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**TOSVERT VF-FS1 series**

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**LONWORKS<sup>®</sup> Plug-in LIS007Z**

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**Instruction Manual**

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**NOTICE**

1. Read this manual before installing or operating the LONWORKS plug-in for VF-FS1. Keep it in a safe place for reference.
2. All information contained in this manual is subject to change without notice. Please confirm the latest information on TOSVERT series Web site "[www.inverter.co.jp](http://www.inverter.co.jp)".

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# Preface

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- \* **Technical information described in this manual is used to explain typical operations and applications of products, and this is not intended to grant warranty or licensing right on its usage regarding TOSHIBA group or a third party intellectual property and the other right.**
- \* Specifications for this software may change without prior notice.
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Symbols used in this document have the following meaning.

- “ ”: Items and messages of LIS007Z
- [ ]: Buttons on the screen of LIS007Z
- Italic*: Menus of LIS007Z and Windows
- : Keys of the PC

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# 1. Introduction

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LIS007Z is LNS device plug-in to simplify the configuration, monitoring, controlling of TOSVERT VF-FS1 series LONWORKS option LIU007Z. Carefully read this manual together with the Inverter and LONWORKS option Instruction manual for correct use.

- Recommended Performance environment

LNS application LonMaker

HDD ..... Space area About 10 MB

Display ..... 640 x 480 dot / 256 colors or more

Others ..... Equipped with a CD-ROM drive or internet, and a mouse or the other pointing device.

## 2. Setup

### 2.1. Installation

To install LIS007Z, follow these steps.

- **N.B. Install LNS application (ex. LonMaker) before installing LIS007Z.**
- If other applications are working, end their operation.
- If LIS007Z is updated from elder one, uninstall the elder one (refer to next section).  
The version of LIS007Z can be checked on *Help | About this plug-in*.

- Run the setup program (LIS007Z\_setup.exe).

N.B. Do not change the installation directory (the default is C:¥LonWorks¥), if your LNS application is installed into the default directory (C:¥LonWorks)

|  |   |
|--|---|
|  <b>Caution</b> |   |
| <br>Prohibited  | ▼ Do not install this product into specified directory.<br>It may cause any computer problem. |

### 2.2. Uninstallation

When uninstalling, use *My Computer | Control Panel | Add / Remove Programs*.

|  |  |
|--|--|
|  <b>Caution</b> |  |
| <br>Mandatory   | ▼ Uninstall this product after executing Deregister. (Refer to the next page for "Deregister" method).<br>Otherwise, LIS007Z may not be uninstalled correctly. |

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## 3. Start up

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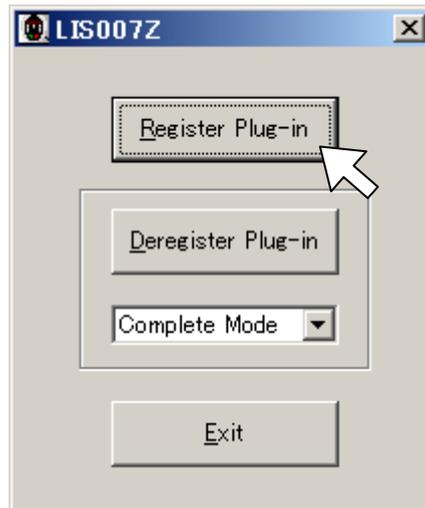
### 3.1. Register

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Run the LIS007Z.exe (Short-cut is prepared, *Start | All programs | Toshiba Inverter | LIS007Z*).

LIS007Z shows a dialog shown in below.

Click the [Register Plug-in] button and LIS007Z registration command is added into Windows registry, then show the message to inform the completion.



After LIS007Z register command is added with Windows registry, LNS application can find it. Use the register command to register LIS007Z. See your LNS application instruction manual for detail.

- “Deregister”

Use [Deregister Plug-in] button when deleting LIS007Z from your LNS or Windows.

Do “Deregister” by all means before LIS007Z uninstallation.

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### 3.2. Start up plug-in

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LIS007Z is LNS device plug-in for ACMotorDrive functional block of VF-FS1series LONWORKS option LIU007Z. The commands shown in below can be used when starting the functions.

- Browse
- Configure

A dialog after starting up is decided by the command.

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## 4. Functions

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### 4.1. Log

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“Logger list” that lies in the bottom side of the dialog shows the history sending network variables.



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### 4.2. Device menu

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#### 4.2.1. Clear

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The Log is cleared by *Clear* command.

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#### 4.2.2. Save, Save as

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The Log is saved into file by *Save* or *Save as* command.

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#### 4.2.3. Monitor

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- *Enable*  
Restart to monitor network.
- *Disable*  
Stop to monitor network.

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#### 4.2.4. Exit

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Close the LIS007Z dialog and exit it.

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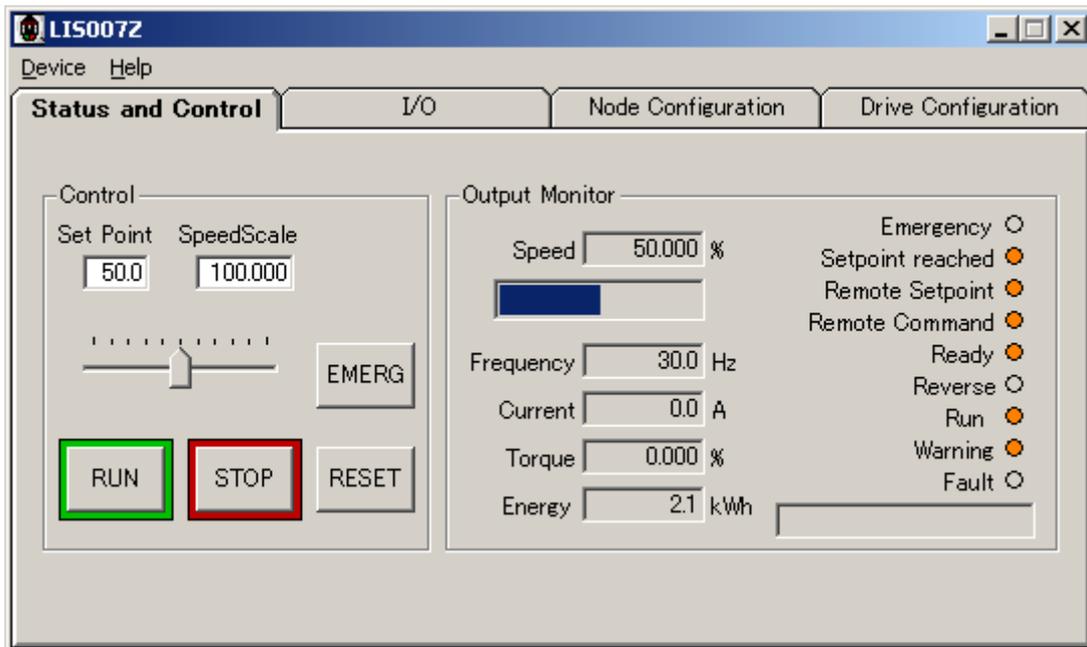
### 4.3. Help menu

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*Help* | *About this plug-in* command shows the plug-in information.

4.4. “Status and Control” Tab

Lower dialog appears by selecting “Status and Control” tab.



The functions of objects are shown in the table below.

See VF-FS1 LONWORKS option communication function manual for network variables details.

- “Control”

| Objects                                | network variable | value                           | launch  |
|--|------------------|---------------------------------|---|
| “SetPoint” text box<br>SetPoint slider | nviDrvSpeedStpt  | 0.0 to 100.0%<br>Only for value | <input type="text" value="ENTER"/> key<br>Changed |
| “SpeedScale” text box                  | nviDrvSpeedScale | -163.840 to 163.830%            | <input type="text" value="ENTER"/> key            |
| [RUN] button                           | nviDrvSpeedStpt  | {“SetPoint”, 1}                 | Click   |
| [STOP] button                          | nviDrvSpeedStpt  | {“SetPoint”, 0}                 | Click   |
| [EMERG] button                         | nviEmergOverride | EMERG_SHUTDOWN                  | Click   |
| [RESET] button                         | nviResetFault*1  | {0,0}→{100.,1}→{0,0}            | Click   |

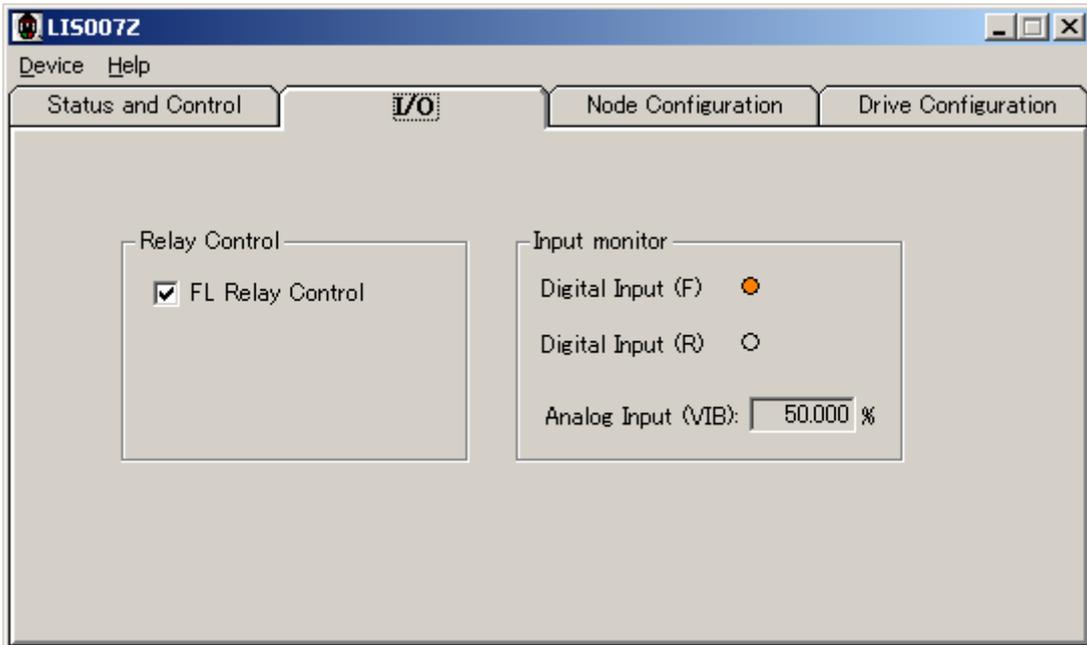
\*1: In emergency stop mode by nviEmergOverride network variable, it sends EMERG\_NORMAL by it.

- “Output Monitor”

| Objects                       | network variable | Description                             |
|-------------------------------|------------------|---|
| “Speed” text box<br>Speed bar | nvoDrvSpeed      | Output speed of the inverter            |
| “Frequency” text box          | nvoInvOutFreq    | Output frequency of the inverter        |
| “Current” text box            | nvoDrvCurnt      | Output current of the inverter          |
| “Torque” text box             | nvoTorque        | Output torque of the inverter           |
| “Energy” text box             | nvoDrvEnergy     | Cumulative input energy of the inverter |
| Status lamp                   | nvoStatusWord    | The inverter status                     |
| “Fault” text box              | nvoAlarmWord     | Fault information of the inverter       |

**4.5. “I/O” Tab**

Lower dialog appears by selecting “I/O” tab.



The functions of objects are shown in the table below.

See VF-FS1 LONWORKS option communication function manual for network variables details.

- “Relay controls”

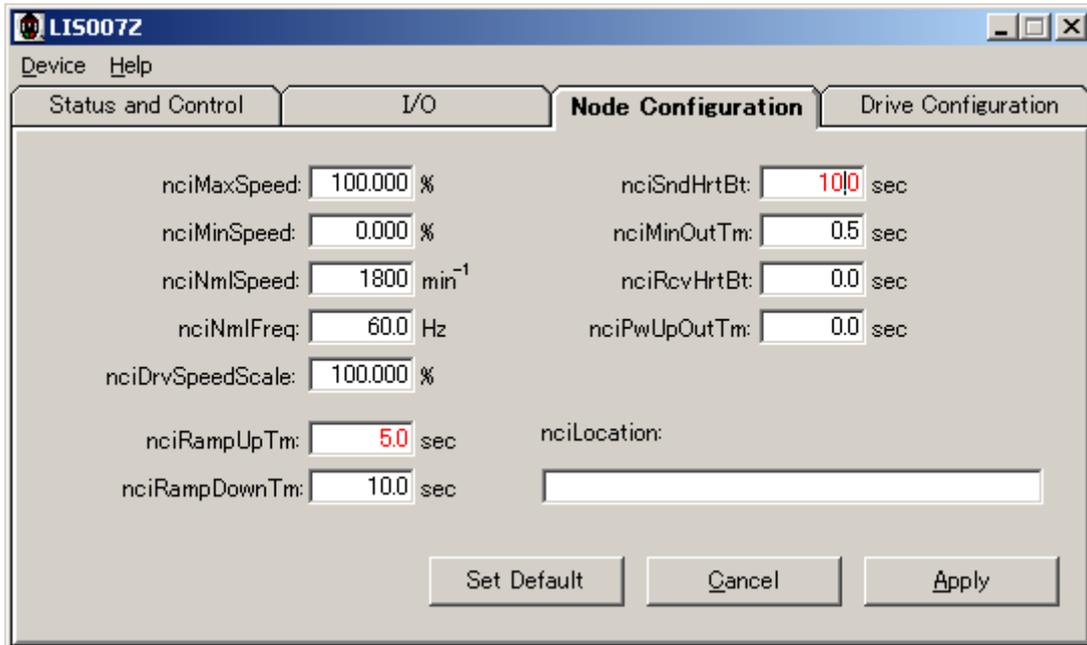
| Objects           | network variable | value   | launch    |
|-------------------|------------------|---------|-----------|
| “Relay” check box | nviRelay1        | {0,0}   | Check OFF |
|                   |                  | {100,1} | Check ON  |

- “Input monitor”

| Objects                 | network variable | Description                            |
|-------------------------|------------------|--|
| “Digital Input” lamps   | nvoDigitalIn1    | Monitor for F, R terminal              |
|                         | nvoDigitalIn2    | Orange color means ON, gray means OFF. |
| “Analog Input” text box | nvoAnalogIn2     | Monitor for VIB terminal               |

## 4.6. “Node Configuration” Tab

Lower dialog appears by selecting “Node Configuration” tab.



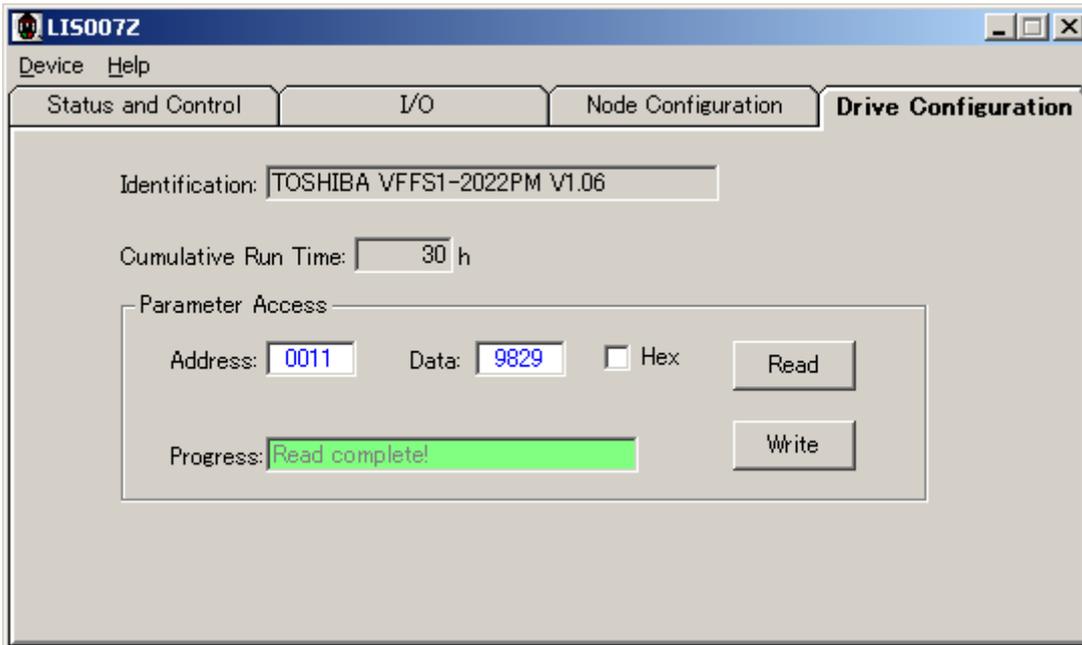
Input the configuration property text from keyboard. Changed value shows red text, it is not transmitted to the node yet. The functions of buttons are shown in the table below.

| Objects              | Function   |
|----------------------|--|
| [Set Default] button | All configuration properties are set to default value. They are not transmitted to the node. |
| [Cancel] button      | The configuration properties changed the value (red color) are returns to previous value.    |
| [Apply] button       | The configuration properties changed the value (red color) are transmit to the node.         |

See VF-FS1 LONWORKS option communication function manual for configuration properties details.

## 4.7. “Drive Configuration” Tab

Lower dialog appears by selecting “Drive Configuration” tab.



The functions of objects are shown in the table below.

See VF-FS1 LONWORKS option communication function manual for network variables details.

- Monitor

| Objects               | network variable | Description                                     |
|-----------------------|------------------|---|
| “Identification”      | nvoTypeVer       | Inverter commercial reference, software version |
| “Cumulative Run Time” | nvoDrvRunHours   | Cumulative run time for the inverter            |

- “Parameter Access” (by using nviParamCmd, nvoParamResp)

| Objects             | Function  |
|---------------------|---|
| “Address” text box  | Input the access address text from keyboard.  |
| “Data” text box     | In case of READ: The data is shown in this text box (blue).<br>In case of WRITE: Input the data text from keyboard. |
| “Hex” check box     | Checked: Transfer “Data” value to Hexadecimal.<br>Unchecked: Transfer “Data” value to decimal.                      |
| “Progress” text box | It shows the parameter access progress  |
| [READ] button       | Transmit nviParamCmd for with LN_REPORT_VALUE command.  |
| [WRITE] button      | Transmit nviParamCmd for with LN_LEARN_VALUE command.   |

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## 5. Specifications

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| Item                    | Specifications   |
|-------------------------|--|
| Applicable model        | VF-FS1 series that LIU007Z is installed  |
| Performance environment | On the Windows computer<br>- that the LNS application is installed<br>- Connected to LonWORKS network.               |
| LNS command             | Browse, Configure, Register, Deregister  |
| Language                | English  |
| Functions               | Controls and monitors the inverter<br>I/O controls and monitor<br>Configuration for the node<br>Inverter maintenance |