1. Outline

FX3U-ENET-ADP is an Ethernet adapter for the FX3G/FX3U/FX3GC/FX3UC Series PLC that is compliant with 100BASE-TX/10BASE-T and has the features as follows.

1) Users can read and write data and programs from/to the PLC using MELSOFT products such as GX Works2 with your nearest Mitsubishi product provider.
2) Users can develop custom software to communicate with the PLC by using MC (Mitsubishi Communications) protocol (A-series, normal detail, for details, refer to user’s manual). (TCP/IP or UDP/IP)
3) The FX3U-ENET-ADP can be connected directly (simple connection) to GX Works2 with only one Ethernet cable without using the hub.
4) Users can search “FX3U-ENET-ADP” + Main unit connected in the network using the first CPU function of GX Works2.
5) The FX3U-ENET-ADP can automatically set the time of the main unit using the time setting function.
6) The FX3U-ENET-ADP parameter can be set easily using GX Works2.
7) The diagnostic functions of GX Works2 enables easy diagnostics and troubleshooting of the parts of GX Works2.
8) Users can monitor the information and device values stored in the main unit and FX3U-ENET-ADP from a browser in a personal computer using the data monitoring function.

1.1 Incorporated Items

Verify that the following product and items are included in the package:

Product: FX3U-ENET-ADP Ethernet communication special adapter

Accessories: Installation Manual (This manual)

1.2 External Dimensions and Each Part Names

2. Installation

For installation details, refer to the following manuals.

To refer to the FXU-ENET-ADP User’s Manual.

INSTALLATION PRECAUTIONS

1) Make sure to cut off all phases of the power supply externally before attempting installation work.
2) Failure to do so may cause electric shock.

INSTALLATION PRECAUTIONS

• Use the product within the generic environment specifications described in PLC main unit manual (Hardware Edition).
• Never use the product in areas with excessive dust, oil, smoke, conductive fluids, salt air, CO2, H2SO4 or NO2, flammable gas, vibration or impacts, or expose it to high temperature, condensation, or rain water.
• If the product is used in such conditions, electric shock, fire, malfunctions, deterioration or damage may occur.
• Do not touch the conductions of the product directly.
• Do making cause device failures or malfunctions.
• Do not connect equipment using a DIN rail or mounting screws.
• Install the product on a flat surface.
• If the mounting surface is rough, undue force will be applied to the PC board, thereby causing noncompliance.
• When drilling screw holes or wiring, make sure that cutting and wiring operations do not enter the ventilation slots.
• Failure to do so may cause fire, equipment failures or malfunctions.
• Connect with FX3U-ENET-ADP securely to special adapter connector.
• Loose connections may cause malfunctions.

2.1 Connection to the PLC

A connector conversion adapter is required to connect the special adapters with FX3U-ENET-ADP. An expansion board is required to connect the special adapters with the FX3U, FX3GC, FX3US, FX3UC, and FX3UC-10B-T.

For installation method to PLC, refer to the PLC main unit manual.

Connection precautions:

Only one FX3U-ENET-ADP unit can be connected in the final stage (leftmost position) of the main unit, special adapter, etc.

Connect all the high-speed I/O special adapters before connecting other special adapters when they are used in combination.

Do not connect an expansion I/O special adapter on the left side of any special adapters other than other high-speed I/O special adapters.

2.2 Mounting

The product is mounted by the following method.

• DIN rail mounting

For details, refer to the respective PLC manuals.
3. Wiring

**3.1 Applicable Connector and Cable**

- **RJ45** type modular jack
- **Category 5 or better (STP cable)**

**3.2 Pin Configuration**

<table>
<thead>
<tr>
<th>Pin No.</th>
<th>Signal</th>
<th>Direction</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>TD+</td>
<td>Out</td>
<td>+ of sending data</td>
</tr>
<tr>
<td>2</td>
<td>TD-</td>
<td>Out</td>
<td>- of sending data</td>
</tr>
<tr>
<td>3</td>
<td>RD+</td>
<td>In</td>
<td>+ of receiving data</td>
</tr>
<tr>
<td>4</td>
<td>RD-</td>
<td>In</td>
<td>- of receiving data</td>
</tr>
<tr>
<td>5</td>
<td>RC</td>
<td>In</td>
<td>- of receiving data</td>
</tr>
<tr>
<td>6</td>
<td>RS</td>
<td>In</td>
<td>- of receiving data</td>
</tr>
</tbody>
</table>

**3.3 Grounding**

- **3.1.1 Applicable connector**
- **3.1.2 Pin Configuration**
- **3.1.3 Applicable cable**
- **3.2 Grounding**

**Terminal block arrangement**

<table>
<thead>
<tr>
<th>Terminal name</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grounding wire</td>
<td>(Ground terminal)</td>
</tr>
<tr>
<td>Ground cable</td>
<td></td>
</tr>
<tr>
<td>Electric wire size</td>
<td>0.5 to 1.5mm² (AWG20 to 16)</td>
</tr>
<tr>
<td>Terminal screw</td>
<td>M2.5</td>
</tr>
</tbody>
</table>

**Grounding wire**

- Ethernet plug modular jack (RJ45)
- **FX3U**

**3.4 Specification**

For details on specifications, refer to the following manual.

→ FX3U-ENET-ADP User’s Manual

**4. Related software**

- **GX Works2**
- **MELSOFT**

**5. Disposal**

- Please contact a certified electronic waste disposal company for environmentally safe recycling and disposal of your device.

**6. Functions**

- **Communication Using MC Protocol**
- **MELSOFT Direct Connection (Simple Connection)**

**4.4 Power Supply Specification**

**Type**

- **MELSOFT connections**
- **Data transmission speed** 100Mbps/100Mbps
- **Communication method** Full-duplex/Half-duplex
- **Transmission method** Base band
- **Maximum segment length** 100m (328.1')

<table>
<thead>
<tr>
<th>Number of simultaneously open connections allowed</th>
<th>MELSOFT connection + MC protocol + Data monitoring &lt;= 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of connectable units to the main unit</td>
<td>1 per 2</td>
</tr>
</tbody>
</table>

**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 other Mitsubishi products; and to other duties.

For safe use

- This product has been manufactured as a general-purpose part for general industries, and has not been designed or manufactured to be incorporated in a device or system used in purposes related to human life.
- Before using the product for special purposes (such as communication boards and other communication special adapters).
- This product has been manufactured under strict quality control. However when installing the product where major accidents or losses could occur, if the product fails, install appropriate backup or failsafe functions in the system.