**ΩΞ OMEGA™**

# User's Guide

# RD9900 SERIES
## Communications Interfaces

# ΩΞ OMEGA®

# CONTENTS

# Introduction

This manual describes the specifications and operation of three communications interfaces (RS-232C, RS-485 and Ethernet) of the RD9900 series graphic recorders.

The individual part for each communication is explained separately in [In case of RS-232C], [In case of RS-485] and [in case of Ethernet], and the common part is explained all together. Please read the required part carefully. Be sure to confirm the model code of the communications interface of this unit you purchased.

RD99□□　□□□

Measurement points/Sampling rate
06: 6-point input /100ms
12: 12 point input /100ms

Communication interface (Option)
Blank: None
C24: High order: RS232C (High order)/RS485 (High order)
Switchable, Low order: RS485

Alarm output, contact input, Power output for transmitter (Option)
Blank: None
AL12: Alarm relay output (12 points)

Power supply,
Blank: Standard power supply
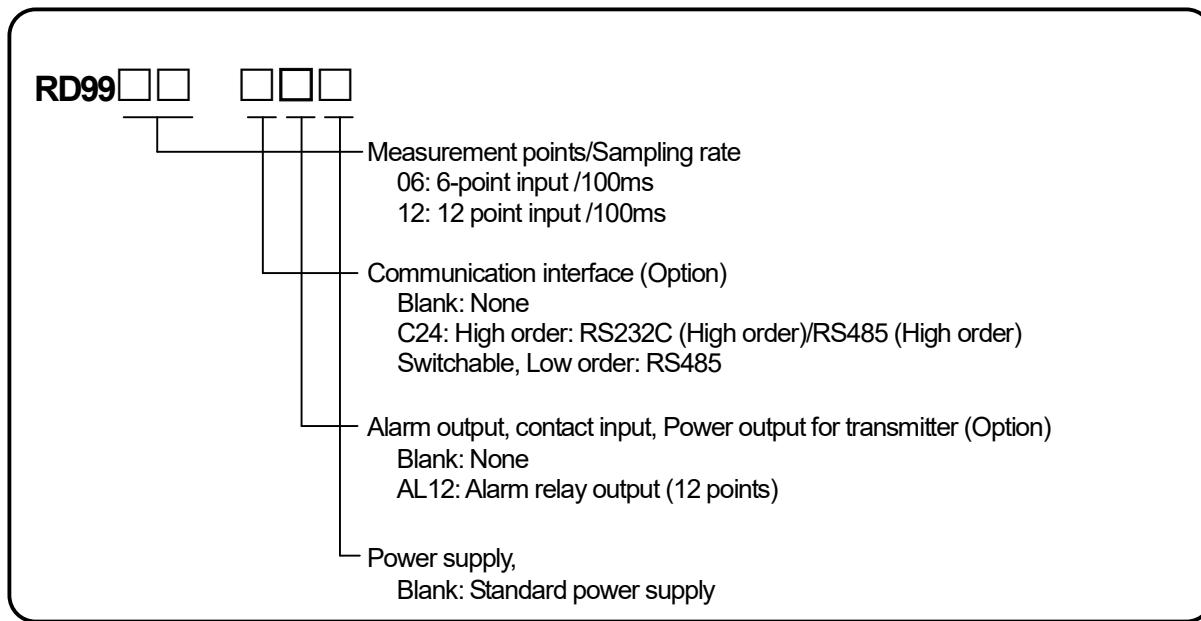
## 1. Other manuals to be consulted

This manual is for the communications interface only. For the installations of this instrument, please refer to the following separate manuals:

1) RD9900 General Instruction Manual
2) RD9900 Mounting/connections edition Instruction Manua
* For the personal computer (PC) you use, refer to the manual attached to the PC.

## 2. Caution display　⚠ Precaution

This manual contains explanation with　⚠ Precaution . Observe these precautions when operating and handling the communications interface, otherwise damage of this unit, deterioration in performance or operation failure may occur.

⚠ Precaution

(1) The right is reserved to change the contents of this manual at any time without notice.

(2) The contents of this manual have been prepared professionally. However, if you have any questions, or notice of error or an omission of descriptions found on this manual, please contact your nearest OMEGA sales agent.

(3) OMEGA is not responsible for any results influenced by the operation of this communications interface, irrespective of item (2) above.

# 1 General

The communications interfaces available in this unit are Ethernet as standard and 2 kinds of serial communications, RS-232C/RS485, as an option. Via these communications, a PC can receive measured data and set various parameters.

## 1.1 RS-232C communications interface

The RS-232C is the data communications standard being set and issued by EIA (Electronic Industries Association) in the USA and the correspondence Japanese standard is JIS C 6361.

This standard covers the interfaces between the MODEM and the connected data terminal units, and specifies electrical and mechanical specifications only. Most of the RS-232C communications interfaces are being used in PCs and industrial instruments such as the RD9900 series graphic recorder, and do not completely conform to this standard. Signal wire numbers and connectors of the RS-232C communications interface may differ from those specified in the standard. Also, since this standard does not specify any software parts, so-called [data transmission procedures], units having the RS-232C communications interface cannot be interconnected with each other unconditionally. For these reasons, users must survey and check the specifications and transmission procedures in advance of units being connected. However, if a unit connected is a PC or similar device that can optionally program the specifications, most units can be connected via proper software programs created by a systems engineer.

## 1.2 RS-485 communications interface

The RS-485 communications interface can communicate with multiple RD9900 series graphic recorders (up to 31 sets) in parallel by signals conforming to the RS-485.

There are few PCs having the RS-485 communications interface. However, since these communications interfaces are characterized with serial communications, it is easily connectable to a PC having the RS-232C communications interface by using an RS-232C ⟷ RS-485 signal-converting unit.  A line converter (Model SC8-10) is available for RS-232C ⟷ RS-485 signal conversion from OMEGA.

## 1.3 Ethernet

Ethernet is the communications standard specified in IEEE802.3 and is the most widely installed small-sized LAN technology. The RD9900 series graphic recorder is connected to a LAN established by the Ethernet and performs reception of measured data, setting of various parameters, etc.

For the specifications of this unit, connections for the Ethernet, etc., refer to the general manual for this unit.

## 1.4 MODBUS protocol

The RD9900 series graphic recorder employs MODBUS protocol as the communications protocol.

The MODBUS protocol has RTU mode and ASCII mode that can be selected by keys on the front of this unit or the communications.

By using the MODBUS protocol, operation of measurement, setting, etc. to instruments can be performed.

Ethernet interface performs by implementing the MODBUS protocol on TCP protocol packet.

* MODBUS is a registered trademark of Schneider Automation Inc.

# **2** Communications specifications

## 2.1 Serial communications

Specifications of the serial communications of this unit are as follows. * mark shows factory default settings.
- ・Start-stop synchronization system
- ・Half-duplex (polling selecting system)
- ・Protocol: MODBUS protocol
- ・Transmission mode: RTU mode* or ASCII mode
- ・Transmission speed: 19200 bps or 9600 bps* selectable
- ・Start bit: 1 bit
- ・Data length: 7 bits or 8 bits* (depended on transmission mode)
- ・Parity bit: Even, Odd or Non* (none) (depended on transmission mode)
- ・Stop bit: 1 bit* or 2 bits (depended on transmission mode)
- ・Transmission code: Binary* or ASCII (depended on transmission mode)
- ・Error check: CRC-16* or LRC (depended on transmission mode)
- ・External units precedence communications system
- ・Data transmission procedure: No procedure
- ・Signals used: Transmission/reception of data only (Control signal not used)

## 2.2 Ethernet communications

Specifications of the Ethernet communications of this unit are as follows.
- ・Media: Ethernet (10BASE-T/100BASE-TX)
- ・Communications mode: Full-duplex/Half-duplex)
- ・Communications speed: 10Mbps (1-BASE-T)/100Mbps (100BASE-TX)

  However, as the communications speed and the communications mode are automatically recognized, fixed settings are disabled.
- ・Protocol: MODBUS (RTU) protocol on TCP/IP
- ・Number of simultaneous connection: 1 (for upper communications using the MODBUS protocol only)

This unit provides functions of Web, FTP, etc., but this manual describes data communications using MODBUS communications only.

The relation of the MODBUS communications and TCP/IP layers are shown in the table below.

| TCP/IP Model Layers | Main protocols used in Ethernet communications |
|---|---|
| Application layer | MODBUS |
| Transport layer | TCP |
| Internet layer | IP, ARP |
| Physical layer/Data link layer | Hardware (Ethernet) |

For details of the MODBUS protocol, refer to **5** **MODBUS protocol.**

### 2.2.1 Establishment of TCP connection

When the upper communications between a PC (the side which requires data: Client) and this unit (the side of which data is required: Server) is performed, it starts from establishing a TCP connection according to the following procedures first.

    1. The PC transmits the TCP packet with the SYN flag set to this unit.

    2. When this unit receives the SYN packet, it transmits the TCP packet the SYN+ACK flags set to the PC.

    3. When the PC receives the SYN+ACK packet, it transmits the TCP packet with the ACK flag set to this unit.
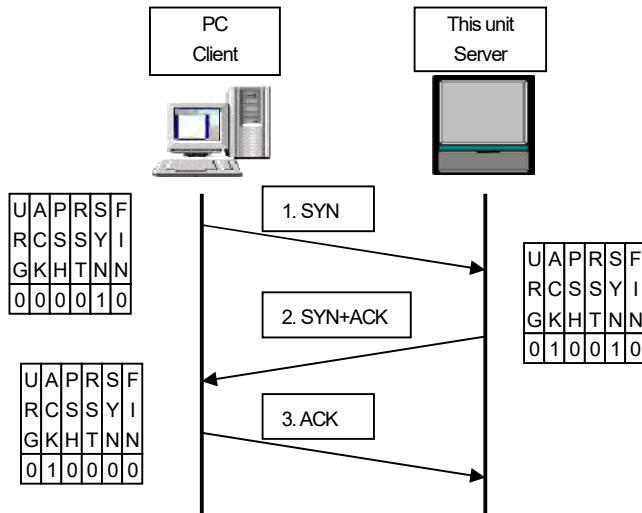


## 2.2.2 Data transmission and reception through TCP

When the connection is established, transmission and reception of various data through the MODBUS (RTU) protocol on the TCP data between the PC (Client) side and this unit (Server) are performed.
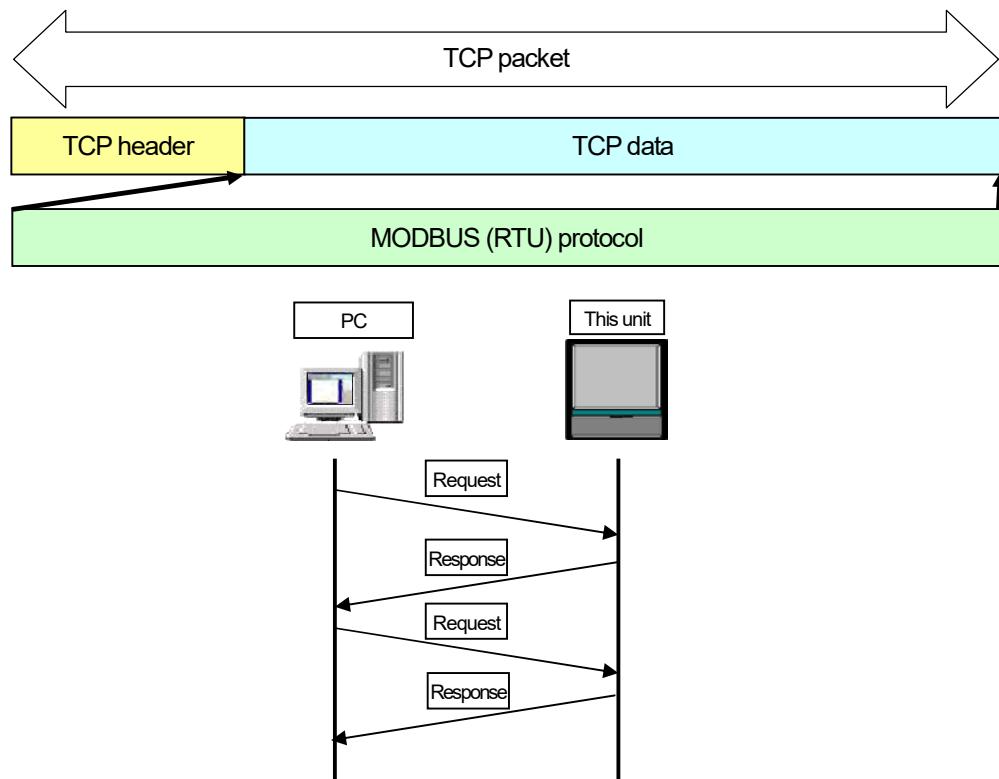
## 2.2.3 Disconnection of TCP connection

The communication flow at the disconnection of the TCP connection is as follows.

1. The PC transmits the TCP packet with the FIN flag set to this unit.
2. When this unit receives the FIN packet, it transmits the TCP packet the ACK flag set to the PC.
3. This unit transmits the FIN+ACK packet to the PC.
4. The PC transmits the ACK packet responding to the FIN.
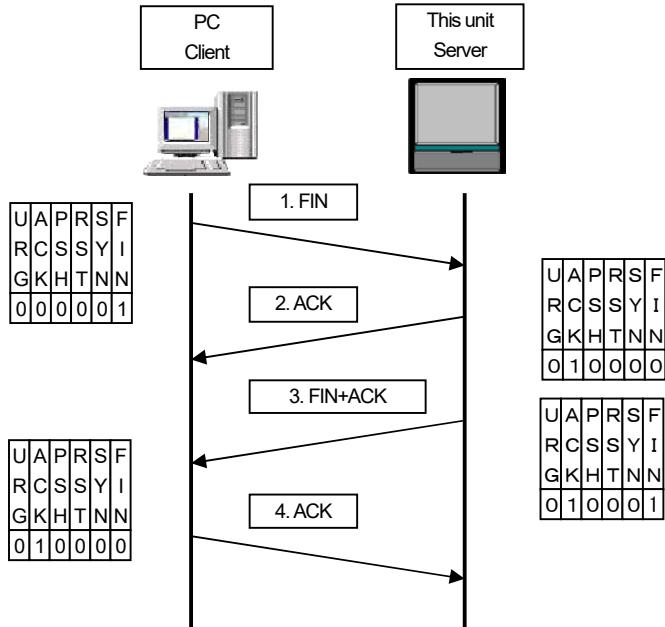


## 2.2.4 Functions at communications failure
**The followings are functions of this unit when the communications failure on the TCP/IP occurs.**

● In case that there is no response from a communication partner (PC, etc.)
When a response (ACK) packet does not return after this unit transmits data to a communication partner on Ethernet, this unit repeats to retry transmission (up to about 3 minutes).

When there is no response also to the transmission retry packet, this unit disconnects the TCP connection.

When the communication partner requests to connect the TCP connection to this unit before this unit disconnect the TCP connection, this unit transmits the RST packet to refuse the connection.

In addition, this unit transmits the RST packet in the following cases.
・When this unit receives the TCP packet from other than the partner being connected
・When this unit receives the RST packet from the communication partner

●When this unit receives an unexpected reply packet
Fundamentally, this unit ignores the unexpected reply packet. However, this unit disconnects the TCP connection as soon as it receives the RST packet in case of forcible disconnection of the TCP connection by the PC side and so on.

# 3 Confirmation of communications specifications and settings

## 3.1 Switch settings

When the serial communication is used, before installations and connections, select the RS-232C or RS-485 with the selector switch placed the upper part of this unit.

Switch position

485     232C

It switches in the state of power supply OFF.

Back side
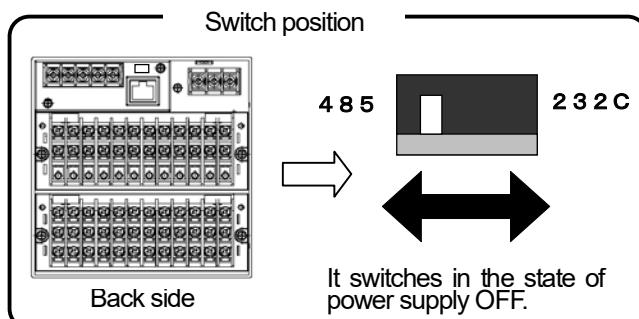
| SW2 | |
|---|---|
| Communication terminal side | Power terminals side |
| RS-485 | RS-232C |

⚠ **Precaution**

Turn the power of this recorder off before the setting of the above switch.

In addition, please confirm that the switch is pushed surely to a side.

## 3.2 Settings from this unit

### 3.2.1 Settings for Ethernet

Push [MENU] key, select [Network settings] from the setting menu displayed, and then press [ENTER] key. From the menu displayed here, select [Ethernet settings] and push [ENTER] key to display the setting screen shown below. Set the IP address, the subnet mask and the default gateway if desired. For the details, refer to "**13.10.1 Settings for Ethernet"** in the RD9900 General Instruction Manual.

| | |
|---|---|
| Group1 | 2007/05/18 |
| Real trend   Rem.24 1day | 11:03:44 |
| IP address | 192.168.254.254 |
| Subnet mask | 255.255.255. 0 |
| Default gateway | 0. 0. 0. 0 |

## 3.2.2 Settings for upper communications

Push [MENU] key, select [System settings] from the setting menu displayed, and then press [ENTER] key. From the menu displayed here, select [Upper communications] and push [ENTER] key to display the setting screen shown below. Set each item if desired.
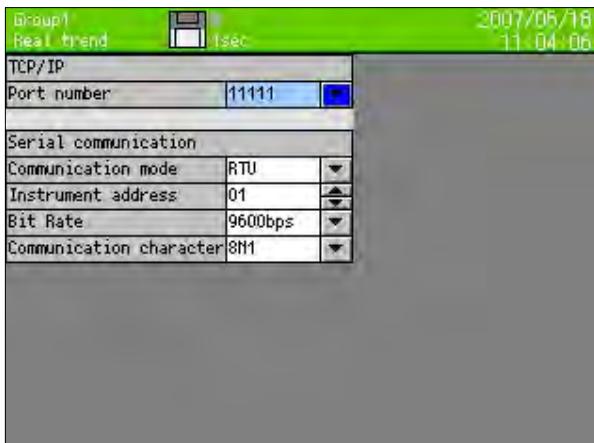


・Port number: Specify the port number used in the upper communications* via Ethernet.
・Communications mode: Select the RTU/ASCII.
・Instrument address: Set an arbitrary number in the range from 01 to 31.
・Bit rate: Select 9600bps or 19200bps.
・Communications character: Select it from the codes listed below.

| Code | Character length | Parity | Stop bit |
|------|------------------|--------|----------|
| 7E1  |                  | Even   | 1        |
| 7E2  |                  |        | 2        |
| 7O1  | 7 bits           | Odd    | 1        |
| 7O2  |                  |        | 2        |
| 8N1  |                  | None   | 1        |
| 8N2  |                  |        | 2        |
| 8E1  |                  | Even   | 1        |
| 8E2  | 8 bits           |        | 2        |
| 8O1  |                  | Odd    | 1        |
| 8O2  |                  |        | 2        |

\* In case of the upper communications via Ethernet, the communications mode is the RTU and the instrument address is fixed at "01".

# 4 Connections

## 4.1 Connection precautions

### 4.1.1 Communications Terminals

In case of the serial communications, the connection terminals are different with each communications interface.
For the details, refer to "**4.7 Connections of communications I/F terminals**" in the RD9900 Installation/Connection Manual.
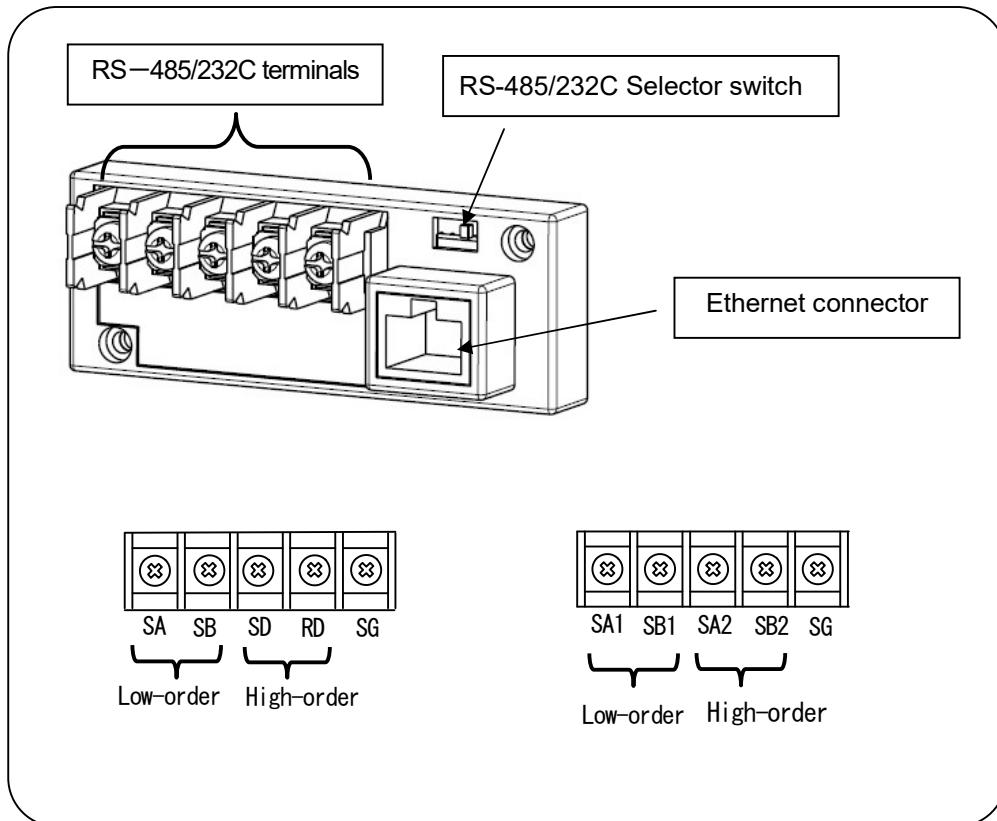


### 4.1.2 Total extension of RS-485 communications cable is up to 1.2km.

The wiring distance between each instrument is arbitrary, but the total extension length of cable is within 1.2km. (Line converter ⟺ the termination unit of RD9900 series graphic recorders)



Total extension of cable: Within 1.2km
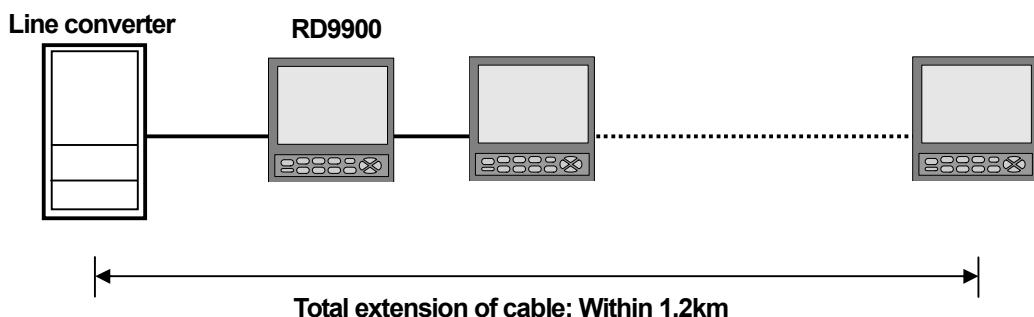
### 4.1.3 Take measures against noise

Separate the communications cable from power lines and other communications lines more than 50 cm not to be affected by noise.

In addition, when the communications using a PC or an Ethernet hub are performed, depending on circumstances, the hub, communications ICs, or the PC itself may be strongly affected by noise and failures may occur in communication with this unit. In this case, take sufficient measures against noise for the communication lines, the power lines, etc.

### 4.1.4 Crimp type terminals

Falling off of connections is one of communications failures. Terminate the communications cable with crimp type ring or spade terminals with an insulation sleeve. (The terminal screws of RD9900 series graphic recorders are M4mm and the terminal screws of the line converter are M3.5mm.)



**Crimp type ring terminal**

8 or less   3.7 or more

Insulation sleeve

**Crimp type spade terminal**

8 or less   3.7 or more

(mm)   Insulation sleeve
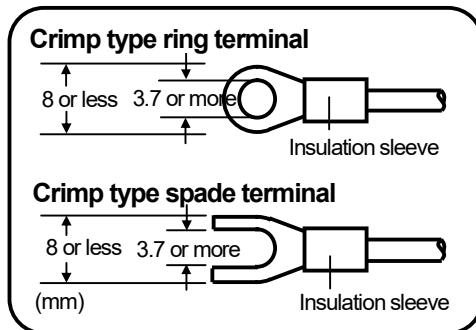
### 4.1.5 Attach a termination resistor

For using the RS-485 communications, mount a 100 Ω resistor to the RD9900 series graphic recorder connected at the final end. (For details, see Section 4.4)

[A general metal film resistor can be used. The resistor (sold separately) is available at OMEGA.]

However, there are also environments where a communication error cannot take place easily without the termination resistor attached

### 4.1.6 Number of this unit connectable

For RS-232C:     1 set
For RS-485:      Up to 31 sets* including other RS-485-compatible instruments

\* ICs complying with the RS-485 standards are used in this unit, but the number of the units that can communicate in high quality is different by cables used, distance and types of instruments connected.

## 4.2 Communications cables

Use communications dedicated cables. Communications dedicated cables (sold separately) are available at OMEGA.

### 4.2.1 Communications cables for RS-232C

(1) Connections between a PC (9 pins) and the RD9900 series recorder, and between a PC (9 pins) and a line converter

| Cable | 9-pin connector ⟷ RS-232C cable with crimp type ring terminals |
|---|---|
| Shape |  RS-232C cable (max. length: 15m)<br><br>9-pin connector for a PC<br><br>Terminals for the KR2000 series recorder or a line converter |
| Internal wiring |  |
| Type code | RZ-CRS6□□<br>└── Cable length: 1~ 15m (to be specified) |
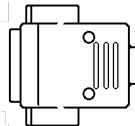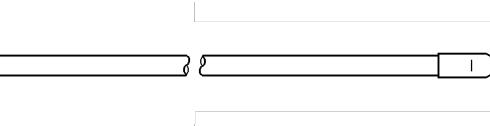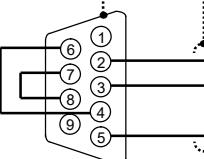
(2) Connections between a PC (25 pins) and the RD9900 series recorder, and between a PC (25 pins) and a line converter

| Cable | 25-pin connector ⟷ RS-232C cable with crimp type ring terminals |
|---|---|
| Shape |  RS-232C cable (max. length: 15m)<br><br>25-pin connector for a PC<br><br>Terminals for the KR2000 series recorder or a line converter |
| Internal wiring |  For NEC's PC98 series (except NX) |
| Type code | RZ-CRS2□□<br>└── Cable length: 1 ~ 15m (to be specified) |
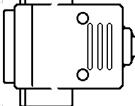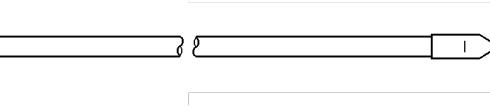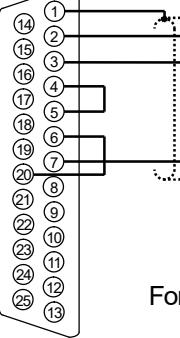
## 4.2.2 Communications cables for RS-485

Connections between a line converter and the RD9900 series recorder, and between the RD9900 recorder and the RD9900 recorder

| Cable | Crimp type ring terminals ⟷ RS-485 with crimp type ring terminals |
|---|---|
| Shape | SA RDA SB RDB SG SG<br><br>Line converter: RDA   RDB   SG          RD9900<br>RD9900:       SA    SB    SG<br><br>SA SB SG<br><br>The cable consists of a twisted dual-core CVVS wires with SG (signal grounding) wire at both ends. As the line converter has no SG terminal, cut this wire to use. |
| Internal wiring | SA RDA ○————————————○ SA<br>SB RDB ○————————————○ SB<br>SG SG ○————————————○ SG |
| Type code | RZ-LEC□□□ or RZ-CSS□□□<br><br>Cable length: 1 ~ 200m (to be specified) |
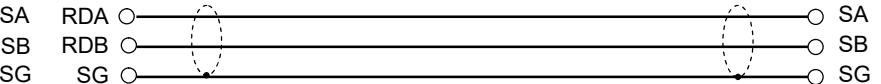
## 4.3 Connection of High order communication RS-232C

This unit uses three control signals of Send (SD), Receive (RD), Signal ground (SG) only. Since regular PCs are controlled by control signals, the PCs do not function by only connecting three signal cables without wiring processing inside the connector. The wiring processing depends upon the control signals being controlled by the PC. For details, read the manual for the PC used.

[Connection example 1]

RD9900

⊗ ⊗ ⊗
SD RD SG

Communications cable
RZ-CRS6□□

① ② ③ ④ ⑤
⑥ ⑦ ⑧ ⑨

DR RS CS ER

9-pin connector for a PC
(PC-98 series/IBM-PC・AT)

[Connection example 2]

RD9900

⊗ ⊗ ⊗
SD RD SG

Communications cable
RZ-CRS2□□

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬
⑭ ⑮ ⑯ ⑰ ⑱ ⑲ ⑳ ㉑ ㉒ ㉓ ㉔ ㉕

RS CS DR ER

25-pin connector for a PC
(PC-98 series)
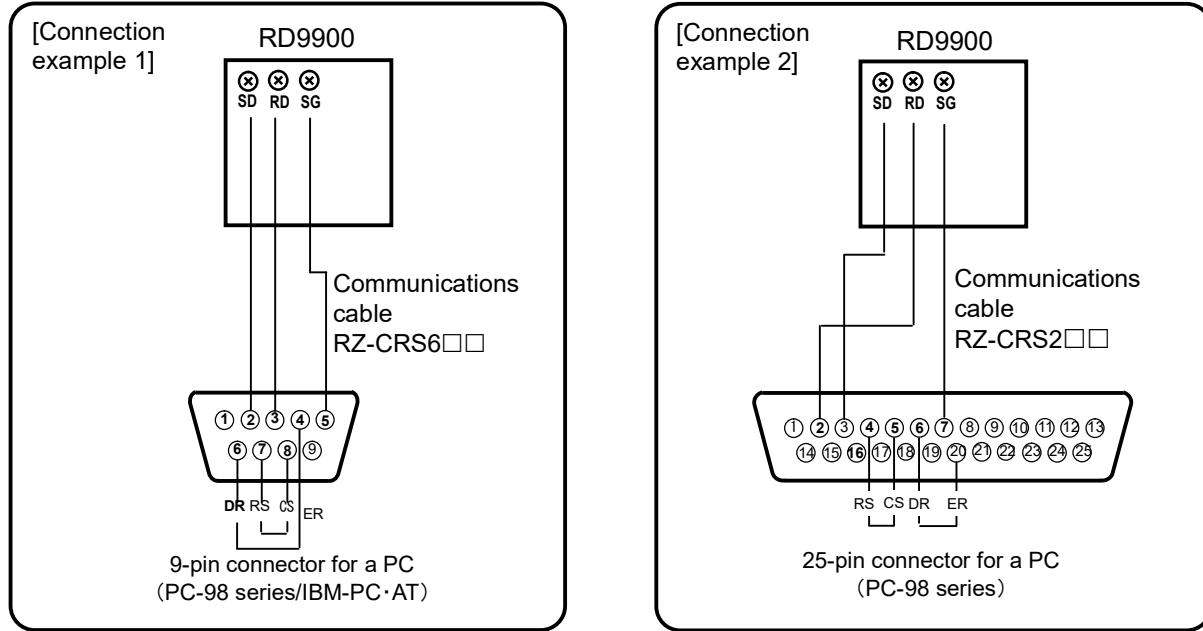
## ⚠ Precaution

The length of the RS-232C cable is maximum 15m. The connection example 1 is for the 9-pin connector and the connection example 2 is for the 25-pin connector.

**Don't connect the SG line to the protective conductor terminal (ground terminal).**

## 4.4 Connection of High order communication RS-485

This paragraph describes the connections of the RS-485 communications interface to a PC via the line converter (Model SC8-10: sold separately). Since the line converter and the PC use three control signals of Send, Receive and Signal ground only, the wiring processing inside the connector is required in the same way as in RS-232C connections.

[For details, read the manual for the line converter (Model SC8-10: sold separately).]



* For the wiring processing of the connector, refer to Para. **4.3 RS-232C connections.**
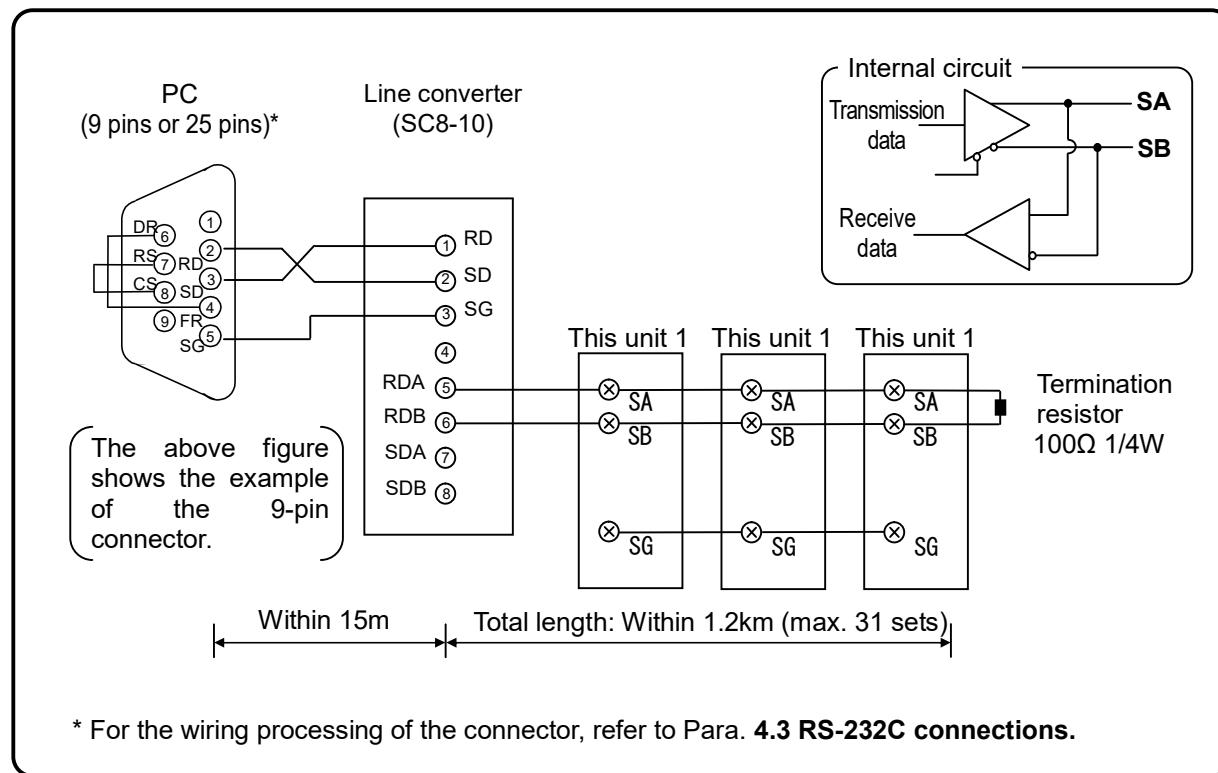
⚠ **Precaution**

**Don't connect the SG line to the protective conductor terminal (ground terminal).**

## 4.5 Connection of Low order communication RS-485

Connect SA1, SB1 of RD9900 and SA, SB of low order connected instrument like the following figure.
Refer to instruction manual of each instrument for detail method of low order instrument connection.

### Example of connection 1

| SA1 ⊗ | SA ⊗ | SDA ⊗ | Termination |
| SB1 ⊗ | SB ⊗ | SDB ⊗ | resistor |
| SA2 ⊗ | | RDA ⊗ | 100Ω・1/4W |
| SB2 ⊗ | | RDB ⊗ | |
| SG ⊗ | SG ⊗ | SG ⊗ | |

| RD9900 Low order communications terminal | AL/AH | SE3000 , MELSEC etc. |

Within 1.2km (max. 31 sets)

Communications cables
RZ-LEC0□□, RZ-CSS1□□

### Example of connection 2 (SYSMAC)

Internal circuit

Transmitting data — SA

Receiving data — SB

Protocol converter
(SC8-10)

RS-485          RS-232C

This recorder

| ⊗ SA1 | RD ① | ② SD |
| ⊗ SB1 | SD ② | ③ RD |
| ⊗ SA2 | SG ③ | ⑨ SG |
| ⊗ SB2 | ④ | ④ RS |
| ⊗ SG | ⑤ RDA | ⑤ CS |
| | ⑥ RDB | |
| | ⑦ SDA | |
| | ⑧ SDB | |

Connecting the RS and CS.
Other open.

SYSMAC   CPU unit
Internal RS-232C port
(D-SUB 9-pin receptacle)

Termination resistor
100Ω・

Within 1.2km        Within 15m

Communications cables          Communications cables
RZ-LEC0□□, RZ-CSS1□□          RZ-CRS6□□

**Remarks** ▷ Mounting termination resistor

To ensure the transmission of data via RS-485 communications, mount a termination resistor at both ends of transmission lines. When the protocol converter (SC-8) is at an end of a transmission circuit, short the terminals of ④ and ⑤ of the unit to insert the termination resistor automatically.

# 5 MODBUS protocol

## Precautions and basic procedure of communications

⚠**Precautions**

**1. As the control signal wire is not used, pay attention to retransmit a command.**
The serial interface of this instrument communicates without using control wire.
Pay attention to retransmit a command as reception defects may occur depending on the status of this instrument.

**2. Do not remove any devices or communication cables and do not turn ON or OFF the power supply during communications.**
If devices or cables configuring the serial interface are removed or if the power is turned ON (OFF) during communications, the communications may stop or an error may occur. If this happens, reset all the devices configuring the serial interface and restart the communications from the beginning.

**3. Transmit the next command after confirming that the communication drive is switched OFF.**
In RS-485, if multiple instruments are connected to same communications line, then only 1 instrument, of which instrument number is specified from the PC, drives the communications line. At that time, for transmitting all the characters to the PC completely, the drive of the communications line is turned OFF with some time interval after the last character is sent. If the PC transmits a command to the next instrument before it becomes OFF, then the signal crashes and normal communications cannot be done. Therefore take care when a high speed PC is used. This interval is around 5ms.

## 5.1 Transmission mode of message

There are 2 types of the RTU (Remote Terminal Unit) mode and the ASCII mode.

(Table 1. Comparison of RTU mode and ASCII mode)

| Item | | RTU mode | ASCII mode |
|---|---|---|---|
| Transmission code | | Binary | ASCII |
| Error detection (Error check) | Vertical direction | Parity | |
| | Horizontal direction | CRC-16 | LRC |
| Character configuration | Start bit | 1 bit | |
| | Data bit | 8 bits | 7 bits, 8 bits |
| | Parity bit | None, odd, even | None (Note), odd, even |
| | Stop bit | 1, 2 bits | |
| Message start code | | None | : (Colon) |
| Message end code | | None | CR, LF |
| Data time interval | | Less than 28-bit hours | Less than 1 second |

(Note) When the data bit is 7 bits, [Parity bit None] is not applicable.

### 5.1.1 Transmission data

The RTU mode is binary transmission. The ASCII mode divides 8 bits binary of the RTU into higher 4 bits and lower 4 bits and converts into characters respectively (0-9, A-F).

Ex) RTU mode          ASCII mode

| RTU mode | ASCII mode |
|---|---|
| 67H | 36H ("6") |
| 89H | 37H ("7") |
| ABH | 38H ("8") |
| | 39H ("9") |
| | 41H ("A") |
| | 42H ("B") |
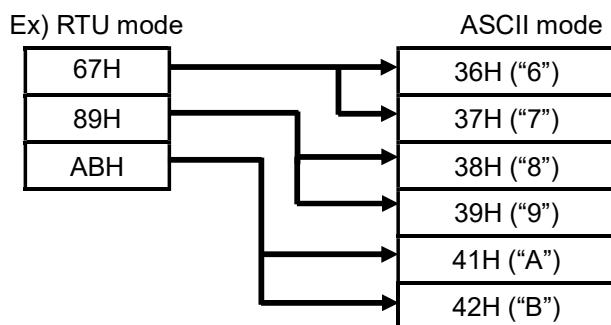
The RTU mode is half in the message length as compared to the ASCII mode and enables the efficient transmission.

### 5.1.2 Message frame configuration

The RTU mode is configured by message parts only.
The ASCII mode is configured by the start character ": (colon, 3AH)", messages and the end character "CR (carriage return, ODH) + LF (Line feed, OAH)".

RTU mode          ASCII mode

| Message |
|---|

| : | Message | CR | LF |
|---|---|---|---|
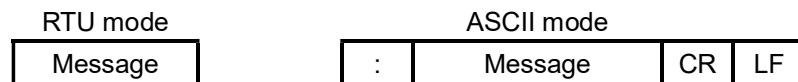
As the ASCII mode has the start character of ":" it has an advantage that the troubleshooting is easy.

## 5.2 Data time interval

**RTU mode:** Less than 28-bit hours (2.8msec at 9600bps, 1.4msec at19200bps)
**ASCII mode:** Less than 1 second

When a message is sent, be careful that the time interval of data configuring one message does not exceed the time shown above. If the time interval exceeds the time shown above, the receiving side (this unit) judges that the transmission from a sender is finished and the data are processed as the reception of an abnormal message.

In the RTU mode, message characters should be sent continuously, but in the ASCII mode, as the interval between the characters is maximum 1 second, a master (PC) whose processing speed is comparatively slow can be used.

## 5.3 Message configuration

The MODBUS messages have the following configuration for both of the RTU mode and the ASCII mode.

| |
| :---: |
| Slave address |
| Function code |
| Data |
| Error check |
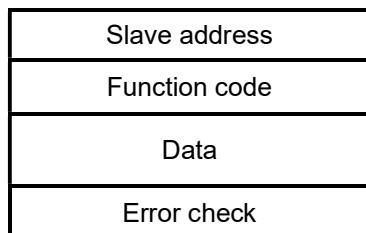
## 5.3.1 Slave address

Slave addresses should be set in advance in a range of 1-31. The master usually communicates with 1 slave. Only the slave corresponding with the slave address in the command message from the master responds to that message.

The slave address "0" is used in messages (Broadcast) to all the slaves from the master. In this case, the slaves do not return any response.

## 5.3.2 Function code

The function codes are the codes to be performed in the slaves and each data is roughly categorized as follows. The table shows original functions of MODBUS and functions of our MODBUS instruments.

(Table 2. Function codes)

| Code | Function | Unit | MODBUS original function (Reference) |
|:---:|---|:---:|---|
| 01 | Reading of digital (ON/OFF) setting value | 1 bit | Reading the status of coil |
| 02 | Reading of digital input data | 1 bit | Reading the status of input relay |
| 03 | Reading of analog setting value | 16 bits | Reading the content of holding register |
| 04 | Reading of analog input data | 16 bits | Reading the content of input register |
| 05 | Writing digital setting value | 1 bit | Changing the status of single coil |
| 06 | Writing analog setting value | 16 bits | Writing to single holding register |
| 08 | Transmission of received data (for diagnosis) | | Loop back test |
| 16 | Writing multiple analog setting values | | Writing to multiple holding registers |

| | |
|---|---|
| 1. Digital settings value | Parameters to change functions including record ON/OFF, marker text record etc. |
| 2. Digital input data | Data of event activation status etc. |
| 3. Analog settings value | Various setting information. Numeric values are in the range of 16 bits (-32763 to 32767). |
| 4. Analog input data | Measurement data, instrument specification information etc. Numeric values in the range of 16 bits are outputted. |

* For the details, refer to the reference table.

## 5.3.3 Data part

Data structures differ depending on the function codes. In case of requests from the master, they are configured by a code number (relative numbers calculated from reference numbers mentioned hereafter) of the target data for reading/writing and number of data, etc. Responses from the slaves are configured by data requested by a command etc.

All basic data of MODBUS are 16-bit integers and existence of a mark is decided for each data. Therefore real values of data like measured values are expressed by allocating a decimal place to a different address or by normalizing with high/low values of a scale while the decimal place is fixed. This instrument adopts the allocation method of the decimal place to a different address.

⚠ Precaution

In the data part, there are specific numeric values such as input data allocated as error data. When using such data, perform the error judgment of data first and then combine them with decimal point data.
If such error data are combined with decimal point data first, they are judged as normal data.

## 5.3.4 Reference number

Numbers called "Reference numbers" are allocated to all the data of this instrument and these numbers are necessary for reading/writing data.

The data are classified into "Digital setting values", "Digital input data", "Analog input data" and "Analog setting values" depending on their types. Number designation in messages is performed by relative numbers corresponding to the respective reference numbers.

(Table 3. Reference numbers and relative numbers)

| Data type | Reference number | Relative number | MODBUS original (Reference) |
|---|---|---|---|
| Digital setting value | 1 ~ 10000 | Reference number - 1 | Coil |
| Digital input data | 10001 ~ 20000 | Reference number - 10001 | Input relay |
| Analog input data | 30001 ~ 40000 | Reference number - 30001 | Input register |
| Analog setting value | 40001 ~ 50000 | Reference number - 40001 | Hold register |

For example, the relative number of "Reference number 30101 (Data of Channel 1)" mentioned later becomes "100".

（Table 4. Reference numbers）

| Data type | Parameter | Reference number | Corresponding function code | Reference table |
|---|---|---|---|---|
| Digital setting value | Key lock<br>Record ON/OFF<br>Marker text writing | 1 ~ 20 | 01 (READ)<br>05 (WRITE) | Para. 5.7.1 |
| Digital input data | Event status | 10101 ~ 10800 | 02 (READ) | Para. 5.7.2 |
| Analog input data | Instrument information<br>Measurement data | 30001 ~ 30093<br>30101 ~ 30188 | 04 (READ) | Para. 5.7.3 |
| Analog setting value | Common parameter (Date/time, upper communications, processing reset etc.) | 40001 ~ 40098 | 03 (READ)<br>06 (WRITE)<br>16 (WRITE) | Para. 5.7.4 |
| | Setting parameter for each channel | 40102 ~ 44500 | | |
| | Communications parameter | 45001 ~ 45486 | | |
| | Low order communications parameter | 45501 ~ 45544 | | |
| | Group parameter | 46001 ~ 46500 | | |
| | Common parameter (screen, schedule etc.) | 47110 ~ 47167 | | |
| | File-related-parameter | 47207 ~ 47700 | | |
| | Marker text | 48001 ~ 48752 | | |
| | Low order communication setting (PLC relation) | 48951～48985 | | |
| | Web server setting | 49001～49064 | | |

## 5.3.5 Error check

The error check of transmission frame differs depending on the mode.

RTU mode: CRC-16

ASCII mode: LRC

### 5.3.5.1 Calculation of CRC-16

The CRC method divides the information to be sent by a generating polynomial and transmits it by attaching the calculated remainder to its end. The generating polynomial is as follows.

$$1 + X^2 + X^{15} + X^{16}$$

The following calculation is performed for information from a slave address to the end of data.

1) Initialization (=FFFFH) of data of CRC-16 (consider as X)

2) Exclusive OR of data 1 and X (EX-OR) → X

3) 1-bit shifting of X to the right → X

4) For a carry existed, A001H and EX-OR are taken, else go to 5). → X

5) 3) and 4) are repeated up to 8-time shifts.

6) EX-OR of the following data and X→ X

7) Same as 3) - 5)

8) Repeating up to the last data.

9) A message is created in the order from lower digits to higher digits of the calculated 16-bit data (X).

Example)

When data is ⌐02H ⌐07H, the CRC becomes 1241H.

Then the error check data becomes ⌐41H ⌐12H.

Reference: CRC-16 calculation program　(C language)

```c
/***** CRC-16 calculation program *****/
#include <stdio.h>
#include <conio.h>

void main(void){
    /*** Internal variable declaration ***/
    unsigned    int     iLoopCnt;           /* Loop counter         */
    unsigned    short   usData;             /* Input data           */
    unsigned    short   usCrcData;          /* CRC-16 data          */
    unsigned    short   usErrChkData;       /* Error check data   */
                int     iDummy;             /* Dummy variable          */

    /* (1) Initialization of output result of a CRC-16 data */
    usCrcData = 0xffff;

    printf("Enter the hexadecimal data (Cancel by [q].) >\n");
    while( scanf("%x", &usData) != 0){
        /* (2) (6) Taking exclusive OR of the CRC output result and the entered data */
        usCrcData = usData ^ usCrcData;

        /*** CRC calculation processing ***/
        /* (5) Repetition up to 8-bit shifts */
        for(iLoopCnt = 0 ; iLoopCnt < 8 ; iLoopCnt++){
            /* (4) Checking if there is a carry. */
            if(usCrcData & 0x0001){
                /* (4) At a carry activated */
                /* (3) 1-bit shifting of the CRC output result to the right */
                usCrcData = usCrcData >> 1;

                /* (4) Taking exclusive OR with A001H */
                usCrcData = usCrcData ^ 0xa001;
            }else{
                /* (4) At a carry no activated */
                /* (3) 1-bit shifting of the CRC output result to the right */
                usCrcData = usCrcData >> 1;
            }
        } /* for */
    }; /* while */

    printf("The CRC-16 data is %xH.", usCrcData);

    /* Error check data creation*/
    usErrChkData = (usCrcData >> 8) | (usCrcData << 8);
    printf("The data for the error check is %xH.", usErrChkData);

    iDummy = getch();
}
```

**5.3.5.2 LRC calculation method**

The data from a slave address up to the end of the data are calculated by the following procedure.

  1) A message is created in the RTU mode.

  2) The data from the start (slave address) to the end are added. →X

  3) The complement (Bit inversion) of X is taken. →X

  4) 1 is added. (X=X+1)

  5) X is attached at the end of the message as the LRC.

  6) The entire data is converted into the ASCII character.

Example) When the data is $\boxed{02H \mid 07H}$, the LRC becomes F7H. Therefore the binary message becomes $\boxed{02H \mid 07H \mid F7H}$ and the ASCII message becomes $\boxed{30H \mid 32H \mid 30H \mid 37H \mid 46H \mid 37H}$

## 5.3.6 Precautions at the time of data processing

  1) As the measurement data and the decimal place are assigned to different numbers, it is necessary to use both information at replaying the data.

  2) As each 1 data can be accessed (changed), precautions are necessary at the time of setting the associated data including Initialization process of the associated data due to change of a range number, etc.

  3) Read and write the data in the range stipulated by the reference number. Reading and writing of reference number not stipulated may have an adverse effect on the instrument operation.

  4) At the reading of continuous reference numbers, the data of the reference number not stipulated becomes "0".

  5) At the writing to continuous reference numbers, if error is detected, all the settings become disabled.

## 5.4 Message creation

A message is consisted of 1) Slave address, 2) Function code, 3) Data part and 4) Error check code. (Refer to "5.3 Message configuration")

The number of data that can be read once is within the following range.

| Transmission mode | Number of data |
|---|---|
| RTU | 120 |
| ASCII | 120 |

The creating method of a message is explained in the following example.

Example) Reading of the measurement data of "Channel 1" of this unit set by the "Slave address 02".

### 5.4.1 RTU mode message

1) Slave address: 02　(　02H　)

2) Function code: 04　(　04H　)

t is the reading of the analog input data (contents of input register). When the function code is "04", it is necessary to specify "Relative number of data 2 bytes" for reading in the data part and "Number of data 2 byte" for reading. (Refer to "5.3 Message configuration". Refer to "5.3.2 Function code: 04".)

* It is necessary to confirm the number of bytes of data.

3) Data part: Starting relative number 100 (　00H　64H　) , Number of data 2 (　00H　02H　)

The measured data (analog input data) is stored in the reference number 0001 to 40000. (Refer to "5.3.4 Reference number Table 3"). By the reference table, you will understand that the integer part of CH1 is stored in "30101" and the decimal place is stored in "30102". (Refer to "5.7 Reference table". and refer to "5.7.3 Analog input data" for reading of measured data.) The relative number of the starting "Reference number 30101" is 30101-30001=100. If it is expressed in 2 bytes, it becomes "00H　64H". The number of data to be read is the integer part of CH 1 and the decimal place and if it is expressed in the hexadecimal 2 bytes, it becomes "00H　02H".

4) Error check: Calculation by the CRC-16　2730H　(30H　27H)

The error check in RTU mode is performed by the CRC-16. (Refer to "5.3.5.1 Calculation of CRC-16") The data of basic part of the message becomes 02H 04H 00H 64H 00H 02H as per 1) to 3), and the CRC-16 becomes 2730H. Therefore the error check data becomes 30H 27H .

5) Message: A message is created with the configuration of 02H 04H 00H 64H 00H 02H 30H 27H .
(Refer to "5.3 Message configuration")

### 5.4.2 ASCII mode message

The error check LRC is calculated from basic part of the message. The LRC becomes 94H. (Refer to "5.3.5.2 LRC calculation method). Each data of the basic part is converted into the ASCII code. In addition, the LRC is converted into ASCII code and is attached to the basic part. The start character of the message " : ", and "CR" and "LF" are added to the end.

(Example) In case of 02, 04H, 00H, 64H, 00H, 02H, 30H and 27H

| 3AH | 30H | 32H | 30H | 34H | 30H | 30H | 36H | 34H |
|---|---|---|---|---|---|---|---|---|

[ : ]　　02H　　　　　　　　00H　　　　64H

| 30H | 30H | 30H | 32H | 39H | 34H | 0DH | 0AH |
|---|---|---|---|---|---|---|---|

00H　　　　02H　　　　94H　　CR　　LF
　　　　　　　　　　　　　LRC
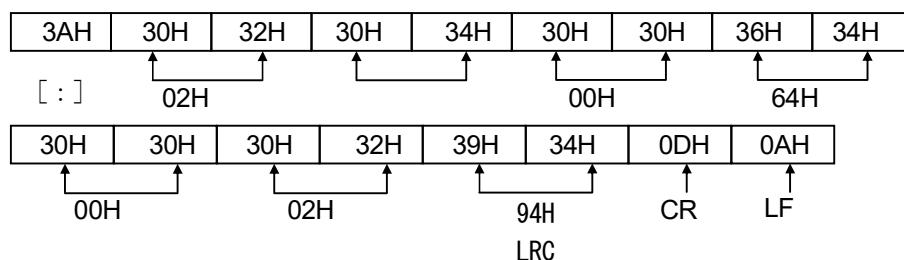
## 5.5 Function Code
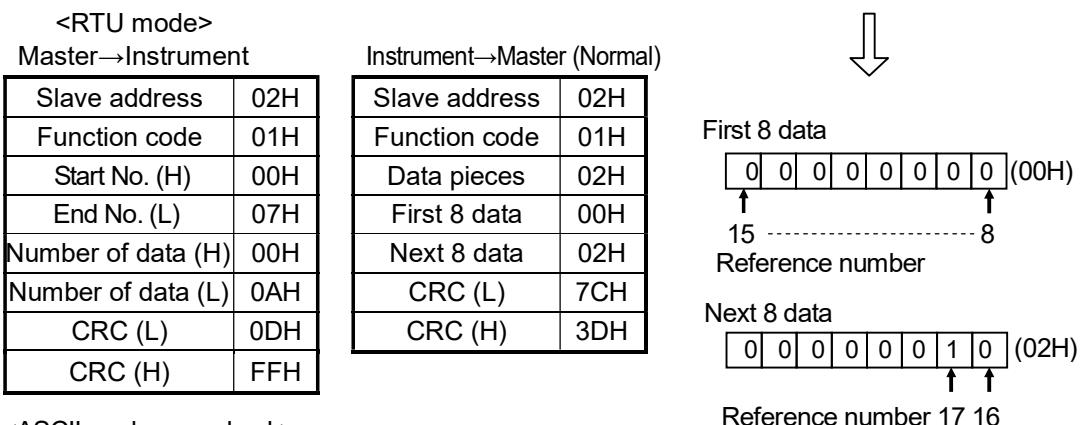
The response for each function is given below. (Refer to <Table 2 Function code table> in "5.3.2 Function code")
Note) Refer to "5.6 Process during abnormality" for responses for abnormality.

### 5.5.1 Reading of digital setting values (Reading of coil status)

[Function code:01 (01H)]
"Digital (ON/OFF) setting values with the continuous numbers" are read for the number of data specified from the start number specified. The ON/OFF data is arranged per 8 by 8 in numerical order in 1 data (1 byte) and configures a data of the response message. The LSB (D0 side) of each data is the digital data of the youngest number. When the number of read data pieces is not in multiples of 8, the unnecessary bits become 0.

Example) Reading of 10 digital setting value reference numbers from 8 to 17 of the slave 2

| Reference number | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
|---|---|---|---|---|---|---|---|---|---|---|
| Data | - | - | - | - | - | - | - | - | - | ON |

"0" is responded as no reference number exists.

Record ON

<RTU mode>

Master→Instrument

| Slave address | 02H |
|---|---|
| Function code | 01H |
| Start No. (H) | 00H |
| End No. (L) | 07H |
| Number of data (H) | 00H |
| Number of data (L) | 0AH |
| CRC (L) | 0DH |
| CRC (H) | FFH |

Instrument→Master (Normal)

| Slave address | 02H |
|---|---|
| Function code | 01H |
| Data pieces | 02H |
| First 8 data | 00H |
| Next 8 data | 02H |
| CRC (L) | 7CH |
| CRC (H) | 3DH |

First 8 data

| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (00H) |

15 - - - - - - - - - - - - - - - - - 8
Reference number

Next 8 data

| 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | (02H) |

Reference number 17 16

<ASCII mode error check>

Error check: The CRC (L) and the CRC (H) parts are as follows.

| LRC | ECH |
|---|---|

| LRC | F9H |
|---|---|

Note) The start number (Relative number) is "Reference number - 1". (Decimal 7 (= 8 - 1) → Hexadecimal 07H)

Note) The data pieces are the number of bytes of data.
(It differs from the number of data requested. In the example, the requested number of data is 10 and the data pieces are 2.)

### 5.5.2 Reading of digital input data (Reading of input relay status)

[Function code: 02 (02H)]
"Digital (ON/OFF) input data with the continuous numbers" are read for the number of data specified from the start number specified. The ON/OFF data is arranged per 8 by 8 in numerical order in 1 data (1 byte) and configures a data of the response message. The LSB (D0 side) of each data is the digital data of the youngest number. When the number of read data pieces is not in multiples of 8, the unnecessary bits become 0.
The start number (Relative number) is "Reference number - 10001".

Example) Reading of 4 digital input setting value reference numbers from 10109 to 10112 of the slave 2

| Reference number | 10109 | 10110 | 10111 | 10112 | 10113 | 10114 | 10115 | 10116 |
|---|---|---|---|---|---|---|---|---|
| Data | ON | OFF | ON | OFF | - | - | - | - |

Level 1  Level 2  Level 3  Level 4   "0"  is  responded  as  no
CH1 Event activation status          reference number exists.

<RTU mode>

Master→Instrument

| Slave address | 02H |
|---|---|
| Function code | 02H |
| Start No. (H) | 00H |
| End No. (L) | 6CH |
| Number of data (H) | 00H |
| Number of data (L) | 04H |
| CRC (L) | B9H |
| CRC (H) | E7H |

Instrument→Master (Normal)

| Slave address | 02H |
|---|---|
| Function code | 02H |
| Data pieces | 01H |
| First 8 data | 05H |
| CRC (L) | 61H |
| CRC (H) | CFH |

First 8 data

| 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | (05H) |
|---|---|---|---|---|---|---|---|---|

Reference number 10112 ........ 10109

"0" is responded as the reference numbers from 10113 to 10116 do not exist.

<ASCII mode error check>

Error check: The CRC (L) and the CRC (H) parts are as follows.

| LRC | 8CH |  | LRC | F6H |
|---|---|---|---|---|

Note) The start number (Relative number) is "Reference number - 10001".
(Decimal 108 (= 10109 - 10001) → Hexadecimal 6CH)

Note) The data pieces are the number of bytes of data.
(It differs from the number of data requested. In the example, the requested number of data is 4 and the data piece is 1.)

## 5.5.3 Reading of analog setting values (Reading of maintenance register contents)

[Function code: 03 (03H)]

"Analog setting values (2 bytes: 16 bits) with the continuous numbers" are read for the number of data specified from the start number specified. The data is arranged by splitting into higher 8 bits and lower 8 bits in numerical order and configures a data of the response message.

Example) Reading of the range high/low limits and the decimal point of Channel 1 of the slave 2
(Reading of 3 analog setting value reference numbers from 40104 to 40106 of the slave 2)

| Reference number | 40104 | 40105 | 40106 |
|---|---|---|---|
| Data | 0 (0000H) | 1000 (03E8H) | 1 (0001H) | ← Data example 0.0 ~ 100.0

<RTU mode>

Master→Instrument

| Slave address | 02H |
|---|---|
| Function code | 03H |
| Start No. (H) | 00H |
| End No. (L) | 67H |
| Number of data (H) | 00H |
| Number of data (L) | 03H |
| CRC (L) | B4H |
| CRC (H) | 27H |

Instrument→Master (Normal)

| Slave address | 02H |
|---|---|
| Function code | 03H |
| Data pieces | 06H |
| Low limit value data (H) | 00H |
| Low limit value data (L) | 00H |
| High limit value data (H) | 03H |
| High limit value data (L) | E8H |
| Decimal point data | 00H |
| Decimal point data (L) | 01H |
| CRC (L) | 74H |
| CRC (H) | 35H |

<ASCII mode error check>

| LRC | 91 |  | LRC | 09H |
|---|---|---|---|---|

Note) The start number (Relative number) is "Reference number - 40001".
(Decimal 103 (= 40104 - 40001) → Hexadecimal 67H)

Note) The data pieces are the number of bytes of data.
(It differs from the number of data requested. In the example, the requested number of data is 3 and the data pieces are 6.)

Note) There is a limitation on the data pieces for the message (that this unit can transmit) that can be received at a time. (Refer to "5.4 Message creation")

## 5.5.4 Reading of analog input data (Reading of input register contents)

[Function code: 04 (034)]

"Analog input data (2 bytes: 16 bits) with the continuous numbers" are read for the number of data specified from the start number specified. The data is arranged by splitting into higher 8 bits and lower 8 bits in numerical order and configures a data of the response message. The response example is same as "Function code 03", but the start number (Relative number) is "Reference number – 30001".

## 5.5.5 Writing of digital setting values (Changing of single coil status)

[Function code: 05 (05H)]

The digital setting value specified is put into the status (ON/OFF) specified.

Example) Execution of the marker text writing of the slave 2 (The digital setting value reference number 20 of the slave 2 is turned ON.)

&lt;RTU mode&gt;

| Master→Instrument | | Instrument→Master (Normal) | |
|---|---|---|---|
| Slave address | 02H | Slave address | 02H |
| Function code | 05H | Function code | 05H |
| Setting value No. (H) | 00H | Setting value No. (H) | 00H |
| Setting value No. (L) | 13H | Setting value No. (L) | 13H |
| Setting status (H) | FFH | Setting status (H) | FFH |
| Setting status (L) | 00H | Setting status (L) | 00H |
| CRC (L) | 7DH | CRC (L) | 7DH |
| CRC (H) | CCH | CRC (H) | CCH |

&lt;ASCII mode error check&gt;

| LRC | E7H | LRC | E7H |
|---|---|---|---|

Note) In case of a normal response, the response is same as a command message.

Note) The setting value number (Relative number) is "Reference number - 1". (Decimal 19 (= 20 - 1) → Hexadecimal 13H)

Note) Set "F00HH" at the execution. In the key lock and the record ON/OFF, set "0000H" to turn OFF and "FF00H" to turn ON.

Note) When the slave address is set to 0, all slaves perform this command, but no slave responds.

## 5.5.6 Writing of analog setting values (Writing of single maintenance resister)

[Function code: 06 (06H)]

The analog setting value specified is put into the value specified.

Example) Setting of the sensor correction value of Channel 1 of the slave 2 to 20
  (Setting of the analog setting value reference number 40111 of the slave 2 to "20".)

&lt;RTU mode&gt;

Master→Instrument

| Slave address | 02H |
|---|---|
| Function code | 06H |
| Setting value No. (H) | 00H |
| Setting value No. (L) | 6EH |
| Setting data (H) | 00H |
| Setting data (L) | 14H |
| CRC (L) | E8H |
| CRC (H) | 2BH |

Instrument→Master (Normal)

| Slave address | 02H |
|---|---|
| Function code | 06H |
| Setting value No. (H) | 00H |
| Setting value No. (L) | 6EH |
| Setting data (H) | 00H |
| Setting data (L) | 14H |
| CRC (L) | E8H |
| CRC (H) | 2BH |

&lt;ASCII mode error check&gt;

| LRC | 76H |
|---|---|

| LRC | 76H |
|---|---|

Note) In case of a normal response, the response is same as a command message.

Note) The setting value number (Relative number) is "Reference number - 40001".
  (Decimal 110 (= 40111 - 40001) → Hexadecimal 6EH)

Note) When the slave address is set to 0, all slaves perform this command, but no slave responds.

## 5.5.7 Loop back test

[Function code: 08 (08H)]

The transmission check is performed between the master and slaves. The response is performed according to the diagnosis code specified. With this unit, "Return check by transmitting the received data as it is" is performed and the diagnosis code is fixed with "0000H".

Example) Execution of "Loop back test" in the slave 2

&lt;RTU mode&gt;

Master→Instrument

| Slave address | | 02H |
|---|---|---|
| Function code | | 08H |
| Diagnosis code (H) | Fixed | 00H |
| Diagnosis code (L) | | 00H |
| Optional data | | * |
| Optional data | | * |
| CRC (L) | | * |
| CRC (H) | | * |

Instrument→Master (Normal)

| Slave address | | 02H |
|---|---|---|
| Function code | | 08H |
| Diagnosis code (H) | Fixed | 00H |
| Diagnosis code (L) | | 00H |
| Received data | | * |
| Received data | | * |
| CRC (L) | | * |
| CRC (H) | | * |

&lt;ASCII mode error check&gt;

| LRC | * |
|---|---|

| LRC | * |
|---|---|

## 5.5.8 Writing multiple analog setting values (Writing to multiple maintenance registers)

[Function code: 16 (10H)]

The specified number of the analog setting values from the start number specified is put into the values specified. The data is arranged and sent by splitting into higher 8 bits and lower 8 bits in numerical order.

Example) Setting of the range high/low limit values and the decimal point of Channel 1 of the slave 2 to 0.0 ~ 100.0

(Set ting of 3 analog setting value reference numbers from 40104 to 40106 of the slave 2)

| Reference number | 40104 | 40105 | 40106 |
|---|---|---|---|
| Data | 0 (0000H) | 1000 (03E8H) | 1 (0001H) |

← Data example 0.0 ~ 100.0

<RTU mode>

Master→Instrument

| | |
|---|---|
| Slave address | 02H |
| Function code | 10H |
| Start No. (H) | 00H |
| End No. (L) | 67H |
| Number of data (H) | 00H |
| Number of data (L) | 03H |
| Data pieces | 06H |
| First dada (H) | 00H |
| First data (L) | 00H |
| Second data (H) | 03H |
| Second data (L) | E8H |
| Third data (H) | 00H |
| Third data (L) | 01H |
| CRC (L) | 10H |
| CRC (H) | 97H |

Instrument→Master (Normal)

| | |
|---|---|
| Slave address | 02H |
| Function code | 10H |
| Start No. (H) | 00H |
| End No. (L) | 67H |
| Number of data (H) | 00H |
| Number of data (L) | 03H |
| CRC (L) | 31H |
| CRC (H) | E4H |

<ASCII mode error check>〉

| | |
|---|---|
| LRC | 92H |

| | |
|---|---|
| LRC | 84H |

Note) The start number (Relative number) is "Reference number - 40001".
(Decimal 103 (= 40104 - 40001) → Hexadecimal 67H)

Note) When the slave address is set to 0, all slaves perform this command, but no slave responds.

Note) There is a limitation on the data pieces for the message (that this unit can receive) that can be sent at a time. (Refer to "5.4 Message creation")

## 5.6 Process during abnormality

The followings are responses when there is an error in the message content from the master.

### 5.6.1 No response

In the following cases, the message is ignored and no response is performed.

    1) When a transmission error (overrun, framing, parity, CRC, or LRC) is detected in the message

    2) When the slave address in the message is not ones own address

    3) When the data interval of the message is long

       RTU mode... 28 bits hour or more

       ASCII mode … 1 second or more

    4) When the transmission parameter does not match

    5) When the received message exceeds 512 bytes

    Note) When the slave address is "0" in the writing function, if there is no error in the message, the message is performed but no response is performed.

### 5.6.2 Error message response

When the following error is detected in the message content not having any error shown in Para. 5.6.1 from the master, the code showing its error content is responded as the "Error message".
The format of the error message is as follows.

| Slave address |
| :---: |
| Function code + 80H |
| Error code |
| CRC (L) |
| CRC (H) |

| Function code | Function code + 80H |
| :---: | :---: |
| 02 | 82H |
| 03 | 83H |
| 04 | 84H |
| 06 | 86H |
| 08 | 88H |
| 16 | 90H |

The error codes are as follows.

| Error code | Content |
|---|---|
| 01H | Defect of a function code<br>When the function code not defined is received |
| 02H | Defect of a Relative number (Reference number)<br>When the received starting number or the received setting value number are other than defined |
| 03H | Defect of the number of data<br>In case of any of the followings<br>1) When the received function code and the number of data do not match<br>・When "data pieces" is not twice the "number of data" in case of the function code "16"<br>2) When the number of data to be sent in response to the received message exceeds the number of data defined<br>・Maximum 120 data (RTU), Maximum 120 data (ASCII) |
| 11H | Out of setting value range (Set error)<br>In case of any of the followings<br>1) For the range No., etc. not defined<br>2) When the setting value (binary) exceeds the range of "-30000 ~ 30000"<br>3) When the decimal point data exceeds the range of "0 ~ 3"<br>4) When the RJ is set to "internal" for other than thermocouple input ranges<br>5) When the burnout is set to "enable" for other than thermocouple input ranges, etc. |
| 12H | Setting impossible<br>When a setting message is received in any of the following cases<br>・When the parameter setting message for multiple channels at the parameter setting for each channel<br>・When the parameter setting message for an optional function not built-in<br>  ("0" is responded to a message for reading.)<br>・When the setting is being performed through the instrument and the Web screen<br>・When the setting content is being registered<br>  (The registration starts 3 seconds after the last setting frame is received. The registration takes about 1 second.) |

## 5.7 Reference table

### 5.7.1 Digital setting values

R/W … R: READ, W: WRITE

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 01 | 01 05 | R W | Keylock | 0 (0000h) = Keylock disabled<br>1 (FF00h) = Keylock enabled<br>The figures shown in parentheses are for the function code 05.<br>Error code: 01H, 02H, 03H, 11H, 12H |
| 17 | 01 05 | R W | Record ON/OFF | 0 (0000h) = Record OFF<br>1 (FF00h) = Record ON<br>The figures shown in parentheses are for the function code 05.<br>Error code: 01H, 02H, 03H, 11H, 12H |
| 20 | 05 | W | Marker text writing | 1 (FF00h) = Marker text writing<br>Writing of the text with the number specified by 48002 to the group specified by the analog setting value reference number 48001<br>The figures shown in parentheses are for the function code 05.<br>Error code: 01H, 02H, 03H, 11H, 12H |

## 5.7.2 Digital input data

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 10101 10102 | 02 | R | CH1 status 1 | Status expression in 2 bits 00: Measured data 01: Calculated data Error code: 01H, 02H, 03H |
| 10105 10106 10107 10108 | 02 | R | CH1 status 2 | Status expression in 4 bits 0000: Normal data 0001: +over range 0010: -over range 0100: Burnout 1000: Invalid data Error code: 01H, 02H, 03 |
| 10109 10110 10111 10112 | 02 | R | CH1 alarm 1 activated CH1 alarm 2 activated CH1 alarm 3 activated CH1 alarm 4 activated | 0: Not activated 1: Alarm activated Error code: 01H, 02H, 03 |
| 10117 10118 | 02 | R | CH2 status 1 | Status expression in 2 bits 00: Measured data 01: Calculated data Error code: 01H, 02H, 03H |
| 10121 10122 10123 10124 | 02 | R | CH2 status 2 | Status expression in 4 bits 0000: Normal data 0001: +over range 0010: -over range 0100: Burnout 1000: Invalid data Error code: 01H, 02H, 03 |
| 10125 10126 10127 10128 | 02 | R | CH2 alarm 1 activated CH2 alarm 2 activated CH2 alarm 3 activated CH2 alarm 4 activated | 0: Not activated 1: Alarm activated Error code: 01H, 02H, 03 |
| 10133 10134 | 02 | R | CH3 status 1 | Status expression in 2 bits 00: Measured data 01: Calculated data Error code: 01H, 02H, 03H |
| 10137 10138 10139 10140 | 02 | R | CH3 status 2 | Status expression in 4 bits 0000: Normal data 0001: +over range 0010: -over range 0100: Burnout 1000: Invalid data Error code: 01H, 02H, 03 |
| 10141 10142 10143 10144 | 02 | R | CH3 alarm 1 activated CH3 alarm 2 activated CH3 alarm 3 activated CH3 alarm 4 activated | 0: Not activated 1: Alarm activated Error code: 01H, 02H, 03 |
| 10149 ~ 10160 | 02 | R | From CH4 event level 1 to CH4 event level 4 activated | Same as CH1 |
| 10165 ~ 10176 | 02 | R | From CH5 event level 1 to CH5 event level 4 activated | Same as CH1 |
| 10181 ~ 10192 | 02 | R | From CH6 event level 1 to CH6 event level 4 activated | Same as CH1 |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 10197 ~ 10208 | 02 | R | From CH7 event level 1 to CH7 event level 4 activated | Same as CH1 |
| 10213 ~ 10224 | 02 | R | From CH8 event level 1 to CH8 event level 4 activated | Same as CH1 |
| 10229 ~ 10240 | 02 | R | From CH9 event level 1 to CH9 event level 4 activated | Same as CH1 |
| 10245 ~ 10256 | 02 | R | From CH10 event level 1 to CH10 event level 4 activated | Same as CH1 |
| 10261 ~ 10272 | 02 | R | From CH11 event level 1 to CH11 event level 4 activated | Same as CH1 |
| 10277 ~ 10288 | 02 | R | From CH12 event level 1 to CH12 event level 4 activated | Same as CH1 |
| 10293 ~ 10304 | 02 | R | From CH13 event level 1 to CH13 event level 4 activated | Same as CH1 |
| 10309 ~ 10320 | 02 | R | From CH14 event level 1 to CH14 event level 4 activated | Same as CH1 |
| 10325 ~ 10336 | 02 | R | From CH15 event level 1 to CH15 event level 4 activated | Same as CH1 |
| 10341 ~ 10352 | 02 | R | From CH16 event level 1 to CH16 event level 4 activated | Same as CH1 |
| 10357 ~ 10368 | 02 | R | From CH17 event level 1 to CH17 event level 4 activated | Same as CH1 |
| 10373 ~ 10384 | 02 | R | From CH18 event level 1 to CH18 event level 4 activated | Same as CH1 |
| 10389 ~ 10400 | 02 | R | From CH19 event level 1 to CH19 event level 4 activated | Same as CH1 |
| 10405 ~ 10416 | 02 | R | From CH20 event level 1 to CH20 event level 4 activated | Same as CH1 |
| 10421 ~ 10432 | 02 | R | From CH21 event level 1 to CH21 event level 4 activated | Same as CH1 |
| 10437 ~ 10448 | 02 | R | From CH22 event level 1 to CH22 event level 4 activated | Same as CH1 |
| 10453 ~ 10464 | 02 | R | From CH23 event level 1 to CH23 event level 4 activated | Same as CH1 |
| 10469 ~ 10480 | 02 | R | From CH24 event level 1 to CH24 event level 4 activated | Same as CH1 |
| 10485 ~ 10496 | 02 | R | From CH25 event level 1 to CH25 event level 4 activated | Same as CH1 |
| 10501 ~ 10512 | 02 | R | From CH26 event level 1 to CH26 event level 4 activated | Same as CH1 |
| 10517 ~ 10528 | 02 | R | From CH27 event level 1 to CH27 event level 4 activated | Same as CH1 |
| 10533 ~ 10544 | 02 | R | From CH28 event level 1 to CH28 event level 4 activated | Same as CH1 |
| 10549 ~ 10560 | 02 | R | From CH29 event level 1 to CH29 event level 4 activated | Same as CH1 |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 10565 ~ 10576 | 02 | R | From CH30 event level 1 to CH30 event level 4 activated | Same as CH1 |
| 10581 ~ 10592 | 02 | R | From CH31 event level 1 to CH31 event level 4 activated | Same as CH1 |
| 10597 ~ 10608 | 02 | R | From CH32 event level 1 to CH32 event level 4 activated | Same as CH1 |
| 10613 ~ 10624 | 02 | R | From CH33 event level 1 to CH33 event level 4 activated | Same as CH1 |
| 10629 ~ 10640 | 02 | R | From CH34 event level 1 to CH34 event level 4 activated | Same as CH1 |
| 10645 ~ 10656 | 02 | R | From CH35 event level 1 to CH35 event level 4 activated | Same as CH1 |
| 10661 ~ 10672 | 02 | R | From CH36 event level 1 to CH36 event level 4 activated | Same as CH1 |
| 10677 ~ 10688 | 02 | R | From CH37 event level 1 to CH37 event level 4 activated | Same as CH1 |
| 10693 ~ 10704 | 02 | R | From CH38 event level 1 to CH38 event level 4 activated | Same as CH1 |
| 10709 ~ 10720 | 02 | R | From CH39 event level 1 to CH39 event level 4 activated | Same as CH1 |
| 10725 ~ 10736 | 02 | R | From CH40 event level 1 to CH40 event level 4 activated | Same as CH1 |
| 10741 ~ 10752 | 02 | R | From CH41 event level 1 to CH41 event level 4 activated | Same as CH1 |
| 10757 ~ 10768 | 02 | R | From CH42 event level 1 to CH42 event level 4 activated | Same as CH1 |
| 10773 ~ 10784 | 02 | R | From CH43 event level 1 to CH43 event level 4 activated | Same as CH1 |
| 10789 ~ 10800 | 02 | R | From CH44 event level 1 to CH44 event level 4 activated | Same as CH1 |

## 5.7.3 Analog input data

1) Reading of instrument specifications

R/W … R: READ, W: WRITE

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 30001 | 04 | R | Instrument name character 1, 2 | ASCII "KR" |
| 30002 | 04 | R | Instrument name character 3, 4 | ASCII "21" |
| 30003 | 04 | R | Instrument name character 5, 6 | ASCII "60": 6 points, "20": 12 points |
| 30009 | 04 | R | ROM version character 1, 2 | ASCII 2 digits |
| 30010 | 04 | R | ROM version character 3, 4 | ASCII 2 digits |
| 30011 | 04 | R | ROM version character 5, 6 | ASCII 2 digits |
| 30012 | 04 | R | ROM version character 7, 8 | ASCII 2 digits |
| 30017 | 04 | R | Input point | 6: 6 points, 12: 12 points |
| 30025 | 04 | R | Alarm output point | 12: 12 points, 8: 8 points, 6: 6 points, 4: 4 points, 0: None |
| 30026 | 04 | R | External contact | Optional external contact Enable: 1, Disable: 0 |
| 30079 | 04 | R | Serial number 1, 2 | ASCII 2 digits |
| 30080 | 04 | R | Serial number 3, 4 | ASCII 2 digits |
| 30081 | 04 | R | Serial number 5, 6 | ASCII 2 digits |
| 30082 | 04 | R | Serial number 7, 8 | ASCII 2 digits |
| 30083 | 04 | R | Serial number 9, 10 | ASCII 2 digits |
| 30084 | 04 | R | Serial number 11, 12 | ASCII 2 digits |
| 30085 | 04 | R | Serial number 13, 14 | ASCII 2 digits |
| 30086 | 04 | R | Serial number 15, 16 | ASCII 2 digits |
| 30087 | 04 | R | Built date 1, 2 | ASCII 2 digits |
| 30088 | 04 | R | Built date 3, 4 | ASCII 2 digits |
| 30089 | 04 | R | Built date 5, 6 | ASCII 2 digits |
| 30090 | 04 | R | Built date 7, 8 | ASCII 2 digits |
| 30091 | 04 | R | MAC address 1, 2 | MAC address 1, 2 |
| 30092 | 04 | R | MAC address 3, 4 | MAC address 3, 4 |
| 30093 | 04 | R | MAC address 5, 6 | MAC address 5, 6 |
| 30094 | 04 | R | Communication kind | 01:High order+Low order(read) 12:High order+Low order(write) |

2) Reading of measured data

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 30101 | 04 | R | CH1 Measured data | DATA: -30000 ~ 30000<br>32767: High limit over flow<br>-32767: Low limit over flow<br>32765: RJ error<br>32766: Burnout<br>-32765: Invalid data<br>32764: Calculation error<br>Error code: 01H, 02H, 03H, 12H<br>(The exponent part is described later.) |
| 30102 | 04 | R | CH1 decimal point/status | Data status, event status, decimal point (discussed later)<br>Error code: 01H, 02H, 03H, 12H |
| 30103 | 04 | R | CH2 measured data | Same as CH1 |
| 30104 | 04 | R | CH2 decimal point/status | Same as CH1 |
| 30105 | 04 | R | CH3 measured data | Same as CH1 |
| 30106 | 04 | R | CH3 decimal point/status | Same as CH1 |
| 30107 | 04 | R | CH4 measured data | Same as CH1 |
| 30108 | 04 | R | CH4 decimal point/status | Same as CH1 |
| 30109 | 04 | R | CH5 measured data | Same as CH1 |
| 30110 | 04 | R | CH5 decimal point/status | Same as CH1 |
| 30111 | 04 | R | CH6 measured data | Same as CH1 |
| 30112 | 04 | R | CH6 decimal point/status | Same as CH1 |
| 30113 | 04 | R | CH7 measured data | Same as CH1 |
| 30114 | 04 | R | CH7 decimal point/status | Same as CH1 |
| 30115 | 04 | R | CH8 measured data | Same as CH1 |
| 30116 | 04 | R | CH8 decimal point/status | Same as CH1 |
| 30117 | 04 | R | CH9 measured data | Same as CH1 |
| 30118 | 04 | R | CH9 decimal point/status | Same as CH1 |
| 30119 | 04 | R | CH10 measured data | Same as CH1 |
| 30120 | 04 | R | CH10 decimal point/status | Same as CH1 |
| 30121 | 04 | R | CH11 measured data | Same as CH1 |
| 30122 | 04 | R | CH11 decimal point/status | Same as CH1 |
| 30123 | 04 | R | CH12 measured data | Same as CH1 |
| 30124 | 04 | R | CH12 decimal point/status | Same as CH1 |
| 30125 | 04 | R | CH13 measured data | Same as CH1 |
| 30126 | 04 | R | CH13 decimal point/status | Same as CH1 |
| 30127 | 04 | R | CH14 measured data | Same as CH1 |
| 30128 | 04 | R | CH14 decimal point/status | Same as CH1 |
| 30129 | 04 | R | CH15 measured data | Same as CH1 |
| 30130 | 04 | R | CH15 decimal point/status | Same as CH1 |
| 30131 | 04 | R | CH16 measured data | Same as CH1 |
| 30132 | 04 | R | CH16 decimal point/status | Same as CH1 |
| 30133 | 04 | R | CH17 measured data | Same as CH1 |
| 30134 | 04 | R | CH17 decimal point/status | Same as CH1 |
| 30135 | 04 | R | CH18 measured data | Same as CH1 |
| 30136 | 04 | R | CH18 decimal point/status | Same as CH1 |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 30137 | 04 | R | CH19 measured data | Same as CH1 |
| 30138 | 04 | R | CH19 decimal point/status | Same as CH1 |
| 30139 | 04 | R | CH20 measured data | Same as CH1 |
| 30140 | 04 | R | CH20 decimal point/status | Same as CH1 |
| 30141 | 04 | R | CH21 measured data | Same as CH1 |
| 30142 | 04 | R | CH21 decimal point/status | Same as CH1 |
| 30143 | 04 | R | CH22 measured data | Same as CH1 |
| 30144 | 04 | R | CH22 decimal point/status | Same as CH1 |
| 30145 | 04 | R | CH23 measured data | Same as CH1 |
| 30146 | 04 | R | CH23 decimal point/status | Same as CH1 |
| 30147 | 04 | R | CH24 measured data | Same as CH1 |
| 30148 | 04 | R | CH24 decimal point/status | Same as CH1 |
| 30149 | 04 | R | CH25 measured data | Same as CH1 |
| 30150 | 04 | R | CH25 decimal point/status | Same as CH1 |
| 30151 | 04 | R | CH26 measured data | Same as CH1 |
| 30152 | 04 | R | CH26 decimal point/status | Same as CH1 |
| 30153 | 04 | R | CH27 measured data | Same as CH1 |
| 30154 | 04 | R | CH27 decimal point/status | Same as CH1 |
| 30155 | 04 | R | CH28 measured data | Same as CH1 |
| 30156 | 04 | R | CH28 decimal point/status | Same as CH1 |
| 30157 | 04 | R | CH29 measured data | Same as CH1 |
| 30158 | 04 | R | CH29 decimal point/status | Same as CH1 |
| 30159 | 04 | R | CH30 measured data | Same as CH1 |
| 30160 | 04 | R | CH30 decimal point/status | Same as CH1 |
| 30161 | 04 | R | CH31 measured data | Same as CH1 |
| 30162 | 04 | R | CH31 decimal point/status | Same as CH1 |
| 30163 | 04 | R | CH32 measured data | Same as CH1 |
| 30164 | 04 | R | CH32 decimal point/status | Same as CH1 |
| 30165 | 04 | R | CH33 measured data | Same as CH1 |
| 30166 | 04 | R | CH33 decimal point/status | Same as CH1 |
| 30167 | 04 | R | CH34 measured data | Same as CH1 |
| 30168 | 04 | R | CH34 decimal point/status | Same as CH1 |
| 30169 | 04 | R | CH35 measured data | Same as CH1 |
| 30170 | 04 | R | CH35 decimal point/status | Same as CH1 |
| 30171 | 04 | R | CH36 measured data | Same as CH1 |
| 30172 | 04 | R | CH36 decimal point/status | Same as CH1 |
| 30173 | 04 | R | CH37 measured data | Same as CH1 |
| 30174 | 04 | R | CH37 decimal point/status | Same as CH1 |
| 30175 | 04 | R | CH38 measured data | Same as CH1 |
| 30176 | 04 | R | CH38 decimal point/status | Same as CH1 |
| 30177 | 04 | R | CH39 measured data | Same as CH1 |
| 30178 | 04 | R | CH39 decimal point/status | Same as CH1 |
| 30179 | 04 | R | CH40 measured data | Same as CH1 |
| 30180 | 04 | R | CH40 decimal point/status | Same as CH1 |
| 30181 | 04 | R | CH41 measured data | Same as CH1 |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 30182 | 04 | R | CH41 decimal point/status | Same as CH1 |
| 30183 | 04 | R | CH42 measured data | Same as CH1 |
| 30184 | 04 | R | CH42 decimal point/status | Same as CH1 |
| 30185 | 04 | R | CH43 measured data | Same as CH1 |
| 30186 | 04 | R | CH43 decimal point/status | Same as CH1 |
| 30187 | 04 | R | CH44 measured data | Same as CH1 |
| 30188 | 04 | R | CH44 decimal point/status | Same as CH1 |

*About the exponent part form data format.

| MSB(15) | (14) Integer part(10 bit) | (4) Exponent part sign | (3) LSB(0) Exponent part(4 bit) |
|---|---|---|---|
| Integer part sign | Integer part(10 bit) | Exponent part sign | Exponent part(4 bit) |

Integer part sign          :sign      0(＋) / 1(－)
Exponent part sign        :sign      0(＋) / 1(－)

*About the error
1023     :Over          High limit over flow
1022     :Under         Low limit over flow
1021     :RJ            RJ error
1020     :BURN          Burnout
1019     :Cal           Calculation error
1018     :Other error
1017     :Invalid data

* About the decimal point/status information

| MSB(15) | | | | (11) | | | | | (7) | | | (4) | (3) LSB(0) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | SCALE | EV4 | EV3 | EV2 | EV1 | ERR | BURN | OF | UF | DP |

SCALE              : Display scale type        0(Standard)/1 (Logarithm)
EV1 ~ 4            : Each alarm status         0 (Not activated)/1 (activated)
ERR                : Input part status         0 (normal)/1 (abnormal)
BURN               : Sensor disconnection      0 (Not activated)/1 (activated)
OF                 : Overflow error            0 (Not activated)/1 (activated)
UF                 : Underflow error           0 (Not activated)/1 (activated)
DP                 : Data decimal place        |0|0|0|0|: 0, |0|0|0|1|: 1, |0|0|1|0|: 2
                                               |0|0|1|1|: 3

## 5.7.4 Analog setting values

1) Common parameters (Date/time, upper communications, etc.)

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 40001 | 03<br>06<br>16 | R<br>W<br>W | Date/time setting 1, 2 | Year, ASCII 2 digits<br>00: Year 2000 ~ 99: Year 2099<br>Error code: 01H, 02H, 03H, 11H, 12H |
| 40002 | 03<br>06<br>16 | R<br>W<br>W | Date/time setting 3, 4 | Month, ASCII 2 digits<br>Error code: 01H, 02H, 03H, 11H, 12H |
| 40003 | 03<br>06<br>16 | R<br>W<br>W | Date/time setting 5, 6 | Day, ASCII 2 digits<br>Error code: 01H, 02H, 03H, 11H, 12H |
| 40004 | 03<br>06<br>16 | R<br>W<br>W | Date/time setting 7, 8 | Hour, ASCII 2 digits<br>Error code: 01H, 02H, 03H, 11H, 12H |
| 40005 | 03<br>06<br>16 | R<br>W<br>W | Date/time setting 9, 10 | Minute, ASCII 2 digits<br>Error code: 01H, 02H, 03H, 11H, 12H |
| 40006 | 03<br>06<br>16 | R<br>W<br>W | Date/time setting 11, 12 | Second, ASCII 2 digits<br>Error code: 01H, 02H, 03H, 11H, 12H |
| 40031 | 03<br>06<br>16 | R<br>W<br>W | Upper transmission mode | 0: RTU mode, 1: ASCII mode<br>Error code: 01H, 02H, 03H, 11H, 12H |
| 40032 | 03<br>06<br>16 | R<br>W<br>W | Upper I instrument address | 1 ~ 31<br>Error code: 01H, 02H, 03H, 11H, 12H |
| 40033 | 03<br>06<br>16 | R<br>W<br>W | Upper transmission speed | 3: 9600bps, 4: 19200bps<br>Error code: 01H, 02H, 03H, 11H, 12H |
| 40034 | 03<br>06<br>16 | R<br>W<br>W | Upper transmission character | 0: 8N1, 1: 8N2, 2: 8E1, 3: 8E2, 4: 8O1,<br>5: 8O2, 6: 7E1, 7: 7E2, 8: 7O1, 9: 7O2<br>Error code: 01H, 02H, 03H, 11H, 12H |
| 40072 | 03<br>06<br>16 | R<br>W<br>W | Decimal point mark | 0: Dot, 1: Comma<br>Error code: 01H, 02H, 03H, 11H, 12H |
| 40073 | 03<br>06<br>16 | R<br>W<br>W | Frequency selection | 1: 50Hz, 2: 60Hz<br>Error code: 01H, 02H, 03H, 11H, 12H |
| 40074 | 03<br>06<br>16 | R<br>W<br>W | Filter level | 0 ~ 3<br>Error code: 01H, 02H, 03H, 11H, 12H |
| 40075 | 03<br>06<br>16 | R<br>W<br>W | Number of using loop | 1 ~ 5<br>Error code: 01H, 02H, 03H, 11H, 12H |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 40076 | 03<br>06<br>16 | R<br>W<br>W | At writing message, method of using remote contact | 0: Standard, 1: Binary<br>Error code: 01H, 02H, 03H, 11H, 12H |
| 40077 | 03<br>06<br>16 | R<br>W<br>W | Overwriting mode | 0: OFF, 1: ON<br>Error code: 01H, 02H, 03H, 11H, 12H |
| 40078 | 03<br>06<br>16 | R<br>W<br>W | Remote contact selection | 0: CF card, 1: USB memory<br>Error code: 01H, 02H, 03H, 11H, 12H |
| 40079 | 03<br>06<br>16 | R<br>W<br>W | Keylock operation restriction item | Bit0:Setting, Bit1:START/STOP key,<br>Bit2:Display selection ,<br>Bit3:Group selecton<br>Bit4:Touch panel operation<br>Bit5:All keys operation<br>Error code:01H,02H,03H,11H,12H |
| 40080 | 03<br>06<br>16 | R<br>W<br>W | PEN corddinates | 0:Smoothness, 1:Directly<br>Error code:01H,02H,03H,11H,12H |
| 40081 | 03<br>06<br>16 | R<br>W<br>W | Calculation reset/ Automatic reset ON/OFF | 0: OFF, 1: ON<br>Error code: 01H, 02H, 03H, 11H, 12H |
| 40082 | 03<br>06<br>16 | R<br>W<br>W | Calculation reset/ at reference | ASCII 2 digits, 00 ~ 23<br>Error code: 01H, 02H, 03H, 11H, 12H |
| 40083 | 03<br>06<br>16 | R<br>W<br>W | Calculation reset/ for reference | ASCII 2 digits, 00 ~ 59<br>Error code: 01H, 02H, 03H, 11H, 12H |
| 40084 | 03<br>06<br>16 | R<br>W<br>W | Calculation reset/ at interval | ASCII 2 digits, 00 ~ 23<br>Error code: 01H, 02H, 03H, 11H, 12H |
| 40085 | 03<br>06<br>16 | R<br>W<br>W | Calculation reset/ for interval | ASCII 2 digits, 00 ~ 59<br>Error code: 01H, 02H, 03H, 11H, 12H |
| 40086 | 03<br>06<br>16 | R<br>W<br>W | Calculation reset/ Reset by DI | 1 to 8:Channel number, 0:None<br>Error code: 01H, 02H, 03H, 11H, 12H |
| 40087 | 03<br>06<br>16 | R<br>W<br>W | Calculation reset/ Setting method | 0: All CH commonness,1:CH individual<br>Error code: 01H, 02H, 03H, 11H, 12H |
| 40091 | 03<br>06<br>16 | R<br>W<br>W | Instrument name 1, 2 | ASCII 2 characters, Shift JIS 1 character<br>Error code: 01H, 02H, 03H, 11H, 12H |
| 40092 | 03<br>06<br>16 | R<br>W<br>W | Instrument name 3, 4 | ASCII 2 characters, Shift JIS 1 character<br>Error code: 01H, 02H, 03H, 11H, 12H |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 40093 | 03<br>06<br>16 | R<br>W<br>W | Instrument name 5, 6 | ASCII 2 characters, Shift JIS 1 character<br>Error code: 01H, 02H, 03H, 11H, 12H |
| 40094 | 03<br>06<br>16 | R<br>W<br>W | Instrument name 7, 8 | ASCII 2 characters, Shift JIS 1 character<br>Error code: 01H, 02H, 03H, 11H, 12H |
| 40095 | 03<br>06<br>16 | R<br>W<br>W | Instrument name 9, 10 | ASCII 2 characters, Shift JIS 1 character<br>Error code: 01H, 02H, 03H, 11H, 12H |
| 40096 | 03<br>06<br>16 | R<br>W<br>W | Instrument name 11, 12 | ASCII 2 characters, Shift JIS 1 character<br>Error code: 01H, 02H, 03H, 11H, 12H |
| 40097 | 03<br>06<br>16 | R<br>W<br>W | Instrument name 13, 14 | ASCII 2 characters, Shift JIS 1 character<br>Error code: 01H, 02H, 03H, 11H, 12H |
| 40098 | 03<br>06<br>16 | R<br>W<br>W | Instrument name 15, 16 | ASCII 2 characters, Shift JIS 1 character<br>Error code: 01H, 02H, 03H, 11H, 12H |

2) Setting parameters for each channel

(Note) Writing of multiple setting values across channels becomes an error. (Error code 12H)

R/W … R: READ, W: WRITE

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 40102 | 03<br>06<br>16 | R<br>W<br>W | CH1 range number | ASCII code 2 digits (A space code can be used in the first digit.)<br>CH1 ~ CH12: 01(13.80mV) ~ 80(Pt-Co)<br>CH13 ~ : 10 (-10.00 ~ 10.00V) fixed<br>For the optional DI added<br>CH37 ~ CH42: 90 (DI) ~ 92 (pulse (-))<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40103 | 03<br>06<br>16 | R<br>W<br>W | CH1 RJ | 0: External, 1: Internal<br>* For other than thermocouple inputs<br>  "0: External" fixed<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40104 | 03<br>06<br>16 | R<br>W<br>W | CH1 range low limit | -30000 ~ 30000<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40105 | 03<br>06<br>16 | R<br>W<br>W | CH1 range high limit | -30000 ~ 30000<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40106 | 03<br>06<br>16 | R<br>W<br>W | CH1 range decimal point | Range decimal place 0 ~ 3<br>* Same decimal place for range high/low<br>  limits values<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40107 | 03<br>06<br>16 | R<br>W<br>W | CH1 scale low limit | -30000 ~ 30000<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40108 | 03<br>06<br>16 | R<br>W<br>W | CH1 scale high limit | -30000 ~ 30000<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40109 | 03<br>06<br>16 | R<br>W<br>W | CH1 scale decimal point | Scale decimal place 0 ~ 3<br>* Same decimal place for scale high/low<br>  limits values<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40110 | 03<br>06<br>16 | R<br>W<br>W | CH1 burnout | 0: Disable 1: Up scale, 2: Down scale<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40111 | 03<br>06<br>16 | R<br>W<br>W | CH1 sensor correction | -30000 ~ 30000<br>* The scale decimal point is used for the<br>  decimal place.<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40112 | 03<br>06<br>16 | R<br>W<br>W | CH1 display color | 12 colors 1: Red, 2: Blue, 3: Green, 4: Brown, 5: Purple, 6: Orange, 7: Gray, 8: Light blue, 9: Yellow-green, 10: Yellow, 11: Pink, 12: Dark blue<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40113 | 03<br>06<br>16 | R<br>W<br>W | CH1 filter level | 0:System setting is used<br>1:[0]none, [1]Weak,[2]Middle,[3]Strong<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 40114 | 03<br>06<br>16 | R<br>W<br>W | CH1 alarm maker 1,2 | Higher 1 byte:Alarm marker1 0 to 50<br>Lower 1 byte:Alarm marker21 0 to 50<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40115 | 03<br>06<br>16 | R<br>W<br>W | CH1 alarm maker 3,4 | Higher 1 byte:Alarm marker3 0 to 50<br>Lower 1 byte:Alarm marker4 0 to 50<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40116 | 03<br>06<br>16 | R<br>W<br>W | CH1 totalizer<br>Automatic reset<br>Reset by DI | Higher 1 byte:totalizer reset[0]OFF,[1]ON<br>Lower 1 byte:reset by DI 0 to 8([0] is nine.)<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40117 | 03<br>06<br>16 | R<br>W<br>W | CH1 totalizer reset<br>reference hour/minute | Higher 1 byte:hour 0 to 23<br>Lower 1 byte:minute 0 to 59<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40118 | 03<br>06<br>16 | R<br>W<br>W | CH1 totalizer reset<br>interval | Higher 1 byte:hour 0 to 24<br>Lower 1 byte:minute 0 to 59<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40119 | 03<br>06<br>16 | R<br>W<br>W | CH1 unit 1, 2 | ASCII, Shift JIS 2 digit<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40120 | 03<br>06<br>16 | R<br>W<br>W | CH1 unit 3, 4 | ASCII, Shift JIS 2 digit<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40121 | 03<br>06<br>16 | R<br>W<br>W | CH1 unit 5, 6 | ASCII, Shift JIS 2 digit<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40122 | 03<br>06<br>16 | R<br>W<br>W | CH1 unit 7 | ASCII 1 digit, Low 1 byte - 00H fixed<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40125 | 03<br>06<br>16 | R<br>W<br>W | CH1 tag 1, 2 | ASCII, Shift JIS 2 digit<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40126 | 03<br>06<br>16 | R<br>W<br>W | CH1 tag 3, 4 | ASCII, Shift JIS 2 digit<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40127 | 03<br>06<br>16 | R<br>W<br>W | CH1 tag 5, 6 | ASCII, Shift JIS 2 digit<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40128 | 03<br>06<br>16 | R<br>W<br>W | CH1 tag 7, 8 | ASCII, Shift JIS 2 digit<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40129 | 03<br>06<br>16 | R<br>W<br>W | CH1 tag 9, 10 | ASCII, Shift JIS 2 digit<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40130 | 03<br>06<br>16 | R<br>W<br>W | CH1 tag 11, 12 | ASCII, Shift JIS 2 digit<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40131 | 03<br>06<br>16 | R<br>W<br>W | CH1 tag 13, 14 | ASCII, Shift JIS 2 digit<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 40132 | 03<br>06<br>16 | R<br>W<br>W | CH1 tag 15 | ASCII 1 digit, Low 1 byte - 00H fixed<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40133 | 03<br>06<br>16 | R<br>W<br>W | CH1 alarm type 1 | 0: Disable, 1: High limit, 2: Low limit, 5: Difference high limit, 6: Difference low limit, 7: Abnormal data<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40134 | 03<br>06<br>16 | R<br>W<br>W | CH1 setting value 1 | -30000 ~ 30000<br>* The scale decimal point is used for the decimal place.<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40135 | 03<br>06<br>16 | R<br>W<br>W | CH1 output relay 1 | ASCII 2 digits<br>01 ~ Alarm output point, 00H: No setting<br>Error: 01H, 02H, 03H, 09H, 11H, 12H |
| 40136 | 03<br>06<br>16 | R<br>W<br>W | CH1 AND/OR 1 | 0: OR, 1: AND<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40137 | 03<br>06<br>16 | R<br>W<br>W | CH1 reference channel 1 | ASCII 2 digits<br>Reference channel at difference alarm No. 01 ~ 44<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40139 | 03<br>06<br>16 | R<br>W<br>W | CH1 dead band 1 | 0 ~ 30000<br>* The scale decimal point is used for the decimal place.<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40140 | 03<br>06<br>16 | R<br>W<br>W | CH1 alarm delay 1 | 0 ~ 3600 seconds<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40141 | 03<br>06<br>16 | R<br>W<br>W | CH1 alarm type 2 | 0: Disable, 1: high limit, 2: Low limit, 5: Difference high limit, 6: Difference low limit, 7: Abnormal data<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40142 | 03<br>06<br>16 | R<br>W<br>W | CH1 setting value 2 | -30000 ~ 30000<br>* The scale decimal point is used for the decimal place.<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40143 | 03<br>06<br>16 | R<br>W<br>W | CH1 output relay 2 | ASCII 2 digits<br>01 ~ Alarm output point, 00H: No setting<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40144 | 03<br>06<br>16 | R<br>W<br>W | CH1 AND/OR 2 | 0:OR, 1: AND<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40145 | 03<br>06<br>16 | R<br>W<br>W | CH1 reference channel 2 | ASCII 2 digits<br>Reference channel at difference alarm No. 01 ~ 44<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40147 | 03<br>06<br>16 | R<br>W<br>W | CH1 dead band 2 | 0 ~ 30000<br>* The scale decimal point is used for the decimal place.<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 40148 | 03<br>06<br>16 | R<br>W<br>W | CH1 alarm delay 2 | 0 ~ 3600 seconds<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40149 | 03<br>06<br>16 | R<br>W<br>W | CH1 alarm type 3 | 0: Disable, 1: high limit, 2: Low limit, 5: Difference high limit, 6: Difference low limit, 7: Abnormal data<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40150 | 03<br>06<br>16 | R<br>W<br>W | CH1 setting value 3 | -30000 ~ 30000<br>* The scale decimal point is used for the decimal place.<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40151 | 03<br>06<br>16 | R<br>W<br>W | CH1 output relay 3 | ASCII 2 digits<br>01 ~ Alarm output point, 00H: No setting<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40152 | 03<br>06<br>16 | R<br>W<br>W | CH1 AND/OR 3 | 0:OR, 1: AND<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40153 | 03<br>06<br>16 | R<br>W<br>W | CH1 reference channel 3 | ASCII2 桁<br>Reference channel at difference alarm No. 01 ~ 44<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40155 | 03<br>06<br>16 | R<br>W<br>W | CH1 dead band 3 | 0 ~ 30000<br>* The scale decimal point is used for the decimal place.<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40156 | 03<br>06<br>16 | R<br>W<br>W | CH1 alarm delay 3 | 0 ~ 3600 seconds<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40157 | 03<br>06<br>16 | R<br>W<br>W | CH1 alarm type 4 | 0: Disable, 1: high limit, 2: Low limit, 5: Difference high limit, 6: Difference low limit, 7: Abnormal data<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40158 | 03<br>06<br>16 | R<br>W<br>W | CH1 setting value 4 | -30000 ~ 30000<br>* The scale decimal point is used for the decimal place.<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40159 | 03<br>06<br>16 | R<br>W<br>W | CH1 output relay 4 | ASCII 2 digits<br>01 ~ Alarm output point, 00H: No setting<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40160 | 03<br>06<br>16 | R<br>W<br>W | CH1 AND/OR 4 | 0:OR, 1: AND<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40161 | 03<br>06<br>16 | R<br>W<br>W | CH1 reference channel 4 | ASCII 2 digits<br>Reference channel at difference alarm No. 01 ~ 44<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40163 | 03<br>06<br>16 | R<br>W<br>W | CH1 dead band 4 | 0 ~ 30000<br>* The scale decimal point is used for the decimal place.<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 40164 | 03<br>06<br>16 | R<br>W<br>W | CH1 alarm delay 4 | 0 ~ 3600 seconds<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40166 | 03<br>06<br>16 | R<br>W<br>W | CH1 display scale low limit | -30000 ~ 30000<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40167 | 03<br>06<br>16 | R<br>W<br>W | CH1 display scale high limit | -30000 ~ 30000<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40168 | 03<br>06<br>16 | R<br>W<br>W | CH1 display scale decimal point | 0 ~ 3<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40169 | 03<br>06<br>16 | R<br>W<br>W | CH1 display scale type | 0: Standard, 1: Logarithm<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40171 | 03<br>06<br>16 | R<br>W<br>W | CH1 range position (Area belonged) | 0 ~ 3, At parallel scale 0 ~ 7 (0 ~ 3: First zone, 4 ~ 7: Second zone)<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40176 | 03<br>06<br>16 | R<br>W<br>W | Calculation ON/OFF | 0: Not used, 1: Used<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40177 | 03<br>06<br>16 | R<br>W<br>W | CH1 calculation formula 1, 2 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40178 | 03<br>06<br>16 | R<br>W<br>W | CH1 calculation formula 3, 4 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40179 | 03<br>06<br>16 | R<br>W<br>W | CH1 calculation formula 5, 6 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40180 | 03<br>06<br>16 | R<br>W<br>W | CH1 calculation formula 7, 8 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40181 | 03<br>06<br>16 | R<br>W<br>W | CH1 calculation formula 9, 10 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40182 | 03<br>06<br>16 | R<br>W<br>W | CH1 calculation formula 11, 12 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40183 | 03<br>06<br>16 | R<br>W<br>W | CH1 calculation formula 13, 14 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40184 | 03<br>06<br>16 | R<br>W<br>W | CH1 calculation formula 15, 16 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 40185 | 03<br>06<br>16 | R<br>W<br>W | CH1 calculation formula 17, 18 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40186 | 03<br>06<br>16 | R<br>W<br>W | CH1 calculation formula 19, 20 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40187 | 03<br>06<br>16 | R<br>W<br>W | CH1 calculation formula 21, 22 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40188 | 03<br>06<br>16 | R<br>W<br>W | CH1 calculation formula 23, 24 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40189 | 03<br>06<br>16 | R<br>W<br>W | CH1 calculation formula 25, 26 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40190 | 03<br>06<br>16 | R<br>W<br>W | CH1 calculation formula 27, 28 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40191 | 03<br>06<br>16 | R<br>W<br>W | CH1 calculation formula 29, 30 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40192 | 03<br>06<br>16 | R<br>W<br>W | CH1 calculation formula 31, 32 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40193 | 03<br>06<br>16 | R<br>W<br>W | CH1 calculation formula 33, 34 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40194 | 03<br>06<br>16 | R<br>W<br>W | CH1 calculation formula 35, 36 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40195 | 03<br>06<br>16 | R<br>W<br>W | CH1 calculation formula 37, 38 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40196 | 03<br>06<br>16 | R<br>W<br>W | CH1 calculation formula 39, 40 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40197 | 03<br>06<br>16 | R<br>W<br>W | CH1 calculation formula 41, 42 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40198 | 03<br>06<br>16 | R<br>W<br>W | CH1 calculation formula 43, 44 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 40199 | 03<br>06<br>16 | R<br>W<br>W | CH1 calculation formula 45, 46 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 40200 | 03 | R | CH1 calculation formula 47, 48 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| | 06 | W | | |
| | 16 | W | | |
| 40202<br>~<br>40300 | 03 | R | CH2 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| | 06 | W | | |
| | 16 | W | | |
| 40302<br>~<br>40400 | 03 | R | CH3 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| | 06 | W | | |
| | 16 | W | | |
| 40402<br>~<br>40500 | 03 | R | CH4 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| | 06 | W | | |
| | 16 | W | | |
| 40502<br>~<br>40600 | 03 | R | CH5 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| | 06 | W | | |
| | 16 | W | | |
| 40602<br>~<br>40700 | 03 | R | CH6 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| | 06 | W | | |
| | 16 | W | | |
| 40702<br>~<br>40800 | 03 | R | CH7 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| | 06 | W | | |
| | 16 | W | | |
| 40802<br>~<br>40900 | 03 | R | CH8 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| | 06 | W | | |
| | 16 | W | | |
| 40902<br>~<br>41000 | 03 | R | CH9 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| | 06 | W | | |
| | 16 | W | | |
| 41002<br>~<br>41100 | 03 | R | CH10 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| | 06 | W | | |
| | 16 | W | | |
| 41102<br>~<br>41200 | 03 | R | CH11 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| | 06 | W | | |
| | 16 | W | | |
| 41202<br>~<br>41300 | 03 | R | CH12 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| | 06 | W | | |
| | 16 | W | | |
| 41302<br>~<br>41400 | 03 | R | CH13 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| | 06 | W | | |
| | 16 | W | | |
| 41402<br>~<br>41500 | 03 | R | CH14 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| | 06 | W | | |
| | 16 | W | | |
| 41502<br>~<br>41600 | 03 | R | CH15 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| | 06 | W | | |
| | 16 | W | | |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 41602<br>~<br>41700 | 03<br>06<br>16 | R<br>W<br>W | CH16 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| 41702<br>~<br>41800 | 03<br>06<br>16 | R<br>W<br>W | CH17 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| 41802<br>~<br>41900 | 03<br>06<br>16 | R<br>W<br>W | CH18 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| 41902<br>~<br>42000 | 03<br>06<br>16 | R<br>W<br>W | CH19 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| 42002<br>~<br>42100 | 03<br>06<br>16 | R<br>W<br>W | CH20 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| 42102<br>~<br>42200 | 03<br>06<br>16 | R<br>W<br>W | CH21 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| 42202<br>~<br>42300 | 03<br>06<br>16 | R<br>W<br>W | CH22 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| 42302<br>~<br>42400 | 03<br>06<br>16 | R<br>W<br>W | CH23 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| 42402<br>~<br>42500 | 03<br>06<br>16 | R<br>W<br>W | CH24 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| 42502<br>~<br>42600 | 03<br>06<br>16 | R<br>W<br>W | CH25 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| 42602<br>~<br>42700 | 03<br>06<br>16 | R<br>W<br>W | CH26 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| 42702<br>~<br>42800 | 03<br>06<br>16 | R<br>W<br>W | CH27 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| 42802<br>~<br>42900 | 03<br>06<br>16 | R<br>W<br>W | CH28 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| 42902<br>~<br>43000 | 03<br>06<br>16 | R<br>W<br>W | CH29 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| 43002<br>~<br>43100 | 03<br>06<br>16 | R<br>W<br>W | CH30 setting parameter | Same as CH1 parameter (40102 ~ 40200) |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 43102<br>~<br>43200 | 03<br>06<br>16 | R<br>W<br>W | CH31 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| 43202<br>~<br>43300 | 03<br>06<br>16 | R<br>W<br>W | CH32 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| 43302<br>~<br>43400 | 03<br>06<br>16 | R<br>W<br>W | CH33 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| 43402<br>~<br>43500 | 03<br>06<br>16 | R<br>W<br>W | CH34 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| 43502<br>~<br>43600 | 03<br>06<br>16 | R<br>W<br>W | CH35 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| 43602<br>~<br>43700 | 03<br>06<br>16 | R<br>W<br>W | CH36 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| 43702<br>~<br>43800 | 03<br>06<br>16 | R<br>W<br>W | CH37 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| 43802<br>~<br>43900 | 03<br>06<br>16 | R<br>W<br>W | CH38 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| 43902<br>~<br>44000 | 03<br>06<br>16 | R<br>W<br>W | CH39 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| 44002<br>~<br>44100 | 03<br>06<br>16 | R<br>W<br>W | CH40 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| 44102<br>~<br>44200 | 03<br>06<br>16 | R<br>W<br>W | CH41 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| 44202<br>~<br>44300 | 03<br>06<br>16 | R<br>W<br>W | CH42 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| 44302<br>~<br>44400 | 03<br>06<br>16 | R<br>W<br>W | CH43 setting parameter | Same as CH1 parameter (40102 ~ 40200) |
| 44402<br>~<br>44500 | 03<br>06<br>16 | R<br>W<br>W | CH44 setting parameter | Same as CH1 parameter (40102 ~ 40200) |

3) Communications parameter

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 45001 | 03<br>06<br>16 | R<br>W<br>W | IP address 1, 2 | IP address<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45002 | 03<br>06<br>16 | R<br>W<br>W | IP address 3, 4 | IP address<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45003 | 03<br>06<br>16 | R<br>W<br>W | Subnet mask1, 2 | Subnet mask<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45004 | 03<br>06<br>16 | R<br>W<br>W | Subnet mask 3, 4 | Subnet mask<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45005 | 03<br>06<br>16 | R<br>W<br>W | Default gateway 1, 2 | Default gateway<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45006 | 03<br>06<br>16 | R<br>W<br>W | Default gateway 3, 4 | Default gateway<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45010 | 03<br>06<br>16 | R<br>W<br>W | FTP client directory 1,2 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45011 | 03<br>06<br>16 | R<br>W<br>W | FTP client directory 3,4 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45012 | 03<br>06<br>16 | R<br>W<br>W | FTP client directory 5,6 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45013 | 03<br>06<br>16 | R<br>W<br>W | FTP client directory 7,8 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45014 | 03<br>06<br>16 | R<br>W<br>W | FTP client directory 9,108,9 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45015 | 03<br>06<br>16 | R<br>W<br>W | FTP client directory 11,12 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45016 | 03<br>06<br>16 | R<br>W<br>W | FTP client directory 13,14 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45017 | 03<br>06<br>16 | R<br>W<br>W | FTP client directory 15,16 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45018 | 03<br>06<br>16 | R<br>W<br>W | FTP client directory 17,18 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 45019 | 03<br>06<br>16 | R<br>W<br>W | FTP client directory<br>19,20 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45020 | 03<br>06<br>16 | R<br>W<br>W | FTP client directory<br>21,22 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45021 | 03<br>06<br>16 | R<br>W<br>W | FTP client directory<br>23,24 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45022 | 03<br>06<br>16 | R<br>W<br>W | FTP client directory<br>25,26 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45023 | 03<br>06<br>16 | R<br>W<br>W | FTP client directory<br>27,28 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45024 | 03<br>06<br>16 | R<br>W<br>W | FTP client directory<br>29,30 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45025 | 03<br>06<br>16 | R<br>W<br>W | FTP client directory<br>31,32 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45026 | 03<br>06<br>16 | R<br>W<br>W | FTP Login user<br>Name(client/sever)<br>1,2 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45027 | 03<br>06<br>16 | R<br>W<br>W | FTP Login user<br>Name(client/sever)<br>3,4 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45028 | 03<br>06<br>16 | R<br>W<br>W | FTP Login user<br>Name(client/sever)<br>5,6 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45029 | 03<br>06<br>16 | R<br>W<br>W | FTP Login user<br>Name(client/sever)<br>7,8 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45030 | 03<br>06<br>16 | R<br>W<br>W | FTP Login user<br>Name(client/sever)<br>9,10 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45031 | 03<br>06<br>16 | R<br>W<br>W | FTP Login user<br>Name(client/sever)<br>11,12 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45032 | 03<br>06<br>16 | R<br>W<br>W | FTP Login user<br>Name(client/sever)<br>13,14 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45033 | 03<br>06<br>16 | R<br>W<br>W | FTP Login user<br>Name(client/sever)<br>15,16 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45034 | 03<br>06<br>16 | R<br>W<br>W | FTP Login user<br>Name(client/sever)<br>17,18 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 45035 | 03<br>06<br>16 | R<br>W<br>W | FTP Login user Name(client/sever) 19.20 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45036 | 03<br>06<br>16 | R<br>W<br>W | FTP Login user Name(client/sever) 21,22 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45037 | 03<br>06<br>16 | R<br>W<br>W | FTP Login user Name(client/sever) 23,24 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45038 | 03<br>06<br>16 | R<br>W<br>W | FTP Login user Name(client/sever) 25,26 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45039 | 03<br>06<br>16 | R<br>W<br>W | FTP Login user Name(client/sever) 27,28 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45040 | 03<br>06<br>16 | R<br>W<br>W | FTP Login user Name(client/sever) 29,30 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45041 | 03<br>06<br>16 | R<br>W<br>W | FTP Login user Name(client/sever) 31,32 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45042 | 03<br>06<br>16 | R<br>W<br>W | FTP Login password (client/sever) 1,2 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45043 | 03<br>06<br>16 | R<br>W<br>W | FTP Login password (client/sever) 3,4 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45044 | 03<br>06<br>16 | R<br>W<br>W | FTP Login password (client/sever) 5,6 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45045 | 03<br>06<br>16 | R<br>W<br>W | FTP Login password (client/sever) 7,8 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45046 | 03<br>06<br>16 | R<br>W<br>W | FTP Login password (client/sever) 9,10 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45047 | 03<br>06<br>16 | R<br>W<br>W | FTP Login password (client/sever) 11,12 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45048 | 03<br>06<br>16 | R<br>W<br>W | FTP Login password (client/sever) 13,14 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45049 | 03<br>06<br>16 | R<br>W<br>W | FTP Login password (client/sever) 15,16 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45050 | 03<br>06<br>16 | R<br>W<br>W | FTP Login password (client/sever) 17,18 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 45051 | 03<br>06<br>16 | R<br>W<br>W | FTP Login password (client/sever) 19,20 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45052 | 03<br>06<br>16 | R<br>W<br>W | FTP Login password (client/sever) 21,22 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45053 | 03<br>06<br>16 | R<br>W<br>W | FTP Login password (client/sever) 23,24 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45054 | 03<br>06<br>16 | R<br>W<br>W | FTP Login password (client/sever) 25,26 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45055 | 03<br>06<br>16 | R<br>W<br>W | FTP Login password (client/sever) 27,28 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45056 | 03<br>06<br>16 | R<br>W<br>W | FTP Login password (client/sever) 29,30 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45057 | 03<br>06<br>16 | R<br>W<br>W | FTP Login password (client/sever) 31,32 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45058 | 03<br>06<br>16 | R<br>W<br>W | FTP client PASV mode | 0:OFF,1:ON<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45059 | 03<br>06<br>16 | R<br>W<br>W | FTP client Auto transfer | 0:OFF,1:ON<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45060 | 03<br>06<br>16 | R<br>W<br>W | FTP client Retry mode | 0:OFF,1:ON<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45070 | 03<br>06<br>16 | R<br>W<br>W | FTP server ON/OFF | 0: OFF, 1: ON<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45071 | 03<br>06<br>16 | R<br>W<br>W | FTP server address 1, 2 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45072 | 03<br>06<br>16 | R<br>W<br>W | FTP server address 3, 4 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45073 | 03<br>06<br>16 | R<br>W<br>W | FTP server address 5, 6 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45074 | 03<br>06<br>16 | R<br>W<br>W | FTP server address 7, 8 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45075 | 03<br>06<br>16 | R<br>W<br>W | FTP server address 9, 10 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 45076 | 03<br>06<br>16 | R<br>W<br>W | FTP server address 11, 12 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45077 | 03<br>06<br>16 | R<br>W<br>W | FTP server address 13, 14 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45078 | 03<br>06<br>16 | R<br>W<br>W | FTP server address 15, 16 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45079 | 03<br>06<br>16 | R<br>W<br>W | FTP server address 17, 18 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45080 | 03<br>06<br>16 | R<br>W<br>W | FTP server address 19, 20 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45081 | 03<br>06<br>16 | R<br>W<br>W | FTP server address 21, 22 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45082 | 03<br>06<br>16 | R<br>W<br>W | FTP server address 23, 24 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45083 | 03<br>06<br>16 | R<br>W<br>W | FTP server address 25, 26 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45084 | 03<br>06<br>16 | R<br>W<br>W | FTP server address 27, 28 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45085 | 03<br>06<br>16 | R<br>W<br>W | FTP server address 29, 30 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45086 | 03<br>06<br>16 | R<br>W<br>W | FTP server address 31, 32 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45091 | 03<br>06<br>16 | R<br>W<br>W | Login user name (for server) 1, 2 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45092 | 03<br>06<br>16 | R<br>W<br>W | Login user name (for server) 3, 4 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45093 | 03<br>06<br>16 | R<br>W<br>W | Login user name (for server) 5, 6 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45094 | 03<br>06<br>16 | R<br>W<br>W | Login user name (for server) 7, 8 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45095 | 03<br>06<br>16 | R<br>W<br>W | Login user name (for server) 9, 10 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 45096 | 03<br>06<br>16 | R<br>W<br>W | Login user name (for server) 11, 12 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45097 | 03<br>06<br>16 | R<br>W<br>W | Login user name (for server) 13, 14 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45098 | 03<br>06<br>16 | R<br>W<br>W | Login user name (for server) 15, 16 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45099 | 03<br>06<br>16 | R<br>W<br>W | Login user name (for server) 17, 18 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45100 | 03<br>06<br>16 | R<br>W<br>W | Login user name (for server) 19, 20 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45101 | 03<br>06<br>16 | R<br>W<br>W | Login user name (for server) 21, 22 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45102 | 03<br>06<br>16 | R<br>W<br>W | Login user name (for server) 23, 24 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45103 | 03<br>06<br>16 | R<br>W<br>W | Login user name (for server) 25, 26 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45104 | 03<br>06<br>16 | R<br>W<br>W | Login user name (for server) 27, 28 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45105 | 03<br>06<br>16 | R<br>W<br>W | Login user name (for server) 29,30 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45106 | 03<br>06<br>16 | R<br>W<br>W | Login user name (for server) 31, 32 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45111 | 03<br>06<br>16 | R<br>W<br>W | Login password (for server) 1, 2 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45112 | 03<br>06<br>16 | R<br>W<br>W | Login password (for server) 3, 4 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45113 | 03<br>06<br>16 | R<br>W<br>W | Login password (for server) 5, 6 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45114 | 03<br>06<br>16 | R<br>W<br>W | Login password (for server) 7, 8 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45115 | 03<br>06<br>16 | R<br>W<br>W | Login password (for server) 9, 10 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 45116 | 03<br>06<br>16 | R<br>W<br>W | Login password (for server) 11, 12 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45117 | 03<br>06<br>16 | R<br>W<br>W | Login password (for server) 13, 14 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45118 | 03<br>06<br>16 | R<br>W<br>W | Login password (for server) 15, 16 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45119 | 03<br>06<br>16 | R<br>W<br>W | Login password (for server) 17, 18 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45120 | 03<br>06<br>16 | R<br>W<br>W | Login password (for server) 19, 20 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45121 | 03<br>06<br>16 | R<br>W<br>W | Login password (for server) 21, 22 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45122 | 03<br>06<br>16 | R<br>W<br>W | Login password (for server) 23, 24 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45123 | 03<br>06<br>16 | R<br>W<br>W | Login password (for server) 25, 26 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45124 | 03<br>06<br>16 | R<br>W<br>W | Login password (for server) 27,28 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45125 | 03<br>06<br>16 | R<br>W<br>W | Login password (for server) 29, 30 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45126 | 03<br>06<br>16 | R<br>W<br>W | Login password (for server) 31, 32 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45141 | 03<br>06<br>16 | R<br>W<br>W | E-mail transfer condition 1 Condition type selection/Transfer address number | Higher 1 byte   Condition type selection<br>0: Disable, 1: At alarm activated, 2: At fixed time<br>Lower 1 byte   Transfer address number: Bit correspondence<br>Bit 0 ~ 7 → Address 1 ~ 8 |
| 45142 | 03<br>06<br>16 | R<br>W<br>W | E-mail transfer condition 1 Alarm channel starting/ending numbers | Higher 1 byte   Starting channel number: 1 ~ 44<br>Lower 1 byte   Ending channel number: 1 ~ 44<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45143 | 03<br>06<br>16 | R<br>W<br>W | E-mail transfer condition 1 Reference hour/minute | Higher 1 byte   At reference: 0 ~ 23<br>Lower 1 byte   For reference: 0 ~ 59<br>00:00 ~ 23:59<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 45144 | 03<br>06<br>16 | R<br>W<br>W | E-mail transfer condition 1<br>Interval hour/minute | Higher 1 byte   At interval: 0 ~ 24<br>Lower 1 byte   For interval: 0 ~ 59<br>00:00 ~ 24:00<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45145 ~ 45148 | 03<br>06<br>16 | R<br>W<br>W | E-mail transfer condition 2 | Same as E-mail transfer condition 1 (45141 ~ 45144) |
| 45149 ~ 45152 | 03<br>06<br>16 | R<br>W<br>W | E-mail transfer condition 3 | Same as E-mail transfer condition 1 (45141 ~ 45144) |
| 45153 ~ 45156 | 03<br>06<br>16 | R<br>W<br>W | E-mail transfer condition 4 | Same as E-mail transfer condition 1 (45141 ~ 45144) |
| 45157 ~ 45160 | 03<br>06<br>16 | R<br>W<br>W | E-mail transfer condition 5 | Same as E-mail transfer condition 1 (45141 ~ 45144) |
| 45161 ~ 45164 | 03<br>06<br>16 | R<br>W<br>W | E-mail transfer condition 6 | Same as E-mail transfer condition 1 (45141 ~ 45144) |
| 45165 ~ 45168 | 03<br>06<br>16 | R<br>W<br>W | E-mail transfer condition 7 | Same as E-mail transfer condition 1 (45141 ~ 45144) |
| 45169 ~ 45172 | 03<br>06<br>16 | R<br>W<br>W | E-mail transfer condition 8 | Same as E-mail transfer condition 1 (45141 ~ 45144) |
| 45181 | 03<br>06<br>16 | R<br>W<br>W | E-mail transfer address 1<br>1, 2 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45182 | 03<br>06<br>16 | R<br>W<br>W | E-mail transfer address 1<br>3, 4 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45183 | 03<br>06<br>16 | R<br>W<br>W | E-mail transfer address 1<br>5, 6 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45184 | 03<br>06<br>16 | R<br>W<br>W | E-mail transfer address 1<br>7, 8 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45185 | 03<br>06<br>16 | R<br>W<br>W | E-mail transfer address 1<br>9, 10 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45186 | 03<br>06<br>16 | R<br>W<br>W | E-mail transfer address 1<br>11, 12 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45187 | 03<br>06<br>16 | R<br>W<br>W | E-mail transfer address 1<br>13, 14 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 45188 | 03 06 16 | R W W | E-mail transfer address 1 15, 16 | ASCII 2 digits Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45189 | 03 06 16 | R W W | E-mail transfer address 1 17, 18 | ASCII 2 digits Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45190 | 03 06 16 | R W W | E-mail transfer address 1 19, 20 | ASCII 2 digits Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45191 | 03 06 16 | R W W | E-mail transfer address 1 21, 22 | ASCII 2 digits Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45192 | 03 06 16 | R W W | E-mail transfer address 1 23, 24 | ASCII 2 digits Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45193 | 03 06 16 | R W W | E-mail transfer address 1 25, 26 | ASCII 2 digits Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45194 | 03 06 16 | R W W | E-mail transfer address 1 27, 28 | ASCII 2 digits Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45195 | 03 06 16 | R W W | E-mail transfer address 1 29, 30 | ASCII 2 digits Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45196 | 03 06 16 | R W W | E-mail transfer address 1 31, 32 | ASCII 2 digits Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45197 ~ 45212 | 03 06 16 | R W W | E-mail transfer address 2 | Same as E-mail address 1 (45181 ~ 45196) |
| 45213 ~ 45228 | 03 06 16 | R W W | E-mail transfer address 3 | Same as E-mail address 1 (45181 ~ 45196) |
| 45229 ~ 45244 | 03 06 16 | R W W | E-mail transfer address 4 | Same as E-mail address 1 (45181 ~ 45196) |
| 45245 ~ 45260 | 03 06 16 | R W W | E-mail transfer address 5 | Same as E-mail address 1 (45181 ~ 45196) |
| 45261 ~ 45276 | 03 06 16 | R W W | E-mail transfer address 6 | Same as E-mail address 1 (45181 ~ 45196) |
| 45277 ~ 45292 | 03 06 16 | R W W | E-mail transfer address 7 | Same as E-mail address 1 (45181 ~ 45196) |
| 45293 ~ 45308 | 03 06 16 | R W W | E-mail transfer address 8 | Same as E-mail address 1 (45181 ~ 45196) |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 45311 | 03 06 16 | R W W | E-mail attached data CH1 | Bit correspondence Bit 0: Address 1 ~ Bit 7: Address 8 0: Not attached, 1: Attached Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45312 | 03 06 16 | R W W | E-mail attached data CH2 | Bit correspondence Bit 0: Address 1 ~ Bit 7: Address 8 0: Not attached, 1: Attached Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45313 | 03 06 16 | R W W | E-mail attached data CH3 | Bit correspondence Bit 0: Address 1 ~ Bit 7: Address 8 0: Not attached, 1: Attached Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45314 | 03 06 16 | R W W | E-mail attached data CH4 | Bit correspondence Bit 0: Address 1 ~ Bit 7: Address 8 0: Not attached, 1: Attached Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45315 | 03 06 16 | R W W | E-mail attached data CH5 | Bit correspondence Bit 0: Address 1 ~ Bit 7: Address 8 0: Not attached, 1: Attached Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45316 | 03 06 16 | R W W | E-mail attached data CH6 | Bit correspondence Bit 0: Address 1 ~ Bit 7: Address 8 0: Not attached, 1: Attached Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45317 | 03 06 16 | R W W | E-mail attached data CH7 | Bit correspondence Bit 0: Address 1 ~ Bit 7: Address 8 0: Not attached, 1: Attached Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45318 | 03 06 16 | R W W | E-mail attached data CH8 | Bit correspondence Bit 0: Address 1 ~ Bit 7: Address 8 0: Not attached, 1: Attached Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45319 | 03 06 16 | R W W | E-mail attached data CH9 | Bit correspondence Bit 0: Address 1 ~ Bit 7: Address 8 0: Not attached, 1: Attached Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45320 | 03 06 16 | R W W | E-mail attached data CH10 | Bit correspondence Bit 0: Address 1 ~ Bit 7: Address 8 0: Not attached, 1: Attached Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45321 | 03 06 16 | R W W | E-mail attached data CH11 | Bit correspondence Bit 0: Address 1 ~ Bit 7: Address 8 0: Not attached, 1: Attached Error code: 01H, 02H, 03H, 09H, 11H, 12H |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 45322 | 03<br>06<br>16 | R<br>W<br>W | E-mail attached data CH12 | Bit correspondence<br>Bit 0: Address 1 ~ Bit 7: Address 8<br>0: Not attached, 1: Attached<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45323 | 03<br>06<br>16 | R<br>W<br>W | E-mail attached data CH13 | Bit correspondence<br>Bit 0: Address 1 ~ Bit 7: Address 8<br>0: Not attached, 1: Attached<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45324 | 03<br>06<br>16 | R<br>W<br>W | E-mail attached data CH14 | Bit correspondence<br>Bit 0: Address 1 ~ Bit 7: Address 8<br>0: Not attached, 1: Attached<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45325 | 03<br>06<br>16 | R<br>W<br>W | E-mail attached data CH15 | Bit correspondence<br>Bit 0: Address 1 ~ Bit 7: Address 8<br>0: Not attached, 1: Attached<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45326 | 03<br>06<br>16 | R<br>W<br>W | E-mail attached data CH16 | Bit correspondence<br>Bit 0: Address 1 ~ Bit 7: Address 8<br>0: Not attached, 1: Attached<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45327 | 03<br>06<br>16 | R<br>W<br>W | E-mail attached data CH17 | Bit correspondence<br>Bit 0: Address 1 ~ Bit 7: Address 8<br>0: Not attached, 1: Attached<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45328 | 03<br>06<br>16 | R<br>W<br>W | E-mail attached data CH18 | Bit correspondence<br>Bit 0: Address 1 ~ Bit 7: Address 8<br>0: Not attached, 1: Attached<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45329 | 03<br>06<br>16 | R<br>W<br>W | E-mail attached data CH19 | Bit correspondence<br>Bit 0: Address 1 ~ Bit 7: Address 8<br>0: Not attached, 1: Attached<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45330 | 03<br>06<br>16 | R<br>W<br>W | E-mail attached data CH20 | Bit correspondence<br>Bit 0: Address 1 ~ Bit 7: Address 8<br>0: Not attached, 1: Attached<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45331 | 03<br>06<br>16 | R<br>W<br>W | E-mail attached data CH21 | Bit correspondence<br>Bit 0: Address 1 ~ Bit 7: Address 8<br>0: Not attached, 1: Attached<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45332 | 03<br>06<br>16 | R<br>W<br>W | E-mail attached data CH22 | Bit correspondence<br>Bit 0: Address 1 ~ Bit 7: Address 8<br>0: Not attached, 1: Attached<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45333 | 03<br>06<br>16 | R<br>W<br>W | E-mail attached data CH23 | Bit correspondence<br>Bit 0: Address 1 ~ Bit 7: Address 8<br>0: Not attached, 1: Attached<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 45334 | 03<br>06<br>16 | R<br>W<br>W | E-mail attached data C24 | Bit correspondence<br>Bit 0: Address 1 ~ Bit 7: Address 8<br>0: Not attached, 1: Attached<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45335 | 03<br>06<br>16 | R<br>W<br>W | E-mail attached data C25 | Bit correspondence<br>Bit 0: Address 1 ~ Bit 7: Address 8<br>0: Not attached, 1: Attached<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45336 | 03<br>06<br>16 | R<br>W<br>W | E-mail attached data C26 | Bit correspondence<br>Bit 0: Address 1 ~ Bit 7: Address 8<br>0: Not attached, 1: Attached<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45337 | 03<br>06<br>16 | R<br>W<br>W | E-mail attached data CH27 | Bit correspondence<br>Bit 0: Address 1 ~ Bit 7: Address 8<br>0: Not attached, 1: Attached<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45338 | 03<br>06<br>16 | R<br>W<br>W | E-mail attached data CH28 | Bit correspondence<br>Bit 0: Address 1 ~ Bit 7: Address 8<br>0: Not attached, 1: Attached<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45339 | 03<br>06<br>16 | R<br>W<br>W | E-mail attached data CH29 | Bit correspondence<br>Bit 0: Address 1 ~ Bit 7: Address 8<br>0: Not attached, 1: Attached<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45340 | 03<br>06<br>16 | R<br>W<br>W | E-mail attached data CH30 | Bit correspondence<br>Bit 0: Address 1 ~ Bit 7: Address 8<br>0: Not attached, 1: Attached<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45341 | 03<br>06<br>16 | R<br>W<br>W | E-mail attached data CH31 | Bit correspondence<br>Bit 0: Address 1 ~ Bit 7: Address 8<br>0: Not attached, 1: Attached<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45342 | 03<br>06<br>16 | R<br>W<br>W | E-mail attached data CH32 | Bit correspondence<br>Bit 0: Address 1 ~ Bit 7: Address 8<br>0: Not attached, 1: Attached<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45343 | 03<br>06<br>16 | R<br>W<br>W | E-mail attached data CH33 | Bit correspondence<br>Bit 0: Address 1 ~ Bit 7: Address 8<br>0: Not attached, 1: Attached<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45344 | 03<br>06<br>16 | R<br>W<br>W | E-mail attached data CH34 | Bit correspondence<br>Bit 0: Address 1 ~ Bit 7: Address 8<br>0: Not attached, 1: Attached<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45345 | 03<br>06<br>16 | R<br>W<br>W | E-mail attached data CH35 | Bit correspondence<br>Bit 0: Address 1 ~ Bit 7: Address 8<br>0: Not attached, 1: Attached<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 45346 | 03<br>06<br>16 | R<br>W<br>W | E-mail attached data CH36 | Bit correspondence<br>Bit 0: Address 1 ~ Bit 7: Address 8<br>0: Not attached, 1: Attached<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45347 | 03<br>06<br>16 | R<br>W<br>W | E-mail attached data CH37 | Bit correspondence<br>Bit 0: Address 1 ~ Bit 7: Address 8<br>0: Not attached, 1: Attached<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45348 | 03<br>06<br>16 | R<br>W<br>W | E-mail attached data CH38 | Bit correspondence<br>Bit 0: Address 1 ~ Bit 7: Address 8<br>0: Not attached, 1: Attached<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45349 | 03<br>06<br>16 | R<br>W<br>W | E-mail attached data CH39 | Bit correspondence<br>Bit 0: Address 1 ~ Bit 7: Address 8<br>0: Not attached, 1: Attached<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45350 | 03<br>06<br>16 | R<br>W<br>W | E-mail attached data CH40 | Bit correspondence<br>Bit 0: Address 1 ~ Bit 7: Address 8<br>0: Not attached, 1: Attached<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45351 | 03<br>06<br>16 | R<br>W<br>W | E-mail attached data CH41 | Bit correspondence<br>Bit 0: Address 1 ~ Bit 7: Address 8<br>0: Not attached, 1: Attached<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45352 | 03<br>06<br>16 | R<br>W<br>W | E-mail attached data CH42 | Bit correspondence<br>Bit 0: Address 1 ~ Bit 7: Address 8<br>0: Not attached, 1: Attached<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45353 | 03<br>06<br>16 | R<br>W<br>W | E-mail attached data CH43 | Bit correspondence<br>Bit 0: Address 1 ~ Bit 7: Address 8<br>0: Not attached, 1: Attached<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45354 | 03<br>06<br>16 | R<br>W<br>W | E-mail attached data CH44 | Bit correspondence<br>Bit 0: Address 1 ~ Bit 7: Address 8<br>0: Not attached, 1: Attached<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45361 | 03<br>06<br>16 | R<br>W<br>W | POP3 address 1, 2 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45362 | 03<br>06<br>16 | R<br>W<br>W | POP3 address 3, 4 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45363 | 03<br>06<br>16 | R<br>W<br>W | POP3 address 5, 6 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45364 | 03<br>06<br>16 | R<br>W<br>W | POP3 address 7, 8 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 45365 | 03<br>06<br>16 | R<br>W<br>W | POP3 address 9, 10 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45366 | 03<br>06<br>16 | R<br>W<br>W | POP3 address 11, 12 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45367 | 03<br>06<br>16 | R<br>W<br>W | POP3 address 13, 14 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45368 | 03<br>06<br>16 | R<br>W<br>W | POP3 address 15, 16 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45369 | 03<br>06<br>16 | R<br>W<br>W | POP3 address 17, 18 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45370 | 03<br>06<br>16 | R<br>W<br>W | POP3 address 19, 20 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45371 | 03<br>06<br>16 | R<br>W<br>W | POP3 address 21, 22 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45372 | 03<br>06<br>16 | R<br>W<br>W | POP3 address 23, 24 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45373 | 03<br>06<br>16 | R<br>W<br>W | POP3 address 25, 26 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45374 | 03<br>06<br>16 | R<br>W<br>W | POP3 address 27, 28 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45375 | 03<br>06<br>16 | R<br>W<br>W | POP3 address 29, 30 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45376 | 03<br>06<br>16 | R<br>W<br>W | POP3 address 31, 32 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45381 | 03<br>06<br>16 | R<br>W<br>W | SMTP address 1, 2 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45382 | 03<br>06<br>16 | R<br>W<br>W | SMTP address 3, 4 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45383 | 03<br>06<br>16 | R<br>W<br>W | SMTP address 5, 6 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45384 | 03<br>06<br>16 | R<br>W<br>W | SMTP address 7, 8 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 45385 | 03<br>06<br>16 | R<br>W<br>W | SMTP address 9, 10 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45386 | 03<br>06<br>16 | R<br>W<br>W | SMTP address 11, 12 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45387 | 03<br>06<br>16 | R<br>W<br>W | SMTP address 13, 14 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45388 | 03<br>06<br>16 | R<br>W<br>W | SMTP address 15, 16 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45389 | 03<br>06<br>16 | R<br>W<br>W | SMTP address 17, 18 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45390 | 03<br>06<br>16 | R<br>W<br>W | SMTP address 19, 20 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45391 | 03<br>06<br>16 | R<br>W<br>W | SMTP address 21, 22 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45392 | 03<br>06<br>16 | R<br>W<br>W | SMTP address 23, 24 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45393 | 03<br>06<br>16 | R<br>W<br>W | SMTP address 25, 26 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45394 | 03<br>06<br>16 | R<br>W<br>W | SMTP address 27, 28 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45395 | 03<br>06<br>16 | R<br>W<br>W | SMTP address 29, 30 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45396 | 03<br>06<br>16 | R<br>W<br>W | SMTP address 31, 32 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45401 | 03<br>06<br>16 | R<br>W<br>W | Sender address 1, 2 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45402 | 03<br>06<br>16 | R<br>W<br>W | Sender address 3, 4 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45403 | 03<br>06<br>16 | R<br>W<br>W | Sender address 5, 6 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45404 | 03<br>06<br>16 | R<br>W<br>W | Sender address 7, 8 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 45405 | 03 06 16 | R W W | Sender address 9, 10 | ASCII 2 digits Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45406 | 03 06 16 | R W W | Sender address 11, 12 | ASCII 2 digits Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45407 | 03 06 16 | R W W | Sender address 13, 14 | ASCII 2 digits Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45408 | 03 06 16 | R W W | Sender address 15, 16 | ASCII 2 digits Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45409 | 03 06 16 | R W W | Sender address 17, 18 | ASCII 2 digits Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45410 | 03 06 16 | R W W | Sender address 19, 20 | ASCII 2 digits Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45411 | 03 06 16 | R W W | Sender address 21, 22 | ASCII 2 digits Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45412 | 03 06 16 | R W W | Sender address 23, 24 | ASCII 2 digits Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45413 | 03 06 16 | R W W | Sender address 25, 26 | ASCII 2 digits Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45414 | 03 06 16 | R W W | Sender address 27, 28 | ASCII 2 digits Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45415 | 03 06 16 | R W W | Sender address 29, 30 | ASCII 2 digits Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45416 | 03 06 16 | R W W | Sender address 31, 32 | ASCII 2 digits Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45421 | 03 06 16 | R W W | Mail account 1, 2 | ASCII 2 digits Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45422 | 03 06 16 | R W W | Mail account 3, 4 | ASCII 2 digits Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45423 | 03 06 16 | R W W | Mail account 5, 6 | ASCII 2 digits Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45424 | 03 06 16 | R W W | Mail account 7, 8 | ASCII 2 digits Error code: 01H, 02H, 03H, 09H, 11H, 12H |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 45425 | 03<br>06<br>16 | R<br>W<br>W | Mail account 9, 10 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45426 | 03<br>06<br>16 | R<br>W<br>W | Mail account 11, 12 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45427 | 03<br>06<br>16 | R<br>W<br>W | Mail account 13, 14 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45428 | 03<br>06<br>16 | R<br>W<br>W | Mail account 15, 16 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45429 | 03<br>06<br>16 | R<br>W<br>W | Mail account 17, 18 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45430 | 03<br>06<br>16 | R<br>W<br>W | Mail account 19, 20 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45431 | 03<br>06<br>16 | R<br>W<br>W | Mail account 21, 22 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45432 | 03<br>06<br>16 | R<br>W<br>W | Mail account 23, 24 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45433 | 03<br>06<br>16 | R<br>W<br>W | Mail account 25, 26 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45434 | 03<br>06<br>16 | R<br>W<br>W | Mail account 27, 28 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45435 | 03<br>06<br>16 | R<br>W<br>W | Mail account 29, 30 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45436 | 03<br>06<br>16 | R<br>W<br>W | Mail account 31, 32 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45441 | 03<br>06<br>16 | R<br>W<br>W | Mail password 1, 2 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45442 | 03<br>06<br>16 | R<br>W<br>W | Mail password 3, 4 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45443 | 03<br>06<br>16 | R<br>W<br>W | Mail password 5, 6 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45444 | 03<br>06<br>16 | R<br>W<br>W | Mail password 7, 8 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 45445 | 03<br>06<br>16 | R<br>W<br>W | Mail password 9, 10 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45446 | 03<br>06<br>16 | R<br>W<br>W | Mail password 11, 12 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45447 | 03<br>06<br>16 | R<br>W<br>W | Mail password 13, 14 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45448 | 03<br>06<br>16 | R<br>W<br>W | Mail password 15, 16 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45449 | 03<br>06<br>16 | R<br>W<br>W | Mail password 17, 18 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45450 | 03<br>06<br>16 | R<br>W<br>W | Mail password 19, 20 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45451 | 03<br>06<br>16 | R<br>W<br>W | Mail password 21, 22 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45452 | 03<br>06<br>16 | R<br>W<br>W | Mail password 23, 24 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45453 | 03<br>06<br>16 | R<br>W<br>W | Mail password 25, 26 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45454 | 03<br>06<br>16 | R<br>W<br>W | Mail password 27, 28 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45455 | 03<br>06<br>16 | R<br>W<br>W | Mail password 29, 30 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45456 | 03<br>06<br>16 | R<br>W<br>W | Mail password 31, 32 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45461 | 03<br>06<br>16 | R<br>W<br>W | DNS On/Off | 0: OFF, 1: ON<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45462 | 03<br>06<br>16 | R<br>W<br>W | DNS primary server IP address 1, 2 | Higher 16 bits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45463 | 03<br>06<br>16 | R<br>W<br>W | DNS primary server IP address 3, 4 | Higher 16 bits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45464 | 03<br>06<br>16 | R<br>W<br>W | DNS secondary server IP address 1, 2 | Higher 16 bits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 45465 | 03<br>06<br>16 | R<br>W<br>W | DNS secondary server IP address 3, 4 | Higher 16 bits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45466 | 03<br>06<br>16 | R<br>W<br>W | SNTP ON/OFF | 0:OFF,1:ON<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45467 | 03<br>06<br>16 | R<br>W<br>W | SNTP sever 1,2 | Higher 16 bits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45468 | 03<br>06<br>16 | R<br>W<br>W | SNTP sever 3,4 | Higher 16 bits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45469 | 03<br>06<br>16 | R<br>W<br>W | SNTP sever 5,6 | Higher 16 bits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45470 | 03<br>06<br>16 | R<br>W<br>W | SNTP sever 7,8 | Higher 16 bits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45471 | 03<br>06<br>16 | R<br>W<br>W | SNTP sever 9,10 | Higher 16 bits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45472 | 03<br>06<br>16 | R<br>W<br>W | SNTP sever 11,12 | Higher 16 bits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45473 | 03<br>06<br>16 | R<br>W<br>W | SNTP sever 13,14 | Higher 16 bits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45474 | 03<br>06<br>16 | R<br>W<br>W | SNTP sever 15,16 | Higher 16 bits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45475 | 03<br>06<br>16 | R<br>W<br>W | SNTP sever 17,18 | Higher 16 bits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45476 | 03<br>06<br>16 | R<br>W<br>W | SNTP sever 19,20 | Higher 16 bits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45477 | 03<br>06<br>16 | R<br>W<br>W | SNTP sever 21,22 | Higher 16 bits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45478 | 03<br>06<br>16 | R<br>W<br>W | SNTP sever 23,24 | Higher 16 bits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45479 | 03<br>06<br>16 | R<br>W<br>W | SNTP sever 25,26 | Higher 16 bits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45480 | 03<br>06<br>16 | R<br>W<br>W | SNTP sever 27,28 | Higher 16 bits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 45481 | 03<br>06<br>16 | R<br>W<br>W | SNTP sever 29,30 | Higher 16 bits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45482 | 03<br>06<br>16 | R<br>W<br>W | SNTP sever 31,32 | Higher 16 bits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45483 | 03<br>06<br>16 | R<br>W<br>W | SNTP base time | Higher 1byte base time hour:0 to 23<br>Lower 1byte base time minute:0 to 59<br>00:00 to 24:00<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45484 | 03<br>06<br>16 | R<br>W<br>W | SNTP interval | Higher 1byte base time hour:0 to 24<br>Lower 1byte base time minute:0 to 59<br>00:00 to 24:00<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45485 | 03<br>06<br>16 | R<br>W<br>W | SNTP port number | 1 to 65536<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45486 | 03<br>06<br>16 | R<br>W<br>W | POP3 port number | 1 to 65536<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |

4) Low order communications parameter

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 45501 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 1 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45502 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 2 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45503 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 3 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45504 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 4 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45505 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 5 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45506 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 6 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45507 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 7 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45508 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 8 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45509 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 9 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 45510 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 10 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45511 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 11 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45512 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 12 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45513 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 13 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45514 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 14 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45515 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 15 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45516 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 16 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45517 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 17 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45518 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 18 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 45519 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 19 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45520 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 20 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45521 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 21 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45522 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 22 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45523 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 23 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45524 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 24 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45525 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 25 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45526 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 26 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45527 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 27 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 45528 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 28 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45529 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 29 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45530 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 30 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45531 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 31 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45532 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 32 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45533 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 33 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45534 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 34 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45535 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 35 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45536 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 36 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 45537 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 37 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45538 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 38 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45539 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 39 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45540 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 40 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45541 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 41 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45542 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 42 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45543 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 43 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 45544 | 03<br>06<br>16 | R<br>W<br>W | Low order communication registration instruments number/ channel number 44 | Higher 1 byte 0 :No setting, 1~5:instryments number<br>Lower 1 byte :channel number : 1~200<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |

5) Group parameter

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 46001 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display group<br>name 1, 2 | ASCII, Shift JIS 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46002 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display group<br>name 3, 4 | ASCII, Shift JIS 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46003 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display group<br>name 5, 6 | ASCII, Shift JIS 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46004 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display group<br>name 7, 8 | ASCII, Shift JIS 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46005 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display group<br>name 9, 10 | ASCII, Shift JIS 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46006 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display group<br>name 11, 12 | ASCII, Shift JIS 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46007 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display group<br>name 13, 14 | ASCII, Shift JIS 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46008 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display group<br>name 15, 16 | ASCII, Shift JIS 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46011 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel<br>allocaton/Display_<br>Nondisplay/Trend<br>line diameter 1 | Bit 0 ~ 7    Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9    Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12    Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46012 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel<br>allocaton/Display_<br>Nondisplay/Trend<br>line diameter 2 | Bit 0 ~ 7    Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9    Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12    Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46013 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel<br>allocaton/Display_<br>Nondisplay/Trend<br>line diameter 3 | Bit 0 ~ 7    Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9    Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12    Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46014 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel<br>allocaton/Display_<br>Nondisplay/Trend<br>line diameter 4 | Bit 0 ~ 7    Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9    Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12    Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 46015 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel<br>allocaton/Display_<br>Nondisplay/Trend<br>line diameter 5 | Bit 0 ~ 7   Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9   Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12   Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46016 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel<br>allocaton/Display_<br>Nondisplay/Trend<br>line diameter 6 | Bit 0 ~ 7   Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9   Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12   Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46017 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel<br>allocaton/Display_<br>Nondisplay/Trend<br>line diameter 7 | Bit 0 ~ 7   Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9   Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12   Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46018 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel<br>allocaton/Display_<br>Nondisplay/Trend<br>line diameter 8 | Bit 0 ~ 7   Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9   Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12   Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46019 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel<br>allocaton/Display_<br>Nondisplay/Trend<br>line diameter 9 | Bit 0 ~ 7   Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9   Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12   Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46020 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel<br>allocaton/Display_<br>Nondisplay/Trend<br>line diameter 10 | Bit 0 ~ 7   Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9   Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12   Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46021 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel<br>allocaton/Display_<br>Nondisplay/Trend<br>line diameter 11 | Bit 0 ~ 7   Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9   Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12   Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46022 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel<br>allocaton/Display_<br>Nondisplay/Trend<br>line diameter 12 | Bit 0 ~ 7   Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9   Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12   Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46023 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel<br>allocaton/Display_<br>Nondisplay/Trend<br>line diameter 13 | Bit 0 ~ 7   Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9   Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12   Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 46024 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel allocaton/Display_Nondisplay/Trend line diameter 14 | Bit 0 ~ 7    Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9    Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12    Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46025 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel allocaton/Display_Nondisplay/Trend line diameter 15 | Bit 0 ~ 7    Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9    Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12    Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46026 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel allocaton/Display_Nondisplay/Trend line diameter 16 | Bit 0 ~ 7    Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9    Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12    Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46027 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel allocaton/Display_Nondisplay/Trend line diameter 17 | Bit 0 ~ 7    Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9    Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12    Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46028 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel allocaton/Display_Nondisplay/Trend line diameter 18 | Bit 0 ~ 7    Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9    Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12    Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46029 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel allocaton/Display_Nondisplay/Trend line diameter 19 | Bit 0 ~ 7    Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9    Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12    Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46030 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel allocaton/Display_Nondisplay/Trend line diameter 20 | Bit 0 ~ 7    Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9    Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12    Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46031 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel allocaton/Display_Nondisplay/Trend line diameter 21 | Bit 0 ~ 7    Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9    Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12    Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46032 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel allocaton/Display_Nondisplay/Trend line diameter 22 | Bit 0 ~ 7    Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9    Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12    Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 46033 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel<br>allocaton/Display_<br>Nondisplay/Trend<br>line diameter 23 | Bit 0 ~ 7    Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9    Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12    Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46034 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel<br>allocaton/Display_<br>Nondisplay/Trend<br>line diameter 24 | Bit 0 ~ 7    Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9    Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12    Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46035 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel<br>allocaton/Display_<br>Nondisplay/Trend<br>line diameter 25 | Bit 0 ~ 7    Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9    Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12    Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46036 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel<br>allocaton/Display_<br>Nondisplay/Trend<br>line diameter 26 | Bit 0 ~ 7    Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9    Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12    Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46037 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel<br>allocaton/Display_<br>Nondisplay/Trend<br>line diameter 27 | Bit 0 ~ 7    Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9    Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12    Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46038 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel<br>allocaton/Display_<br>Nondisplay/Trend<br>line diameter 28 | Bit 0 ~ 7    Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9    Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12    Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46039 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel<br>allocaton/Display_<br>Nondisplay/Trend<br>line diameter 29 | Bit 0 ~ 7    Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9    Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12    Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46040 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel<br>allocaton/Display_<br>Nondisplay/Trend<br>line diameter 30 | Bit 0 ~ 7    Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9    Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12    Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46041 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel<br>allocaton/Display_<br>Nondisplay/Trend<br>line diameter 31 | Bit 0 ~ 7    Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9    Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12    Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 46042 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel<br>allocaton/Display_<br>Nondisplay/Trend<br>line diameter 32 | Bit 0 ~ 7    Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9    Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12    Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46043 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel<br>allocaton/Display_<br>Nondisplay/Trend<br>line diameter 33 | Bit 0 ~ 7    Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9    Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12    Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46044 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel<br>allocaton/Display_<br>Nondisplay/Trend<br>line diameter 34 | Bit 0 ~ 7    Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9    Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12    Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46045 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel<br>allocaton/Display_<br>Nondisplay/Trend<br>line diameter 35 | Bit 0 ~ 7    Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9    Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12    Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46046 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel<br>allocaton/Display_<br>Nondisplay/Trend<br>line diameter 36 | Bit 0 ~ 7    Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9    Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12    Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46047 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel<br>allocaton/Display_<br>Nondisplay/Trend<br>line diameter 37 | Bit 0 ~ 7    Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9    Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12    Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46048 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel<br>allocaton/Display_<br>Nondisplay/Trend<br>line diameter 38 | Bit 0 ~ 7    Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9    Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12    Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46049 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel<br>allocaton/Display_<br>Nondisplay/Trend<br>line diameter 39 | Bit 0 ~ 7    Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9    Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12    Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46050 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel<br>allocaton/Display_<br>Nondisplay/Trend<br>line diameter 40 | Bit 0 ~ 7    Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9    Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12    Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 46051 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel allocaton/Display_Nondisplay/Trend line diameter 41 | Bit 0 ~ 7　Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9　Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12　Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46052 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel allocaton/Display_Nondisplay/Trend line diameter 42 | Bit 0 ~ 7　Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9　Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12　Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46053 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel allocaton/Display_Nondisplay/Trend line diameter 43 | Bit 0 ~ 7　Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9　Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12　Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46054 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Display channel allocaton/Display_Nondisplay/Trend line diameter 44 | Bit 0 ~ 7　Display channel allocation: 1 ~ 44<br>0: Not set<br>Bit 8 ~ 9　Trend line diameter 0: 1, 1: 3, 2: 5<br>Bit 12　Display_Nondiaplay 0: Nondisplay, 1: Display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46055 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Time ruler interval | 12 to 510 (Only the even number value)<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46061 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Trip line position 1 | 1 ~ 99 0: None<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46062 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Trip line color 1 | 1~ 12<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46063 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Trip line thickness 1 | 0: 1, 1: 3, 2: 5<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46064 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Trip line position 2 | 1 ~ 99 0: None<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46065 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Trip line color 2 | 1~ 12<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46066 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Trip line thickness 2 | 0: 1, 1: 3, 2: 5<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46067 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Trip line position 3 | 1 ~ 99 0: None<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46068 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Trip line color 3 | 1~ 12<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 46069 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Trip line thickness 3 | 0: 1, 1: 3, 2: 5<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46070 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Trip line position 4 | 1 ~ 99 0: None<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46071 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Trip line color 4 | 1~ 12<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46072 | 03<br>06<br>16 | R<br>W<br>W | Group 1<br>Trip line thickness 4 | 0: 1, 1: 3, 2: 5<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 46101 ~ 46200 | 03<br>06<br>16 | R<br>W<br>W | Group 2<br>parameter | Same as Group 1 parameter (46001 ~ 46072) |
| 46201 ~ 46300 | 03<br>06<br>16 | R<br>W<br>W | Group 3<br>parameter | Same as Group 1 parameter (46001 ~ 46072) |
| 46301 ~ 46400 | 03<br>06<br>16 | R<br>W<br>W | Group 4<br>parameter | Same as Group 1 parameter (46001 ~ 46072) |
| 46401 ~ 46500 | 03<br>06<br>16 | R<br>W<br>W | Group 5<br>parameter | Same as Group 1 parameter (46001 ~ 46072) |

6) Common parameter (screen, schedule, etc.)

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 47110 | 03<br>06<br>16 | R<br>W<br>W | Language | 0: Japanese, 1: English<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47111 | 03<br>06<br>16 | R<br>W<br>W | Screen saver | 0 ~ 60 (min.)<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47112 | 03<br>06<br>16 | R<br>W<br>W | Year/month/day format | 0: y/m/d, 1: m/d/y, 2: d/m/y<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47114 | 03<br>06<br>16 | R<br>W<br>W | Background color | 0: White, 1: Black<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47113 | 03<br>06<br>16 | R<br>W<br>W | Time adjustmenmt by DI | 0: none, 1 to 8 DI number<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47115 | 03<br>06<br>16 | R<br>W<br>W | Display contrast adjustment | 1 ~ 4 (Default: 3)<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47117 | 03<br>06<br>16 | R<br>W<br>W | Combined display | 0: W/o tag, 1: With tag, 2: Bargraph, 3: None<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47118 | 03<br>06<br>16 | R<br>W<br>W | Trend direction | 0: Vertical, 1: Horizontal<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47119 | 03<br>06<br>16 | R<br>W<br>W | Bargraph direction | 0: Vertical, 1: Horizontal<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47120 | 03<br>06<br>16 | R<br>W<br>W | Number of frames for numeric number display screen | 1, 4, 6, 12, 21, 44 switching<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47122 | 03<br>06<br>16 | R<br>W<br>W | Zone used/not used | 0: Not used, 1: Used<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47123 | 03<br>06<br>16 | R<br>W<br>W | Automatic changing interval | 0 ~ 60<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47124 | 03<br>06<br>16 | R<br>W<br>W | Numeric number display update speed | 0 ~ 2<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47125 | 03<br>06<br>16 | R<br>W<br>W | Scale text | 0: With display, 1: W/o display<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47126 | 03<br>06<br>16 | R<br>W<br>W | Base position of bargraph | 0 to 100<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 47128 | 03<br>06<br>16 | R<br>W<br>W | Data display Size adjustment | 0: w/o adjustment , 1: with adjustment<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47129 | 03<br>06<br>16 | R<br>W<br>W | Trend label | 0: none , 1: CH tag , 2: tag<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47130 | 03<br>06<br>16 | R<br>W<br>W | Dual trend synchronization | 0: w/o synchronization , 1:with synchronization<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47140 | 03<br>06<br>16 | R<br>W<br>W | Low order communication connected model 1 | 0: No connection ,1: SE, 2:AL , 3:BR, 4: KE,5: LE<br>6: KR, 7: LT2/3/8, 8: LT4 ,9: JU, 10: JW,<br>11: MELSEC, 12: SYSMAC<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47141 | 03<br>06<br>16 | R<br>W<br>W | Low order communication connected model 2 | Same as Low order communication connection instrument 1 (47140) |
| 47142 | 03<br>06<br>16 | R<br>W<br>W | Low order communication connected model 3 | Same as Low order communication connection instrument 1 (47140) |
| 47143 | 03<br>06<br>16 | R<br>W<br>W | Low order communication connected model 4 | Same as Low order communication connection instrument 1 (47140) |
| 47144 | 03<br>06<br>16 | R<br>W<br>W | Low order communication connected model 5 | Same as Low order communication connection instrument 1 (47140) |
| 47150 | 03<br>06<br>16 | R<br>W<br>W | Low order communication number of instrument CH 1 | 0: CH none,<br>1 to 200: Number of CH of low order connection instrument<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47151 | 03<br>06<br>16 | R<br>W<br>W | Low order communication number of instrument CH 2 | 0: CH none,<br>1 to 200: Number of CH of low order connection instrument<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47152 | 03<br>06<br>16 | R<br>W<br>W | Low order communication number of instrument CH 3 | 0: CH none,<br>1 to 200: Number of CH of low order connection instrument<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 47153 | 03<br>06<br>16 | R<br>W<br>W | Low order communication number of instrument CH 4 | 0: CH none,<br>1 to 200: Number of CH of low order connection instrument<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47154 | 03<br>06<br>16 | R<br>W<br>W | Low order communication number of instrument CH 5 | 0: CH none,<br>1 to 200: Number of CH of low order connection instrument<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47156 | 03<br>06<br>16 | R<br>W<br>W | Schedule type | 0: Schedule OFF, 1: Date, 2: Day (continuous)<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47157 | 03<br>06<br>16 | R<br>W<br>W | Starting schedule year | ASCII 2 digits (A space code can be used in the first digit.) 00 ~ 99<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47158 | 03<br>06<br>16 | R<br>W<br>W | Starting schedule month | ASCII 2 digits (A space code can be used in the first digit.) 01 ~ 12<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47159 | 03<br>06<br>16 | R<br>W<br>W | Starting schedule date | ASCII 2 digits (A space code can be used in the first digit.) 01 ~ 31<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47160 | 03<br>06<br>16 | R<br>W<br>W | Starting schedule day | Bit correspondence<br>Bit 0: Sunday, Bit 1: Monday…Bit 6: Saturday<br>ON (1), OFF (0)<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47161 | 03<br>06<br>16 | R<br>W<br>W | Starting schedule hour | ASCII 2 digits (A space code can be used in the first digit.) 00 ~ 23<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47162 | 03<br>06<br>16 | R<br>W<br>W | Starting schedule minute | ASCII 2 digits (A space code can be used in the first digit.) 00 ~ 59<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47163 | 03<br>06<br>16 | R<br>W<br>W | Ending schedule year | ASCII 2 digits (A space code can be used in the first digit.) 00 ~ 99<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47164 | 03<br>06<br>16 | R<br>W<br>W | Ending schedule month | ASCII 2 digits (A space code can be used in the first digit.) 01 ~ 12<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47165 | 03<br>06<br>16 | R<br>W<br>W | Ending schedule date | ASCII 2 digits (A space code can be used in the first digit.) 01 ~ 31<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47166 | 03<br>06<br>16 | R<br>W<br>W | Ending schedule day | Bit correspondence<br>Bit 0: Sunday, Bit 1: Monday…Bit 6: Saturday<br>ON (1), OFF (0)<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47167 | 03<br>06<br>16 | R<br>W<br>W | Ending schedule hour | ASCII 2 digits (A space code can be used in the first digit.) 00 ~ 23<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |

7) File-related-parameter

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 47207 | 03<br>06<br>16 | R<br>W<br>W | File 1<br>Data recording<br>cycle | 0: 0.1 sec., 1: 0.2 sec., 2: 0.5 sec., 3: 1 sec., 4: 2 sec., 5: 3 sec., 6: 5 sec., 7: 10 sec., 8: 15 sec., 9: 20 sec., 0: 30 sec., 11: 1 min., 12: 2 min., 13: 3 min., 14: 5 min., 15: 10 min., 16: 15 min., 17: 20 min., 18: 30 min., 19: 60 min.<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47208 | 03<br>06<br>16 | R<br>W<br>W | File 1 Start trigger | 0: Key, 1: Alarm, 2: Contact input<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47209 | 03<br>06<br>16 | R<br>W<br>W | File 1 Start condition 1 | ASCII 2 digits<br>47208: The start trigger of File 1 is;<br>1: In case of alarm, 01 ~ Alarm output<br>2: In case of contact input, 01 ~ Number of remote contact<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47210 | 03<br>06<br>16 | R<br>W<br>W | File 1 Start condition 2 | Number of pre-trigger: 10-increment for 0 ~ 950<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47211 | 03<br>06<br>16 | R<br>W<br>W | File 1 End trigger | 0: Same as Start trigger, 1: Count<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47213 | 03<br>06<br>16 | R<br>W<br>W | File 1 End condition | Count: 10-increment for 0 ~ 30000<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47221 | 03<br>06<br>16 | R<br>W<br>W | Storing type | 0: Binary (setting information existed),<br>1: CSV, 2:CSV(continuous)<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47222 | 03<br>06<br>16 | R<br>W<br>W | CF saving cycle | 0: None, 1: 1 min., 2: 2 min., 3: 3 min., 4: 5 min., 5: 10 min., 6: 20 min., 7: 30 min., 8: 60 min.<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47223 | 03<br>06<br>16 | R<br>W<br>W | Data type | 0: Sample, 1: Average, 2: Maximum, 3: Minimum, 4: Maximum/minimum<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47224 | 03<br>06<br>16 | R<br>W<br>W | File size | 0: Automatic (same as at present)<br>1: 10 min., 2: 15 min., 3: 20 min., 4: 30 min.,<br>5: 60 min., 6: 2 hours, 7: 3 hours, 8: 4 hours,<br>9: 6 hours, 10: 8 hours, 11: 12 hours,<br>12: 24 hours, 13: 1 week, 14: 1 month<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47231 | 03<br>06<br>16 | R<br>W<br>W | Storing file directory 1, 2 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47232 | 03<br>06<br>16 | R<br>W<br>W | Storing file directory 3, 4 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 47233 | 03<br>06<br>16 | R<br>W<br>W | Storing file directory 5, 6 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47234 | 03<br>06<br>16 | R<br>W<br>W | Storing file directory 7, 8 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47235 | 03<br>06<br>16 | R<br>W<br>W | Storing file directory 9, 10 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47236 | 03<br>06<br>16 | R<br>W<br>W | Storing file directory 11, 12 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47237 | 03<br>06<br>16 | R<br>W<br>W | Storing file directory 13, 14 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47238 | 03<br>06<br>16 | R<br>W<br>W | Storing file directory 15, 16 | ASCII 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47241 | 03<br>06<br>16 | R<br>W<br>W | Record ON/OFF | 0: Record OFF, 1: Record ON<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 47301 ~ 47400 | 03<br>06<br>16 | R<br>W<br>W | File 2 setting | Same as File 1 parameter (47201 ~ 47300) |
| 47401 ~ 47500 | 03<br>06<br>16 | R<br>W<br>W | File 3 setting | Same as File 1 parameter (47201 ~ 47300) |
| 47501 ~ 47600 | 03<br>06<br>16 | R<br>W<br>W | File 4 setting | Same as File 1 parameter (47201 ~ 47300) |
| 47601 ~ 47700 | 03<br>06<br>16 | R<br>W<br>W | File 5 setting | Same as File 1 parameter (47201 ~ 47300) |

8) Marker text

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 48001 | 03<br>06<br>16 | R<br>W<br>W | Marker text/<br>Designation of group<br>number for writing | 0 ~ 5, 00H: Group designation in displaying<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 48002 | 03<br>06<br>16 | R<br>W<br>W | Marker text/<br>Designation of<br>writing text number | 0 ~10, 00H: Designation of text performed last time<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 48003 | 03<br>06<br>16 | R<br>W<br>W | Marker text 1 1, 2 | ASCII, Shift JIS 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 48004 | 03<br>06<br>16 | R<br>W<br>W | Marker text 1 3, 4 | ASCII, Shift JIS 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 48005 | 03<br>06<br>16 | R<br>W<br>W | Marker text 1 5, 6 | ASCII, Shift JIS 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 48006 | 03<br>06<br>16 | R<br>W<br>W | Marker text 1 7, 8 | ASCII, Shift JIS 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 48007 | 03<br>06<br>16 | R<br>W<br>W | Marker text 1 9, 10 | ASCII, Shift JIS 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 48008 | 03<br>06<br>16 | R<br>W<br>W | Marker text 1 11, 12 | ASCII, Shift JIS 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 48009 | 03<br>06<br>16 | R<br>W<br>W | Marker text 1 13, 14 | ASCII, Shift JIS 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 48010 | 03<br>06<br>16 | R<br>W<br>W | Marker text 1 15, 16 | ASCII, Shift JIS 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 48011 | 03<br>06<br>16 | R<br>W<br>W | Marker text 1 17, 18 | ASCII, Shift JIS 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 48012 | 03<br>06<br>16 | R<br>W<br>W | Marker text 1 19, 20 | ASCII, Shift JIS 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 48013 | 03<br>06<br>16 | R<br>W<br>W | Marker text 1 21, 22 | ASCII, Shift JIS 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 48014 | 03<br>06<br>16 | R<br>W<br>W | Marker text 1 23, 24 | ASCII, Shift JIS 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 48015 | 03<br>06<br>16 | R<br>W<br>W | Marker text 1 25, 26 | ASCII, Shift JIS 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 48016 | 03<br>06<br>16 | R<br>W<br>W | Marker text 1 27, 28 | ASCII, Shift JIS 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 48017 | 03<br>06<br>16 | R<br>W<br>W | Marker text 1 29, 30 | ASCII, Shift JIS 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 48018 ~ 48032 | 03<br>06<br>16 | R<br>W<br>W | Marker text 2 | Same as Marker text 1 (48003 ~ 48017) |
| 48033 ~ 48047 | 03<br>06<br>16 | R<br>W<br>W | Marker text 3 | Same as Marker text 1 (48003 ~ 48017) |
| 48048 ~ 48062 | 03<br>06<br>16 | R<br>W<br>W | Marker text 4 | Same as Marker text 1 (48003 ~ 48017) |
| 48063 ~ 48077 | 03<br>06<br>16 | R<br>W<br>W | Marker text 5 | Same as Marker text 1 (48003 ~ 48017) |
| 48078 ~ 48092 | 03<br>06<br>16 | R<br>W<br>W | Marker text 6 | Same as Marker text 1 (48003 ~ 48017) |
| 48093 ~ 48107 | 03<br>06<br>16 | R<br>W<br>W | Marker text 7 | Same as Marker text 1 (48003 ~ 48017) |
| 48108 ~ 48122 | 03<br>06<br>16 | R<br>W<br>W | Marker text 8 | Same as Marker text 1 (48003 ~ 48017) |
| 48123 ~ 48137 | 03<br>06<br>16 | R<br>W<br>W | Marker text 9 | Same as Marker text 1 (48003 ~ 48017) |
| 48138 ~ 48152 | 03<br>06<br>16 | R<br>W<br>W | Marker text 10 | Same as Marker text 1 (48003 ~ 48017) |
| 48153 ~ 48167 | 03<br>06<br>16 | R<br>W<br>W | Marker text 11 | Same as Marker text 1 (48003 ~ 48017) |
| 48168 ~ 48182 | 03<br>06<br>16 | R<br>W<br>W | Marker text 12 | Same as Marker text 1 (48003 ~ 48017) |
| 48183 ~ 48197 | 03<br>06<br>16 | R<br>W<br>W | Marker text 13 | Same as Marker text 1 (48003 ~ 48017) |
| 48198 ~ 48212 | 03<br>06<br>16 | R<br>W<br>W | Marker text 14 | Same as Marker text 1 (48003 ~ 48017) |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 48213 ~ 48227 | 03<br>06<br>16 | R<br>W<br>W | Marker text 15 | Same as Marker text 1 (48003 ~ 48017) |
| 48228 ~ 48242 | 03<br>06<br>16 | R<br>W<br>W | Marker text 16 | Same as Marker text 1 (48003 ~ 48017) |
| 48243 ~ 48257 | 03<br>06<br>16 | R<br>W<br>W | Marker text 17 | Same as Marker text 1 (48003 ~ 48017) |
| 48258 ~ 48272 | 03<br>06<br>16 | R<br>W<br>W | Marker text 18 | Same as Marker text 1 (48003 ~ 48017) |
| 48273 ~ 48287 | 03<br>06<br>16 | R<br>W<br>W | Marker text 19 | Same as Marker text 1 (48003 ~ 48017) |
| 48288 ~ 48302 | 03<br>06<br>16 | R<br>W<br>W | Marker text 20 | Same as Marker text 1 (48003 ~ 48017) |
| 48303 ~ 48317 | 03<br>06<br>16 | R<br>W<br>W | Marker text 21 | Same as Marker text 1 (48003 ~ 48017) |
| 48318 ~ 48332 | 03<br>06<br>16 | R<br>W<br>W | Marker text 22 | Same as Marker text 1 (48003 ~ 48017) |
| 48333 ~ 48347 | 03<br>06<br>16 | R<br>W<br>W | Marker text 23 | Same as Marker text 1 (48003 ~ 48017) |
| 48348 ~ 48362 | 03<br>06<br>16 | R<br>W<br>W | Marker text 24 | Same as Marker text 1 (48003 ~ 48017) |
| 48363 ~ 48377 | 03<br>06<br>16 | R<br>W<br>W | Marker text 25 | Same as Marker text 1 (48003 ~ 48017) |
| 48378 ~ 48392 | 03<br>06<br>16 | R<br>W<br>W | Marker text 26 | Same as Marker text 1 (48003 ~ 48017) |
| 48393 ~ 48407 | 03<br>06<br>16 | R<br>W<br>W | Marker text 27 | Same as Marker text 1 (48003 ~ 48017) |
| 48408 ~ 48422 | 03<br>06<br>16 | R<br>W<br>W | Marker text 28 | Same as Marker text 1 (48003 ~ 48017) |
| 48423 ~ 48437 | 03<br>06<br>16 | R<br>W<br>W | Marker text 29 | Same as Marker text 1 (48003 ~ 48017) |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 48438 ~ 48452 | 03<br>06<br>16 | R<br>W<br>W | Marker text 30 | Same as Marker text 1 (48003 ~ 48017) |
| 48453 ~ 48467 | 03<br>06<br>16 | R<br>W<br>W | Marker text 31 | Same as Marker text 1 (48003 ~ 48017) |
| 48468 ~ 48482 | 03<br>06<br>16 | R<br>W<br>W | Marker text 32 | Same as Marker text 1 (48003 ~ 48017) |
| 48483 ~ 48497 | 03<br>06<br>16 | R<br>W<br>W | Marker text 33 | Same as Marker text 1 (48003 ~ 48017) |
| 48498 ~ 48512 | 03<br>06<br>16 | R<br>W<br>W | Marker text 34 | Same as Marker text 1 (48003 ~ 48017) |
| 48513 ~ 48527 | 03<br>06<br>16 | R<br>W<br>W | Marker text 35 | Same as Marker text 1 (48003 ~ 48017) |
| 48528 ~ 48542 | 03<br>06<br>16 | R<br>W<br>W | Marker text 36 | Same as Marker text 1 (48003 ~ 48017) |
| 48543 ~ 48557 | 03<br>06<br>16 | R<br>W<br>W | Marker text 37 | Same as Marker text 1 (48003 ~ 48017) |
| 48558 ~ 48572 | 03<br>06<br>16 | R<br>W<br>W | Marker text 38 | Same as Marker text 1 (48003 ~ 48017) |
| 48573 ~ 48587 | 03<br>06<br>16 | R<br>W<br>W | Marker text 39 | Same as Marker text 1 (48003 ~ 48017) |
| 48588 ~ 48602 | 03<br>06<br>16 | R<br>W<br>W | Marker text 40 | Same as Marker text 1 (48003 ~ 48017) |
| 48603 ~ 48617 | 03<br>06<br>16 | R<br>W<br>W | Marker text 41 | Same as Marker text 1 (48003 ~ 48017) |
| 48618 ~ 48632 | 03<br>06<br>16 | R<br>W<br>W | Marker text 42 | Same as Marker text 1 (48003 ~ 48017) |
| 48633 ~ 48647 | 03<br>06<br>16 | R<br>W<br>W | Marker text 43 | Same as Marker text 1 (48003 ~ 48017) |
| 48648 ~ 48662 | 03<br>06<br>16 | R<br>W<br>W | Marker text 44 | Same as Marker text 1 (48003 ~ 48017) |

| Reference number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 48663 ~ 48677 | 03<br>06<br>16 | R<br>W<br>W | Marker text 45 | Same as Marker text 1 (48003 ~ 48017) |
| 48678 ~ 48692 | 03<br>06<br>16 | R<br>W<br>W | Marker text 46 | Same as Marker text 1 (48003 ~ 48017) |
| 48693 ~ 48707 | 03<br>06<br>16 | R<br>W<br>W | Marker text 47 | Same as Marker text 1 (48003 ~ 48017) |
| 48708 ~ 48722 | 03<br>06<br>16 | R<br>W<br>W | Marker text 48 | Same as Marker text 1 (48003 ~ 48017) |
| 48723 ~ 48737 | 03<br>06<br>16 | R<br>W<br>W | Marker text 49 | Same as Marker text 1 (48003 ~ 48017) |
| 48738 ~ 48752 | 03<br>06<br>16 | R<br>W<br>W | Marker text 50 | Same as Marker text 1 (48003 ~ 48017) |

9) Low order communication setting (PLC relation)

| リファレンス番号 | 適用<br>ファンクションコード | R/W | 内　　容 | 詳　　細 |
|---|---|---|---|---|
| 48951 | 03<br>06<br>16 | R<br>W<br>W | PLC node<br>number 1 | Node number of connection PLC: 0 to 31<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 48952 | 03<br>06<br>16 | R<br>W<br>W | PLC node<br>number 2 | Node number of connection PLC: 0 to 31<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 48953 | 03<br>06<br>16 | R<br>W<br>W | PLC node<br>number 3 | Node number of connection PLC: 0 to 31<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 48954 | 03<br>06<br>16 | R<br>W<br>W | PLC node<br>number 4 | Node number of connection PLC: 0 to 31<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 48955 | 03<br>06<br>16 | R<br>W<br>W | PLC node<br>number 5 | Node number of connection PLC: 0 to 31<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 48956 | 03<br>06<br>16 | R<br>W<br>W | Top address 1 of<br>PLC<br>1,2 | Top address of connection PLC<br>ASCII code 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 48957 | 03<br>06<br>16 | R<br>W<br>W | Top address 1 of<br>PLC<br>3,4 | Top address of connection PLC<br>ASCII code 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 48958 | 03<br>06<br>16 | R<br>W<br>W | Top address 1 of<br>PLC<br>5,6 | Top address of connection PLC<br>ASCII code 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 48959 | 03<br>06<br>16 | R<br>W<br>W | Top address 1 of<br>PLC<br>7,8 | Top address of connection PLC<br>ASCII code 2 digits<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 48960 to<br>48963 | 03<br>06<br>16 | R<br>W<br>W | Top address 2 of<br>PLC | Same as top address 1 of PLC<br>( 48956 to 48959 ) |
| 48964 to<br>48967 | 03<br>06<br>16 | R<br>W<br>W | Top address 3 of<br>PLC | Same as top address 1 of PLC<br>( 48956 to 48959 ) |
| 48968 to<br>48971 | 03<br>06<br>16 | R<br>W<br>W | Top address 4 of<br>PLC | Same as top address 1 of PLC<br>( 48956 to 48959 ) |
| 48972 to<br>48975 | 03<br>06<br>16 | R<br>W<br>W | Top address 5 of<br>PLC | Same as top address 1 of PLC<br>( 48956 to 48959 ) |

| リファレンス番号 | 適用 ファンクションコード | R/W | 内　容 | 詳　　細 |
|---|---|---|---|---|
| 48976 | 03 06 16 | R W W | PLC read / write count 1 | Low order communication (read) : read count　For MELSEC　1 to 60　For SYSMAC　1 to 30　Low order communication (write) : write count　For MELSEC　1 to 64　For SYSMAC　1 to 29 Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 48977 | 03 06 16 | R W W | PLC read / write count 2 | Same as PLC read / write count 1 ( 48976 ) |
| 48978 | 03 06 16 | R W W | PLC read / write count 3 | Same as PLC read / write count 1 ( 48976 ) |
| 48979 | 03 06 16 | R W W | PLC read / write count 4 | Same as PLC read / write count 1 ( 48976 ) |
| 48980 | 03 06 16 | R W W | PLC read / write count 5 | Same as PLC read / write count 1 ( 48976 ) |
| 48981 | 03 06 16 | R W W | PLC writing KR Top CH 1 | Low order communication use ( write )　1 to 128 Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 48982 | 03 06 16 | R W W | PLC writing KR Top CH 2 | Low order communication use ( write )　1 to 128 Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 48983 | 03 06 16 | R W W | PLC writing KR Top CH 3 | Low order communication use ( write )　1 to 128 Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 48984 | 03 06 16 | R W W | PLC writing KR Top CH 4 | Low order communication use ( write )　1 to 128 Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 48985 | 03 06 16 | R W W | PLC writing KR Top CH 5 | Low order communication use ( write )　1 to 128 Error code: 01H, 02H, 03H, 09H, 11H, 12H |

10) Web server setting

| Reference Number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 49001 | 03<br>06<br>16 | R<br>W<br>W | Web server<br>Administrator user<br>User name 1,2 | ASCII, Shift JIS 2 digit<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 49002 | 03<br>06<br>16 | R<br>W<br>W | Web server<br>Administrator user<br>User name 3,4 | ASCII, Shift JIS 2 digit<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 49003 | 03<br>06<br>16 | R<br>W<br>W | Web server<br>Administrator user<br>User name 5,6 | ASCII, Shift JIS 2 digit<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 49004 | 03<br>06<br>16 | R<br>W<br>W | Web server<br>Administrator user<br>User name 7,8 | ASCII, Shift JIS 2 digit<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 49005 | 03<br>06<br>16 | R<br>W<br>W | Web server<br>Administrator user<br>User name 9,10 | ASCII, Shift JIS 2 digit<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 49006 | 03<br>06<br>16 | R<br>W<br>W | Web server<br>Administrator user<br>User name 11,12 | ASCII, Shift JIS 2 digit<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 49007 | 03<br>06<br>16 | R<br>W<br>W | Web server<br>Administrator user<br>User name 13,14 | ASCII, Shift JIS 2 digit<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 49008 | 03<br>06<br>16 | R<br>W<br>W | Web server<br>Administrator user<br>User name 15,16 | ASCII, Shift JIS 2 digit<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 49009 | 03<br>06<br>16 | R<br>W<br>W | Web server<br>Administrator user<br>User name 17,18 | ASCII, Shift JIS 2 digit<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 49010 | 03<br>06<br>16 | R<br>W<br>W | Web server<br>Administrator user<br>User name 19,20 | ASCII, Shift JIS 2 digit<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 49011 | 03<br>06<br>16 | R<br>W<br>W | Web server<br>Administrator user<br>User name 21,22 | ASCII, Shift JIS 2 digit<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 49012 | 03<br>06<br>16 | R<br>W<br>W | Web server<br>Administrator user<br>User name 23,24 | ASCII, Shift JIS 2 digit<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 49013 | 03<br>06<br>16 | R<br>W<br>W | Web server<br>Administrator user<br>User name 25,26 | ASCII, Shift JIS 2 digit<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 49014 | 03<br>06<br>16 | R<br>W<br>W | Web server<br>Administrator user<br>User name 27,28 | ASCII, Shift JIS 2 digit<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 49015 | 03<br>06<br>16 | R<br>W<br>W | Web server<br>Administrator user<br>User name 29,30 | ASCII, Shift JIS 2 digit<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 49016 | 03<br>06<br>16 | R<br>W<br>W | Web server<br>Administrator user<br>User name 31,32 | ASCII, Shift JIS 2 digit<br>Error code: 01H, 02H, 03H, 09H, 11H, 12H |
| 49017 to 49032 | 03<br>06<br>16 | R<br>W<br>W | Web server<br>Administrator user<br>Password 1 to 32 | Same as administrator user name<br>( 49001 to 49016 ) |

| Reference Number | Applied function code | R/W | Content | Detail |
|---|---|---|---|---|
| 49033 to 49048 | 03<br>06<br>16 | R<br>W<br>W | Web server<br>General user<br>User name 1 to 32 | Same as administrator user name<br>( 49001 to 49016 ) |
| 49049 to 49064 | 03<br>06<br>16 | R<br>W<br>W | Web server<br>General user<br>Password 1 to 32 | Same as administrator user name<br>( 49001 to 49016 ) |

# 5.8 Range number table

| Input type | | Range number | Measurement range | | | | Decimal place |
|---|---|---|---|---|---|---|---|
| DC voltage | | 01 | -13.80 | — | 13.80 | mV | 2 |
| | | 02 | -27.60 | — | 27.60 | mV | 2 |
| | | 03 | -69.00 | — | 69.00 | mV | 2 |
| | | 04 | -200.0 | — | 200.0 | mV | 1 |
| | | 05 | -500.0 | — | 500.0 | mV | 1 |
| | | 06 | -2.000 | — | 2.000 | V | 3 |
| | | 07 | -5.000 | — | 5.000 | V | 3 |
| | | 08 | -10.00 | — | 10.00 | V | 2 |
| | | 09 | -20.00 | — | 20.00 | V | 2 |
| | | 10 | -50.00 | — | 50.00 | V | 2 |
| Thermocouple | K | 21 | — | — | 300.0 | °C | 1 |
| | | 22 | — | — | 600.0 | °C | 1 |
| | | 23 | -200 | — | 1370 | °C | 0 |
| | E | 24 | -200.0 | — | 200.0 | °C | 1 |
| | | 25 | -200.0 | — | 350.0 | °C | 1 |
| | | 26 | -200 | — | 900 | °C | 0 |
| | J | 27 | -200.0 | — | 250.0 | °C | 1 |
| | | 28 | -200.0 | — | 500.0 | °C | 1 |
| | | 29 | -200 | — | 1200 | °C | 0 |
| | T | 30 | -200.0 | — | 250.0 | °C | 1 |
| | | 31 | -200.0 | — | 400.0 | °C | 1 |
| | R | 32 | 0 | — | 1200 | °C | 0 |
| | | 33 | 0 | — | 1760 | °C | 0 |
| | S | 34 | 0 | — | 1300 | °C | 0 |
| | | 35 | 0 | — | 1760 | °C | 0 |
| | B | 36 | 0 | — | 1820 | °C | 0 |
| | N | 37 | -200.0 | — | 400.0 | °C | 1 |
| | | 38 | -200.0 | — | 750.0 | °C | 1 |
| | | 39 | -200 | — | 1300 | °C | 0 |
| | W-WRe26 | 40 | 0 | — | 2315 | °C | 0 |
| | WRe5-WRe26 | 41 | 0 | — | 2315 | °C | 0 |
| | PtRh40-PtRh20 | 43 | 0 | — | 1888 | °C | 0 |
| | NiMo-Ni | 44 | -50.0 | — | 290.0 | °C | 1 |
| | | 45 | -50.0 | — | 600.0 | °C | 1 |
| | | 46 | -50 | — | 1310 | °C | 0 |
| | CR-AuFe | 47 | 0.0 | — | 280.0 | K | 1 |
| | Platinel II | 48 | 0.0 | — | 350.0 | °C | 1 |
| | | 49 | 0.0 | — | 650.0 | °C | 1 |
| | | 50 | 0 | — | 1395 | °C | 0 |
| | U | 51 | -200.0 | — | 250.0 | °C | 1 |
| | | 52 | -200.0 | — | 500.0 | °C | 1 |
| | | 53 | -200.0 | — | 600.0 | °C | 1 |
| | L | 54 | -200.0 | — | 250.0 | °C | 1 |
| | | 55 | -200.0 | — | 500.0 | °C | 1 |
| | | 56 | -200 | — | 900 | °C | 0 |
| RTD | Pt100 | 70 | -140.0 | — | 150.0 | °C | 1 |
| | | 71 | -200.0 | — | 300.0 | °C | 1 |
| | | 72 | -200.0 | — | 850.0 | °C | 1 |
| | JPt100 | 76 | -140.0 | — | 150.0 | °C | 1 |
| | | 77 | -200.0 | — | 300.0 | °C | 1 |
| | | 78 | -200.0 | — | 649.0 | °C | 1 |
| | Pt50 | 79 | -200.0 | — | 649.0 | °C | 1 |
| | Pt-Co | 80 | 4.0 | — | 374.0 | K | 1 |
| DI | | 90 | 0 (OFF) / 1 (ON) | | | | 0 |
| Pulse (+) | | 91 | 0 | — | 30000 | | 0 |
| Pulse (-) | | 92 | 0 | — | 30000 | | 0 |

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2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

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2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

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