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Before using the products described in this document, please read this manual and the relevant manuals carefully and pay full attention to safety to handle the products correctly.

In this section, the safety precautions are classified into two levels: "WARNING" and "CAUTION".

WARNING  Indicates that incorrect handling may cause hazardous conditions, resulting in death or severe injury.

CAUTION  Indicates that incorrect handling may cause hazardous conditions, resulting in minor or moderate injury or property damage.

Under some circumstances, failure to observe the precautions given under "CAUTION" may lead to serious consequences.
Always observe the instructions of both levels to ensure personal safety.
# REVISIONS

<table>
<thead>
<tr>
<th>No.</th>
<th>Revision</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>*</td>
<td>First edition</td>
<td></td>
</tr>
</tbody>
</table>
INTRODUCTION

About This Connection Guide

This connection guide describes the procedures for connecting a COGNEX barcode reader to a MELSEC programmable controller and controlling the barcode reader in the SLMP\(^1\) scanner communication.

Required Modules and Devices

Mitsubishi Electric products

- MELSEC-Q/L series built-in Ethernet port programmable controller
- GX Works2
  
  (Engineering software for programmable controllers)

COGNEX products

- DataMan60S
  
  (SLMP-compatible barcode reader)
- DataMan Setup Tool
  
  (Ver 5.4.0 CR2)\(^2\)

Commercial products

- HUB
- Ethernet straight cable
- USB cable
- 24 V DC power supply

\(^1\) The abbreviation for Seamless Message Protocol. The SLMP is used to access SLMP-compatible devices (e.g. programmable controllers) from external devices (e.g. barcode readers) via Ethernet.

\(^2\) Use DataMan Setup Tool of a version appropriate to the model of the DataMan product used.
An input/output cable is used for supplying the power to the barcode reader. Connect the pin 5 (Brown/White) (+24 V DC power supply) to the positive electrode and the pin 4 (Red) (GND) to the negative electrode of the 24 V DC power supply.

<table>
<thead>
<tr>
<th>PIN</th>
<th>Color</th>
<th>Signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Brown</td>
<td>Reserved</td>
</tr>
<tr>
<td>2</td>
<td>Green</td>
<td>TxD</td>
</tr>
<tr>
<td>3</td>
<td>Green/Black</td>
<td>RxD</td>
</tr>
<tr>
<td>4</td>
<td>Red</td>
<td>GND</td>
</tr>
<tr>
<td>5</td>
<td>Brown/White</td>
<td>DC+ (system power, 5 to 24 V DC)</td>
</tr>
<tr>
<td>6</td>
<td>Blue</td>
<td>RTS</td>
</tr>
<tr>
<td>7</td>
<td>Blue/White</td>
<td>Output-0</td>
</tr>
<tr>
<td>8</td>
<td>White (Input-Common)</td>
<td>Input-0</td>
</tr>
<tr>
<td>9</td>
<td>White/Black</td>
<td>Input-1</td>
</tr>
<tr>
<td>10</td>
<td>Light blue</td>
<td>CTS</td>
</tr>
<tr>
<td>11</td>
<td>Light blue/Black</td>
<td>Output-1</td>
</tr>
<tr>
<td>12</td>
<td>Light blue/Yellow</td>
<td>Output-Common</td>
</tr>
<tr>
<td>13</td>
<td>Light blue/Green</td>
<td>Output-Strobe</td>
</tr>
<tr>
<td>14</td>
<td>Yellow (Output-Common)</td>
<td>Reserved</td>
</tr>
<tr>
<td>15</td>
<td>Yellow/Black</td>
<td>Reserved</td>
</tr>
</tbody>
</table>
System Configuration for Connecting the Barcode Reader

1) Connect the programmable controller and a personal computer with the USB cable.

2) Connect the HUB and each device with Ethernet cables.

- Q/I series programmable controller
  IP address (192.168.3.2)

- Barcode reader
  IP address (192.168.3.1)

- 24 V DC power supply

- HUB

- GX Works2
  DataMan Setup Tool

- IP address (192.168.3.3)
BASIC OPERATIONS OF THE SLMP SCANNER

Basic Operation Flow of the SLMP Scanner

Barcode reader

Read (Read the Bit state for Control.)

Write (Turn on the Bit for Status.)

Write (Decode result (e.g. Code read result))

Write (Turn on the Bit for Status.)

Programmable controller

The programmable controller turns on the Bit for Trigger.

Indicates the status of the barcode reader (Bit for Status): Trigger ON Acquiring Decoding Decode Complete Toggle, etc.

Importing images

Reading codes
Basic Operations of the SLMP Scanner

In the SLMP Scanner, the barcode reader reads programmable controller devices assigned to control blocks at the poll interval set with DataMan Setup Tool, and the processing is performed responding to changes in the devices. The processing status is written to the corresponding bit in the status block.

To control the barcode reader, assign devices of the programmable controller to each of the defined data blocks (including control blocks) and use them.

The following shows the six data blocks.

- **Control block:** This block is used to send control commands (including triggers) to the barcode reader, and uses bit information. The barcode reader is controlled by turning on and off the devices set to the control block using the programmable controller.

- **Status block:** This block indicates the status of the barcode reader, and can be checked with bit information.

- **Input block:** This block is used to input application data (including parameters) from the programmable controller, and uses word information.

- **Output block:** This block is used to output code read results to the programmable controller from the barcode reader, and uses word information.

- **String command block:** This block is used to set commands (string commands) to control the barcode reader, and uses word information.

- **String command result block:** This block is used to output the results controlled by the commands, and uses word information.

Data Blocks

The following shows the six data blocks defined to control the barcode reader.

**Control data block**

![Control data block diagram]

- **Trigger Enable** Enables the trigger.
- **Trigger** Triggers an operation. (Available while “Trigger Enable” is on)
- **Buffer Results Enable** Enables the buffer result.
- **Results Ack** Acknowledges a read result.
- **Reserved** Reserved.
- **Set User Data** Used to change values of parameters.
- **Initiate String Cmd** Sends DMCC (control commands).
- **Soft Event** Soft events.
**BASIC OPERATIONS OF THE SLMP SCANNER**

### Status block

<table>
<thead>
<tr>
<th>Bit</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></td>
<td>Missed Acq</td>
<td>Acquiring</td>
<td>Trigger Ack</td>
<td>Trigger Ready</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bit 15</td>
<td>Bit 14</td>
<td>Bit 13</td>
<td>Bit 12</td>
<td>Bit 11</td>
<td>Bit 10</td>
<td>Bit 9</td>
<td>Bit 8</td>
</tr>
<tr>
<td>General Fault</td>
<td>Reserved</td>
<td>Results Available</td>
<td>Results Buffer Overrun</td>
<td>Decode Complete Toggle</td>
<td>Decoding</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bit 23</td>
<td>Bit 22</td>
<td>Bit 21</td>
<td>Bit 20</td>
<td>Bit 19</td>
<td>Bit 18</td>
<td>Bit 17</td>
<td>Bit 16</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bit 31</td>
<td>Bit 30</td>
<td>Bit 29</td>
<td>Bit 28</td>
<td>Bit 27</td>
<td>Bit 26</td>
<td>Bit 25</td>
<td>Bit 24</td>
</tr>
</tbody>
</table>

- **Trigger Ready**: Indicates that the trigger is enabled or disabled.
- **Trigger Ack**: An acknowledge to the trigger request.
- **Acquiring**: Indicates that the image is being imported.
- **Missed Acq**: Indicates that importing of the image failed.
- **Reserved**: Reserved.
- **Decoding**: Indicates that the code is being read.
- **Decode Complete Toggle**: Indicates that the code has been read (Changes its bit at every completion).
- **Results Buffer Overrun**: Indicates that the result buffer overrun occurs.
- **Results Available**: Indicates that the result is available.
- **General Fault**: Indicates that a fault has occurred.
- **Set User Data Ack**: An acknowledge to a parameter change request.
- **String Cmd Ack**: An acknowledge to a DMCC (control command) send request.
- **SoftEvent Ack**: An acknowledge to a soft event.

### Output block

<table>
<thead>
<tr>
<th>Word 0</th>
<th>Word 1</th>
<th>Word 2</th>
<th>Word 3</th>
<th>Word 4</th>
<th>Word 5+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reserved</td>
<td>Trigger ID</td>
<td>Result ID</td>
<td>Result Code</td>
<td>Result Length</td>
<td>Result Data</td>
</tr>
</tbody>
</table>

- **Reserved**: Reserved.
- **Trigger ID**: Trigger ID
- **Result ID**: Result ID
- **Result Code**: Result code
- **Result Length**: Length of the read code
- **Result Data**: Data of the read code
BASIC OPERATIONS OF THE SLMP SCANNER

Input block

<table>
<thead>
<tr>
<th>Word 0</th>
<th>Word 1</th>
<th>Word 2..N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reserved</td>
<td>User Data Length</td>
<td>User Data</td>
</tr>
</tbody>
</table>

Reserved: Reserved.
User Data Length: Length of user data
User Data: User data (e.g., parameter values)

String command block

<table>
<thead>
<tr>
<th>Word 0</th>
<th>Word 1..N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>String Command</td>
</tr>
</tbody>
</table>

Length: Length of strings
String Command: Strings of DMCC (control command)

String result command block

<table>
<thead>
<tr>
<th>Word 0</th>
<th>Word 1</th>
<th>Word 2..N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Result Code</td>
<td>Length</td>
<td>String Command Result</td>
</tr>
</tbody>
</table>

Result Code: Result code (1: Reading completed, 0: Reading failed)
Length: Length of strings
String Command Result: Result of the sent control command

For details of the data block functions for controlling the barcode reader, refer to "Communications and Programming.pdf" stored in the folder where DataMan Setup Tool has been installed.
The following shows a timing chart when "Trigger" of the control block is turned on from the programmable controller. To enable the trigger from the programmable controller, turn on "Trigger Enable" of the control block. When "Trigger" of the control block is turned on from the programmable controller while "Trigger Ready" of the control block is on, the status of the barcode reader is output to "Trigger Ack", "Acquiring", "Decoding", and "Decode Complete Toggle" of the status block. "Decode Complete Toggle" changes (toggles) the status at every completion. "Trigger" turns off after "Trigger Ack" turns on.
(1) **Setting an IP address to the personal computer**
Set the IP address 192.168.3.3 to the personal computer from the Control Panel.

(2) **Connection with the barcode reader**
Start DataMan Setup Tool to set the barcode reader.

---

Add the barcode reader to the network.

1. Set the MAC address.*
   
   MAC address: ************

2. Select [Use Static IP Address].

3. Set the IP address.
   
   IP address: 192.168.3.1

4. Set the subnet mask.
   
   Subnet mask: 255.255.255.0

5. Select [OK].

---

After a while, the assigned barcode reader is displayed.

Select the displayed barcode reader, and select [Connect].
SETTING THE BARCODE READER

Select "Quick Setup" to adjust the brightness of the barcode reader and set the read target code.

1. Select "Quick Setup".
2. Select "Single (external)".
3. Select "Tune".
4. Select "Optimize Brightness".
5. Select the symbology setting.

In Symbology Settings, set the read target codes. Add QR codes as a read target.

1. Select "General".
2. Put a checkmark in "QR Code".

Select "Data Formatting" to configure the setting to output read codes.

1. Select "Data Formatting".
2. Put a checkmark in "Standard".
3. Select "Standard".
SETTING THE BARCODE READER

Set full strings as read target data, and add “CR/LF” at the text end.

1. Select “Standard Formatting”.
2. Select “Universal”.
3. Select “General”.
4. Select “Full string”.
5. When [Add] is selected, “Full string” is entered.
6. Put a checkmark in “CR/LF”.

(3) Checking read operations

Execute the trigger and check the read results.
When a barcode cannot be read, adjust the distance between the barcode reader and the target code, perform tuning, or optimize the brightness to catch the target clearly.

1. Select “Quick Setup”.
2. Click “Trigger”.
3. Check the read result.
SETTING THE BARCODE READER

(4) Communication setting

Set the communication with the programmable controller.

1. Select "Industrial Protocols" in "Communication Settings".
2. Select "SLMP Protocol".

Configure the setting of the SLMP protocol.

- Set the IP Address: 192.168.3.2 (IP address of the programmable controller)
- Set the Host Port [hex]: 3001 (Port of the programmable controller)
- Set the Timeout [ms]: 1000
- Set the Poll Interval [ms]: 100
- Set the PLC Series: QCPU
- Set the Network Number: 0
- Set the PC Number [hex]: FF
- Set the Destination Module: 0x3FF = Local station

Put a checkmark in "Enabled".

Configure the following settings.

- Host Port [hex]: 3001
- Host Port [dec]: 3001
- Host Port [oct]: 0x7601
- Host Port [bin]: 11100110000001

Shortening the poll interval also shortens the interval to monitor the programmable controller status.

Set a device, offset, and the number of devices to each of the six data blocks as shown left.

For control contents of when the device is assigned to each data block, refer to "CONTENTS IN DATA BLOCKS".

<table>
<thead>
<tr>
<th>Name</th>
<th>Selected Device</th>
<th>Offset</th>
<th>Number of Devices</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>D = Data Register</td>
<td>1080</td>
<td>1</td>
<td>View control block...</td>
</tr>
<tr>
<td>Status</td>
<td>D = Data Register</td>
<td>1082</td>
<td>2</td>
<td>View status block...</td>
</tr>
<tr>
<td>PLC Input</td>
<td>D = Data Register</td>
<td>1085</td>
<td>5</td>
<td>User data block...</td>
</tr>
<tr>
<td>PLC Output</td>
<td>D = Data Register</td>
<td>1010</td>
<td>100</td>
<td>Inspection results bl...</td>
</tr>
<tr>
<td>Command</td>
<td>D = Data Register</td>
<td>2090</td>
<td>100</td>
<td>Command string...</td>
</tr>
</tbody>
</table>
After setting the communication, the "Reboot Required" dialog box appears. Select [Yes] to restart the setup tool.

After a while, the barcode reader is automatically connected.

Save the setting of the barcode reader.

1. Select "System".
2. Select "Save Settings".
Setting the Programmable Controller

Start GX Works2 to set the programmable controller.

Start GX Works2 and create a new project. Select Type: Q06UDV, Project Type: Simple Project, and Language: Ladder. Click [OK].

The Q Parameter Setting window appears. Select the "Built-in Ethernet Port Setting" tab.

Configure the setting in the "Built-in Ethernet Port Setting" tab as shown left. IP Address: 192.168.3.2. Select "Binary Code" and "Enable online change (FTP, MC Protocol)". Click [Open Setting].
1. Select "HEX" for "IP Address/Port No. Input Format".
2. Select "TCP" in "Protocol".
3. Select "MC Protocol" in "Open System".
4. Enter "3001" in "Host Station".

*1 When DEC is selected, set "12289" in "Host Station".

The user have to set parameters for communication, however, do not need to create a program for communication.
(1) Starting the programmable controller
Write the parameters.

Select [Parameter + Program] and click [Execute].

After writing the parameters is completed, reset and run the programmable controller.

Turn off and restart the barcode reader.

Connect to the barcode reader with DataMan Setup Tool.

(2) Checking the SLMP communication
Check that the programmable controller and the barcode reader communicate in the SLMP protocol.

1. Select “Industrial Protocols”.
2. Select “SLMP Protocol”. Check that “MC scanner connection established 192.168.3.2:3001” is displayed in Status.
**CHECKING OPERATIONS**

**Checking Operations**

Control the barcode reader using the programmable controller and check the operations.

**Setting a Trigger**

Set a trigger to the barcode reader to acquire read results. Open "Device/Buffer Memory Batch Monitor" in GX Works2 to display devices.

Set devices as shown left.
Device Name: D1000

To enable the trigger from the programmable controller, turn on the "Trigger Enable" bit (D1000.0).

When the "Trigger Enable" bit (D1000.0) is off, the barcode reader does not operate even though the trigger is on.
CHECKING OPERATIONS

Turn on the "Trigger" bit (D1000.1) of the control block.
Execute a trigger to the barcode reader.
Read results and codes are output.

D1013 = Read result
D1014 = Number of characters in the read code
D1015 to D1037 = Read codes

When the reading is completed, the "Decode Complete Toggle" bit (D1002.9) changes (toggles) the status.

* The "Decode Complete Toggle" bit (D1002.9) changes (toggles) the status when the decoding (reading) is completed.
To set a trigger to the barcode reader again, turn "OFF" and "ON" D1000.1.

To display the read codes in word strings, switch the display format to "ASC".

Select!

Read codes
Codes read with DataMan Setup Tool can be checked. Select "Quick Setup".
Controlling with DMCC Commands

Control the barcode reader with DMCC commands. In this section, "||>GET DEVICE.NAME", the DMCC command that acquires the device names of the barcode reader, is sent to acquire the device names.

- Set "20" as the string length of the DMCC command in D2000.
- Set the DMCC command "||>GET DEVICE.NAME" +CRLF in D2001.
- To set values in the left devices, create the ladder program shown in the left figure and perform online change.

- Open "Device/Buffer Memory Batch Monitor" in GX Works2, and check that the DMCC command length and the DMCC command have been set.

- Turn on "Initiate String Cmd" (D1001.1) of the control block. The command is sent to the barcode reader, and the device name of the barcode reader is output.
- After "String Cmd Ack" (D1003.1) of the status block turns on, turn off "Initiate String Cmd" (D1001.1) of the control block.
The other DMCC commands for controlling the barcode reader (e.g. "||>TRIGGER ON", the command for setting a trigger) are provided. For details, refer to "DataMan Control Commands".

Open "Device/Buffer Memory Batch Monitor" in GX Works2, and check that the device names of the barcode reader have been output.

To check the device names, switch the display format to "ASC".
Set a start device and the number of devices to each data block with DataMan Setup Tool. The start device types and start addresses can be changed. The number of devices, excluding the ones for control blocks and status blocks, can be changed. The control details set to each data block are fixed in the system. The following shows the control details of the six data blocks where devices have been assigned.

<table>
<thead>
<tr>
<th>Type</th>
<th>Start device</th>
<th>Number of devices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>D1000</td>
<td>2</td>
</tr>
<tr>
<td>Status</td>
<td>D1002</td>
<td>2</td>
</tr>
<tr>
<td>Input block</td>
<td>D1005</td>
<td>5</td>
</tr>
<tr>
<td>Output block</td>
<td>D1010</td>
<td>100</td>
</tr>
<tr>
<td>Command</td>
<td>D2000</td>
<td>100</td>
</tr>
<tr>
<td>Command result</td>
<td>D2100</td>
<td>100</td>
</tr>
</tbody>
</table>
### Device assignment (Control)

<table>
<thead>
<tr>
<th>Classification</th>
<th>Device</th>
<th>Control details (Application)</th>
<th>Supplement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>D1000.0 Trigger Enable</td>
<td>The trigger is enabled by turning on this bit and is disabled by clearing this bit.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>D1000.1 Trigger</td>
<td>The trigger can be set when &quot;Trigger Enable&quot; is on.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>D1000.2 Buffer Result Enable</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>D1000.3 Inspection Result ON Acknowledgment</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>D1000.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>D1000.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>D1000.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>D1000.7</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>D1000.8</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>D1000.9</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>D1000.A Reserved</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>D1000.B</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>D1000.C</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>D1000.D</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>D1000.E</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>D1000.F</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>D1001.0 Soft Event 0 Trigger</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>D1001.1 Soft Event 1 Trigger</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>D1001.2 Soft Event 2 Trigger</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>D1001.3 Soft Event 3 Trigger</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>D1001.4 Soft Event 4 Trigger</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>D1001.5 Soft Event 5 Trigger</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>D1001.6 Soft Event 6 Trigger</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>D1001.7 Soft Event 7 Trigger</td>
<td></td>
</tr>
</tbody>
</table>
## CONTENTS IN DATA BLOCKS

### Device assignment (Status)

<table>
<thead>
<tr>
<th>Classification</th>
<th>Device</th>
<th>Control details (Application)</th>
<th>Supplement</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1002.0</td>
<td>Trigger Ready</td>
<td></td>
<td>This bit turns on when the trigger can be input.</td>
</tr>
<tr>
<td>D1002.1</td>
<td>Trigger ON Acknowledgment</td>
<td></td>
<td>This bit notifies that the trigger ON is acknowledged. This bit remains ON until the trigger bit is cleared.</td>
</tr>
<tr>
<td>D1002.2</td>
<td>Acquiring</td>
<td></td>
<td>This bit turns on while an image is being imported.</td>
</tr>
<tr>
<td>D1002.3</td>
<td>Missed Acq</td>
<td></td>
<td>This bit turns on when importing an image failed. This bit is cleared when importing an image is properly completed.</td>
</tr>
<tr>
<td>D1002.4</td>
<td>Reserved</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D1002.5</td>
<td>Reserved</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D1002.6</td>
<td>Reserved</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D1002.7</td>
<td>Reserved</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D1002.8</td>
<td>Decoding</td>
<td></td>
<td>This bit turns on during decoding.</td>
</tr>
<tr>
<td>D1002.9</td>
<td>Decode Complete Toggle</td>
<td></td>
<td>This bit changes (toggles) the status when decoding is completed.</td>
</tr>
<tr>
<td>D1002.A</td>
<td>Result Buffer Overrun</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D1002.B</td>
<td>Results Available</td>
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<td></td>
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<tr>
<td>D1002.C</td>
<td>Reserved</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D1002.D</td>
<td>Reserved</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D1002.E</td>
<td>Fault</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D1003.0</td>
<td>Set User Data Trigger Acknowledgment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D1003.1</td>
<td>DMCC Command Send Trigger Acknowledgment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D1003.2</td>
<td>Reserved</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D1003.3</td>
<td>Reserved</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D1003.4</td>
<td>Reserved</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D1003.5</td>
<td>Soft Event 0 Trigger Acknowledgment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D1003.6</td>
<td>Soft Event 1 Trigger Acknowledgment</td>
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<td></td>
</tr>
<tr>
<td>D1003.7</td>
<td>Soft Event 2 Trigger Acknowledgment</td>
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<td></td>
</tr>
<tr>
<td>D1003.8</td>
<td>Soft Event 3 Trigger Acknowledgment</td>
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### CONTENTS IN DATA BLOCKS

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<td></td>
<td>D1003.E</td>
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<td></td>
<td>D1003.F</td>
<td>Soft Event 7 Trigger Acknowledgment</td>
<td></td>
</tr>
</tbody>
</table>

**Device assignment (Input block, Output block, Command, and Command result)**

<table>
<thead>
<tr>
<th>Classification</th>
<th>Device</th>
<th>Control details (Application)</th>
<th>Supplement</th>
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<td><strong>Input block</strong></td>
<td>D1005</td>
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<td></td>
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<td></td>
</tr>
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<td></td>
<td>D1007</td>
<td>User Data</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D1008</td>
<td>to</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D1009</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Output block</strong></td>
<td>D1010</td>
<td>Reserved</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D1011</td>
<td>Trigger ID</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D1012</td>
<td>Result ID</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D1013</td>
<td>Result Code</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D1014</td>
<td>Decode Result String Length</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D1015</td>
<td>to</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D1110</td>
<td>Decode Result</td>
<td></td>
</tr>
<tr>
<td><strong>Command</strong></td>
<td>D2000</td>
<td>String Word Length</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D2001</td>
<td>to</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D2099</td>
<td>Command String</td>
<td></td>
</tr>
<tr>
<td><strong>Command result</strong></td>
<td>D2100</td>
<td>Result Code</td>
<td></td>
</tr>
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<td></td>
<td>D2101</td>
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<td></td>
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<td></td>
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</tr>
<tr>
<td></td>
<td>D2199</td>
<td>Command Result String</td>
<td></td>
</tr>
</tbody>
</table>

This device stores the user data length.
This device stores the string length of the decode result.
These devices store decode results.
This device stores the DMCC command length.
These devices store DMCC commands.
This device stores the DMCC Command Result String length.
These devices store DMCC command results.
USB Connection between a GOT and the Barcode Reader

The barcode reader can be connected to the USB interface on the front or back side of a GOT to acquire results read by the barcode reader. The GOT processes inputs from the barcode reader connected with a USB cable as keyboard inputs. The GOT detects the keys (characters) that can be input with a Japanese 106 keyboard or 101 English keyboard. (The other keys (characters) are invalid.) The following shows applicable product models and software versions.

- Applicable GOT model: GT27 series or GT25 series
- GT Designer3: Version 1.126G or later
- Applicable DataMan model: DataMan 8050 series or 8600 series
- DataMan firmware: Version 5.4.0 or later

(1) Configuration example

(2) Setting the barcode reader

Set the barcode reader.

Configure the setting to read the read target codes with DataMan Setup tool.

Configure the setting to add "CR/LF" at the end of the read target code with DataMan Setup tool.

Save the setting, terminate DataMan Setup Tool, and disconnect the barcode reader from the personal computer.

Read the USB keyboard connection code as shown left with the barcode reader. The "USB Keyboard" code can be found on the Quick Reference Guide.
(3) Setting the GOT

In GT Designer3, select “Common” → “GOT Setup” → “Basic Setting” → “USB Host” to use a USB keyboard.

- Put a checkmark in “Use USB keyboard”.
- Put a checkmark in “Update the USB host setting”.

Configure the setting to write or display results read with the barcode reader.

- Click “Object” → “Text Display/Input” → “Text Input”.
- Put a checkmark in “Text Input”.
- Set the device where results read with DataMan is to be written and the number of digits to be displayed depending on the user's system.
(4) GOT screens and settings in the configuration example

(a) GOT screen
Set a switch for barcode input and a text input for read results as objects, and set the display of a cursor and a key window related to the text input.
Configure the settings for the connected device and devices depending on the user’s system.

(b) GOT setting example

Set the switch for barcode input.

Set "GB1000" for "Device".
Put a checkmark in "Alternate".

Set the text input for the barcode read result.

Click "Object" → "Text Display/Input" → "Text Input".
Select the "Device/Style" tab in "Basic Setting".
Put a checkmark in "Text Input".
Set "GD3000" where results read with DataMan is to be written for "Device".
Set "50" for "Digits".
(c) Setting the key window operation

Configure the basic setting of key windows.

Select "Common" → "GOT Environmental Setting" → "Key Window".
Select "Basic Setting".
Put a checkmark in "Standard".

Configure the advanced setting of key windows.

Select "Common" → "GOT Environmental Setting" → "Key Window".
Select "Advanced Setting".
Put a checkmark in "Hide" for "Key Window".
Put a checkmark in "Display at any time" for "Cursor".

Set the Trigger tab of Text Input.

Select the "Trigger" tab in "Advanced Settings".
Select "ON".
Set "GB1000".

Configure the advanced setting of key windows.

Select the Trigger tab of Text Input.