2. Wiring

2.1 Applicable Cable and Connector

For the following tables, refer to the connectable cables and connectors for a PROFIBUS-DP network.

2.2 Wire to PROFIBUS-DP network

Use the PROFIBUS connector and standard tested PROFIBUS cable complying with EN 50170.

3.3 Grounding

Ground the cable as stated here.

3.4 Bus Terminator

The losses of the following table are in order to prevent noise and ensure the power supply for the PLC under the influence of noise.

4. Specifications

4.1 Applicable PLC

The following table shows the applicable PLCs in order to ensure the system operation even during such power supply problems, communication and overvoltage during power-on or power-off, and thermal stress during power-off.

4.2 General Specifications

The following table shows the applicable PLC in order to ensure the system operation even during such power supply problems, communication and overvoltage during power-on or power-off, and thermal stress during power-off.

4.3 Power Supply Specifications

The following table shows the applicable power supply in order to ensure the system operation even during such power supply problems, communication and overvoltage during power-on or power-off, and thermal stress during power-off.

4.4 Maximum Bus Length and Baud Rate

The following table shows the applicable maximum bus length and baud rate in order to ensure the system operation even during such power supply problems, communication and overvoltage during power-on or power-off, and thermal stress during power-off.

5. Installation

5.1 Connection with PLC

The following table shows the applicable maximum bus length and baud rate in order to ensure the system operation even during such power supply problems, communication and overvoltage during power-on or power-off, and thermal stress during power-off.

5.2 Mounting

The following table shows the applicable maximum bus length and baud rate in order to ensure the system operation even during such power supply problems, communication and overvoltage during power-on or power-off, and thermal stress during power-off.

5.3 DIN Rail Mounting

The following table shows the applicable maximum bus length and baud rate in order to ensure the system operation even during such power supply problems, communication and overvoltage during power-on or power-off, and thermal stress during power-off.
1. Introduction

The FX3U-32DP PROFIBUS-DP Interface Block (hereafter called the "32DP") enables one to connect the FX3U Series 32-point PLC to the PROFIBUS-DP network. The 32DP can be mounted on the PLC either in the field or in the PLC terminal compartment. The 32DP uses the PROFIBUS-DP interface block of the 32DP instead of the PROFIBUS-DP interface block of the 32DP-3DP. This manual describes the 32DP and the applicable cables and connectors. For details, refer to "FX3G Series User's Manual - Hardware Edition" (TP-P011000-00-00-E) and "FX3UC Series User's Manual - Hardware Edition" (TP-P011001-00-00-E).

2. Installation

2.1 Connection with PLC

The 32DP can be mounted on a DIN rail (DIN46227, 35mm width) in the following manner:

1) Fit the upper edge of the DIN rail inside the mounting hole of the 32DP.
2) Push the product onto the DIN rail.

2.2 DIN Rail Mounting

2.2.1 Precautions for DIN Rail Mounting

- The DIN rail must be securely fastened to the main circuit, high-voltage line, or load line.
- If a DIN rail is already installed, refer to the MELSEC iQ-F FX5U User's Manual (Hardware) for details.
- For details of the DIN rail, refer to the Mitsubishi Electric dealer you purchased the product from.

2.3 Wiring

2.3.1 Applicable Cable and Connector

The following table shows the most commonly used cables and connectors for a PROFIBUS-DP network:

<table>
<thead>
<tr>
<th>Model name</th>
<th>Model code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROFIBUS-DP Interface Block</td>
<td>JY997D55801</td>
<td>PROFIBUS-DP Interface Block</td>
</tr>
<tr>
<td>PROFIBUS-DP Interface Block (Hardware)</td>
<td>JY997D16501</td>
<td>PROFIBUS-DP Interface Block (Hardware)</td>
</tr>
</tbody>
</table>

2.3.2 Precautions for Wiring

- Make sure to insulate all cables and connections to avoid electrical shock.
- The wire gauge and cable insulation must be suitable for the intended purpose.
- Use of the wrong wire size may result in overheating or damage to the equipment.

3. Specifications

3.1 Applicable Cable and Connector

The following table shows the most commonly used cables and connectors for a PROFIBUS-DP network:

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</table>

3.2 Equipment requirements and rules

- The system must be protected against electrical shock and abnormal conditions.
- Use of the wrong wire size may result in overheating or damage to the equipment.
- Use of the wrong wire size may result in overheating or damage to the equipment.

4. Applications

4.1 Application Examples

The following examples illustrate how to use the 32DP in various applications:

- In a manufacturing environment, the 32DP can be used to control and monitor various processes.
- In a HVAC environment, the 32DP can be used to control and monitor temperature and humidity.

5. Troubleshooting

5.1 Common Problems

- If the 32DP does not operate as expected, check the following:
- The power supply is connected correctly.
- All connections are secure.

6. Maintenance

6.1 General Maintenance

- Regular maintenance is necessary to ensure the proper operation of the 32DP.
- Use a clean, dry cloth to wipe off dust and debris.

7. Accessories

7.1 Optional Accessories

- The following accessories are available for the 32DP:
- Additional PROFIBUS-DP Interface Blocks
- Additional Wiring Harnesses

8. Troubleshooting

8.1 Common Problems

- If the 32DP does not operate as expected, check the following:
- The power supply is connected correctly.
- All connections are secure.

9. Glossary

- PROFIBUS-DP: A high-speed, fieldbus system for industrial automation.
- PLC: Programmable Logic Controller.

10. Legal Notice

- Mitsubishi Electric Corporation is not responsible for any damages or losses resulting from the use of the 32DP.
- The 32DP is not intended for use in life-supporting systems.

11. Warranty

- Mitsubishi Electric Corporation warrants the 32DP to be free from defects in material and workmanship for a period of one year from the date of shipment.

12. Export Regulations

- Export of the 32DP is subject to the regulations of the country of origin.

13. Technical Support

- For technical support, contact the Mitsubishi Electric dealer you purchased the product from.

14. Environmental Information

- The 32DP is manufactured under strict environmental regulations.
- For information on the recycling of the 32DP, contact the Mitsubishi Electric dealer you purchased the product from.

15. End User License Agreement

- By using the 32DP, you agree to the terms and conditions of the End User License Agreement.

16. Contact Information

- For customer inquiries, contact the Mitsubishi Electric dealer you purchased the product from.

17. Legal Information

- The 32DP is manufactured under strict quality control.
- Mitsubishi Electric Corporation is not responsible for any damages or losses resulting from the use of the 32DP.

18. Limitation of Liability

- Mitsubishi Electric Corporation is not responsible for any damages or losses resulting from the use of the 32DP.
2. Wiring

2.1 Applicable Cable and Connector

For the following interfaces, use the Yokogawa's connectable cable complying with the EN50170 standard. For PROFIBUS connectable use the PROFIBUS connector and Yokogawa's standard tested PROFIBUS cable complying with EN50170.

2.2 Wiring

For PROFIBUS FCS connect the PROFIBUS FCS network, use the PROFIBUS connector and standard tested PROFIBUS cable complying with EN50170.

3. 3. Wiring

Ground the cable as stated below.

Ground the cable as stated below.

Ground to the control cabinet with the thickest possible grounding cable.

1) Most importantly, have the following: an emergency stop circuit, a protection system operation even during external power supply problems, communication power supply for the entire network, and protection against overcurrents and short-circuiting.

2) Install the product on a flat surface. If the mounting surface is rough, undue vibration or impacts, or expose it to high temperature, condensation, or rain or dusts, corrosive gas (salt air, Cl2, H2S, SO2 or NO2), flammable gas, equipment failure, or electric shock, or failure may result in wire damage/breakage or PLC failure.

3) Before modifying or disrupting the program in operation or running the PLC, failure may cause electric shock or malfunctions.

4) Installing, removing, or replacing the parts while the PLC is running may cause electric shock or malfunctions.

5) If the product is used in such conditions, electric shock, fire, malfunctions, damage, equipment failure, or electric shock, or failure may result in wire damage/breakage or PLC failure.

6) If the product is used in such conditions, electric shock, fire, malfunctions, damage, equipment failure, or electric shock, or failure may result in wire damage/breakage or PLC failure.

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