Sets device address received as it is.
2	Function code	1 byte	0x06	Sets function code received as it is.
3	Writing address	2 bytes	0x0000 to 0xFFFF	Sets writing address received as it is.
4	Data to be written	2 bytes	0x0000 to 0xFFFF	Sets data to be written received as it is.

Response message data configuration (abnormal)

No.	Name	Size	Range	Description
1	Device address	1 byte	0x01	Sets device address received as it is.
2	Function code	1 byte	0x86	Adds 0x80 to function code received.
3	Error code	1 byte	0x01 to 0x03	Sets error code. Error code differs according to cause.

- (4) Message format for Read Holding Registers (Function code: 0x03)
 - This function will be used to read the item data of IJ printer, which is readable and writable.
 - The maximum number of bytes that can be read in the Holding Register per time is 250 bytes; if this number is exceeded, you must divide the data into smaller segments while updating the starting address each time.

No.	Name	Size	Range	Description
1	Device address	1 byte	0x01	Sets device address. Set device address to 0x01.
2	Function code	1 byte	0x03	Sets function code (Read Holding Registers).
3	Start address	2 bytes	0x0000 to 0xFFFF	Sets reading start address. Address is set in word units.
4	No. of words to be read	2 bytes	1 to 125.	Sets number of words to be read.

Response message data configuration (normal)

No.	Name	Size	Range	Description
1	Device address	1 byte	0x01	Sets device address received as it is.
2	Function code	1 byte	0x03	Sets function code received as it is.
3	No. of bytes to be read	1 byte	2 to 250	Sets number of data bytes to be read.
4	Data to be read	2 to 250 bytes	0x0000 to 0xFFFF	Sets data to be read (variable length of 2 to 250 bytes).

Response message data configuration (abnormal)

No.	Name	Size	Range	Description
1	Device address	1 byte	0x01	Sets device address received as it is.
2	Function code	1 byte	0x83	Adds 0x80 to function code received.
3	Error code	1 byte	0x01 to 0x03	Sets error code. Error code differs according to cause.

- (5) Message format for Read Input Registers (Function code: 0x04)
 - This function will be used to read the item data of IJ printer, which is read only, or used to read the status of IJ printer.
 - The maximum number of bytes that can be read in the Input Register per time is 250 bytes; if this number is exceeded, you must divide the data into smaller segments while updating the starting address each time.

No.	Name	Size	Range	Description
1	Device address	1 byte	0x01	Sets device address. Set device address to 0x01.
2	Function code	1 byte	0x04	Sets function code (Read Input Registers).
3	Start address	2 bytes	0x0000 to 0xFFFF	Sets reading start address. Address is set in word units.
4	No. of words to be read	2 bytes	1 to 125	Sets number of words to be read.

Response message data configuration (normal)

No.	Name	Size	Range	Description
1	1 Device address		0x01	Sets device address received as it is.
2	Function code	1 byte	0x04	Sets function code received as it is.
3	No. of bytes to be read	1 byte	2 to 250	Sets number of data bytes to be read.
4	Data to be read	2 to 250 bytes	0x0000 to 0xFFFF	Sets data to be read (variable length of 2 to 250 bytes).

Response message data configuration (abnormal)

No.	Name	Size	Range	Description
1	Device address	1 byte	0x01	Sets device address received as it is.
2	Function code	1 byte	0x84	Adds 0x80 to function code received.
3	Error code	1 byte	0x01 to 0x03	Sets error code. Error code differs according to cause.

(6) Error code

Error code

No.	No. Name		Conditions	
1	Illegal function code	0x01	Function code not yet supported is set.	
2	2 Illegal address 0x0		Illegal address is set.	
3	Illegal data	0x03	Illegal data is set.	

5.4 Model-by-model Data configuration

Data configuration of Holding Registers and Input Registers for IJ Printer is indicated model-by-model.

5.4.1 Data configuration on RX

(1) Holding Registers

Holding Registers are the area which is written by Write Multiple Registers (0x10) or Write Single Register (0x06) and read by Read Holding Registers (0x03).

The item data which can be set to IJ printer or can be obtained from IJ printer are all placed in Holding Registers.

Holding Registers can be read and be written by one (1) word (2 bytes) at every address.

Holding Register data configuration on RX (1/13)

Word address	Classification	Item name	Setting range	Contents
00 00		Start/Stop control flag	1,2	Start/Stop flag is used when Holding Register is written more than once. First write "1" and write Holding Registers more than once and finally write "2". Then all the written contents will be reflected to IJ Printer. Start/Stop flag is not used when Holding Register is written only once. [1:Start; 2:Stop]
00 01 00 07		Reserve_1 Reserve_7	-	"Reserve" is not initially provided, but may be added in future.
00 08		Number of the printing items	1 to 100	Set the number of the printing items used.
00 09 00 0F		Reserve_1 Reserve_7	-	"Reserve" is not initially provided, but may be added in future.
00 10	Index	Specify Print message registration number	0 to 2000	Set Print message information at Input Register address 0x0E40, which Print message registration number is specified here. When "0" is specified, the print message information of the print message which is being edited will be set.
00 11		Specify Character position for the Inter-character space obtained	1 to 1000	Set Inter-character space at Input Register address 0x0EF1, which Character position is specified here.
00 12		Specify Substitution rules number	1 to 99	Set Substitution rules data at Holding Register address 0x1AC0, which Substitution rules number is specified here.
00 13		Specify User pattern character size	1 to 13	Set User pattern registration information at Holding Register address 0x2D00, which Character size is specified here. 1:4x5, 2:5x5, 3:5x8(5x7), 4:9x8(9x7), 5:7x10, 6:10x12, 7:12x16, 8:18x24, 9:24x32, 10:11x11, 11:5x3(chimney), 12:5x5(chimney), 13:7x5(chimney)
00 14		Specify Group number	1 to 99	Set Group information at Input Register address 0x0ED0, which Group number is specified here.
00 15 00 1F		Reserve_1 Reserve_11	-	"Reserve" is not initially provided, but may be added in future.

Holding Register data configuration on RX (2/13)

Wo	ord	01		0.11	2
add	ress	Classification	Item name	Setting range	Contents
00	20		Character count(Print item 1)	1 to 1000	
00	21		Character count(Print item 2)	1 to 1000	Sets the character count for each
00	82		Character count(Print item 99)	1 to 1000	print item.
00	83		Character count(Print item 100)	1 to 1000	
					Set the characters of Print
00	84		Attribute(1st digit)	0x0000 to 0xFFFF	contents. Character codes are the
00	85	Print contents	Character code(1st digit)	0x0020 to 0xFFFF	same as those which are used in Standard communication. Please refer to Technical Manual, Section
		Contents			5 Communication, for details.
80	52		Attribute(1000th digit)	0x0000 to 0xFFFF	In case of setting Calendar/Count characters, set to Character
08	53		Character code(1000th digit)	0x0020 to 0xFFFF	attribute, or if they are NOT Calendar/Count characters, set to Character code.
80	54		Reserve_1		"Reserve" is not initially provided,
 0F	FF		 Reserve_1964	-	but may be added in future.
			_	4 100	Sets the printing item number to
10	00	Printings	Printing erase item number	1 to 100	erase printing contents.
10	01	erasure	Reserve_1		"Reserve" is not initially provided,
10	05		Reserve_5	-	but may be added in future.
10	06		Print data message number	1 to 2000	Set the registered print message number to be recalled.
10	07	Print data	Reserve 1		
		recall		-	"Reserve" is not initially provided, but may be added in future.
10	0B		Reserve_5		but may be added in luture.
10	0C		Group number	0 to 99	
10	0D		Print data message number	1 to 2000	Register the being edited print
10	0E		Message name(1st digit)	0x0020 to 0xFFFF	message by the specified Group
10	0F	5	Message name(2nd digit)	0x0020 to 0xFFFF	number or by the registered print message number or by the
10	18	Print data registration	Message name(11th digit)	0x0020 to 0xFFFF	message name.
10	19	. eg.e ee	Message name(12th digit)	0x0020 to 0x1111	
10	1A		Reserve 1	0X0020 to 0X1111	
				-	"Reserve" is not initially provided,
10	1F		Reserve_6		but may be added in future.
10	20		Line count / print format uniformity	0 , 1	Line count of all columns are made uniform based on the first column.
10	21		Insert column	1 to 100	Adds a column directly before the editing objective column.
10	22		Delete column	1 to 100	Deletes all the print items of the editing objective column.
10	23	Print format	Add column	1 to 100	Adds a column at the end.
10	24		Individual column setup (Column position)	1 to 100	Changing the number of lines of
10	25		Individual column setup (Line count)	1 to 5	the editing objective column.
10 10	26 27		Reserve_1 Reserve_2	-	"Reserve" is not initially provided, but may be added in future.
10	28		Adjust Inter-character space (Start)	1 to 1000	,
10	29		Adjust Inter-character space (End)	1 to 1000	Inter-character space can be set in character units.
10	2A		Adjust Inter-character space (Setting value)	0 to 28	

Holding Register data configuration on RX (3/13)

	ord ress	Classification	Item name	Setting range	Contents	
10	2B		Reserve_1		IIDaaanalia sattattal	
				-	"Reserve" is not initially provided, but may be added in future.	
10	3E		Reserve_20		,	
10	25		Former Cotum	1 40 2	Sets the Format Setup.	
10	3F		Format Setup	1 to 3	1:Individual setup , 2:Overall setup 3:Free layout	
10	40		Line count	1 to 5	Sets the line count of the print item 1.	
10	41		Line spacing	0 to 2	Sets the line spacing of the print item 1.	
10	42		Character size	1 to 13	Sets the character size of the print item 1. 1:4x5 , 2:5x5 , 3:5x8(5x7) 4:9x8(9x7) , 5:7x10 , 6:10x12 7:12x16 , 8:18x24 , 9:24x32 10:11x11 , 11:5x3(chimney) 12:5x5(chimney), 13:7x5(chimney)	
10	43		Inter-character space	0 to 28	Sets the inter-character space of the print item 1.	
10	44		Bold	1 to 9	Sets the bold of the print item 1.	
10			2010	1 10 0	Sets the bar code of the print item 1.	
10	45	Print format	Bar code	0 to 25	0:none , 1:Code 39 , 2:ITF 3:NW-7 , 4:EAN-13 , 5:DM8x32 6:DM16x16 , 7:DM16x36 8:DM16x48 , 9:DM18x18 10:DM20x20 , 11:DM22x22 12:DM24x24 13:Code 128 (Code set B) 14:Code 128 (Code set C) 15:UPC-A , 16:UPC-E , 17:EAN-8 18:QR21x21 , 19:QR25x25 20:QR29x29 , 22:EAN-13add-on 5 23:MicroQR15x15 24:GS1 DataBar (Limited) 25:GS1 DataBar (Omnidirectional)	
10	46		EAN readable code	0 to 2	Sets the EAN readable code of the print item 1. 0:none, 1:5x5, 2:5x7	
10	47		EAN Prefix	0 to 99	Sets the EAN prefix of the print item 1.	
10	48		Calendar block No.	0 to 8	When writing, setting is NOT	
10	49		Calendar block count	0 to 8	required. When reading, Block	
10	4A		Count block No.	0 to 8	information can be obtained item by item.	
10	4B		Count block count	0 to 8		
10	4C		Horizontal (X)	0 to 31998	Valid when Free layout is set. Sets the coordinate of the print	
10	4D		Vertical (Y)	0 to 29	item 1.	
10	4E		Reserve_1		"Reserve" is not initially provided,	
 10	57		 Reserve_10	-	but may be added in future.	
10 10	58 6F		Print format(Print item 2)		Item 2 through 100 will be set in	
				-	the same configuration as those of Item 1 (Address: from 0x1040 to	
19 19	88 9F		Print format(Print item 100)		ox1057).	

Holding Register data configuration on RX (4/13)

	ord ress	Classification	Item name	Setting range	Contents
19	A0		Character height	0 to 99	Sets the character height.
19	A1		Ink drop use	1 to 16	Sets the ink drop use.
19	A2		High-speed print	0 to 2	Sets the high-speed print. 0:HM , 1:NM , 2:QM
19	А3		Character width	0 to 3999	Sets the character width.
19	A4		Character orientation	0 to 3	Sets the character orientation.
19	A5		Print start delay	0 to 9999	Sets the print start delay.
19	A6		Reverse direction	0 to 9999	Sets the reverse direction.
19	A7		Product speed matching	0 to 2	Sets the product speed matching. 0:None , 1:Encoder , 2:Auto
19	A8		Pulse rate division factor	1 to 999	Sets the pulse rate division factor.
19	A9		Speed compensation	0,1	Sets the speed compensation. 0:Disable , 1:Enable
19	AA		Line speed	0 to 9999	Sets the line speed. Set value is multiplied by 1/10 and reflected to IJ Printer (Example: 1234 = 123.4 m/min.)
19	AB	Print	Distance between print head and work	0 to 99	Sets the distance between print head and work.
19	AC	specification	Print Target width	0 to 9999	Sets the print Target width.
19	AD		Actual Print width	0 to 9999	Sets the actual Print width.
19	ΑE		Repeat count	0 to 9999	Sets the repeat count.
19 19	AF B0		Repeat intervals	0 to 99999	Sets the repeat intervals.
19	B1		Target sensor timer	0 to 999	Sets the target sensor timer.
19	B2		Target sensor filter	0 , 1	Sets the target sensor filter. 0:Time setup , 1:Until end of print.
19	B3		Target sensor filter value	0 to 9999	Sets the target sensor filter value.
19	B4		Ink Drop Charge Rule	0 to 2	Sets the ink drop charge rule. 0:Standard 1:Mixed single scan and interlaced 2:Dot mixed interlaced
19	B5		Speed compensation fine control	-50 to 50	Sets the speed compensation fine control.
19 19	B6 BF		Reserve_1 Reserve_10	-	"Reserve" is not initially provided, but may be added in future.

Holding Register data configuration on RX (5/13)

Wo add		Classification	Item name	Setting range	Contents
19	C0		Offset(Year)	0 to 99	
19	C1		Offset(Month)	0 to 99	
19	C2		Offset(Day)	0 to 1999	Sets the offset of the Calendar block 1.
19	C3		Offset(Hour)	-23 to 99	Block 1.
19	C4		Offset(Minute)	-59 to 99	
19	C5		Zero-suppression(Year)	0 to 2	
19	C6		Zero-suppression(Month)	0 to 2	Sets the zero-suppression of the
19	C7		Zero-suppression(Day)	0 to 2	Calendar block 1. 0:Disable , 1:Enable(Space)
19	C8		Zero-suppression(Hour)	0 to 2	2:Enable(Character fill)
19	C9		Zero-suppression(Minute)	0 to 2	
19	CA		Substitution rules(Year)	0 , 1	
19	СВ		Substitution rules(Month)	0 , 1	Sets the substitution rules of the
19	CC		Substitution rules(Day)	0 , 1	Calendar block 1.
19	CD		Substitution rules(Hour)	0 , 1	0:Disable , 1:Enable
19	CE		Substitution rules(Minute)	0 , 1	
19	CF	Calendar	Substitution rules No.	1 to 99	Sets the substitution rules No. of the Calendar block 1.
19	D0	condition	Substitution rules (Week number)	0 , 1	Sets the substitution rules of the Calendar block 1.
19	D1		Zero-suppression (Week number)	0 to 2	Sets the zero-suppression of the Calendar block 1.
19	D2		Substitution rules (Day of week)	0 , 1	Sets the substitution rules of the Calendar block 1.
19	D3		Zero-suppression (Day of week)	0 to 2	Sets the zero-suppression of the Calendar block 1.
19	D4		Output during calendar updating Trigger (Function item for SOP-05)	1	[1] Fixed
19	D5		Reserve_1	-	"Reserve" is not initially provided,
19	DF		Reserve_11		but may be added in future.
19 19	E0 FF		Calendar condition (Calendar block 2)		Block 2 through 8 will be set in the
	A 2			-	same configuration as those of Block 1 (Address: from 0x19C0 to
1A 1A	A0 BF		Calendar condition (Calendar block 8)		0x19DF).

Holding Register data configuration on RX (6/13)

Wo	ord	2			_
addı		Classification	Item name	Setting range	Contents
1A	C0		Substitution rules No.	1 to 99	
1A	C1		Starting year	2000 to 2099	
1A	C2		Substitution character(Year)	0x0020 to 0xFFFF	
1A	F3		Substitution character(Year)	0x0020 to 0xFFFF	
1A	F4		Substitution character(Month)	0x0020 to 0xFFFF	
1B	17		Substitution character(Month)	0x0020 to 0xFFFF	
1B	18		Substitution character(Day)	0x0020 to 0xFFFF	
1B	74		Substitution character(Day)	0x0020 to 0xFFFF	
1B	75		Substitution character(Hour)	0x0020 to 0xFFFF	Substitution rules will be registered
					with the specified Substitution rules number, Start year and
1B	A4	Substitution	Substitution character(Hour)	0x0020 to 0xFFFF	Substitution rules setup items.
1B	A5	rule	Substitution character(Minute)	0x0020 to 0xFFFF	·
1C	1C		Substitution character(Minute)	0x0020 to 0xFFFF	
1C	1D		Substitution character	0x0020 to 0xFFFF	
			(Week number)	0,0020 to 0,111	
			Substitution character	•••	
1C	BB		(Week number)	0x0020 to 0xFFFF	
1C	ВС		Substitution character (Day of week)	0x0020 to 0xFFFF	
				•••	
1C	D0		Substitution character (Day of week)	0x0020 to 0xFFFF	
1C	D1		Reserve_1		
				-	"Reserve" is not initially provided, but may be added in future.
1C	D3		Reserve_3		Jacay 50 addod rataror
1C	D4		Range (Lower limit) (1st digit)	0x0020 to 0xFFFF	
					Sets the range (Lower limit).
1C	D6		Range (Lower limit) (3rd digit)	0x0020 to 0xFFFF	
1C	D7		Range (Upper limit) (1st digit)	0x0020 to 0xFFFF	
				•••	Sets the range (Upper limit).
1C	D9	Time count	Range (Upper limit) (3rd digit)	0x0020 to 0xFFFF	
1C	DA	condition	Reset(1st digit)	0x0020 to 0xFFFF	
					Sets the reset.
1C	DC		Reset(3rd digit)	0x0020 to 0xFFFF	
1C	DD		Reset time	0 to 23	Sets the reset time.
1C	DE		Renewal period	0 to 5	Sets the renewal period. 0:5 minutes, 1:6 minutes 2:10 minutes, 3:15 minutes 4:20 minutes, 5:30 minutes
1C	DF		Reserve_1	-	"Reserve" is not initially provided, but may be added in future.

Holding Register data configuration on RX (7/13)

Contents Contents			<u>-</u>		
Start minute	Word address	Classification	Item name	Setting range	Contents
C	1C E0		Start hour	0 to 23	Sets the start time of the shift code
1C E3	1C E1		Start minute	0 to 59	rule 1.
Columb	1C E2		End hour	0 to 23	Sets the end time of the shift code
Company Comp	1C E3		End minute	0 to 59	rule 1.
Shift code character	1C E4			0x0020 to 0xFFFF	
Shift code Shift code Shift code Reserve_1				•••	
1C EF Reserve_1 Reserve_2 Shift code rule (Rule 2)	1C ED			0x0020 to 0xFFFF	offitt dodd fallo 1.
The control of the count block 1 Sets the range (Lower limit) of the count block 1	1C EE	Joseph	Reserve_1		
Shift code rule (Rule 2) Shift code 2 through 48 will be set in the same configuration as those of Shift code 1 (Address: from 0x1CEO~0x1CEF).	1C EF		Reserve_2	-	but may be added in future.
In the same configuration as those of Shift code (Rule 48)			Shift code rule (Rule 2)		Shift code 2 through 48 will be set
1F DD Shift code rule (Rule 48)				-	
Shift code rule (Rule 48)					
Sets the value of the count block 1 Value(20th digit) 0x0020 to 0xFFFF Range (Lower limit) 0x0020 to 0xFFFF Count block 1 Count	-	1	Shift code rule (Rule 48)		CATGLO CATGLI).
Value(20th digit)	1F E0		Value(1st digit)	0x0020 to 0xFFFF	
Value(20th digit)					Sets the value of the count block 1.
Count condition Count cond			Value(20th digit)	0x0020 to 0xFFFF	
Count condition Count cond	1E E4		Range (Lower limit)	0v0020 to 0vEEEE	
Count block 1. Coun	11 14		(1st digit)	000020 10 0011111	Sets the range (Lower limit) of the
Count condition Count cond			Denne (Leuren lineit)	•••	
Count condition Count cond	20 07		(20th digit)	0x0020 to 0xFFFF	
Count Coun	20 08			0x0020 to 0xFFFF	Sets the range (Linner limit) of the
Count condition Update (In progress) Update (In progress) O to 999998 Sets the update (In progress) of the count block 1.					
Update (In progress) Update (Units) Update (Update (Units) Update (Update (Units) Update (U	20 1B			0x0020 to 0xFFFF	
Description Count condition Count conditio			Update (In progress)	0 to 999998	
Sets the direction of the count block 1. Sets the jump (from) of the count block 1. Sets the jump (from) of the count block 1. Sets the jump (from) of the count block 1. Sets the jump (from) of the count block 1. Sets the jump (from) of the count block 1. Sets the jump (from) of the count block 1. Sets the jump (to) of the jump (to) of the jump (to) o			Update (Units)	1 to 999999	
Direction Direction Direction Direction Direction O, 1 Sets the direction of the count block 1. O:up, 1:down Jump (from) Jump (from) Jump (from) Jump (from) Jump (from) Jump (from) Jump (to) Jump	20 20		Increment	1 to 99	
20 22 20 35 20 36 Jump (from) (20th digit) 0x0020 to 0xFFFF Jump (to) (1st digit) 0x0020 to 0xFFFF Sets the jump (from) of the count block 1. 20 49 Jump (to) (20th digit) 0x0020 to 0xFFFF 20 49 Reset (1st digit) 0x0020 to 0xFFFF Sets the jump (to) of the count block 1. 20 5D Reset (1st digit) 0x0020 to 0xFFFF Sets the reset of the count block 1. Reset (20th digit) 0x0020 to 0xFFFF Reset signal (Function item for SOP-05) 0 to 2 Sets the reset signal of the count block 1. 20 5F External signal count (Function item for SOP-05) 0, 1 Sets the external signal count of the count block 1.	20 21	condition	Direction	0,1	block 1.
Jump (from) (20th digit) 0x0020 to 0xFFFF 20 36 Jump (to) (1st digit) 0x0020 to 0xFFFF Jump (to) (20th digit) 0x0020 to 0xFFFF 20 49 20 49 Reset (1st digit) 0x0020 to 0xFFFF Sets the jump (to) of the count block 1. Sets the reset of the count block 1. Reset (20th digit) 0x0020 to 0xFFFF Sets the reset of the count block 1. Reset (20th digit) 0x0020 to 0xFFFF Reset signal (Function item for SOP-05) Sets the reset signal of the count block 1. Sets the reset signal of the count block 1. Sets the reset signal of the count block 1. Sets the reset signal of the count block 1. Sets the reset signal of the count block 1. Sets the reset signal of the count block 1. Sets the reset signal of the count block 1. Sets the reset signal of the count block 1. Sets the reset signal of the count block 1.	20 22]	Jump (from) (1st digit)	0x0020 to 0xFFFF	
20 35 20 36 Jump (to) (1st digit) 0x0020 to 0xFFFF Sets the jump (to) of the count block 1. 20 49 20 49 Reset (1st digit) 0x0020 to 0xFFFF Sets the reset of the count block 1. Reset (20th digit) 0x0020 to 0xFFFF Reset signal (Function item for SOP-05) 0 to 2 Sets the reset signal of the count block 1. Sets the reset signal of the count block 1. 0:Disable , 1:Signal 1 , 2:Signal 2 External signal count (Function item for SOP-05) 0 , 1 Sets the external signal count of the count block 1.]			, , ,
Jump (to) (20th digit) 0x0020 to 0xFFFF 20 4A Reset (1st digit) 0x0020 to 0xFFFF Sets the jump (to) of the count block 1. Sets the jump (to) of the count block 1. Sets the reset of the count block 1. O:Disable , 1:Signal 1 , 2:Signal 2 Sets the external signal count of the count block 1.	20 35]	Jump (from) (20th digit)	0x0020 to 0xFFFF	DIOOK 1.
Jump (to) (20th digit) 0x0020 to 0xFFFF 20 4A Reset (1st digit) 0x0020 to 0xFFFF Sets the reset of the count block 1. 20 5D Reset (20th digit) 0x0020 to 0xFFFF Reset signal (20th digit) 0x0020 to 0xFFFF Reset signal (Function item for SOP-05) External signal count (Function item for SOP-05) External signal count (Function item for SOP-05) Control of the count block 1. Sets the reset signal of the count block 1. Sets the external signal count of the count block 1.	20 36		Jump (to) (1st digit)	0x0020 to 0xFFFF	
20 49 Jump (to) (20th digit) 0x0020 to 0xFFFF					
Sets the reset of the count block 1 Reset (20th digit) 0x0020 to 0xFFFF Reset signal (Function item for SOP-05) O to 2 External signal count (Function item for SOP-05) Sets the reset of the count block 1 O to 2 Sets the reset signal of the count block 1. O:Disable , 1:Signal 1 , 2:Signal 2 Sets the external signal count of the count block 1.	20 49		Jump (to) (20th digit)	0x0020 to 0xFFFF	DIOCK 1.
20 5D Reset (20th digit) 0x0020 to 0xFFFF Reset signal (Function item for SOP-05) 0 to 2 Sets the reset signal of the count block 1. 0:Disable , 1:Signal 1 , 2:Signal 2 External signal count (Function item for SOP-05) 0 to 2 Sets the external signal count of the count block 1.	20 4A]	Reset (1st digit)	0x0020 to 0xFFFF	
Reset signal (Function item for SOP-05) Reset signal (Function item for SOP-05) O to 2 O to 2 Sets the reset signal of the count block 1. O:Disable, 1:Signal 1, 2:Signal 2 Sets the external signal count of the count block 1.]			Sets the reset of the count block 1.
20 5E Reset signal (Function item for SOP-05) 0 to 2 block 1. 0:Disable , 1:Signal 1 , 2:Signal 2 External signal count (Function item for SOP-05) 0 to 2 block 1. 0:Disable , 1:Signal 1 , 2:Signal 2 Sets the external signal count of the count block 1.	20 5D]	Reset (20th digit)	0x0020 to 0xFFFF	
External signal count of the count block 1. External signal count of the count block 1.	20 5E			0 to 2	block 1. 0:Disable , 1:Signal 1 , 2:Signal 2
· · · · · · · · · · · · · · · · · · ·	20 5F			0 , 1	Sets the external signal count of the count block 1.

Holding Register data configuration on RX (8/13)

Wo		Classification	Item name	Setting range	Contents
addı	ress	Siacomodion	Rom name	Journal Talling	
20	60		Zero-suppression	0 , 1	Sets the zero-suppression of the count block 1. 0:Disable , 1:Enable
20	61		Multiplier(1st digit)	0x0020 to 0x0039	Sets the multiplier of the count block 1.
					Numeric:0x0031~0x0039 Decimal point:0x002E
20	6A		Multiplier(10th digit)	0x0020 to 0x0039	Space:0x0020
20	6B		Count skip(1st digit)	0x0020 to 0xFFFF	Sets the count skip of the count
		Count	•••		block 1.
20	6F	condition	Count skip(5th digit)	0x0020 to 0xFFFF	
20	70		Reserve_1	-	"Reserve" is not initially provided, but may be added in future.
20	73		Reserve_4		but may be added in luture.
20	74		Count condition		
21	07		(Count block 2)		Block 2 through 8 will be set in the same configuration as those of
	F.			-	Block 1 (Address: from 0x1FE0 to
23	EC		Count condition (Count block 8)		0x2073).
24	7F		(Court block 8)		Sets the calendar offset.
24	80		Calendar offset	0 , 1	0:Offset from yesterday 1:From today
24	81		DIN print	0,1	Sets the DIN print. 0:Disable, 1:Enable
24	82	Adjust print	EAN Prefix	0 , 1	Sets the EAN prefix. 0:Edit message , 1:Print format
24	83	parameters	Barcode printing	0,1	Sets the barcode printing. 0:Normal , 1:Reverse
24	84		QR Error correction level	0 , 1	Sets the QR error correction level. 0:M (15%), 1:Q (25%)
24	85		Reserve_1		"Reserve" is not initially provided,
 24	8F		 Reserve_11	-	but may be added in future.
24	90		On-line / Off-line	0 , 1	Change the on-line or off-line. 0:Offline, 1:Online
24	91	On-line / Off-line	Reserve_1		"Reserve" is not initially provided,
 24	93	.	 Reserve_3	-	but may be added in future.
24	93	Remote	Remote operation	0 to 4	Specifies remote operation to IJP. 0:Operation start 1:Operation stop 2:Deflection voltage control (ON) 3:Deflection voltage control (OFF) 4:Fault clear
24	95	operation	Reserve_1		
				-	"Reserve" is not initially provided, but may be added in future.
24	97		Reserve_3		

Holding Register data configuration on RX (9/13)

Word address Classification 24 98 24 99 24 9A 24 9B 24 9C 24 9D 24 9F 24 A0 24 A1 24 A3 24 A4 24 A6 24 24 B0 24 B1 Vser environment setup 24 B5 24 B6 24 B7 24 B8 24 B9	Current time(year) Current time(month) Current time(day) Current time(hour) Current time(minute) Current time(second) Calendar time control Calendar time(year) Calendar time(month) Calendar time(day) Calendar time(hour) Calendar time(minute)	Setting range 2000 to 2099 1 to 12 1 to 31 0 to 23 0 to 59 0 to 59 0 , 1 2000 to 2099 1 to 12 1 to 31	Sets the current time. Sets the calendar time control. 0:same as current time 1:clock stop
24 99 24 9A 24 9B 24 9C 24 9E 24 9F 24 A0 24 A1 24 A2 24 A3 24 A6 24 24 B0 24 B1 24 B3 24 B4 24 B5 24 B6 24 B7 24 B8 24 B9	Current time(month) Current time(day) Current time(hour) Current time(minute) Current time(second) Calendar time control Calendar time(year) Calendar time(month) Calendar time(day) Calendar time(hour) Calendar time(minute)	1 to 12 1 to 31 0 to 23 0 to 59 0 to 59 0 , 1 2000 to 2099 1 to 12	Sets the calendar time control. 0:same as current time
24 9A 24 9B 24 9C 24 9E 24 9F 24 A0 24 A1 24 A2 24 A3 24 A4 24 A5 24 A6 24 24 B0 24 B1 24 B3 24 B4 24 B5 Company of the property of the p	Current time(day) Current time(hour) Current time(minute) Current time(second) Calendar time control Calendar time(year) Calendar time(month) Calendar time(day) Calendar time(hour) Calendar time(minute)	1 to 31 0 to 23 0 to 59 0 to 59 0 , 1 2000 to 2099 1 to 12	Sets the calendar time control. 0:same as current time
24 9B 24 9C 24 9E 24 9F 24 A0 24 A1 24 A2 24 A3 24 A4 24 A6 24 24 B0 24 B1 24 B3 24 B4 24 B5 24 B6 24 B7 24 B8 24 B9	Current time(hour) Current time(minute) Current time(second) Calendar time control Calendar time(year) Calendar time(month) Calendar time(day) Calendar time(hour) Calendar time(minute)	0 to 23 0 to 59 0 to 59 0 , 1 2000 to 2099 1 to 12	Sets the calendar time control. 0:same as current time
24 9C 24 9D 24 9E 24 9F 24 A0 24 A1 24 A2 24 A3 24 A6 24 24 B0 24 B1 24 B2 24 B3 24 B4 24 B5 User environment setup 24 B6 24 B7 24 B8 24 B9	Current time(minute) Current time(second) Calendar time control Calendar time(year) Calendar time(month) Calendar time(day) Calendar time(hour) Calendar time(minute)	0 to 59 0 to 59 0 , 1 2000 to 2099 1 to 12	Sets the calendar time control. 0:same as current time
24 9D 24 9E 24 9F 24 A0 24 A1 24 A2 24 A3 24 A4 24 A5 24 A6 24 24 B0 24 B1 24 B2 24 B3 24 B4 24 B5 24 B6 24 B7 24 B8 24 B9	Current time(second) Calendar time control Calendar time(year) Calendar time(month) Calendar time(day) Calendar time(hour) Calendar time(minute)	0 to 59 0 , 1 2000 to 2099 1 to 12	0:same as current time
24 9E 24 9F 24 A0 24 A1 24 A2 24 A3 24 A4 24 A5 24 A6 24 24 B0 24 B1 24 B2 24 B3 24 B4 24 B5 24 B6 24 B7 24 B8 24 B9	Calendar time control Calendar time(year) Calendar time(month) Calendar time(day) Calendar time(hour) Calendar time(minute)	0 , 1 2000 to 2099 1 to 12	0:same as current time
24 9F 24 A0 24 A1 24 A2 24 A3 24 A4 24 A5 24 A6 24 24 B0 24 B1 24 B3 24 B4 24 B5 24 B6 24 B7 24 B8 24 B9	Calendar time(year) Calendar time(month) Calendar time(day) Calendar time(hour) Calendar time(minute)	2000 to 2099 1 to 12	0:same as current time
24 A0 24 A1 24 A2 24 A3 24 A4 24 A5 24 A6 24 B0 24 B1 24 B2 24 B3 24 B4 24 B5 24 B6 24 B7 24 B8 24 B9	Calendar time(month) Calendar time(day) Calendar time(hour) Calendar time(minute)	1 to 12	
24 A1 24 A2 24 A3 24 A4 24 A6 24 AF 24 B0 24 B1 24 B3 24 B4 24 B5 24 B6 24 B7 24 B8 24 B9	Calendar time(day) Calendar time(hour) Calendar time(minute)		
24 A2 24 A3 24 A4 24 A5 24 A6 24 AF 24 B0 24 B1 24 B2 24 B3 24 B4 24 B5 24 B6 24 B7 24 B8 24 B9	Calendar time(hour) Calendar time(minute)	1 to 31	
24 A3 24 A4 24 A5 24 A6 24 AF 24 B0 24 B1 24 B2 24 B3 24 B4 24 B5 24 B6 24 B7 24 B8 24 B9	Calendar time(minute)		Sets the calendar time.
24 A4 24 A5 24 A6 24 AF 24 B0 24 B1 24 B2 24 B3 24 B4 24 B5 24 B6 24 B7 24 B8 24 B9	` '	0 to 23	Sets the calendar time.
24 A5 24 A6 24 AF 24 B0 24 B1 24 B2 24 B3 24 B4 24 B5 24 B6 24 B7 24 B8 24 B9	Onlaw day time of the coll	0 to 59	
24 A6 24 AF 24 B0 24 B1 24 B2 24 B3 24 B4 24 B5 24 B6 24 B7 24 B8 24 B9	Calendar time(second)	0 to 59	
24 A6 24 AF 24 B0 24 B1 24 B2 24 B3 24 B4 24 B5 24 B6 24 B7 24 B8 24 B9	Clock system	0,1	Sets the clock system.
24 AF 24 B0 24 B1 24 B2 24 B3 24 B4 24 B5 24 B5 Can be a subject) Can be a subject by a subject		, ,	0:24-hour clock , 1:12-hour clock
24 AF 24 B0 24 B1 24 B2 24 B3 24 B4 24 B5 24 B6 24 B6 24 B7 24 B8 24 B9	Reserve_1	_	"Reserve" is not initially provided,
24 B1 24 B2 24 B3 24 B4 24 B5 24 B6 24 B6 24 B7 24 B8 24 B8	Reserve_10		but may be added in future.
24 B2 24 B3 24 B4 24 B5 24 B5 24 B6 24 B6 24 B7 24 B8 24 B9	Repeat print sensor mode	0,1	Sets the repeat print sensor mode. 0:signal ON , 1:OFF-ON transition
24 B3 24 B4 24 B5 24 B5 24 B6 24 B6 24 B7 24 B8 24 B8	Change Character orientation	0 to 3	Sets the change character orientation. 0:Disable 1:Reverse direction printing 2:normal or inverted 3:Character orientation 0 or 3
24 B4 24 B5 24 B6 24 B6 24 B7 24 B8 24 B8	Change mode	0 , 1	Sets the change mode. 0: OFF=normal/forward 1: OFF=inverted/reverse
24 B5 User environment setup 24 B6 (Future subject) 24 B8 24 B9	Reverse print	0 , 1	Sets the reverse print. 0:right-justified , 1:left-justified
24 B5 environment setup 24 B6 24 B7 24 B8 24 B8	Print signal type	0 , 1	Sets the print signal type. 0:print.complete 1:printin-progress
24 B7 24 B8 24 B9	Print data changeover error	0 , 1	Sets the print data changeover error. 0:Disable , 1:Enable
24 B7 24 B8 24 B9	Char. Size menu 1	0 , 1	Sets the Char. Size menu 1. 0:5x8, 1:5x7
24 B9	Char. Size menu 2	0 , 1	Sets the Char. Size menu 2. 0:9x8, 1:9x7
	Excitation V-ref. warning	0,1	Sets the excitation V-ref. warning. 0:Disable , 1:Enable
	Print characters one by one	0 , 1	Sets the print characters one by one. 0:Disable , 1:Enable
24 BA	Continue message print (Function item for SOP-15-20)	0,1	Sets the continue message print. 0:Disable , 1:Enable
24 BB	Start message number (Function item for SOP-15-20)	0 to 2000	Sets the number of registered print
24 BC		0 to 2000	message to be printed.
24 BD 25 7F	End message number (Function item for SOP-15-20)	-	"Reserve" is not initially provided, but may be added in future.

Holding register data configuration on RX (10/13)

	ord ress	Classification	Item name	Setting range	Contents
25	80		Display	0 to 2	Sets the display. 0:OFF in 3 min. , 1:OFF in 30 min. 2:Always ON
25	81		Keyboard layout	0 , 1	Sets the keyboard layout. 0:ABC , 1:QWERTY
25	82		ICON Display	0,1	Sets the ICON display. 0:Disable , 1:Enable
25	83	Touch screen	Clock display format	0 to 2	Sets the clock display format. 0:YYYY.MM.DD , 1:DD.MM.YYYY 2:MM.DD.YYYY
25	84	setup	Confirmation window for Manual Control Menu	0,1	Sets the confirmation window for manual control menu. 0:Display , 1:Non display
25	85		Arabic input method	0 , 1	Sets the Arabic input method. 0:to the left , 1:to the right
25 25	86 8F		Reserve_1 Reserve_10	-	"Reserve" is not initially provided, but may be added in future.
25 25	90 AF	Reserve	Reserve_1 Reserve_32	-	"Reserve" is not initially provided, but may be added in future.
25	В0		Ink operating time	0 to 9999	Sets the ink operating time.
25	B1		Ink alarm time	0 to 9999	Sets the ink alarm time.
25 25	B2 B3	Operation	Print count	0 to 999999999	Sets the print count.
25 25	B4 B7	management	Reserve_1 Reserve_4	-	"Reserve" is not initially provided, but may be added in future.
25	B8	Circulation control	Ink filter use time	0 to 59999	Sets the ink filter use time.
25	B9		Makeup filter use time	0 to 59999	Sets the makeup filter use time.
25	ВА		Recovery filter use time	0 to 59999	Sets the recovery filter use time.
25	BB		Air filter use time	0 to 59999	Sets the air filter use time.
25 25	BC DF		Reserve_1 Reserve_36	-	"Reserve" is not initially provided, but may be added in future.

Holding Register data configuration on RX (11/13)

10/	ord				
Wo addi		Classification	Item name	Setting range	Contents
25	E0		Number to change the message name	1 to 2000	
25	E1		Message name(1st digit)	0x0020 to 0xFFFF	Changes the message name of
25	E2		Message name(2nd digit)	0x0020 to 0xFFFF	stored message of the selected
					number.
25	EB		Message name(11th digit)	0x0020 to 0xFFFF	
25	EC		Message name(12th digit)	0x0020 to 0xFFFF	
25 	ED		Reserve_1	-	"Reserve" is not initially provided, but may be added in future.
25	EF	Manage	Reserve_3		but may be added in fatale.
25	F0	messages	Number to delete the stored message	1 to 2000	Deletes the stored message of the selected number.
25	F1		Reserve_1		"Reserve" is not initially provided,
 25	FF		 Reserve_15	-	but may be added in future.
26	00		Number before the change	1 to 2000	Changes the stored number of
26	01		Number after the change	1 to 2000	stored messages of the selected number.
26	02		Reserve_1		"Decompo" is not initially provided
 26	0F		 Reserve_14	-	"Reserve" is not initially provided, but may be added in future.
26	10		Group number	1 to 99	
26	11		Group name(1st digit)	0x0020 to 0xFFFF	
26	12		Group name(2nd digit)	0x0020 to 0xFFFF	Creates the group of the selected
					number and name.
26	1B		Group name(11th digit)	0x0020 to 0xFFFF	
26	1C		Group name(12th digit)	0x0020 to 0xFFFF	
26 	1D		Reserve_1	-	"Reserve" is not initially provided, but may be added in future.
26	1F		Reserve_3		
26	20	Manage group	Number to change the group name	1 to 99	
26	21		Group name(1st digit)	0x0020 to 0xFFFF	
26	22		Group name(2nd digit)	0x0020 to 0xFFFF	Changes the group name of stored group of the selected number.
					group of the selected fidiliber.
26	2B		Group name(11th digit)	0x0020 to 0xFFFF	
26	2C		Group name(12th digit)	0x0020 to 0xFFFF	
26	2D		Number before the change	1 to 99	Changes the stored number of stored groups of the selected
26	2E		Number after the change	1 to 99	number.
26	2F		Number to delete the stored group	1 to 99	Deletes the stored group of the selected number.

Holding Register data configuration on RX (12/13)

Wo		Classification	Item name	Setting range	Contents
_	ress				Comence
26	30		Substitution rule No. Substitution rule name	1 to 99	
26	31		(1st digit)	0x0020 to 0xFFFF	
26	32		Substitution rule name (2nd digit)	0x0020 to 0xFFFF	Sets the number and the name of Substitution rule 1.
					(Read only. Write operation is the
26	3B		Substitution rule name (11th digit)	0x0020 to 0xFFFF	future subject.)
26	3C	Edit substitution	Substitution rule name (12th digit)	0x0020 to 0xFFFF	
26	3D	rule	Reserve_1		"Reserve" is not initially provided,
				-	but may be added in future.
26	3F		Reserve_3		
26 26	40 4F		Substitution rule(Rule 2)		Substitution rules 02 through 99 will be set in the same configuration as those of
				-	Substitution rules 01 (Address:
2C	50		0 1 111 11 1 100		from 0x2630 to 0x263F).
2C	5F		Substitution rule(Rule 99)		(Read only. Write operation is the future subject.)
2C	60		Reserve_1		•
		Reserve		-	"Reserve" is not initially provided, but may be added in future.
2C	6F		Reserve_16		but may be added in luture.
2C	70		Printing job function	0 , 1	Sets the printing job function. 0:Disable, 1:Enable
2C	71	Printing Job	Control status	0 , 1	Sets the control status. 0:stop , 1:start
2C 2C	72 73	Management (Future	Print count	0 to 99999	Sets the print count.
2C	74	subject)	Reserve_1		
				-	"Reserve" is not initially provided, but may be added in future.
2C	7F		Reserve_12		but may be added in luture.
2C	80		Reserve_1		
		Reserve		-	"Reserve" is not initially provided, but may be added in future.
2C	FF		Reserve_128		•
2D	00		User pattern registration 01	0x0000 to 0xFFFF	Status of User pattern registration (Registered or NOT) is set by bit
2D	01		User pattern registration 02	0x0000 to 0xFFFF	information ON or OFF. User
					pattern registration 01 shows 16 status of User pattern registration
2D	0B		User pattern registration 12	0x0000 to 0xFFFF	000 through 015 starting from the
2D	0C	User pattern (Fixed size)	User pattern registration 13	0x0000 to 0xFFFF	upper bit. Subsequently, the same data structure as that of User pattern registration 01 will follow.
2D	0D		Reserve_1		"Reserve" is not initially provided,
	4-			-	but may be added in future.
2D	1F		Reserve_19		I I I I I I I I I I I I I I I I I I I
2D	20		Pattern data	0x0000 to 0xFFFF	User pattern data will be set, size by size and moved up to front.
2D	21		Pattern data	0x0000 to 0xFFFF	Please note that the address of
	_				User pattern data will be different size by size. Please refer to 5.5.(2)
64	FE		Pattern data	0x0000 to 0xFFFF	Details of User pattern data
64	FF		Pattern data	0x0000 to 0xFFFF	(Fixed-size and Free-size), for details.
			<u>l</u>	l	

Holding Register data configuration on RX (13/13)

Wo add		Classification	Item name	Setting range	Contents
65	00		Pattern data registration 01	0x0000 to 0xFFFF	Status of User pattern registration (Registered or NOT) is set by bit
65	01		Pattern data registration 02	0x0000 to 0xFFFF	information ON or OFF. User pattern registration 01 shows 16 status of User pattern registration
65	02		Pattern data registration 03	0x0000 to 0xFFFF	000 through 015 starting from the upper bit. Subsequently, the same
65	03		Pattern data registration 04	0x0000 to 0xFFFF	data structure as that of User pattern registration 01 will follow.
65 65	04 0F		Reserve_1 Reserve_12	-	"Reserve" is not initially provided, but may be added in future.
65	10		Vertical size (User pattern character 00)	1 to 32	
65	11		Horizontal size (User pattern character 00)	1 to 320	Sets the dot size and pattern data of the user pattern data.
65	12		Pattern data (User pattern character 00)	0x0000 to 0xFFFF	User pattern data (Free-size) is controlled by the fixed address.
65	13	User pattern (Free size)	Pattern data (User pattern character 00)	0x0000 to 0xFFFF	User pattern data (Free size) of the registered User pattern
					character 00 will be set here from
67	90		Pattern data (User pattern character 00)	0x0000 to 0xFFFF	0x6510 to 0x6791.
67	91		Pattern data (User pattern character 00)	0x0000 to 0xFFFF	
67	92				
67	93		User pattern data		User pattern data (Free size) of the
6A	12		(User pattern character 01)		registered User pattern character 01 through 49 will be set in the
6A	13				same configuration as those of User pattern data of the registered
				-	User pattern character 01
DF	F2				(Address: from 0x6510 to 0x6791)
DF	F3		User pattern data		Please refer to 5.5 (2) Details of
E2	72		(User pattern character 49)		User pattern data (Fixed-size and
E2	73		· · · · · · · · · · · · · · · · · · ·		Free-size), for details.
E2	74		Poponyo 1		
	74		Reserve_1	-	"Reserve" is not initially provided, but may be added in future.
E2	7F		Reserve_12		
E2	80		Reserve_1		
		Reserve		_	"Reserve" is not initially provided,
FF	FF		Reserve_7552		but may be added in future.

(2) Input Registers

Input Registers are the area read by Read Input Registers (0x04). The item data is placed, which can be obtained from IJ Printer. Input Registers can be read by one (1) word (2 bytes) at every address.

Input Register data configuration on RX (1/8)

\/\/c	Word Classification Harmonia Continue Contacts							
addı		Classification	Item name	Setting range	Contents			
00	00		Communication connection status	0x0030 , 0x0031	Gets the communication connection status. 0x0030:Offline , 0x0031:Online			
00	01		Receive enable/disable status	0x0030 , 0x0031	Gets the receive enable/disable status. 0x0030:Reception not possible 0x0031:Reception possible			
00	02		Operation status	0x0000 to 0xFFFF	Gets the operation status. Status can be obtained by use of the same code as that of the			
00	03		Warning status	0x0000 to 0xFFFF	Status output of SOP-04 (Special Communication Function A). Refer to Software Option Specification SOP-04 for details.			
00	04	Unit status	Analysis information 1 (Function code)	0x0000 to 0xFFFF	Cause will be obtained when the external communication error occurred during Modbus communication. Refer to 5.5 (1) Details of Analysis information for			
00	05		Analysis information 2 (Classification code)	0x0000 to 0xFFFF	details. ·Analysis information 1 Function code is obtained when error is caused.			
00	06		Analysis information 3 (Error factor)	0x0000 to 0xFFFF	·Analysis information 2 Classification code is obtained when error is caused.			
00	07		Analysis information 4 (Preparation for future)	0x0000 to 0xFFFF	Analysis information 3 Error factor is obtained when error is caused. Analysis information 4 [0x0000] Fixed			
00 00	08 0F		Reserve_1 Reserve_8	-	"Reserve" is not initially provided, but may be added in future.			
00	10		Type name(1st digit)	0x0030 to 0x007A				
00	11		Type name(2nd digit)	0x0030 to 0x007A	Gets the type name.			
					Model name RX-SD160W is			
00	1E	Unit information	Type name(15th digit)	0x0030 to 0x007A	obtained when it is used.			
00	1F		Type name(16th digit)	0x0030 to 0x007A				
00	20 21		Serial number	00000000 to 9999999	Gets the serial number.			
00	22		Ink name(1st digit)	0x0030 to 0x007A				
00	23		Ink name(2nd digit)	0x0030 to 0x007A	Gets the ink name.			
					Ink type JP-K67 is obtained when			
00	2A		Ink name(9th digit)	0x0030 to 0x007A	it is used.			
00	2B		Ink name(10th digit)	0x0030 to 0x007A				

Input Register data configuration on RX (2/8)

	ord ress	Classification	Item name	Setting range	Contents
00	2C		Input mode	1,2	Gets the input mode. 1:Default , 2:Local Language
00	2D		Maximum message length (Characters)	120 to 1000	Gets the maximum message length (Characters).
00	2E		Maximum registers	48 to 2000	Gets the maximum registers.
00	2F		2D code print	0,1	Gets the 2D code print. 0:NOT supported , 1:supported
00	30	Unit	Character size	0x0000 to 0x0007	Gets the Settable sizes. Bit information is obtained for availability of Character size of 4x5 or 18x24 or 24x32. 0x0001:4x5, 0x0002:18x24 0x0004:24x32
00	31	information	Maximum calendar/count block count	2,8	Gets the maximum calendar/count block count.
00	32		Replacement items	48 , 99	Gets the replacement items.
00	33		Shift code/Time count	0,1	Gets the shift code/time count. 0:NOT supported, 1:supported
00	34		Chimney/DIN print	0,1	Gets the chimney/DIN print. 0:NOT supported, 1:supported
00	35		Maximum column	2 to 5	Gets the maximum column.
00 00	36 4F		Reserve_1 Reserve_26	-	"Reserve" is not initially provided, but may be added in future.
00	50		Ink operating time	0 to 9999	Gets the ink operating time.
00	51		Ink alarm time	0 to 9999	Gets the ink alarm time.
00	52 53		Print count	0 to 999999999	Gets the print count.
00	54 55		Cumulative operation time	0 to 999999	Gets the cumulative operation time.
00	56		Ink/makeup ink type	1 to 999	Gets the ink/makeup ink type.
00	57		Ink viscosity	0 to 999	Gets the ink viscosity.
00	58	Operation	Ink pressure	0 to 999	Gets the ink pressure. Ink pressure multiplied by 1000 is obtained. (Example : 255 = 0.255 MPa)
00	59	management	Ambient temperature	-99 to 100	Gets the ambient temperature.
00	5A		Deflection voltage	0 to 99	Gets the deflection voltage. Deflection Voltage multiplied by 10 is obtained. (Example: 57 = 5.7 kV)
00	5B		Excitation V-ref.	0 to 27	Gets the excitation V-ref.
00	5C		Excitation frequency	0 to 1000	Gets the excitation frequency. Excitation frequency multiplied by 10 is obtained. (Example: 754 = 75.4 kHz)
00	5D		Reserve_1	-	"Reserve" is not initially provided,
00	6F		Reserve_19		but may be added in future.

Input Register data configuration on RX (3/8)

Wo		Classification	Item name	Setting range	Contents
00	70		Fault/warning message count	0 to 90	Gets the fault/warning message count.
00 00	71 73		Reserve_1 Reserve_3	-	"Reserve" is not initially provided, but may be added in future.
00	74		Generation time(year)	2000 to 2099	
00	75		Generation time(month)	1 to 12	7
00	76		Generation time(day)	1 to 31	Gets the generation time of the
00	77		Generation time(hour)	0 to 23	message 1.
00	78	View alarm	Generation time(minute)	0 to 59	7
00	79	history	Generation time(second)	0 to 59	7
00	7A		Fault/warning No.	1 to 999	Gets the fault/warning No. of the message 1.
00	7B		Reserve_1	-	"Reserve" is not initially provided, but may be added in future.
00	7C 83		Fault/warning message 2		Fault/warning history 02 through 90 are obtained in a same way as
				-	that of Fault warning history 01
03	3C 43		Fault/warning message 90		(Address: from 0x0074 to 0x007B)
03	44		Reserve_1		
 0A	FF	Reserve	 Reserve_1980	-	"Reserve" is not initially provided, but may be added in future.
0В	00		State at power-up	0 to 2	Gets the state at power-up. 0:Comm. port is OFF 1:Comm. port is ON 2:OFF fixed
0B	01		Communication and signal error	0,1	Gets the communication and signal error. 0:Warning, 1:Fault
0B	02	Communicati on environment setup	Baud rate(Standard port)	0 to 10	Gets the baud rate of the standard port. 0:150bps, 1:300bps, 2:600bps 3:1200bps, 4:2400bps 5:4800bps, 6:9600bps 7:19200bps, 8:38400bps 9:57600bps, 10:115200bps
0B	03		Data length(Standard port)	0 , 1	Gets the data length of the standard port. 0:7 bits, 1:8 bits
0B	04		Parity bit(Standard port)	0 to 2	Gets the parity bit of the standard port. 0:Disable, 1:Odd, 2:Even
0B	05		Stop bits(Standard port)	0 , 1	Gets the stop bits of the standard port. 0:1 bit, 1:2 bits
0B	06		Baud rate(Secondary port)	0 to 10	Gets the baud rate of the secondary port.
0B	07		Data length(Secondary port)	0 , 1	Gets the data length of the secondary port.
0B	08		Parity bit(Secondary port)	0 to 2	Gets the parity bit of the secondary port.
0B	09		Stop bits(Secondary port)	0,1	Gets the stop bits of the secondary port.

Input Register data configuration on RX (4/8)

Wo	ord ress	Classification	Item name	Setting range	Contents
0B	0A		Baud rate(Private port)	0 to 10	Gets the baud rate of the private port.
0B	0B		Data length(Private port)	0,1	Gets the data length of the private port.
0B	0C		Parity bit(Private port)	0 to 2	Gets the parity bit of the private port.
0B	0D		Stop bits(Private port)	0 , 1	Gets the stop bits of the private port.
0B	0E		Number of comm. bytes	0,1	Gets the number of comm. bytes. 0:1 byte, 1:2 bytes
0B	0F		BCC code handling	0 , 1	Gets the BCC code handling. 0:Disable, 1:Enable
0B	10		Communication mode	0,1	Gets the communication mode. 0:overwrite-protected 1:overwrite-enabled
0B	11		Print message transfer ACK	0,1	Gets the print message transfer ACK. 0:t=fixed , 1:t=async.
0B	12		Print spec transfer char height	0 , 1	Gets the print spec transfer char height. 0:2 digits , 1:3 digits
0В	13		Buffer function (Function item for Communication buffer)	0 , 1	Gets the buffer function. 0:Disable , 1:Enable
0B	14		Buffer repeat count (Function item for Communication buffer)	1 to 9999	Gets the buffer repeat count.
0B	15	Communicati	Empty Buffer Fault (Function item for Communication buffer)	0,1	Gets the empty buffer fault. 0:Disable , 1:Enable
0B	16	on environment	Timing of Fault (Function item for Communication buffer)	0 , 1	Gets the timing of fault. 0:Print Start, 1:Print. Complete
0B	17	setup	Data Number at Fault (Function item for Communication buffer)	0 to 9	Gets the data number at fault.
0B	18		Start output (Function item for SOP-04)	0 , 1	Gets the start output. 0:Disable , 1:Enable
0B	19		Output kind (Function item for SOP-04)	0 to 2	Gets the output kind. 0:Disable , 1:Print data , 2:Code
0B	1A		Condition (Function item for SOP-04)	0,1	Gets the condition. 0:Every time 1:Different from last time
0B	1B		Status output (Function item for SOP-04)	0,1	Gets the status output. 0:Disable , 1:Enable
0B	1C		Output item(Start item) (Function item for SOP-04)	1 to 100	Gets the output item.
0B	1D		Output item(End item) (Function item for SOP-04)	1 to 100	·
0B	1E		Output comm. ENQ (Function item for SOP-04)	0 , 1	Gets the output comm. ENQ. 0:Disable , 1:Enable
0В	1F		Output port (Function item for SOP-04)	0 , 1	Gets the output port. 0:Standard port 1:Secondary port
0B	20		Select message (Function item for SOP-05)	0,1	Gets the select message. 0:Disable , 1:Enable
0B	21		Data exchange (Function item for SOP-05)	0,1	Gets the data exchange. 0:Reflect at once 1:Reflect by signal
0B	22		Reserve_1	_	"Reserve" is not initially provided,
0B	BF		Reserve_158		but may be added in future.

Input Register data configuration on RX (5/8)

Wo		Classification	Item name	Setting range	Contents
0B	C0		Ink concentration control	0,1	Gets the ink concentration control. 0:Disable , 1:Enable
0B	C1		Exhaust Circulation System	0,1	Gets the exhaust circulation system. 0:Disable , 1:Enable
0B	C2		Cooling Fan Unit	0,1	Gets the cooling fan unit. 0:Disable , 1:Enable
0B	С3		Temperature Difference Increase	0,1	Gets the temperature difference increase. 0:Disable , 1:Enable
0B 0B	C4 CF		Reserve_1 Reserve_12	-	"Reserve" is not initially provided, but may be added in future.
0B	D0		Ink filter use time	0 to 59999	Gets the ink filter use time.
0B	D1		Makeup filter use time	0 to 59999	Gets the makeup filter use time.
0B	D2		Recovery filter use time	0 to 59999	Gets the recovery filter use time.
0B	D3		Air filter use time	0 to 59999	Gets the air filter use time.
0B	D4		Viscometer filter use time	0 to 59999	Gets the viscometer filter use time.
0B	D5		MV9 filter use time	0 to 59999	Gets the MV9 filter use time.
0B	D6		Pump use time	0 to 59999	Gets the pump use time.
0B	D7		Heating unit use time	0 to 59999	Gets the heating unit use time.
0B	D8	Circulation	MV1 use time	0 to 59999	Gets the MV1 use time.
0B	D9	control	MV2 use time	0 to 59999	Gets the MV2 use time.
0B	DA		MV3 use time	0 to 59999	Gets the MV3 use time.
0B	DB		MV4 use time	0 to 59999	Gets the MV4 use time.
0B	DC		MV5 use time	0 to 59999	Gets the MV5 use time.
0B	DD		MV6 use time	0 to 59999	Gets the MV6 use time.
0B	DE		MV7 use time	0 to 59999	Gets the MV7 use time.
0B	DF		MV8 use time	0 to 59999	Gets the MV8 use time.
0B	E0		MV9 use time	0 to 59999	Gets the MV9 use time.
0B	E1		MV11 use time	0 to 59999	Gets the MV11 use time.
0B	E2		MV12 use time	0 to 59999	Gets the MV12 use time.
0B 0B	E3 E4		Ink consumption	0 to 999999	Gets the ink consumption.
0B 0B	E5 E6		Makeup consumption	0 to 999999	Gets the makeup consumption.
0B 0B	E7 E8		Print count	0 to 999999999	Gets the print count.
0B 	E9		Reserve_1	-	"Reserve" is not initially provided, but may be added in future.
0C	1F		Reserve_55		

Input Register data configuration on RX (6/8)

Wo		Classification	Item name	Setting range	Contents
0C	20		Basic software(1st digit)	0x0020 to 0xFFFF	
0C	21		Basic software(2nd digit)	0x0020 to 0xFFFF	Gets the basic software version.
					When the version is V01.00,
0C	3E		Basic software(31st digit)	0x0020 to 0xFFFF	"V01.00 Basic software" is obtained.
0C	3F		Basic software(32nd digit)	0x0020 to 0xFFFF	Obtained.
0C	40		Controller software(1st digit)	0x0020 to 0xFFFF	
0C	41		Controller software(1st digit) Controller software(2nd digit)	0x0020 to 0xFFFF	Gets the controller software
	41		Controller software(2nd digit)	0.0020 10 0.01111	version.
	5E		Controller coffware/21 at digit)	0x0020 to 0xFFFF	When the version is V01.00, "V01.00 Controller software" is
0C 0C	5F		Controller software(31st digit)		obtained.
			Controller software(32nd digit) Print controller software M	0x0020 to 0xFFFF	
0C	60		(1st digit)	0x0020 to 0xFFFF	
0C	61		Print controller software M	0x0020 to 0xFFFF	Gets the print controller software M
			(2nd digit)		version. When the version is V01.00,
	7-		Print controller software M		"V01.00 Engine software M" is
0C	7E		(31st digit)	0x0020 to 0xFFFF	obtained.
0C	7F		Print controller software M (32nd digit)	0x0020 to 0xFFFF	
0C	80		Print controller software S (1st digit)	0x0020 to 0xFFFF	
0C	81		Print controller software S (2nd digit)	0x0020 to 0xFFFF	Gets the print controller software S version.
					When the version is V01.00,
0C	9E		Print controller software S	0x0020 to 0xFFFF	"V01.00 Engine software S" is
-00	9∟		(31st digit) Print controller software S	0.0020 10 0.01111	obtained.
0C	9F		(32nd digit)	0x0020 to 0xFFFF	
0C	A0	View software	1st language(1st digit)	0x0020 to 0xFFFF	Gets the language version. When the version is V01.00 English language,
0C	A1	version	1st language(2nd digit)	0x0020 to 0xFFFF	"V01.00 Language 02" is obtained. The last 2-digit shows Language number. 【Language No.】
					01:Japanese 02:English 03:Simple Chinese 04:Traditional Chinese
0C	BE		1st language(31st digit)	0x0020 to 0xFFFF	05:Korean 06:Thai 07:Italian
0C	BF		1st language(32nd digit)	0x0020 to 0xFFFF	08:Dutch 09:Spanish 10:German
0C	C0		2nd language(1st digit)	0x0020 to 0xFFFF	11:French 12:Vietnamese 13:Swedish 14:Arabic
0C	C1		2nd language(2nd digit)	0x0020 to 0xFFFF	15:Russian 16:Greek 17:Czech
					18:Danish 19:Portuguese 20:Polish 21:Serbian
0C	DE		2nd language(31st digit)	0x0020 to 0xFFFF	22:Turkish 23:Hungarian 24:Bulgarian
0C	DF		2nd language(32nd digit)	0x0020 to 0xFFFF	25:Catalan 26:Finnish 27:Romanian 28:Norwegian

Input Register data configuration on RX (7/8)

Wo	ord				_
addr		Classification	Item name	Setting range	Contents
0C	E0		Software option01(1st digit)	0x0020 to 0xFFFF	
0C	E1		Software option01(2nd digit)	0x0020 to 0xFFFF	
0C	FE		Software option01(31st digit)	0x0020 to 0xFFFF	
0C	FF		Software option01(32nd digit)	0x0020 to 0xFFFF	Gets the software option version and symbol.
					When SOP-04 is installed and its
0E	00	View	Software option10(1st digit)	0x0020 to 0xFFFF	version is V01.00,
0E	01	software version	Software option10(2nd digit)	0x0020 to 0xFFFF	"V01.00 SOP-04" is obtained.
		version			
0E	1E		Software option10(31st digit)	0x0020 to 0xFFFF	
0E	1F		Software option10(32nd digit)	0x0020 to 0xFFFF	
0E	20		Reserve 1	5X5525 to 5X1111	
	20		_	_	"Reserve" is not initially provided,
0E	3F		Reserve_32	_	but may be added in future.
0E	40		Print data message number	1 to 2000	
0E	41			0 to 99	When Print message registration
			Group number		number is specified at Holding
0E	42		Message name(1st digit)	0x0020 to 0xFFFF	Register address 0x0010, its Group number and Message name
	15				are obtained.
0E	4D		Message name(12th digit)	0x0020 to 0xFFFF	
0E	4E		Reserve_1	-	"Reserve" is not initially provided,
					but may be added in future.
0E	52	Manage	Reserve_5		Otatus of Brint management
٥Ε	5 2	messages	Print message registration	0v0000 to 0vEEEE	Status of Print message registration (Registered or NOT) is
0E	53		(001)	0x0000 to 0xFFFF	obtained by bit information ON or OFF. Print message registration
					(001) shows 16 statuses of Print message registrations 1 through
					16 starting from the upper bit.
			Print message registration		Subsequently, the same data structure as those of Print
0E	CF		(125)	0x0000 to 0xFFFF	message registration (001) will
					follow.
0E	D0		Group number	0 to 99	When Group number is specified
0E	D1		Group name(1st digit)	0x0020 to 0xFFFF	at Holding Register address
					0x0014, its Group name is obtained.
0E	DC		Group name(12th digit)	0x0020 to 0xFFFF	ostaniou.
0E	DD		Reserve_1		"Reserve" is not initially provided,
•••				-	but may be added in future.
0E	E8	Manage	Reserve_12		-
0E	E9	group	Group registration (1)	0x0000 to 0xFFFF	Status of Group registration (Registered or NOT) is obtained by
					bit information ON or OFF. Group registration (1) shows 16 statuses
					of Group registrations 1 through 16
0E	EF		Group registration (7)	0x0000 to 0xFFFF	starting from the upper bit. Subsequently, the same data structure as those of Group
					registration (1) will follow.

Input Register data configuration on RX (8/8)

Word address	Classification	Item name	Setting range	Contents
0E F0		Current message data length	0 to 2000	Gets the message data length (Character count x 2) of the current message.
0E F1		Inter-character space (Character units)	0 to 28	When Character position is specified at Holding Register address 0x0011, its Inter-character space will be obtained.
0E F2		Calendar block count	0 to 8	Gets the calendar block count of the current message.
0E F3		Calendar characters count (Calendar block 1)	0 to 20	
0E F4		Calendar characters count (Calendar block 2)	0 to 20	Gets the calendar characters
				count for 8 blocks of the current
0E F9		Calendar characters count (Calendar block 7)	0 to 20	message.
0E FA	_	Calendar characters count (Calendar block 8)	0 to 20	
0E FB		Time count block No.	0 to 8	Gets the time count block No. of the current message.
0E FC		Shift code block No.	0 to 8	Gets the shift code block No. of the current message.
0E FD		Shift code rule count	0 to 48	Gets the shift code rule count of the current message.
0E FE	Various data	Count block count	0 to 8	Gets the count block count of the current message.
0E FF		Count characters count (Count block 1)	0 to 20	Gets the count characters count for 8 blocks of the current message.
0F 00		Count characters count (Count block 2)	0 to 20	
			•••	
0F 05		Count characters count (Count block 7)	0 to 20	
0F 06		Count characters count (Count block 8)	0 to 20	
0F 07 0F 0F		Reserve_1 Reserve_9	-	"Reserve" is not initially provided, but may be added in future.
0F 10		Inter-character space (1st digit)	0 to 28	
0F 11		Inter-character space (2nd digit)	0 to 28	Gets the inter-character space for
				1000 characters of the current
12 F6		Inter-character space (999th digit)	0 to 28	message.
12 F7		Inter-character space (1000th digit)	0 to 28	
12 F8		Reserve_1		"Reserve" is not initially provided,
			-	but may be added in future.
12 FF		Reserve_8		
13 00 13 01	_	Print completion count	0 to 99999	Gets the print completion count.
13 02	Printing Job Management (Future	Print completion status	0 to 2	Gets the print completion status. 0:Non-completion 1:Print completion 2:Fault
13 03 13 0F	subject)	Reserve_1 Reserve_13	-	"Reserve" is not initially provided, but may be added in future.
5 01	_1	1.1000170_10		

5.4.2 Data configuration on RX2

(1) Holding Registers

Holding Registers are the area which is written by Write Multiple Registers (0x10) or Write Single Register (0x06) and read by Read Holding Registers (0x03).

The item data which can be set to IJ printer or can be obtained from IJ printer are all placed in Holding Registers.

Holding Registers can be read and be written by one (1) word (2 bytes) at every address.

Holding Register data configuration on RX2 (1/13)

Wo addr		Classification	Item name	Setting range	Contents
00	00		Start/Stop control flag	1,2	Start/Stop flag is used when Holding Register is written more than once. First write "1" and write Holding Registers more than once and finally write "2". Then all the written contents will be reflected to IJ Printer. Start/Stop flag is not used when Holding Register is written only once. [1:Start; 2:Stop]
00 00	01 07		Reserve_1 Reserve_7	-	"Reserve" is not initially provided, but may be added in future.
00	08		Number of the printing items	1 to 100	Set the number of the printing items used.
00 00	09 0F		Reserve_1 Reserve_7	-	"Reserve" is not initially provided, but may be added in future.
00	10	Index	Specify Print message registration number	0 to 2000	Set Print message information at Input Register address 0x0E40, which Print message registration number is specified here. When "0" is specified, the print message information of the print message which is being edited will be set.
00	11		Specify Character position for the Inter-character space obtained	1 to 1000	Set Inter-character space at Input Register address 0x0EF1, which Character position is specified here.
00	12		Specify Substitution rules number	1 to 99	Set Substitution rules data at Holding Register address 0x1AC0, which Substitution rules number is specified here.
00	13		Specify User pattern character size	1 to 13	Set User pattern registration information at Holding Register address 0x2D00, which Character size is specified here. 1:4x5, 2:5x5, 3:5x8(5x7), 4:9x8(9x7), 5:7x10, 6:10x12, 7:12x16, 8:18x24, 9:24x32, 10:11x11, 11:5x3(chimney), 12:5x5(chimney), 13:7x5(chimney)
00	14		Specify Group number	1 to 99	Set Group information at Input Register address 0x0ED0, which Group number is specified here.
00 00	15 1F		Reserve_1 Reserve_11	-	"Reserve" is not initially provided, but may be added in future.

Holding Register data configuration on RX2 (2/13)

Wo addr		Classification	Item name	Setting range	Contents
00	20		Character count(Print item 1)	1 to 1000	
00	21		Character count(Print item 2)	1 to 1000	Sets the character count for each
00	82		Character count(Print item 99)	1 to 1000	print item.
00	83		Character count(Print item 100)	1 to 1000	
00	84		Attribute(1st digit)	0x0000 to 0xFFFF	Set the characters of Print contents. Character codes are the
00	85	Print	Character code(1st digit)	0x0020 to 0xFFFF	same as those which are used in Standard communication. Please refer to Technical Manual, Section
		contents			5 Communication, for details.
08	52		Attribute(1000th digit)	0x0000 to 0xFFFF	In case of setting Calendar/Count characters, set to Character
08	53		Character code(1000th digit)	0x0020 to 0xFFFF	attribute, or if they are NOT Calendar/Count characters, set to Character code.
80	54		Reserve_1		"Reserve" is not initially provided,
 0F	FF		 Reserve_1964	-	but may be added in future.
10	00		Printing erase item number	1 to 100	Sets the printing item number to erase printing contents.
10	01	Printings	Reserve_1		
		erasure		-	"Reserve" is not initially provided, but may be added in future.
10	05		Reserve_5		-
10	06		Print data message number	1 to 2000	Set the registered print message number to be recalled.
10	07	Print data recall	Reserve_1	-	"Reserve" is not initially provided,
		recaii			but may be added in future.
10	0B		Reserve_5	0.4.00	-
10	0C		Group number	0 to 99	
10	0D 0E		Print data message number	1 to 2000	Register the being edited print
10 10	0E 0F		Message name(1st digit) Message name(2nd digit)	0x0020 to 0xFFFF 0x0020 to 0xFFFF	message by the specified Group number or by the registered print
	UI	Print data	wessage name(znd digit)	0x0020 to 0x1111	message number or by the
10	18	registration	Message name(11th digit)	0x0020 to 0xFFFF	message name.
10	19		Message name(12th digit)	0x0020 to 0xFFFF	
10	1A		Reserve 1	5,00 <u>2</u> 0 to 0,1111	
				-	"Reserve" is not initially provided,
10	1F		Reserve_6		but may be added in future.
10	20		Line count / print format uniformity	0 , 1	Line count of all columns are made uniform based on the first column.
10	21		Insert column	1 to 100	Adds a column directly before the editing objective column.
10	22		Delete column	1 to 100	Deletes all the print items of the editing objective column.
10	23	Print format	Add column	1 to 100	Adds a column at the end.
10	24		Individual column setup (Column position)	1 to 100	Changing the number of lines of
10	25		Individual column setup (Line count)	1 to 5	the editing objective column.
10 10	26 27		Reserve_1 Reserve_2	-	"Reserve" is not initially provided, but may be added in future.
10	28		Adjust Inter-character space (Start)	1 to 1000	
10	29		Adjust Inter-character space (End)	1 to 1000	Inter-character space can be set in character units.
10	2A		Adjust Inter-character space (Setting value)	0 to 28	

Holding Register data configuration on RX2 (3/13)

	ord	Classification	Item name	Setting range	Contents
add 10	ress 2B	Cladomodilori		Coung range	Contents
	ZB		Reserve_1		"Reserve" is not initially provided,
10	3E		Reserve 20	-	but may be added in future.
10	3F		Format Setup	1 to 3	Sets the Format Setup. 1:Individual setup , 2:Overall setup 3:Free layout
10	40		Line count	1 to 5	Sets the line count of the print item 1.
10	41		Line spacing	0 to 2	Sets the line spacing of the print item 1.
10	42		Character size	1 to 13	Sets the character size of the print item 1. 1:4x5 , 2:5x5 , 3:5x8(5x7) 4:9x8(9x7) , 5:7x10 , 6:10x12 7:12x16 , 8:18x24 , 9:24x32 10:11x11 , 11:5x3(chimney) 12:5x5(chimney), 13:7x5(chimney)
10	43		Inter-character space	0 to 28	Sets the inter-character space of the print item 1.
10	44		Bold	1 to 9	Sets the bold of the print item 1.
10	45	Print format	Bar code	0 to 26	Sets the bar code of the print item 1. 0:none , 1:Code 39 , 2:ITF 3:NW-7 , 4:EAN-13 , 5:DM8x32 6:DM16x16 , 7:DM16x36 8:DM16x48 , 9:DM18x18 10:DM20x20 , 11:DM22x22 12:DM24x24 13:Code 128 (Code set B) 14:Code 128 (Code set C) 15:UPC-A , 16:UPC-E , 17:EAN-8 18:QR21x21 , 19:QR25x25 20:QR29x29 , 22:EAN-13add-on 5 23:MicroQR15x15 24:GS1 DataBar (Limited) 25:GS1 DataBar (Omnidirectional) 26:GS1 DataBar (Stacked)
10	46		EAN readable code	0 to 2	Sets the EAN readable code of the print item 1. 0:none, 1:5x5, 2:5x7
10	47		EAN Prefix	0 to 99	Sets the EAN prefix of the print item 1.
10	48		Calendar block No.	0 to 8	When writing, setting is NOT
10	49		Calendar block count	0 to 8	required. When reading, Block
10	4A		Count block No.	0 to 8	information can be obtained item
10	4B		Count block count	0 to 8	by item.
10	4C		Horizontal (X)	0 to 31998	Valid when Free layout is set. Sets the coordinate of the print
10	4D		Vertical (Y)	0 to 29	item 1.
10 10	4E 57		Reserve_1 Reserve_10	-	"Reserve" is not initially provided, but may be added in future.
10 10 19	58 6F 88 9F		Print format(Print item 2) Print format(Print item 100)	-	Item 2 through 100 will be set in the same configuration as those of Item 1 (Address: from 0x1040 to 0x1057).

Holding Register data configuration on RX2 (4/13)

	ord ress	Classification	Item name	Setting range	Contents
19	Α0		Character height	0 to 99	Sets the character height.
19	A1		Ink drop use	1 to 16	Sets the ink drop use.
19	A2		High-speed print	0 to 3	Sets the high-speed print. 0:HM, 1:NM, 2:QM, 3:SM
19	А3		Character width	0 to 3999	Sets the character width.
19	A4		Character orientation	0 to 3	Sets the character orientation.
19	A5		Print start delay	0 to 9999	Sets the print start delay.
19	A6		Reverse direction	0 to 9999	Sets the reverse direction.
19	A7		Product speed matching	0 to 2	Sets the product speed matching. 0:None , 1:Encoder , 2:Auto
19	A8		Pulse rate division factor	1 to 999	Sets the pulse rate division factor.
19	A9		Speed compensation	0 , 1	Sets the speed compensation. 0:Disable, 1:Enable
19	AA		Line speed	0 to 9999	Sets the line speed. Set value is multiplied by 1/10 and reflected to IJ Printer (Example : 1234 = 123.4 m/min.)
19	AB	Print	Distance between print head and work	0 to 99	Sets the distance between print head and work.
19	AC	specification	Print Target width	0 to 9999	Sets the print Target width.
19	AD		Actual Print width	0 to 9999	Sets the actual Print width.
19	AE		Repeat count	0 to 9999	Sets the repeat count.
19 19	AF B0		Repeat intervals	0 to 99999	Sets the repeat intervals.
19	В1		Target sensor timer	0 to 999	Sets the target sensor timer.
19	B2		Target sensor filter	0 , 1	Sets the target sensor filter. 0:Time setup , 1:Until end of print.
19	В3		Target sensor filter value	0 to 9999	Sets the target sensor filter value.
19	B4		Ink Drop Charge Rule	0 to 2	Sets the ink drop charge rule. 0:Standard 1:Mixed single scan and interlaced 2:Dot mixed interlaced
19	B5		Speed compensation fine control	-50 to 50	Sets the speed compensation fine control.
19 19	B6 BF		Reserve_1 Reserve_10	-	"Reserve" is not initially provided, but may be added in future.

Holding Register data configuration on RX2 (5/13)

	C0			Setting range	Contents
19			Offset(Year)	0 to 99	
. •	C1		Offset(Month)	0 to 99	
19	C2		Offset(Day)	0 to 1999	Sets the offset of the Calendar block 1.
19	C3		Offset(Hour)	-23 to 99	Block 1.
19	C4		Offset(Minute)	-59 to 99	
19	C5		Zero-suppression(Year)	0 to 2	
19	C6		Zero-suppression(Month)	0 to 2	Sets the zero-suppression of the
19	C7		Zero-suppression(Day)	0 to 2	Calendar block 1. 0:Disable , 1:Enable(Space)
19	C8		Zero-suppression(Hour)	0 to 2	2:Enable(Character fill)
19	C9		Zero-suppression(Minute)	0 to 2	
19	CA		Substitution rules(Year)	0 , 1	
19	СВ		Substitution rules(Month)	0 , 1	Sets the substitution rules of the
19	CC		Substitution rules(Day)	0 , 1	Calendar block 1.
19	CD		Substitution rules(Hour)	0 , 1	0:Disable , 1:Enable
19	CE	1	Substitution rules(Minute)	0 , 1	
19	CF	Calendar	Substitution rules No.	1 to 99	Sets the substitution rules No. of the Calendar block 1.
19	D0	condition	Substitution rules (Week number)	0,1	Sets the substitution rules of the Calendar block 1.
19	D1		Zero-suppression (Week number)	0 to 2	Sets the zero-suppression of the Calendar block 1.
19	D2		Substitution rules (Day of week)	0 , 1	Sets the substitution rules of the Calendar block 1.
19	D3		Zero-suppression (Day of week)	0 to 2	Sets the zero-suppression of the Calendar block 1.
19	D4		Output during calendar updating Trigger (Function item for SOP-05)	1	[1] Fixed
19 	D5		Reserve_1	-	"Reserve" is not initially provided, but may be added in future.
19	DF		Reserve_11		but may be added in future.
	E0 FF		Calendar condition (Calendar block 2)		Block 2 through 8 will be set in the
				-	same configuration as those of
1A .	A0 BF		Calendar condition (Calendar block 8)		Block 1 (Address: from 0x19C0 to 0x19DF).

Holding Register data configuration on RX2 (6/13)

Wo	ord	01		0.111	0
addı		Classification	Item name	Setting range	Contents
1A	C0		Substitution rules No.	1 to 99	
1A	C1		Starting year	2000 to 2099	
1A	C2		Substitution character(Year)	0x0020 to 0xFFFF	
1A	F3		Substitution character(Year)	0x0020 to 0xFFFF	
1A	F4		Substitution character(Month)	0x0020 to 0xFFFF	
1B	17		Substitution character(Month)	0x0020 to 0xFFFF	
1B	18		Substitution character(Day)	0x0020 to 0xFFFF	
1B	74		Substitution character(Day)	0x0020 to 0xFFFF	
1B	75		Substitution character(Hour)	0x0020 to 0xFFFF	Substitution rules will be registered
					with the specified Substitution rules number, Start year and
1B	A4	Substitution	Substitution character(Hour)	0x0020 to 0xFFFF	Substitution rules setup items.
1B	A5	rule	Substitution character(Minute)	0x0020 to 0xFFFF	
1C	1C		Substitution character(Minute)	0x0020 to 0xFFFF	
1C	1D		Substitution character	0x0020 to 0xFFFF	
			(Week number)		1
			Substitution character		1
1C	BB		(Week number)	0x0020 to 0xFFFF	
1C	ВС		Substitution character (Day of week)	0x0020 to 0xFFFF	
1C	D0		Substitution character (Day of week)	0x0020 to 0xFFFF	
1C	D1		Reserve_1		IIDaaania ka
				-	"Reserve" is not initially provided, but may be added in future.
1C	D3	<u> </u>	Reserve_3		Sac may so added in fature.
1C	D4		Range (Lower limit) (1st digit)	0x0020 to 0xFFFF	
					Sets the range (Lower limit).
1C	D6		Range (Lower limit) (3rd digit)	0x0020 to 0xFFFF	, , , ,
1C	D7		Range (Upper limit) (1st digit)	0x0020 to 0xFFFF	
					Sets the range (Upper limit).
1C	D9	Times '	Range (Upper limit) (3rd digit)	0x0020 to 0xFFFF	,,
1C	DA	Time count condition	Reset(1st digit)	0x0020 to 0xFFFF	
					Sets the reset.
1C	DC		Reset(3rd digit)	0x0020 to 0xFFFF	1
1C	DD		Reset time	0 to 23	Sets the reset time.
1C	DE		Renewal period	0 to 5	Sets the renewal period. 0:5 minutes, 1:6 minutes 2:10 minutes, 3:15 minutes 4:20 minutes, 5:30 minutes
1C	DF		Reserve_1	-	"Reserve" is not initially provided, but may be added in future.

Holding Register data configuration on RX2 (7/13)

Word address	Classification	Item name	Setting range	Contents
1C E0		Start hour	0 to 23	Sets the start time of the shift code
1C E1		Start minute	0 to 59	rule 1.
1C E2		End hour	0 to 23	Sets the end time of the shift code
1C E3		End minute	0 to 59	rule 1.
1C E4		Shift code character (1st digit)	0x0020 to 0xFFFF	
				Sets the shift code character of the shift code rule 1.
1C ED	Shift code setup	Shift code character (10th digit)	0x0020 to 0xFFFF	orint dodd raid 1.
1C EE		Reserve_1		"Reserve" is not initially provided,
1C EF		Reserve_2	-	but may be added in future.
1C F0		Shift code rule (Rule 2)		Shift code 2 through 48 will be set
			-	in the same configuration as those
1F D0				of Shift code 1 (Address: from 0x1CE0~0x1CEF).
1F DF	†	Shift code rule (Rule 48)		CATGLO GATGLI).
1F E0		Value(1st digit)	0x0020 to 0xFFFF	
	_			Sets the value of the count block 1.
1F F3	_	Value(20th digit)	0x0020 to 0xFFFF	
1F F4		Range (Lower limit)	0x0020 to 0xFFFF	
117 174		(1st digit)	000020 10 000	Sets the range (Lower limit) of the
				count block 1.
20 07		Range (Lower limit) (20th digit)	0x0020 to 0xFFFF	
20 08		Range (Upper limit) (1st digit)	0x0020 to 0xFFFF	Sets the range (Upper limit) of the
				count block 1.
20 1B		Range (Upper limit) (20th digit)	0x0020 to 0xFFFF	
20 1C 20 1D		Update (In progress)	0 to 999998	Sets the update (In progress) of the count block 1.
20 1E 20 1F		Update (Units)	1 to 999999	Sets the update (Units) of the count block 1.
20 20	Count	Increment	1 to 99	Sets the increment of the count block 1.
20 21	condition	Direction	0 , 1	Sets the direction of the count block 1. 0:up, 1:down
20 22	1	Jump (from) (1st digit)	0x0020 to 0xFFFF	
	1			Sets the jump (from) of the count
20 35	1	Jump (from) (20th digit)	0x0020 to 0xFFFF	block 1.
20 36	1	Jump (to) (1st digit)	0x0020 to 0xFFFF	
	1			Sets the jump (to) of the count
20 49	1	Jump (to) (20th digit)	0x0020 to 0xFFFF	block 1.
20 4A	1	Reset (1st digit)	0x0020 to 0xFFFF	
	1			Sets the reset of the count block 1.
20 5D	1	Reset (20th digit)	0x0020 to 0xFFFF	
20 5E		Reset signal (Function item for SOP-05)	0 to 2	Sets the reset signal of the count block 1. 0:Disable , 1:Signal 1 , 2:Signal 2
20 5F		External signal count (Function item for SOP-05)	0 , 1	Sets the external signal count of the count block 1. 0:Disable , 1:Enable

Holding Register data configuration on RX2 (8/13)

Wo addi		Classification	Item name	Setting range	Contents
20	60		Zero-suppression	0 , 1	Sets the zero-suppression of the count block 1. 0:Disable , 1:Enable
20	61		Multiplier(1st digit)	0x0020 to 0x0039	Sets the multiplier of the count block 1.
					Numeric:0x0031~0x0039
20	6A		Multiplier(10th digit)	0x0020 to 0x0039	Decimal point:0x002E Space:0x0020
20	6B		Count skip(1st digit)	0x0020 to 0xFFFF	
		Count	•••		Sets the count skip of the count block 1.
20	6F	condition	Count skip(5th digit)	0x0020 to 0xFFFF	
20	70		Reserve_1	-	"Reserve" is not initially provided, but may be added in future.
20	73		Reserve_4		,
20	74 07		Count condition (Count block 2)		Block 2 through 8 will be set in the
				-	same configuration as those of Block 1 (Address: from 0x1FE0 to
23	EC		Count condition		0x2073).
24	7F		(Count block 8)		0.1.1
24	80		Calendar offset	0 , 1	Sets the calendar offset. 0:Offset from yesterday 1:From today
24	81		DIN print	0,1	Sets the DIN print. 0:Disable, 1:Enable
24	82	Adjust print	EAN Prefix	0 , 1	Sets the EAN prefix. 0:Edit message , 1:Print format
24	83	Adjust print parameters	Barcode printing	0,1	Sets the barcode printing. 0:Normal , 1:Reverse
24	84		QR Error correction level	0 , 1	Sets the QR error correction level. 0:M (15%), 1:Q (25%)
24	85		Reserve_1		
				-	"Reserve" is not initially provided, but may be added in future.
24	8F		Reserve_11		-
24	90		On-line / Off-line	0 , 1	Change the on-line or off-line. 0:Offline, 1:Online
24	91	On-line / Off-line	Reserve_1		"Reserve" is not initially provided,
		OII-III IC		-	but may be added in future.
24	93		Reserve_3		Specifies remote operation to IJP.
24	94	Remote	Remote operation	0 to 4	0:Operation start 1:Operation stop 2:Deflection voltage control (ON) 3:Deflection voltage control (OFF) 4:Fault clear
24	95	operation	Reserve_1		
				-	"Reserve" is not initially provided, but may be added in future.
24	97		Reserve_3		

Holding Register data configuration on RX2 (9/13)

Wo	ord				
	ress	Classification	Item name	Setting range	Content
24	98		Current time(year)	2000 to 2099	
24	99		Current time(month)	1 to 12	
24	9A		Current time(day)	1 to 31	Sets the current time.
24	9B		Current time(hour)	0 to 23	Cots the current time.
24	9C		Current time(minute)	0 to 59	
24	9D		Current time(second)	0 to 59	
24	9E		Calendar time control	0 , 1	Sets the calendar time control. 0:same as current time 1:clock stop
24	9F	Date / time	Calendar time(year)	2000 to 2099	
24	A0	setup	Calendar time(month)	1 to 12	
24	A1		Calendar time(day)	1 to 31	Sets the calendar time.
24	A2		Calendar time(hour)	0 to 23	Sets the calendar time.
24	А3		Calendar time(minute)	0 to 59	
24	A4		Calendar time(second)	0 to 59	
24	A5		Clock system	0 , 1	Sets the clock system.
24	A6			- ,	0:24-hour clock , 1:12-hour clock
	AU		Reserve_1		"Reserve" is not initially provided,
24	AF		Reserve 10	-	but may be added in future.
24			_		Sets the repeat print sensor mode.
24	B0		Repeat print sensor mode	0 , 1	0:signal ON, 1:OFF-ON transition
24	B1		Change Character orientation	0 to 3	Sets the change character orientation. 0:Disable 1:Reverse direction printing 2:normal or inverted 3:Character orientation 0 or 3
24	B2		Change mode	0 , 1	Sets the change mode. 0: OFF=normal/forward 1: OFF=inverted/reverse
24	ВЗ		Reverse print	0 , 1	Sets the reverse print. 0:right-justified , 1:left-justified
24	B4	User	Print signal type	0 , 1	Sets the print signal type. 0:print.complete 1:printin-progress
24	B5	environment setup	Print data changeover error	0,1	Sets the print data changeover error. 0:Disable , 1:Enable
24	В6	(Future subject)	Char. Size menu 1	0 , 1	Sets the Char. Size menu 1. 0:5x8, 1:5x7
24	В7	oubject)	Char. Size menu 2	0 , 1	Sets the Char. Size menu 2. 0:9x8 , 1:9x7
24	В8		Excitation V-ref. warning	0 , 1	Sets the excitation V-ref. warning. 0:Disable , 1:Enable
24	В9		Print characters one by one	0 , 1	Sets the print characters one by one. 0:Disable , 1:Enable
24	ВА		Continue message print (Function item for SOP-15-20)	0 , 1	Sets the continue message print. 0:Disable , 1:Enable
24	ВВ		Start message number (Function item for SOP-15-20)	0 to 2000	Sets the number of registered print
24	ВС		End message number (Function item for SOP-15-20)	0 to 2000	message to be printed.
24	BD 75		Reserve_1	-	"Reserve" is not initially provided, but may be added in future.
25	7F		Reserve_195		

Holding register data configuration on RX2 (10/13)

	ord ress	Classification	Item name	Setting range	Contents
25	80		Display	0 to 2	Sets the display. 0:OFF in 3 min. , 1:OFF in 30 min. 2:Always ON
25	81		Keyboard layout	0 , 1	Sets the keyboard layout. 0:ABC , 1:QWERTY
25	82		ICON Display	0,1	Sets the ICON display. 0:Disable, 1:Enable
25	83	Touch screen setup	Clock display format	0 to 2	Sets the clock display format. 0:YYYY.MM.DD , 1:DD.MM.YYYY 2:MM.DD.YYYY
25	84	Scrup	Confirmation window for Manual Control Menu	0,1	Sets the confirmation window for manual control menu. 0:Display , 1:Non display
25	85		Arabic input method	0,1	Sets the Arabic input method. 0:to the left , 1:to the right
25 25	86 8F		Reserve_1 Reserve_10	-	"Reserve" is not initially provided, but may be added in future.
25 25	90 AF	Reserve	Reserve_1 Reserve_32	-	"Reserve" is not initially provided, but may be added in future.
25	B0		Ink operating time	0 to 9999	Sets the ink operating time.
25	B1		Ink alarm time	0 to 9999	Sets the ink alarm time.
25 25	B2 B3	Operation management	Print count	0 to 999999999	Sets the print count.
25 25	B4 B7	management	Reserve_1 Reserve_4	-	"Reserve" is not initially provided, but may be added in future.
25	В8		Ink filter use time	0 to 59999	Sets the ink filter use time.
25	B9		Makeup filter use time	0 to 59999	Sets the makeup filter use time.
25	ВА	Circulation	Recovery filter use time	0 to 59999	Sets the recovery filter use time.
25	BB		Air filter use time	0 to 59999	Sets the air filter use time.
25	ВС	control	Circulation filter use time	0 to 59999	Sets the circulation filter use time.
25 25	BD DF		Reserve_1 Reserve_35	-	"Reserve" is not initially provided, but may be added in future.

Holding Register data configuration on RX2 (11/13)

10/6	ard.				
Wo addi		Classification	Item name	Setting range	Contents
25	E0		Number to change the message name	1 to 2000	
25	E1		Message name(1st digit)	0x0020 to 0xFFFF	Changes the message name of
25	E2		Message name(2nd digit)	0x0020 to 0xFFFF	stored message of the selected
					number.
25	EB		Message name(11th digit)	0x0020 to 0xFFFF	
25	EC		Message name(12th digit)	0x0020 to 0xFFFF	
25 	ED		Reserve_1	-	"Reserve" is not initially provided, but may be added in future.
25	EF	Manage	Reserve_3		but may be added in future.
25	F0	messages	Number to delete the stored message	1 to 2000	Deletes the stored message of the selected number.
25	F1		Reserve_1		"Reserve" is not initially provided,
 25	FF		 Reserve_15	-	but may be added in future.
26	00		Number before the change	1 to 2000	Changes the stored number of
26	01		Number after the change	1 to 2000	stored messages of the selected number.
26	02		Reserve_1		"Reserve" is not initially provided, but may be added in future.
				-	
26	0F		Reserve_14		
26	10		Group number	1 to 99	
26	11		Group name(1st digit)	0x0020 to 0xFFFF	
26	12		Group name(2nd digit)	0x0020 to 0xFFFF	Creates the group of the selected
					number and name.
26	1B		Group name(11th digit)	0x0020 to 0xFFFF	
26	1C		Group name(12th digit)	0x0020 to 0xFFFF	
26	1D		Reserve_1		"Reserve" is not initially provided,
	45		 December 2	-	but may be added in future.
26	1F	Manage	Reserve_3 Number to change the group		
26	20	group	name	1 to 99	
26	21		Group name(1st digit)	0x0020 to 0xFFFF	
26	22		Group name(2nd digit)	0x0020 to 0xFFFF	Changes the group name of stored
					group of the selected number.
26	2B		Group name(11th digit)	0x0020 to 0xFFFF	
26	2C		Group name(12th digit)	0x0020 to 0xFFFF	
26	2D		Number before the change	1 to 99	Changes the stored number of
26	2E		Number after the change	1 to 99	stored groups of the selected number.
26	2F		Number to delete the stored group	1 to 99	Deletes the stored group of the selected number.

Holding Register data configuration on RX2 (12/13)

Wo	ord	Classification	Item name	Setting range	Contents
	ress	Classification		5 5	Contents
26	30		Substitution rule No.	1 to 99	
26	31		Substitution rule name (1st digit)	0x0020 to 0xFFFF	
26	32		Substitution rule name (2nd digit)	0x0020 to 0xFFFF	Sets the number and the name of Substitution rule 1.
					(Read only. Write operation is the future subject.)
26	3B		Substitution rule name (11th digit)	0x0020 to 0xFFFF	iuture subject.)
26	3C	Edit substitution	Substitution rule name (12th digit)	0x0020 to 0xFFFF	
26	3D	rule	Reserve_1		"Reserve" is not initially provided,
				-	but may be added in future.
26	3F		Reserve_3		,
26	40		Substitution rule(Rule 2)		Substitution rules 02 through 99
26	4F		Substitution rule(Nule 2)		will be set in the same configuration as those of
				-	Substitution rules 01 (Address:
2C	50				from 0x2630 to 0x263F).
2C	5F		Substitution rule(Rule 99)		(Read only. Write operation is the future subject.)
2C	60		Reserve_1		luture subject.)
	00	Reserve	_	_	"Reserve" is not initially provided,
 2C	6F	reserve	Reserve_16	-	but may be added in future.
2C	70		Printing job function	0 , 1	Sets the printing job function. 0:Disable , 1:Enable
2C	71	Printing Job	Control status	0,1	Sets the control status. 0:stop , 1:start
2C 2C	72 73	Management (Future	Print count	0 to 99999	Sets the print count.
2C	74	subject)	Reserve_1		
		, , ,		_	"Reserve" is not initially provided, but may be added in future.
2C	7F		Reserve_12		
2C	80		Reserve 1		
	00	Reserve		_	"Reserve" is not initially provided,
2C	FF	11000110	Reserve 128		but may be added in future.
2D	00		User pattern registration 01	0x0000 to 0xFFFF	Status of User pattern registration
2D	01		User pattern registration 02	0x0000 to 0xFFFF	(Registered or NOT) is set by bit information ON or OFF. User
20	υı		Oser pattern registration 02	UNUUUU IU UXFFFF	pattern registration 01 shows 16
					status of User pattern registration
2D	0B		User pattern registration 12	0x0000 to 0xFFFF	000 through 015 starting from the
2D	0C		User pattern registration 13	0x0000 to 0xFFFF	upper bit. Subsequently, the same data structure as that of User pattern registration 01 will follow.
2D	0D	User pattern	Reserve_1		"Reserve" is not initially provided,
	4 -	(Fixed size)	 December 10	-	but may be added in future.
2D	1F		Reserve_19	0x0000 to 0x5555	Hoor nottorn data will be a state of
2D	20		Pattern data	0x0000 to 0xFFFF	User pattern data will be set, size by size and moved up to front.
2D	21		Pattern data	0x0000 to 0xFFFF	Please note that the address of User pattern data will be different
				•••	size by size. Please refer to 5.5.(2)
64	FE		Pattern data	0x0000 to 0xFFFF	Details of User pattern data (Fixed-size and Free-size), for
64	FF		Pattern data	0x0000 to 0xFFFF	details.

Holding Register data configuration on RX2 (13/13)

	ord ress	Classification	Item name	Setting range	Contents
65	00		Pattern data registration 01	0x0000 to 0xFFFF	Status of User pattern registration (Registered or NOT) is set by bit
65	01		Pattern data registration 02	0x0000 to 0xFFFF	information ON or OFF. User pattern registration 01 shows 16 status of User pattern registration
65	02		Pattern data registration 03	0x0000 to 0xFFFF	000 through 015 starting from the upper bit. Subsequently, the same
65	03		Pattern data registration 04	0x0000 to 0xFFFF	data structure as that of User pattern registration 01 will follow.
65 	04		Reserve_1	-	"Reserve" is not initially provided, but may be added in future.
65	0F		Reserve_12		
65	10		Vertical size (User pattern character 00)	1 to 32	
65	11		Horizontal size (User pattern character 00)	1 to 320	Sets the dot size and pattern data of the user pattern data.
65	12		Pattern data (User pattern character 00)	0x0000 to 0xFFFF	User pattern data (Free-size) is controlled by the fixed address.
65	13	User pattern	Pattern data (User pattern character 00)	0x0000 to 0xFFFF	User pattern data (Free size) of the registered User pattern
		(Free size)			character 00 will be set here from
67	90		Pattern data (User pattern character 00)	0x0000 to 0xFFFF	0x6510 to 0x6791.
67	91		Pattern data (User pattern character 00)	0x0000 to 0xFFFF	
67	92				Llear pattern data (Free size) of the
67	93		User pattern data		User pattern data (Free size) of the registered User pattern character
6A	12		(User pattern character 01)		01 through 49 will be set in the
6A	13				same configuration as those of
				-	User pattern data of the registered User pattern character 01
DF	F2				(Address: from 0x6510 to 0x6791)
DF	F3		User pattern data		Please refer to 5.5 (2) Details of
E2	72		(User pattern character 49)		User pattern data (Fixed-size and Free-size), for details.
E2	73				. 100 0.20), 101 dotailo.
E2	74		Reserve_1		IIDaaaaalia aatiawali aa aa i
				-	"Reserve" is not initially provided, but may be added in future.
E2	7F		Reserve_12		The state of the s
E2	80		Reserve_1		IIDaaaaalia aatiolooli aasia
		Reserve		-	"Reserve" is not initially provided, but may be added in future.
FF	FF		Reserve_7552		

(2) Input Registers

Input Registers are the area read by Read Input Registers (0x04).

The item data is placed, which can be obtained from IJ Printer.

Input Registers can be read by one (1) word (2 bytes) at every address.

Input Register data configuration on RX2 (1/8)

\\/c	Word Clasification (house see a Contrate						
addı		Classification	Item name	Setting range	Contents		
00	00		Communication connection status	0x0030 , 0x0031	Gets the communication connection status. 0x0030:Offline , 0x0031:Online		
00	01		Receive enable/disable status	0x0030 , 0x0031	Gets the receive enable/disable status. 0x0030:Reception not possible 0x0031:Reception possible		
00	02		Operation status	0x0000 to 0xFFFF	Gets the operation status. Status can be obtained by use of the same code as that of the		
00	03		Warning status	0x0000 to 0xFFFF	Status output of SOP-04 (Special Communication Function A). Refer to Software Option Specification SOP-04 for details.		
00	04	Unit status	Analysis information 1 (Function code)	0x0000 to 0xFFFF	Cause will be obtained when the external communication error occurred during Modbus communication. Refer to 5.5 (1) Details of Analysis information for		
00	05		Analysis information 2 (Classification code)	0x0000 to 0xFFFF	details. ·Analysis information 1 Function code is obtained when error is caused.		
00	06		Analysis information 3 (Error factor)	0x0000 to 0xFFFF	·Analysis information 2 Classification code is obtained when error is caused.		
00	07		Analysis information 4 (Preparation for future)	0x0000 to 0xFFFF	Analysis information 3 Error factor is obtained when error is caused. Analysis information 4 [0x0000] Fixed		
00 00	08 0F		Reserve_1 Reserve_8	-	"Reserve" is not initially provided, but may be added in future.		
00	10		Type name(1st digit)	0x0030 to 0x007A			
00	11		Type name(2nd digit)	0x0030 to 0x007A	Gets the type name.		
					Model name RX2-SD160W is		
00	1E		Type name(15th digit)	0x0030 to 0x007A	obtained when it is used.		
00	1F		Type name(16th digit)	0x0030 to 0x007A			
00	20 21	Unit information	Serial number	00000000 to 9999999	Gets the serial number.		
00	22		Ink name(1st digit)	0x0030 to 0x007A			
00	23		Ink name(2nd digit)	0x0030 to 0x007A	Gets the ink name.		
					Ink type JP-K67 is obtained when		
00	2A		Ink name(9th digit)	0x0030 to 0x007A	it is used.		
00	2B		Ink name(10th digit)	0x0030 to 0x007A			

Input Register data configuration on RX2 (2/8)

	ord ress	Classification	Item name	Setting range	Contents
00	2C		Input mode	1,2	Gets the input mode. 1:Default , 2:Local Language
00	2D		Maximum message length (Characters)	120 to 1000	Gets the maximum message length (Characters).
00	2E		Maximum registers	48 to 2000	Gets the maximum registers.
00	2F		2D code print	0,1	Gets the 2D code print. 0:NOT supported , 1:supported
00	30	Unit	Character size	0x0000 to 0x0007	Gets the Settable sizes. Bit information is obtained for availability of Character size of 4x5 or 18x24 or 24x32. 0x0001:4x5, 0x0002:18x24 0x0004:24x32
00	31	information	Maximum calendar/count block count	2,8	Gets the maximum calendar/count block count.
00	32		Replacement items	48 , 99	Gets the replacement items.
00	33		Shift code/Time count	0,1	Gets the shift code/time count. 0:NOT supported, 1:supported
00	34		Chimney/DIN print	0,1	Gets the chimney/DIN print. 0:NOT supported, 1:supported
00	35		Maximum column	2 to 5	Gets the maximum column.
00 00	36 4F		Reserve_1 Reserve_26	-	"Reserve" is not initially provided, but may be added in future.
00	50		Ink operating time	0 to 9999	Gets the ink operating time.
00	51		Ink alarm time	0 to 9999	Gets the ink alarm time.
00	52 53		Print count	0 to 999999999	Gets the print count.
00	54 55		Cumulative operation time	0 to 999999	Gets the cumulative operation time.
00	56		Ink/makeup ink type	1 to 999	Gets the ink/makeup ink type.
00	57		Ink viscosity	0 to 999	Gets the ink viscosity.
00	58	Operation	Ink pressure	0 to 999	Gets the ink pressure. Ink pressure multiplied by 1000 is obtained. (Example : 255 = 0.255 MPa)
00	59	management	Ambient temperature	-99 to 100	Gets the ambient temperature.
00	5A		Deflection voltage	0 to 99	Gets the deflection voltage. Deflection Voltage multiplied by 10 is obtained. (Example: 57 = 5.7 kV)
00	5B		Excitation V-ref.	0 to 27	Gets the excitation V-ref.
00	5C		Excitation frequency	0 to 1000	Gets the excitation frequency. Excitation frequency multiplied by 10 is obtained. (Example: 689 = 68.9 kHz)
00	5D		Reserve_1	-	"Reserve" is not initially provided,
00	6F		Reserve_19		but may be added in future.

Input Register data configuration on RX2 (3/8)

Wo		Classification	Item name	Setting range	Contents
00	70		Fault/warning message count	0 to 90	Gets the fault/warning message count.
00 00	71 73		Reserve_1 Reserve_3	-	"Reserve" is not initially provided, but may be added in future.
00	74		Generation time(year)	2000 to 2099	
00	75		Generation time(month)	1 to 12	1
00	76		Generation time(day)	1 to 31	Gets the generation time of the
00	77		Generation time(hour)	0 to 23	message 1.
00	78	View alarm	Generation time(minute)	0 to 59	1
00	79	history	Generation time(second)	0 to 59	
00	7A		Fault/warning No.	1 to 999	Gets the fault/warning No. of the message 1.
00	7B		Reserve_1	-	"Reserve" is not initially provided, but may be added in future.
00	7C 83		Fault/warning message 2		Fault/warning history 02 through 90 are obtained in a same way as
				-	that of Fault warning history 01
03	3C 43		Fault/warning message 90		(Address: from 0x0074 to 0x007B)
03	44		Reserve_1		
 0A	FF	Reserve	 Reserve_1980	-	"Reserve" is not initially provided, but may be added in future.
0B	00		State at power-up	0 to 2	Gets the state at power-up. 0:Comm. port is OFF 1:Comm. port is ON 2:OFF fixed
0B	01		Communication and signal error	0,1	Gets the communication and signal error. 0:Warning, 1:Fault
0B	02	Communicati	Baud rate(Standard port)	0 to 10	Gets the baud rate of the standard port. 0:150bps, 1:300bps, 2:600bps 3:1200bps, 4:2400bps 5:4800bps, 6:9600bps 7:19200bps, 8:38400bps 9:57600bps, 10:115200bps
0B	03	Communicati on environment	Data length(Standard port)	0,1	Gets the data length of the standard port. 0:7 bits, 1:8 bits
0B	04	setup	Parity bit(Standard port)	0 to 2	Gets the parity bit of the standard port. 0:Disable, 1:Odd, 2:Even
0B	05		Stop bits(Standard port)	0,1	Gets the stop bits of the standard port. 0:1 bit, 1:2 bits
0B	06		Baud rate(Secondary port)	0 to 10	Gets the baud rate of the secondary port.
0B	07		Data length(Secondary port)	0,1	Gets the data length of the secondary port.
0B	80		Parity bit(Secondary port)	0 to 2	Gets the parity bit of the secondary port.
0B	09		Stop bits(Secondary port)	0 , 1	Gets the stop bits of the secondary port.

Input Register data configuration on RX2 (4/8)

Wo		Classification	Item name	Setting range	Contents
0B	0A		Baud rate(Private port)	0 to 10	Gets the baud rate of the private port.
0B	0B		Data length(Private port)	0 , 1	Gets the data length of the private port.
0B	0C		Parity bit(Private port)	0 to 2	Gets the parity bit of the private port.
0B	0D		Stop bits(Private port)	0,1	Gets the stop bits of the private port.
0B	0E		Number of comm. bytes	0,1	Gets the number of comm. bytes. 0:1 byte, 1:2 bytes
0B	0F		BCC code handling	0 , 1	Gets the BCC code handling. 0:Disable , 1:Enable
0B	10		Communication mode	0,1	Gets the communication mode. 0:overwrite-protected 1:overwrite-enabled
0B	11		Print message transfer ACK	0,1	Gets the print message transfer ACK. 0:t=fixed , 1:t=async.
0B	12		Print spec transfer char height	0,1	Gets the print spec transfer char height. 0:2 digits , 1:3 digits
0B	13		Buffer function (Function item for Communication buffer)	0,1	Gets the buffer function. 0:Disable , 1:Enable
0B	14		Buffer repeat count (Function item for Communication buffer)	1 to 9999	Gets the buffer repeat count.
0B	15	Communicati	Empty Buffer Fault (Function item for Communication buffer)	0,1	Gets the empty buffer fault. 0:Disable , 1:Enable
0B	16	on environment setup	Timing of Fault (Function item for Communication buffer)	0,1	Gets the timing of fault. 0:Print Start, 1:Print. Complete
0B	17	Solup	Data Number at Fault (Function item for Communication buffer)	0 to 9	Gets the data number at fault.
0B	18		Start output (Function item for SOP-04)	0,1	Gets the start output. 0:Disable , 1:Enable
0B	19		Output kind (Function item for SOP-04)	0 to 2	Gets the output kind. 0:Disable , 1:Print data , 2:Code
0B	1A		Condition (Function item for SOP-04)	0,1	Gets the condition. 0:Every time 1:Different from last time
0B	1B		Status output (Function item for SOP-04)	0,1	Gets the status output. 0:Disable , 1:Enable
0B	1C		Output item(Start item) (Function item for SOP-04)	1 to 100	Gets the output item.
0B	1D		Output item(End item) (Function item for SOP-04)	1 to 100	·
0B	1E		Output comm. ENQ (Function item for SOP-04)	0,1	Gets the output comm. ENQ. 0:Disable , 1:Enable
0B	1F		Output port (Function item for SOP-04)	0 , 1	Gets the output port. 0:Standard port 1:Secondary port
0B	20		Select message (Function item for SOP-05)	0,1	Gets the select message. 0:Disable , 1:Enable
0B	21		Data exchange (Function item for SOP-05)	0,1	Gets the data exchange. 0:Reflect at once 1:Reflect by signal
0B 	22		Reserve_1	-	"Reserve" is not initially provided, but may be added in future.
0B	BF		Reserve_158		Jac may be added in faction.

Input Register data configuration on RX2 (5/8)

	ord ress	Classification	Item name	Setting range	Contents
0B	C0		Ink concentration control	0 , 1	Gets the ink concentration control. 0:Disable , 1:Enable
0B 0B	C1 CF		Reserve_1 Reserve_15	-	"Reserve" is not initially provided, but may be added in future.
0B	D0		Ink filter use time	0 to 59999	Gets the ink filter use time.
0B	D1		Makeup filter use time	0 to 59999	Gets the makeup filter use time.
0B	D2		Recovery filter use time	0 to 59999	Gets the recovery filter use time.
0B	D3		Air filter use time	0 to 59999	Gets the air filter use time.
0B	D4		Circulation filter use time	0 to 59999	Gets the circulation filter use time.
0B	D5		MGV filter use time	0 to 59999	Gets the MGV filter use time.
0B	D6		Pump use time	0 to 59999	Gets the pump use time.
0B	D7		Heating unit use time	0 to 59999	Gets the heating unit use time.
0B	D8		MV1 use time	0 to 59999	Gets the MV1 use time.
0B	D9		MV2 use time	0 to 59999	Gets the MV2 use time.
0B	DA		MV3 use time	0 to 59999	Gets the MV3 use time.
0B	DB	Circulation	MV4 use time	0 to 59999	Gets the MV4 use time.
0B	DC	control	MV5 use time	0 to 59999	Gets the MV5 use time.
0B	DD		MV6 use time	0 to 59999	Gets the MV6 use time.
0B	DE		MV7 use time	0 to 59999	Gets the MV7 use time.
0B	DF		MV8 use time	0 to 59999	Gets the MV8 use time.
0B	E0		MV9 use time	0 to 59999	Gets the MV9 use time.
0B	E1		Reserve_1		"Reserve" is not initially provided,
0B	E2		Reserve_2	_	but may be added in future.
0B	E3		Ink consumption	0 to 999999	Gets the ink consumption.
0B	E4		THE CONSUMPTION	0 10 999999	Gets the link consumption.
0B	E5		Makeup consumption	0 to 999999	Gets the makeup consumption.
0B	E6		Makeup consumption	0 10 333333	Gets the makeup consumption.
0B 0B	E7 E8		Print count	0 to 999999999	Gets the print count.
0B	E9		R air filter use time	0 to 59999	Gets the R air filter use time.
0B 	EA		Reserve_1	-	"Reserve" is not initially provided, but may be added in future.
0C	1F		Reserve_54		Sat may be added in fatale.

Input Register data configuration on RX2 (6/8)

Wo	ord	as		0	
add		Classification	Item name	Setting range	Contents
0C	20		Basic software(1st digit)	0x0020 to 0xFFFF	
0C	21		Basic software(2nd digit)	0x0020 to 0xFFFF	Gets the basic software version. When the version is V01.00,
					"V01.00 Basic software" is
0C	3E		Basic software(31st digit)	0x0020 to 0xFFFF	obtained.
0C	3F		Basic software(32nd digit)	0x0020 to 0xFFFF	
0C	40		Controller software(1st digit)	0x0020 to 0xFFFF	Gets the controller software
0C	41		Controller software(2nd digit)	0x0020 to 0xFFFF	version.
					When the version is V01.00, "V01.00 Controller software" is
0C	5E		Controller software(31st digit)	0x0020 to 0xFFFF	obtained.
0C	5F		Controller software(32nd digit) Print controller software M	0x0020 to 0xFFFF	
0C	60		(1st digit)	0x0020 to 0xFFFF	
0C	61		Print controller software M (2nd digit)	0x0020 to 0xFFFF	Gets the print controller software M version.
					When the version is V01.00,
0C	7E		Print controller software M (31st digit)	0x0020 to 0xFFFF	"V01.00 Engine software M" is obtained.
0C	7F		Print controller software M	0x0020 to 0xFFFF	ootaliiou.
0C	80		(32nd digit) Print controller software S	0x0020 to 0xFFFF	
			(1st digit) Print controller software S		Gets the print controller software S
0C	81		(2nd digit)	0x0020 to 0xFFFF	version.
			Print controller software S		When the version is V01.00, "V01.00 Engine software S" is
0C	9E		(31st digit)	0x0020 to 0xFFFF	obtained.
0C	9F		Print controller software S (32nd digit)	0x0020 to 0xFFFF	
0C	A0	View software version	1st language(1st digit)	0x0020 to 0xFFFF	Gets the language version. When the version is V01.00 English language,
0C	A1		1st language(2nd digit)	0x0020 to 0xFFFF	"V01.00 Language 02" is obtained. The last 2-digit shows Language number. [Language No.]
					01:Japanese 02:English 03:Simple Chinese 04:Traditional Chinese 05:Korean
0C	BE		1st language(31st digit)	0x0020 to 0xFFFF	06:Thai 06:Thai 07:Italian 08:Dutch 09:Spanish
0C	BF		1st language(32nd digit)	0x0020 to 0xFFFF	10:German 11:French 12:Vietnamese
0C	C0		2nd language(1st digit)	0x0020 to 0xFFFF	13:Swedish 14:Arabic 15:Russian 16:Greek
0C	C1		2nd language(2nd digit)	0x0020 to 0xFFFF	17:Czech 18:Danish 19:Portuguese 20:Polish
					21:Serbian 22:Turkish 23:Hungarian 24:Bulgarian
0C	DE		2nd language(31st digit)	0x0020 to 0xFFFF	25:Catālan 26:Finnish 27:Romanian 28:Norwegian
0C	DF		2nd language(32nd digit)	0x0020 to 0xFFFF	29:Slovenian 30:Croatian 31:Myanmar

Input Register data configuration on RX2 (7/8)

Wo		Classification	Item name	Setting range	Contents
0C	E0		Software option01(1st digit)	0x0020 to 0xFFFF	
0C	E1		Software option01(2nd digit)	0x0020 to 0xFFFF	
0C	FE		Software option01(31st digit)	0x0020 to 0xFFFF	
0C	FF		Software option01(32nd digit)	0x0020 to 0xFFFF	Gets the software option version
			Contract options (C2114 digit)	5X5525 to 5X1111	and symbol. When SOP-04 is installed and its
0E	00	View	Software option10(1st digit)	0x0020 to 0xFFFF	version is V01.00,
0E	01	software	Software option10(2nd digit)	0x0020 to 0xFFFF	"V01.00 SOP-04" is obtained.
	<u> </u>	version	convare option to (End digit)	5X5525 to 5X1111	
0E	1E		Software option10(31st digit)	0x0020 to 0xFFFF	
0E	1F		Software option10(32nd digit)	0x0020 to 0x1111	
0E	20		Reserve 1	0.0020 10 0.01111	
	20		_		"Reserve" is not initially provided,
0E	3F		Reserve_32	-	but may be added in future.
0E	40		Print data message number	1 to 2000	
0E	41		Group number	0 to 99	When Print message registration number is specified at Holding
0E	42		Message name(1st digit)	0x0020 to 0xFFFF	Register address 0x0010, its
					Group number and Message name
0E	4D		Message name(12th digit)	0x0020 to 0xFFFF	are obtained.
0E	4E		Reserve 1		
				-	"Reserve" is not initially provided,
0E	52	Manage	Reserve_5		but may be added in future.
0E	53	messages	Print message registration (001)	0x0000 to 0xFFFF	Status of Print message registration (Registered or NOT) is obtained by bit information ON or OFF. Print message registration (001) shows 16 statuses of Print message registrations 1 through 16 starting from the upper bit.
0E	CF		Print message registration (125)	0x0000 to 0xFFFF	Subsequently, the same data structure as those of Print message registration (001) will follow.
0E	D0		Group number	0 to 99	When Group number is specified
0E	D1		Group name(1st digit)	0x0020 to 0xFFFF	at Holding Register address
					0x0014, its Group name is
0E	DC		Group name(12th digit)	0x0020 to 0xFFFF	obtained.
0E	DD		Reserve_1		
		Manage group	_ 	-	"Reserve" is not initially provided,
0E	E8		Reserve_12		but may be added in future.
0E	E9		Group registration (1)	0x0000 to 0xFFFF	Status of Group registration (Registered or NOT) is obtained by bit information ON or OFF. Group
					registration (1) shows 16 statuses of Group registrations 1 through 16
0E	EF		Group registration (7)	0x0000 to 0xFFFF	starting from the upper bit. Subsequently, the same data structure as those of Group registration (1) will follow.

Input Register data configuration on RX2 (8/8)

Wo		Classification	Item name	Setting range	Contents
0E	F0		Current message data length	0 to 2000	Gets the message data length (Character count x 2) of the current message.
0E	F1		Inter-character space (Character units)	0 to 28	When Character position is specified at Holding Register address 0x0011, its Inter-character space will be obtained.
0E	F2		Calendar block count	0 to 8	Gets the calendar block count of the current message.
0E	F3		Calendar characters count (Calendar block 1)	0 to 20	
0E	F4		Calendar characters count (Calendar block 2)	0 to 20	Gets the calendar characters
				•••	count for 8 blocks of the current
0E	F9		Calendar characters count (Calendar block 7)	0 to 20	message.
0E	FA		Calendar characters count (Calendar block 8)	0 to 20	
0E	FB		Time count block No.	0 to 8	Gets the time count block No. of the current message.
0E	FC		Shift code block No.	0 to 8	Gets the shift code block No. of the current message.
0E	FD		Shift code rule count	0 to 48	Gets the shift code rule count of the current message.
0E	FE	Various data	Count block count	0 to 8	Gets the count block count of the current message.
0E	FF	Various data	Count characters count (Count block 1)	0 to 20	
0F	00		Count characters count (Count block 2)	0 to 20	Gets the count characters count for 8 blocks of the current
				•••	
0F	05		Count characters count (Count block 7)	0 to 20	message.
0F	06		Count characters count (Count block 8)	0 to 20	
0F 0F	07 0F		Reserve_1 Reserve_9	-	"Reserve" is not initially provided, but may be added in future.
0F	10		Inter-character space (1st digit)	0 to 28	
0F	11		Inter-character space (2nd digit)	0 to 28	Gets the inter-character space for
					1000 characters of the current
12	F6		Inter-character space (999th digit)	0 to 28	message.
12	F7		Inter-character space (1000th digit)	0 to 28	
12	F8		Reserve_1		"Reserve" is not initially provided,
				-	but may be added in future.
12	FF		Reserve_8		-
13 13	00		Print completion count	0 to 99999	Gets the print completion count.
13	02	Printing Job Management (Future	Print completion status	0 to 2	Gets the print completion status. 0:Non-completion 1:Print completion 2:Fault
13	03	subject)	Reserve_1	-	"Reserve" is not initially provided, but may be added in future.
13	0F		Reserve_13		but may be added in idtule.

5.4.3 Data configuration on UX

(1) Holding Registers

Holding Registers are the area which is written by Write Multiple Registers (0x10) or Write Single Register (0x06) and read by Read Holding Registers (0x03).

The item data which can be set to IJ printer or can be obtained from IJ printer are all placed in Holding Registers.

Holding Registers can be read and be written by one (1) word (2 bytes) at every address.

Holding Register data configuration on UX (1/13)

Word address	Classification	Item name	Setting range	Contents
00 00		Start/Stop control flag	1,2	Start/Stop flag is used when Holding Register is written more than once. First write "1" and write Holding Registers more than once and finally write "2". Then all the written contents will be reflected to IJ Printer. Start/Stop flag is not used when Holding Register is written only once. [1:Start; 2:Stop]
00 01 00 07		Reserve_1 Reserve_7	-	"Reserve" is not initially provided, but may be added in future.
00 08		Number of the printing items	1 to 100	Set the number of the printing items used.
00 09 00 0F		Reserve_1 Reserve_7	-	"Reserve" is not initially provided, but may be added in future.
00 10	Index	Specify Print message registration number	0 to 2000	Set Print message information at Input Register address 0x0E40, which Print message registration number is specified here. When "0" is specified, the print message information of the print message which is being edited will be set.
00 11		Specify Character position for the Inter-character space obtained	1 to 1000	Set Inter-character space at Input Register address 0x0EF1, which Character position is specified here.
00 12		Specify Substitution rules number	1 to 99	Set Substitution rules data at Holding Register address 0x1AC0, which Substitution rules number is specified here.
00 13		Specify User pattern character size	1 to 15	Set User pattern registration information at Holding Register address 0x2D00, which Character size is specified here. 1:4x5, 2:5x5, 3:5x8(5x7), 4:9x8(9x7), 5:7x10, 6:10x12, 7:12x16, 8:18x24, 9:24x32, 10:11x11, 11:5x3(chimney), 12:5x5(chimney), 13:7x5(chimney), 14:30x40, 15:36x48
00 14		Specify Group number	1 to 99	Set Group information at Input Register address 0x0ED0, which Group number is specified here.
00 15 00 1F		Reserve_1 Reserve 11	-	"Reserve" is not initially provided, but may be added in future.
	1	_ ······		<u> </u>

Holding Register data configuration on UX (2/13)

Wo addi		Classification	Item name	Setting range	Contents
00	20		Character count(Print item 1)	1 to 1000	
00	21		Character count(Print item 2)	1 to 1000	Sets the character count for each
00	82		Character count(Print item 99)	1 to 1000	print item.
00	83		Character count(Print item 100)	1 to 1000	
00	84		Attribute(1st digit)	0x0000 to 0xFFFF	Set the characters of Print contents. Character codes are the
00	85	Print	Character code(1st digit)	0x0020 to 0xFFFF	same as those which are used in Standard communication. Please refer to Technical Manual, Section
		contents			5 Communication, for details.
08	52		Attribute(1000th digit)	0x0000 to 0xFFFF	In case of setting Calendar/Count characters, set to Character
08	53		Character code(1000th digit)	0x0020 to 0xFFFF	attribute, or if they are NOT Calendar/Count characters, set to Character code.
08	54		Reserve_1		"Reserve" is not initially provided,
 0F	FF		 Reserve_1964	-	but may be added in future.
10	00		Printing erase item number	1 to 100	Sets the printing item number to erase printing contents.
10	01	Printings	Reserve 1		_
		erasure		-	"Reserve" is not initially provided, but may be added in future.
10	05		Reserve_5		-
10	06	D	Print data message number	1 to 2000	Set the registered print message number to be recalled.
10	07	Print data recall	Reserve_1		"Reserve" is not initially provided,
	0.0	recaii	 D	-	but may be added in future.
10	0B 0C		Reserve_5	0 to 00	
10	0C 0D		Group number Print data message number	0 to 99 1 to 2000	
10	0E		Message name(1st digit)	0x0020 to 0xFFFF	Register the being edited print
10	0F		Message name(2nd digit)	0x0020 to 0xFFFF	message by the specified Group number or by the registered print
		Print data	Weddage Harrie(Zha digit)	0X0020 to 0X1111	message number or by the
10	18	registration	Message name(11th digit)	0x0020 to 0xFFFF	message name.
10	19		Message name(12th digit)	0x0020 to 0xFFFF	
10	1A		Reserve 1		
				-	"Reserve" is not initially provided, but may be added in future.
10	1F		Reserve_6		•
10	20		Line count / print format uniformity	0,1	Line count of all columns are made uniform based on the first column.
10	21		Insert column	1 to 100	Adds a column directly before the editing objective column.
10	22		Delete column	1 to 100	Deletes all the print items of the editing objective column.
10	23	Print format	Add column	1 to 100	Adds a column at the end.
10	24		Individual column setup (Column position)	1 to 100	Changing the number of lines of
10	25		Individual column setup (Line count)	1 to 5	the editing objective column.
10 10	26 27		Reserve_1 Reserve_2	-	"Reserve" is not initially provided, but may be added in future.
10	28		Adjust Inter-character space (Start)	1 to 1000	
10	29		Adjust Inter-character space (End)	1 to 1000	Inter-character space can be set in character units.
10	2A		Adjust Inter-character space (Setting value)	0 to 28	

Holding Register data configuration on UX (3/13)

Wo		Classification	Item name	Setting range	Contents
10	2B		Reserve_1		"December in not initially provided
				-	"Reserve" is not initially provided, but may be added in future.
10	3E		Reserve_20		,
10	3F		Format Setup	1 to 3	Sets the Format Setup. 1:Individual setup , 2:Overall setup 3:Free layout
10	40		Line count	1 to 5	Sets the line count of the print item 1.
10	41		Line spacing	0 to 2	Sets the line spacing of the print item 1.
10	42		Character size	1 to 15	Sets the character size of the print item 1. 1:4x5, 2:5x5, 3:5x8(5x7) 4:9x8(9x7), 5:7x10, 6:10x12 7:12x16, 8:18x24, 9:24x32 10:11x11, 11:5x3(chimney) 12:5x5(chimney), 13:7x5(chimney) 14:30x40, 15:36x48
10	43		Inter-character space	0 to 28	Sets the inter-character space of the print item 1.
10	44		Bold	1 to 9	Sets the bold of the print item 1.
10	45	Print format	Bar code	0 to 26	Sets the bar code of the print item 1. 0:none , 1:Code 39 , 2:ITF 3:NW-7 , 4:EAN-13 , 5:DM8x32 6:DM16x16 , 7:DM16x36 8:DM16x48 , 9:DM18x18 10:DM20x20 , 11:DM22x22 12:DM24x24 13:Code 128 (Code set B) 14:Code 128 (Code set C) 15:UPC-A , 16:UPC-E , 17:EAN-8 18:QR21x21 , 19:QR25x25 20:QR29x29 , 22:EAN-13add-on 5 23:MicroQR15x15 24:GS1 DataBar (Limited) 25:GS1 DataBar (Omnidirectional) 26:GS1 DataBar (Stacked)
10	46		EAN readable code	0 to 2	Sets the EAN readable code of the print item 1. 0:none , 1:5x5 , 2:5x7
10	47		EAN Prefix	0 to 99	Sets the EAN prefix of the print item 1.
10	48		Calendar block No.	0 to 8	When writing, setting is NOT
10	49		Calendar block count	0 to 8	required. When reading, Block
10	4A		Count block No.	0 to 8	information can be obtained item by item.
10	4B		Count block count	0 to 8	-
10	4C		Horizontal (X)	0 to 31998	Valid when Free layout is set. Sets the coordinate of the print
10	4D		Vertical (Y)	0 to 29	item 1.
10 10	4E 57		Reserve_1 Reserve_10	-	"Reserve" is not initially provided, but may be added in future.
10 10 19	58 6F 88		Print format(Print item 2)	-	Item 2 through 100 will be set in the same configuration as those of Item 1 (Address: from 0x1040 to
19	9F		Print format(Print item 100)		0x1057).

Holding Register data configuration on UX (4/13)

Wo	ord ress	Classification	Item name	Setting range	Contents
19	A0		Character height	0 to 99	Sets the character height.
19	A1		Ink drop use	1 to 16	Sets the ink drop use.
19	A2		High-speed print	Nozzle diameter 65μ m or 40μ m 0 to 3 Nozzle diameter 55μ m 0 to 6	Sets the high-speed print. Nozzle diameter 65μ m or 40μ m 0:HM , 1:NM , 2:QM , 3:SM Nozzle diameter 55μ m 0:M1, 1:M2, 2:M3, 3:M4, 4:M5, 5:M6, 6:M7
19	А3		Character width	0 to 3999	Sets the character width.
19	A4		Character orientation	0 to 3	Sets the character orientation.
19	A5		Print start delay	0 to 9999	Sets the print start delay.
19	A6		Reverse direction	0 to 9999	Sets the reverse direction.
19	A7		Product speed matching	0 to 2	Sets the product speed matching. 0:None , 1:Encoder , 2:Auto
19	A8		Pulse rate division factor	1 to 999	Sets the pulse rate division factor.
19	A9		Speed compensation	0,1	Sets the speed compensation. 0:Disable , 1:Enable
19	AA	Print	Line speed	0 to 9999	Sets the line speed. Set value is multiplied by 1/10 and reflected to IJ Printer. (Example: 1234 = 123.4 m/min.)
19	AB	specification	Distance between print head and work	0 to 99	Sets the distance between print head and work.
19	AC		Print Target width	0 to 9999	Sets the print Target width.
19	AD		Actual Print width	0 to 9999	Sets the actual Print width.
19	ΑE		Repeat count	0 to 9999	Sets the repeat count.
19 19	AF B0		Repeat intervals	0 to 99999	Sets the repeat intervals.
19	B1		Target sensor timer	0 to 999	Sets the target sensor timer.
19	B2		Target sensor filter	0 , 1	Sets the target sensor filter. 0:Time setup , 1:Until end of print.
19	B3		Target sensor filter value	0 to 9999	Sets the target sensor filter value.
19	B4		Ink Drop Charge Rule	0 to 2	Sets the ink drop charge rule. 0:Standard 1:Mixed single scan and interlaced 2:Dot mixed interlaced
19	B5		Speed compensation fine control	-50 to 50	Sets the speed compensation fine control.
19 19	B6 BF		Reserve_1 Reserve_10	-	"Reserve" is not initially provided, but may be added in future.

Holding Register data configuration on UX (5/13)

	C0			Setting range	Contents
19			Offset(Year)	0 to 99	
. •	C1		Offset(Month)	0 to 99	
19	C2		Offset(Day)	0 to 1999	Sets the offset of the Calendar block 1.
19	C3		Offset(Hour)	-23 to 99	Block 1.
19	C4		Offset(Minute)	-59 to 99	
19	C5		Zero-suppression(Year)	0 to 2	
19	C6		Zero-suppression(Month)	0 to 2	Sets the zero-suppression of the
19	C7		Zero-suppression(Day)	0 to 2	Calendar block 1. 0:Disable , 1:Enable(Space)
19	C8		Zero-suppression(Hour)	0 to 2	2:Enable(Character fill)
19	C9		Zero-suppression(Minute)	0 to 2	
19	CA		Substitution rules(Year)	0 , 1	
19	СВ		Substitution rules(Month)	0 , 1	Sets the substitution rules of the
19	CC		Substitution rules(Day)	0 , 1	Calendar block 1.
19	CD		Substitution rules(Hour)	0 , 1	0:Disable , 1:Enable
19	CE		Substitution rules(Minute)	0 , 1	
19	CF	Calendar	Substitution rules No.	1 to 99	Sets the substitution rules No. of the Calendar block 1.
19	D0	condition	Substitution rules (Week number)	0,1	Sets the substitution rules of the Calendar block 1.
19	D1		Zero-suppression (Week number)	0 to 2	Sets the zero-suppression of the Calendar block 1.
19	D2		Substitution rules (Day of week)	0 , 1	Sets the substitution rules of the Calendar block 1.
19	D3		Zero-suppression (Day of week)	0 to 2	Sets the zero-suppression of the Calendar block 1.
19	D4		Output during calendar updating Trigger (Function item for SOP-05)	1	[1] Fixed
19 	D5		Reserve_1	-	"Reserve" is not initially provided, but may be added in future.
19	DF		Reserve_11		but may be added in future.
	E0 FF		Calendar condition (Calendar block 2)		Block 2 through 8 will be set in the
				-	same configuration as those of
1A .	A0 BF		Calendar condition (Calendar block 8)		Block 1 (Address: from 0x19C0 to 0x19DF).

Holding Register data configuration on UX (6/13)

۱۸/-	vrd				
Wo addr		Classification	Item name	Setting range	Contents
1A	C0		Substitution rules No.	1 to 99	
1A	C1		Starting year	2000 to 2099	
1A	C2		Substitution character(Year)	0x0020 to 0xFFFF	
1A	F3		Substitution character(Year)	0x0020 to 0xFFFF	
1A	F4		Substitution character(Month)	0x0020 to 0xFFFF	
1B	17		Substitution character(Month)	0x0020 to 0xFFFF	
1B	18		Substitution character(Day)	0x0020 to 0xFFFF	
1B	74		Substitution character(Day)	0x0020 to 0xFFFF	
1B	75		Substitution character(Hour)	0x0020 to 0xFFFF	Substitution rules will be registered
					with the specified Substitution rules number, Start year and
1B	A4	Substitution	Substitution character(Hour)	0x0020 to 0xFFFF	Substitution rules setup items.
1B	A5	rule	Substitution character(Minute)	0x0020 to 0xFFFF	•
1C	1C		Substitution character(Minute)	0x0020 to 0xFFFF	
1C	1D		Substitution character	0x0020 to 0xFFFF	
-			(Week number)		
•••			Substitution character	•••	
1C	BB		(Week number)	0x0020 to 0xFFFF	
1C	ВС		Substitution character (Day of week)	0x0020 to 0xFFFF	
1C	D0		Substitution character (Day of week)	0x0020 to 0xFFFF	
1C	D1		Reserve_1		
				-	"Reserve" is not initially provided, but may be added in future.
1C	D3		Reserve_3		but may be added in luture.
1C	D4		Range (Lower limit) (1st digit)	0x0020 to 0xFFFF	
					Sets the range (Lower limit).
1C	D6		Range (Lower limit) (3rd digit)	0x0020 to 0xFFFF	
1C	D7		Range (Upper limit) (1st digit)	0x0020 to 0xFFFF	
					Sets the range (Upper limit).
1C	D9		Range (Upper limit) (3rd digit)	0x0020 to 0xFFFF	O C FF - 7
1C	DA	Time count condition	Reset(1st digit)	0x0020 to 0xFFFF	
				5.10020 to 0.1111	Sets the reset.
1C	DC		Reset(3rd digit)	0x0020 to 0xFFFF	
1C	DD		Reset time	0 to 23	Sets the reset time.
				0.020	Sets the renewal period.
1C	DE		Renewal period	0 to 5	0:5 minutes, 1:6 minutes 2:10 minutes, 3:15 minutes 4:20 minutes, 5:30 minutes
1C	DF		Reserve_1	-	"Reserve" is not initially provided, but may be added in future.

Holding Register data configuration on UX (7/13)

Contents Contents			<u>-</u>		
Start minute	Word address	Classification	Item name	Setting range	Contents
C	1C E0		Start hour	0 to 23	Sets the start time of the shift code
1C E3	1C E1		Start minute	0 to 59	rule 1.
Columb	1C E2		End hour	0 to 23	Sets the end time of the shift code
Company Comp	1C E3		End minute	0 to 59	rule 1.
Shift code character	1C E4			0x0020 to 0xFFFF	
Shift code Shift code Shift code Reserve_1				•••	
1C EF Reserve_1 Reserve_2 Shift code rule (Rule 2)	1C ED			0x0020 to 0xFFFF	offitt dodd fallo 1.
The control of the count block 1 Sets the range (Lower limit) of the count block 1	1C EE	Joseph	Reserve_1		
Shift code rule (Rule 2) Shift code 2 through 48 will be set in the same configuration as those of Shift code 1 (Address: from 0x1CEO~0x1CEF).	1C EF		Reserve_2	-	but may be added in future.
In the same configuration as those of Shift code (Rule 48)			Shift code rule (Rule 2)		Shift code 2 through 48 will be set
1F DD Shift code rule (Rule 48)				-	
Shift code rule (Rule 48)					
Sets the value of the count block 1 Value(20th digit) 0x0020 to 0xFFFF Range (Lower limit) 0x0020 to 0xFFFF Count block 1 Count	-	1	Shift code rule (Rule 48)		CATGLO CATGLI).
Value(20th digit)	1F E0		Value(1st digit)	0x0020 to 0xFFFF	
Value(20th digit)					Sets the value of the count block 1.
Count condition Count cond			Value(20th digit)	0x0020 to 0xFFFF	
Count condition Count cond	1E E4		Range (Lower limit)	0v0020 to 0vEEEE	
Count block 1. Coun	11 14		(1st digit)	000020 10 0011111	Sets the range (Lower limit) of the
Count condition Count cond			Denne (Leuren lineit)	•••	
Count condition Count cond	20 07		(20th digit)	0x0020 to 0xFFFF	
Count Coun	20 08			0x0020 to 0xFFFF	Sets the range (Linner limit) of the
Count condition Update (In progress) Update (In progress) O to 999998 Sets the update (In progress) of the count block 1.					
Update (In progress) Update (Units) Update (Update (Units) Update (Update (Units) Update (U	20 1B			0x0020 to 0xFFFF	
Description Count condition Count conditio			Update (In progress)	0 to 999998	
Sets the direction of the count block 1. Sets the jump (from) of the count block 1. Sets the jump (from) of the count block 1. Sets the jump (from) of the count block 1. Sets the jump (from) of the count block 1. Sets the jump (from) of the count block 1. Sets the jump (from) of the count block 1. Sets the jump (to) of the count block 1. Sets the ju			Update (Units)	1 to 999999	
Direction Direction Direction Direction Direction O, 1 Sets the direction of the count block 1. O:up, 1:down Jump (from) Jump (from) Jump (from) Jump (from) Jump (from) Jump (from) Jump (to) Jump	20 20		Increment	1 to 99	
20 22 20 35 20 36 Jump (from) (20th digit) 0x0020 to 0xFFFF Jump (to) (1st digit) 0x0020 to 0xFFFF Sets the jump (from) of the count block 1. 20 49 Jump (to) (20th digit) 0x0020 to 0xFFFF 20 49 Reset (1st digit) 0x0020 to 0xFFFF Sets the jump (to) of the count block 1. 20 5D Reset (1st digit) 0x0020 to 0xFFFF Sets the reset of the count block 1. Reset (20th digit) 0x0020 to 0xFFFF Reset signal (Function item for SOP-05) 0 to 2 Sets the reset signal of the count block 1. 20 5F External signal count (Function item for SOP-05) 0, 1 Sets the external signal count of the count block 1.	20 21	condition	Direction	0,1	block 1.
Jump (from) (20th digit) 0x0020 to 0xFFFF 20 36 Jump (to) (1st digit) 0x0020 to 0xFFFF Jump (to) (20th digit) 0x0020 to 0xFFFF 20 49 20 49 Reset (1st digit) 0x0020 to 0xFFFF Sets the jump (to) of the count block 1. Sets the reset of the count block 1. Reset (20th digit) 0x0020 to 0xFFFF Sets the reset of the count block 1. Reset (20th digit) 0x0020 to 0xFFFF Reset signal (Function item for SOP-05) Sets the reset signal of the count block 1. Sets the reset signal of the count block 1. Sets the reset signal of the count block 1. Sets the reset signal of the count block 1. Sets the reset signal of the count block 1. Sets the reset signal of the count block 1. Sets the reset signal of the count block 1. Sets the reset signal of the count block 1. Sets the reset signal of the count block 1.	20 22]	Jump (from) (1st digit)	0x0020 to 0xFFFF	
20 35 20 36 Jump (to) (1st digit) 0x0020 to 0xFFFF Sets the jump (to) of the count block 1. 20 49 20 49 Reset (1st digit) 0x0020 to 0xFFFF Sets the reset of the count block 1. Reset (20th digit) 0x0020 to 0xFFFF Reset signal (Function item for SOP-05) 0 to 2 Sets the reset signal of the count block 1. Sets the reset signal of the count block 1. 0:Disable , 1:Signal 1 , 2:Signal 2 External signal count (Function item for SOP-05) 0 , 1 Sets the external signal count of the count block 1.]			, , ,
Jump (to) (20th digit) 0x0020 to 0xFFFF 20 4A Reset (1st digit) 0x0020 to 0xFFFF Sets the jump (to) of the count block 1. Sets the jump (to) of the count block 1. Sets the reset of the count block 1. O:Disable , 1:Signal 1 , 2:Signal 2 Sets the external signal count of the count block 1.	20 35]	Jump (from) (20th digit)	0x0020 to 0xFFFF	DIOOK 1.
Jump (to) (20th digit) 0x0020 to 0xFFFF 20 4A Reset (1st digit) 0x0020 to 0xFFFF Sets the reset of the count block 1. 20 5D Reset (20th digit) 0x0020 to 0xFFFF Reset signal (20th digit) 0x0020 to 0xFFFF Reset signal (Function item for SOP-05) External signal count (Function item for SOP-05) External signal count (Function item for SOP-05) Control of the count block 1. Sets the reset signal of the count block 1. Sets the external signal count of the count block 1.	20 36]	Jump (to) (1st digit)	0x0020 to 0xFFFF	
20 49 Jump (to) (20th digit) 0x0020 to 0xFFFF]			
Sets the reset of the count block 1 Reset (20th digit) 0x0020 to 0xFFFF Reset signal (Function item for SOP-05) O to 2 External signal count (Function item for SOP-05) Sets the reset of the count block 1 O to 2 Sets the reset signal of the count block 1. O:Disable , 1:Signal 1 , 2:Signal 2 Sets the external signal count of the count block 1.	20 49]	Jump (to) (20th digit)	0x0020 to 0xFFFF	DIOCK 1.
20 5D Reset (20th digit) 0x0020 to 0xFFFF Reset signal (Function item for SOP-05) 0 to 2 Sets the reset signal of the count block 1. 0:Disable , 1:Signal 1 , 2:Signal 2 External signal count (Function item for SOP-05) 0 to 2 Sets the external signal count of the count block 1.	20 4A]	Reset (1st digit)	0x0020 to 0xFFFF	
Reset signal (Function item for SOP-05) Reset signal (Function item for SOP-05) O to 2 Sets the reset signal of the count block 1. O:Disable, 1:Signal 1, 2:Signal 2 Sets the external signal count of the count block 1.]			Sets the reset of the count block 1.
20 5E Reset signal (Function item for SOP-05) 0 to 2 block 1. 0:Disable , 1:Signal 1 , 2:Signal 2 External signal count (Function item for SOP-05) 0 to 2 block 1. 0:Disable , 1:Signal 1 , 2:Signal 2 Sets the external signal count of the count block 1.	20 5D]	Reset (20th digit)	0x0020 to 0xFFFF	
External signal count of the count block 1. External signal count of the count block 1.	20 5E			0 to 2	block 1. 0:Disable , 1:Signal 1 , 2:Signal 2
· · · · · · · · · · · · · · · · · · ·	20 5F			0 , 1	Sets the external signal count of the count block 1.

Holding Register data configuration on UX (8/13)

\\/	ord				
	ress	Classification	Item name	Setting range	Contents
20	60		Zero-suppression	0 , 1	Sets the zero-suppression of the count block 1. 0:Disable , 1:Enable
20	61		Multiplier(1st digit)	0x0020 to 0x0039	Sets the multiplier of the count block 1.
					Numeric:0x0031~0x0039
20	6A		Multiplier(10th digit)	0x0020 to 0x0039	Decimal point:0x002E Space:0x0020
20	6B		Count skip(1st digit)	0x0020 to 0xFFFF	
		Count			Sets the count skip of the count block 1.
20	6F	condition	Count skip(5th digit)	0x0020 to 0xFFFF	2.66.1
20 20	70 73		Reserve_1 Reserve_4	-	"Reserve" is not initially provided, but may be added in future.
20	74				
21	07		Count condition (Count block 2)		Block 2 through 8 will be set in the same configuration as those of
				-	Block 1 (Address: from 0x1FE0 to
23	EC		Count condition		0x2073).
24	7F		(Count block 8)		Sets the calendar offset.
24	80		Calendar offset	0 , 1	0:Offset from yesterday 1:From today
24	81		DIN print	0 , 1	Sets the DIN print. 0:Disable , 1:Enable
24	82	A	EAN Prefix	0 , 1	Sets the EAN prefix. 0:Edit message , 1:Print format
24	83	Adjust print parameters	Barcode printing	0,1	Sets the barcode printing. 0:Normal , 1:Reverse
24	84		QR Error correction level	0,1	Sets the QR error correction level. 0:M (15%), 1:Q (25%)
24	85		Reserve_1		
				-	"Reserve" is not initially provided, but may be added in future.
24	8F		Reserve_11		-
24	90		On-line / Off-line	0 , 1	Change the on-line or off-line. 0:Offline, 1:Online
24	91	On-line / Off-line	Reserve_1		"Reserve" is not initially provided,
	00	On mile		-	but may be added in future.
24	93		Reserve_3		Specifies remote operation to IJP.
24	94	Remote	Remote operation	0 to 4	0:Operation start 1:Operation stop 2:Deflection voltage control (ON) 3:Deflection voltage control (OFF) 4:Fault clear
24	95	operation	Reserve_1		
				-	"Reserve" is not initially provided, but may be added in future.
24	97		Reserve_3		

Holding Register data configuration on UX (9/13)

Word address Classifical 24 98 24 99 24 9A 24 9B 24 9C 24 9B 24 9B 24 9B 24 9B 24 A0 24 A1 24 A3 24 A6 24 24 B0 24 B1 24 B3 24 B4 24 B5 24 B6 24 B7 24 B8 24 B8 24 B8 24 B8 24 B8 24 B8			
24 99 24 9A 24 9B 24 9C 24 9D 24 9F 24 A0 24 A1 24 A2 24 A3 24 A6 24 24 B0 24 B1 24 B3 24 B4 24 B5 24 B6 24 B6 24 B7 24 B8	ification Item name	Item name Setting range	Content
24 9A 24 9B 24 9C 24 9E 24 9F 24 A0 24 A1 24 A2 24 A3 24 A4 24 A5 24 A6 24 24 B0 24 B1 24 B3 24 B4 24 B5 24 B6 24 B7 24 B8	Current time(year)	Current time(year) 2000 to 2099	
24 9B 24 9C 24 9E 24 9F 24 A0 24 A1 24 A2 24 A3 24 A4 24 A5 24 A6 24 24 B0 24 B1 24 B3 24 B4 24 B5 24 B6 24 B7 24 B8	Current time(month)	Current time(month) 1 to 12	
24 9C 24 9D 24 9E 24 A0 24 A1 24 A2 24 A3 24 A4 24 A5 24 A6 24 24 B0 24 B1 24 B3 24 B4 24 B5 24 B6 24 B7 24 B8 24 B9 24 BA 24 BB	Current time(day)	Current time(day) 1 to 31	current time.
24 9D 24 9E 24 9F 24 A0 24 A1 24 A2 24 A3 24 A6 24 24 B0 24 B1 24 B3 24 B4 24 B4 24 B5 24 B6 24 B7 24 B8 24 B9 24 BA 24 BB	Current time(hour)	Current time(hour) 0 to 23	current time.
24 9F 24 A0 24 A1 24 A2 24 A3 24 A4 24 A5 24 A6 24 AF 24 B0 24 B1 24 B2 24 B3 24 B4 24 B5 Cruture subject) 24 B8 24 B9 24 B8 24 B8	Current time(minute)	Current time(minute) 0 to 59	
24 9F 24 A0 24 A1 24 A2 24 A3 24 A4 24 A5 24 A6 24 24 B0 24 B1 24 B3 24 B4 24 B4 24 B5 24 B6 24 B7 24 B8 24 B9 24 BA 24 BA 24 BB	Current time(second)	Current time(second) 0 to 59	
24 A0 24 A1 24 A2 24 A3 24 A4 24 A5 24 A6 24 B7 24 B1 24 B3 24 B4 24 B4 24 B5 24 B6 24 B7 24 B8 24 B9 24 BA 24 BB	Calendar time control		calendar time control. as current time top
24 A0 setup 24 A1 24 A2 24 A4 24 A5 24 A6 24 24 B0 24 B1 24 B3 24 B4 24 B4 24 B5 24 B6 24 B7 24 B8 24 B9 24 BA 24 BB	time Calendar time(year)	Calendar time(year) 2000 to 2099	
24 A2 24 A3 24 A4 24 A5 24 A6 24 AF 24 B0 24 B1 24 B2 24 B3 24 B4 24 B5 24 B6 24 B7 24 B8 24 B9 24 BA 24 BB		Calendar time(month) 1 to 12	
24 A3 24 A4 24 A5 24 A6 24 AF 24 B0 24 B1 24 B2 24 B3 24 B4 24 B5 24 B6 24 B7 24 B8 24 B9 24 BA 24 BB	Calendar time(day)	Calendar time(day) 1 to 31	aalandar tima
24 A4 24 A5 24 A6 24 AF 24 B0 24 B1 24 B2 24 B3 24 B4 24 B5 24 B6 24 B7 24 B8 24 B9 24 BA 24 BB	Calendar time(hour)	Calendar time(hour) 0 to 23	calendar time.
24 A5 24 A6 24 AF 24 B0 24 B1 24 B2 24 B3 24 B4 24 B5 24 B6 24 B7 24 B8 24 B9 24 BA 24 BB	Calendar time(minute)	Calendar time(minute) 0 to 59	
24 A6 24 AF 24 B0 24 B1 24 B2 24 B3 24 B4 24 B5 24 B6 24 B6 24 B7 24 B8 24 B8 24 B8 24 B8	Calendar time(second)	Calendar time(second) 0 to 59	
24 B1 24 B2 24 B3 24 B3 24 B4 24 B5 24 B6 24 B6 24 B7 24 B8 24 B8 24 B8 24 B8 24 B8	Clock system		clock system.
24 B1 24 B2 24 B3 24 B3 24 B4 24 B5 24 B6 24 B6 24 B7 24 B8 24 B8 24 B8 24 B8 24 B8	Reserve 1	0.24-1100	r clock , 1:12-hour clock
24 B1 24 B2 24 B3 24 B4 24 B5 24 B6 24 B6 24 B7 24 B8 24 B8 24 B8 24 B8	 Reserve_10	"Reserve	" is not initially provided, be added in future.
24 B1 24 B2 24 B3 24 B4 24 B5 24 B6 24 B6 24 B7 24 B8 24 B8 24 B9 24 BA 24 BB	_	Sote the	repeat print sensor mode.
24 B2 24 B3 24 B4 24 B5 24 B6 24 B6 24 B7 24 B8 24 B9 24 B8 24 B9	Repeat print sensor mode	Repeat print sensor mode 0, 1 0:signal 0	ON , 1:OFF-ON transition
24 B3 24 B4 24 B5 24 B6 24 B6 24 B7 24 B8 24 B8 24 B9 24 BA 24 BB	Change Character orientation	Change Character orientation O to 3 orientation O to 3 increase 2:normal 3:Character	e e direction printing or inverted tter orientation 0 or 3
24 B4 24 B5 24 B6 24 B6 24 B7 24 B8 24 B8 24 B9 24 BA 24 BB	Change mode	Change mode 0 , 1 0: OFF=r 1: OFF=i 1: OFF=i	change mode. normal/forward nverted/reverse
24 B5 User environme setup 24 B6 (Future subject) 24 B8 24 B9 24 B9 24 BA 24 BB	Reverse print	Reverse print 0, 1 0:right-jus	reverse print. stified,1:left-justified
24 B5 environme setup 24 B6 (Future subject) 24 B7 24 B8 24 B9 24 BA 24 BB	Print signal type	Print signal type 0 , 1 0:print.co	n-progress
24 B7 24 B8 24 B9 24 BA 24 BB	I FIIII Uala CHAHUEUVEL EHUL	Print data changeover error 0 , 1 error. 0:Disable	print data changeover e , 1:Enable
24 B7 24 B8 24 B9 24 BA 24 BB		Char. Size menu 1 0 , 1 0:5x8 , 1:	
24 B9 24 BA 24 BB	Char. Size menu 2	Char. Size menu 2 0 , 1 0:9x8 , 1:	
24 BA 24 BB	Excitation V-ref. warning	Excitation v-ref. warning 0, 1 0:Disable	excitation V-ref. warning.
24 BB	Print characters one by one	Print characters one by one 0 , 1 one. 0:Disable	print characters one by e , 1:Enable
	Continue message print (Function item for SOP-15-20)	(Function item for SOP-15-20) 0:Disable	continue message print. e , 1:Enable
	Start message number (Function item for SOP-15-20)		number of registered print
24 BC	End message number (Function item for SOP-15-20)	End message number 0 to 2000 message	to be printed.
24 BD 25 7F	Reserve_1 Reserve_195	"Reserve	" is not initially provided, be added in future.

Holding register data configuration on UX (10/13)

	ord ress	Classification	Item name	Setting range	Contents
25	80		Display	0 to 2	Sets the display. 0:OFF in 3 min. , 1:OFF in 30 min. 2:Always ON
25	81		Keyboard layout	0 , 1	Sets the keyboard layout. 0:ABC, 1:QWERTY
25	82		ICON Display	0,1	Sets the ICON display. 0:Disable , 1:Enable
25	83	Touch screen setup	Clock display format	0 to 2	Sets the clock display format. 0:YYYY.MM.DD , 1:DD.MM.YYYY 2:MM.DD.YYYY
25	84	Scrup	Confirmation window for Manual Control Menu	0,1	Sets the confirmation window for manual control menu. 0:Display , 1:Non display
25	85		Arabic input method	0,1	Sets the Arabic input method. 0:to the left , 1:to the right
25	86		Reserve_1	-	"Reserve" is not initially provided, but may be added in future.
25	8F		Reserve_10		
25 25	90 AF	Reserve	Reserve_1 Reserve_32	-	"Reserve" is not initially provided, but may be added in future.
25	В0		Ink operating time	0 to 9999	Sets the ink operating time.
25	B1		Ink alarm time	0 to 9999	Sets the ink alarm time.
25 25	B2 B3	Operation management	Print count	0 to 999999999	Sets the print count.
25 25	B4 B7	management	Reserve_1 Reserve_4	-	"Reserve" is not initially provided, but may be added in future.
25	B8	Circulation control	Ink filter use time	0 to 59999	Sets the ink filter use time.
25	B9		Makeup filter use time	0 to 59999	Sets the makeup filter use time.
25	ВА		Recovery filter use time	0 to 59999	Sets the recovery filter use time.
25	BB		Air filter use time	0 to 59999	Sets the air filter use time.
25	ВС		Circulation filter use time	0 to 59999	Sets the circulation filter use time.
25 25	BD DF		Reserve_1 Reserve_35	-	"Reserve" is not initially provided, but may be added in future.

Holding Register data configuration on UX (11/13)

10/	ord				
Wo addi		Classification	Item name	Setting range	Contents
25	E0		Number to change the message name	1 to 2000	
25	E1		Message name(1st digit)	0x0020 to 0xFFFF	Changes the message name of
25	E2		Message name(2nd digit)	0x0020 to 0xFFFF	stored message of the selected
					number.
25	EB		Message name(11th digit)	0x0020 to 0xFFFF	
25	EC		Message name(12th digit)	0x0020 to 0xFFFF	
25 	ED		Reserve_1	-	"Reserve" is not initially provided, but may be added in future.
25	EF	Manage	Reserve_3		but may be added in fatale.
25	F0	messages	Number to delete the stored message	1 to 2000	Deletes the stored message of the selected number.
25	F1		Reserve_1		"Reserve" is not initially provided,
 25	FF		 Reserve_15	-	but may be added in future.
26	00		Number before the change	1 to 2000	Changes the stored number of
26	01		Number after the change	1 to 2000	stored messages of the selected number.
26	02		Reserve_1		"Decompo" is not initially provided
 26	0F		 Reserve_14	-	"Reserve" is not initially provided, but may be added in future.
26	10		Group number	1 to 99	
26	11		Group name(1st digit)	0x0020 to 0xFFFF	
26	12		Group name(2nd digit)	0x0020 to 0xFFFF	Creates the group of the selected
					number and name.
26	1B		Group name(11th digit)	0x0020 to 0xFFFF	
26	1C		Group name(12th digit)	0x0020 to 0xFFFF	
26 	1D		Reserve_1	-	"Reserve" is not initially provided, but may be added in future.
26	1F		Reserve_3		,
26	20	Manage group	Number to change the group name	1 to 99	
26	21		Group name(1st digit)	0x0020 to 0xFFFF	
26	22		Group name(2nd digit)	0x0020 to 0xFFFF	Changes the group name of stored group of the selected number.
					group of the selected fidiliber.
26	2B		Group name(11th digit)	0x0020 to 0xFFFF	
26	2C		Group name(12th digit)	0x0020 to 0xFFFF	
26	2D		Number before the change	1 to 99	Changes the stored number of stored groups of the selected
26	2E		Number after the change	1 to 99	number.
26	2F		Number to delete the stored group	1 to 99	Deletes the stored group of the selected number.

Holding Register data configuration on UX (12/13)

Wo	ord ress	Classification	Item name	Setting range	Contents
26	30		Substitution rule No.	1 to 99	
26	31		Substitution rule name (1st digit)	0x0020 to 0xFFFF	
26	32		Substitution rule name (2nd digit)	0x0020 to 0xFFFF	Sets the number and the name of Substitution rule 1.
					(Read only. Write operation is the
26	3B		Substitution rule name (11th digit)	0x0020 to 0xFFFF	future subject.)
26	3C	Edit substitution	Substitution rule name (12th digit)	0x0020 to 0xFFFF	
26	3D	rule	Reserve_1		"Reserve" is not initially provided,
				-	but may be added in future.
26	3F		Reserve_3		•
26	40		Substitution rule(Rule 2)		Substitution rules 02 through 99 will be set in the same
26	4F				configuration as those of
				-	Substitution rules 01 (Address:
2C	50		Substitution rule(Rule 99)		from 0x2630 to 0x263F). (Read only. Write operation is the
2C	5F		Substitution rule(Rule 99)		future subject.)
2C	60		Reserve_1		-
		Reserve		-	"Reserve" is not initially provided, but may be added in future.
2C	6F		Reserve_16		but may be added in luture.
2C	70		Printing job function	0,1	Sets the printing job function. 0:Disable , 1:Enable
2C	71	Printing Job	Control status	0 , 1	Sets the control status. 0:stop , 1:start
2C 2C	72 73	Management (Future	Print count	0 to 99999	Sets the print count.
2C	74	subject)	Reserve_1		"December is not initially provided
				-	"Reserve" is not initially provided, but may be added in future.
2C	7F		Reserve_12		Jaca, de adaeaa.a.e.
2C	80		Reserve_1		"Pagarya" is not initially provided
		Reserve		-	"Reserve" is not initially provided, but may be added in future.
2C	FF		Reserve_128		•
2D	00		User pattern registration 01	0x0000 to 0xFFFF	Status of User pattern registration (Registered or NOT) is set by bit
2D	01		User pattern registration 02	0x0000 to 0xFFFF	information ON or OFF. User pattern registration 01 shows 16
					status of User pattern registration
2D	0B		User pattern registration 12	0x0000 to 0xFFFF	000 through 015 starting from the
2D	0C		User pattern registration 13	0x0000 to 0xFFFF	upper bit. Subsequently, the same data structure as that of User pattern registration 01 will follow.
2D	0D	User pattern	Reserve_1		"Reserve" is not initially provided,
 2D	1F	(Fixed size)	 Reserve_19	-	but may be added in future.
2D 2D	20		Pattern data	0x0000 to 0xFFFF	User pattern data will be set, size
2D	21		Pattern data	0x0000 to 0xFFFF	by size and moved up to front. Please note that the address of
					User pattern data will be different
64	FE		Pattern data	0x0000 to 0xFFFF	size by size. Please refer to 5.5.(2) Details of User pattern data
					(Fixed-size and Free-size), for details.
64	FF		Pattern data	0x0000 to 0xFFFF	ucidiis.

Holding Register data configuration on UX (13/13)

Wo		Classification	Item name	Setting range	Contents
65	00		Pattern data registration 01	0x0000 to 0xFFFF	Status of User pattern registration (Registered or NOT) is set by bit
65	01		Pattern data registration 02	0x0000 to 0xFFFF	information ON or OFF. User pattern registration 01 shows 16 status of User pattern registration
65	02		Pattern data registration 03	0x0000 to 0xFFFF	000 through 015 starting from the upper bit. Subsequently, the same
65	03		Pattern data registration 04	0x0000 to 0xFFFF	data structure as that of User pattern registration 01 will follow.
65 65	04 0F		Reserve_1 Reserve_12	-	"Reserve" is not initially provided, but may be added in future.
65	10		Vertical size (User pattern character 00)	1 to 32	
65	11		Horizontal size (User pattern character 00)	1 to 320	Sets the dot size and pattern data of the user pattern data.
65	12		Pattern data (User pattern character 00)	0x0000 to 0xFFFF	User pattern data (Free-size) is controlled by the fixed address.
65	13	User pattern	Pattern data (User pattern character 00)	0x0000 to 0xFFFF	User pattern data (Free size) of the registered User pattern
		(Free size)			character 00 will be set here from
67	90		Pattern data (User pattern character 00)	0x0000 to 0xFFFF	0x6510 to 0x6791.
67	91		Pattern data (User pattern character 00)	0x0000 to 0xFFFF	
67	92				
67	93		User pattern data		User pattern data (Free size) of the registered User pattern character
6A	12		(User pattern character 01)		01 through 49 will be set in the
6A	13				same configuration as those of User pattern data of the registered
• • • •				-	User pattern character 01
DF	F2				(Address: from 0x6510 to 0x6791)
DF	F3		User pattern data		Please refer to 5.5 (2) Details of
E2	72		(User pattern character 49)		User pattern data (Fixed-size and
E2	73				Free-size), for details.
E2	74		Reserve 1		
	17			-	"Reserve" is not initially provided, but may be added in future.
E2	7F		Reserve_12		
E2	80		Reserve_1		
		Reserve		-	"Reserve" is not initially provided,
FF	FF		Reserve_7552		but may be added in future.

(2) Input Registers

Input Registers are the area read by Read Input Registers (0x04). The item data is placed, which can be obtained from IJ Printer. Input Registers can be read by one (1) word (2 bytes) at every address.

Input Register data configuration on UX (1/8)

\/\/c	Word Classification Warman Contact						
addı		Classification	Item name	Setting range	Contents		
00	00		Communication connection status	0x0030 , 0x0031	Gets the communication connection status. 0x0030:Offline , 0x0031:Online		
00	01		Receive enable/disable status	0x0030 , 0x0031	Gets the receive enable/disable status. 0x0030:Reception not possible 0x0031:Reception possible		
00	02		Operation status	0x0000 to 0xFFFF	Gets the operation status. Status can be obtained by use of the same code as that of the		
00	03		Warning status	0x0000 to 0xFFFF	Status output of SOP-04 (Special Communication Function A). Refer to Software Option Specification SOP-04 for details.		
00	04	- Unit status	Analysis information 1 (Function code)	0x0000 to 0xFFFF	Cause will be obtained when the external communication error occurred during Modbus communication. Refer to 5.5 (1) Details of Analysis information for		
00	05		Analysis information 2 (Classification code)	0x0000 to 0xFFFF	details. ·Analysis information 1 Function code is obtained when error is caused.		
00	06		Analysis information 3 (Error factor)	0x0000 to 0xFFFF	·Analysis information 2 Classification code is obtained when error is caused.		
00	07		Analysis information 4 (Preparation for future)	0x0000 to 0xFFFF	Analysis information 3 Error factor is obtained when error is caused. Analysis information 4 [0x0000] Fixed		
00 00	08 0F		Reserve_1 Reserve_8	-	"Reserve" is not initially provided, but may be added in future.		
00	10		Type name(1st digit)	0x0030 to 0x007A			
00	11		Type name(2nd digit)	0x0030 to 0x007A	Gets the type name.		
					Model name UX-E160W is		
00	1E		Type name(15th digit)	0x0030 to 0x007A	obtained when it is used.		
00	1F		Type name(16th digit)	0x0030 to 0x007A			
00	20 21	Unit information	Serial number	00000000 to 99999999	Gets the serial number.		
00	22		Ink name(1st digit)	0x0030 to 0x007A			
00	23		Ink name(2nd digit)	0x0030 to 0x007A	Gets the ink name.		
					Ink type 1067K is obtained when it		
00	2A		Ink name(9th digit)	0x0030 to 0x007A	is used.		
00	2B		Ink name(10th digit)	0x0030 to 0x007A			

Input Register data configuration on UX (2/8)

	Word address Classification		Item name	Setting range	Contents
00	2C		Input mode	1,2	Gets the input mode. 1:Default , 2:Local Language
00	2D		Maximum message length (Characters)	120 to 1000	Gets the maximum message length (Characters).
00	2E		Maximum registers	48 to 2000	Gets the maximum registers.
00	2F		2D code print	0,1	Gets the 2D code print. 0:NOT supported , 1:supported
00	30	Unit	Character size	0x0000 to 0x0007	Gets the Settable sizes. Bit information is obtained for availability of Character size of 4x5 or 18x24 or 24x32. 0x0001:4x5, 0x0002:18x24 0x0004:24x32
00	31	information	Maximum calendar/count block count	2,8	Gets the maximum calendar/count block count.
00	32		Replacement items	48 , 99	Gets the replacement items.
00	33		Shift code/Time count	0,1	Gets the shift code/time count. 0:NOT supported, 1:supported
00	34		Chimney/DIN print	0,1	Gets the chimney/DIN print. 0:NOT supported, 1:supported
00	35		Maximum column	2 to 5	Gets the maximum column.
00 00	36 4F		Reserve_1 Reserve_26	-	"Reserve" is not initially provided, but may be added in future.
00	50		Ink operating time	0 to 9999	Gets the ink operating time.
00	51		Ink alarm time	0 to 9999	Gets the ink alarm time.
00	52 53		Print count	0 to 999999999	Gets the print count.
00	54 55		Cumulative operation time	0 to 999999	Gets the cumulative operation time.
00	56		Ink/makeup ink type	1 to 999	Gets the ink/makeup ink type.
00	57		Ink viscosity	0 to 999	Gets the ink viscosity.
00	58	Operation	Ink pressure	0 to 999	Gets the ink pressure. Ink pressure multiplied by 1000 is obtained. (Example : 255 = 0.255 MPa)
00	59	management	Ambient temperature	-99 to 100	Gets the ambient temperature.
00	5A		Deflection voltage	0 to 99	Gets the deflection voltage. Deflection Voltage multiplied by 10 is obtained. (Example: 57 = 5.7 kV)
00	5B		Excitation V-ref.	0 to 27	Gets the excitation V-ref.
00	5C		Excitation frequency	0 to 1000	Gets the excitation frequency. Excitation frequency multiplied by 10 is obtained. (Example: 689 = 68.9 kHz)
00	5D		Reserve_1	-	"Reserve" is not initially provided,
00	6F		Reserve_19		but may be added in future.

Input Register data configuration on UX (3/8)

	Word address Classification		Item name	Setting range	Contents	
00	70		Fault/warning message count	0 to 90	Gets the fault/warning message count.	
00 00	71 73		Reserve_1 Reserve_3	-	"Reserve" is not initially provided, but may be added in future.	
00	74		Generation time(year)	2000 to 2099		
00	75		Generation time(month)	1 to 12	1	
00	76		Generation time(day)	1 to 31	Gets the generation time of the	
00	77		Generation time(hour)	0 to 23	message 1.	
00	78	View alarm	Generation time(minute)	0 to 59	1	
00	79	history	Generation time(second)	0 to 59	1	
00	7A		Fault/warning No.	1 to 999	Gets the fault/warning No. of the message 1.	
00	7B		Reserve_1	-	"Reserve" is not initially provided, but may be added in future.	
00	7C 83		Fault/warning message 2		Fault/warning history 02 through 90 are obtained in a same way as	
				-	that of Fault warning history 01	
03	3C 43		Fault/warning message 90		(Address: from 0x0074 to 0x007B)	
03	44		Reserve_1			
 0A	FF	Reserve	 Reserve_1980	-	"Reserve" is not initially provided, but may be added in future.	
0В	00		State at power-up	0 to 2	Gets the state at power-up. 0:Comm. port is OFF 1:Comm. port is ON 2:OFF fixed	
0B	01		Communication and signal error	0,1	Gets the communication and signal error. 0:Warning, 1:Fault	
0B	02	Communicati	Baud rate(Standard port)	0 to 10	Gets the baud rate of the standard port. 0:150bps, 1:300bps, 2:600bps 3:1200bps, 4:2400bps 5:4800bps, 6:9600bps 7:19200bps, 8:38400bps 9:57600bps, 10:115200bps	
0B	03	on environment	Data length(Standard port)	0 , 1	Gets the data length of the standard port. 0:7 bits, 1:8 bits	
0B	04	setup	Parity bit(Standard port)	0 to 2	Gets the parity bit of the standard port. 0:Disable, 1:Odd, 2:Even	
0B	05		Stop bits(Standard port)	0 , 1	Gets the stop bits of the standard port. 0:1 bit, 1:2 bits	
0B	06		Baud rate(Secondary port)	0 to 10	Gets the baud rate of the secondary port.	
0B	07		Data length(Secondary port)	0 , 1	Gets the data length of the secondary port.	
0B	08		Parity bit(Secondary port)	0 to 2	Gets the parity bit of the secondary port.	
0B	09		Stop bits(Secondary port)	0 , 1	Gets the stop bits of the secondary port.	

Input Register data configuration on UX (4/8)

Word address Classification		Classification	Item name	Setting range	Contents
0B	0A		Baud rate(Private port)	0 to 10	Gets the baud rate of the private port.
0B	0B		Data length(Private port)	0,1	Gets the data length of the private port.
0B	0C		Parity bit(Private port)	0 to 2	Gets the parity bit of the private port.
0B	0D		Stop bits(Private port)	0 , 1	Gets the stop bits of the private port.
0B	0E		Number of comm. bytes	0,1	Gets the number of comm. bytes. 0:1 byte, 1:2 bytes
0B	0F		BCC code handling	0 , 1	Gets the BCC code handling. 0:Disable, 1:Enable
0B	10		Communication mode	0,1	Gets the communication mode. 0:overwrite-protected 1:overwrite-enabled
0В	11		Print message transfer ACK	0,1	Gets the print message transfer ACK. 0:t=fixed , 1:t=async.
0B	12		Print spec transfer char height	0,1	Gets the print spec transfer char height. 0:2 digits , 1:3 digits
0B	13		Buffer function (Function item for Communication buffer)	0,1	Gets the buffer function. 0:Disable , 1:Enable
0B	14		Buffer repeat count (Function item for Communication buffer)	1 to 9999	Gets the buffer repeat count.
0B	15	Communicati	Empty Buffer Fault (Function item for Communication buffer)	0,1	Gets the empty buffer fault. 0:Disable , 1:Enable
0B	16	on environment	Timing of Fault (Function item for Communication buffer)	0 , 1	Gets the timing of fault. 0:Print Start, 1:Print. Complete
0B	17	setup	Data Number at Fault (Function item for Communication buffer)	0 to 9	Gets the data number at fault.
0B	18		Start output (Function item for SOP-04)	0 , 1	Gets the start output. 0:Disable , 1:Enable
0B	19		Output kind (Function item for SOP-04)	0 to 2	Gets the output kind. 0:Disable , 1:Print data , 2:Code
0B	1A		Condition (Function item for SOP-04)	0,1	Gets the condition. 0:Every time 1:Different from last time
0B	1B		Status output (Function item for SOP-04)	0 , 1	Gets the status output. 0:Disable , 1:Enable
0B	1C		Output item(Start item) (Function item for SOP-04)	1 to 100	Gets the output item.
0B	1D		Output item(End item) (Function item for SOP-04)	1 to 100	·
0B	1E		Output comm. ENQ (Function item for SOP-04)	0,1	Gets the output comm. ENQ. 0:Disable , 1:Enable
0B	1F		Output port (Function item for SOP-04)	0,1	Gets the output port. 0:Standard port 1:Secondary port
0B	20		Select message (Function item for SOP-05)	0,1	Gets the select message. 0:Disable , 1:Enable
0B	21		Data exchange (Function item for SOP-05)	0,1	Gets the data exchange. 0:Reflect at once 1:Reflect by signal
0B	22		Reserve_1	_	"Reserve" is not initially provided,
0B	BF		Reserve_158	-	but may be added in future.

Input Register data configuration on UX (5/8)

	ord ress	Classification	Item name	Setting range	Contents
0B	C0		Ink concentration control	0,1	Gets the ink concentration control. 0:Disable , 1:Enable
0B 0B	C1 CF		Reserve_1 Reserve_15	-	"Reserve" is not initially provided, but may be added in future.
0B	D0		Ink filter use time	0 to 59999	Gets the ink filter use time.
0B	D1		Makeup filter use time	0 to 59999	Gets the makeup filter use time.
0B	D2		Recovery filter use time	0 to 59999	Gets the recovery filter use time.
0B	D3		Air filter use time	0 to 59999	Gets the air filter use time.
0B	D4		Circulation filter use time	0 to 59999	Gets the circulation filter use time.
0B	D5		MGV filter use time	0 to 59999	Gets the MGV filter use time.
0B	D6		Pump use time	0 to 59999	Gets the pump use time.
0B	D7		Heating unit use time	0 to 59999	Gets the heating unit use time.
0B	D8		MV1 use time	0 to 59999	Gets the MV1 use time.
0B	D9		MV2 use time	0 to 59999	Gets the MV2 use time.
0B	DA		MV3 use time	0 to 59999	Gets the MV3 use time.
0B	DB	Circulation	MV4 use time	0 to 59999	Gets the MV4 use time.
0B	DC	control	MV5 use time	0 to 59999	Gets the MV5 use time.
0B	DD		MV6 use time	0 to 59999	Gets the MV6 use time.
0B	DE		MV7 use time	0 to 59999	Gets the MV7 use time.
0B	DF		MV8 use time	0 to 59999	Gets the MV8 use time.
0B	E0		MV9 use time	0 to 59999	Gets the MV9 use time.
0B	E1		Reserve_1		"Reserve" is not initially provided,
0B	E2		Reserve_2	-	but may be added in future.
0B	E3		Ink consumption	0 to 999999	Gets the ink consumption.
0B	E4		The consumption	0 10 999999	Gets the link consumption.
0B	E5		Makeup consumption	0 to 999999	Gets the makeup consumption.
0B	E6		wakeup consumption	0 10 33333	Cos the makeup consumption.
0B 0B	E7 E8		Print count	0 to 999999999	Gets the print count.
0B	E9		R air filter use time	0 to 59999	Gets the R air filter use time.
0B 	EA		Reserve_1	-	"Reserve" is not initially provided, but may be added in future.
0C	1F		Reserve_54		

Input Register data configuration on UX (6/8)

Wo	ord				
add		Classification	Item name	Setting range	Contents
0C	20		Basic software(1st digit)	0x0020 to 0xFFFF	
0C	21		Basic software(2nd digit)	0x0020 to 0xFFFF	Gets the basic software version. When the version is V01.00,
					"V01.00 Basic software" is
0C	3E		Basic software(31st digit)	0x0020 to 0xFFFF	obtained.
0C	3F		Basic software(32nd digit)	0x0020 to 0xFFFF	
0C	40		Controller software(1st digit)	0x0020 to 0xFFFF	Gets the controller software
0C	41		Controller software(2nd digit)	0x0020 to 0xFFFF	version.
					When the version is V01.00, "V01.00 Controller software" is
0C	5E		Controller software(31st digit)	0x0020 to 0xFFFF	obtained.
0C	5F		Controller software(32nd digit) Print controller software M	0x0020 to 0xFFFF	
0C	60		(1st digit)	0x0020 to 0xFFFF	
0C	61		Print controller software M (2nd digit)	0x0020 to 0xFFFF	Gets the print controller software M version.
					When the version is V01.00,
0C	7E		Print controller software M	0x0020 to 0xFFFF	"V01.00 Engine software M" is obtained.
0C	7F		(31st digit) Print controller software M	0x0020 to 0xFFFF	obtained.
			(32nd digit) Print controller software S		
0C	80		(1st digit) Print controller software S	0x0020 to 0xFFFF	Gets the print controller software S
0C	81		(2nd digit)	0x0020 to 0xFFFF	version.
					When the version is V01.00, "V01.00 Engine software S" is
0C	9E		Print controller software S (31st digit)	0x0020 to 0xFFFF	obtained.
0C	9F		Print controller software S (32nd digit)	0x0020 to 0xFFFF	
0C	A0	View software version	1st language(1st digit)	0x0020 to 0xFFFF	Gets the language version. When the version is V01.00 English language, "V01.00 Language 02" is
0C	A1		1st language(2nd digit)	0x0020 to 0xFFFF	obtained. The last 2-digit shows Language number. [Language No.]
					01:Japanese 02:English 03:Simple Chinese 04:Traditional Chinese
0C	BE		1st language(31st digit)	0x0020 to 0xFFFF	05:Korean 06:Thai 07:Italian 08:Dutch
0C	BF		1st language(32nd digit)	0x0020 to 0xFFFF	09:Spanish 10:German 11:French
0C	C0		2nd language(1st digit)	0x0020 to 0xFFFF	12:Vietnamese 13:Swedish 14:Arabic 15:Russian
0C	C1		2nd language(2nd digit)	0x0020 to 0xFFFF	16:Greek 17:Czech 18:Danish
					19:Portuguese 20:Polish 21:Serbian 22:Turkish
0C	DE		2nd language(31st digit)	0x0020 to 0xFFFF	23:Hungarian 24:Bulgarian 25:Catalan
0C	DF		2nd language(32nd digit)	0x0020 to 0xFFFF	26:Finnish 27:Romanian 28:Norwegian 29:Slovenian

Input Register data configuration on UX (7/8)

Wo	ord	01		0.11	
addr		Classification	Item name	Setting range	Contents
0C	E0		Software option01(1st digit)	0x0020 to 0xFFFF	
0C	E1		Software option01(2nd digit)	0x0020 to 0xFFFF	
0C	FE		Software option01(31st digit)	0x0020 to 0xFFFF	Coto the cofficient aution version
0C	FF		Software option01(32nd digit)	0x0020 to 0xFFFF	Gets the software option version and symbol.
					When SOP-04 is installed and its
0E	00	View	Software option10(1st digit)	0x0020 to 0xFFFF	version is V01.00,
0E	01	software version	Software option10(2nd digit)	0x0020 to 0xFFFF	"V01.00 SOP-04" is obtained.
		VC101011			
0E	1E		Software option10(31st digit)	0x0020 to 0xFFFF	
0E	1F		Software option10(32nd digit)	0x0020 to 0xFFFF	
0E	20		Reserve 1		
				_	"Reserve" is not initially provided,
0E	3F		Reserve_32		but may be added in future.
0E	40		Print data message number	1 to 2000	
0E	41		Group number	0 to 99	When Print message registration
0E	42		Message name(1st digit)	0x0020 to 0xFFFF	number is specified at Holding Register address 0x0010, its
			, , ,	0X0020 to 0X1111	Group number and Message name
0E	4D		Message name(12th digit)	0x0020 to 0xFFFF	are obtained.
0E	4E		Reserve 1	0,0020 to 0,1111	
	46		Neserve_1		"Reserve" is not initially provided,
0E	52		Reserve_5	_	but may be added in future.
0E	53	Manage messages	Print message registration (001)	0x0000 to 0xFFFF	Status of Print message registration (Registered or NOT) is obtained by bit information ON or OFF. Print message registration (001) shows 16 statuses of Print
					message registrations 1 through 16 starting from the upper bit.
0E	CF		Print message registration (125)	0x0000 to 0xFFFF	Subsequently, the same data structure as those of Print message registration (001) will follow.
0E	D0		Group number	0 to 99	When Group number is specified
0E	D1		Group name(1st digit)	0x0020 to 0xFFFF	at Holding Register address
					0x0014, its Group name is
0E	DC		Group name(12th digit)	0x0020 to 0xFFFF	obtained.
0E	DD		Reserve_1		
				-	"Reserve" is not initially provided, but may be added in future.
0E	E8	Manage	Reserve_12		but may be added in luture.
0E	E9	group	Group registration (1)	0x0000 to 0xFFFF	Status of Group registration (Registered or NOT) is obtained by bit information ON or OFF. Group
					registration (1) shows 16 statuses of Group registrations 1 through 16
0E	EF		Group registration (7)	0x0000 to 0xFFFF	starting from the upper bit. Subsequently, the same data structure as those of Group registration (1) will follow.

Input Register data configuration on UX (8/8)

Word address		Classification	Item name	Setting range	Contents
0E	F0		Current message data length	0 to 2000	Gets the message data length (Character count x 2) of the current message.
0E	F1		Inter-character space (Character units)	0 to 28	When Character position is specified at Holding Register address 0x0011, its Inter-character space will be obtained.
0E	F2		Calendar block count	0 to 8	Gets the calendar block count of the current message.
0E	F3		Calendar characters count (Calendar block 1)	0 to 20	
0E	F4		Calendar characters count (Calendar block 2)	0 to 20	Gets the calendar characters
				•••	count for 8 blocks of the current
0E	F9		Calendar characters count (Calendar block 7)	0 to 20	message.
0E	FA		Calendar characters count (Calendar block 8)	0 to 20	
0E	FB		Time count block No.	0 to 8	Gets the time count block No. of the current message.
0E	FC		Shift code block No.	0 to 8	Gets the shift code block No. of the current message.
0E	FD		Shift code rule count	0 to 48	Gets the shift code rule count of the current message.
0E	FE	Various data	Count block count	0 to 8	Gets the count block count of the current message.
0E	FF	74.1000 data	Count characters count (Count block 1)	0 to 20	
0F	00		Count characters count (Count block 2)	0 to 20	Gets the count characters count
					for 8 blocks of the current
0F	05		Count characters count (Count block 7)	0 to 20	message.
0F	06		Count characters count (Count block 8)	0 to 20	
0F 0F	07 0F		Reserve_1 Reserve_9	-	"Reserve" is not initially provided, but may be added in future.
0F	10		Inter-character space (1st digit)	0 to 28	
0F	11		Inter-character space (2nd digit)	0 to 28	Gets the inter-character space for
					1000 characters of the current
12	F6		Inter-character space (999th digit)	0 to 28	message.
12	F7		Inter-character space (1000th digit)	0 to 28	
12	F8		Reserve_1		"Reserve" is not initially provided,
				-	but may be added in future.
12	FF		Reserve_8		-
13 13	00		Print completion count	0 to 99999	Gets the print completion count.
13	02	Printing Job Management (Future	Print completion status	0 to 2	Gets the print completion status. 0:Non-completion 1:Print completion 2:Fault
13	03	subject)	Reserve_1	-	"Reserve" is not initially provided, but may be added in future.
13	0F		Reserve_13		but may be added in idtule.

5.5 Detail of Data configuration

(1) Details of Analysis information

When an error occurs in the external communication being conducted, the error cause can be obtained from the analysis information of IJ printer status available at Input Registers.

- Analysis information 1 (Function Code): Functional code of the communication message which resulted in error.
- Analysis information 2 (Classification code): Functional classification of the communication message which resulted in error.
- Analysis information 3 (Error factor): Cause which resulted in error.
- Analysis information 4 (Preparation for future): Reserved area for future use. 0x0000 fixed.

Code table of Analysis information

No.	item	code	Or Analysis Information Content
110.	Rem	0x0010	Write on Holding Register
		0x0006	Write one word on Holding Register
	Analysis information 1	0x0000	Read Holding Register
1	(Function code)	0x0003	Read Injut Register
	(1 diletion code)	Other than	Read Illput Register
		the above	Function code which is NOT available
		0x0000	No classification assigned
		0x0001	Index
		0x0002	Print description
		0x0003	Delete of Print contents
		0x0004	Print data Recall
		0x0005	Print data Register
		0x0006	Print format
		0x0007	Print specification
		0x0008	Calendar conditions
		0x0009	Substitution rules.
		0x000A	Time count
		0x000B	Shift code
	Analysis information 2	0x000C	Count conditions
2	Analysis information 2 (Classification code)	0x000D	Various print setup
		0x000E	Online/Offline
		0x000F	Remote operation
		0x0010	Time control
		0x0011	User environment setup (Preparation for future)
		0x0012	Touch screen setup
		0x0014	Operation management
		0x0015	Circulation control
		0x0016	Print data management
		0x0017	Group control
		0x0018	Editing Substitution rules
		0x001A	Print job control (Preparation for future)
		0x001B	User pattern (Fixed size)
		0x001C	User pattern (Free size)
		0x0001	Invalid Function code
		0x0002	Invalid Address
		0x0003	Invalid Data size
3	Analysis information 3	0x0004	Invalid CRC code
	(Error factor)	0x0005	Invalid Offline
		0x0006	Invalid Message repeat print
		0x0007	Communication is NOT allowed when Ink ejection is stopped.
		0x0010	Invalid data
4	Analysis information 4	0x0000	0x0000 fixed.
	(Preparation for future)		

(2) Details of User pattern data (Fixed-size and Free-size)

In case of Fixed-size, User pattern data will be placed at variable address depending on the character size specified. The Pattern data length of one character is shown below size by size. According to Pattern data length, User pattern data will be placed in Holding Registers and moved up to front.

In case of Free-size, User pattern data of one character consists of its dot size and the pattern data and is placed at fixed address.

When User pattern is newly registered, the applicable flag of Pattern data registration shall be ON.

Character size vs. Pattern data length (bytes)

01	
Character size	Pattern data length (bytes)
4x5	4 words(8 bytes)
5x5	4 words(8 bytes)
5x8(5x7)	4 words(8 bytes)
9x8(9x7)	8 words(16 bytes)
7x10	8 words(16 bytes)
10x12	16 words(32 bytes)
12x16	16 words(32 bytes)
18x24	36 words(72 bytes)
24x32	64 words(128 bytes)
11x11	16 words(32 bytes)
5x3(chimney)	3 words(5 bytes)
5x5(chimney)	3 words(5 bytes)
7x5(chimney)	4 words(7 bytes)
30x40	100 words(200 bytes)
36x48	144 words(288 bytes)
Free size	640 words(1280 bytes)
	4x5 5x5 5x8(5x7) 9x8(9x7) 7x10 10x12 12x16 18x24 24x32 11x11 5x3(chimney) 5x5(chimney) 7x5(chimney) 30x40 36x48

^{*} The parenthesized number show the available number of bytes as pattern data.

The below-mentioned is an example of "Holding Registers" where User patterns are registered. User pattern registration 01 shows 16 status of User pattern registration 000 through 015 starting from the upper bit. Subsequently, the same data structure as that of User pattern registration 01 will follow.

The construction rule of User pattern data is the same as that of User pattern character transmission of Standard communication.

(Registration No. 000) (Registration No. 001)





Example of Holding Register setup

	Word address Classification		Item name	Setting data	Content
2D	00		Pattern data registered or Not 01	0xC000	Designation status for Designatured
2D	01		Pattern data registered or Not 02	0x0000	Registration status for Registered Char. 000 and 001are set to ON.
2D	20		Pattern data (Registered Char. 000)	0x0009	
2D	21		Pattern data (Registered Char. 000)	0x1F01	Pattern data of Registered
2D	22	User pattern	Pattern data (Registered Char. 000)	0x0000	Character 000 will be set.
2D	23	(fixed size)	Pattern data (Registered Char. 000)	0x0000	
2D	24		Pattern data (Registered Char. 001)	0x0913	
2D	25		Pattern data (Registered Char. 001)	0x1515	Pattern data of Registered
2D	26		Pattern data (Registered Char. 001)	0x0900	Character 001 will be set.
2D	27		Pattern data (Registered Char. 001)	0x0000	

5.6 Modbus communication rule for IJ Printer

The Modbus communication rule for IJ printer is described. Please read them carefully and fully understand and use the IJ printer.

- (1) When IJ Printer is Offline, Offline/Online switching and Read Input Registers are only available. In case of Read Holding Registers or Write Multiple/Single Register(s), please place IJ Printer Online.
- (2) When Holding Registers which overlap the plural functional classifications are read/written by one communication message, it will NOT work correctly. If reading/writing operation of the Registers overlaps their functional classification, please separate the message into plural messages so that one message will NOT overlap plural functional classifications.
- (3) When IJ Printer receives Modbus communication, IJ Printer will reflect the contents of the message each time of communication. If plural writing operations are conducted, please use Start/Stop control flag which are placed at the leading address of Holding Registers.
- (4) Start/Stop control flag will be used when the data more than 247 bytes are written on Holding Registers or when the writing operation is made on the Registers of which addresses are NOT consecutive.
 - When the Start (0x0001) is written on Start/Stop control flag, the written data is held and there will be NO writing operation onto Holding Registers.
 - When the Stop (0x0002) is written on Start/Stop control flag, all the data held on Holding Registers will be reflected to IJ Printer.
- (5) Character codes are the same as those which are used in Standard communication. Please refer to Technical Manual, Section 5 Communication, for details. In Modbus communication, Shift code characters and Time count characters can be also used and communicated. They are shown in the table below.

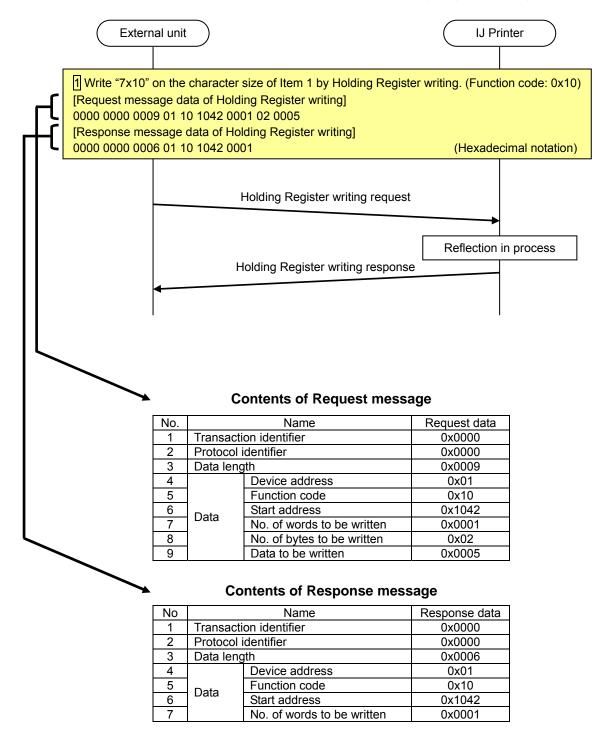
Shift code character	0xF25B	Time count character	0xF25C
Shift code start character	0xF26B	Time count start character	0xF26C
Shift code end character	0xF27B	Time count end character	0xF27C

(6) If the external signal was input for Print Data Recall, etc. when Read Holding Registers was conducted more than once, there is a possibility that the data before external signal input and the data after external signal input are mixed and the read result would be an unexpected data. Therefore, when Modbus communication and the external signals are used together, it is recommended to control the input timing of the external signal so that they will NOT overlap.

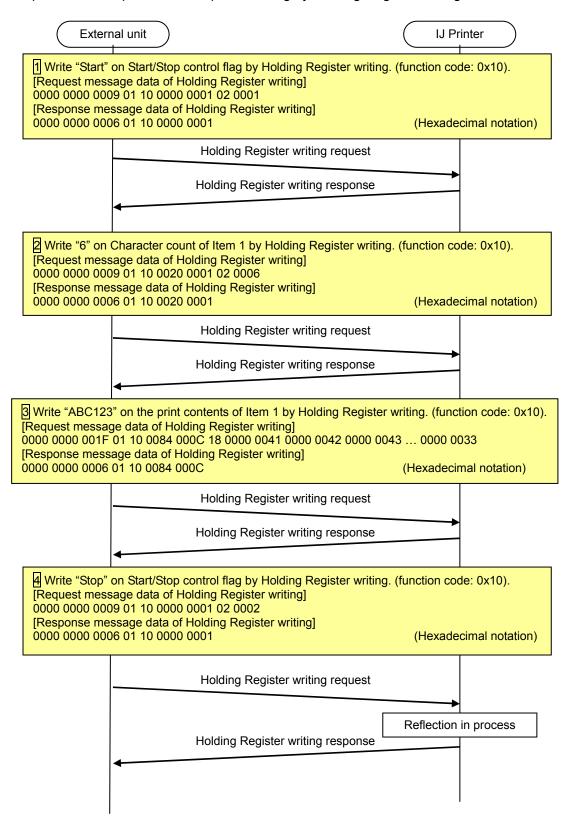
5.7 Examples of Transmission procedure

(1) In case of changing the character size of Item 1 to "7x10":

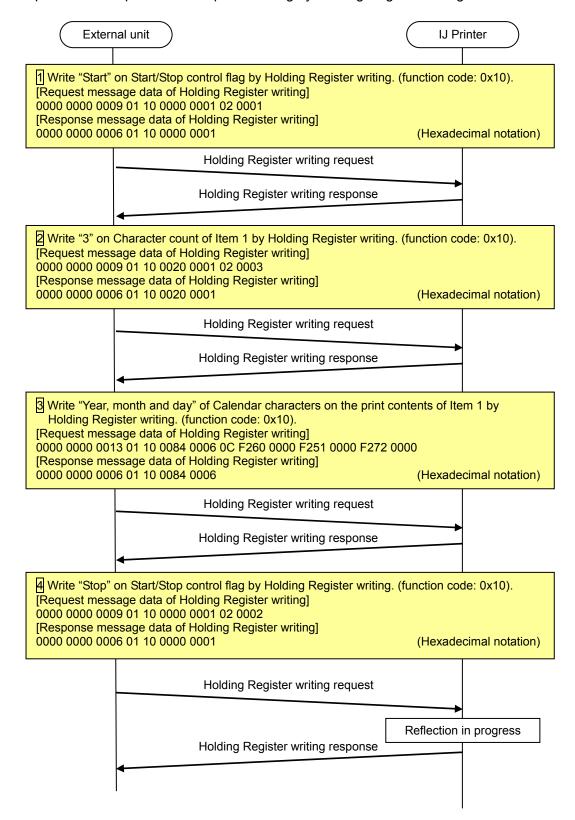
Step 1. Write 7x10 on the character size of Item 1 by Holding Register writing.



- (2) In case of setting the print contents of Item 1 to "ABC123":
 - Step 1. Write "Start" on Start/Stop control flag by Holding Register writing.
 - Step 2. Write "6" on Character count of Item 1 by Holding Register writing.
 - Step 3. Write "ABC123" on the print contents of Item 1 by Holding Register writing.
 - Step 4. Write "Stop" on Start/Stop control flag by Holding Register writing.

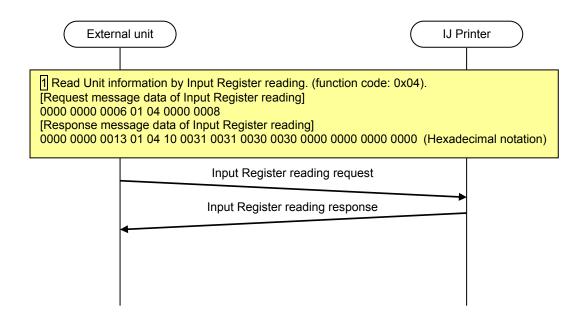


- (3) In case of setting "Year, month and day" of Calendar characters on the print contents of Item1:
 - Step 1. Write "Start" on Start/Stop control flag by Holding Register writing.
 - Step 2. Write "3" on Character count of Item 1 by Holding Register writing.
 - Step 3. Write "Year, month and day" of Calendar characters on the print contents of Item 1 by Holding Register writing.
 - Step 4. Write "Stop" on Start/Stop control flag by Holding Register writing.



(4) In case of getting Unit information of IJ Printer:

Step 1. Read Unit information by Input Register reading.



6 Troubleshooting guide In case TUP-I does not work correctly, please troubleshoot referring to the table below:

Phenomenon	Check	Solution
TUP-I is not powered ON.	Is TUP-I connected properly ?	Confirm TUP-I connection, referring to 2.3 LAN cable connection.
	Is IJ Printer's main power switch turned ON?	Power ON IJ Printer's main power switch.
	Is IJ Printer's plug surely inserted into Power outlet? Is Power outlet activated?	First turn OFF the main switch. Confirm if the power outlet is activated or not. And then, insert the plug into the outlet.
External device can NOT communicate to TUP-I.	Is TUP-I connected to LAN of the same network segment?	Set TUP-I to an IP address of the same network segment.
	Is IP address which was set to TUP-I the duplicate of other device on the network?	If there is a possibility of the duplicate IP address, please disconnect LAN cable and change IP address.
	Is communication blocked by the security software?	Please temporarily disable Firewall protection of Windows or the security software, retry.
	Is IP address or Port number properly set for external device?	Confirm setting of external device.
	Are DIP switches properly set?	Set all DIP switches of SW2 and SW3 to OFF position, referring to Section 2.4 TUP-I Communication setup.
When TUP-I is powered ON again, the data which was supposed to be changed is NOT changed.	Did you power OFF IJ Printer after ink ejection was stopped?	IJ Printer saves the data when ink ejection is stopped. Please power OFF IJ Printer after ink ejection stop process is complete. Data will NOT be held when data change is made via communication during stand-by.