

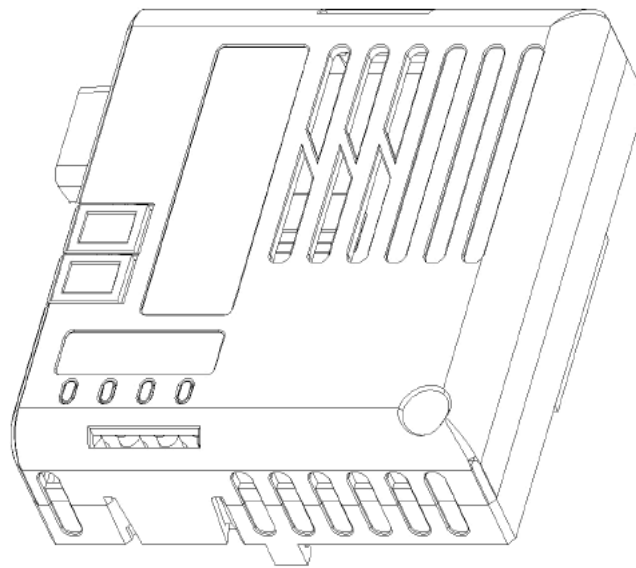
The best choice for your best interests!

LSIS works hard to ensure that all our clients receive the best possible benefits.

Profibus Option Board

SV-iS7 Series

User Manual



Safety Precautions

- Please read all safety precautions before using this product.
- After reading this manual, please store it in a location where it can be easily found.

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INSTRUCTIONS TO USERS

Thank you for your selecting our Profibus-DP option.

This instruction includes how to use the product and the instruction during handling.

Your wrong handling of this product may cause damage and then it reduces the duration of the product.



Therefore, please read this instruction carefully and then observes the instruction without fail.

Safety Precautions



Safety Precautions are for using the product safe and correct in order to prevent the accidents and danger, so please go by them.

The precautions explained here only apply to the iS7 Profibus Option. For safety precautions on the Inverter system, refer to the iS7 User's manual.


The precautions are divided into 2 sections, 'Warning' and 'Caution'. Each of the meanings is represented as follows.

| Precaution | | Definition |
|---|---------|--|
|  | Warning | If violated instructions, it can cause death, fatal injury or considerable loss of property. |
|  | Caution | If violated instructions, it can cause a slight injury or slight loss of products |

The symbols indicated in products and datasheet mean as follows

| Symbol | Definition |
|---|---|
|  | This symbol means pay attention because of danger of injury, fire or malfunction. |
|  | This symbol means paying attention because of danger of electric shock. |

Store this datasheet in a safe place so that you can take it out and read it whenever necessary. Always forward it to the end user.

|  Warning |
|--|
| <ul style="list-style-type: none"> ▪ Do not contact the terminals while the power is applied. It can cause electric shock and malfunction. ▪ Protect the product from being gone into by foreign metallic matter. It can cause fire, electric shock and malfunction. |

 **Caution**

- **Be sure to check the rated voltage and terminal arrangement for the module and observe them correctly.**
It can cause fire, electric shock and malfunction.
- **Tighten up the terminal screw firmly to defined torque when wiring.**
If the terminal screw looses, it can cause fire and electric shock.
- **Do not install around inflammable substances.**
It can cause fire.
- **Use in an environment that meets the general specifications contained in this datasheet.**
It can cause electrical shock, fire, erroneous operation and deterioration.
- **Be sure that external load does not exceed the rating of output module.**
It can cause fire and erroneous operation.
- **Do not use in the environment of direct vibration.**
It can cause electrical shock, fire and erroneous operation.
- **Do not disassemble, repair or modify except A/S specialist.**
It can cause electrical shock, fire and erroneous operation.
- **When disposing, treat it as industrial waste.**
It can cause poisonous pollution or explosion.

Precautions for use

- This option card is for SV-iS7 only. Don't install it to any other device than SV-iS7.
- When using the product, use the inverter with grounded. For the method of GND, please refer to the instruction manual of inverter body.
- Be sure to connect inverter and option card exactly. For the method of connection,
Please refer to "6. How to install option" in iS7 User's Manual.
- Do not separating or remodeling the PCB of Option card.
- Turn off when install or uninstall the option.
- Use Mobile or Radio telegraph at 30cm away from the product.
- Input/output signal or communication wire should be 100mm away from high voltage cable or power line.

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1. Summary

1.1 Introduction

You can connect SV-iS7 inverter to Profibus network using Profibus option.

With Profibus option board built in, inverter control and monitoring by PLC sequence program or optional master module is available.

As a number of inverters in connection operate through one communication line only, It reduces the installation cost compared with communication being unused.

Furthermore, its simple wiring enables the reduction of installation time and easy maintenance and repair.

1.2 Construction of Product

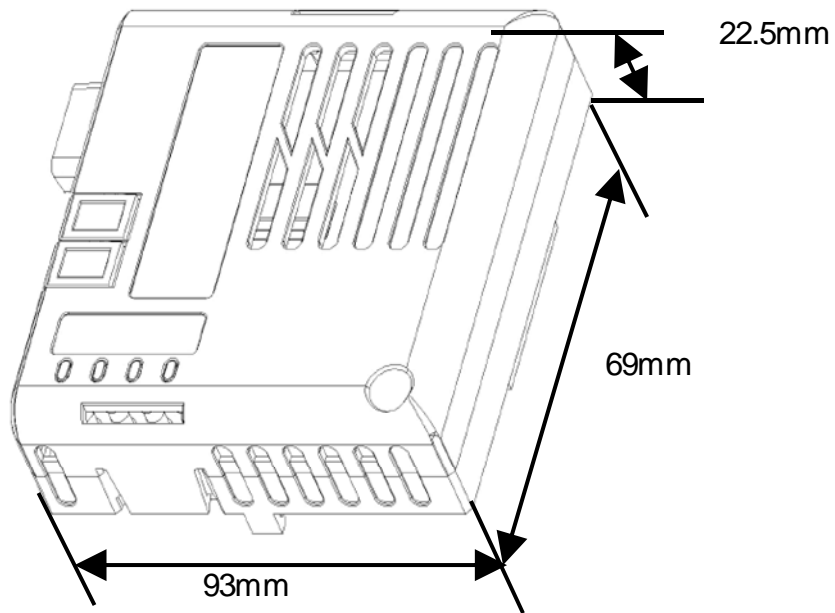
Profibus option, (1) 9-Pin Connector, Fixing Screw (M3), Manual

2. Product Specification

2.1 Basic Communication Specification of Profibus Option

- Device Type : Profibus DP Slave
- Auto Baud Rate Detect : Support
- Sync Mode : Support
- Freeze Mode : Support
- Max Input Length : 8 words
- Max Output Length : 8 words
- Max Data Length : 16 words
- Baud Rate Support : 9.6K, 19.2K, 93.75K, 187.5K, 500K, 1.5M, 3M, 6M, 12M
- Modular Station : Support
- Max Module : 2

2.2 Dimension



3. Appearance and Name of Each Part

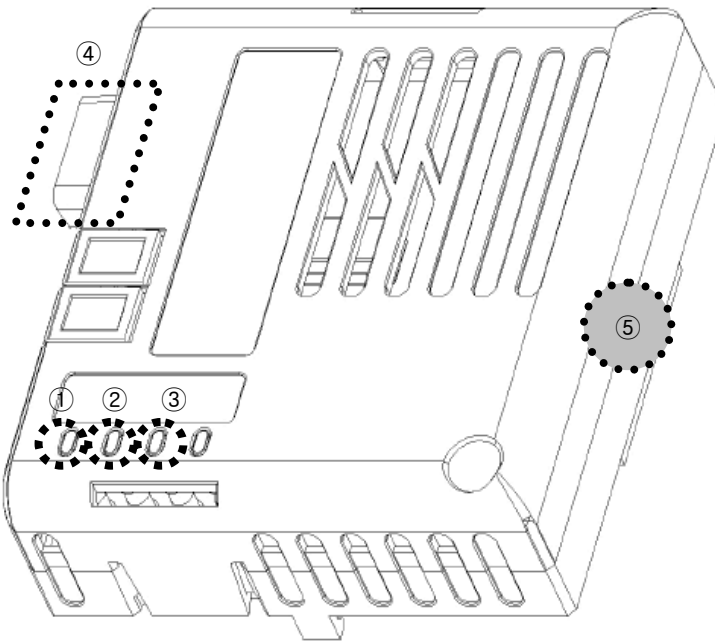


Figure 1. Exterior Appearance

■ LED Display

| No. | Name | Application |
|-----|-----------------------------------|---|
| ① | DATA_EX LED | Always "On" when Profibus is Online status. |
| ② | ERROR LED | "On" when error occurs in the option |
| ③ | CPU LED | "On" when the option board is built in the inverter and power is supplied to the inverter |
| ④ | Communication connecting Terminal | Terminal that connects it with Profibus communication |
| ⑤ | Inverter connecting Connector | Terminal that connects it with inverter body |

※ For further operation, please refer to '7. Troubleshooting'.

■ Communication Line Connecting Terminal

| Pin No. | Signal | Description |
|---------|-----------|-------------------------------|
| 1 | Shield | Protective Ground Line |
| 2 | M24 | 24V Output GND |
| 3 | RxD/TxD-P | Send/Receive Data Plus |
| 4 | CTRL-P | Control Signal for Repeater |
| 5 | DGND | Signal GND |
| 6 | VP | 5V for Terminating Resistance |
| 7 | P24 | 24V Output Plus |
| 8 | RxD/TxD-N | Send/Receive Data Negative |
| 9 | CTRL-N | Control Signal for Repeater |

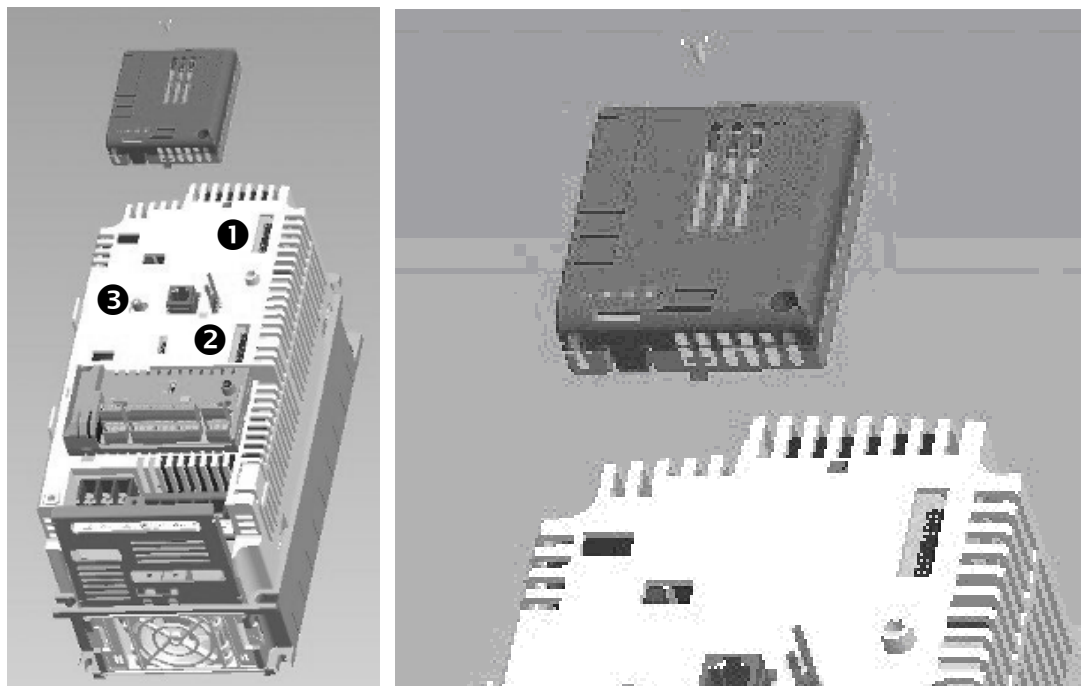
NOTE

This product supports the signal Nos. 3,5,6,8 only.

4. Option Installation Method

4.1 How to install option to inverter

1. Power off.
2. Connect connector after isolating front cover from iS7 as shown in Figure below.
3. Fix by enclosed volt.
4. Power On and Check “Profibus” at parameter, “CNF 31: Option-1 Type”.



⚠ CAUTION

Cut off the power when remove the option, it may cause electric shock or break down.

NOTE

1. iS7 has 3 option connectors, they are located in front upper, lower and left side: Option ❶ ❷ ❸ at the Figure.
2. Profibus must be connected with Option

5. Profibus Parameter

5.1 Station Address Setting

| | Minimum Value | Max. Value | Position on Keypad |
|--------------|---------------|------------|--------------------|
| Field Bus ID | 0 | 125 | No. 7 of COM Group |

※ Station address is a peculiar value distinguishing each node in the Profibus Network, and therefore each different device cannot jointly possess the same value. Station address can be changed through Keypad manipulation. Default value set from the factory is 1.

5.2 Number of Status Data Setting

Determines the number of output data (Variable to be monitored out of the inverter variables)

| | Minimum Value | Max. Value | Position on Keypad |
|-----------------|---------------|------------|---------------------|
| Para Status Num | 0 | 8 | No. 30 of COM Group |

5.3 Number of Control Data Setting

Determines the number of input data (Variable to be commanded from outside among the inverter variables)

| | Minimum Value | Max. Value | Position on Keypad |
|---------------|---------------|------------|---------------------|
| Para Ctrl Num | 0 | 8 | No. 50 of COM Group |

5.4 Address of Output Data Setting

Determines the address setting in the number of data to be output.

| | Minimum Value | Max. Value | Position on Keypad |
|-----------------|---------------|------------|-------------------------|
| Para Status 1~8 | 0h0000 | 0hFFFF | Nos. 31~38 of COM Group |

5.5 Address of Input Data Setting

Determines the address setting in the number of data to be input.

| | Minimum Value | Max. Value | Position on Keypad |
|---------------|---------------|------------|-------------------------|
| Para Ctrl 1~8 | 0h0000 | 0hFFFF | Nos. 51~58 of COM Group |

5.6 I/O Data Send/Receive

Output data set in the keypad of the inverter is transmitted to Profibus Master Module (Control Program of PLC or PC) through Profibus Option Module. On the contrary, the control data is transmitted from Profibus Master Module (Control Program of PLC or PC) to Profibus Option Module, which is sent from Profibus Option Module to the inverter.

6. Basic Feature

When turning on the inverter power or when reset occurs;

- CPU LED flashes if power supply is in normal state.
- ERR LED is On if power supply is in abnormal state.
- Conduct configuration using the keypad.
- If the communication with the Master Station as configured, Profibus communication status DATA_EX LED is Off.

7. Unusual Operation and Measures

The status of device and network is displayed through three (3) LED (DATA_EX, ERR, CPU) lights located at the lower part of the Product. The current status can be checked through the display of LED.

7.1 DATA_EX LED Operation and Measures against Error

| LED | Status | Cause | Help |
|-----|----------------|---|--|
| Off | Off-Line | When Master fails to start communication | Master starts communication. |
| | | Wrong wiring of Connector | Check for the wiring of pin number and terminating resistance of the connector. |
| | | No master inside the current network | No master allotted or problem of master station. |
| | | Station Address Error | Check if the station address allotted to the Profibus-use option module of LS inverter is same as that designated by keypad in the tool configured, and it is only one in the network. |
| | | Network Config. Problem. | Check if it exceeds the max. length of the segment. Check if 32 or more stations including repeater are connected with the segment. Check if 126 or more stations including repeater are connected with the network. |
| On | On-Line Status | Network, Station Address, Parameterization, Configuration are all in normal condition | |

7.2 CPU LED Operation and Measures against Error

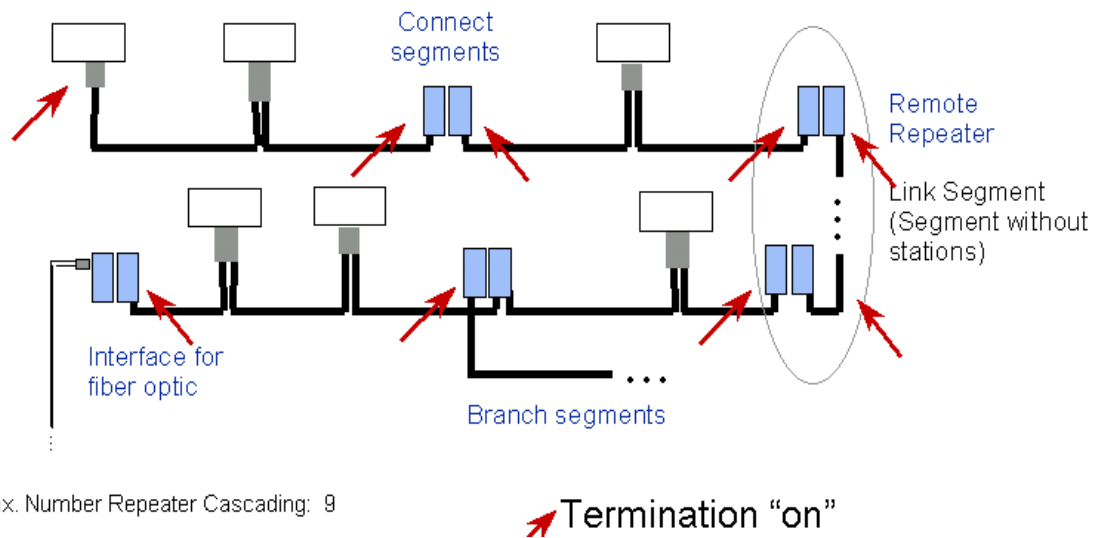
| LED | Status | Cause | Help |
|-------------------------------|---------------------|--|--|
| Off | Power Supply Defect | inverter power supply defect/ Defect of Contact between inverter and option | Check for the condition of inverter power supply. Check for error of inverter. Check for the contact between inverter and connector. |
| Flashing with 1 sec. interval | Normal | Normal Operation | |

7.3 Error LED Operation and Measures against Error

| LED | Status | Cause | Help |
|---------------------------------------|---------------------------------------|--|---|
| Off | Normal | Normal Operation | |
| Flashing with 1 sec. interval | Inverter ~ option communication Error | Communication between inverter and option is not available | Check for abnormal connection between option and inverter. <ul style="list-style-type: none"> It flashes like CPU LED. |
| Flashing with approx. 1 sec. interval | CONFIG ERROR | When On line status is arranged in the Master, if configurations of Master and Profibus option are different each other. | Check if the config. info. of inverter set in Master corresponds with that inside the inverter. <ul style="list-style-type: none"> Configured Data: Number of Status Data and Control Data. It flashes contrary to CPU LED. |

8. Construction of System & Transmission Specification

8.1 Installation of Terminating Resistance and its Specification



8.2 Max. Transmitting Distance Specification

| Communication Speed(Kbps) | Max. Segment Length | Max. Extended Distance |
|---------------------------|---------------------|------------------------|
| 9.60 | 1000 m / 3278 feet | 10000 m / 32786 feet |
| 19.20 | 1000 m / 3278 feet | 10000 m / 32786 feet |
| 93.75 | 1000 m / 3278 feet | 10000 m / 32786 feet |
| 187.50 | 1000 m / 3278 feet | 10000 m / 32786 feet |
| 500.00 | 400 m / 1311 feet | 4000 m / 13114 feet |
| 1500.00 | 200 m / 655 feet | 2000 m / 6557 feet |
| 3000.00 | 100 m / 327 feet | 1000 m / 3278 feet |
| 6000.00 | 100 m / 327 feet | 1000 m / 3278 feet |
| 12000.00 | 100 m / 327 feet | 1000 m / 3278 feet |

9. Environment Configuration & Other Functions

9.1 GSD Files (Electronic Data Sheets)

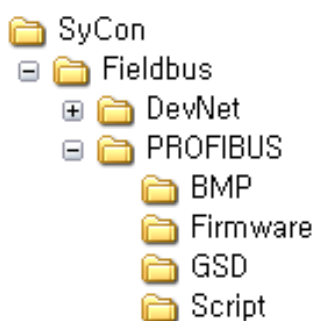
This is the file including the information of inverter Profibus Option Module.

This file is required in the Profibus Configuration Software. Be sure to use iS7-use GSD file.

The relevant file can be downloaded from the homepage of LSIS Co., Ltd. (<http://www.lsis.biz>).

- GSD File Name : LSIS0A6C.GSD
- Version : 2.00
- ICON File Name
 - Stop Icon : LSIS_INV_S.DIB
 - Run Icon : LSIS_INV_R.DIB
 - Diagnostic Icon : LSIS_INV_D.DIB
- It doesn't support from Module = "9 Word Status Input Data" 0h58 to Module = "16 Word Status Input Data", and from Module = "9 Word Control Output Data" 0h68 to Module = "16 Word Control Output Data" 0h6F.

You may attach LSIS0A6C.GSD to the folder where GSD file is stored in Master Configuration program, and attach ICON files to the ICON storage folder.



Ex) In case it is Sycon used in XGT;

Here, you may attach LSIS0A6C.GSD to GSD under the PROFIBUS folder, and then attach ICON files to BMP.

9.2 User Parameter Setting

You may set Profibus-use User Parameter including Sycon in Profibus Master.

(1) Data Word Format

Inverter data is word, which is sent divided into byte at the time of data transmission.

At this time, whether transmitting to MSB-LSB or to LSB-MSB will be elected.

Initial value is MSB-LSB.

(2) Config Data Update

Decide if forcing to set the number of inverter I/O data compulsorily by the Master, or generating the Configuration Error.

Selection is to be made out of Disable and Enable. If Enable is selected, the set value of master is forced to be set in the inverter.

At this time, the initial value is Disable. If the number of I/O data set in the inverter doesn't corresponds with that set in the Master,

Config Err occurs. This is the useful function when testing the communication with the inverter under Enable status.

9.3 Extended Diagnostic

As the safety-related function, it generates diagnostic in the master when trip occurs in inverter or option.

There are 5 defined extended diagnostics as follows:

1. Cannot connect between Main and Option: Defect of communication between inverter and option
2. Inverter H/W Diag Trip: When hardware diagnostic trip occurs in the inverter
3. Inverter Latch Type Trip: When trip in latch type occurs
4. Inverter Level Type Trip: When trip in level type occurs
5. Inverter Warning: When warning occurs

10. Communication Parameter

10.1 Map Structure of Whole Communication Parameter in European Style

| Category | Address | Type of Parameter |
|---------------------------------------|---------------|---|
| iS5 Series Compatible Common Category | 0h0000~0h00FF | |
| Parameter Registered Type Category | 0h0100~0h01FF | Parameter registered on COM Grp |
| | 0h0200~0h023F | Parameter registered on Usr Grp |
| | 0h0240~0h027F | Parameter registered on Macro Grp |
| | 0h0280~0h02FF | Reserved |
| European Common Category | 0h0300~0h037F | Inverter State (Read Only) Parameter |
| | 0h0380~0h03FF | Inverter Control (Read/Write) Parameter |
| | 0h0400~0h0FFF | Reserved |
| KeyPad Parameter Category | 0h1000 | MAK Grp |
| | 0h1100 | DRV Grp |
| | 0h1200 | BAS Grp |
| | 0h1300 | ADV Grp |
| | 0h1400 | CON Grp |
| | 0h1500 | IN Grp |
| | 0h1600 | OUT Grp |
| | 0h1700 | COM Grp |
| | 0h1800 | APP Grp |
| | 0h1900 | AUT Grp |
| | 0h1A00 | APO Grp |
| | 0h1B00 | PRT Grp |
| | 0h1C00 | M2 Grp |

10.2 Parameter Group for Periodical Transmission

Parameter Group that can make Communication using the Address registered in Communication Function Group (COM)

0h100 ~ 0h107: Inverter Status Parameter registered on Status Para # of KeyPad Parameter COM Group

0h110 ~ 0h117: Inverter Control Parameter registered on Control Para # of KeyPad Parameter COM Group

All other categories (0h108 ~ 0h10F, 0h117 ~ 0h1FF) are invalid addresses.

| Address | Parameter | R/W | Value Allotted by Bit |
|-------------|----------------------|-----|--------------------------------------|
| 0h0100 | Status Parameter #1 | R | Parameter value registered on COM-31 |
| 0h0101 | Status Parameter #2 | R | Parameter value registered on COM-32 |
| 0h0102 | Status Parameter #3 | R | Parameter value registered on COM-33 |
| 0h0103 | Status Parameter #4 | R | Parameter value registered on COM-34 |
| 0h0104 | Status Parameter #5 | R | Parameter value registered on COM-35 |
| 0h0105 | Status Parameter #6 | R | Parameter value registered on COM-36 |
| 0h0106 | Status Parameter #7 | R | Parameter value registered on COM-37 |
| 0h0107 | Status Parameter #8 | R | Parameter value registered on COM-38 |
| 0h108~0h10F | Invalid address | - | Category not used |
| 0h0110 | Control Parameter #1 | R/W | Parameter value registered on COM-51 |
| 0h0111 | Control Parameter #2 | R/W | Parameter value registered on COM-52 |
| 0h0112 | Control Parameter #3 | R/W | Parameter value registered on COM-53 |
| 0h0113 | Control Parameter #4 | R/W | Parameter value registered on COM-54 |
| 0h0114 | Control Parameter #5 | R/W | Parameter value registered on COM-55 |
| 0h0115 | Control Parameter #6 | R/W | Parameter value registered on COM-56 |

| Address | Parameter | R/W | Value Allotted by Bit |
|-------------|----------------------|-----|--------------------------------------|
| 0h0116 | Control Parameter #7 | R/W | Parameter value registered on COM-57 |
| 0h0117 | Control Parameter #8 | R/W | Parameter value registered on COM-58 |
| 0h118~0h1FF | Invalid address | - | Category not used |

10.3 Parameter Group for User & Macro Grp Transmission

0h200 ~ 0h23F: User Grp Parameter Currently Registered

| Address | Parameter | Value Allotted by Bit |
|---------|-------------------|---|
| 0h0200 | User Grp. Code 1 | Parameter value registered on U&M>USR->1 |
| 0h0201 | User Grp. Code 2 | Parameter value registered on U&M>USR->2 |
| 0h0202 | User Grp. Code 3 | Parameter value registered on U&M>USR->3 |
| 0h0203 | User Grp. Code 4 | Parameter value registered on U&M>USR->4 |
| . | . | . |
| 0h023C | User Grp. Code 61 | Parameter value registered on U&M>USR->61 |
| 0h023D | User Grp. Code 62 | Parameter value registered on U&M>USR->62 |
| 0h023E | User Grp. Code 63 | Parameter value registered on U&M>USR->63 |
| 0h023F | User Grp. Code 64 | Parameter value registered on U&M>USR->64 |

* In case of accessing the code not registered on User Grp, return to "Illegal data address" Error Code "02".

10.4 0h240 ~ 0h27F: Macro Grp Parameter Currently Configured

| Address | Parameter | Value Allotted by Bit |
|---------|--------------------|--|
| 0h0240 | Macro Grp. Code 1 | Parameter value registered on U&M>MC->1 |
| 0h0241 | Macro Grp. Code 2 | Parameter value registered on U&M>MC->2 |
| 0h0242 | Macro Grp. Code 3 | Parameter value registered on U&M>MC->3 |
| 0h0243 | Macro Grp. Code 4 | Parameter value registered on U&M>MC->4 |
| . | . | . |
| 0h024C | Macro Grp. Code 61 | Parameter value registered on U&M>MC->61 |
| 0h024D | Macro Grp. Code 62 | Parameter value registered on U&M>MC->62 |
| 0h024E | Macro Grp. Code 63 | Parameter value registered on U&M>MC->63 |
| 0h024F | Macro Grp. Code 64 | Parameter value registered on U&M>MC->64 |

* In case of accessing the code not smaller than the size of macro currently configured, return to "Illegal data address" Error Code "02".

NOTE

For further inverter address and function, please refer to 'Communication Function', Section 11 in iS7 Main Body Manual.

11. Parameter description

11.1 List of iS7 Profibus Communication Related Parameters

| Code | Parameter Name | Initial Value | Range |
|--------|-----------------|---------------|--------------|
| CFG-30 | Option-1 Type | - | - |
| DRV-06 | Cmd Source | 0(Fx/Rx-1) | 0. Keypad |
| | | | 1. Fx/Rx-1 |
| | | | 2. Fx/Rx-2 |
| | | | 3. RS485 |
| | | | 4. FieldBus |
| DRV-07 | Freq Ref Src | 0(Keypad-1) | 0. Keypad-1 |
| | | | 1. Keypad-2 |
| | | | 2. V1 |
| | | | 3. Reserved |
| | | | 4. V2 |
| | | | 5. I2 |
| | | | 6. Int 485 |
| | | | 7. Reserved |
| | | | 8. Fieldbus |
| | | | 9. Reserved |
| | | | 10. Reserved |
| | | | 11. Reserved |
| | | | 12. Pulse |
| COM-06 | FBus S/W Ver | - | - |
| COM-07 | FBusID | 1 | 1~125 |
| COM-09 | FBusLED | - | - |
| COM-30 | Para Status Num | 3 | 0~8 |
| COM-31 | Para Status-1 | 0h000A | 0~0hFFFF |
| COM-32 | Para Status-2 | 0h000E | 0~0hFFFF |

11. Parameter description

| Code | Parameter Name | Initial Value | Range |
|--------|----------------|---------------|---|
| COM-33 | Para Status-3 | 0h000F | 0~0hFFFF |
| COM-34 | Para Status-4 | 0h0000 | 0~0hFFFF |
| COM-35 | Para Status-5 | 0h0000 | 0~0hFFFF |
| COM-36 | Para Status-6 | 0h0000 | 0~0hFFFF |
| COM-37 | Para Status-7 | 0h0000 | 0~0hFFFF |
| COM-38 | Para Status-8 | 0h0000 | 0~0hFFFF |
| COM-50 | Para Ctrl Num | 2 | 0~8 |
| COM-51 | Para Control-1 | 0h0005 | 0~0hFFFF |
| COM-52 | Para Control-2 | 0h0006 | 0~0hFFFF |
| COM-53 | Para Control-3 | 0h0000 | 0~0hFFFF |
| COM-54 | Para Control-4 | 0h0000 | 0~0hFFFF |
| COM-55 | Para Control-5 | 0h0000 | 0~0hFFFF |
| COM-56 | Para Control-6 | 0h0000 | 0~0hFFFF |
| COM-57 | Para Control-7 | 0h0000 | 0~0hFFFF |
| COM-58 | Para Control-8 | 0h0000 | 0~0hFFFF |
| PRT-12 | Lost Cmd Mode | 0(None) | 0. None |
| | | | 1. Free-Run |
| | | | 2. Dec |
| | | | 3. Hold Input |
| | | | 4. Hold Output |
| | | | 5. Lost Preset |
| PRT-13 | Lost Cmd Time | 1.0 sec | 0.1~120.0 sec |
| PRT-14 | Lost Preset F | 0 Hz | Start frequency ~ Maximum frequency [Hz] |

11.2 Description of iS7 Profibus Communication Related Parameters

11.2.1 Mounted Communication Card Information – Option-1 Type (CNF-30)

The kind of communication card mounted on iS7 is automatically displayed.

When iS7 Profibus communication card is mounted, CNF-30 “Profibus” is automatically displayed.

Not displaying the name of option mounted on the Option Type indicates that interface communication between inverter body and option is not normally operated.

11.2.2 Establishment of Inverter Operation Command Source– Cmd Source (DRV-06)

The operation command source is set.

To issue run/stop command to inverter via Profibus communication, DRV-06 Cmd Source needs to be set into “Fieldbus”.

11.2.3 Establishment of Inverter Frequency Command Source– Freq Ref Src(DRV-07)

The frequency command source of inverter is set.

To set command frequency of inverter via Profibus communication, DRV-07 Freq Ref Src needs to be set into “Fieldbus”.

11.2.4 Information of Mounted Communication Card Version– FBus S/W Ver(COM-06)

The version of mounted communication card is automatically displayed.

11.2.5 Station ID Setting–Fbus ID(COM-07)

It is a parameter to set Station ID values of Profibus. Station Number can be set from 1 to 125.

Duplicated Station ID setting is not permitted. Please check if Station ID value to be set is established as other Station ID of the network.

11.2.6 Display of LED Status Indicating Communication Status-Fbus LED(COM-9)

It is a parameter that displays flashing status of DATA_EX, ERROR and CPU LEDs mounted on the Profibus communication cards.

LED status is displayed in the order of RESERVED, DATA_EX, ERROR and CPU LEDs from right to left on the keypad.

| LED Type | RESERVED | DATA_EX (GREEN) | ERROR (RED) | CPU (GREEN) |
|---------------|---|---|---|---|
| Meaning | - | ON | OFF | ON |
| LCD KPD Value |  |  |  |  |

11.2.7 Establishment of Periodic Communication Parameters

(1) Input Data Number Setting- Para Status Num (COM-30)

The number of data inputted into master from inverter is set. The same value with the number of input data established in master configuration is inputted into COM-30 Para Status Num.

The discordance between the number of input data established in master configuration and that of COM-31 Para Status Num leads to communication failure.

(2) Establishment of Input Data Address- Para Status 1~8 (COM-31~38)

The Para Status address is set to meet the number established in OM-30 Para Status Num.

If COM-30 Para Status Num is set into "4", inverter address through which data is sent to master needs to be inputted from COM-31~34 Para Status 1 to 4.

You can enter the inverter address by making reference to common area address and inverter keypad address.

(3) Output Data Number Setting- Para Ctrl Num (COM-50)

The number of data outputted to inverter from master is set. The same value with the number of output data established in master configuration is inputted into COM-30 Para Status Num.

The discordance between the number of output data established in master configuration and that of COM-31 Para Status Num leads to communication failure.

- (4) Establishment of Output Data Address– Para Control 1~8 (COM-51~58)

The Para Status address is set to meet the number established in OM-50 Para Ctrl Num, and only available inverter address is to be entered from 1 to 8.

If COM-50 Para Ctrl Num is set into“2”, inverter address which is applicable to data inputted from master needs to be entered from COM-51~52 Para Control 1 to 2.

You can enter the inverter address by making reference to common area address and inverter keypad address.

11.2.8 Establishment of Lost Command Parameters

- (1) Operating Method in Case of the Communication Command Loss– Lost Cmd Mode (PRT-12)

The operating method in case of the communication command loss is set when the loss of communication command is perceived by the occurrence of communication loss during ‘communication command loss determination time’.

To use communication command loss function, DRV-06 Cmd Source needs to be set into “Fieldbus”, or RV-07 Freq Ref Src as “Fieldbus”.

The operating method in case of the communication command loss is summarized as follows.

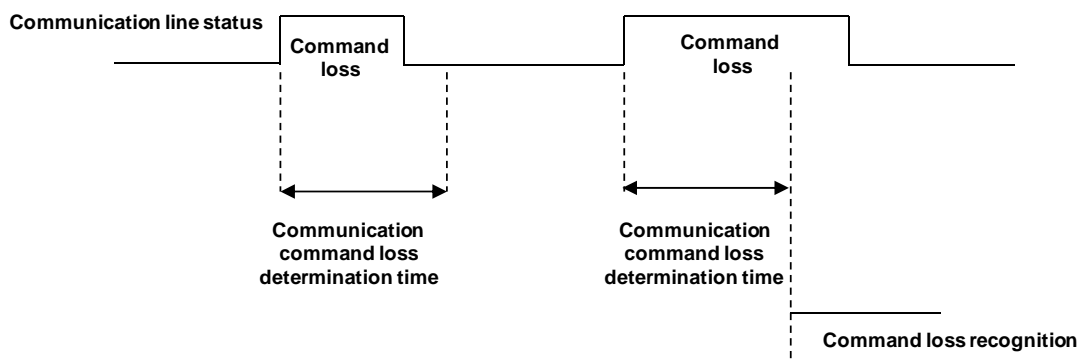
| Set Value | Description | |
|-----------|-------------|--|
| 0 | None | Operation continues even in the event of the communication command loss |
| 1 | Free-Run | Output is blocked by inverter, and motor stops in a free-run state. |
| 2 | Dec | Deceleration stop proceeds in accordance with time set in the PRT-07Trip Dec Time. |
| 3 | Hold Input | Operation continues by means of the average value of the input for the last 10 seconds until the moment when the loss of speed command is determined. |
| 4 | Hold Output | Operation continues by means of the average value of the output for the last 10 seconds until the moment when the loss of speed command is determined. |
| 5 | Lost Preset | Operation proceeds in accordance with frequency set in the PRT-14 Lost Preset F. |

(2) Communication Command Loss Determination Time- Lost Cmd Time (PRT-13)

The loss of communication command is perceived when communication loss occurs during the time established as 'communication command loss determination time'.

To use communication command loss function, DRV-06 Cmd Source needs to be set into "Fieldbus", or RV-07 Freq Ref Src as "Fieldbus".

The loss is not recognized as an error as long as the communication is resumed within 'communication command loss determination time' and then system is restored to a normal state.



12. Existing iS5/iG5/ iG5A compatible common area parameter

| Address | Parameter | Scale | unit | R/W | Allotment for Bits | | |
|---------|--|-------|------|-----|--------------------------------|---------------------------------|--------------|
| 0h0000 | Inverter model | - | - | R | B: iS7 | | |
| 0h0001 | Inverter capacity | - | - | R | 0: 0.75kW | 1: 1.5kW | 2: 2.2kW |
| | | | | | 3: 3.7kW | 4: 5.5kW | 5: 7.5kW |
| | | | | | 6: 11kW | 7: 15kW | 8: 18.5kW |
| | | | | | 9: 22kW | 10: 30kW | 11: 37kW |
| | | | | | 12: 45kW | 13: 55kW | 14: 75kW |
| | | | | | 15: 90kW | 16: 110kW | 17: 132kW |
| | | | | | 18: 160kW | 19: 200kW | 20: 220kW |
| | | | | | 21: 280kW | 22: 375kW | 65535: 0.4kW |
| 0h0002 | Inverter input voltage | - | - | R | 0: 220V class | | |
| | | | | | 1: 400V class | | |
| 0h0003 | Version | - | - | R | (example) 0h0100: Version 1.00 | | |
| | | | | | 0h0101: Version 1.01 | | |
| 0h0004 | Reserved | - | - | R/W | | | |
| 0h0005 | Command frequency | 0.01 | Hz | R/W | | | |
| 0h0006 | Operating command (option) * see additional description | - | - | R | B15 | Reserved | |
| | | | | | B14 | 0: Keypad Freq | |
| | | | | | B13 | 1: Keypad Torq | |
| | | | | | B12 | 2~16: Terminal block sequential | |
| | | | | | B11 | 17: Up | |
| | | | | | B10 | 18: Down | |
| | | | | | B9 | 19: STEADY | |
| | | | | | | 20: AUTO-A | |
| | | | | | | 21: AUTO-B | |
| | | | | | | 22: V1 | |
| | | | | | | 23: 1 | |

12. Existing iS5/iG5/ iG5A compatible common area parameter

| Address | Parameter | Scale | unit | R/W | Allotment for Bits | |
|---------|--------------------|-------|------|-----|--------------------|---|
| | | | | R/W | | 24: V2 25: I2 26: Reserved 27: Built-in485 28: Communication option 29: PLC option 30: JOG 31: PID |
| | | | | | B8 | 0: Keypad 1: FX/RX-1 |
| | | | | | B7 | 2: FX/RX-2 3: Built-in 485 |
| | | | | | B6 | 4: Communication option 5: PLC option |
| | | | | | B5 | Reserved |
| | | | | | B4 | Emergency stop |
| | | | | | B3 | W: Trip reset (0→1) R: Trip status |
| | | | | | B2 | Reverse operation (R) |
| | | | | | B1 | Forward operation (F) |
| | | | | | B0 | Stop (S) |
| 0h0007 | accelerating time | 0.1 | sec | R/W | - | |
| 0h0008 | decelerating time | 0.1 | sec | R/W | - | |
| 0h0009 | output current | 0.1 | A | R | - | |
| 0h000A | output frequency | 0.01 | Hz | R | - | |
| 0h000B | output voltage | 1 | V | R | - | |
| 0h000C | DC Link voltage | 1 | V | R | - | |
| 0h000D | output power | 0.1 | kW | R | - | |
| 0h000E | status of Inverter | - | - | - | B15 | 0: Remote, 1: Keypad Local |
| | | | | | B14 | 1: Frequency command by comm. |

12. Existing iS5/iG5/ iG5A compatible common area parameter

| Address | Parameter | Scale | unit | R/W | Allotment for Bits |
|---------|------------------|-------|------|-----|--|
| | | | | | (Built-in type, Option) |
| | | | | | B13 1: Run command by comm. (Built-in type, Option) |
| | | | | | B12 Reverse direction run command |
| | | | | | B11 Forward direction run command |
| | | | | | B10 Brake open signal |
| | | | | | B9 Jog mode |
| | | | | | B8 Stop |
| | | | | | B7 DC Braking |
| | | | | | B6 Speed reached |
| | | | | | B5 Decelerating |
| | | | | | B4 Accelerating |
| | | | | | B3 Operates according to the set value of Fault (Trip) *PRT-30 Trip Out Mode |
| | | | | | B2 Reverse operation |
| | | | | | B1 Forward operation |
| | | | | | B0 Stop |
| 0h000F | Trip information | - | - | R | B15 Reserved |
| | | | | | B14 Reserved |
| | | | | | B13 Reserved |
| | | | | | B12 Reserved |
| | | | | | B11 Reserved |
| | | | | | B10 H/W-Diag |
| | | | | | B9 Reserved |

12. Existing iS5/iG5/ iG5A compatible common area parameter

| Address | Parameter | Scale | unit | R/W | Allotment for Bits | |
|---------|----------------------------|-------|------|-----|--------------------|--------------------|
| | | | | | B8 | Reserved |
| | | | | | B7 | Reserved |
| | | | | | B6 | Reserved |
| | | | | | B5 | Reserved |
| | | | | | B4 | Reserved |
| | | | | | B3 | Level Type Trip |
| | | | | | B2 | Reserved |
| | | | | | B1 | Reserved |
| | | | | | B0 | Latch Type Trip |
| 0h0010 | Input terminal information | - | - | R | B15 | Reserved |
| | | | | | B14 | Reserved |
| | | | | | B13 | Reserved |
| | | | | | B12 | Reserved |
| | | | | | B11 | Reserved |
| | | | | | B10 | P11 (extended I/O) |
| | | | | | B9 | P10 (extended I/O) |
| | | | | | B8 | P9 (extended I/O) |
| | | | | | B7 | P8 |
| | | | | | B6 | P7 |
| | | | | | B5 | P6 |
| | | | | | B4 | P5 |
| | | | | | B3 | P4 |
| B2 | P3 | | | | | |

12. Existing iS5/iG5/ iG5A compatible common area parameter

| Address | Parameter | Scale | unit | R/W | Allotment for Bits |
|------------|-----------------------------|-------|------|-----|--|
| | | | | | B1 P2 |
| | | | | | B0 P1 |
| 0h0011 | output terminal information | - | - | R | B15 Reserved |
| | | | | | B14 Reserved |
| | | | | | B13 Reserved |
| | | | | | B12 Reserved |
| | | | | | B11 Reserved |
| | | | | | B10 Reserved |
| | | | | | B9 Reserved |
| | | | | | B8 Reserved |
| | | | | | B7 Reserved |
| | | | | | B6 Reserved |
| | | | | | B5 Relay 5(extended I/O) |
| | | | | | B4 Relay 4(extended I/O) |
| | | | | | B3 Relay 3(extended I/O) |
| | | | | | B2 Q1 |
| B1 Relay 2 | | | | | |
| B0 Relay 1 | | | | | |
| 0h0012 | V1 | 0.01 | % | R | V1 voltage input |
| 0h0013 | V2 | 0.01 | % | R | V2 voltage input(extended I/O) |
| 0h0014 | I1 | 0.01 | % | R | I1 current input |
| 0h0015 | Motor rotation speed | 1 | rpm | R | Current motor rotation speed displayed |
| 0h0016 | Reserved | - | - | - | - |

12. Existing iS5/iG5/ iG5A compatible common area parameter

| Address | Parameter | Scale | unit | R/W | Allotment for Bits |
|---------|-----------------------|-------|------|-----|---------------------------|
| ~0h0019 | | | | | |
| 0h001A | Hz/rpm selection | - | - | R | 0: Hz unit 1: rpm unit |
| 0h001B | Motor poles displayed | - | - | R | Motor poles displayed |

13. iS7 Extended common area parameter

13.1.1 Inverter Monitoring Area Parameter (Reading only)

| Address | Parameter | Scale | unit | Allotment for Bits |
|---------|--|-------|------|--|
| 0h0300 | Inverter model | - | - | iS7: 000Bh |
| 0h0301 | Inverter capacity | - | - | 0.75kW: 3200h 1.5kW: 4015h, 2.2kW: 4022h, 3.7kW: 4037h, 5.5kW: 4055h, 7.5kW: 4075h, 11kW: 40B0h 15kW: 40F0h, 18.5kW: 4125h, 22kW: 4160h, 30kW: 41E0h, 37kW: 4250h, 45kW: 42D0h 55kW: 4370h, 75kW: 44B0h, 90kW: 45A0h 110kW: 46E0h, 132kW: 4840h, 160kW: 4A00h 185kW: 4B90h |
| 0h0302 | Inverter input voltage / power supply type (single phase, 3 phase) / cooling method | - | - | 200V single phase open air cooling: 0220h 200V 3 phase open air cooling: 0230h 200V single phase forced cooling: 0221h 200V 3 phase forced cooling: 0231h 400V single open air cooling: 0420h 400V 3 phase open air cooling: 0430h 400V single phase forced cooling: 0421h 400V 3 phase forced cooling: 0431h |
| 0h0303 | Inverter S/W version | - | - | (example) 0h0100: Version 1.00 0h0101: Version 1.01 |

| Address | Parameter | Scale | unit | Allotment for Bits | |
|---------|---------------------------------------|-------|------|--------------------|---|
| 0h0304 | Reserved | - | - | - | |
| 0h0305 | Inverter operating status | - | - | B15 | 0: normal status |
| | | | | B14 | 4: Warning status |
| | | | | B13 | 8: Fault status (operates according to set value of PRT-30 Trip Out Mode) |
| | | | | B12 | |
| | | | | B11 | - |
| | | | | B10 | |
| | | | | B9 | |
| | | | | B8 | |
| | | | | B7 | 1: Speed search |
| | | | | B6 | 2: Accelerating |
| | | | | | 3: Steady speed |
| | | | | | 4: Decelerating |
| | | | | | 5: Decelerating stop |
| | | | | B5 | 6: H/W OCS |
| | | | | B4 | 7: S/W OCS |
| | | | | | 8: Dwell operating |
| B3 | 0: stop | | | | |
| B2 | 1: forward operating | | | | |
| B1 | 2: reverse operating | | | | |
| | 3: DC operating(0 speed control) | | | | |
| 0h0306 | Inverter run frequency command source | - | - | B15 | Run command source |
| | | | | B14 | 0: Keypad |
| | | | | | 1: Communication option |
| | | | | B13 | 2:App/PLC |
| | | | | | 3. Built-in 485 |
| | | | | B12 | 4: Terminal Block |
| B11 | 5:reserved | | | | |
| | 6:Auto 1 | | | | |
| B10 | 7:Auto 2 | | | | |

13. iS7 Extended common area parameter

| Address | Parameter | Scale | unit | Allotment for Bits | |
|------------------|----------------------|-------|------|---|---|
| | | | | B9 | Frequency command source 0: Keypad speed 1: Keypad torque 2~4: Up/Down run speed 5: V1 6: I1 7: V2 8: I2 9: Pulse 10: Built-in485 11: Communication option 12: App(PLC) 13: Jog 14: PID 15~22: Auto Step 25~39: Multi-step speed frequency |
| | | | | B8 | |
| | | | | B7 | |
| | | | | B6 | |
| | | | | B5 | |
| | | | | B4 | |
| | | | | B3 | |
| | | | | B2 | |
| | | | | B1 | |
| | | | | B0 | |
| 0h0307 | Keypad S/W version | | | (E.g) 0h0100: Version 1.00 | |
| 0h0308 | Keypad Title version | | | 0h0101: Version 1.01 | |
| 0h0309 ~0h30F | reserved | | | | |
| 0h0310 | Output current | 0.1 | A | - | |
| 0h0311 | Output frequency | 0.01 | Hz | - | |
| 0h0312 | Output RPM | 0 | RPM | - | |
| 0h0313 | Motor feedback speed | 0 | RPM | -32768rpm~32767rpm (Having a polarity.) | |
| 0h0314 | Output voltage | 0.1 | V | - | |
| 0h0315 | DC Link voltage | 0.1 | V | - | |
| 0h0316 | Output power | 0.1 | kW | - | |
| 0h0317 | Output Torque | 0.1 | % | - | |

| Address | Parameter | Scale | unit | Allotment for Bits | |
|-------------------|----------------------------------|-------|------|----------------------------------|--------------------|
| 0h0318 | PID reference | 0.1 | % | - | |
| 0h0319 | PID feedback | 0.1 | % | - | |
| 0h031A | Number of No.1 motor display | - | - | Number of No.1 motor display | |
| 0h031B | Number of No.2 motor display | - | - | Number of No.2 motor display | |
| 0h031C | Number of selected motor display | - | - | Number of selected motor display | |
| 0h031D | Selection among Hz/rpm | - | - | 0: Hz unit 1: rpm unit | |
| 0h031E ~0h031F | Reserved | - | - | - | |
| 0h0320 | Digital input information | | | B15 | Reserved |
| | | | | B14 | Reserved |
| | | | | B13 | Reserved |
| | | | | B12 | Reserved |
| | | | | B11 | Reserved |
| | | | | B10 | P11 (Extended I/O) |
| | | | | B9 | P10 (Extended I/O) |
| | | | | B8 | P9 (Extended I/O) |
| | | | | B7 | P8 (Basic I/O) |
| | | | | B6 | P7 (Basic I/O) |
| | | | | B5 | P6 (Basic I/O) |
| | | | | B4 | P5 (Basic I/O) |
| | | | | B3 | P4 (Basic I/O) |
| | | | | B2 | P3 (Basic I/O) |
| B1 | P2 (Basic I/O) | | | | |

13. iS7 Extended common area parameter

| Address | Parameter | Scale | unit | Allotment for Bits | |
|---------|-----------------------------------|-------|------|--------------------|------------------------|
| | | | | B0 | P1 (Basic I/O) |
| 0h0321 | Digital output information | - | - | B15 | Reserved |
| | | | | B14 | Reserved |
| | | | | B13 | Reserved |
| | | | | B12 | Reserved |
| | | | | B11 | Reserved |
| | | | | B10 | Reserved |
| | | | | B9 | Reserved |
| | | | | B8 | Reserved |
| | | | | B7 | Reserved |
| | | | | B6 | Reserved |
| | | | | B5 | Relay 5 (Extended I/O) |
| | | | | B4 | Relay 4 (Extended I/O) |
| | | | | B3 | Relay 3 (Extended I/O) |
| | | | | B2 | Q1 (Basic I/O) |
| | | | | B1 | Relay 2 (Basic I/O) |
| | | | | B0 | Relay 1 (Basic I/O) |
| 0h0322 | Virtual digital input information | - | - | B15 | Virtual DI 16 (COM85) |
| | | | | B14 | Virtual DI 15 (COM84) |
| | | | | B13 | Virtual DI 14 (COM83) |
| | | | | B12 | Virtual DI 13 (COM82) |
| | | | | B11 | Virtual DI 12 (COM81) |
| | | | | B10 | Virtual DI 11 (COM80) |

| Address | Parameter | Scale | unit | Allotment for Bits |
|---------|------------------------|-------|------|-------------------------------|
| | | | | B9 Virtual DI 10 (COM79) |
| | | | | B8 Virtual DI 9 (COM78) |
| | | | | B7 Virtual DI 8 (COM77) |
| | | | | B6 Virtual DI 7 (COM76) |
| | | | | B5 Virtual DI 6 (COM75) |
| | | | | B4 Virtual DI 5 (COM74) |
| | | | | B3 Virtual DI 4 (COM73) |
| | | | | B2 Virtual DI 3 (COM72) |
| | | | | B1 Virtual DI 2 (COM71) |
| | | | | B0 Virtual DI 1 (COM70) |
| 0h0323 | Selected motor display | - | - | 0: No.1 motor / 1: No.2 motor |
| 0h0324 | AI1 | 0.01 | % | Analog input1 (Basic I/O) |
| 0h0325 | AI2 | 0.01 | % | Analog input2 (Basic I/O) |
| 0h0326 | AI3 | 0.01 | % | Analog input3 (Extended I/O) |
| 0h0327 | AI4 | 0.01 | % | Analog input4 (Extended I/O) |
| 0h0328 | AO1 | 0.01 | % | Analog output1 (Basic I/O) |
| 0h0329 | AO2 | 0.01 | % | Analog output2 (Basic I/O) |
| 0h032A | AO3 | 0.01 | % | Analog output3 (Extended I/O) |
| 0h032B | AO4 | 0.01 | % | Analog output4 (Extended I/O) |
| 0h032C | Reserved | - | - | - |
| 0h032D | Reserved | - | - | - |
| 0h032E | Reserved | - | - | - |
| 0h032F | Reserved | - | - | - |

13. iS7 Extended common area parameter

| Address | Parameter | Scale | unit | Allotment for Bits | |
|---------|-------------------------------|-------|------|--------------------|---|
| 0h0330 | Latch type trip information-1 | - | - | B15 | Fuse Open Trip |
| | | | | B14 | Overheat Trip |
| | | | | B13 | Arm Short |
| | | | | B12 | External Trip |
| | | | | B11 | Overvoltage Trip |
| | | | | B10 | Overcurrent Trip |
| | | | | B9 | NTC Trip |
| | | | | B8 | Overspeed Deviation |
| | | | | B7 | Overspeed |
| | | | | B6 | Input open-phase trip |
| | | | | B5 | Output open-phase trip |
| | | | | B4 | Ground Fault Trip |
| | | | | B3 | E-Thermal Trip |
| | | | | B2 | Inverter Overload Trip |
| B1 | Underload Trip | | | | |
| B0 | Overload Trip | | | | |
| 0h0331 | Latch type trip information-2 | - | - | B15 | Reserved |
| | | | | B14 | Reserved |
| | | | | B13 | Inverter output cutoff by terminal block input on Safety Option (applied to above 90kW) |
| | | | | B12 | Slot3 option board contact defectiveness |
| | | | | B11 | Slot2 option board contact defectiveness |
| | | | | B10 | Slot1 option board contact defectiveness |

| Address | Parameter | Scale | unit | Allotment for Bits | |
|---------|-----------------------------|-------|------|--------------------|--------------------------------------|
| | | | | B9 | No MotorTrip |
| | | | | B8 | External Brake Trip |
| | | | | B7 | Basic IO board contact defectiveness |
| | | | | B6 | Pre PID Fail |
| | | | | B5 | Error on Parameter Write |
| | | | | B4 | Reserved |
| | | | | B3 | FAN Trip |
| | | | | B2 | PTC (Thermal sensor) Trip |
| | | | | B1 | Encoder Error Trip |
| | | | | B0 | MC Fail Trip |
| 0h0332 | Level type trip information | - | - | B15 | Reserved |
| | | | | B14 | Reserved |
| | | | | B13 | Reserved |
| | | | | B12 | Reserved |
| | | | | B11 | Reserved |
| | | | | B10 | Reserved |
| | | | | B9 | Reserved |
| | | | | B8 | Reserved |
| | | | | B7 | Reserved |
| | | | | B6 | Reserved |
| | | | | B5 | Reserved |
| | | | | B4 | Reserved |
| B3 | Keypad Lost Command | | | | |

13. iS7 Extended common area parameter

| Address | Parameter | Scale | unit | Allotment for Bits | |
|---------|--------------------------------|-------|------|--------------------|-----------------------|
| | | | | B2 | Lost Command |
| | | | | B1 | LV |
| | | | | B0 | BX |
| 0h0333 | H/W Diagnosis Trip information | - | - | B15 | Reserved |
| | | | | B14 | Reserved |
| | | | | B13 | Reserved |
| | | | | B12 | Reserved |
| | | | | B11 | Reserved |
| | | | | B10 | Reserved |
| | | | | B9 | Reserved |
| | | | | B8 | Reserved |
| | | | | B7 | Reserved |
| | | | | B6 | Reserved |
| | | | | B5 | Reserved |
| | | | | B4 | Gate Drive Power Loss |
| | | | | B3 | Watchdog-2 error |
| | | | | B2 | Watchdog-1 error |
| B1 | EEPROM error | | | | |
| B0 | ADC error | | | | |
| 0h0334 | Warning information | - | - | B15 | Reserved |
| | | | | B14 | Reserved |
| | | | | B13 | Reserved |
| | | | | B12 | Reserved |

| Address | Parameter | Scale | unit | Allotment for Bits | |
|-------------------|-----------------|-------|------|--|---------------------------|
| | | | | Bit | Description |
| | | | | B11 | Reserved |
| | | | | B10 | Reserved |
| | | | | B9 | Auto Tuning fail |
| | | | | B8 | Keypad Lost |
| | | | | B7 | Encoder miss-wiring |
| | | | | B6 | Encoder miss-installation |
| | | | | B5 | DB |
| | | | | B4 | FAN operation |
| | | | | B3 | Lost command |
| | | | | B2 | Inverter Overload |
| | | | | B1 | Underload |
| | | | | B0 | Overload |
| 0h0335~ 0h033F | Reserved | - | - | - | |
| 0h0340 | On Time date | 0 | Day | Total number date of inverter power On | |
| 0h0341 | On Time minute | 0 | Min | Total minute except for total date of inverter On Time | |
| 0h0342 | Run Time date | 0 | Day | Total number day of inverter run | |
| 0h0343 | Run Time minute | 0 | Min | Total minute except for total day of Run Time | |
| 0h0344 | Fan Time date | 0 | Day | Total day of cooling fan run | |
| 0h0345 | Fan Time minute | 0 | Min | Total minute except for total day of Fan time | |
| 0h0346 | Reserved | - | - | - | |
| 0h0347 | Reserved | - | - | - | |
| 0h0348 | Reserved | - | - | - | |

13. iS7 Extended common area parameter

| Address | Parameter | Scale | unit | Allotment for Bits |
|---------|-----------|-------|------|--|
| 0h0349 | Reserved | - | - | - |
| 0h034A | Option 1 | - | - | 0: None 1: Reserved 2: Reserved 3: Profibus, |
| 0h034B | Option 2 | - | - | 4: Reserved 5: Reserved 6: Reserved 7: RNet, |
| 0h034C | Option 3 | | | 8: Reserved 9: Reserved 10: PLC, 20: External IO-1 23: Encoder |

13.1.2 Inverter Control Area Parameter (Reading and Writing Available)

| Address | Parameter | Scale | unit | Allotment for Bits | |
|---------|---|-------|------|---|--|
| 0h0380 | Frequency command | 0.01 | Hz | command frequency setting | |
| 0h0381 | RPM command | 1 | rpm | command RPM setting | |
| 0h0382 | Operating command | - | - | B7 | Reserved |
| | | | | B6 | Reserved |
| | | | | B5 | Reserved |
| | | | | B4 | Reserved |
| | | | | B3 | 0→1: free run stop |
| | | | | B2 | 0→1: trip reset |
| | | | | B1 | 0:reverse command 1:forward command |
| | | | | B0 | 0:stop command 1:run command |
| | | | | Ex) forward operatingcommand:0003h, reverse operatingcommand:0001h | |
| 0h0383 | Accelerating time | 0.1 | sec | Accelerating time setting | |
| 0h0384 | Decelerating timed | 0.1 | sec | Decelerating time setting | |
| 0h0385 | Virtual digital input control (0:Off, 1:On) | - | - | B15 | Virtual DI 16 (COM85) |
| | | | | B14 | Virtual DI 15 (COM84) |
| | | | | B13 | Virtual DI 14 (COM83) |
| | | | | B12 | Virtual DI 13 (COM82) |
| | | | | B11 | Virtual DI 12 (COM81) |
| | | | | B10 | Virtual DI 11 (COM80) |
| | | | | B9 | Virtual DI 10 (COM79) |

13. iS7 Extended common area parameter

| Address | Parameter | Scale | unit | Allotment for Bits | |
|---------|---|-------|------|--------------------|-------------------------------|
| | | | | B8 | Virtual DI 9 (COM78) |
| | | | | B7 | Virtual DI 8 (COM77) |
| | | | | B6 | Virtual DI 7 (COM76) |
| | | | | B5 | Virtual DI 6 (COM75) |
| | | | | B4 | Virtual DI 5 (COM74) |
| | | | | B3 | Virtual DI 4 (COM73) |
| | | | | B2 | Virtual DI 3 (COM72) |
| | | | | B1 | Virtual DI 2 (COM71) |
| | | | | B0 | Virtual DI 1 (COM70) |
| 0h0386 | Digital output control (0:Off, 1:On) | - | - | B15 | Reserved |
| | | | | B14 | Reserved |
| | | | | B13 | Reserved |
| | | | | B12 | Reserved |
| | | | | B11 | Reserved |
| | | | | B10 | Reserved |
| | | | | B9 | Reserved |
| | | | | B8 | Reserved |
| | | | | B7 | Reserved |
| | | | | B6 | Reserved |
| | | | | B5 | Q4 (extended I/O, OUT36:None) |
| | | | | B4 | Q3 (extended I/O, OUT35:None) |
| | | | | B3 | Q2 (extended I/O, OUT34:None) |
| B2 | Q1 (basic I/O, OUT33:None) | | | | |

| Address | Parameter | Scale | unit | Allotment for Bits | |
|-------------------|----------------------|-------|------|---------------------------------------|--------------------------------|
| | | | | | |
| | | | | B1 | Relay2 (basic I/O, OUT32:None) |
| | | | | B0 | Relay1 (basic I/O, OUT31:None) |
| 0h0387 | Reserved | - | - | Reserved | |
| 0h0388 | PID reference | 0.1 | % | PID reference command released | |
| 0h0389 | PID feedback value | 0.1 | % | PID feedback value | |
| 0h038A ~0h038F | Reserved | - | - | - | |
| 0h0390 | Torque Ref | 0.1 | % | torque command | |
| 0h0391 | Fwd Pos Torque Limit | 0.1 | % | forward motor ring torque limit | |
| 0h0392 | Fwd Neg Torque Limit | 0.1 | % | forward regenerative torque limit | |
| 0h0393 | Rev Pos Torque Limit | 0.1 | % | reverse motor ring torque limit | |
| 0h0394 | Rev Neg Torque Limit | 0.1 | % | reverse regenerative torque limit | |
| 0h0395 | Torque Bias | 0.1 | % | torque Bias | |
| 0h0395 ~0h399 | Reserved | - | - | - | |
| 0h039A | Anytime Para | - | - | CNF-20 value setting (see page 13-40) | |
| 0h039B | Monitor Line-1 | - | - | CNF-21 value setting (see page 13-40) | |
| 0h039C | Monitor Line-2 | - | - | CNF-22 value setting (see page 13-40) | |
| 0h039D | Monitor Line-3 | - | - | CNF-23 value setting (see page 13-40) | |

13.1.3 Inverter Memory Control Area Parameter(Reading and Writing Available)

In this area, if the parameter is set, it is not only reflected in the inverter but saved. Parameters of other areas, if set by communication, are reflected in the inverter but not saved. If you turn off the inverter and turn it on again, the values set by communication are all deleted and the pre-setting values are saved. Therefore you should save the parameter before turning off the inverter after setting through communication. However, in this area, set parameter values are directly saved in the inverter without the need to save the parameter values.

| Address | Parameter | Scale | unit | Shift during operation | Function |
|---------------------------|--------------------------------|-------|------|------------------------|---|
| 0h03E0 ^{note1)} | Parameter saving | - | - | X | 0: No 1:Yes |
| 0h03E1 ^{note1)} | Monitor mode initialization | - | - | O | 0: No 1:Yes |
| 0h03E2 ^{note1)} | Parameter initialization | - | - | X | 0: No 1: All Grp 2: Drv Grp 3:BAS Grp 4: ADV Grp 5:CON Grp 6:IN Grp 7:OUT Grp 8: COM Grp 9:APP Grp 10:AUT Grp 11:APO Grp 12:PRT Grp 13:M2 Grp *no setting during trip |
| 0h03E3 | Changed parameter displayed | - | - | O | 0: No 1:Yes |
| 0h03E4 | Macro function item | - | - | X | 0:None 1: Draw App 2: Traverse |
| 0h03E5 ^{note1)} | All history of failure deleted | - | - | O | 0: No 1:Yes |
| 0h03E6 ^{note1)} | User registration code deleted | - | - | O | 0: No 1:Yes |
| 0h03E7 ^{note 2)} | Parameter mode hidden | 0 | Hex | O | writing: 0 ~ 9999 |
| | | | | | reading: 0: Unlock 1:Lock |
| 0h03E8 ^{note 2)} | Parameter editing locked | 0 | Hex | O | writing: 0 ~ 9999 |
| | | | | | reading: 0: Unlock 1:Lock |

| Address | Parameter | Scale | unit | Shift during operation | Function | |
|--------------------------|--|-------|------|------------------------|----------|-------|
| 0h03E9 | Initial parameter easy setting | - | - | 0 | 0: No | 1:Yes |
| 0h03EA ^{note1)} | Consumed power initialization | - | - | 0 | 0: No | 1:Yes |
| 0h03EB ^{note1)} | Cumulative inverter operating time initialization | - | - | 0 | 0: No | 1:Yes |
| 0h03EC ^{note1)} | Cumulative cooling fan operating time initialization | - | - | 0 | 0: No | 1:Yes |

note1) Be careful in setting parameters. Set parameters at 0 through communication and then set them at other values. If you input a value other than 0 while it is set at a value other than 0, an error message will respond.

If you read this parameter through communication, you will know the previously set values.

**The time required might be longer because the data is saved in the inverter, thus possibly interrupting the communication. Be careful when setting.

note 2) The parameters that input password. If you input password, the Lock status becomes Unlock status and the Unlock status becomes Lock status. If you consecutively input the same password, only the first parameter is implemented and the following values are not reflected. Therefore if you want to input the same value for another time, change it to another value and input the previous value again.

E.g.) Follow the order below if you want to input 244 twice.

244 -> 0 -> 244

Warranty

| | | | |
|--------------|-----------------|----------------------|--|
| Product Name | Profibus Option | Date of Installation | |
| Model Name | SV-iS7 Series | Warranty Period | |
| Customer | Name | | |
| | Address | | |
| | Phone Number | | |
| Sales Agency | Name | | |
| | Address | | |
| | Phone Number | | |

Notes

This inverter has been manufactured by LSIS using strict quality control and inspection processes. The warranty period is 18 months from the date of installation. A period of 18 months from the date of manufacture will be applied if the date of installation has not been entered. However, the warranty period may vary according to the terms of the contract.

Free after-sales servicing

If the drive fails as a result of normal usage during the warranty period, contact our agency or designated service center. We will repair the drive free of charge.

Paid Servicing

In the following instances, repair services are provided for a fee:

- If the damage is the result of deliberate action or negligence.
- If the damage is the result of power supply problems or an improper connecting device.
- If the damage is the result of a natural disaster (for example, fire, flood, gas, earthquake, etc.).
- If the inverter has been modified or repaired somewhere other than our agency or service center.
- If there is no LSIS name plate attached.
- If the warranty period is over.

Please visit the LSIS homepage (<http://www.lsis.biz>) for more useful information and services:

Manual Revision History

| No. | Date of Publication | Contents Changed | Version Number | Remarks |
|-----|---------------------|------------------|----------------|---------|
| 1 | First Edition | | V1.0 | |
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