1. Introduction

The F930GOT-BBD-K-E (hereafter called "GOT") is to be mounted on the face of a control panel or option panel, and connected to the programming (CPU port) or the communication port (communication port) of a PLC. Various devices can be monitored and PLC data changed via the GOT. Several display screens are built-in to the GOT, and additional personalized screens can be created by the user.

1) The GOT can connect to MELSEC FX, A, QnA and G PCs as well as a host of third party manufactured units. Further information can be found in GOT-F900 Series Hardware Manual.

2) PLC user programs can be downloaded, uploaded and monitored using programming software GX-Developer or FX-PCS/WIN-E on a personal computer via the GOT. Further information can be found in the GOT-F900 Series Operation Manual.

3) GOT, screens are created using the following software:

Software Name | Version
--- | ---
GT Designer2 |
BWIDCSC-GTD-E (10 indicates version) | GOT-F900 and GOT-A900 Series (for Windows) screen creation software.
BWIDCSC-GOTR-PACK (10 indicates version) | GOT-F900 and GOT-A900 Series (for Windows) screen creation software.
FX-PCS-DUWIN-E | GOT-F900 Series (for Windows) screen creation software.
SWPCF-DFXDU/WIN-E version 2.70 or later |

1.2 Dimensions and Each Part Name

Dimensions: (mm) (inches) Mass (Weight): 0.6 kg (1.32 lbs)
Accessory: Mounting brackets, Tightening bolt (M3, 4 bolts), Packing seal for dust and water resistance

a) Display
b) LED (green)
c) Function keys
d) Cursor keys
e) 0 to 9 keys
f) Mounting bracket and tightening bolt (optional)
g) Communication ports

2. Specifications

2.1 General Specifications

Item | Specifications
--- | ---
Operating Temperature | 0 ~ 50 °C (-4 ~ 122 °F)
Storage Temperature | -20 ~ 60 °C (-4 ~ 140 °F)
Humidity | 10 ~ 85% Relative Humidity. No condensation

Vibration Resistance |
- Intermittent vibration 57 ~ 150 Hz: 0.035 mm Half Amplitude
- Continuous vibration 57 ~ 150 Hz: 4.9 mm Acceleration

Shock Resistance | 147 m/s² Acceleration, 3 times in each direction X, Y, and Z

Noise Immunity | 10 ~ 50 Hz: micro second, 30 ~ 100 Hz: tested by noise simulation

Delectric Withstand Voltage | 500V AC, 1 minute, tested between power terminals and ground

Insulation Resistance | 5 MΩ at 500 V DC, tested between power terminals and ground

Grounding resistance of 100 ohm or less.

Protection | IP65 level

2.2 Power Supply Specifications

Specifications

Item | Specifications
--- | ---
Power Supply Voltage | 24V DC, ±10% -15%

Power Supply Ripple | 200 mV or less

Current Ratings |
- Continuous: 220 mA at 24V DC
- Peak: 120 mA at 34V DC when backlight is turned OFF

Fuse | Fuse built-in (impossible to change)

Max. Allowable Momentary Power Supply Failure period | 5 ms: If less than 5 ms, the GOT will continue operation. If 5 ms or more, the GOT will shut down.

Battery | Built-in, FX-2N-32/SL type lithium battery. (Approximately 3 years battery life)
1. Introduction

The F930GOT-BBD-K-E (hereafter called “GOT”) is to be mounted on the face of a control panel or operations panel, and connected to the programming computer (CPU port) or the communication port (communication port) of a PLC. Various devices can be monitored and PLC data changed via the GOT. Several display screens are built-in to the GOT, and additional personalized screens can be created by the user.

1) The GOT can connect to MELSEC FX, A, QnA and Q PLCs as well as a host of third party manufactured units. Further information can be found in GOT-F900 Series Hardware Manual.

2) PLC user programs can be downloaded, uploaded and monitored using programming software GX-Developer or FX-PCS/WIN-E on a personal computer via the GOT. Further information can be found in the GOT-F900 Series Operation Manual.

3) GOT, screens are created using the following software:

<table>
<thead>
<tr>
<th>Software Name</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>GT Designer 2</td>
<td>SWDSCD-GT00-E (10 indicates version)</td>
</tr>
<tr>
<td>G900 and GOT-A900 Series (for Windows) screen creation software.</td>
<td></td>
</tr>
<tr>
<td>GT Designer 2</td>
<td>SWDSCD-GOTR-PACK (10 indicates version)</td>
</tr>
<tr>
<td>G900 and GOT-A900 Series (for Windows) screen creation software.</td>
<td></td>
</tr>
<tr>
<td>FX-PCS-DU-WIN-E</td>
<td>G900 Series (for Windows) screen creation software.</td>
</tr>
<tr>
<td>SWOPC-FXDU-WIN-E version 2.7 or later</td>
<td></td>
</tr>
</tbody>
</table>

1.1 Product Lists

<table>
<thead>
<tr>
<th>Production Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FX-50DU-CAB0</td>
<td>Communication cable (GOT → CPU port in FX3U, FX5U, FX3U, FX5U) or FX5U (if applicable)</td>
</tr>
<tr>
<td>COM1(RS=-232)</td>
<td>The connector on the GOT side is wired straight through.</td>
</tr>
<tr>
<td>COM2(RS=-232)</td>
<td>Use the FX-50DU-CAB0/EN for compliance with EC EMC.</td>
</tr>
<tr>
<td>FX-50DU-CAB1</td>
<td>Communication cable (GOT → CPU port in FX3U, FX5U, FX3U, FX5U or FX5U (if applicable)).</td>
</tr>
<tr>
<td>FX-50DU-CAB1-*M</td>
<td>The connector on the GOT side is wired straight through.</td>
</tr>
<tr>
<td>M</td>
<td>* M is cable length. 1M: 1m (3’ 3”), 10M: 10m (32’ 9”), 20M: 20m (65’ 7”), 30M: 30m (98’ 5”).</td>
</tr>
<tr>
<td>DC30R2</td>
<td>The connector on the GOT side is wired straight through.</td>
</tr>
<tr>
<td>COM1(RS=-232)</td>
<td>The connector on the GOT side is wired straight through.</td>
</tr>
<tr>
<td>COM2(RS=-232)</td>
<td>The connector on the GOT side is wired straight through.</td>
</tr>
<tr>
<td>FX-232CAB-1</td>
<td>Data exchange cable (GOT → Personal computer &lt;9-D sub&gt;).</td>
</tr>
<tr>
<td>COM1(RS=-232)</td>
<td>The connector on the GOT side is wired straight through.</td>
</tr>
<tr>
<td>COM2(RS=-232)</td>
<td>The connector on the GOT side is wired straight through.</td>
</tr>
<tr>
<td>FX-50GOTSC</td>
<td>Transparent protection sheet for F900GOT (5 pieces).</td>
</tr>
</tbody>
</table>

1.2 Dimensions and Each Part Name

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions</td>
<td>1) mm (inches) Mass (Weight): 0.6 kg (1.32 lbs)</td>
</tr>
<tr>
<td>Accessory</td>
<td>Mounting brackets, Tightening bolt (M3, 4 bolts), Packung seal for dust and water resistance</td>
</tr>
</tbody>
</table>

a) Display
b) LED (green)
c) Function keys
d) Cursor keys
e) 0 to 9 keys
f) Mounting bracket and tightening bolt (stainless)
g) Communication ports

2. Specifications

2.1 General Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Temperature</td>
<td>0 ~ 56 °C (-30 ~ 122 °F)</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>20 ~ 60 °C (-4 ~ 140 °F)</td>
</tr>
<tr>
<td>Humidity</td>
<td>10 ~ 85% Relative Humidity, No condensation</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>
<tr>
<td>Vibration</td>
<td>10 ~ 57 Hz: 0.075 mm Half Amplitude</td>
</tr>
<tr>
<td>Vibration - intermittent vibration</td>
<td>57 ~ 150 Hz: 9.8 m/s² Acceleration</td>
</tr>
<tr>
<td>Vibration - Continuous vibration</td>
<td>57 ~ 150 Hz: 4.5 m/s³ Acceleration</td>
</tr>
<tr>
<td>Shock Resistance</td>
<td>147m/s² Acceleration, 3 times in each direction X, Y, and Z</td>
</tr>
<tr>
<td>Noise Immunity</td>
<td>100 ~ 190 dB (20 micro second sec), 100 ~ 190 dB (20 micro second sec), 100 ~ 190 dB (20 micro second sec)</td>
</tr>
<tr>
<td>Dielectric Withstand Voltage</td>
<td>&gt; at 500 V DC, tested between power terminals and ground</td>
</tr>
<tr>
<td>Insulation Resistance</td>
<td>5 MΩ at 500 V DC, tested between power terminals and ground</td>
</tr>
<tr>
<td>Ground</td>
<td>grounding resistance of 100 Ω or less.</td>
</tr>
<tr>
<td>Protection</td>
<td>IP65 level</td>
</tr>
</tbody>
</table>

2.2 Power Supply Specifications

<table>
<thead>
<tr>
<th>Specifications</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Supply Voltage</td>
<td>24V DC, +10% ~ -15%</td>
</tr>
<tr>
<td>Power Supply Ripple</td>
<td>200 mV or less</td>
</tr>
<tr>
<td>Current Consumption</td>
<td>Rating: 220 mA at 24V DC</td>
</tr>
<tr>
<td>Fuse</td>
<td>Fuse built-in GOT (impossible to change)</td>
</tr>
<tr>
<td>Max. Allowable Momentary Power Supply Failure period</td>
<td>5% if less than 5 m, the GOT will continue operation. 5 ms or more, the GOT will shut down.</td>
</tr>
<tr>
<td>Battery</td>
<td>Built-in, FX-5C-5L, type lithium battery (Approximately 3 years battery life)</td>
</tr>
</tbody>
</table>
The F930GOT-BBD-K-E (hereafter called “GOT”) is to be mounted on the face of a control panel or operations panel, and connected to the programming CPU (port C1) or the communication port (communication port) of a PLC. Various devices can be monitored and PLC data changed via the GOT. Several display screens are built-in to the GOT, and additional personalized screens can be created by the user.

1) The GOT can connect to MELSEC FX, A, QnA and Q PLCs as well as a host of third-party manufacturers’ units. Further information can be found in GOT-F900 Series Hardware Manual.
2) PLC user programs can be downloaded, uploaded and monitored using programming software GX-Developer or FX-PCS/WIN-E on a personal computer via the GOT. Further information can be found in the GOT-F900 Series Operation Manual.
3) GOT-F900, screens are created using the following software:

<table>
<thead>
<tr>
<th>Software Name</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>D5C-GTD2-E</td>
<td></td>
</tr>
<tr>
<td>SWD5C-GTDR</td>
<td></td>
</tr>
<tr>
<td>W5D5C-GRM</td>
<td></td>
</tr>
<tr>
<td>D5C-GTD2-E</td>
<td></td>
</tr>
<tr>
<td>SWD5C-GTDR</td>
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<td></td>
</tr>
<tr>
<td>SWD5C-GTDR</td>
<td></td>
</tr>
<tr>
<td>W5D5C-GRM</td>
<td></td>
</tr>
<tr>
<td>D5C-GTD2-E</td>
<td></td>
</tr>
</tbody>
</table>

1.1 Product Lists

<table>
<thead>
<tr>
<th>Production Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FX-50UD-CABB</td>
<td>Communication cable (GOT to FX0S, FX1S, FX0N, FX1N)</td>
</tr>
<tr>
<td>FX-50UD-CABEN</td>
<td>Communication cable (GOT to FX0S, FX1S, FX0N, FX1N)</td>
</tr>
<tr>
<td>FX-50UD-CAB</td>
<td>Communication cable (GOT to FX0S, FX1S, FX0N, FX1N)</td>
</tr>
<tr>
<td>FX-40UD-CAB</td>
<td>Communication cable (GOT to FX0S, FX1S, FX0N, FX1N)</td>
</tr>
<tr>
<td>FX-40UD-CABB</td>
<td>Communication cable (GOT to FX0S, FX1S, FX0N, FX1N)</td>
</tr>
<tr>
<td>DC30R2</td>
<td>Data exchange cable (GOT to FX0S, FX1S, FX0N, FX1N)</td>
</tr>
<tr>
<td>JY992D94801</td>
<td>Transparent protection sheet for F930GOT (5 pieces)</td>
</tr>
</tbody>
</table>

2. Specifications

2.1 General Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Temperature</td>
<td>0 ~ 50 °C (-40 ~ 122 °F)</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-20 ~ 60 °C (-4 ~ 140 °F)</td>
</tr>
<tr>
<td>Humidity</td>
<td>10 ~ 95% Relative Humidity. No condensation</td>
</tr>
<tr>
<td>Operating atmosphere</td>
<td>Must be free of fumes, corrosive gas, flammable gas, or excessive amount of electroconductive dust particles and must be no direct sunlight. (Same as for saving)</td>
</tr>
<tr>
<td>Vibration Resistance</td>
<td>57 ~ 150 Hz: 9.8 m/s² Acceleration, 57 ~ 150 Hz: 10 ms in each direction</td>
</tr>
<tr>
<td>Shock Resistance</td>
<td>147 m/s² Acceleration, 3 times in each direction, X, Y, and Z</td>
</tr>
<tr>
<td>Noise Immunity</td>
<td>100 dB (A) at 1 m, microsecond to 300 ~ 600 Hz, tested by noise simulation</td>
</tr>
<tr>
<td>Dielectric Withstand Voltage</td>
<td>500 V AC &gt; 1 min, tested between power terminals and ground</td>
</tr>
<tr>
<td>Insulation Resistance</td>
<td>5 MΩ at 500 V DC, tested between power terminals and ground</td>
</tr>
<tr>
<td>Grounding resistance</td>
<td>100 Ω or less</td>
</tr>
<tr>
<td>Fireproof level</td>
<td>DIP32</td>
</tr>
</tbody>
</table>

2.2 Power Supply Specifications

<table>
<thead>
<tr>
<th>Specifications</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Supply Voltage</td>
<td>24V DC, ±10% ~ ±15%</td>
</tr>
<tr>
<td>Power Supply Ripple</td>
<td>200 mA or less</td>
</tr>
<tr>
<td>Current Ratings</td>
<td>220 mA at 24V DC, 600 mA at 24V DC when weight is turned OFF</td>
</tr>
<tr>
<td>Fuse</td>
<td>Fuse must be in the GOT (impossible to change)</td>
</tr>
<tr>
<td>Max. Allowable Momentary Current</td>
<td>5 mA; If less than 5 mA, the GOT will continue operation. If 5 mA or more, the GOT will shut down.</td>
</tr>
<tr>
<td>Battery</td>
<td>Built-in: FX-232C, Li-battery (Approximately 3 years battery life)</td>
</tr>
</tbody>
</table>
3. Installation

Note:
- Do not mount the GOT in an environment that contains dust, soot corrosive or conductive dust, corrosive or flammable gas, or expose the unit to high temperatures, dew condensation, direct sunlight, rain, wind or impact and vibration. The GOT is designed to be mounted in a panel. Install it using the following procedure:

1) Preparing the panel surface
   - On the panel surface, cut a rectangular mounting slot with the dimensions shown on the right. At this time, a space of 10 mm is required at each of the top and bottom sides of the slot, inside the panel for metal fixtures as shown in "4) Dimensions required inside the panel for installation".

2) Inserting the GOT into the panel surface
   - Attach the packing seal to the GOT, and insert the GOT from the front face of the panel surface.
   - a) Packing seal
   - b) GOT
   - c) Mounting slot

3) Fixing the GOT
   - Put hooks of the mounting brackets (supplied) in the mounting holes of the GOT. Tighten mounting bolts (also supplied) until the GOT is securely fixed.
   - Fix mounting bolts in all four positions, above and below the GOT.
   - a) Clamping bolt
   - b) Mounting bracket

4) Power Supply Wiring

Caution: Do not perform any operation of connecting/disconnecting the power supply while the GOT is energized.貴重な面接を安全に接続・切断してください。When the power is turned on, the GOT will be damaged and malfunctions may occur.

Note:
- Wire the power supply using electric wires of 0.75 mm² or more so that voltage drop will not occur. Use M3 size crimp style terminals. Securely tighten crimp-style terminals with a torque of 0.5 ~ 0.8 N·m so that errors can be avoided.
- Insure correct termination of the DC power source, incorrect connection may result in unit failure or serious damage to the GOT.
- Attach a 3 A fuse to the 24V DC power supply.
- Perform grounding (100 Ω or less) with an electric wire of at least 1.25 mm². Never perform common grounding of the GOT and a strong power system.
- Use an external power supply to provide 24V DC. The service power supply of the programmable controller cannot be used. Confirm the service power supply capacity of the main unit or extension unit is more than the total value of the current consumption of the GOT, extension blocks and special function blocks.
- Even if instantaneous power interruption of less than 5 ms occurs, the GOT continues to operate. When power interruption for a considerable period of time or voltage drop occurs, the GOT stops its operation. However, when the power supply is recovered, the GOT automatically restarts its operation. (The screen displayed just after recovery is determined by the working environment originally set.)

Warranty
MITSUBISHI ELECTRIC CORPORATION will not be held liable for damage caused by factors not found to be the cause of Mitsubishi; opportunity lost or loss factors 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 duities. For the detailed warranty, refer to the GOT-F900 Series HARDWARE MANUAL [CONNECTION].

Manual number : JY997D2501
Manual revision: D
Date : Sep. 2008
HEAD OFFICE HIMEJI WORKS

MITSUBISHI ELECTRIC CORPORATION
### 2.3 Screen Hardware Specifications

<table>
<thead>
<tr>
<th>Specifications</th>
<th>Value</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display Device</td>
<td>21.9 monochrome liquid crystal</td>
<td></td>
</tr>
<tr>
<td>Resolution</td>
<td>240 x 640 (360), 50 characters x 5 lines</td>
<td></td>
</tr>
<tr>
<td>Dot Pitch</td>
<td>0.47 mm (0.019&quot;) Horizontal, 0.47 mm (0.019&quot;) Vertical</td>
<td></td>
</tr>
<tr>
<td>Effective Display Area</td>
<td>117 mm (4.6&quot;) x 220 mm (8.7&quot;)</td>
<td></td>
</tr>
<tr>
<td>Number of Colors</td>
<td>2 colors (White and Blue)</td>
<td></td>
</tr>
<tr>
<td>Life of liquid crystal</td>
<td>Approximately 50,000 hours</td>
<td>Make sure to peel off the protective sheet on the surface of the product before use.</td>
</tr>
<tr>
<td>Backlight</td>
<td>Cold cathode tube</td>
<td></td>
</tr>
<tr>
<td>Life of Backlight</td>
<td>50,000 hours or more</td>
<td></td>
</tr>
<tr>
<td>Touch Keys</td>
<td>Maximum 5 touch keys / screen, 15 x 4 matrix</td>
<td></td>
</tr>
<tr>
<td>Keypad</td>
<td>28 keys / 3 keys, Cursor keys, Function keys, SET Key, DEL Key, ESC Key, EXIT Key</td>
<td></td>
</tr>
<tr>
<td>Interface</td>
<td>M0-422 (COM0), M0-242 (COM1)</td>
<td></td>
</tr>
<tr>
<td>Number of Screens</td>
<td>User screen: 50 screens or less, System screen: Allocated screens No. 1001-1030</td>
<td></td>
</tr>
<tr>
<td>User Memory</td>
<td>Flash memory: 256 KB (built-in)</td>
<td></td>
</tr>
<tr>
<td>Battery</td>
<td>Life of liquid crystal: Approximately 50,000 hours</td>
<td></td>
</tr>
</tbody>
</table>

#### 3. Installation

**Note:**
- Do not mount the GOT in an environment that contains dust, soot corrosive or conducive dust, corrosive or flammable gas, or expose the unit to high temperatures, dew condensation, direct sunlight, rain, wind or impact and vibration.
- If the GOT is used in such a place, electrical shock, fire, malfunction, damages or deterioration may occur.
- Never drop cutting chips or electric wire chips into the ventilation window of the GOT when drilling screw holes or performing wiring. Such chips may cause fire, failure or malfunction.
- Turn off the power before securely connecting any cables. Poor connection may cause malfunction.

The GOT is designed to be mounted in a panel. Install it using the following procedure:

1. **Preparing the panel surface.** On the panel surface, cut a rectangular mounting slot with the dimensions shown on the right. At this time, a space of 10 mm is required at each of the top and bottom sides of the slot, inside the panel for metal fixtures as shown in "4) Dimensions required inside the panel for installation".

2. **Inserting the GOT into the panel surface.** Attach the packaging sealing to the GOT, and insert the GOT from the front of the panel surface.
   - a) Packing seal
   - b) GOT
   - c) Mounting slot

3. **Fixing the GOT.** Put hooks of the mounting brackets (supplied) into the mounting holes of the GOT. Tighten mounting bolts (also supplied) until the GOT is securely fixed. Fix mounting bolts in all four positions, above and below the GOT.
   - a) Clamping bolt
   - b) Mounting bracket

**Note:** Make sure that the thickness of the panel surface is no more than 5 mm (0.2")

#### 4. Power Supply Wiring

**Caution:**
- Cut OFF all external phases of power before installation or wiring to avoid electric shock or serious damage to the product.

**Note:**
- Wire the power supply using electric wires of 0.75 mm² or more so that voltage drop will not occur. Use M3 size crimp style terminals. Securely tighten crimp style terminals with a torque of 0.5 ~ 0.8 N·m so that errors can be avoided.
- Insure correct termination of the DC power source, incorrect connection may result in unit failure or serious damage to the GOT.
- Attach a 2 A fuse to the 24V DC power supply.
- Perform grounding (100Ω or less) with an electric wire of at least 1.25 mm². Never perform common grounding of the GOT and a strong power system.
- Use an external power supply to provide 24V DC. The service power supply of the programmable controller cannot be used. Confirm the service power supply capacity of the main unit or extension unit is more than the total value of the current consumption of the GOT, extension blocks and special function blocks.
- Even if instantaneous power interruption of less than 5 ms occurs, the GOT continues to operate. When power interruption for a considerable period of time or voltage drop occurs, the GOT stops its operation. However, when the power supply is recovered, the GOT automatically restarts its operation. (The screen displayed just after recovery is determined by the working environment originally set.)

#### 4.1 Using Service Power Supply of PLC

**Note:**
- Attach the GOT to the service power supply of the PLC. The service power supply of the programmable controller cannot be used. Confirm the service power supply capacity of the main unit or extension unit is more than the total value of the current consumption of the GOT, extension blocks and special function blocks.

#### 4.2 Using External Power Supply

**Note:**
- Attach the GOT to the 24V DC external power supply. Even if instantaneous power interruption of less than 5 ms occurs, the GOT continues to operate. When power interruption for a considerable period of time or voltage drop occurs, the GOT stops its operation. However, when the power supply is recovered, the GOT automatically restarts its operation. (The screen displayed just after recovery is determined by the working environment originally set.)

#### 5. Maintenance

**Caution:**
- Correctly connect the battery for memory backup. Never charge, disassemble, heat, burn or short-circuit the battery. If the battery is handled in such a way, fire may be caused.
- Always power OFF and remove the GOT from the panel before starting the replacement of the backlight and battery. If this is not the case, the backlight may be dropped and subsequently cause injury, or electrical shock may be sustained.
- Never disassemble or modify the GOT. Disassembly or modification may cause failure, malfunction or fire. For repair, please, contact a service representative.

**Note:**
- Turn OFF the power, before connecting/disconnecting cables. Connecting/disconnecting cables while the power is turned on will cause failure or malfunction.
- When repairing the liquid crystal screen, please, contact a service representative.

##### 5.1 Battery Replacement

When the battery voltage drops, a control device (system information) set by the screen design software turns ON. The control device interlocks with an auxiliary relay in the PLC. It is recommended to provide a lamp while utilizing the output of the PLC so that voltage drop can be monitored outside the GOT.

For details of control devices, refer to the GOT-F900 Series Operation Manual.

**Note:**
- For approximately one month after the control device for battery voltage drop turns ON, the battery will back up the alarm history, sampling and the current time. When the control device (system information) turns ON, replace the battery (FX2NC-32BL) as soon as possible. The screen data is stored in the flash memory, therefore, the screen data will remain even after severe battery voltage loss.

#### 6. Label Insert

The clear plastic sheet for labeling Function keys can be replaced from the rear of the GOT. Clarify the user defined key name and operation by using this label.

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**MITSUBISHI ELECTRIC CORPORATION**

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**Manual number:** JY997D02501

**Manual revision:** D

**Date:** Sep. 2008

**HEAD OFFICE**

**HIMEJI WORKS**

1010, CHIYODA CHI, NISHINAGAHARA-CHI, HIMEJI, HYOGO, JAPAN

**WARRANTY**

Mitsubishi will not be held liable for damage caused by factors found not to be the cause of Mitsubishi; opportunity loss or loss 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].
3. Installation

**Warning:**
- Do not mount the GOT in an environment that contains dust, soot, corrosive or conductive dust, corrosive or flammable gas, or expose the unit to high temperatures, dew condensation, direct sunlight, rain, wind or impact and vibration.
- If the GOT is used in such a place, electrical shock, fire, malfunction, damages or deterioration may occur.
- Never cut mounting or electric wire chips into the ventilation window of the GOT when drilling screw holes or performing wiring. Such chips may cause fire, failure or malfunction.
- Turn off the power before securely connecting any cables. Poor connection may cause malfunction.

The GOT is designed to be mounted in a panel. Install it using the following procedure:

1) Preparing the panel surface.
- On the panel surface, cut a rectangular mounting slot with the dimensions shown on the right. At this time, a space of 10 mm is required at each of the top and bottom sides of the slot, inside the panel for metal fixtures as shown in "4) Dimensions required inside the panel for installation."

2) Inserting the GOT into the panel surface.
- Attach the panel surface mounting slot to the GOT. Insert the GOT from the front face of the panel surface.
   - a) Packing seal
   - b) GOT
   - c) Mounting slot

3) Fixing the GOT.
- Put hooks of the mounting brackets (supplied) in the mounting holes of the GOT. Tighten mounting bolts (also supplied) until the GOT is securely fixed. Fix mounting bolts in all four positions, above and below the GOT.
   - a) Clamping bolt
   - b) Mounting bracket

Note: Make sure that the thickness of the panel surface is no more than 5 mm (0.20”).

4. Power Supply Wiring

**Caution:**
- Use an external power supply to provide 24V DC. The service power supply capacity of the programmable controller cannot be used. Confirm the service power supply capacity of the main unit or extension unit is more than the total value of the current consumption of the GOT, extension blocks and special function blocks.
- Even if instantaneous power interruption of less than 5 ms occurs, the GOT continues to operate. When power interruption for a considerable period of time or voltage drop occurs, the GOT stops its operation. However, when the power supply is recovered, the GOT automatically restarts its operation. (The screen displayed just after recovery is determined by the working environment originally set.)

**Note:**
- Use an external power supply to provide 24V DC.
- The service power supply capacity of the programmable controller cannot be used.

4.1 Using Service Power Supply of PLC

4.2 Using External Power Supply

**Caution:**
- Insure correct termination of the DC power source, incorrect connection may result in unit failure or serious damage to the GOT.
- Attach a 5 A fuse to the 24V DC power supply.
- Perform grounding (100Ω or less) with an electric wire of at least 1.25 mm². Never perform common grounding of the GOT and a strong power system.

**Note:**
- Use the external power supply to provide 24V DC. The service power supply capacity of the programmable controller cannot be used.
- Confirm the service power supply capacity of the main unit or extension unit is more than the total value of the current consumption of the GOT, extension blocks and special function blocks.
- Even if instantaneous power interruption of less than 5 ms occurs, the GOT continues to operate. When power interruption for a considerable period of time or voltage drop occurs, the GOT stops its operation. However, when the power supply is recovered, the GOT automatically restarts its operation. (The screen displayed just after recovery is determined by the working environment originally set.)

5. Maintenance

**Cautions:**
- Correctly connect the battery for memory backup. Never charge, disassemble, heat, burn or short-circuit the battery. If the battery is handled in such a way, or fire may be caused.
- Always power OFF and remove the GOT from the panel before starting the replacement of the backlight and battery. If this is not the case, the backlight may be dropped and subsequently cause injury, or electrical shock may be sustained.
- Never disassemble or modify the GOT. Disassembly or modification may cause failure, malfunction or fire. For repair, please, contact a service representative.
- When repairing the liquid crystal display, please, contact a service representative.

5.1 Battery Replacement

When the battery voltage drops, a control device (system information) set by the screen design software turns ON. The control device interlocks with an auxiliary relay in the PLC. It is recommended to provide a lamp while utilizing the output of the PLC so that voltage drop can be monitored outside the GOT. For details of control devices, refer to the GOT-F900 Series Operation Manual.

**Note:**
- For approximately one month after the control device for battery voltage drop turns ON, the battery will back up the arm history, sampling and the current time. When the control device (system information) turns ON, replace the battery (FX2NC-32BL) as soon as possible.

The screen data is stored in the flash memory; therefore, the screen data will remain even after severe battery voltage loss.

6. Label Insert

The clear plastic sheet for labeling Function keys can be replaced from the rear of the GOT. Clarify the user defined key name and operation by using this label.
1. Introduction

The F930GOT-K-E (hereafter called "GOT") is to be mounted on the face of a control panel or operations panel, and connected to the programming CPU (port c) or the communication port (communication port) of a PLC. Various devices can be monitored and PLC data changed via the GOT. Separate display screens are built-in to the GOT, and additional personalized screens can be created by the user.

1) The GOT can connect to MELSEC FX, A, QnA and Q PLCs as well as a host of third party manufacturer's units. Further information can be found in GOT-F900 Series Hardware Specifications Manual.

2) PLC user programs can be downloaded, uploaded and monitored using programming software GX-Developer or FX-PCS-WIN-E on a personal computer via the GOT. Further information can be found in the GOT-F900 Series Operation Manual.

3) GOT, screens are created using the following software:

- GT Designer2
- SWIDCSC-GTD-E (Indicates version)
- WIDCSC-GTD-R (Indicates version)
- FPC-DCU-WIN-E (Indicates version)

Software Name Description
GOT-F900 and GOT-A900 Series (for Windows) screen creation software.
GOT-F900 and GOT-A900 Series (for Windows) screen creation software.
GOT-F900 Series (for Windows) screen creation software. SPWPC-FDUX-WIN-E version 2.70 or later

1.1 Product Lists

Production Name Description
FX-50DU-CAB0 Communication cable (GOT CPU port in FXn, FXs, FXnQ, FXnU, FXnS or FXQn series PLC) The connector on the GOT side is wired straight through. Cable length is 3m (9’ 10”).
FX-50DU-CAB EN The connector on the GOT side is wired straight through. Use the FX-50DU-CAB0/EN for compliance with EC EMC.
FX-50DU-CAB-“M” The connector on the GOT side is wired straight through. * M: Cable length, 1M: 1m (3’ 3”), 10M: 10m (32’ 9”), 20M: 20m (65’ 7”), 30M: 30m (98’ 6”)
FX-40DU-CAB Communication cable (GOT CPU port in A or QnA series PLC) The connector on the GOT side is wired straight through. Cable length is 3m (9’ 10”).
FX-40DU-CAB-“M” The connector on the GOT side is wired straight through. * M: Cable length, 1M: 1m (3’ 3”), 10M: 10m (32’ 9”), 20M: 20m (65’ 7”), 30M: 30m (98’ 6”)
DC03R0 GOT Series graphic operation terminals, GT Designer2 and FX-PCS-DUWIN-E.
FX-232DCAB-1 Data exchange cable (GOT Personal computer-9pin D-sub)
GOT-F900GOT Database protection sheet for F930GOT (5 pieces)

Caution

During abnormal communication (including cable breakages) when monitoring within the GOT, communication between the GOT and programmable controller CPU is interrupted. It is then impossible to operate switches on devices via the PLCs via the GOT. Communication and normal operation resumes when the GOT system is correctly configured. DO NOT configure emergency stop or safety features to operate through the GOT, and be sure that there is no adverse consequences in the event of a GOT - PLC communications malfunction.

Note:

- Do not lay signal cables near high voltage power cables or allow them to share the same trunking duct, otherwise, effects of noise or surge induction are likely to occur. Keep a safe distance of more than 100 mm from these wires.
- Operate touch switches on the display screen with hand.
- DO NOT use excessive force, or attempt to operate them with hard or pointed objects. The tip of a screw driver, pen or similar object for example may break the screen.
- Must be free of lamp black, corrosive gas, flammable gas, or excessive ignition atmosphere
- Packing seal (accessory)
- Communication cable (optional)
- DC power supply terminal (M03)
- Label insert
- Packing seal (accessory)

2. Specifications

2.1 General Specifications

- Operating Temperature: 0 ~ 50 °C (32 ~ 122 °F)
- Storage Temperature: -20 ~ 60 °C (-4 ~ 140 °F)
- Humidity: 85% Relative Humidity, No condensation
- Must be free of lamp black, corrosive gas, flammable gas, or excessive ignition atmosphere
- Shock Resistance: 474ms2 Acceleration, 3 times in each direction, X, Y and Z
- Noise Immunity: EFT 100 V-μs pulse, min. 600 – 1000 Hz, tested by noise simulation
- Electrically Stable Voltage: 500 V AC, 1 min. tested between power terminals and ground
- Insulation Resistance: 5 MΩ at 500 V DC, tested between power terminals and ground
- Surge: overvoltage resistance of 100 kΩ or less.
- Protection: IP65 level

2.2 Power Supply Specifications

- Power Supply Voltage: 24 V DC ±10% -15%
- Power Supply Ripple: 200 mA or less
- Current Ratings: 220 mA at 24V DC 
- Power Supply Failure period: 5 ms or less before the GOT will shut down
- Battery: Built-in, Fx35-V32B, lithium battery (Approximately 3 years battery life)

Specifications

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3. Installation

Note:
- Do not mount the GOT in an environment that contains dust, soot corrosive or conductive dust, corrosive or flammable gas, or expose the unit to high temperatures, dew condensation, direct sunlight, rain, wind or impact and vibration. If the GOT is used in such a place, electrical shock, fire, malfunction, damages or deterioration may occur.
- Never drop cutting chips or electric wire chips into the ventilation window of the GOT when drilling screw holes or performing wiring. Such chips may cause fire, failure or malfunction.
- Turn off the power before securely connecting any cables. Poor connection may cause malfunction.

The GOT is designed to be mounted in a panel. Install it using the following procedure:

1) Preparing the panel surface. On the panel surface, cut a rectangular mounting slot with the dimensions shown on the right. At this time, a space of 10 mm is required at each of the top and bottom sides of the slot, inside the panel for metal fixtures as shown in "4) Dimensions required inside the panel for installation."

2) Inserting the GOT into the panel surface. Attach the packing seal to the GOT, and insert the GOT from the front face of the panel surface.
   a) Packing seal
   b) GOT
   c) Mounting slot

3) Fixing the GOT. Put hooks of the mounting brackets (supplied) in to the mounting holes of the GOT. Tighten mounting bolts (also supplied) until the GOT is securely fixed. Fix mounting bolts in all four positions, above and below the GOT.
   a) Clamping bolt
   b) Mounting bracket

4) Peeling of protective sheet. Make sure to peel off the protective sheet on the surface of the product before use.

Dimensions required inside the panel for installation.
When installing the GOT, make sure that the inner dimensions shown on the right are available.
- PLC connection cable
- Packing seal

4. Power Supply Wiring

Caution: Do not apply power off in all phases of power before installation or wiring to avoid electric shock or serious damage to the product.

Note:
- Wire the power supply using electric wires of 0.75 mm² or more so that voltage drop will not occur. Use M3 size crimp style terminals. Securely tighten crimp style terminals with a torque of 0.5 ~ 0.8 N-m so that errors can be avoided.
- Ensure correct termination of the DC power source, incorrect connection may result in unit failure or serious damage to the GOT.
- Attach a 2 A fuse to the 24V DC power supply.
- Perform grounding (100Ω or less) with an electric wire of at least 1.25 mm². Never perform common grounding of the GOT and a strong power system.

5. Maintenance

Caution:
- Correctly connect the battery for memory backup. Never charge, disassemble, heat, burn or short-circuit the battery. If the battery is handled in such a way, fire may be caused.
- Always power OFF and remove the GOT from the panel before starting the replacement of the backlight and battery. If this is not the case, the backlight may be dropped and subsequently cause injury, or electrical shock may be sustained.
- Never disassemble or modify the GOT. Disassembly or modification may cause failure, malfunction or fire. For repair, please, contact a service representative.

Note:
- Turn OFF the power, before connecting/disconnecting cables. Connecting/disconnecting cables while the power is turned on will cause failure or malfunction.

5.1 Battery Replacement
When the battery voltage drops, a control device (system information) set by the screen design software turns ON. The control device interlocks with an auxiliary relay in the PLC. It is recommended to provide a lamp while utilizing the output of the PLC so that voltage drop can be monitored outside the GOT.

For details of control devices, refer to the GOT-F900 Series Operation Manual.

Note:
- For approximately one month after the control device for battery voltage drop turns ON, the battery will back up the alarm history, sampling and the current time. When the control device (system information) turns ON, replace the battery (FXlite-32BL) as soon as possible.

The screen data is stored in the flash memory, therefore, the screen data will remain even after severe battery voltage loss.

5.1.1 Replacement Procedure
1) Turn off the power to the GOT and remove the battery holder cover.
2) Remove the existing battery from the battery holder, and disconnect.
3) Within 30 seconds, connect a new battery.
4) Insert the new battery into the battery holder, and attach the cover.

6. Label Insert

The clear plastic sheet for labeling Function keys can be replaced from the rear of the GOT. Clarify the user defined key name and operation by using this label.

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 : JY99TD52501
Manual revision: D
Date: Sep. 2008