FX3G-2AD-BD INSTALLATION MANUAL

1. Outline
The FX3G-2AD-BD boards for analog input (hereafter called 2AD-BD) is an expansion board for the Mitsubishi FX3G PLC series. It is used for communication with a PLC in the same PLC series. Details of the specifications are described in the appendix.

1.1 Incorporated items
- FX3G-2AD-BD board
- Manual
- Terminal block to connect analog input (2AD-BD type)
- Connector cover

1.2 External Dimensions, Part Names

2. Installation

2.1 Application and Cable Terminal Tightening Torque

2.2 Wiring

3. Wiring

4. Specifications

4.1 Applicable PLC

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6. How to order manuals

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Applicable standards

Marketing inquiry

1.3 Cautions

2.3 Wiring of Analog Input

4.4 List of Special Devices

5.4 List of Special Devices

6.5 Notes
3.2 Wiring of Analog Input  

### 3.2.1 Setting (channel number)  
- **b1** is the channel number. Set the channel number to 'O' to '7' sequentially.  
- For the analog input, set the channel number to 'O' to '3'.  
- The channel number can be used in the PLC. Set all channel numbers to be as small as possible.

### 3.2.2 Setting (range)  
- **b2** is the range. Set the range to 'O' to '15' sequentially.  
- For the analog input, set the range to 'O' to '3'.  
- The setting should be used in the PLC. Set all ranges to be as small as possible.

### 3.2.3 Setting (power)  
- **b3** is the power. Set the power to 'O' to '15' sequentially.  
- For the analog input, set the power to 'O' to '3'.  
- The setting should be used in the PLC. Set all powers to be as small as possible.

### 3.2.4 Setting (direction)  
- **b4** is the direction. Set the direction to 'O' to '3' sequentially.  
- For the analog input, set the direction to 'O' to '3'.  
- The setting should be used in the PLC. Set all directions to be as small as possible.

### 3.3 Grounding  
- Grounding should be performed as specified below.  
- The grounding resistance should be 100 ohms or less.  
- The grounding circuit should be placed in the PLC, and all grounding circuits should be as small as possible.
## 1. Outline

The FX3G-2AD-BD has an analog input and output terminal block. It can be used as an analog I/O extension device.

### 1.1 Incorporated Items

- **2-channel analog input (2AD-BD)**
- **2-channel analog output (2AD-BD)**

### 1.2 External Dimensions, Part Names

![Diagram of external dimensions and part names]

- **List of points (1-pole)**
  - Connector cover is mounted.
  - AP: 50 (50.3) mm

### 1.3 Applicable Cable and Terminal Tightening Torque

- **Recommended wire size**: AWG 22-20 (0.3-0.5 mm²)

### 1.4 Specifications

#### 4.1 Applicable PLC

<table>
<thead>
<tr>
<th>Model name</th>
<th>FX3U-2AD-BD</th>
<th>FX3U-2AD-2BD</th>
<th>FX3U-2DA-BD</th>
</tr>
</thead>
<tbody>
<tr>
<td>FX3G PLC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FX3G-1PLC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FX3G-2PLC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FX3G-3PLC</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### 4.4 List of Special Devices

<table>
<thead>
<tr>
<th>Device number</th>
<th>Description</th>
<th>U/W</th>
</tr>
</thead>
</table>

### 4.5 Performance Specifications

#### 4.5.1 Analog Input

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input voltage range</td>
<td>0V - 10V (FX3G)</td>
</tr>
<tr>
<td>Output voltage range</td>
<td>0V - 10V</td>
</tr>
</tbody>
</table>

#### 4.5.2 Analog Output

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output current range</td>
<td>0A - 20mA</td>
</tr>
<tr>
<td>Output voltage range</td>
<td>0V - 10V</td>
</tr>
</tbody>
</table>

## 2. Installation

### 2.1 WARNING

Make sure to use all pieces of the plug-in type relay externally, before observing any installation or wiring work. Make sure to use all pieces of the plug-in type relay externally, before observing any installation or wiring work.

### 2.2 Installation PRECAUTIONS

- **Always perform the installation work while observing the following precautions.**
- **Always install the device in a purchaseable state.**
- **Always forward it to the end user.**
- **Always install it to the end user.**

### 2.3 Applicable Cable and Terminal Tightening Torque

#### 2.3.1 Terminal block (European type)

- **Note**: This symbol mark is for China only.

### 2.4 Wiring PRECAUTIONS

- **Always perform the installation work while observing the following precautions.**
- **Always install the device in a purchaseable state.**
- **Always forward it to the end user.**
- **Always install it to the end user.**

## 3. Wiring

### 3.1 Wiring PRECAUTIONS

- **Always perform the installation work while observing the following precautions.**
- **Always install the device in a purchaseable state.**
- **Always forward it to the end user.**
- **Always install it to the end user.**

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**Note:** This symbol mark is for China only.

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**More information on the FX3G-2AD-BD can be found in the user's manual.**