Upon receipt of the product and prior to initial operation, read these instructions thoroughly, and retain for future reference.

MOTOMAN INSTRUCTIONS

MOTOMAN-□□□ INSTRUCTIONS
DX200 INSTRUCTIONS
DX200 OPERATOR’S MANUAL (for each purpose)
DX200 MAINTENANCE MANUAL

The DX200 Operator’s manual above corresponds to specific usage. Be sure to use the appropriate manual.
MANDATORY

• This manual explains the DeviceNet Safety of the DX200. Read this manual carefully and be sure to understand its contents before handling the DX200.
• General items related to safety are listed in Chapter 1: Safety of the DX200 Instructions. To ensure correct and safe operation, carefully read the DX200 Instruction before reading this manual.

CAUTION

• Some drawings in this manual are shown with the protective covers or shields removed for clarity. Be sure all covers and shields are replaced before operating this product.
• The drawings and photos in this manual are representative examples and differences may exist between them and the delivered product.
• YASKAWA may modify this model without notice when necessary due to product improvements, modifications, or changes in specifications. If such modification is made, the manual number will also be revised.
• If your copy of the manual is damaged or lost, contact a YASKAWA representative to order a new copy. The representatives are listed on the back cover. Be sure to tell the representative the manual number listed on the front cover.
• YASKAWA is not responsible for incidents arising from unauthorized modification of its products. Unauthorized modification voids your product’s warranty.
We suggest that you obtain and review a copy of the ANSI/RIA National Safety Standard for Industrial Robots and Robot Systems (ANSI/RIA R15.06-2012). You can obtain this document from the Robotic Industries Association (RIA) at the following address:

Robotic Industries Association
900 Victors Way
P.O. Box 3724
Ann Arbor, Michigan 48106
TEL: (734) 994-6088
FAX: (734) 994-3338
www.roboticsonline.com

Ultimately, well-trained personnel are the best safeguard against accidents and damage that can result from improper operation of the equipment. The customer is responsible for providing adequately trained personnel to operate, program, and maintain the equipment. NEVER ALLOW UNTRAINED PERSONNEL TO OPERATE, PROGRAM, OR REPAIR THE EQUIPMENT!

We recommend approved Yaskawa training courses for all personnel involved with the operation, programming, or repair of the equipment.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.
# Notes for Safe Operation

Read this manual carefully before installation, operation, maintenance, or inspection of the DX200.

In this manual, the Notes for Safe Operation are classified as “DANGER”, “WARNING”, “CAUTION”, “MANDATORY”, or “PROHIBITED”.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="DANGER" /></td>
<td>Indicates a imminent hazardous situation which, if not avoided, could result in death or serious injury to personnel.</td>
</tr>
<tr>
<td><img src="image" alt="WARNING" /></td>
<td>Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury to personnel.</td>
</tr>
<tr>
<td><img src="image" alt="CAUTION" /></td>
<td>Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury to personnel and damage to equipment. It may also be used to alert against unsafe practices.</td>
</tr>
<tr>
<td><img src="image" alt="MANDATORY" /></td>
<td>Always be sure to follow explicitly the items listed under this heading.</td>
</tr>
<tr>
<td><img src="image" alt="PROHIBITED" /></td>
<td>Must never be performed.</td>
</tr>
</tbody>
</table>

Even items described as “CAUTION” may result in a serious accident in some situations.

At any rate, be sure to follow these important items

**NOTE**

To ensure safe and efficient operation at all times, be sure to follow all instructions, even if not designated as “DANGER”, “WARNING” and “CAUTION”.

---

**PROHIBITED**

- Do not use or keep the board in the following environmental conditions.
  - Where exposed to direct sunshine
  - Where vibration or impact occurs
  - Where high humidity exists
  - Where a strong magnetic field exists
  - Where much dust exists
  - Where a sudden change in the temperature occurs
  - Where corrosive gases occur
  - Where condensation occurs

Improper usage of the board may damage the board.
WARNING

- Before operating the manipulator, check that servo power is turned OFF when the emergency stop buttons on the front door of the DX200 and programming pendant are pressed. When the servo power is turned OFF, the SERVO ON LED on the programming pendant is turned OFF.

Injury or damage to machinery may result if the emergency stop circuit cannot stop the manipulator during an emergency. The manipulator should not be used if the emergency stop buttons do not function.

*Figure 1: Emergency Stop Button*

- Once the emergency stop button is released, clear the cell of all items which could interfere with the operation of the manipulator. Then turn the servo power ON.

Injury may result from unintentional or unexpected manipulator motion.

*Figure 2: Release of Emergency Stop*

- Observe the following precautions when performing teaching operations within the P-point maximum envelope of the manipulator
  - Be sure to use a lockout device to the safeguarding when going inside. Also, display the sign that the operation is being performed inside the safeguarding and make sure no one closes the safeguarding.
  - View the manipulator from the front whenever possible.
  - Always follow the predetermined operating procedure.
  - Keep in mind the emergency response measures against the manipulator’s unexpected motion toward you.
  - Ensure that you have a safe place to retreat in case of emergency.

Improper or unintended manipulator operation may result in injury.

- Confirm that no persons are present in the P-point maximum envelope of the manipulator and that you are in a safe location before:
  - Turning ON the DX200 power
  - Moving the manipulator with the programming pendant
  - Running the system in the check mode
  - Performing automatic operations

Injury may result if anyone enters the P-point maximum envelope of the manipulator during operation. Always press an emergency stop button immediately if there are problems. The emergency stop buttons are located on the right of the front door of the DX200 and the programming pendant.

- Before wiring, be sure to turn OFF the power supply and put up a warning sign, such as “DO NOT TURN ON THE POWER.”

Failure to observe this warning may result in an electric shock or an injury.
WARNING

- Do not touch the inside of the panel for 5 minutes after the power is turned OFF. The remaining charged voltage in the capacitor may cause an electric shock or an injury.
- Be sure to close the door and install the protection cover while the power is turned ON.

Failure to observe this warning may result in a fire or an electric shock.

CAUTION

- Perform the following inspection procedures prior to conducting manipulator teaching. If problems are found, repair them immediately, and be sure that all other necessary processing has been performed.
  - Check for problems in manipulator movement.
  - Check for damage to insulation and sheathing of external wires.
- Always return the programming pendant to the hook on the cabinet of the DX200 after use.

The programming pendant can be damaged if it is left in the manipulator's work area, on the floor, or near fixtures.

Read and understand the Explanation of Warning Labels in the DX200 Instructions before operating the manipulator:
- The wiring and mounting must be performed by authorized and qualified personnel.

Failure to observe this caution may result in a fire or an electric shock.

- Make sure that there is no foreign matter such as metal chips on the board.

In case of malfunction, etc. it may result in an injury or damage the board.

- Make sure that there is no damage or deflection of parts on the board.

In case of malfunction, etc. it may result in an injury or damage the board.

- Correctly connect each cable and connector.

Failure to observe this caution may result in a fire or damage the board.

- Set the switches, etc. correctly.

Malfunction, caused by an incorrect setting, may result in an injury or damage the board.

- Never touch the mounting surfaces of the board parts directly with fingers.

The generated static electricity may damage the IC.

- Never touch the soldered surfaces of the board directly with fingers.

Protrusions on the soldered surface may result in an injury.

- No shock to the board.

The shock may damage the board.
Definition of Terms Used In this Manual

The MOTOMAN is the YASKAWA industrial robot product.

The MOTOMAN usually consists of the manipulator, the controller, the programming pendant, and supply cables.

In this manual, the equipment is designated as follows:

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Manual Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>DX200 controller</td>
<td>DX200</td>
</tr>
<tr>
<td>DX200 programming pendant</td>
<td>Programming pendant</td>
</tr>
<tr>
<td>Cable between the manipulator and the controller</td>
<td>Manipulator cable</td>
</tr>
</tbody>
</table>

Descriptions of the programming pendant, buttons, and displays are shown as follows:

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Manual Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programming Pendant</td>
<td>Character Keys/ Symbol Keys: The keys which have characters printed on them are denoted with [ ]. ex. [ENTER]</td>
</tr>
<tr>
<td></td>
<td>Axis Keys/ Number Keys: “Axis Keys” and “Number Keys” are generic names for the keys for axis operation and number input.</td>
</tr>
<tr>
<td></td>
<td>Keys pressed simultaneously: When two keys are to be pressed simultaneously, the keys are shown with a “+” sign between them, ex. [SHIFT]+[COORD]</td>
</tr>
<tr>
<td></td>
<td>Displays: The menu displayed in the programming pendant is denoted with { }. ex. (JOB)</td>
</tr>
</tbody>
</table>

Description of the Operation Procedure

In the explanation of the operation procedure, the expression "Select • • •" means that the cursor is moved to the object item and the SELECT key is pressed, or that the item is directly selected by touching the screen.

Registered Trademark

In this manual, names of companies, corporations, or products are trademarks, registered trademarks, or brand names for each company or corporation. The indications of (R) and TM are omitted.
Customer Support Information

If you need assistance with any aspect of your DeviceNet Safety system, please contact Motoman Customer Support at the following 24-hour telephone number:

(937) 847-3200

For routine technical inquiries, you can also contact Motoman Customer Support at the following e-mail address:

technical.support@motoman.com

When using e-mail to contact Motoman Customer Support, please provide a detailed description of your issue, along with complete contact information. Please allow approximately 24 to 36 hours for a response to your inquiry.

Please have the following information ready before you call Customer Support:

- System: DeviceNet Safety
- Robots: ___________________________
- Primary Application: ___________________________
- Controller: DX200
- Software Version: Access this information on the Programming Pendant’s LCD display screen by selecting {MAIN MENU} - {SYSTEM INFO} - {VERSION}
- Robot Serial Number: Located on the robot data plate
- Robot Sales Order Number: Located on the DX200 controller data plate

NOTE: Please use e-mail for routine inquiries only. If you have an urgent or emergency need for service, replacement parts, or information, you must contact Motoman Customer Support at the telephone number shown above.
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1 Outline

This manual explains settings and other information required for DeviceNet Safety communication. DeviceNet Safety communication uses SST-DN4-PCU-1 which is a DeviceNet one-channel type board (manufactured by Molex, Inc.). The use of the SST-DN4-PCU-1 board enables safety signals to be transferred to and from the safety PLC on DeviceNet Safety communication.

SST-DN4-PCU-1 attached to the slot 1 can only perform DeviceNet Safety communication.

SST-DN4-PCU-2 (two-channel type board) or SST-DN3-PCU cannot perform DeviceNet Safety communication.

Following is the availability of the combination of the boards attached to each PCI slot.

<table>
<thead>
<tr>
<th>Slot 1</th>
<th>Slot 2</th>
<th>SST-DN4-PCU-1 (DeviceNet Safety)</th>
<th>SST-DN4-PCU-1 (Standard DeviceNet)</th>
<th>SST-DN4-PCU-2 (Standard DeviceNet)</th>
<th>Other field bus boards/Not used</th>
</tr>
</thead>
<tbody>
<tr>
<td>SST-DN4-PCU-1 (DeviceNet Safety)</td>
<td>×</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td></td>
</tr>
<tr>
<td>SST-DN4-PCU-1 (Standard DeviceNet)</td>
<td>×</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td></td>
</tr>
<tr>
<td>SST-DN4-PCU-2 (Standard DeviceNet)</td>
<td>×</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td></td>
</tr>
<tr>
<td>Other field bus boards /Not used</td>
<td>×</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td></td>
</tr>
</tbody>
</table>

NOTE

This manual explains the setting procedures when communicating the DeviceNet (Safety) to the safety PLC manufactured by Rockwell Automation, Inc. For settings, “RSLogix 5000” which is manufactured by Rockwell Automation, Inc., is necessary.
1.1 System Configuration

The safety PLC will be the safety scanner for DeviceNet Safety communication. The DX200 machine safety board will be the safety adapter. The SST-DN4-PCU board relays data between the safety scanner and the safety adapter as the relay board for DeviceNet Safety communication. In addition, the standard master for DeviceNet communication usually works within the safety PLC which is the safety scanner.

The DX200 can activate a standard master and a standard slave for DeviceNet communication at the same time as the safety adapter for DeviceNet Safety communication. In this case, another SST-DN4-PCU board is required. For the details of the standard master and the standard slave for DeviceNet communication, refer to “DX200 OPTIONS DeviceNet COMMUNICATIONS FUNCTION INSTRUCTIONS” (167073-1CD).

When using DeviceNet Safety, the Boot version of the machine safety unit should be 2.00 or more. When the version is lower than 2.00, the alarm 510 software version un-match [30] occurs.

While performing DeviceNet Safety communication, supply communication power (24 V) constantly to the SST-DN4-PCU used as the relay board for the safety adapter. If the supply of communication power is cut off, DeviceNet Safety communication may not be performed again. In this case, turn the DX200 control power supply OFF, and then ON.

With the same channel for the SST-DN4-PCU, the standard master and the standard slave cannot be activated at the same time as the safety adapter.
2 Hardware Specifications

For the information on the SST-DN4-PCU board hardware specifications, refer to “DX200 OPTIONS DeviceNet COMMUNICATIONS FUNCTION INSTRUCTIONS” (167073-1CD).
3 Mounting the SST-DN4-PCU Board

For how to mount the SST-DN4-PCU board, refer to “DX200 OPTIONS DeviceNet COMMUNICATIONS FUNCTION INSTRUCTIONS” (167073-1CD).
4 Setting for DeviceNet Safety

4.1 DX200 Side Settings

4.1.1 Displaying the SST-DN4-PCU Setting Window

In order to use the SST-DN4-PCU board in the DX200, perform the setting of the option board and I/O module in the following manner.

The channel 1 of the SST-DN4-PCU-1 board attached to the PCI slot 1 can only be set as DeviceNet Safety communication.

![Image of SST-DN4-PCU Setting Window]

Perform the following settings in the management mode.

The settings cannot be performed in the operation mode or the edit mode.

4.1.2 Setting of the SST-DN4-PCU-1 Board to Slave

1. Turn ON the power supply while pressing [MAIN MENU].
   - The Maintenance mode starts.

2. Set the security mode to “Management Mode”.

...
3. Select {SYSTEM} under the main menu.
   - The sub menu appears.

4. Select {SETUP}.
   - The SETUP display appears.
5. Select “OPTION BOARD”.
   – The OPTION BOARD display appears.

6. Select “DN4-PCU-1”.
   – The DN4-PCU-1 setup display appears.
4 Setting for DeviceNet Safety
4.1 DX200 Side Settings

– (Explanation of Setup Items)

(1) DN4-PCU-1
   Sets whether to use DeviceNet or not.

(2) SLAVE OR MASTER
   Sets the operation mode for DeviceNet. When using DeviceNet Safety, set the item to SLAVE.

(3) IO SIZE
   Sets the IO size used for the standard IO. When using DeviceNet Safety, set the item to ‘0’.

(4) MAC ID
   Sets the MAC ID.

(5) BAUD RATE
   Sets the baud rate.

(6) SCAN LIST
   “SCAN LIST” is not used for setting the SST-DN4-PCU-1 board to slave.

(7) DeviceNet Safety
   Indicates whether to use safety communication using DeviceNet Safety or not. The setting of this item cannot be changed. (Fixed to “USED”) 

(8) SAFETY IO SIZE
   Displays the IO size for the DX200 (safety adapter) used for DeviceNet Safety communication. The setting of this item cannot be changed. (Fixed to “8 byte”)

(9) VIRTUAL COMM
   This item is the mode which is used when the robot performs a test operation. When starting the DX200 without connecting the DN4 board to the safety PLC, set this item to “VIRTUAL”. Only when setting this item, change the security mode to the safety mode.

When performing the normal operation, make sure to set this item to “SAFETY”.

When the connection with the safety PLC is established with the setting remaining as “VIRTUAL”, the setting is automatically changed to “SAFETY”.

NOTE
4.1.3 General Settings for DN4-PCU-1

1. Confirm that DN4-PCU-1 is set to “USED”.

2. Confirm that DeviceNet Safety is set to “USED”.
4 Setting for DeviceNet Safety
4.1 DX200 Side Settings

### 4.1.4 IO Module Settings

If the DN4-PCU settings are changed, the IO module needs to be set as well. Perform the IO module settings following the procedures below.

1. (the continuation of the DN4-PCU-1 settings)
   - The IO module window (the first half) appears.

2. Press [ENTER].
   - The IO module window (the latter half) appears.
     - Confirm that the values, which are calculated by adding 8 to the IO size already set, are set to DI and DO of ST#16. However, the data size for the safety signals is not included.
3. Press [ENTER].
   – The confirmation dialog box appears.

4. Select {YES}.
   – If the IO module is properly installed, select {YES}. The IO module settings will be updated, and the external IO setup window appears.
### 4.1.5 External IO Settings

1. The EXTERNAL IO SETUP window appears.

2. Select “AUTO” or “MANUAL” for the allocation mode.
   - After “AUTO”/“MANUAL” is selected, the selection menu appears.

   ![External IO Setup Window](image)

   **NOTE**
   If the allocation mode is changed from **MANUAL** to **AUTO**, the allocation data that has been set will be lost, and re-allocating will be executed in the auto mode. If the set allocation data needs to be kept, save the data in the external memory menu in advance.
3. Select an allocation mode to be set.
   - When allocating the I/O signal automatically, select “AUTO”.
     When allocating the I/O signal manually, select “MANUAL”.
   - The selected allocation mode will be set.

4. Select “DETAIL” of (EXTERNAL IO ALLOCATION).
   - When selecting “AUTO” for the allocation mode, the following steps 5 to 7 are not necessary.
     Perform the operation from step 8.
   - When selecting “MANUAL” for the allocation mode, perform the following steps 5 to 7 for the items necessary for manual settings.
5. Select an external I/O signal number to be changed from the original. (#20070) is selected in the setting example.)
   – The select menu appears.

6. Select “MODIFY” and enter a desired external input signal number to replace with the original. (‘20200’ is entered in the setting example.)
   – The external input signal number will be changed.

7. Select and change the external input signal number with the same steps.
   – Repeat the selecting and changing operation for the desired allocation.
8. Press [ENTER].
   – The external output signal allocation window appears.

   ![External Output Signal Allocation Window](image1)

9. Select and change an external output signal number by the same procedure as the external input signal number.
   – Repeat the selecting and changing operation for the desired allocation.

10. Press [ENTER].
    – The confirmation dialog box appears.

   ![Confirmation Dialog Box](image2)
11. Select {YES}.
   – Return to the setting window after the setting contents are confirmed.

Now, the DX200 side settings are completed.
Turn the DX200 control power supply OFF, and then ON to start normally.
Continuously, perform the PLC side settings.
4.2 Creating an EDS File

When setting the communication of DeviceNet Safety, the EDS file (Electronic Data Sheet) may be required. (It depends on the safety scanner to be used.) Use the EDS file created in the following procedures.

For the details of the EDS file, refer to the specifications of DeviceNet and CIP. For how to use the communication master, the communication setting tool (network configurator), and the created EDS file, refer to the instruction manual of each equipment.

4.2.1 Creating Procedures of EDS File

1. Turn ON the power supply while pressing [Main Menu] simultaneously.
   – The maintenance mode starts-up.

2. Select {EX. MEMORY} in the Main Menu.
   – The sub menu appears.
3. Select {SAVE}.
   - The SAVE window appears.

4. Select "EDS/GSD FILE SAVE".
   - The EDS/GSD FILE LIST window appears.
5. Select “DN4-PCU-1(Safety)”.

- “*” appears to the selected board.

6. Press [Enter].

- The confirmation dialog box appears.
7. Select {YES}.
   - An EDS file is created in the currently valid device (CompactFlash or USB memory).
4.3 PLC Side Settings

For performing DeviceNet Safety communication settings, the following PC software manufactured by Rockwell Automation, Inc. is required.

- RSLogix 5000 programming software
- RSLinx software

Connect a PC on which the above-mentioned software is installed and the PLC with a USB cable. Customers should prepare the USB cable by themselves.

This section explains the setting procedures using software manufactured by Rockwell Automation, Inc. The software which is used as an example is “RSLogix 5000 (V20.01.00 (CPR 9 SR 5))”. For more information of the setting procedures, refer to the instruction manual for software manufactured by Rockwell Automation, Inc.

4.3.1 Setting Environment

As shown in the figure below, confirm that the PC and PLC are connected using a USB cable and that PLC and the DX200 are connected using a DeviceNet cable. When connecting the USB cable to PLC, connect it to the CPU module of PLC ("Logix 5572S Automation Controller 4M/2M 1756-L72S" in the example of this manual).

After performing the procedures described in section 4.1 “DX200 Side Settings”, confirm that the DX200 is operated in the Online mode.
4.3.2 Safety PLC Settings

When setting the safety scanner, the EDS file for DX200 DeviceNet Safety may be required. (It depends on the safety scanner to be used.) Use the EDS file created in section 4.2 "Creating an EDS File".

This section explains the setting procedures when using the safety PLC manufactured by Rockwell Automation, Inc. "Logix 5572S Automation Controller 4M/2M 1756-L72S" + "Logix L7SP SIL3 Ple Safety Partner 1756-L7SP" + "DEVICENET BRIDGE/SCANNER MODULE 1756-DNB" as the safety scanner as an example.

When using equipment which is not manufactured by Rockwell Automation, Inc., refer to the instruction manual of each equipment.

1. Start RSLogix 5000.
2. Select (File) - {New...}, and then create a new project.
3. Enter a project name in {Name}, and then select {OK}.
4. Right-click {I/O Configuration}, and then select {New Module...}.

5. Select 1756-DNB, and then select (Create).
6. Select {OK}.

7. Enter a module name in {Name}, and then select {OK}.

8. Select {Close}. 
4. Setting for DeviceNet Safety

4.3 PLC Side Settings

9. Right-click {DeviceNet}, and then select {New Module...}.

10. Select DEVICENET-SAFETYMODULE, and then select {Create}.
11. Select {Change...}.

12. In the {Module} tab, perform the following settings.
   - Vendor: 44
   - Product Type: 140
   - Product Code: 1282
   - Major Revision: 1
   - Minor Revision: 1
   - Electric Keying: Compatible Module

13. When the above settings are completed, select {Connection}.
14. In the {Connection} tab, perform the following settings.

   Safety Input:
   • Input Assembly Instance: 776
   • Output Assembly Instance: 1024
   • Size(8-bit): 8

   Safety Output:
   • Input Assembly Instance: 1024
   • Output Assembly Instance: 904
   • Size(8-bit): 8
   • Configuration Assembly Instance: 1024

15. After settings, select {OK}.

16. When the following dialog box appears, select {Yes}.
17. Enter a module name in {Name}. Set the same value as MAC ID of the DX200 used in DeviceNet Safety in {Node}, and then select the {Safety} tab.

18. Uncheck {Configuration Signature} in the {Safety} tab, set the value of {Requested Packet Interval(RPI)(ms)} in {Safety Input} to 16 or more, and then select {OK}.
19. Set \{Requested Packet Interval(RPI)(ms)\} in \{Safety Output\} following the procedures below. Right-click \{Safety Task\}, and then select \{Properties\}.

20. Select the \{Configuration\} tab.
21. Set the value for {Requested Packet Interval(RPI)(ms)} of {Safety Output} in {Period}. Set the value to 16 or more.

For the values of {Requested Packet Interval (RPI) (ms)} for {Safety Input}/{Safety Output}, set the both values to 16 or more.

22. Right-click {0} 1756-L72S, and then select {Properties}.
23. Select the {Date/Time} tab.

24. Check the checkbox of {Enable Time Synchronization}, and then select {OK}.
25. Connect the PC and the PLC using a USB cable, and then turn the PLC power supply ON. When the following dialog box appears, install the software in accordance with the procedures.

![Found New Hardware Wizard](image1.png)

Welcome to the Found New Hardware Wizard
This wizard helps you install software for:
Rockwell Automation USB CIP

If your hardware came with an installation CD or floppy disk, insert it now.

What do you want the wizard to do?
- Install the software automatically (Recommended)
- Install from a list or a specific location (Advanced)

Click Next to continue.

![Found New Hardware Wizard](image2.png)

Please wait while the wizard installs the software...

![Found New Hardware Wizard](image3.png)

Completing the Found New Hardware Wizard
The wizard has finished installing the software for:
Rockwell Automation USB CIP

Click Finish to close the wizard.
26. Select {Communications} - {Who Active}.

27. Select PLC which is to be connected to the USB port under the USB tree, and then select {Go Online}.
28. When the following dialog box appears, select {Download}.

29. When the following dialog box appears, select {Download}.

- The controller is in Remote Run mode. The mode will be changed to Remote Program prior to download.
- DANGER: The controller is the system time master. Synchronize all synchronized controllers, in this chassis or other chassis, may be turned off.
- DANGER: The controller image stored in nonvolatile memory might be out of date following the download. Failure to update the contents of nonvolatile memory could result in running old logic following a power up or corrupt memory condition.
- DANGER: Unexpected hazardous motion of machinery may occur.
- Some devices maintain independent configuration settings that are not loaded to the device during the download of the controller.
- Verify these devices (drives, network devices, 3rd party products) have been properly loaded before placing the controller into run mode.
- Failure to load proper configuration could result in misaligned data and unexpected equipment operation.
- A non-recoverable safety fault will occur in the safety controller.

No designated Coordinated System Time (CST) master exists.

[Check box for Enable Time Synchronization] [Download] [Cancel] [Help]
30. When the following dialog box appears, select {No}.

31. Right-click {DEVICENET-SAFETYMODULE}, and then select {Properties}.

32. Select {...}.
33. When {Set} cannot be selected as below, select {Cancel}.
   When {Set} can be selected, the steps 34 to 45 are not necessary. Perform the operation from the step 46.

34. Select the {Connection} tab.
35. Check the checkbox of {Inhibit Connection}, and then select {Apply}.

36. When the following dialog box appears, select {Yes}.

After selecting {Yes}, if the alarm "AL1871 M-SAF SEQUENCE WATCH ERROR" occurs at the DX200, cycle the control power of the DX200 OFF/ON, start in Online mode, and then perform the following operations.
37. Select the {Safety} tab.

38. Select {Reset Ownership}. 
39. When the following dialog box appears, select {Yes}.

And then, when the following dialog box appears, select {Yes}.

After selecting {Reset Ownership}, "AL0772 DeviceNet Safety Restart Request" occurs.
After the alarm occurs, cycle the control power of the DX200 OFF/ON, start in Online mode, and then perform the following operations.

40. Select the {Connection} tab.
41. Uncheck {Inhibit Connection}, and then select {Apply}.

42. When the following dialog box appears, select {Yes}. 
43. Select the {General} tab.

44. Select {...}.
4.5. Select {Set} and then, set TUNID (Target Unique Network Identifier) to the DX200 safety adapter. TUNID is created by SNN (Safety Network Number: an unique number allocated to a node on the safety network of the safety adapter) and MAC ID.

The value of the SNN specified in this step can be confirmed on the screen of the programming pendant. For confirming procedures, refer to section 4.4 “Confirming SNN”. 

46. Select {Yes}. 

![Set SNN screen](image)
47. Select {Tools} - {Safety} - {Generate Signature} to create Safety Signature.

48. Change the operation mode to {Run Mode}.

49. Select {Yes}.
50. Select {Safety Unlocked} - {Safety Lock/Unlock...}.

51. Select {Lock}.

52. When the check box of {I/O OK} turns to green for RSLogix 5000, it means that communication is established.
4.4 Confirming SNN

The procedures of confirming the SNN specified in the step 45 of section 4.3.2 “Safety PLC Settings” are described below.

1. Start up the DX200 in the online mode.
2. Select {SYSTEM} under the main menu.
3. Select {FIELDBUS INFORMATION}.

   – The value of the SNN currently set is shown in hexadecimal notation.
5 Safety Signals

5.1 Safety Signal Specifications

Among safety signals handled by DeviceNet Safety, there are an 8-byte safety output signal output from the safety PLC to the DX200, and an 8-byte safety input signal input from the DX200 to the safety PLC. These signals can be used for safety logic circuits and for functional safety.

Specifications for the safety signals are as follows:

- When communication between the safety PLC and the DX200 has not been established, or when a communication error has occurred, the value of the DX200 safety output signal will be set to OFF (0) regardless of the safety PLC output signal.

- The safety PLC output signal is duplicated within the machine safety unit. When a duplicated signal value mismatch is detected, the value of the DX200 safety output signal will be set to OFF (0) regardless of the safety PLC output signal.

- When a major alarm occurs at the machine safety unit, the safety output signal and safety input signal values are set to OFF (0) regardless of their actual values.
### 5.2 Safety Signal Allocation

The data for safety signals is allocated to concurrent I/O Internal Control Status Signals. Control status signals are allocated as follows:

#### 5.2.1 Output Signal from Safety PLC (8 byte)

<table>
<thead>
<tr>
<th>Bit 7</th>
<th>Bit 6</th>
<th>Bit 5</th>
<th>Bit 4</th>
<th>Bit 3</th>
<th>Bit 2</th>
<th>Bit 1</th>
<th>Bit 0</th>
</tr>
</thead>
<tbody>
<tr>
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<td>0</td>
<td>0</td>
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<td>0</td>
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</tr>
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</table>

<table>
<thead>
<tr>
<th>Safety signal (Byte 0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>80527</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Bit 7</th>
<th>Bit 6</th>
<th>Bit 5</th>
<th>Bit 4</th>
<th>Bit 3</th>
<th>Bit 2</th>
<th>Bit 1</th>
<th>Bit 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Safety signal (Byte 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>80537</td>
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</table>

<table>
<thead>
<tr>
<th>Bit 7</th>
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<th>Bit 5</th>
<th>Bit 4</th>
<th>Bit 3</th>
<th>Bit 2</th>
<th>Bit 1</th>
<th>Bit 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
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<table>
<thead>
<tr>
<th>Safety signal (Byte 2)</th>
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</thead>
<tbody>
<tr>
<td>80547</td>
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</table>

<table>
<thead>
<tr>
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<th>Bit 4</th>
<th>Bit 3</th>
<th>Bit 2</th>
<th>Bit 1</th>
<th>Bit 0</th>
</tr>
</thead>
<tbody>
<tr>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Safety signal (Byte 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>80557</td>
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</tbody>
</table>

<table>
<thead>
<tr>
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<th>Bit 4</th>
<th>Bit 3</th>
<th>Bit 2</th>
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<tr>
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<td>0</td>
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<table>
<thead>
<tr>
<th>Safety signal (Byte 4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>80567</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bit 7</th>
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<th>Bit 3</th>
<th>Bit 2</th>
<th>Bit 1</th>
<th>Bit 0</th>
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</thead>
<tbody>
<tr>
<td>0</td>
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<table>
<thead>
<tr>
<th>Safety signal (Byte 5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>80577</td>
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</table>

<table>
<thead>
<tr>
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<th>Bit 4</th>
<th>Bit 3</th>
<th>Bit 2</th>
<th>Bit 1</th>
<th>Bit 0</th>
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<tbody>
<tr>
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</table>

<table>
<thead>
<tr>
<th>Safety signal (Byte 6)</th>
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</thead>
<tbody>
<tr>
<td>80587</td>
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</table>

<table>
<thead>
<tr>
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<th>Bit 3</th>
<th>Bit 2</th>
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</thead>
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<tr>
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<table>
<thead>
<tr>
<th>Safety signal (Byte 7)</th>
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</thead>
<tbody>
<tr>
<td>80597</td>
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<table>
<thead>
<tr>
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<th>Bit 2</th>
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</table>
5.2.2 Input Signal to Safety PLC (8 byte)

<table>
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<th>Bit 4</th>
<th>Bit 3</th>
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<tbody>
<tr>
<td>80607</td>
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<td>80604</td>
<td>80603</td>
<td>80602</td>
<td>80601</td>
<td>80600</td>
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<td>Safety signal (Byte 0)</td>
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<td></td>
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<table>
<thead>
<tr>
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<th>Bit 5</th>
<th>Bit 4</th>
<th>Bit 3</th>
<th>Bit 2</th>
<th>Bit 1</th>
<th>Bit 0</th>
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<tbody>
<tr>
<td>80617</td>
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<td>80615</td>
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<td>80613</td>
<td>80612</td>
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</tbody>
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<table>
<thead>
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<th>Bit 4</th>
<th>Bit 3</th>
<th>Bit 2</th>
<th>Bit 1</th>
<th>Bit 0</th>
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<tbody>
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<td>80623</td>
<td>80622</td>
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<td></td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bit 7</th>
<th>Bit 6</th>
<th>Bit 5</th>
<th>Bit 4</th>
<th>Bit 3</th>
<th>Bit 2</th>
<th>Bit 1</th>
<th>Bit 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>80637</td>
<td>80636</td>
<td>80635</td>
<td>80634</td>
<td>80633</td>
<td>80632</td>
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<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bit 7</th>
<th>Bit 6</th>
<th>Bit 5</th>
<th>Bit 4</th>
<th>Bit 3</th>
<th>Bit 2</th>
<th>Bit 1</th>
<th>Bit 0</th>
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<tbody>
<tr>
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<td>80644</td>
<td>80643</td>
<td>80642</td>
<td>80641</td>
<td>80640</td>
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<td>Safety signal (Byte 4)</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bit 7</th>
<th>Bit 6</th>
<th>Bit 5</th>
<th>Bit 4</th>
<th>Bit 3</th>
<th>Bit 2</th>
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<tbody>
<tr>
<td>80657</td>
<td>80656</td>
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<td>80650</td>
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<tr>
<td>Safety signal (Byte 5)</td>
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<table>
<thead>
<tr>
<th>Bit 7</th>
<th>Bit 6</th>
<th>Bit 5</th>
<th>Bit 4</th>
<th>Bit 3</th>
<th>Bit 2</th>
<th>Bit 1</th>
<th>Bit 0</th>
</tr>
</thead>
<tbody>
<tr>
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<td>80664</td>
<td>80663</td>
<td>80662</td>
<td>80661</td>
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<td></td>
<td></td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bit 7</th>
<th>Bit 6</th>
<th>Bit 5</th>
<th>Bit 4</th>
<th>Bit 3</th>
<th>Bit 2</th>
<th>Bit 1</th>
<th>Bit 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>80677</td>
<td>80676</td>
<td>80675</td>
<td>80674</td>
<td>80673</td>
<td>80672</td>
<td>80671</td>
<td>80670</td>
</tr>
<tr>
<td>Safety signal (Byte 7)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</table>
### 5.2.3 Output Signal Status from Safety PLC (1 byte)

<table>
<thead>
<tr>
<th>80847</th>
<th>80846</th>
<th>80845</th>
<th>80844</th>
<th>80843</th>
<th>80842</th>
<th>80841</th>
<th>80840</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Init_Complete_Out</td>
<td>S_Con_Flt_C_Out</td>
<td>S_Run_Idle_Out</td>
</tr>
</tbody>
</table>

- **S_Run_Idle_Out**: It notifies execution status of the safety adapter. \(0: \text{Idle} \ 1: \text{Run}\)
- **S_Con_Flt_C_Out**: It notifies failure detection in the safety adapter. \(0: \text{Fault} \ 1: \text{OK}\)
- **Init_Complete_Out**: It notifies initialization completion status of the safety adapter. \(0: \text{Not completed} \ 1: \text{Completed}\)

### 5.2.4 Input Signal Status to Safety PLC (1 byte)

<table>
<thead>
<tr>
<th>80857</th>
<th>80856</th>
<th>80855</th>
<th>80854</th>
<th>80853</th>
<th>80852</th>
<th>80851</th>
<th>80850</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Run_Idle</td>
<td></td>
<td>Run_Idle</td>
</tr>
</tbody>
</table>

- **Run_Idle**: It notifies input connection status. \(0: \text{Idle} \ 1: \text{Run}\)
### 5.2.5 Status Information (43 byte)

<table>
<thead>
<tr>
<th>Control Input</th>
<th>Name</th>
<th>Description</th>
<th>Valid States</th>
<th>Size (bytes)</th>
</tr>
</thead>
</table>
| 80860 to 80867 | Input Connection Status                   | Safety input connection status                                               | 0x00-Unallocated: Connection establishment failure  
0x01-Initializing: Connection start  
0x02-Established: Connection completion  
0x03-Close(Fail): Connection failure | 1            |
| 80870 to 80877 | Input Connection Error                    | Error reason when safety input connection status is [Closed].               | 0x00-No Error: No error  
0x01-Timeout: Timeout  
0x02-CRC Error: CRC error  
0x03-Packet Error: Reception error  
0x04-Data Error: Data mismatch (DATA_IN_A and DATA_IN_B are different.)  
0x05-General Stack Error: CIP stack internal error occurrence | 1            |
| 80880 to 80887 | Input Connection Consumer Count           | Number of the input connections which are currently valid                  | 0x00-0x0F                                                                   | 1            |
| 80890 to 80897 | Input Connection Data Size                | Safety data size of the input connections which are currently valid         | 0x00-0x08                                                                   | 1            |
| 80900 to 81047 | Producing Connection Status Bytes (For up to 15 connections) | Bit0: Received data status  
Bit1: Connection status  
Bit2-7: Reserved | 0x00:Idle  
0x01:Active  
0x00:Fault  
0x02:OK  
0x00:Reserved | 15           |
| 81050 to 81057 | Output Connection New Data Flag           | A flag indicating data are currently been updated                          | 0x00: Output data not updated  
0x01: Output data updating | 1            |
| 81060 to 81067 | Output Connection Status                  | Safety output connection status                                             | 0x00-Unallocated: Connection establishment failure  
0x01-Initializing: Connection start  
0x02-Established: Connection completion  
0x03-Close(Fail): Connection failure | 1            |
| 81070 to 81077 | Output Connection Error                   | Error reason when safety output connection status is [Closed].              | 0x00-No Error: No error  
0x01-Timeout: Timeout  
0x02-CRC Error: CRC error  
0x03-Packet Error: Reception error  
0x04-Data Error: Data mismatch (DATA_OUT_A and DATA_OUT_B are different.)  
0x05-General Stack Error: CIP stack internal error occurrence | 1            |
| 81080 to 81087 | Output Connection Data Size               | Safety data size of the output connections which are currently valid        | 0x00-0x08                                                                   | 1            |
| 81090 to 81097 | Safety Supervisor Device Status           | Safety Supervisor device status                                             | 0x00:Undefined  
0x01:Self-Testing  
0x02:Idle  
0x03:Self-Test Exception  
0x04:Executing  
0x05:Abort  
0x06:Critical Fault  
0x07:Configuring  
0x08:Waiting for TUNID | 1            |
5.2 Safety Signal Allocation

5.2.6 Communication Status (1 Byte)

<table>
<thead>
<tr>
<th>Control Input</th>
<th>Name</th>
<th>Description</th>
<th>Valid States</th>
<th>Size (bytes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>81100 to 81117</td>
<td>General Stack Status</td>
<td>Value of the software attribute When the Bit signal is TRUE, set a value. When the Bit signal is FALSE, reset the value.</td>
<td>Bit0: Interface card detection Bit1: Network cable detection Bit2: Network Level Stack Load OK Bit3: Network Level Stack enabled</td>
<td>2</td>
</tr>
<tr>
<td>81120 to 81137</td>
<td>General Stack Error</td>
<td>General error code</td>
<td>File ID code</td>
<td>2</td>
</tr>
<tr>
<td>81140 to 81157</td>
<td>Firmware Assertion MainCode</td>
<td>Main code of the firmware assertion</td>
<td>N/A</td>
<td>2</td>
</tr>
<tr>
<td>81160 to 8117</td>
<td>Firmware Assertion AddCode</td>
<td>Additional code of the firmware assertion</td>
<td>N/A</td>
<td>2</td>
</tr>
<tr>
<td>81240 to 81257</td>
<td>Safety Message Tx Count</td>
<td>Counter value of the sent safety I/O message</td>
<td>N/A</td>
<td>2</td>
</tr>
<tr>
<td>81260 to 81277</td>
<td>Safety Message Rx Count</td>
<td>Counter value of the received safety I/O message</td>
<td>N/A</td>
<td>2</td>
</tr>
<tr>
<td>81280 to 81287</td>
<td>Activity Check</td>
<td>A flag for checking the execution status of the software</td>
<td>N/A</td>
<td>1</td>
</tr>
</tbody>
</table>

The concurrent I/O is not the function for the safety product. For this reason, the signals allocated to the Internal Control Status Signal cannot be used as the safety-related signals.
5.3 Standard I/O Signal Allocation

For how to allocate the standard I/O signal, refer to "DX200 OPTIONS DeviceNet COMMUNICATIONS FUNCTION INSTRUCTIONS" (167073-1CD).
6 LED Status Display

DeviceNet Safety status (the module status and the network status) can be confirmed with the LED on the SST-DN4-PCU-1 board.

Read HLTH LED of the board as a module status, and COMM LED as the network status respectively.

### 6.1 Status Display Pattern

<table>
<thead>
<tr>
<th>Status</th>
<th>Module Status (HLTH)</th>
<th>Network Status (COMM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>When the power supply is off (cannot display)</td>
<td>Off</td>
<td>Off</td>
</tr>
<tr>
<td>Self-diagnostic underway</td>
<td>Alternating red and green blinking (0.5 sec intervals)</td>
<td>Off</td>
</tr>
<tr>
<td>TUNID waiting status</td>
<td>Alternating red and green blinking (0.5 sec intervals)</td>
<td>Undefined</td>
</tr>
<tr>
<td>TUNID waiting status (After receiving Propose_TUNID service)</td>
<td>Alternating red and green blinking (0.5 sec intervals)</td>
<td>Alternating red and green blinking (0.25 sec intervals)</td>
</tr>
<tr>
<td>Idle status (Waiting for establishment of communication)</td>
<td>Green blinking (0.5 sec intervals)</td>
<td>Undefined</td>
</tr>
<tr>
<td>Communication occurring</td>
<td>Green lights up</td>
<td>Green lights up</td>
</tr>
<tr>
<td>For example, when the DX200 MAC ID was changed after setting the TUNID.</td>
<td>Red blinking (0.5 sec intervals)</td>
<td>Undefined</td>
</tr>
<tr>
<td>Duplicate MAC ID with other device</td>
<td>Red blinking (0.5 sec intervals)</td>
<td>Red lights up</td>
</tr>
<tr>
<td>DeviceNet Safety major alarm occurring</td>
<td>Red lights up</td>
<td>Undefined</td>
</tr>
</tbody>
</table>
DeviceNet Safety is a function to secure safety as an entire system including the DX200 and peripheral safety devices. Each device has a different setting method for safety. This chapter shows notes and reminders to configure the safety system with the DX200 as the main component.

Normally, setting for safety of the DX200 is performed by using the programming pendant and saved in the DX200. It is impossible to make settings for the DX200 by using Safety Network Configuration Tool (SNCT).

Please keep in mind following items when you use the DX200:

• The replacement of safety devices requires that the replacement device be configured properly and operation of the replacement device shall be user verified.

• If you choose to configure safety connections with an SCID=0, you are responsible for ensuring that originators (data senders) and targets (data receivers) have the correct configurations. SCID (Safety Configuration Identifier) enables to identify the safety configuration. SCID is not used in the DX200.

• The user should assign SNNs (Safety Network Numbers) for each safety network or safety sub-net that are unique system-wide. An SNN is a unique number allocated to each node on the safety network.

• Please clear any pre-existing configuration from any safety device before installing it onto the safety network. For the clearing procedures, refer to the Rockwell Automation, Inc. manual “GuardLogix Controllers User Manual (1756-UM020I-EN-P – August 2012),” chapter 5 “Add, Configure, Monitor, and Replace CIP Safety I/O.” When using a safety PLC manufactured by a company other than Rockwell Automation, Inc., refer to that manufacturer’s manual.

• Please confirm a valid and unique MAC ID is assigned for each safety device before installing it onto the safety network. For the MAC ID confirming procedures, refer to the Rockwell Automation, Inc. manual “GuardLogix Controllers User Manual (1756-UM020I-EN-P – August 2012),” chapter 5 “Add, Configure, Monitor, and Replace CIP Safety I/O.” When using a safety PLC manufactured by a company other than Rockwell Automation, Inc., refer to that manufacturer’s manual.

• Please test safety connection configurations after they are applied in an originator to confirm the target safety connection is operating as intended.

• Please note that LEDs are NOT reliable indicators and cannot be guaranteed to provide accurate information. They should ONLY be used for general diagnosis during commissioning or troubleshooting. Do not attempt to use LEDs as operational indicators.

• Please note that originators that have an “automatic” SNN setting feature can use that feature only when the safety system does not rely on the feature to secure safety.
The following points about the safety system are described for informational purposes:

- When a SIL3 device is configured directly from a workstation, please compare the transferred SCID and safety setting data with the SCID and safety setting data originally viewed in the workstation.

- Please note that user testing is the means by which all downloads are validated. Also, before using the system, confirm that all safety functions are operating as intended.

- Please note that the signature should only be considered “verified” (and configuration locked) after user testing. For information on safety signatures, refer to the Rockwell Automation, Inc. manual “GuardLogix Controllers User Manual (1756-UM020I-EN-P – August 2012),” chapter 6 “Develop Safety Applications.” When using a safety PLC manufactured by a company other than Rockwell Automation, Inc., refer to that manufacturer’s manual.

- Please note that when the originator configures communication setting data and/or target setting data, these data must be downloaded to the target and be tested and verified. Only when the verification result is valid, SCIDs from the target can be confirmed. For the downloading procedures, refer to the Rockwell Automation, Inc. manual “GuardLogix Controllers User Manual (1756-UM020I-EN-P – August 2012),” chapter 7 “Go Online with the Controller.” When using a safety PLC manufactured by a company other than Rockwell Automation, Inc., refer to that manufacturer’s manual.

- Please completely test a device’s operation before setting the Lock Attribute. For information on the Lock Attribute, refer to the Rockwell Automation, Inc. manual “GuardLogix Controllers User Manual (1756-UM020I-EN-P – August 2012),” chapter 6 “Develop Safety Applications.” When using a safety PLC manufactured by a company other than Rockwell Automation, Inc., refer to that manufacturer’s manual.

- Please upload the setting data from each safety device and compare those with the data sent from the SNCT for verification before setting the Lock Attribute in each device. For the uploading procedure, refer to the Rockwell Automation, Inc. manual “GuardLogix Controllers User Manual (1756-UM020I-EN-P – August 2012),” chapter 7 “Go Online with the Controller.” When using a safety PLC manufactured by a company other than Rockwell Automation, Inc., refer to that manufacturer’s manual.

- Please lock the safety device which can be configured via the SNCT interface after verification has been completed.

- Please verify that all originator-configured safety devices which can be configured by a Type 1 SafetyOpen have their ownership assignments as part of the final verification process.

- Please visually verify that all configuration data was downloaded correctly. For the downloading procedures, refer to the Rockwell Automation, Inc. manual “GuardLogix Controllers User Manual (1756-UM020I-EN-P – August 2012),” chapter 7 “Go Online with the Controller.” When using a safety PLC manufactured by a company other than Rockwell Automation, Inc., refer to that manufacturer’s manual.
DX200 OPTIONS
INSTRUCTIONS
FOR DeviceNet SAFETY FUNCTION

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