1. Introduction
When using the connector conversion box F9GT-HCNB, refer to not only this manual but also the manual offered with the handy graphic operation terminal.

Especially, read carefully the cautions on safety described in the following manual before starting wiring or installation.


This manual describes the installation, wiring, specifications, etc. of the handy graphic operation terminal F940GOT-SBD/LBD-H-E.

2. Outline of Product
The F9GT-HCNB is a relay box which converts the D-sub 25-pin connector of an external cable, connected to the handy graphic operation terminal into a connector and terminal block to enable connection of the PLC, the power supply and the switches.

3. Name of Each Part
The name and the function of each part of the F9GT-HCNB are described below.

Front face
1. Connector for handy graphic operation terminal (D-sub, 25-pin, female type)
   Connects a handy graphic operation terminal through an external connection cable.
2. Power switch
   Supplies the power to the handy graphic operation terminal.
   When this switch is set to ON, the power is supplied.
3. Mounting hole (for M3 screw)
   Allows to fix the F9GT-HCNB on the panel face directly or through a mounting bracket.
4. Terminal block for operation switches
   Connects the operation switches SW1 to SW4 of the handy graphic operation terminal.
5. Terminal block for power supply and emergency stop switch
   Connects the 24 VDC power supply of the handy graphic operation terminal and the emergency switch ES1.
6. Connector for PLC (D-sub, 9-pin, female type)
   Connects the PLC through a PLC cable.

4. Installation
The F9GT-HCNB can be installed on the panel face directly or with mounting bracket offered as an accessory.

Direct mounting on the panel face
1) Direct mounting on the panel face
   Drill a mounting slot of the following size on the panel face.

2) Mounting on the panel face
   Fit the F9GT-HCNB from the back side of the panel face, and fix it with four M3 screws (prepared by user).
   In the F9GT-HCNB, thread of M3, 7 mm in depth is cut in each mounting hole. Prepare four M3 mounting screws separately while considering the thickness of the panel face.
   Make sure that interfering objects are not located within 50 mm from the rear face so that the connector of a PLC cable is not hindered.

5. Wiring
The D-sub, 25-pin connector of an external connection cable is converted into the terminal block and the D-sub, 9-pin connector for PLC as shown below. (For the connector name, refer to Section 3.)

Use the following cables for each connector and terminal block.

1) Connector for handy graphic operation terminal (D-sub, 25-pin type provided on front face)
   External cable
   • F9GT-HCAB-3M (3 m) or
   • F9GT-HCAB-10M (10 m)
2) Connector for PLC (D-sub, 25-pin type provided on rear face)
   CPU direct connection
   • FX/FX3U/FX3G/FX3G-A/DnA Series
   • FX-40U-CAN (3 m)
   • FX-3GK/FX3G/KP/FX3G-A/3GK Series
   • FX-50U-CANB-1M (1 m) or
   • FX-50U-CANM-3M (3 m)
   Computer link connection
   • Cable prepared by user
1. Introduction

When using the connector conversion box F9GT-HCNB, refer to not only this manual but also the manual offered with the handy graphic operation terminal.


The F9GT-HCNB is a relay box which converts the D-sub 25-pin connector of an external cable, connected to the handy graphic operation terminal into a connector and terminal block to enable connection of the PLC, the power supply and the switches.

2. Outline of Product

The F9GT-HCNB can be installed on the panel face directly or with mounting bracket as shown below. (For the connector name, refer to Section 3.)

3. Name of Each Part

The name and function of each part of the F9GT-HCNB are described below.

4. Installation

The F9GT-HCNB can be installed on the panel face directly or with mounting bracket offered as an accessory.

Direct mounting on the panel face
1) Direct mounting on the panel face
Drill a mounting slot of the following size on the panel face.

2) Mounting on the panel face
Mount the F9GT-HCNB from the back side of the panel face, and fix it with four M3 screws (prepared by user). In the F9GT-HCNB, thread of M3, 7 mm in depth is cut in each mounting hole. Prepare four M3 mounting screws separately while considering the thickness of the panel face. Make sure that interfering objects are not located within 50 mm from the rear face so that the connector of a PLC cable is not hindered.

Mounting with a mounting bracket
1) Attaching a mounting bracket
Attach a mounting bracket offered as an accessory to the F9GT-HCNB.

5. Wiring

The D-sub, 25-pin connector of an external connection cable is converted into the terminal block and the D-sub, 9-pin connector for PLC as shown below. (For the connector name, refer to Section 3.)

Use the following cables for each connector and terminal block.

1) Connector for handy graphic operation terminal
   External cable
   - F9GT-HCAB-3M (3 m) or F9GT-HCAB-10M (10 m)

2) Connector for PLC (D-sub, 25-pin type provided on rear face)
   CPU direct connection
   - FX/FX

   Computer link connection
   - Cable prepared by user
1. Introduction

When using the connector conversion box F9GT-HCNB, refer to not only this manual but also the manual offered with the handy graphic operation terminal. Especially, read carefully cautions on safety described in the following manual before starting wiring or installation.

1) Attaching a mounting bracket

The F9GT-HCNB can be installed on the panel face directly or with mounting bracket offered as an accessory.

2) Mounting on the panel face

Fit the F9GT-HCNB from the back side of the panel face, and fix it with four M3 screws (prepared by user).

In the F9GT-HCNB, thread of M3, 7 mm in depth is cut in each mounting hole. Prepare four M3 mounting screws separately while considering the thickness of the panel face.

Make sure that interfering objects are not located within 50 mm from the rear face so that the connector of a PLC cable is not hindered.

3. Name of Each Part

The name and function of each part of the F9GT-HCNB are described below.

4. Installation

Front face

1) Connector for handy graphic operation terminal (D-sub, 25-pin, female type)

Connects a handy graphic operation terminal through an external connection cable.

2) Power switch

Supplies the power to the handy graphic operation terminal. When this switch is set to ON, the power is supplied.

3) Mounting hole (for M3 screw)

Allows to fix the F9GT-HCNB on the panel face directly or through a mounting bracket.

4) Terminal block for operation switches

Connects the operation switches SW1 to SW4 of the handy graphic operation terminal.

5) Terminal block for power supply and emergency stop switch

Connects the 24 VDC power supply of the handy graphic operation terminal and the emergency switch ES1.

6) Connector for PLC (D-sub, 9-pin, female type)

Connects the PLC through a PLC cable.

4) Mounting on the panel face

Mount the F9GT-HCNB on the panel face.

Drill a mounting slot of the following size on the panel face.

M4 screw and nut (prepared by user).

Fix the F9GT-HCNB on the panel face with M4 screws and nuts (prepared by user).

Use the following cables for each connector and terminal block.

1) Connector for handy graphic operation terminal (D-sub, 25-pin type provided on front face)

External cable

- F9GT+HCA-B3M (3 m) or
- F9GT+HCA-B10M (10 m)

2) Connector for PLC (D-sub, 25-pin type provided on rear face)

CPU direct connection

- FX/FXO/FPX/FPX2/FPX3 Series
- FX-30U-CAB (3 m) or
- FX-50U-CAB-B1M (1 m) or
- FX-50U-CAB-B3M (3 m)

Computer link connection

- Cable provided by user.
3) Terminal arrangement for power supply and emergency stop switch

DCC4V

Input: DC 24 V
ES1

Wiring by user: Wire the power supply and the frame ground with untied wires of 0.75 mm² or more
(0.3 mm² or more for ES1).

Caution: The power switch provided on the front face of the F9GT-HCBN turns ON or OFF the power supply of the handy graphic operation terminal display unit. The wiring of the operation switches and the emergency stop switch (ES1) is already connected. Accordingly, if the operation switches and the emergency stop switch are wired to the PLC, these switches are effective only while the power of the PLC is turned on.

4) Terminal block for operation switches

Wiring by user: Wire the operation switches with untied wires of 0.3 mm² or more.

6. Specifications

<table>
<thead>
<tr>
<th>Outside dimensions Unit: mm</th>
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<tbody>
<tr>
<td>60</td>
</tr>
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<tr>
<td>21.6</td>
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<td>33</td>
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</table>

Outer painting color: Munsell 0.08GY 7.64/0.81  Mass: 0.15 kg

General specifications

- Ambient operating temperature: 0 to 55 °C
- Ambient operating humidity: 35 to 85% RH (no condensation)
- Vibration resistance: 10 to 57 Hz, Single amplitude: 0.05 mm, 57 to 150 Hz, Acceleration: 4.9 m/s²
- Operating atmosphere: Must be free of lamp black, corrosive gas, flammable gas, or excessive amount of electroconductive dust particles and must be no direct sunlight. (Same as for saving)

Specifications are subject to change without notice
3) Terminal arrangement for power supply and emergency stop switch

![Diagram of terminal arrangement for power supply and emergency stop switch]

Wiring by user: Wire the power supply and the frame ground with untied wires of 0.75 mm² or more (0.3 mm² or more for ES1).

Caution: The power switch provided on the front face of the F9GT-HCNB turns ON or OFF the power supply of the handy graphic operation terminal display unit. The wiring of the operation switches and the emergency stop switch (ES1) is already connected. Accordingly, if the operation switches and the emergency stop switch are wired to the PLC, these switches are effective only while the power of the PLC is turned on.

4) Terminal block for operation switches

Wiring by user: Wire the operation switches with untied wires of 0.3 mm² or more.

6. Specifications

Outside dimensions Unit: mm

<table>
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<tr>
<th>Dimension</th>
<th>Unit</th>
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<tr>
<td>60 x 50</td>
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</tr>
<tr>
<td>60</td>
<td>mm</td>
</tr>
<tr>
<td>33</td>
<td>mm</td>
</tr>
</tbody>
</table>

Outer painting color: Munsell 0.08GY 7.64/0.81 Mass: 0.15 kg

General specifications

<table>
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<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambient operating temperature</td>
<td>0 to 55 °C</td>
</tr>
<tr>
<td>Ambient operating humidity</td>
<td>35 to 85%RH (no condensation)</td>
</tr>
<tr>
<td>Vibration resistance</td>
<td>10 to 57 Hz Single amplitude: 0.055 mm, 57 to 150 Hz Acceleration: 4.9 m/s² 10 times sweeping in each of X, Y and Z directions (80 min in total in each direction)</td>
</tr>
<tr>
<td>Operating atmosphere</td>
<td>Must be free of lamp black, corrosive gas, flammable gas, or excessive amount of electroconductive dust particles and must be no direct sunlight. (Same as for saving)</td>
</tr>
</tbody>
</table>

General specifications other than the above are same as those of the GOT main unit. Refer to the following: GOT-F900 Series HARDWARE MANUAL [CONNECTION].

Guidelines for the safety of the user and protection of the Connector Conversion Box F9GT-HCNB

This manual has been written to be used by trained and competent personnel. This is defined by the European directives for machinery, low voltage and EMC.

If in doubt at any stage during the installation of the Connector Conversion Box F9GT-HCNB always consult a professional electrical engineer who is qualified and trained to the local and national standards. If in doubt about the operation or use of the Connector Conversion Box F9GT-HCNB please consult the nearest Mitsubishi Electric distributor.

Under no circumstances will Mitsubishi Electric be liable or responsible for any consequential damage that may arise as a result of the installation or use of this equipment.

All examples and diagrams shown in this manual are intended only as an aid to understanding the text, not to guarantee operation. Mitsubishi Electric will accept no responsibility for actual use of the product based on these illustrative examples.

Owing to the very great variety in possible application of this equipment, you must satisfy yourself as to its suitability for your specific application.

Warranty

Mitsubishi will not be held liable for damage caused by factors found not to be the cause of Mitsubishi; opportunity loss or lost profits caused by faults in the Mitsubishi products; damage, secondary damage, accident compensation caused by special factors unpredictable by Mitsubishi; damages to products other than Mitsubishi products; and to other duties.

For the detailed warranty, refer to the GOT-F900 Series HARDWARE MANUAL [CONNECTION].

Manual number: JY992D88901
Manual revision: B
Date: Sep. 2008

Specifications are subject to change without notice.
1. Introduction

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3. Name of Each Part

The name and the function of each part of the F9GT-HCNB are described below.

4. Installation

The F9GT-HCNB can be installed on the panel face directly or with mounting bracket offered as an accessory.

4.1 Direct mounting on the panel face

1) Direct mounting on the panel face

Drill a mounting slot of the following size on the panel face.

- Panel face
- Connector conversion box F9GT-HCNB
- PLC

4.2 Mounting on the panel face

1) Attaching a mounting bracket

Attach a mounting bracket offered as an accessory to the F9GT-HCNB.

2) Mounting on the panel face

Mount the F9GT-HCNB on the panel face. Drill a mounting slot of the following size on the panel face.

2) Mounting on the panel face

Mount the F9GT-HCNB on the panel face. Drill a mounting slot of the following size on the panel face.

- Mounting bracket
- Connector conversion box F9GT-HCNB
- Panel face

5. Wiring

The D-sub, 25-pin connector of an external cable is converted into the terminal block and the D-sub, 9-pin connector for PLC as shown below. (For the connector name, refer to Section 3.)

- Connector for handy graphic operation terminal
- Connector for PLC
- Terminal block for power supply and emergency stop switch

Use the following cables for each connector and terminal block.

1) Connector for handy graphic operation terminal (D-sub, 25-pin type provided on front face)

- External cable
  - F9GT-HCAB-3M (3 m) or F9GT-HCAB-10M (10 m)

2) Connector for PLC (D-sub, 25-pin type provided on rear face)

- CPU direct connection
  - FX/FPX/QX/QX2/Q0/Q Series
  - FX-40DU-CAB (3 m)
  - F3X/FX5P/FX5PS/FX5G Series
  - FX-50DU-CAB0 (3 m)

- Computer connection
  - Cable prepared by user
3) Terminal arrangement for power supply and emergency stop switch

<table>
<thead>
<tr>
<th>DC24V</th>
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</thead>
<tbody>
<tr>
<td>208</td>
</tr>
</tbody>
</table>

Wiring by user: Wire the power supply and the frame ground with untied wires of 0.75 mm² or more (0.3 mm² or more for ES1).

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4) Terminal block for operation switches

Wiring by user: Wire the operation switches with untied wires of 0.3 mm² or more.

6. Specifications

**6. Specifications**

- **Outside dimensions**: Unit: mm
  - Outer painting color: Munsell 0.08GY 7.64/0.81
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HANNO WORKS: 4-1-2 KAMIGASAWA, HANNO, YAMANASHI 400-0001, JAPAN
Effective Sep. 2008
Specifications are subject to change without notice

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