Model  GX10/GX20/GP10/GP20/GM10

Multi-batch Function (/BT)
User’s Manual
Introduction

Thank you for purchasing the SMARTDAC+ GX10/GX20/GP10/GP20 (hereafter referred to as the GX or GP) or the GM10 (hereafter referred to as the GM). This manual describes the operating procedure for the GX/GP/GM Multi-batch function/ (BT option). Please use this manual in conjunction with the standard user’s manual (IM 04L51B01-01EN (GX/GP) or IM 04L55B01-01EN (GM)).

To ensure correct use, please read this manual thoroughly before beginning operation. The following manuals are provided for the GX/GP/GM.

● Paper Manuals

<table>
<thead>
<tr>
<th>Model</th>
<th>Manual Title</th>
<th>Manual No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GX/GP</td>
<td>Paperless Recorder First Step Guide</td>
<td>IM 04L51B01-02EN</td>
<td>Explains the basic operations of the GX/GP.</td>
</tr>
<tr>
<td>GX/GP</td>
<td>Quick, Easy Steps</td>
<td>IM 04L51B01-04Z1</td>
<td>Explains the operating procedures.</td>
</tr>
<tr>
<td>GM</td>
<td>Data Acquisition System GM First Step Guide</td>
<td>IM 04L55B01-02EN</td>
<td>Explains the basic operations of the GM.</td>
</tr>
</tbody>
</table>

● Downloadable Electronic Manuals

You can download the latest manuals from the following website.

<table>
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<td>GX/GP</td>
<td>Paperless Recorder First Step Guide</td>
<td>IM 04L51B01-02EN</td>
<td>This is the electronic version of the paper manual.</td>
</tr>
<tr>
<td>GX/GP</td>
<td>User’s Manual</td>
<td>IM 04L51B01-01EN</td>
<td>Describes how to use the GX/GP. The communication control commands and some of the options are excluded.</td>
</tr>
<tr>
<td>GX/GP</td>
<td>Advanced Security Function (AS) User’s Manual</td>
<td>IM 04L51B01-05EN</td>
<td>Describes how to use the advanced security function (AS option).</td>
</tr>
<tr>
<td>GM</td>
<td>Data Acquisition System First Step Guide</td>
<td>IM 04L55B01-02EN</td>
<td>This is the electronic version of the paper manual.</td>
</tr>
<tr>
<td>GM</td>
<td>User’s Manual</td>
<td>IM 04L55B01-01EN</td>
<td>Describes how to use the GM. The communication control commands and some of the options are excluded.</td>
</tr>
<tr>
<td>GX/GP</td>
<td>Communication Commands User’s Manual</td>
<td>IM 04L51B01-17EN</td>
<td>Describes how to use command communication functions.</td>
</tr>
<tr>
<td>SMARTDAC+ STANDARD Universal Viewer User’s Manual</td>
<td>IM 04L61B01-01EN</td>
<td>Describes how to use Universal Viewer, which is a software that displays GX/GP/GM measurement data files.</td>
<td></td>
</tr>
<tr>
<td>SMARTDAC+ STANDARD Hardware Configurator User’s Manual</td>
<td>IM 04L61B01-02EN</td>
<td>Describes how to use the PC software for creating setting parameters for various GX/GP/GM functions.</td>
<td></td>
</tr>
<tr>
<td>GX/GP</td>
<td>Multi-batch Function (BT) User’s Manual</td>
<td>IM 04L51B01-03EN</td>
<td>Describes how to use the multi-batch function (BT option).</td>
</tr>
<tr>
<td>GX/GP</td>
<td>Log Scale (LG) User’s Manual</td>
<td>IM 04L51B01-06EN</td>
<td>Describes how to use the log scale (LG option).</td>
</tr>
<tr>
<td>GX/GP</td>
<td>EtherNet/IP Communication (E1) User’s Manual</td>
<td>IM 04L51B01-18EN</td>
<td>Describes how to use the communication functions through the EtherNet/IP (E1 option).</td>
</tr>
<tr>
<td>GX/GP</td>
<td>WT Communication (E2) User’s Manual</td>
<td>IM 04L51B01-19EN</td>
<td>Describes how to use WT communication (E2 option).</td>
</tr>
<tr>
<td>GX/GP</td>
<td>OPC-UA Server (E3) User’s Manual</td>
<td>IM 04L51B01-20EN</td>
<td>Describes how to use the OPC-UA server function (E3 option).</td>
</tr>
<tr>
<td>GX/GP</td>
<td>SLMP Communication (E4) User’s Manual</td>
<td>IM 04L51B01-21EN</td>
<td>Describes how to use SLMP communication function (E4 option).</td>
</tr>
<tr>
<td>GX/GP</td>
<td>Loop Control Function, Program Control Function (PG Option) User’s Manual</td>
<td>IM 04L51B01-31EN</td>
<td>Describes how to use the Loop Control Function, Program Control Function (PG Option).</td>
</tr>
<tr>
<td>DXA170 DAQStudio User’s Manual</td>
<td>IM 04L41B01-62EN</td>
<td>Describes how to create custom displays (CG option).</td>
<td></td>
</tr>
</tbody>
</table>
Notes

- The contents of this manual are subject to change without prior notice as a result of continuing improvements to the software’s performance and functions.
- Every effort has been made in the preparation of this manual to ensure the accuracy of its contents. However, should you have any questions or find any errors, please contact your nearest YOKOGAWA dealer.
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About the Usage of Open Source Software

This product uses open source software.
For details on using open source software, see Regarding the Downloading and Installing for the Software, Manuals and Labels (IM 04L61B01-11EN).

Revisions

December 2015 1st Edition
March 2016 2nd Edition
June 2017 3rd Edition
# How to Use This Manual

## Recorder Version and Functions Described in This Manual

The contents of this manual apply to the GX/GP/GM10 with the following release numbers (see the STYLE S number) and style numbers (see the STYLE H number).

<table>
<thead>
<tr>
<th>Model</th>
<th>Release Number</th>
<th>Style Number</th>
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<tbody>
<tr>
<td>GX/GP</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>GM10</td>
<td>4</td>
<td>1</td>
</tr>
</tbody>
</table>

## What This Manual Explains

This manual mainly explains the Multi Batch function. For details on other settings and procedures, see the *Model GX10/GX20/GP10/GP20 Paperless Recorder User’s Manual (IM 04L51B01-01EN)* or *Data Acquisition System GM (IM 04L55B01-01EN)*. For details on communication commands, see *Model GX10/GX20/GP10/GP20/GM10 Communication Command User’s Manual (IM 04L51B01-17EN)*.

The GX20/GP20/GM10 standard type and large memory type are distinguished using the following notations.
- **Standard type:** GX20-1/GP20-1/GM10-1
- **Large memory type:** GX20-2/GP20-2/GM10-2

The following terms are used for references to other manuals:

<table>
<thead>
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<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GX/GP First Step Guide</td>
<td>Model GX10/GX20/GP10/GP20 Paperless Recorder First Step Guide Refers to the IM 04L51B01-02EN.</td>
</tr>
<tr>
<td>GM User’s Manual</td>
<td>GM Data Acquisition System User’s Manual Refers to the IM 04L55B01-01EN.</td>
</tr>
<tr>
<td>GM First Step Guide</td>
<td>GM Data Acquisition System First Step Guide Refers to the IM 04L55B01-02EN.</td>
</tr>
<tr>
<td>Communication Command Manual</td>
<td>Model GX10/GX20/GP10/GP20/GM10 Communication Command User’s Manual Refers to the IM 04L51B01-17EN.</td>
</tr>
<tr>
<td>Universal Viewer Manual</td>
<td>SMARTDAC+ STANDARD Universal Viewer User’s Manual Refers to the IM 04L61B01-01EN.</td>
</tr>
<tr>
<td>WT Communication Manual</td>
<td>Model GX10/GX20/GP10/GP20/GM10 WT Communication (E2) User’s Manual Refers to the IM 04L51B01-19EN.</td>
</tr>
<tr>
<td>SLMP Communication Manual</td>
<td>Model GX10/GX20/GP10/GP20/GM10 SLMP Communication (E4) User’s Manual Refers to the IM 04L51B01-21EN.</td>
</tr>
<tr>
<td>Loop Control Function, Program Control Function Manual</td>
<td>Model GX10/GX20/GP10/GP20/GM10 Loop Control Function, Program Control Function (IPG Option) User’s Manual</td>
</tr>
</tbody>
</table>
This manual uses the following conventions:

**Unit**
- **K**: Denotes 1024. Example: 768K (file size)
- **k**: Denotes 1000.

**Notes**
Improper handling or use can lead to injury to the user or damage to the instrument. This symbol appears on the instrument to indicate that the user must refer to the user’s manual for special instructions. The same symbol appears in the corresponding place in the user's manual to identify those instructions. In the manual, the symbol is used in conjunction with the word “WARNING” or “CAUTION.”

**Warning**
Calls attention to actions or conditions that could cause serious or fatal injury to the user, and precautions that can be taken to prevent such occurrences.

**CAUTION**
Calls attention to actions or conditions that could cause light injury to the user or cause damage to the instrument or user’s data, and precautions that can be taken to prevent such occurrences.

**Note**
Calls attention to information that is important for the proper operation of the instrument.

**Reference Item**
Reference to related operation or explanation is indicated after this mark.
Example: section 4.1

**Conventions Used in the Procedural Explanations**

**Bold characters**
Denotes key or character strings that appear on the screen.
Example: **Voltage**
Indicates the character types that can be used.

**Procedure**
Carry out the procedure according to the step numbers. All procedures are written with inexperienced users in mind; depending on the operation, not all steps need to be taken.
Explanation gives information such as limitations related the procedure.

**Path**
Indicates the setup screen and explains the settings.

**Description**
### Revision History

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<th>Model</th>
<th>Product</th>
<th>Description</th>
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<td>New edition</td>
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<td></td>
<td>GM</td>
<td>Release number 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Version 3.01)</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Style number 1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>GX/GP</td>
<td>Release number 3</td>
<td>Added starting of recording, editing of batch numbers and lot numbers, editing of batch comments, and text field display to the batch single screen display. Added a function for switching the display status of all start/stop.</td>
</tr>
<tr>
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<td>GM</td>
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<td></td>
<td></td>
<td>(Version 3.02)</td>
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<td></td>
<td></td>
<td>Style number 1</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>GX/GP</td>
<td>Release number 4</td>
<td>Support for release number 4.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Version 4.01)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Style number 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GM10</td>
<td>Release number 4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Version 4.01)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Style number 1</td>
<td></td>
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Appendix

Appendix 1 ................................................................................................................................................. Using the Event Action Function

App-1
1.1 Features and Benefits

The multi batch function can measure the data of multiple devices operating asynchronously on a single GX/GP/GM and create data files at the batch level. The function has the following features and benefits.

Features
- Up to 12 batches (large memory type) can be measured and recorded.
- A measurement data file can be created for each batch.
- Recording can be started and stopped, and computation can be restarted for the entire batch or for each batch.
- Batch overview allows monitoring of all batches (batch overview mode or all batch mode (Web application)) or individual batches (batch single mode).

Benefits
- Because multiple devices can be recorded on a single GX/GP/GM, there is no need to install a recorder or data logger for each device. This leads to reduction in equipment costs.
- Centralized monitoring using a single recorder or data logger reduces the labor cost of regularly taking rounds to monitor each device.
- The status of each device (each batch) can be monitored centrally.
- Centralized data facilitates data management.
1.2 Recording and Saving Data

1.2.1 Overview

The multi batch function allows you to record and save the measured data from multiple batches separately (per batch). You can also apply the multi batch function to multiple consecutive processes.

The diagram on the following page gives a general overview of the multi batch function.

Number of Batches Supported

The table below shows the number of batches supported by the GX/GP/GM. Each batch is known as a batch group.

<table>
<thead>
<tr>
<th>Model</th>
<th>Number of Batches Supported</th>
</tr>
</thead>
<tbody>
<tr>
<td>GX10-1, GX20-1, GP10-1, GP20-1, GM10-1</td>
<td>2 to 6</td>
</tr>
<tr>
<td>GX20-2, GP20-2, GM10-2</td>
<td>2 to 12</td>
</tr>
</tbody>
</table>

Recordable Channels

On the trend, digital, and bar graph displays, the data of channels is displayed in groups that are set in advance. These groups are called display groups.

The following table shows the number of display groups that can be set in each batch group and the number of channels that can be registered in each display group. Display groups are shared among the trend, digital, and bar graph displays.

For each batch group, the measured data is displayed per display group. The GX/GP/GM records the data from the measurement channels, computation channels, or communication channels (/MC) that are registered in the display groups and recording channels.

Note: If all the display groups in a batch group are set to Off, recording will not start even if you try to start recording because there are no recordable channels.

<table>
<thead>
<tr>
<th>Model</th>
<th>Number of Display Groups</th>
<th>Number of Channels You Can Register to a Single Display Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>GX10-1, GP10-1</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>GX20-1, GP20-1, GM10-1</td>
<td>6</td>
<td>20</td>
</tr>
<tr>
<td>GX20-2, GP20-2, GM10-2</td>
<td>12</td>
<td>20</td>
</tr>
</tbody>
</table>

The conditions for recording display or event data (scan interval, recording interval, and data type) apply to all batch groups. Likewise, the conditions for saving data files (file save interval and save destination directory) apply to all batch groups.

You can start and stop recording for each batch group individually. Other actions such as writing messages and resetting the values calculated on computation channels (/MT option) can also be carried out for each batch group individually.

The computation and report functions (/MT option) each start and stop simultaneously across all batch groups.

Display data and event data are saved per batch group. Batch numbers, lot numbers, file headers, batch text, batch comments, and other batch information are saved to files along with measured data.

Manual sample data, report data, and snapshot data are all saved to their own individual files with no distinction between batch groups.
### Description of the Multi Batch Function

#### 1.2 Recording and Saving Data

**Multi Batch Function**

**Conditions for recording and saving display data and event data**
- Scan interval
- Data record: Display data or Event data
- Recording interval
- File save interval
- Save destination directory

**Manual sampled data file**
- Report file
- Snapshot data file

**Batch group 1**
- Display group
  - 1
  - 2
  - 3
  - ...
  - n

**Batch group 2**
- Display group
  - 1
  - 2
  - 3
  - ...
  - n

- Start recording
- Data file (display data or event data)
- Stop recording
- File name
- Batch number, lot number
- File header
- Batch text
- Batch comment
- Measured data

Start/stop reporting
Start/stop computation
Write message
Reset computation

- Batch group 1
  - Start recording
  - Stop recording

- Batch group 2
  - Start recording
  - Stop recording

〇 represents user actions.
## 1.2.2 Recording and Saving Data

### Starting and Stopping Recording

#### During Batch Overview Mode
You can start and stop recording for each batch group individually. Or, you can start and stop recording across all batch groups simultaneously.

#### During Batch Single Mode
You can start and stop recording on a displayed batch group.

<table>
<thead>
<tr>
<th>Item</th>
<th>Operation Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recording</strong></td>
<td></td>
</tr>
<tr>
<td>Batch group 1</td>
<td>Start Stop</td>
</tr>
<tr>
<td>Batch group 2</td>
<td>Start Stop</td>
</tr>
<tr>
<td>Batch group 3</td>
<td>Start Stop</td>
</tr>
<tr>
<td>Simultaneous start</td>
<td>Start Stop</td>
</tr>
<tr>
<td>Simultaneous stop</td>
<td></td>
</tr>
<tr>
<td><strong>Report</strong></td>
<td>Start Stop</td>
</tr>
<tr>
<td><strong>Computation</strong></td>
<td>Simultaneous start, stop, and reset</td>
</tr>
<tr>
<td>Simultaneous start</td>
<td>Start Stop</td>
</tr>
<tr>
<td>Simultaneous reset</td>
<td>Start Stop</td>
</tr>
<tr>
<td>Simultaneous stop</td>
<td></td>
</tr>
<tr>
<td><strong>Reset each batch group</strong></td>
<td>Start Stop Stop Stop Stop</td>
</tr>
<tr>
<td>Batch group 1</td>
<td>Start Reset Stop</td>
</tr>
<tr>
<td>Batch group 2</td>
<td>Start Reset Stop</td>
</tr>
<tr>
<td>Batch group 3</td>
<td>Start Reset Stop</td>
</tr>
<tr>
<td><strong>Status relay</strong></td>
<td>Relay output when recording stops</td>
</tr>
</tbody>
</table>

- **Starting and Stopping a Report (IMT Option)**
  Reporting starts when recording starts on any batch group. Reporting stops when the recording of all batch group stop.
• Starting and Stopping Computation (/MT Option)
  • All computations start and stop together at the same time.
  • When computations are stopped, you can start recording and computation at the same time.

<table>
<thead>
<tr>
<th>Batch Mode</th>
<th>Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Batch overview mode</td>
<td>Starts computing.</td>
</tr>
<tr>
<td>Batch single mode</td>
<td>Recording + computing</td>
</tr>
<tr>
<td></td>
<td>Starts computing. The computed values of</td>
</tr>
<tr>
<td></td>
<td>computation channels ¹ in the batch group are</td>
</tr>
<tr>
<td></td>
<td>not reset.</td>
</tr>
<tr>
<td></td>
<td>Recording + computing (computation reset)</td>
</tr>
<tr>
<td></td>
<td>The computed values of computation channels</td>
</tr>
<tr>
<td></td>
<td>¹ in the batch group that is to start</td>
</tr>
<tr>
<td></td>
<td>recording are reset.</td>
</tr>
<tr>
<td></td>
<td>Starts computing.</td>
</tr>
</tbody>
</table>

1 The computation channels registered to that batch group’s display group.
  • You can stop computation at any time.
  • The GX/GP’s START/STOP key operation math action setting is fixed to Off.
    Starting and stopping recording using the START/STOP key are the same as those using touch operation.
  • For details on starting and stopping computation using the GM keys, see “Key Operation” on page 3-25.

• Fail Relay Output When Recording Is Started or Stopped (/FL option) (GX/GP)
  If FAIL relay operation is set to Record stop on a GX/GP, relay output occurs when recording stops on all batch groups.
  ▶ Setting: Section 1.23.6, “Setting the FAIL Relay and Instrument Information Output (/FL option),” in the GX/GP User’s Manual

• Recording Status of Each Batch Group
  You can use each batch group’s recording status as variables (REC01 to REC12) in computations (/MT options).

Recording Display Data and Event Data
The following recording conditions are common to all batch groups.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scan interval</td>
<td>500 ms, 1 s, 2 s, or 5 s.</td>
</tr>
<tr>
<td>Types of data to record</td>
<td>Either display data or event data.</td>
</tr>
<tr>
<td>Display data</td>
<td>Recording interval of display data (trend interval).</td>
</tr>
<tr>
<td>Event data</td>
<td>Use Free mode to record event data. You cannot select Trigger mode.</td>
</tr>
<tr>
<td></td>
<td>Recording interval of event data.</td>
</tr>
</tbody>
</table>
1.2 Recording and Saving Data

Recording Manual Sampled Data and Report Data (/MT option)
The settings and behavior of these features are common to all batch groups. See section 1.12.1, “Setting the Type of Data to Record (Display or event data) and Recording Conditions,” in the GX/GP User’s Manual or section 2.13.1, “Setting the Type of Data to Record (Display or event data) and Recording Conditions,” in the GM User’s Manual.

Saving Measured Data to Storage Media
This section briefly how the GX/GP/GM saves various types of measured data to storage media. Sections are the same as with GX/GP/GMs without the multi batch function. For details, see section 1.14, “Setting the Conditions for Saving Data Files,” and section 1.21.2, “Configuring the FTP Client Function,” in the GX/GP User’s Manual or section 2.15, “Setting the Conditions for Saving Data Files,” or section 2.22.2, “Configuring the FTP Client Function,” in the GM User’s Manual.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto save</td>
<td>Display data</td>
</tr>
<tr>
<td>Event data</td>
<td>Saves the data from all batch groups to the specified save destination directory. The same file save interval for event data is used for all batch groups.</td>
</tr>
<tr>
<td>Manual sampled data</td>
<td></td>
</tr>
<tr>
<td>Report data</td>
<td>Saves the data to the specified save destination directory.</td>
</tr>
<tr>
<td>Data saving using touch operation (GX/GP) or Web application operation (GM)</td>
<td>Display data save</td>
</tr>
<tr>
<td>Event data save</td>
<td>Saves the source batch group’s event data that the GX/GP/GM is currently recording to files to the SD card or USB memory device (/UH) (GX/GP).</td>
</tr>
<tr>
<td>Selected data save</td>
<td>The operation of saving data by displaying a memory summary. See section 2.3.3, “Displaying a List of Data Files in the Internal Memory and Saving Data (Memory summary),” in the GX/GP User’s Manual.</td>
</tr>
<tr>
<td>Manual save</td>
<td>Display data</td>
</tr>
<tr>
<td>Event data</td>
<td></td>
</tr>
<tr>
<td>Manual sampled data</td>
<td></td>
</tr>
<tr>
<td>Report data</td>
<td></td>
</tr>
<tr>
<td>Snapshot (GX/GP)</td>
<td>Display data and event data</td>
</tr>
<tr>
<td>Report data</td>
<td>Transfers the data to the specified initial path.</td>
</tr>
<tr>
<td>Media FIFO</td>
<td>Performs a FIFO operation only when the following files are saved. Display or event data files for all batch groups, manual sampled data files, report files, and snapshot data files (GX/GP).</td>
</tr>
</tbody>
</table>
## Data Files

This section explains the makeup of the data files. Sections are the same as with GX/GP/GMs without the multi batch function.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display data and event data</td>
<td>Measured data: Saves the data from each batch group to a separate file. Each batch group’s alarm and message information is also saved.</td>
</tr>
<tr>
<td></td>
<td>File header: The string specified for each batch group.</td>
</tr>
<tr>
<td></td>
<td>Batch text: The string specified for each batch group.</td>
</tr>
<tr>
<td></td>
<td>Batch comment: The string specified for each batch group.</td>
</tr>
<tr>
<td>Manual sampled data</td>
<td>Measured data: The measured data from all source channels.</td>
</tr>
<tr>
<td></td>
<td>File header: Uses batch group 1’s file header.</td>
</tr>
<tr>
<td>Report data</td>
<td>Report data: The source channel depends on the DX settings.</td>
</tr>
<tr>
<td></td>
<td>File header: Uses batch group 1’s file header.</td>
</tr>
<tr>
<td>Snapshot data file (GX/GP)</td>
<td>Screen image data.</td>
</tr>
</tbody>
</table>

### File name

You can specify a different file name configuration for each batch group. For example, you can specify that batch group 1’s file name is in the date configuration, and batch group 2’s file name is in the batch name configuration.

The file names for manual sampled data, snapshot data (GX/GP), and report data all follow the same configuration as that specified for batch group 1.

For all file name configurations, the sequence number portion of the file name for display data and event data differs from that used with a GX/GP/GM without the multi batch function. For details on file names, see section 1.14.1, “Setting the Save Directory, File Header, and File Name,” in the GX/GP User’s Manual or section 2.15.1, “Setting the Save Directory, File Header, and File Name,” in the GM User’s Manual.

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>Display data: One character in the file name sequence number is allocated to identify the batch group. You can specify a different string to use in the file name per batch group. Other file name details are the same as with a GX/GP/GM without the multi batch function.</td>
</tr>
<tr>
<td>Event data</td>
<td></td>
</tr>
<tr>
<td>Manual sampled data</td>
<td>The string used in the file name is the one specified for batch group 1 (specified file name).</td>
</tr>
<tr>
<td>Snapshot data (GX/GP)</td>
<td>Other file name details are the same as with a GX/GP/GM without the multi batch function.</td>
</tr>
<tr>
<td>Report data</td>
<td></td>
</tr>
<tr>
<td>Sequence number</td>
<td>Display data: One character in the file name sequence number is allocated to identify the batch group. You can specify a different string to use in the file name per batch group. Other file name details are the same as with a GX/GP/GM without the multi batch function.</td>
</tr>
<tr>
<td>(This is the “Sequence” file name configuration, it does not refer to the “sequence number” within a file name.)</td>
<td></td>
</tr>
<tr>
<td>Event data</td>
<td></td>
</tr>
<tr>
<td>Manual sampled data</td>
<td>The string used in the file name is the one specified for batch group 1 (specified file name).</td>
</tr>
<tr>
<td>Snapshot data (GX/GP)</td>
<td>Other file name details are the same as with a GX/GP/GM without the multi batch function.</td>
</tr>
<tr>
<td>Report data</td>
<td></td>
</tr>
<tr>
<td>Batch name</td>
<td>Display data: One character in the file name sequence number is allocated to identify the batch group. A separate batch name for each batch group is used. Other file name details are the same as with a GX/GP/GM without the multi batch function.</td>
</tr>
<tr>
<td>Event data</td>
<td></td>
</tr>
<tr>
<td>Manual sampled data</td>
<td>The delimiter is the same as with a GX/GP/GM without the multi batch function.</td>
</tr>
<tr>
<td>Snapshot data (GX/GP)</td>
<td></td>
</tr>
<tr>
<td>Report data</td>
<td></td>
</tr>
</tbody>
</table>
1.2. Recording and Saving Data

File name sequence number for display data and event data

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>File name sequence number</td>
<td>Consists of 1-character batch group identifier + 5-digit number + 1-character delimiter</td>
</tr>
<tr>
<td>Batch group identifier</td>
<td>A, B, C, D, E, F, G, H, J, K, L, or M (A is used for batch group 1, B is used for batch group 2, ... M is used for batch group 12).</td>
</tr>
<tr>
<td>Number</td>
<td>A sequence number in chronological order. The number ranges from 00001 to 99999. If the number reaches 99999, it returns to 00000.</td>
</tr>
</tbody>
</table>

File name examples
The following are file name examples for display data files.

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Example File Name for a Display Data File</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>A00123_AAAAA151224_173524.GDS</td>
</tr>
<tr>
<td>Sequence number</td>
<td>B00123_AAAAA.GDS</td>
</tr>
<tr>
<td>Batch name</td>
<td>C00123_SAMPLE-000001.GDS</td>
</tr>
</tbody>
</table>

1.2.3 Operations You Can Perform on Each Batch Group

Writing Messages and Writing Free Messages
You can write different messages for each batch group.

▲ Procedure:
GX/GP: section 3.1.8, “Writing an Additional Message or an Additional Free Message”
GM: section 3.2.8, “Writing an Additional Message or an Additional Free Message”

Writing Freehand Messages (GX/GP)
You can write freehand messages for each batch group.

▲ Procedure: section 3.1.9, “Writing Freehand Messages”

Computation Reset (/MT option)
You can reset the computed result on the computation channels in use for each batch group.

▲ Procedure:
GX/GP: section 3.1.5, “Starting, Stopping, and Resetting Computations (/MT Option)”
GM: section 3.2.5, “Starting, Stopping, and Resetting Computations (/MT Option)”

Text Field Display
You can display text fields for each batch group.

▲ Procedure:
GX/GP: section 3.1.11, “Displaying the Text Field Settings”
GM: section 3.2.10, “Displaying the Text Field Content”

Saving Display Data and Event Data

▲ Procedure:
GX/GP: section 3.1.4, “Starting/Stopping Recording, and Saving Data”
GM: section 3.2.4, “Starting/Stopping Recording, and Saving Data”
Setting the Batch Name Number, Lot Number, Comment, and Batch Text Field
You can set the batch number, lot number, comment, and batch text field (text) at the start of recording.
You can also set comments when recording is in progress and when it is stopped.
Procedure:
GX/GP: section 3.1.4, “Starting/Stopping Recording, and Saving Data”
GM: section 3.2.4, “Starting/Stopping Recording, and Saving Data”

1.2.4 Changes to Features
The following standard features differ between a GX/GP/GM with the multi batch function and a GX/GP/GM without it.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trend interval switching</td>
<td>When the multi batch function is enabled, you cannot switch the trend interval (you cannot switch to the secondary trend interval).</td>
</tr>
<tr>
<td>Trend clear</td>
<td>When the multi batch function is enabled, the GX/GP/GM always clears the displayed waveform when recording starts.</td>
</tr>
<tr>
<td>Scan interval</td>
<td>500 ms/1s/2s/5s</td>
</tr>
</tbody>
</table>
### 1.3 Display

Two display modes are available: **batch overview mode/all batch mode (Web application)** and **batch single mode**. In batch overview mode, information common to all batch groups is displayed. In batch single mode, information for each batch such as measured data and alarms is displayed.

#### 1.3.1 Batch Overview Mode/All Batch Mode (Web application)

The following table shows the displayed items.

<table>
<thead>
<tr>
<th>Name</th>
<th>Displayed Content</th>
<th>Reference Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status display section</td>
<td>See the items shown in the status display section explained later.</td>
<td>GX/GP: Section 1.3.3, “Setting the Display,” in the GX/GP User’s Manual</td>
</tr>
<tr>
<td>Batch overview</td>
<td>The status of all batch groups. See “Batch Overview,” explained later.</td>
<td>GX/GP: section 3.1.2, “Displaying the Batch Overview”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GM: “Displaying the Batch Overview” on page 3-15</td>
</tr>
<tr>
<td>Overview</td>
<td>The status of enabled channels 1 or the status of all batch groups. 1 GX20/GP20: Up to 100, 1 GX10/GP10: Up to 30, GM10: Up to 100. On the Web application, the maximum number of channels for all models is 100.</td>
<td>GX/GP: “Displaying the Overview” on page 3-2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GM: Section 3.1.2, “Monitoring the GM Data and Controlling the GM from the Monitor Screen,” in the GM User’s Manual</td>
</tr>
<tr>
<td>Custom display (GX/GP)</td>
<td>Customized display screen.</td>
<td>GX/GP: DAQStudio (IM04L41B01-62EN), or section 2.2.2, “Displaying Measured Data,” or section 2.2.1, “Displaying Measured Data Using Waveforms, Numeric Values, Bar Graph, or Custom Display (ICG option) (Trend, digital, bar graph, and custom displays),” in the GX/GP User’s Manual</td>
</tr>
<tr>
<td>Information</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>GM: Section 3.1.2, “Monitoring the GM Data and Controlling the GM from the Monitor Screen,” in the GM User’s Manual</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GM: Section 3.1.2, “Monitoring the GM Data and Controlling the GM from the MonitorScreen,” in the GM User’s Manual</td>
</tr>
<tr>
<td>Internal switch/relay</td>
<td>The DO channel and internal switch status.</td>
<td>GX/GP: Section 2.3.7, “Displaying the DO Channel and Internal Switch Status,” in the GX/GP User’s Manual</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GM: Section 3.1.2, “Monitoring the GM Data and Controlling the GM from the Monitor Screen,” in the GM User’s Manual</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GM: Section 3.1.2, “Monitoring the GM Data and Controlling the GM from the Monitor Screen,” in the GM User’s Manual</td>
</tr>
</tbody>
</table>

Continued on next page
### Description of the Multi Batch Function

<table>
<thead>
<tr>
<th>Name</th>
<th>Displayed Content</th>
<th>Reference</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information</td>
<td>Network information</td>
<td>GX/GP Section 2.3.9, “Displaying Network Information,” in the GX/GP User’s Manual</td>
<td>1.3.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GM Section 3.1.2, “Monitoring the GM Data and Controlling the GM from the Monitor Screen,” in the GM User’s Manual</td>
<td>1.3.1</td>
</tr>
<tr>
<td>WT client (/E2)</td>
<td>WT communication status</td>
<td>GX/GP Section 5.1.4, “Showing the Status of All Loops on a Single Screen (Control Overview)” in the Loop Control Function, Program Control Function Manual</td>
<td>1.3.1</td>
</tr>
<tr>
<td>SLMP client (/E4)</td>
<td>SLMP client status</td>
<td>SLMP Communication Manual</td>
<td>1.3.1</td>
</tr>
<tr>
<td>Reminder (/AH)</td>
<td>Schedule management information</td>
<td>GX/GP Section 1.3.2, “Using the Aerospace Heat Treatment (/AH option) (Release number 3 and later),” in the GX/GP User’s Manual</td>
<td>1.3.1</td>
</tr>
<tr>
<td>System information</td>
<td>GX/GP system information</td>
<td>GM Section 3.1.2, “Monitoring the GM Data and Controlling the GM from the Monitor Screen,” in the GM User’s Manual</td>
<td>1.3.1</td>
</tr>
<tr>
<td>Alarm summary (Web application)</td>
<td>Information regarding the alarm that occurred in the target batch group.</td>
<td>GX/GP Section 2.3.1, “Listing the Log of Alarm Occurrences and Releases,” in the GX/GP User’s Manual</td>
<td>1.3.1</td>
</tr>
<tr>
<td>Message summary (Web application)</td>
<td>Information regarding the messages written for the target batch group.</td>
<td>GM Section 3.1.2, “Monitoring the GM Data and Controlling the GM from the Monitor Screen,” in the GM User’s Manual</td>
<td>1.3.1</td>
</tr>
<tr>
<td>Log</td>
<td>Event Operation log</td>
<td>GX/GP Section 2.3.5, “Displaying Logs,” in the GX/GP User’s Manual</td>
<td>1.3.1</td>
</tr>
<tr>
<td></td>
<td>Error Log</td>
<td>GM Section 3.1.2, “Monitoring the GM Data and Controlling the GM from the Monitor Screen,” in the GM User’s Manual</td>
<td>1.3.1</td>
</tr>
<tr>
<td></td>
<td>General communication</td>
<td>SLMP Communication Manual</td>
<td>1.3.1</td>
</tr>
<tr>
<td></td>
<td>FTP</td>
<td></td>
<td>1.3.1</td>
</tr>
<tr>
<td></td>
<td>Email</td>
<td></td>
<td>1.3.1</td>
</tr>
<tr>
<td></td>
<td>WEB</td>
<td></td>
<td>1.3.1</td>
</tr>
<tr>
<td></td>
<td>SNTP</td>
<td></td>
<td>1.3.1</td>
</tr>
<tr>
<td></td>
<td>DHCP</td>
<td></td>
<td>1.3.1</td>
</tr>
<tr>
<td></td>
<td>MODBUS (/MC)</td>
<td></td>
<td>1.3.1</td>
</tr>
<tr>
<td></td>
<td>SLMP (/E4)</td>
<td></td>
<td>1.3.1</td>
</tr>
<tr>
<td>Control</td>
<td>Control Group</td>
<td>GX/GP Section 5.1.1, “Monitoring and Controlling on the Control Group Screen” in the Loop Control Function, Program Control Function Manual</td>
<td>1.3.1</td>
</tr>
<tr>
<td></td>
<td>Tuning</td>
<td>GX/GP Section 5.1.8, “Viewing and Adjusting PID and Other Control Parameters (Tuning)” in the Loop Control Function, Program Control Function Manual</td>
<td>1.3.1</td>
</tr>
<tr>
<td></td>
<td>Control Overview</td>
<td>GX/GP Section 5.1.4, “Showing the Status of All Loops on a Single Screen (Control Overview)” in the Loop Control Function, Program Control Function Manual</td>
<td>1.3.1</td>
</tr>
</tbody>
</table>

Continued on next page
## 1.3 Display

<table>
<thead>
<tr>
<th>Name</th>
<th>Displayed Content</th>
<th>Reference</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>Control Summary</td>
<td>The control summary shows the control history.</td>
<td>GX/GP Section 5.1.6, “Listing the Control Log (Control summary)” in the Loop Control Function, Program Control Function Manual</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>GM Section 6.1.4, “Control Summary Screen” in the Loop Control Function, Program Control Function Manual</td>
</tr>
<tr>
<td>Control Alarm</td>
<td>Control Alarm Summary</td>
<td>The control alarm summary shows the control alarm history.</td>
<td>GX/GP Section 5.1.7, “Listing the Log of Alarm Occurrences and Releases (Control alarm summary)” in the Loop Control Function, Program Control Function Manual</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>GM Section 6.1.5, “Control Alarm Summary Screen” in the Loop Control Function, Program Control Function Manual</td>
</tr>
<tr>
<td>Program Selection</td>
<td>Program Selection</td>
<td>The program selection screen shows the specified program pattern.</td>
<td>GX/GP Section 5.3.1, “Selecting a Program Pattern” in the Loop Control Function, Program Control Function Manual</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>GM Section 6.2, “Monitoring and Configuring Program Control” in the Loop Control Function, Program Control Function Manual</td>
</tr>
<tr>
<td>Program Operation</td>
<td>Program Operation</td>
<td>The program operation screen shows the running program pattern.</td>
<td>GX/GP Section 5.3, “Performing Program Control (recorder option /PG)” in the Loop Control Function, Program Control Function Manual</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>GM Section 6.2, “Monitoring and Configuring Program Control” in the Loop Control Function, Program Control Function Manual</td>
</tr>
</tbody>
</table>
### GX/GP

#### Status display section

With the following exception, items shown in the status display section are the same as with a GX/GP/GM without the multi batch function.

**Batch overview**

<table>
<thead>
<tr>
<th>Batch</th>
<th>Start Time</th>
<th>Stop Time</th>
<th>Batch Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Batch1</td>
<td>2015/09/18 15:01:49</td>
<td>ALL BATCH</td>
<td>Mode</td>
</tr>
</tbody>
</table>

- **Mode**: Displays items: Section 1.3.3, “Setting the Display,” in the GX/GP User’s Manual

**Batch overview**

- **Single batch group**
  - See below.
  - Sections outside of the range of the number of supported batch groups are displayed in gray.
  - Tap to display individual batches.

**Batch single screen display**

- **Recording status**
  - Light green: Recording
  - White or Black: Not recording

**Alarm icon**

- **Recording status icon**

**Batch group number and file header**

- **Batch name**: Batch number + lot number

**Display**

Switches to the same screen as when you press **MENU** and tap **Record** in batch single mode. The icon color changes according to the recording status.

**Recording**

- **Recording**: light green
- **Not recording**: white

**Batch**

Switches to the same screen as when you press **MENU** and tap the **Universal** tab and then **Batch** in batch single mode.

**Text field**

Switches to the same screen as when you press **MENU** and tap the **Universal** tab and then **Text field** in batch single mode.
### Screen Layout

<table>
<thead>
<tr>
<th>Model</th>
<th>Number of Batch Groups</th>
<th>Screen Layout Vertical × Horizontal</th>
</tr>
</thead>
<tbody>
<tr>
<td>GX10-1, GX20-1, GP10-1, GP20-1</td>
<td>2 to 4</td>
<td>1×4</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>1×5</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>2×3</td>
</tr>
<tr>
<td>GX20-2, GP20-2</td>
<td>2 to 4</td>
<td>1×4</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>1×5</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>2×3</td>
</tr>
<tr>
<td></td>
<td>7 or 8</td>
<td>2×4</td>
</tr>
<tr>
<td></td>
<td>9 or 10</td>
<td>2×5</td>
</tr>
<tr>
<td></td>
<td>11 or 12</td>
<td>2×6</td>
</tr>
</tbody>
</table>

Batch groups are assigned to windows starting with the left column. Batch groups are assigned in ascending order by their group number. The following example shows the case for six batch groups.

![Batch group example](image)
Web Application

Status Display Section
With the following exception, items shown in the status display section are the same as with a GX/GP/GM without the multi batch function.

- Displayed content other than batch mode switch: Section 2.1.4, “Starting and Closing the Web Application,” in the GM User’s Manual
- Batch mode switch operation: section 3.2.1, “Switching between All Batch Mode and Batch Single Mode”

Batch Overview

Switches between all batch mode and batch single mode

Single batch group

Batch name
Batch number + lot number

Recording status icon

Alarm icon

Batch group number and file header
### 1.3.2 Batch Single Mode

The following table shows the displayed items.

<table>
<thead>
<tr>
<th>Name</th>
<th>Displayed Content</th>
<th>Reference Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status display section</td>
<td>See the items shown in the status display section explained later.</td>
<td>GX/GP Section 1.3.3, “Setting the Display,” in the GX/GP User’s Manual</td>
</tr>
<tr>
<td>Trend</td>
<td>The target batch group’s trend display.</td>
<td>GM Section 2.4.3, “Setting the Display,” in the GM User’s Manual</td>
</tr>
<tr>
<td>Historical trend</td>
<td>The target batch group’s historical trend display.</td>
<td>GX/GP Section 2.2.7, “Displaying Previously Measured Data (Historical trend display),” in the GX/GP User’s Manual</td>
</tr>
<tr>
<td>Digital</td>
<td>The target batch group’s digital display.</td>
<td>GM Section 3.1.2, “Monitoring the GM Data and Controlling the GM from the Monitor Screen,” in the GM User’s Manual</td>
</tr>
<tr>
<td>Bar graph</td>
<td>The target batch group’s bar graph display.</td>
<td>GM Section 3.1.2, “Monitoring the GM Data and Controlling the GM from the Monitor Screen,” in the GM User’s Manual</td>
</tr>
<tr>
<td>Custom display</td>
<td>Customized display screen</td>
<td>DAQStudio (IM04L41B01-62EN), or section 2.2.1, “Displaying Measured Data Using Waveforms, Numeric Values, Bar Graph, or Custom Display (CG option) (Trend, digital, bar graph, and custom displays),” in the GX/GP User’s Manual</td>
</tr>
<tr>
<td>Overview</td>
<td>The status of enabled channels 1 of the target batch group or the status of the target batch group’s display group. 1 GX20/GP20: Up to 100 1 GX10/GP10: Up to 30 1 GM10: Up to 100 On the Web application, the maximum number of channels for all models is 100.</td>
<td>GX/GP Section 3.1.3, “Displaying the Overview” Section 2.2.3, “Displaying the Statuses of All Channels on One Screen (Overview Display),” in the GX/GP User’s Manual</td>
</tr>
<tr>
<td>Multi panel</td>
<td>Multi panel screen</td>
<td>GX/GP Section 2.2.4, “Displaying the Multi Panel (GX20/GP20 only),” in the GX/GP User’s Manual</td>
</tr>
<tr>
<td>Information</td>
<td>Alarm summary: Information regarding the alarm that occurred in the target batch group.</td>
<td>GX/GP Section 2.3.1, “Listing the Log of Alarm Occurrences and Releases,” in the GX/GP User’s Manual</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GM Section 3.1.2, “Monitoring the GM Data and Controlling the GM from the Monitor Screen,” in the GM User’s Manual</td>
</tr>
</tbody>
</table>

Continued on next page
## Description of the Multi Batch Function

<table>
<thead>
<tr>
<th>Name</th>
<th>Displayed Content</th>
<th>Reference Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information</td>
<td>Message summary: Information regarding the messages written for the target batch group.</td>
<td>GX/GP Section 2.3.2, “Displaying the Log of Written Messages (Message summary),” in the GX/GP User’s Manual</td>
</tr>
<tr>
<td></td>
<td>Memory summary: Information regarding data files saved to internal memory for the target batch group.</td>
<td>GM Section 3.1.2, “Monitoring the GM Data and Controlling the GM from the Monitor Screen,” in the GM User’s Manual</td>
</tr>
<tr>
<td>Modbus master (/MC)</td>
<td>Modbus master operating status.</td>
<td>GM Section 3.1.2, “Monitoring the GM Data and Controlling the GM from the Monitor Screen,” in the GM User’s Manual</td>
</tr>
<tr>
<td>WT client (/E2)</td>
<td>WT communication status</td>
<td>GX/GP Section 2.3.9, “Displaying Network Information,” in the GX/GP User’s Manual</td>
</tr>
<tr>
<td>SLMP client (/E4)</td>
<td>SLMP client status.</td>
<td>GM Section 3.1.2, “Monitoring the GM Data and Controlling the GM from the Monitor Screen,” in the GM User’s Manual</td>
</tr>
<tr>
<td>Internal switch/relay</td>
<td>The DO channel and internal switch status.</td>
<td>GM Section 3.1.2, “Monitoring the GM Data and Controlling the GM from the Monitor Screen,” in the GM User’s Manual</td>
</tr>
<tr>
<td>Network information</td>
<td>Network information.</td>
<td>GM Section 3.1.2, “Monitoring the GM Data and Controlling the GM from the Monitor Screen,” in the GM User’s Manual</td>
</tr>
<tr>
<td>System information</td>
<td>GX/GP system information.</td>
<td>GM Section 3.1.2, “Monitoring the GM Data and Controlling the GM from the Monitor Screen,” in the GM User’s Manual</td>
</tr>
<tr>
<td>Log</td>
<td>Event Error General communication FTP Email WEB SNTP DHCP Modbus (/MC) SLMP (/E4)</td>
<td>GX/GP Section 2.3.5, “Displaying Logs,” in the GX/GP User’s Manual</td>
</tr>
</tbody>
</table>

Continued on next page
<table>
<thead>
<tr>
<th>Name</th>
<th>Displayed Content</th>
<th>Reference Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Group</td>
<td>A control group is used to monitor and control the loops in the specified control group.</td>
<td>GX/GP Section 5.1.1, “Monitoring and Controlling on the Control Group Screen” in the Loop Control Function, Program Control Function Manual</td>
</tr>
<tr>
<td>Tuning</td>
<td>Tuning is used to view the loop status and adjust PID parameter settings.</td>
<td>GX/GP Section 5.1.8, “Viewing and Adjusting PID and Other Control Parameters (Tuning)” in the Loop Control Function, Program Control Function Manual</td>
</tr>
<tr>
<td>Control Overview</td>
<td>The control overview screen shows on a single screen the alarm status of all loops.</td>
<td>GX/GP Section 5.1.4, “Showing the Status of All Loops on a Single Screen (Control Overview)” in the Loop Control Function, Program Control Function Manual</td>
</tr>
<tr>
<td>Control Summary</td>
<td>The control summary shows the control history.</td>
<td>GX/GP Section 5.1.6, “Listing the Control Log (Control summary)” in the Loop Control Function, Program Control Function Manual</td>
</tr>
<tr>
<td>Control Alarm</td>
<td>The control alarm summary shows the control alarm history.</td>
<td>GX/GP Section 5.1.7, “Listing the Log of Alarm Occurrences and Releases (Control alarm summary)” in the Loop Control Function, Program Control Function Manual</td>
</tr>
<tr>
<td>Program Selection</td>
<td>The program selection screen shows the specified program pattern.</td>
<td>GX/GP Section 5.3.1, “Selecting a Program Pattern” in the Loop Control Function, Program Control Function Manual</td>
</tr>
<tr>
<td>Program Operation</td>
<td>The program operation screen shows the running program pattern.</td>
<td>GX/GP Section 5.3, “Performing Program Control (recorder option /PG)” in the Loop Control Function, Program Control Function Manual</td>
</tr>
</tbody>
</table>

GM Section 6.1.2, “Faceplate Screen and Controller Screen” in the Loop Control Function, Program Control Function Manual

GM Section 6.1.6, “Tuning Screen” in the Loop Control Function, Program Control Function Manual

GM Section 6.1.4, “Control Summary Screen” in the Loop Control Function, Program Control Function Manual

GM Section 6.1.5, “Control Alarm Summary Screen” in the Loop Control Function, Program Control Function Manual

GM Section 6.2, “Monitoring and Configuring Program Control” in the Loop Control Function, Program Control Function Manual
Description of the Multi Batch Function

1.3 Display

GX/GP

Status display section
With the following exception, items shown in the status display section are the same as with a GX/GP/GM without the multi batch function.


<table>
<thead>
<tr>
<th>Batch ID: 900001</th>
<th>Batch name:</th>
<th>2015/10/07 08:10:54</th>
</tr>
</thead>
<tbody>
<tr>
<td>Batch group number and file header</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- See “Batch Overview Mode/All Batch Mode (Web application)” on page 1-10.

Web Application

Status display section

- See “Batch Overview Mode/All Batch Mode (Web application)” on page 1-10.
Chapter 2 GX/GP/GM Configuration

## 2.1 Configuration

### 2.1.1 Settings for the Multi Batch Function

**Specialized Settings for the Multi Batch Function**

- **Multi Batch Function**
  
  By factory default, the multi batch function is enabled. If you change the number of batches to be used or switch the enabled/disabled state of the multi batch function, all settings except the items below are initialized, and the GX/GP/GM restarts.

**Configure the multi batch function first, before reconfiguring or configuring the GX/GP/GM.**

If you disable the multi batch function, the functions that you can use on the GX/GP/GM are the same as those of the standard product.

<table>
<thead>
<tr>
<th>Communication (Ethernet) settings</th>
<th>Basic settings</th>
<th>Server settings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logs</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Events</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Errors</td>
<td></td>
</tr>
<tr>
<td></td>
<td>FTP</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Email</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Modbus</td>
<td></td>
</tr>
</tbody>
</table>

- **Settings for Each Batch Group**

  The settings you can change for each batch group are as follows. These items are in the Batch settings menu (Batch settings > Individual batch settings on the GX/GP).

<table>
<thead>
<tr>
<th>Batch Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group settings</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Data save settings</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

**General Settings Other Than the Specialized Settings for the Multi Batch Function**

Items not in the Batch settings menu (Batch settings > Individual batch settings on the GX/GP) are shared among all batch groups.

- **Event Actions**

  When the multi batch function is enabled, a portion of the actions in the event action function requires the designation of a specific batch group. For those types of actions, a box containing all the batch groups for you to select from is displayed.

<table>
<thead>
<tr>
<th>Actions that require the designation of a specific batch group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recording start/stop</td>
</tr>
<tr>
<td>Recording start</td>
</tr>
<tr>
<td>Recording stop</td>
</tr>
<tr>
<td>Message</td>
</tr>
<tr>
<td>Save display data</td>
</tr>
<tr>
<td>Save event data</td>
</tr>
<tr>
<td>Math reset</td>
</tr>
<tr>
<td>Switch the display group</td>
</tr>
</tbody>
</table>
• **Fixed Features**
  You cannot change the following settings.

<table>
<thead>
<tr>
<th>Function</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trend interval switching</td>
<td>Fixed to Off.</td>
</tr>
<tr>
<td>Trend clear</td>
<td>Fixed to On.</td>
</tr>
<tr>
<td>Confirmation screen</td>
<td>Fixed to On.</td>
</tr>
<tr>
<td>START/STOP key action (GX/GP)</td>
<td>Fixed to Off.</td>
</tr>
<tr>
<td>Event data recording modes</td>
<td>Fixed to Free.</td>
</tr>
<tr>
<td>Batch function On/Off</td>
<td>Fixed to On.</td>
</tr>
</tbody>
</table>

**Notes**

If even one batch group is recording, the following settings cannot be changed.
- I/O channel range, recording channel settings (excluding manual sample recording channels)
- Calculation expressions of math channels (/MT option), constants, recording channel settings
- Trend interval
- Event data
- Batch text (when the advanced security function is enabled)
- Display group (when the advanced security function is enabled)
- Trip line (when the advanced security function is enabled)
- Scale image (GX/GP) (when the advanced security function is enabled)
- File header (when the advanced security function is enabled)
- File name (when the advanced security function is enabled)

The following settings cannot be changed while their applicable batch group is recording.
- Batch text (when the advanced security function is disabled)
2.1.2 Setting the Multi Batch Function

If the measurement mode is set to High speed or Dual interval, the multi-batch function is disabled (fixed to Off) and cannot be changed. To enable the multi-batch function, set the measurement mode to Normal.

Path

GX/GP: MENU key > Browse tab > Initialize Calibration > Setting menu Multi batch
Web application: Calib tab > Multi batch settings

Description

<table>
<thead>
<tr>
<th>Setup Item</th>
<th>Selectable Range or Options</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi batch On/Off (Web application)</td>
<td></td>
<td>On</td>
</tr>
<tr>
<td>Batch operation qty</td>
<td>GX10-1/GX20-1/GP10-1/GP20-1/GM10-1:</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>2/3/4/5/6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GX20-2/GP20-2/GM10-2:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2/3/4/5/6/7/8/9/10/11/12</td>
<td></td>
</tr>
</tbody>
</table>

1 GX10-1/GX20-1/GP10-1/GP20-1/GM10-1: 6
GX20-2/GP20-2/GM10-2: 12

Multi batch, On/Off
Set whether to use the multi batch function.

Options Description
On Multi batch function is used.
Off Multi batch function is not used.

Batch operation qty
Set the number of batches to use.

NOTE

- If you change the multi batch function settings, all settings except a portion of the items are initialized.
  (See section 2.1.1, “Settings for the Multi Batch Function,” on page 2-1.)
- If you change the multi batch function settings, you need to reconfigure the settings.
- If you change the multi batch settings (On/Off, quantity) while using the Web application, you need to reload the Web application after restarting the GX/GP/GM.
- If you are using a GM in fixed IP mode, restarting will clear the mode. You need to set it again.
- If you are using automatic IP address assignment, the IP address may change after restarting. If this happens, you need to reload the correct IP address of the Web application after restarting.
- You cannot turn on or off the multi-batch function from the Hardware Configurator. Do this from the main unit for the GX/GP or Web application for the GM.
- If the multi-batch function is enabled, the measurement mode is fixed to Normal. To set the measurement mode to High speed or Dual interval, disable the multi-batch function.
2.1.3 Configuring Batch Settings

Batch Function

**Path**

GX/GP: **MENU** key > **Browse** tab > **Setting** > **Setting menu** **Batch settings**
Web application: **Config.** tab > **Batch settings** > **Batch function**
Hardware configurator: **Batch settings** > **Batch function**

**Description**

**Batch Function**

<table>
<thead>
<tr>
<th>Setup Item</th>
<th>Selectable Range or Options</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>On/Off</td>
<td>On</td>
<td>Off</td>
</tr>
<tr>
<td>Lot-No. digit</td>
<td>Off/4/6/8</td>
<td>6</td>
</tr>
<tr>
<td>Auto increment</td>
<td>Off/On</td>
<td>On</td>
</tr>
</tbody>
</table>

**On/Off**

Fixed to On.

**Lot-No. digit**

Set the number of digits of lot numbers. To disable lot numbers, set this to Off.

**Auto increment**

<table>
<thead>
<tr>
<th>Options</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>On</td>
<td>Automatically sets the lot number of the next measurement to the current lot number + 1.</td>
</tr>
<tr>
<td>Off</td>
<td>Turns auto increment off.</td>
</tr>
</tbody>
</table>

**Batch Text and Text Field**

You can enter text fields into a file.

**Path**

GX/GP: **MENU** key > **Browse** tab > **Setting** > **Setting menu** **Batch settings** > **Individual batch settings** **Batch text**
Web application: **Config.** tab > **Batch settings** > **Batch text** > **Batch group number 1 to 12**
Hardware configurator: **Batch settings** > **Batch text** > **Batch group number 1 to 12**

**Description**

<table>
<thead>
<tr>
<th>Setup Item</th>
<th>Selectable Range or Options</th>
<th>Default Value</th>
</tr>
</thead>
</table>

**Batch group number**

Select the batch group number for setting a text field.
1. On the Web application and hardware configurator, this is already selected with the path.

**Text field number**

Select the text field number to assign text to.
Text field

<table>
<thead>
<tr>
<th>Setup Item</th>
<th>Selectable Range or Options</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title of field</td>
<td>Character string (up to 20 characters, A-Za-z0-9)</td>
<td>—</td>
</tr>
<tr>
<td>Characters</td>
<td>Character string (up to 30 characters, A-Za-z0-9)</td>
<td>—</td>
</tr>
</tbody>
</table>

Title of field
Set the title for the text field number you selected.

Characters
Set the characters for the text field number you selected.

Group Settings

Path

GX/GP: MENU key > Browse tab > Setting > Setting menu Batch settings > Individual batch settings Group settings
Web application: Config. tab > Batch settings > Group settings > Batch group number 1 to 12
Hardware configurator: Batch settings > Group settings > Batch group number 1 to 12

Description

<table>
<thead>
<tr>
<th>Setup Item</th>
<th>Selectable Range or Options</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Batch group number</td>
<td>GX10-1/GX20-1/GP10-1/GP20-1/GM10-1: 1/2/3/4/5/6</td>
<td>1</td>
</tr>
<tr>
<td>Group number</td>
<td>GX10/GP10/GX20-1/GM10-1: 1 to 6</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>GX20-2/GP20-2/GM10-2: 1 to 12</td>
<td></td>
</tr>
</tbody>
</table>

Batch group number
Select the batch group number for setting a group.
1 On the Web application and hardware configurator, this is already selected with the path.

Group number
Select the group number.

Group settings

<table>
<thead>
<tr>
<th>Setup Item</th>
<th>Selectable Range or Options</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>On/Off</td>
<td>Off/On</td>
<td>Off</td>
</tr>
<tr>
<td>Group name</td>
<td>Character string (up to 16 characters, A-Za-z0-9)</td>
<td>—</td>
</tr>
<tr>
<td>Channel set</td>
<td>GX10/GP10: Up to 10</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>GX20/GP20/GM10: Up to 20</td>
<td>—</td>
</tr>
</tbody>
</table>

On/Off
Set this to On to use the target group number.

Group name
Set the group name.

Channel set
Select from AI channels, DI channels, DO channels, pulse input channels, AO channel, PID channel, math channels (/MT option), and communication channels (/MC option).
2.1 Configuration

**Scale Image (GX/GP), Trip Line 1 to 4**


### Data Save Settings

**Path**

GX/GP: **MENU** key > **Browse** tab > **Setting** > Setting menu **Batch settings** > Individual batch settings **Data save settings**

Web application: **Config.** tab > **Batch settings** > **Data save settings**

Hardware configurator: **Batch settings** > **Data save settings**

**Description**

<table>
<thead>
<tr>
<th>Setup Item</th>
<th>Selectable Range or Options</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Batch group number</td>
<td>GX10-1/GP10-1/GX20-1/GP20-1/GM10-1: 1/2/3/4/5/6</td>
<td>1</td>
</tr>
</tbody>
</table>

**Batch group number**

Select the batch group number for setting data saving.

**File header**

- **Characters**

  Set the user-assigned character string.
  Characters that cannot be used: ‘,’ ‘;’ ‘/’ ‘:’ ‘<’ ‘>’ ‘? ’

- **Structure**

  Sets the structure of the file name when saving data.
  For details on file names, see file names in section 1.2.1, “Overview,” on page 1-2.

<table>
<thead>
<tr>
<th>Options</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>Serial number + specified string + date</td>
</tr>
<tr>
<td>Serial</td>
<td>Serial number + specified string</td>
</tr>
<tr>
<td>Batch name</td>
<td>Serial number + batch (when using the batch function)</td>
</tr>
</tbody>
</table>

**Identified strings**

Set the user-assigned character string.
Characters that cannot be used: ‘,’ ‘;’ ‘/’ ‘:’ ‘<’ ‘>’ ‘? ’
Start Recording Screen (GX/GP)

**Path**
GX/GP: **MENU** key > **Browse** tab > **Setting** > Setting menu **Batch settings**
Web application: **Config.** tab > **Batch settings** > **Batch function**
Hardware configurator: **Batch settings** > **Batch function**

**Description**

**Recording Start Screen**

<table>
<thead>
<tr>
<th>Setup Item</th>
<th>Selectable Range or Options</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recording Start Screen</td>
<td>Batch comment/Batch Text field</td>
<td>Text field</td>
</tr>
</tbody>
</table>

Recording Start Screen
Set whether to display a text field or batch comment on the recording start screen when recording is started.
3.1 GX/GP Operation

3.1.1 Switching between Batch Overview Mode and Batch Single Mode

Procedure

1. Press MENU. The menu screen appears.

2. Tap the batch single mode tab (display example: 1) or the ALL BATCH tab. The light green tab is selected. The GX/GP switches to batch overview mode or batch single mode.

3. Tap the Close icon. The screen closes.

Operation complete

3.1.2 Displaying the Batch Overview

Follow the procedure below when the batch overview mode screen is displayed. Information common to all batch groups is displayed.

Procedure

1. Press MENU. The menu screen appears.

2. Tap the ALL BATCH tab.

3. Tap Browse and then Batch overview. The batch overview is displayed.

Operation complete
3.1.3 Displaying the Overview

**Procedure**

1. Press MENU.
   The menu screen appears.

2. Tap **Browse** and then **Overview**.
   All channel overview or grouping overview is displayed.
   To switch between all channel overview and grouping overview, see section 2.2.3, "Displaying the Statuses of All Channels on One Screen (Overview Display)," in the GX/GP User’s Manual.

### During batch overview mode
- Tap a batch group to display show a display group overview.
- Tap a display group to show a Change display screen. Tap OK to switch to batch single mode and show the channel overview.

### During batch single mode
- Tap a display group to display show a channel overview.

#### Batch group overview
- Switch batch group overview display
- Switch batch group by flicking

#### Display group overview

#### Channel overview
- Trend display

1 When the batch single mode screen is displayed, the batch group overview and the Change display screen are not available.

**Operation complete**
3.1.4 Starting/Stopping Recording, and Saving Data

**Procedure**

Starting Recording from Batch Overview Mode
Follow the procedure below when the batch overview mode screen is displayed.

1. Press **MENU**. The menu screen appears.
2. Tap **Record**. A Record start/stop screen appears.

When Selecting a Single Batch Group

3. Tap **Start** of the batch group you want to start recording on. A Record start screen appears.
4. Tap the batch number and, if necessary, the lot number to set them.
5. If necessary, tap Batch text field (text) or batch comment to set them.
   - Tap **Edit textfield** or **Edit comment** to display Batch textfield or Batch comment in the Record start screen.
   - *The text fields that you specify here will only be saved to the measurement data file that you are about to start recording to. The text fields that you have set in batch settings will not change (see section 2.1.3, "Configuring Batch Settings," on page 2-4).*

6. Tap **Rec+Math**, **Rec+Math (Math reset)**, or **Record**. Recording starts.

When Selecting All Batch Groups

3. Tap **Start** 1 under **ALL BATCH**. A Record start screen appears.
   - 1 Not displayed when **All Start/Stop Show Hide** under the **Universal** tab is set to **Hide**.
   - Tap **Rec+Math**, **Rec+Math (Math reset)**, or **Record**. Recording starts.

**Operation complete**
3.1 GX/GP Operation

**Starting Recording from Batch Single Mode**
Follow the procedure below when the batch single mode screen is displayed.

1. **Press MENU.**
   The menu screen appears.

2. **On the batch single tab, select the batch group you want to start recording on.**
   The batch group that you selected appears.

3. **Tap Record.**
   A Record start screen appears.

4. **Tap the batch number and, if necessary, the lot number to set them.**

5. **If necessary, tap Batch text field (text) or batch comment to set them.**
   - Tap **Edit textfield** or **Edit comment** to display Batch textfield or Batch comment in the Record start screen.
   - *The text fields that you specify here will only be saved to the measurement data file that you are about to start recording to. The text fields that you have set in batch settings will not change (see section 2.1.3, "Configuring Batch Settings," on page 2-4).*

6. **Tap Rec+Math, Rec+Math (Math reset), or Record.**
   Recording starts.

   **Operation complete**

**Stopping Recording from Batch Overview Mode**
Follow the procedure below when the batch overview mode screen is displayed.

1. **Press MENU.**
   The menu screen appears.

2. **Tap Record.**
   A Record start/stop screen appears.

**When Selecting a Single Batch Group**

3. **Tap Stop** of the batch group you want to stop recording on.
   The record stop screen appears.

4. **If necessary, tap batch comment and set it.**

5. **Tap Stop.**
   Recording stops.

**When Selecting All Batch Groups**

3. **Tap Stop \(^1\) under ALL BATCH.**
   The record stop screen appears.
   - \(^1\) Not displayed when **All Start/Stop Show Hide** under the Universal tab is set to Hide.
   - Tap **Rec+Math** or **Record.**
   Recording stops.

   **Operation complete**
3.1 GX/GP Operation

Stopping Recording from Batch Single Mode
Follow the procedure below when the batch single mode screen is displayed.

1. Press MENU.
   The menu screen appears.
2. On the batch single tab, select the batch group you want to stop recording on.
   The batch group that you selected appears.
3. Tap Record.
   The record stop screen appears.
4. If necessary, tap batch comment and set it.
5. Tap Stop.
   Recording stops.

Operation complete

Automatically or Manually Saving Data
See section 1.2.2, “Recording and Saving,” on page 1-4.
             Section 2.5.2, “Manually Saving Measured Data (Collectively saving unsaved data),” in the GX/GP User’s Manual

Saving Selected Data or All Data Stored in Internal Memory by Using Touch Operation
See section 1.2.2, “Recording and Saving,” on page 1-4.
Selective saving is possible only when memory summary is being displayed in batch single mode.
   ▶ Procedure: Section 2.3.3, “Displaying a List of Data Files in the Internal Memory and Saving Data (Memory summary),” in the GX/GP User’s Manual

3.1.5 Starting, Stopping, and Resetting Computations (/MT Option)
   • All computations start and stop together at the same time. You cannot start or stop computations for each batch group separately.
   • You can reset the values calculated on computation channels separately for each batch group.

Procedure
Starting Recording and Computation Simultaneously

1. Press MENU.
   The menu screen appears.
2. Tap Record.
   A Record start/stop screen (during batch overview mode) or Record start screen (batch single mode) appears.

When the Batch Overview Mode Screen Is Displayed

3. Tap Start 1 under ALL BATCH or single batch.
   A Record start screen appears.
   1 The ALL BATCH Start button is not displayed when All Start/Stop Show Hide under the Universal tab is set to Hide.
4. Tap Rec+Math or Rec+Math (Math reset).
   Computation starts when recording starts.
When the Batch Single Mode Screen Is Displayed

3. Tap **Rec+Math** or **Rec+Math (Math reset)**.  
   Computation starts when recording starts.
   
   **Operation complete**

Starting Only the Computation

Follow the procedure below when the batch overview mode screen is displayed.

1. Press **MENU**.  
   The menu screen appears.

2. Tap **Math**.  
   The computation operation screen appears.

3. Tap **Start** under **ALL BATCH**.  
   A Start computing confirmation screen appears.

4. Tap **OK**.  
   Computing starts.
   
   **Operation complete**

Stopping Computation

Follow the procedure below when the batch overview mode screen is displayed.

1. Press **MENU**.  
   The menu screen appears.

2. Tap **Math**.  
   The computation operation screen appears.

3. Tap **Stop** under **ALL BATCH**.  
   A Stop computing confirmation screen appears.

4. Tap **OK**.  
   Computing stops.
   
   **Operation complete**

**NOTE**

When you stop computations, the calculated value for computation channels is retained as the value held immediately prior to computation stopping. When recording, this retained value is recorded.

Resetting Computation

Follow the procedure below when the batch overview mode screen is displayed. When a batch single mode screen is displayed, this is the same as what is described in "Resetting the Values Calculated on the Selected Batch Group's Computation Channels."

1. Press **MENU**.  
   The menu screen appears.

2. Tap **Math**.  
   The computation operation screen appears.

**Resetting the Values Calculated on All Computation Channels**

3. Tap **Reset** under **ALL BATCH**.  
   A Reset computing confirmation screen for all batches appears.
Resetting the Values Calculated on the Selected Batch Group’s Computation Channels

3. Tap Reset of the batch you want to reset.
   A Reset computing confirmation screen for the specified batch appears.

4. Tap OK. The computation of all batches or specified batch is reset.

Operation complete

3.1.6 Using Batch Overview Mode

Follow the procedure below when the batch overview mode screen is displayed.

Procedure

Displaying the Screen

1. Press MENU. The menu screen appears.

2. Tap the Browse tab and then the icon of the screen you want to display.

   Displaying the control screen
   Tap the Browse tab > CTRL and then the icon of the screen you want to display.

Overview

An overview of all batch groups, a display group overview in the batch group, and the status of the channels registered to the display group are displayed.

► section 3.1.3, “Displaying the Overview,” on page 3-2

Batch Overview

Information common to all batch groups is displayed.

► section 3.1.2, “Displaying the Batch Overview,” on page 3-1

Custom Display

The custom display is shown.

► Section 2.2.1, “Displaying Measured Data Using Waveforms, Numeric Values, Bar Graph, or Custom Display (/CG option) (Trend, digital, bar graph, and custom displays),” in the GX/GP User’s Manual

Report

The report data in the internal memory is displayed.

► Section 2.3.4, “Displaying Reports,” in the GX/GP User’s Manual

Modbus Client (/MC) and Modbus Master (/MC)

Command status of Modbus client and Modbus master is displayed.

► Section 2.3.6, “Checking the Command Status of the Modbus Client and Modbus Master,” in the GX/GP User’s Manual

Internal Switch/Relay Status

The status of DO channels and internal switches is displayed.

► Section 2.3.7, “Displaying the DO Channel and Internal Switch Status (Release number 2 and later),” in the GX/GP User’s Manual

Log

Various logs are displayed.

► Section 2.3.5, “Displaying Logs,” in the GX/GP User’s Manual

Network Information

GX/GP network information is displayed.

► Section 2.3.9, “Displaying Network Information,” in the GX/GP User’s Manual
System Information
GX/GP system information is displayed.
  ► Section 2.3.8, “Displaying the GX/GP System Information,” in the GX/GP User’s Manual

WT Client (/E2)
WT communication status is displayed.
  ► “Monitoring the WT Collection Status” in the WT Communication Manual

SLMP Client (/E4)
SLMP communication status is displayed.
  ► SLMP Communication Manual

Reminder (/AH)
Schedule management information is displayed.
  ► Section 1.32, “Using the Aerospace Heat Treatment (/AH option) (Release number 3 and later),” in the GX/GP User’s Manual

Save load
A screen for saving and loading settings is displayed.
  ► Section 1.20, “Loading Settings,” and section 1.21, “Saving Settings”

Setting
The setting screen is displayed.
  ► Chapter 1, “Configuring the GX/GP”

Initialize Calibration
The initialize calibration screen is displayed.
  ► Section 1.29, “Initializing and Calibrating the System (Initialization, reconfiguration, touch screen calibration), Setting the Measurement Mode” in the GX/GP User’s Manual

Control Group
A control group is used to monitor and control the loops in the specified control group.
  ► Section 5.1.1, “Monitoring and Controlling on the Control Group Screen”

Tuning
Tuning is used to view the loop status and adjust PID parameter settings.
  ► Section 5.1.8, “Viewing and Adjusting PID and Other Control Parameters (Tuning)”

Control Overview
The control overview screen shows on a single screen the alarm status of all loops.
  ► Section 5.1.4, “Showing the Status of All Loops on a Single Screen (Control Overview)”

Control Summary
The control summary shows the control history.
  ► Section 5.1.6, “Listing the Control Log (Control summary)”

Control Alarm Summary
The control alarm summary shows the control alarm history.
  ► Section 5.1.7, “Listing the Log of Alarm Occurrences and Releases (Control alarm summary)”

Program Selection
The program selection screen shows the specified program pattern.
  ► Section 5.3.1, “Selecting a Program Pattern”

Program Operation
The program operation screen shows the running program pattern.
  ► Section 5.13, “Performing Program Control (recorder option /PG)”

Operation complete
3.1 GX/GP Operation

Loading Display Data and Event Data
You can load display or event data and display the corresponding historical trend. The historical trend of the loaded batch group is displayed.
If in batch overview mode, the GX/GP switches to batch single mode.
If you tap Context and then Exit to finish displaying the historical trend, the GX/GP returns to batch overview mode.

Section 2.8.2, “Loading and Displaying the Measured Data (Display data and event data) from the Storage Medium,” in the GX/GP User’s Manual

Note
Even if the loaded data is not from batch group 1, the batch single mode indication of data loading will be fixed as batch group 1.
In addition, you cannot switch the batch group while the historical trend is being displayed.

3.1.7 Using Batch Single Mode
Follow the procedure below when the batch single mode screen is displayed. In batch single mode, only the selected batch group’s data is displayed.

Procedure

Displaying the Screen

1. Press MENU.
The menu screen appears.

2. Tap the Browse tab and then the icon of the screen you want to display.
Displaying the control screen
Tap the Browse tab > Ctrl and then the icon of the screen you want to display.

Trend, Digital, Bar, Custom Display
The trend, digital, bar graph, or custom display is shown.

Section 2.2.1, “Displaying Measured Data Using Waveforms, Numeric Values, Bar Graph, or Custom Display (GC option) (Trend, digital, bar graph, and custom displays),” in the GX/GP User’s Manual

Overview
A display group overview and the status of the channels registered to the display group are displayed.


Alarm Summary
An alarm summary of the selected batch group is displayed.

Section 2.3.1, “Listing the Log of Alarm Occurrences and Releases,” in the GX/GP User’s Manual

Note
On the alarm summary watch mode display, removing a channel on which an alarm is occurring from the group will clear the alarm, but the alarm information will remain.

Message Summary
A message summary of the selected batch group is displayed.

Section 2.3.2, “Displaying the Log of Written Messages (Message summary),” in the GX/GP User’s Manual

Memory Summary/Data Save
A memory summary of the selected batch group is displayed.

Section 2.3.3, “Displaying a List of Data Files in the Internal Memory and Saving Data (Memory summary),” in the GX/GP User’s Manual

Multi Panel Screen
A multi panel screen is displayed.

Section 2.2.4, “Displaying the Multi Panel (GX20/GP20 only),” in the GX/GP User’s Manual
3.1 GX/GP Operation

Internal Switch/Relay Status
Internal switch/relay status is displayed.
➤ Section 2.3.7, “Displaying the DO Channel and Internal Switch Status (Release number 2 and later),” in the GX/GP User’s Manual

Report, Modbus Client (IMC), Modbus Master (MC), Internal Switch/Relay Status. Network Information, System Information, Log, WT Client (IE2), SLMP Client (IE4), Reminder (AH), Save load, Setting, Initialize Calibration, Control
➤ See “Using Batch Overview Mode” on page 3-7.

Loading Display Data and Event Data
You can load display or event data and display the corresponding historical trend. The historical trend of the loaded batch group is displayed.
➤ Section 2.8.2, “Loading and Displaying the Measured Data (Display data and event data) from the Storage Medium,” in the GX/GP User’s Manual

-------------------- Operation complete ---------------------

Note
Even if the loaded data is not from batch group 1, the batch single mode indication of data loading will be fixed as batch group 1. In addition, you cannot switch the batch group while the historical trend is being displayed.

3.1.8 Writing an Additional Message or an Additional Free Message
You can write messages to batch groups.

Setting How Messages and Free Messages Are to Be Written

Path
GX/GP: MENU key > Browse tab > Setting > Setting menu Display settings > Trend settings
Web application: Config. tab > Display settings > Trend settings
Hardware configurator: Display settings > Trend settings

Description
Message
Set the display group to write messages to.

<table>
<thead>
<tr>
<th>Setup Item</th>
<th>Selectable Range or Options</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Write group</td>
<td></td>
<td>Common</td>
</tr>
</tbody>
</table>

Write group

<table>
<thead>
<tr>
<th>Batch Mode</th>
<th>Options</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Batch single mode</td>
<td>Common</td>
<td>Writes to all the display groups for the batch group currently displayed.</td>
</tr>
<tr>
<td></td>
<td>Separate</td>
<td>Writes to the display group for the selected batch group.</td>
</tr>
</tbody>
</table>

Setting Messages

Writing a Message When the GX/GP Recovers from a Power Failure
Messages are written to all display groups of all batch groups that are recording.
Procedure

During batch overview mode

Writing Messages

1. Press MENU.
   The menu screen appears.

2. Tap the Universal tab and then Message.
   A Message screen is displayed.

3. Tap the Message icon of the batch group you want to write a message to.
   A message list appears.

4. Select the message to write, and tap OK.
   The message is written.
   
   Operation complete

Writing Free Messages

1. Press MENU.
   The menu screen appears.

2. Tap the Universal tab and then Free message.
   A Free message screen is displayed.

3. Tap the Free message icon of the batch group you want to write a message to.
   A message list appears.

3. Tap the number of the message you want to write.
   A keyboard appears.

4. Set the message to write, and tap OK.
   The message that you entered is written.
   
   Operation complete

During batch single mode

Writing Messages

1. Press MENU.
   The menu screen appears.

2. On the batch single tab, select the batch group and display group.

3. Tap the Universal tab and then Message.
   A message list appears.

4. Select the message to write, and tap OK.
   The message is written.
   
   Operation complete
Writing Free Messages

1. Press MENU.
The menu screen appears.

2. On the batch single tab, select the batch group and display group.

3. Tap the Universal tab and then Free message.
A free message list appears.

4. Tap the message you want to write.
A keyboard appears.

Set the message to write, and tap OK.
The message that you entered is written.

_operation complete_

3.1.9 Writing Freehand Messages

Follow the procedure below when the batch single mode screen is displayed.

Write group

<table>
<thead>
<tr>
<th>Write group</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Separate Save</td>
<td>Writes to the display group currently displayed for the batch group currently displayed.</td>
</tr>
<tr>
<td>Common Save</td>
<td>Writes to all the display groups for the batch group currently displayed.</td>
</tr>
</tbody>
</table>

procedure: Section 2.2.6, "Writing Freehand Messages," in the GX/GP User’s Manual

3.1.10 Using the Favorite Screen


3.1.11 Displaying the Text Field Settings

Procedure

Procedure in Batch Overview Mode

1. Press MENU.
The menu screen appears.

2. Tap the Universal tab and then Text field.
A batch text field screen appears.

3. Tap the Textfield icon of the batch group to display the text field in.
A batch text field appears.

4. Tap Close to return to the batch text field screen.

5. Tap Close to return to the menu screen.

6. Tap the Close icon to close the menu screen.

_operation complete_
### Procedure in Batch Single Mode

1. Press **MENU**.  
The menu screen appears.

2. Tap the **Universal** tab and then **Text field**.  
A batch text field appears.

3. Tap **Close** to return to the menu screen.

4. Tap the **Close** icon to close the menu screen.  

   **Operation complete**

### 3.1.12 Displaying the Multi Panel (GX20/GP20 only)

For each batch group, you can divide the screen into several areas and assign the displays of your choosing to the areas.

On the batch single tab, you can select the batch group.

Goes back 1 group  
Advances 1 group

Other settings are the same as the standard multi panel.

For the procedure, see section 2.2.4, “Displaying the Multi Panel (GX20/GP20 only),” in the GX/GP User’s Manual.

### 3.1.13 Saving Data to USB Flash Memory (/UH option)

You can save the following data to the USB flash memory.

For the procedure, see section 2.3.3, “Displaying a List of Data Files in the Internal Memory and Saving Data (Memory summary),” in the GX/GP User’s Manual.

<table>
<thead>
<tr>
<th>Options</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>All save</td>
<td>Saves all the saved data in internal memory.</td>
</tr>
<tr>
<td>Selective save 1</td>
<td>Saves the selected measured data on the memory summary of the selected batch group</td>
</tr>
<tr>
<td>Display/event data save</td>
<td>Saves all display data and event data in internal memory.</td>
</tr>
<tr>
<td>Manual sampled data save</td>
<td>Saves the manual sampled data</td>
</tr>
<tr>
<td>Report data save</td>
<td>Saves the report data</td>
</tr>
</tbody>
</table>

1 When the batch single mode screen is displayed
3.1.14 Loading Settings
You can load multi batch settings. See section 2.1.2, “Setting the Multi Batch Function,” on page 2-3. However, the setting files that you can load are those containing all the settings saved with All above.
For details on saving all settings, see section 1.26.7, “Saving Setting Parameters, Scale Images, Report Templates, Trusted Certificates (Release number 2 and later), Custom Display (/CG option) (Release number 2 and later), Program pattern (/PG option) (Release number 4 and later) at Once,” in the GX/GP User’s Manual.

Procedure

1. Press MENU.
The menu screen appears.
2. Tap the Browse tab, Save load > Load settings > All above.
3. Tap Select folder to select the folder containing the setting file, and tap OK.
4. Tap Load multi-batch settings to select On.
5. Tap Execute.
The setting file is loaded.

Operation complete

Note
When you load multi batch settings, all settings except the log are initialized first. Then all the settings are loaded, and the system is restarted.

3.1.15 Switching the Display Status of All Start/Stop
You can select whether to display the all batch group (ALL BATCH) Start/Stop button on the screen that appears when you press MENU and tap Record in batch overview mode.

Procedure

1. Press MENU.
The menu screen appears.
2. Tap the Universal tab and then All Start/Stop Show Hide.
The display status of the all batch group Start/Stop button changes. Each time you tap All Start/Stop Show Hide, the setting toggles between show and hide.

Operation complete
3.2 **GM Operation**

3.2.1 **Switching between All Batch Mode and Batch Single Mode**

**Procedure**

1. Select the batch mode selection list box in the status area. A pull-down menu appears.

2. Select *All* or a batch group number from [1] to [12] \(^1\) of the batch single mode. The GM switches to all batch mode or batch single mode.
   - Depends on the specified number of batches.
   - GM10-1: 2 to 6
   - GM10-2: 2 to 12

   *[Operation complete]*

3.2.2 **Displaying the Batch Overview**

Follow the procedure below when the all batch mode screen is displayed. Information common to all batch groups is displayed.

- See section 1.3.1, "Batch Overview Mode/All Batch Mode (Web application)," on page 1-10.

**Procedure**

1. Select the batch mode selection list box in the status area. A pull-down menu appears.

2. Select *All*.

3. On the Data tab, select **Batch overview**. The batch overview is displayed.

   *[Operation complete]*
### 3.2.3 Displaying the Overview

**Procedure**

1. On the **Data** tab, select **Overview**. The overview is displayed.

   **During All Batch Mode**
   - All channel overview and batch group overview are displayed.
   - Select a batch group in batch group overview to display the all channel overview and display group overview of the display group.
   - Select a display group to display an overview of the channels registered in the display group.

   **During batch single mode**
   - You can display the display group overview and channel overview of the selected batch group.

---

![Diagram](image)
3.2.4 Starting/Stopping Recording, and Saving Data

**Procedure**

**Starting Recording from All Batch Mode**

Follow the procedure below when the all batch mode screen is displayed.

1. On the SMARTDAC+ Web Service tab, select Recording.
   A Select batch dialog box appears.

   **When Selecting a Single Batch Group**

2. Select the batch group you want to start recording on.
   A Recording dialog box appears.

3. Enter the batch number, lot number, batch comment, text field (string), and so on.
   * The text fields that you specify here will only be saved to the measurement data file that you are about to start recording to. The text fields that you have set in batch settings will not change (see section 2.1.3, “Configuring Batch Settings,” on page 2-4).

4. Select Start recording, Start recording and computing, or Start recording and computing (MathRST).
   Recording starts.

   **When Selecting All Batch Groups**

2. Select All.
   A Recording dialog box appears.

   Select Start recording, Start recording and computing, or Start recording and computing (MathRST).
   Recording starts.

   **Operation complete**

**Starting Recording from Batch Single Mode**

Follow the procedure below when the batch single mode screen is displayed.

1. On the SMARTDAC+ Web Service tab, select Recording.
   A Recording dialog box appears.

2. Enter the batch number, lot number, batch comment, text field, and so on.
   * The text fields that you specify here will only be saved to the measurement data file that you are about to start recording to. The text fields that you have set in batch settings will not change (see section 2.1.3, “Configuring Batch Settings,” on page 2-4).

3. Select Start recording, Start recording and computing, or Start recording and computing (MathRST).
   Recording starts.

   **Operation complete**
3.2 GM Operation

Stopping Recording from All Batch Mode
Follow the procedure below when the all batch mode screen is displayed.

1. On the SMARTDAC+ Web Service tab, select Recording.
   A Select batch dialog box appears.

When Selecting a Single Batch Group

2. Select the batch group you want to stop recording on.
   A Recording dialog box appears.

3. Select Stop recording or Stop recording and computing.
   Recording stops.

When Selecting All Batch Groups

2. Select All.
   A Recording dialog box appears.

3. Select Stop recording or Stop recording and computing.
   Recording stops.

Stopping Recording from Batch Single Mode
Follow the procedure below when the batch single mode screen is displayed.

1. On the SMARTDAC+ Web Service tab, select Recording.
   A Recording dialog box appears.

2. Select Stop recording or Stop recording and computing.
   Recording stops.

   Operation complete

3.2.5 Starting, Stopping, and Resetting Computations (/MT Option)

- All computations start and stop together at the same time. You cannot start or stop computations for each batch group separately.
- You can reset the values calculated on computation channels separately for each batch group.

Procedure

Starting Recording and Computation Simultaneously
When the All Batch Mode Screen Is Displayed

1. On the SMARTDAC+ Web Service tab, select Recording.
   A Select batch dialog box appears.

2. Select the batch group you want to start recording on or All.
   A Recording dialog box appears.

3. Select Start recording and computing or Start recording and computing (MathRST).
   Computation starts when recording starts.

   Operation complete
When the Batch Single Mode Screen Is Displayed

1. On the SMARTDAC+ Web Service tab, select Recording.
   A Recording dialog box appears.

2. Select Start recording and computing or Start recording and computing (MathRST).
   Computation starts when recording starts.
   Operation complete

Starting Only the Computation
Follow the procedure below when the all batch mode screen is displayed.

1. On the SMARTDAC+ Web Service tab, select Computing.
   A Computing dialog box appears.

2. Tap Start computing or Start computing (MathRST).
   Computing starts.
   Operation complete

Stopping Computation
Follow the procedure below when the all batch mode screen is displayed.

1. On the SMARTDAC+ Web Service tab, select Computing.
   A Computing dialog box appears.

2. Select Stop computing.
   Computing stops.
   Operation complete

Resetting Computation

When the All Batch Mode Screen Is Displayed

1. On the SMARTDAC+ Web Service tab, select Computing.
   A Computing dialog box appears.

2. Select Reset computing.
   A Select batch dialog box appears.
   Resetting Computation of All Batches
   
   3. Select All.
      The computation of all batches is reset.
      Operation complete
   
   Resetting Computation of a Specific Batch
   
   3. Select the batch group you want to reset.
      The computation of the specified batch is reset.
      Operation complete

When the Batch Single Mode Screen Is Displayed

1. On the SMARTDAC+ Web Service tab, select Computing.
   A Computing dialog box appears.

2. Select Reset computing.
   The computation of the selected batch is reset.
   Operation complete
3.2.6 Using All Batch Mode and Batch Single Mode

**Procedure**

Displaying the Screen

1. From the Data tab, select the item you want to display.

Trend, Digital, Bar Graph, and Horizontal Bar Graph

- When the All Batch Mode Screen Is Displayed
  Select the batch group and display group you want to display.

- When the Batch Single Mode Screen Is Displayed
  The data of the selected batch group is displayed.

  Select a display group.

Section 3.1.2, "Monitoring the GM Data and Controlling the GM from the Monitor Screen," in the GM User’s Manual

**Overview**

- When the All Batch Mode Screen Is Displayed
  The status of the following is displayed.
  - Status of all channels
  - Status of all batch groups
  - Status of all channels for the selected batch group
  - Status of the selected batch group and display group
  - Status of the channels registered in the selected batch group and display group
3.2 GM Operation

- When the Batch Single Mode Screen Is Displayed
  The status of the following is displayed.
  - Status of all channels for the selected batch group
  - Status of the selected batch group and display group
  - Status of the channels registered in the selected batch group and display group

  ► section 3.2.3, “Displaying the Overview,” on page 3-16

**Batch Overview**
Follow the procedure below when the all batch mode screen is displayed.

  ► section 3.2.2, “Displaying the Batch Overview,” on page 3-15

**Report**

  ► Section 3.1.2, “Monitoring the GM Data and Controlling the GM from the Monitor Screen,” in the GM User’s Manual

**Modbus Client and Modbus Master**

  ► Section 3.1.2, “Monitoring the GM Data and Controlling the GM from the Monitor Screen,” in the GM User’s Manual

**Internal Switch/Relay Status**

  ► Section 3.1.2, “Monitoring the GM Data and Controlling the GM from the Monitor Screen,” in the GM User’s Manual

**Log**

  ► Section 3.1.2, “Monitoring the GM Data and Controlling the GM from the Monitor Screen,” in the GM User’s Manual

**Network Information**

  ► Section 3.1.2, “Monitoring the GM Data and Controlling the GM from the Monitor Screen,” in the GM User’s Manual

**System Information**

  ► Section 3.1.2, “Monitoring the GM Data and Controlling the GM from the Monitor Screen,” in the GM User’s Manual

**WT Client**

  ► “Monitoring the WT Collection Status” in the WT Communication Manual

**SLMP Client**

  ► SLMP Communication Manual

**Reminder (/AH)**
Schedule management information is displayed.

  ► Section 2.32, “Using the Aerospace Heat Treatment (/AH option) (Release number 3 and later),” in the GM User’s Manual

**Alarm Summary**

- When the All Batch Mode Screen Is Displayed
  Select the batch group you want to display.

- When the Batch Single Mode Screen Is Displayed
  An alarm summary of the selected batch group is displayed.

  ► Section 3.1.2, “Monitoring the GM Data and Controlling the GM from the Monitor Screen,” in the GM User’s Manual
3.2 GM Operation

Message Summary
- When the All Batch Mode Screen Is Displayed
  Select the batch group you want to display.
- When the Batch Single Mode Screen Is Displayed
  A message summary of the selected batch group is displayed.
  ▶ Section 3.1.2, “Monitoring the GM Data and Controlling the GM from the Monitor Screen,” in the GM User’s Manual

Memory Summary/Save
This is applicable only when the batch single mode screen is displayed.
A memory summary of the displayed batch group is displayed.
▶ Section 3.1.2, “Monitoring the GM Data and Controlling the GM from the Monitor Screen,” in the GM User’s Manual

Control Group
A control group is used to monitor and control the loops in the specified control group.
▶ Section 6.1.2, “Faceplate Screen and Controller Screen” in the Loop Control Function, Program Control Function Manual

Tuning
Tuning is used to view the loop status and adjust PID parameter settings.
▶ Section 6.1.6, “Tuning Screen” in the Loop Control Function, Program Control Function Manual

Control Overview
The control overview screen shows on a single screen the alarm status of all loops.
▶ Section 6.1.3, "Control Overview Screen" in the Loop Control Function, Program Control Function Manual

Control Summary
The control summary shows the control history.
▶ Section 6.1.4, "Control Summary Screen" in the Loop Control Function, Program Control Function Manual

Control Alarm Summary
The control alarm summary shows the control alarm history.
▶ Section 6.1.5, "Control Alarm Summary Screen" in the Loop Control Function, Program Control Function Manual

Program Selection
The program selection screen shows the specified program pattern.
▶ Section 6.2, "Monitoring and Configuring Program Control" in the Loop Control Function, Program Control Function Manual

Program Operation
The program operation screen shows the running program pattern.
▶ Section 6.2, "Monitoring and Configuring Program Control" in the Loop Control Function, Program Control Function Manual

Operation complete
3.2.7 Loading Settings

When the multi batch function is enabled, you can load multi batch (On/Off, quantity) settings.
However, the setting files that you can load are those containing all the settings saved with
Save all settings.

**Procedure**

1. Select the Data tab > Save/Load > File list(Save all/Load all).
2. Select and open the folder saved using Save all settings.
3. Select **Load all settings**.
   A Load all settings dialog box appears.
4. Select the **Load multi batch settings also** check box and then **O+K**.
   The settings are loaded.

---

**Operation complete**

3.2.8 Writing an Additional Message or an Additional Free Message

**Procedure**

1. Select **Message**.
   A bar appears where you can set the message to write.
   The Message button appears when monitor content is displayed.
   It does not appear when network information, system information, report, manual sampling, or Save load is displayed.

2. Select **Preset** or **Free**.
   **Preset**: Select a message from the list.
   **Free**: Select a message number from the list, and enter the message string in the text box.

3. From the **Write to** list, select the batch group (when in all batch mode) and display group to write to.

4. Select **Write**.
   The message is written.

---

**Operation complete**
3.2 GM Operation

3.2.9 Writing Batch Comments While Recording

Procedure

When the All Batch Mode Screen Is Displayed

1. On the Operation tab, select Batch. A Select batch dialog box appears.
2. Select the batch to write the batch comment to. A Batch dialog box appears.
3. Enter the batch comment, and select Update. The batch comment is written.

Operation complete

When the Batch Single Mode Screen Is Displayed

2. Enter the batch comment, and select Update. The batch comment is written.

Operation complete

3.2.10 Displaying the Text Field Content

Procedure

When the All Batch Mode Screen Is Displayed

1. On the Operation tab, select Batch. A Select batch dialog box appears.

   During Single Batch Mode
   A text field appears in the Batch dialog box.

2. Select the batch for displaying the text field. A text field appears in the Batch dialog box.

3. Selecting Cancel closes the Batch dialog box.

Operation complete

When the Batch Single Mode Screen Is Displayed

1. On the Operation tab, select Batch. A text field appears in the Batch dialog box.

2. Selecting Cancel closes the Batch dialog box.

Operation complete
3.2.11 Key Operation

The GM key operations when the multi batch function is enabled are as follows.

<table>
<thead>
<tr>
<th>Key Type</th>
<th>Operation Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>START</td>
<td>Start recording on all batches [hold down]¹</td>
</tr>
<tr>
<td></td>
<td>Starting computing [press]</td>
</tr>
<tr>
<td>STOP</td>
<td>Stop recording on all batches [hold down]²</td>
</tr>
<tr>
<td></td>
<td>Stop computing [press]</td>
</tr>
<tr>
<td></td>
<td>Clear errors [press]</td>
</tr>
<tr>
<td>USER1</td>
<td>Execute a specified action (event action function)</td>
</tr>
<tr>
<td>USER1</td>
<td></td>
</tr>
</tbody>
</table>

1. If the report function is enabled, reporting also starts. (When recording on all batches is stopped)
2. If reporting is in progress, it is also stopped.

**NOTE**

You cannot start or stop recording on specific batches using the START or STOP key.

**REC Status Indication When the Multi Batch Function Is Enabled**

<table>
<thead>
<tr>
<th>LED</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>On</td>
<td>Recording on one or more batches is in progress.</td>
</tr>
<tr>
<td>Blinking</td>
<td>Recording is being stopped (blinks even if other batches are recording).</td>
</tr>
<tr>
<td>Off</td>
<td>Recording is stopped on all batches.</td>
</tr>
</tbody>
</table>
Appendix 1 Using the Event Action Function

Event action is used to execute specified actions when certain events occur. For example, it can be used to write a message when an alarm occurs. When the multi batch function is in use, you need to specify the target batch group that the action is to be executed on. For example, you need to specify that a message is to be written to batch group 2 when an alarm occurs. On screens for setting these sort of actions, a box for selecting a batch group is displayed.

Example of Starting/Stopping the Recording on Batch Group 2

Recording on batch group 2 will be started and stopped using remote control input to channel 0201 of the DI module. Event action number 1 will be used.

Setup Items

DI Channel Settings

- Setup Screen

GX/GP: MENU > Browse tab > Setting > DI channel settings > Range
Web application: Config. tab > DI channel settings > [0201-0216] > Range

- Setup Items

<table>
<thead>
<tr>
<th>Setup Item</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>First-CH, Last-CH</td>
<td>0201</td>
</tr>
<tr>
<td>Range</td>
<td>Type: DI</td>
</tr>
<tr>
<td></td>
<td>Span Lower</td>
</tr>
<tr>
<td></td>
<td>Span Upper</td>
</tr>
<tr>
<td></td>
<td>Math: Off</td>
</tr>
</tbody>
</table>

Unit Settings

- Setup Screen

GX/GP: MENU > Browse tab > Setting > Measurement settings > Select unit Main unit or Module2 [GX90XD-16-11]
Web application: Config. tab > Measurement settings > Module operation settings > Module2

- Setup Items

<table>
<thead>
<tr>
<th>Setup Item</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operation mode</td>
<td>Remote</td>
</tr>
</tbody>
</table>

Event Action Settings

GX/GP: MENU > Browse tab > Setting > Event action
Web application: Config. tab > Event action > 1-20

<table>
<thead>
<tr>
<th>Setup Item</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Event action number</td>
<td>1</td>
</tr>
<tr>
<td>Event action On/Off</td>
<td>On</td>
</tr>
<tr>
<td>Event</td>
<td>Type: Alarm - I/O channel</td>
</tr>
<tr>
<td></td>
<td>Number: 0001</td>
</tr>
<tr>
<td></td>
<td>Event details: Alarm level 1</td>
</tr>
<tr>
<td></td>
<td>Operation mode: Rising/Falling edge</td>
</tr>
<tr>
<td>Action</td>
<td>Type: Recording start/stop</td>
</tr>
<tr>
<td></td>
<td>Batch group number: 2</td>
</tr>
</tbody>
</table>

<Operation>

Recording on batch group 2 will be started and stopped according to the input signal to channel 0201.