JUMO LOGOSCREEN nt Paperless Recorder with TFT display and CompactFlash card

B 70.6580.1

Operating Instructions

08.06/00453819

Menu structure of the paperless recorder

⇨ Device manager, Chapter 7, Page 51

⇨ Memory manager, Chapter 6, Page 47

⇨ Alarm and event lists, Chapter 5, Page 43

⇨ Operator level (visualization), Chapter 3, Page 23

⇨ Memory presentation (History), Chapter 4, Page 39

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Contents

1.1 Preface

Please read these operating instructions before commissioning the instrument. Keep the operating instructions in a place which is accessible to all users at all times.

Please assist us to improve these operating instructions, where necessary.

Your comments will be appreciated.

If any difficulties should arise during commissioning, you are asked not to carry out any manipulations that could endanger your rights under the instrument warranty!

Please contact the nearest subsidiary or the head office in such a case.

When returning modules, assemblies or components, the regulations of EN 61340-5-1 and EN 61340-5-2 “Protection of electronic devices from electrostatic phenomena” must be observed. Use only the appropriate **ESD** packaging for transport.

Please note that we cannot accept any liability for damage caused by ESD.

ESD=**E**lectro **S**tatic **D**ischarge

1.2 Arrangement of the documentation

The documentation for this instrument is addressed to equipment manufacturers (OEMs) and users with appropriate technical expertise. It consists of the following parts:

Instrument documentation in printed form

B 70.6580.1 Operating Instructions

The operating instructions are an extract from the operating manual and cover the basic operation of the paperless recorder.

B 70.6580.4 Installation Instructions

The installation instructions describe the installation of the recorder and the connection of the supply and signal cables. The instructions also contain a list of the technical data.

Instrument documentation in the form of PDF files

The “Instrument documentation in the form of PDF files” is on the CD that is included in the delivery.

B 70.6580.0 Operating Manual

It contains information about commissioning, operation, parameterization and configuration on the instrument.

B 70.6580.1 Operating Instructions

The operating instructions are an extract from the operating manual and cover the basic operation of the paperless recorder.

B 70.6580.2.0 Interface Description (serial interfaces)

This provides information on communication (RS232, RS485) with supervisory systems.

Interface Description (Ethernet interface)

This provides information on the connection of a paperless recorder to a company-internal network. This description is integrated into B 70.6580.2.0

B 70.6580.2.3 Interface Description (PROFIBUS-DP interface)

This provides information on the connection of a paperless recorder to a PROFIBUS-DP system.

B 70.6580.4 **Installation Instructions**

The installation instructions describe the installation of the recorder and the connection of the supply and signal cables. The instructions also contain a list of the technical data.

B 70.6580.6 **Setup Program**

The manual describes the function of the setup program. The setup program is available as an option.

T 70.6580 **Data Sheet**

The data sheet contains general information, the order details and the technical data.

B 70.9701.0 **PC evaluation software (PCA3000)**

The operating manual describes the operation and the features of the PC evaluation software.

The PC evaluation software serves to visualize and evaluate process data (measurement data, batch data, messages ...). The process data can be read in via the CompactFlash memory card, or made available through the PCC software.

B 70.9702.0 **PCA communications software (PCC)**

The operating manual describes the operation and the features of the PCA communications software.

The PCA communications software is responsible for the data transfer from the paperless recorder to a PC, or across a network.

All documents are available for downloading at www.jumo.de

- Start the product search on the home page.
- Enter 70.6580 and start the search.
- Select the paperless recorder
- Select the download section
- Download the PDF file.

1.3 Typographical conventions

Warning signs

The signs for **Danger** and **Caution** are used in this manual under the following conditions:

Danger

This symbol is used when there may be **danger to personnel** if the instructions are ignored or not followed correctly!

Caution

This symbol is used when there may be **damage to equipment or data** if the instructions are ignored or not followed correctly!

Caution

This symbol is used where special care is required when handling **components liable to damage through electrostatic discharge**.

Note signs

Note

This symbol is used when your **special attention** is drawn to a remark.

Reference

This symbol refers to **further information** in other manuals, chapters or sections.

abc[1]

Footnote

Footnotes are remarks that **refer to specific points** in the text. Footnotes consist of two parts:

A marker in the text, and the footnote text.

The markers in the text are arranged as continuous superscript numbers.

Action instruction

*

This symbol indicates that an **action to be performed** is described.

The individual steps are marked by this asterisk, e.g.

* Rotate control knob

* Press control knob

Presentation modes

Program Manager

Screen texts

Texts that are displayed in the setup program are indicated by **italic script**.

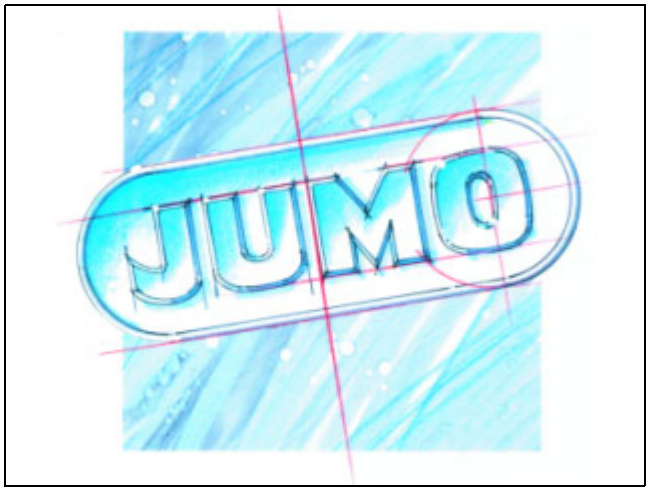
Edit ➔ Device data

Menu items

Menu items in the setup and instrument software referred to in this manual are shown in italics. Menu name, menu item and submenu item are separated from each other by "➔".

1 Introduction

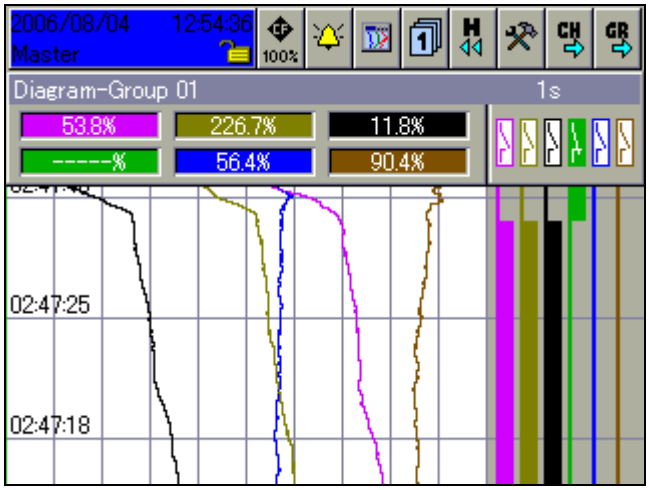
After the paperless recorder has been started up by switching on the supply (power ON), the start logo is the first item that appears.



During screen build-up, the recorder is initialized with the data of the last configuration. After the initialization phase, the presentation mode that was last selected is shown in the visualization level (factory setting). Please note that the start-up behavior is configurable, so you can alter it.

Normal display

This mode of presentation is known as “Normal display”.



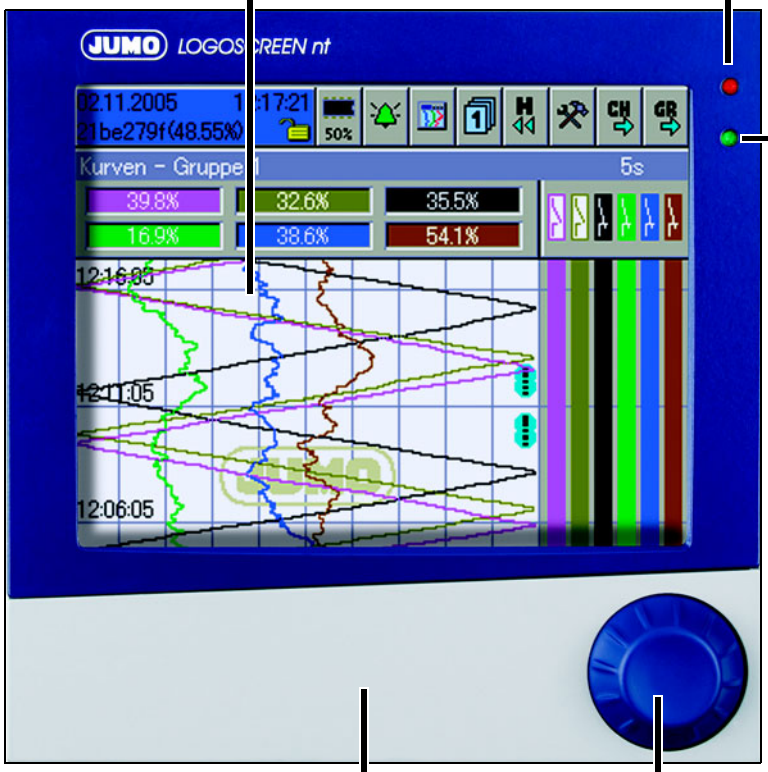
2 Device description

2.1 Displays and controls

Power LED (green)
is on continuously as soon as power is applied.

TFT color display
320 x 240 pixels, 256 colors

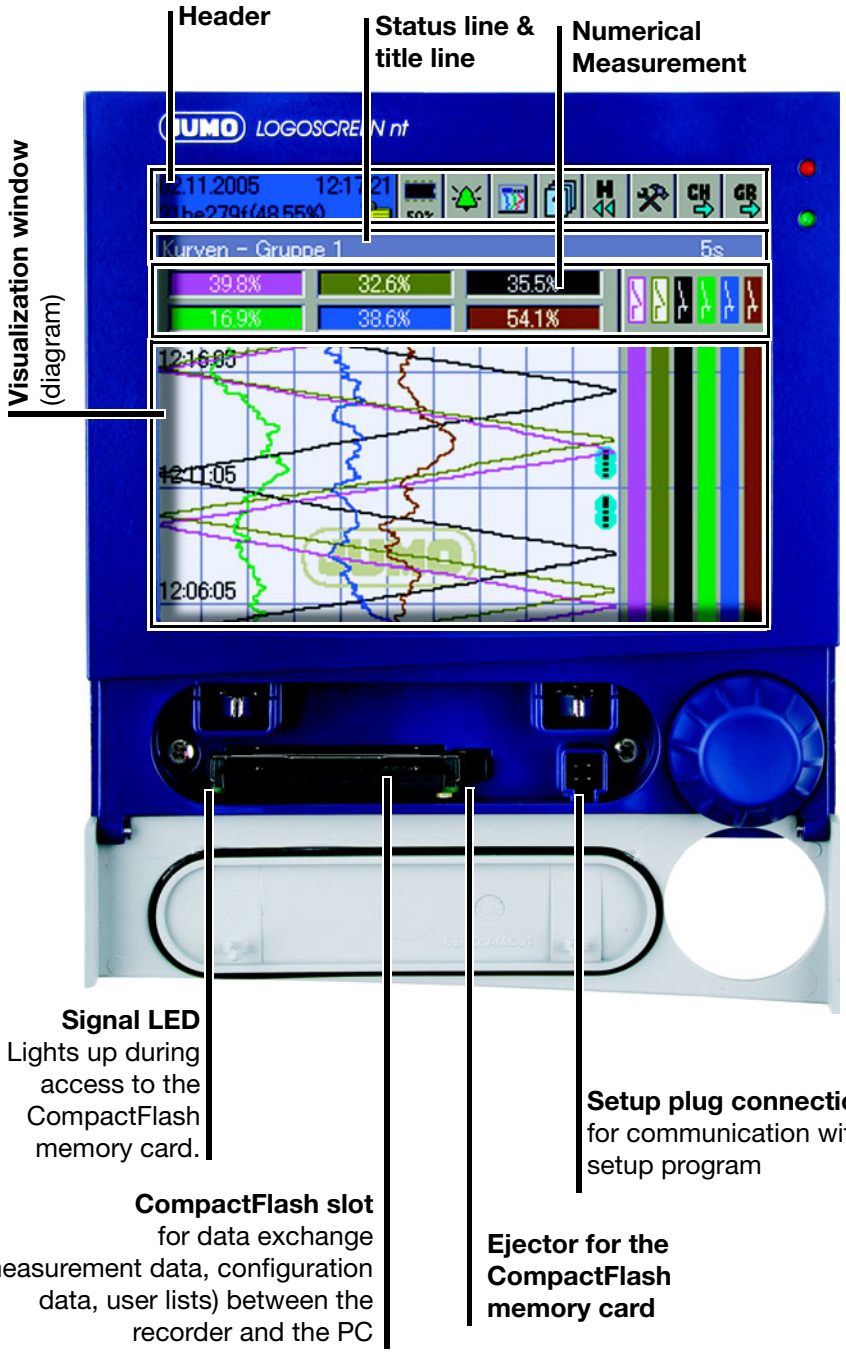
Status LED (red)
is on continuously
if an alarm is present.



Cover
for the CompactFlash® slot[1]
and the setup plug connection

Control knob
The control knob is used to configure and operate the paperless recorder. It can be rotated in both clockwise and anti-clockwise directions, and pressed.

1. CompactFlash® is a registered trademark of SanDisk Corporation.



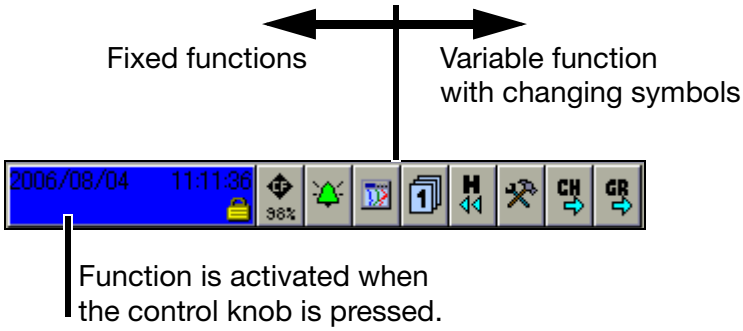
The CompactFlash memory card must not be removed while it is being accessed (signal LED is on).

The life of the background illumination can be prolonged by using the parameter “Screen off”.

2 Device description

2.2 Operating principle and graphic elements

Header

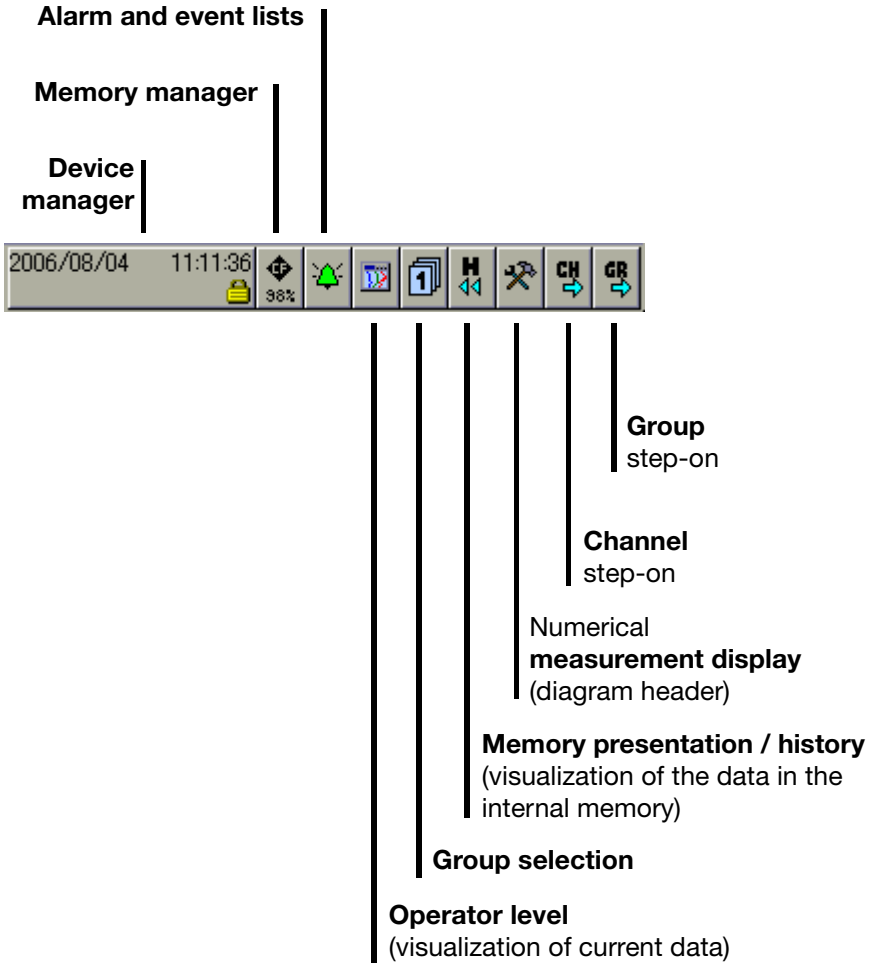


The functions of the paperless recorder are selected in the header. The selected function is indicated by a blue background.

- Function selection by rotating the control knob (to right or left).

- Function is activated by pressing the control knob.

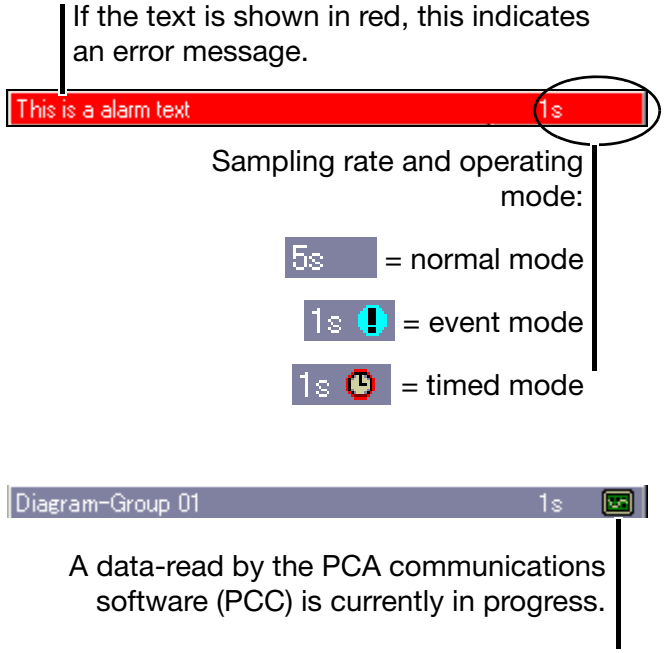
The symbols and variable functions alter according to the function that is currently active.
The following diagram shows the header for normal display when the vertical diagram (curve display) has been selected.



Device manager	⇨ Chapter 7
Memory manager	⇨ Chapter 6
Alarm and event lists	⇨ Chapter 5
Operator level (Visualization)	⇨ Chapter 3
Group selection	⇨ See “Group selection” on Page 25.
Memory presentation	⇨ Chapter 4
Numerical measurement display	⇨ See “Numerical measurement display” on Page 25.
Channel step-on	⇨ See “Channel step-on” on Page 26.
Group step-on	⇨ See “Group step-on” on Page 26.

Status line and title line

This line bar shows alarm and error messages, as well as events, general information, and information about the current presentation mode (e.g. sampling rate). It is automatically blanked out by the system if necessary.



Numerical measurement display
(diagram header)

The numerical measurement display is available for the presentation modes:

- Curves
- History (curve display) and
- Digital diagram

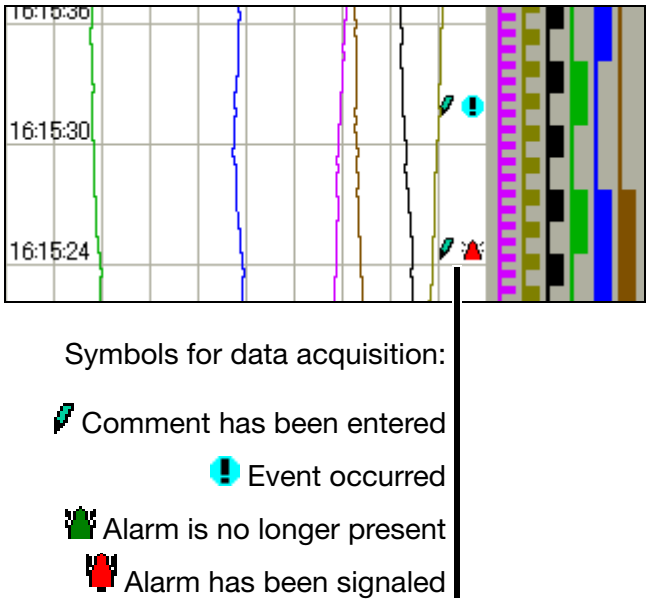
In the **curve presentation**, the numerical display can be switched on and off. This on and off switching also applies to the history representation.

An alarm for a channel is shown in red (MAX alarm) or orange (MIN alarm).

If the numerical measurement display is switched on in the **history (curve presentation**, you can switch between MIN and MAX display. Whether or not MIN and MAX values are both available at the same time, depends on the settings for the group operating mode.

In the **digital presentation**, the diagram header can be switched on and off.

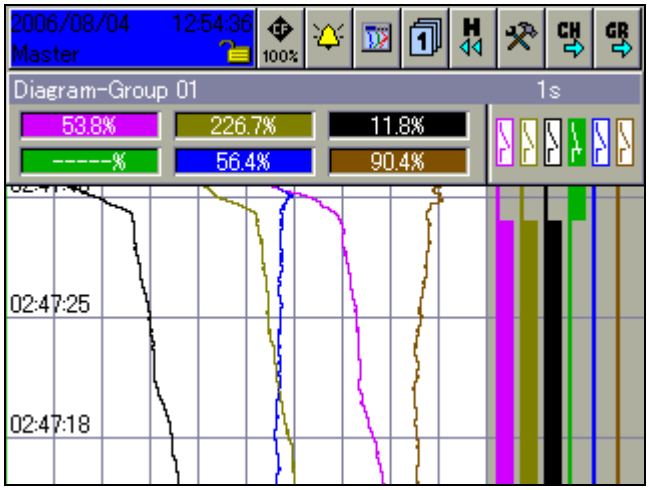
Visualization window
(diagram)



In the visualization window, the measurements are shown in graphical form. Alarms are indicated by a red or orange color for the curve (can be configured in the setup program).
Communication with the operator (device configuration, checking alarm and event lists etc.) also takes place through the visualization window.

2.3 Operating example

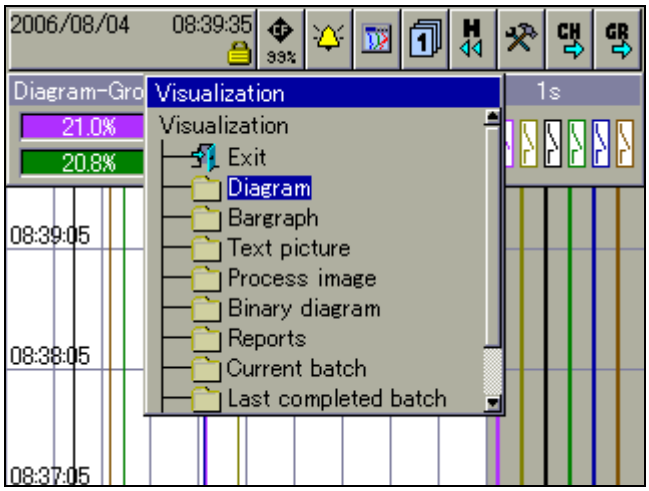
Start The normal display is active.



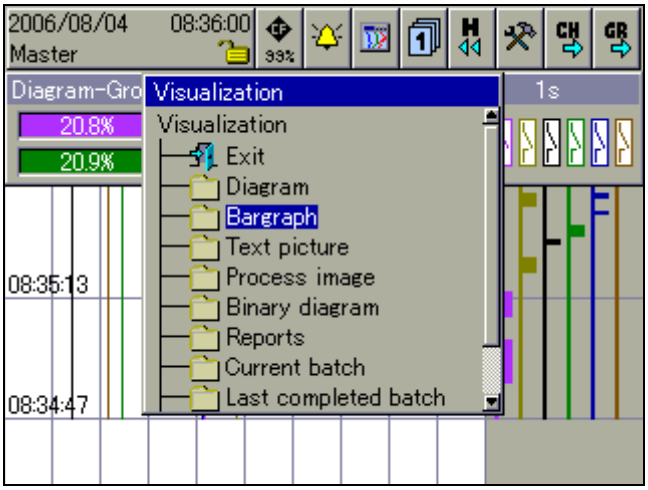
Operation

* Select the operator level by rotating the control knob.

* Activate the operator level by pressing the control knob.

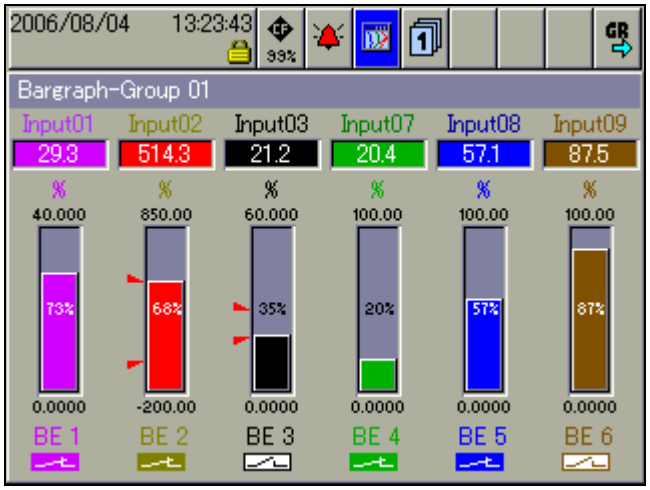


↷ ✱ Select bar graph display by rotating the control knob.

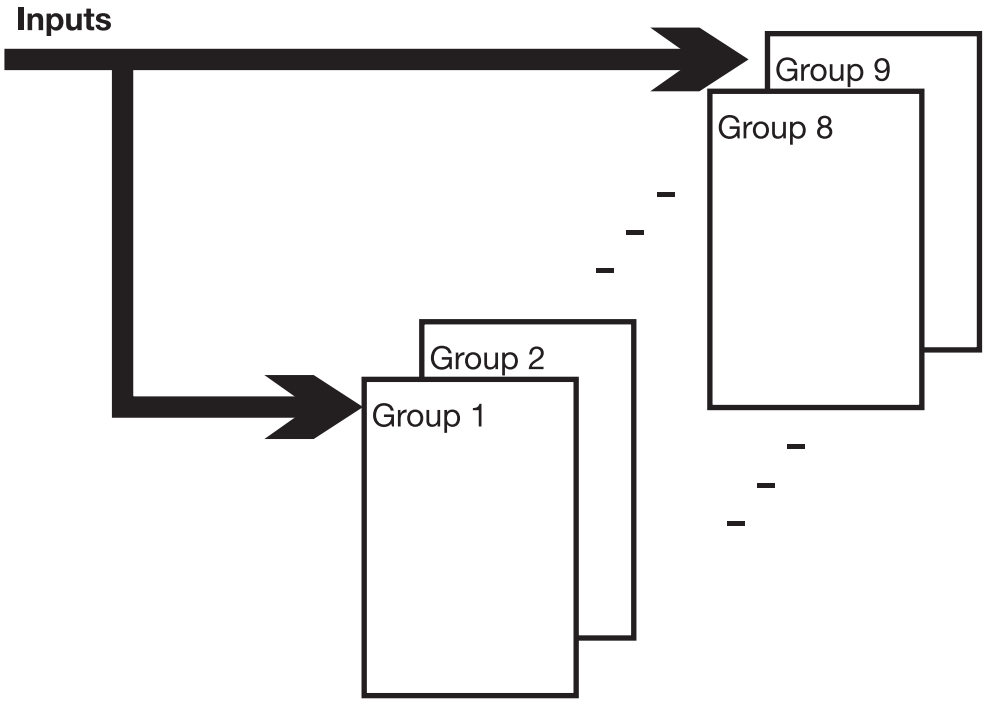


⊙ ✱ Activate bar graph display by pressing the control knob.

Result The bar graph display is now started.



2.4 Group and plant management (batches)



Within the recorder, all analog inputs, binary inputs, counters and integrators, are collected together into groups. A maximum of nine groups is available as a total. Each group can consist of a maximum of 6 analog inputs, 6 binary inputs/outputs, and 4 counters/integrators.

The presentation of the analog inputs and binary inputs/outputs is always made on a group basis.

If plants (batches) are used, then the groups have a fixed assignment to the plants (batches).

Plant number	Group	Plant (batch)
1	1 — 9	1
2	1 — 3 4 — 6 7 — 9	1 2 not assigned
3	1 — 3 4 — 6 7 — 9	1 2 3

In order for a batch to be usable, its main group must be active (status = “Display” or “Display, save”) and at least one analog channel in the group must be assigned.

Batch for plant	Main group
1	1
2	4
3	7

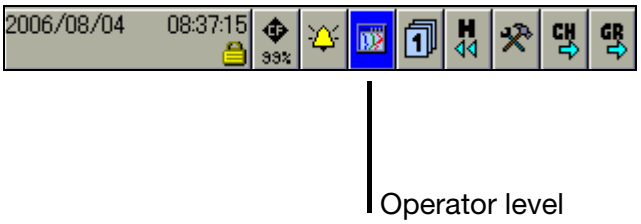
The number of plants is configured by the parameter *Device manager* ➔ *Configuration* ➔ *Batches/plants* ➔ *Gen. plant parameters* ➔ *Number of plants*.

2 Device description

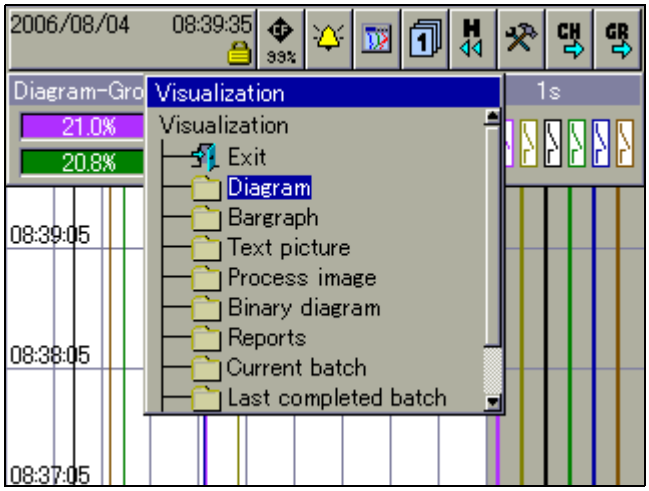
3.1 Activate operator level

The type of visualization (curve presentation, bar graph etc.) is selected at the operator level. Note that the appearance of the operator level can be influenced by the configuration.

* Select the operator level by rotating the control knob.
* Activate the operator level by pressing the control knob.



You can alter the visualization after activating the operator level.



The functions in the header line will change, depending on the visualization. The following types of visualization are available:

Curves	⇨ Chapter 3.3
Bar graph	⇨ Chapter 3.4
Text screen	⇨ Chapter 3.5
Process screen	⇨ Chapter 3.6
Binary	⇨ Chapter 3.7
Report	⇨ Chapter 3.8
Batches	⇨ Chapter 3.9
Counters and integrators	⇨ Chapter 3.10
Comment entry	⇨ Chapter 3.11

3.2 Overview of header lines

Curve presentation

Bar graph presentation

Textual presentation

Process diagram

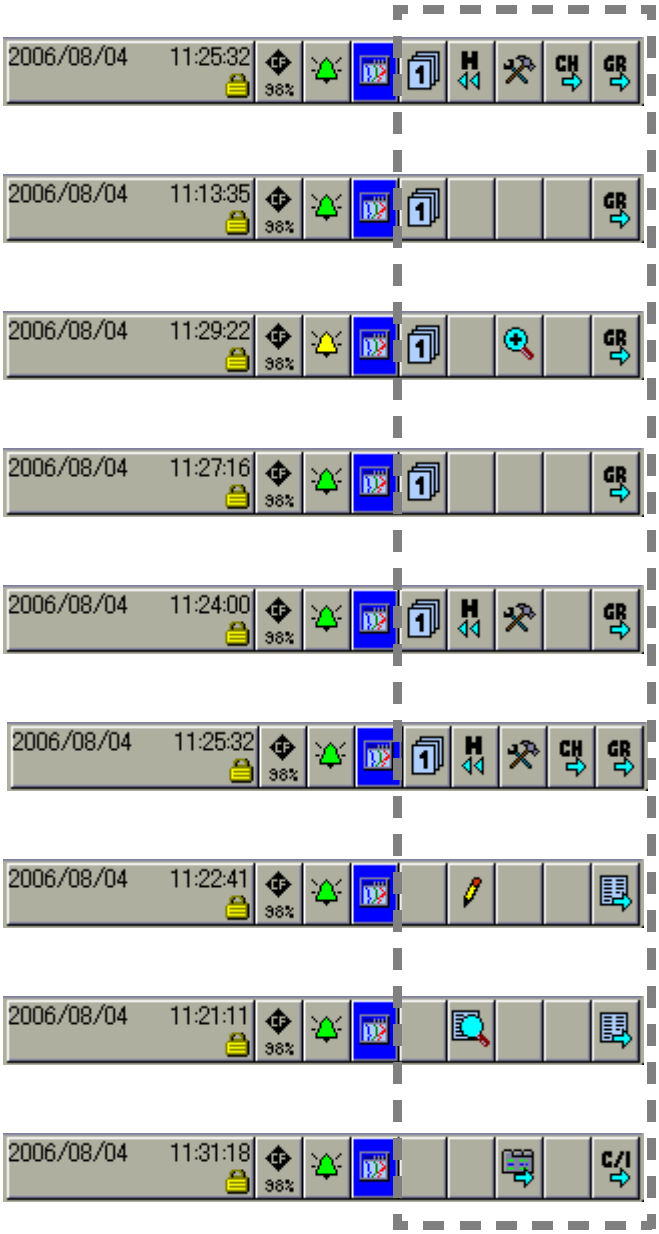
Digital presentation

Report

Batches (current)

Batches (finished)

Counters and integrators



Comment entry

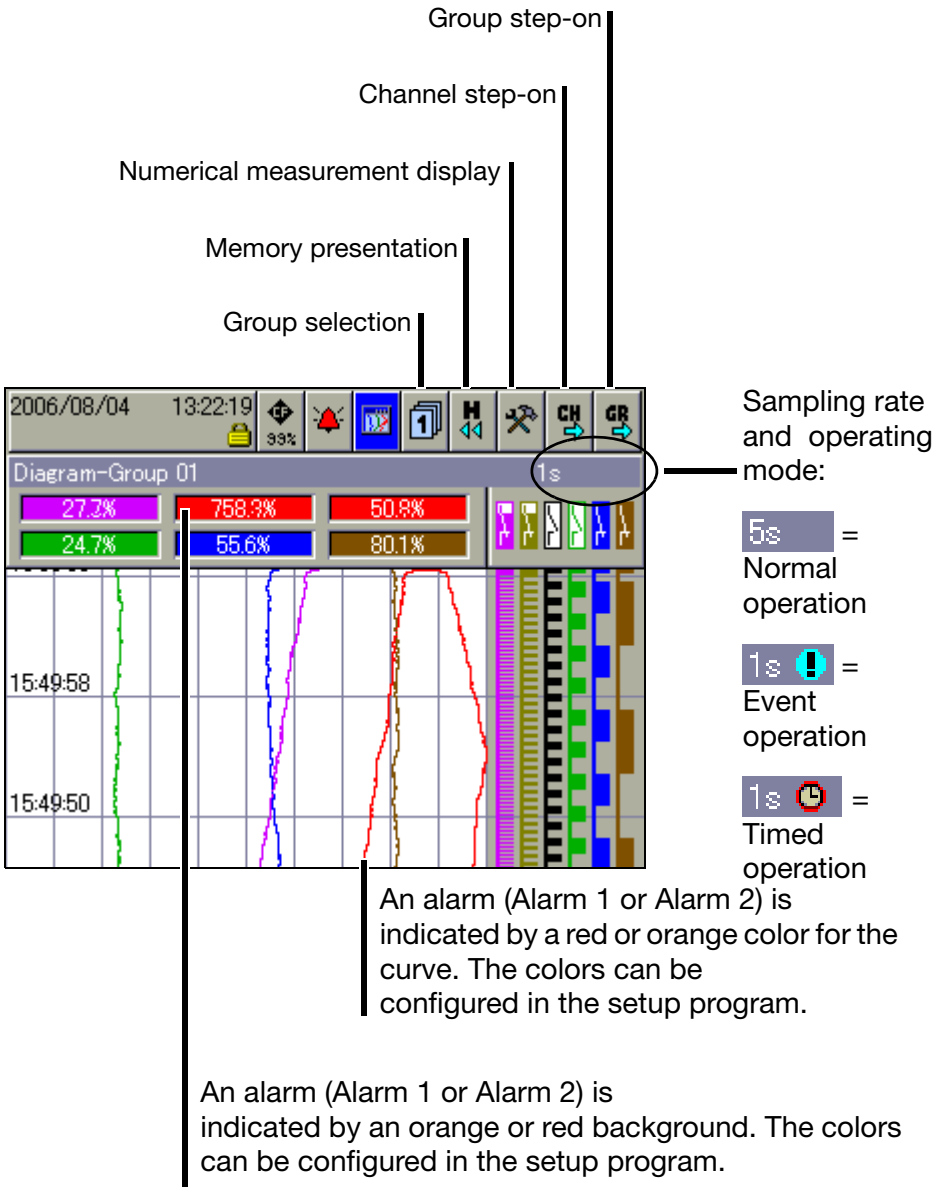
The comment entry does not have its own header. The current header will remain when this function is activated. The comment that has been input is entered in the event list.

The first four functions in the header are identical for all types of visualization. These are supervisory functions (see Page 14 and Page 15).

Differences only arise in the last five functions.

3.3 Curve presentation

In the curve presentation, the individual signal traces run from top to bottom of the display (vertical presentation).



Group selection You can use this function to directly select and display any one of the groups.

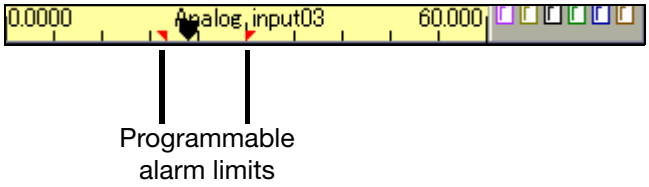
Memory presentation This function starts the presentation of the data that are available in the history memory.

⇨ Chapter 4 “Memory presentation (History)”

Numerical measurement display This function is used to switch the numerical measurement display or diagram header on or off.

Channel step-on

This function activates the scaling display. Repeated activation steps through the scaling for the channels within the group, and then blanks it out again.

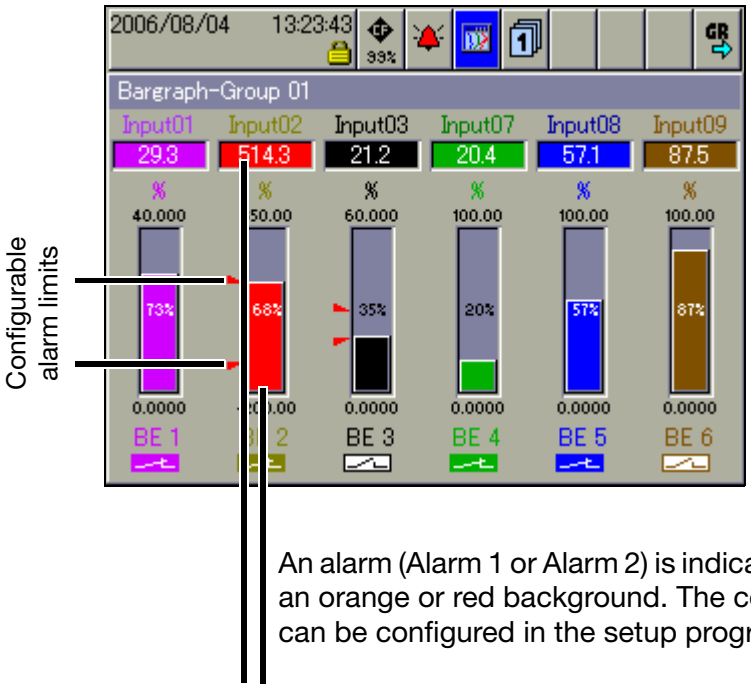


Group step-on

Unlike “Group selection”, where any group can be selected, this function selects the groups one after another.

3.4 Bar graph presentation

In this visualization mode, the analog inputs are presented both numerically and in bar graph form. In addition to the analog channels, the digital inputs can also be visualized at the bottom of the display.

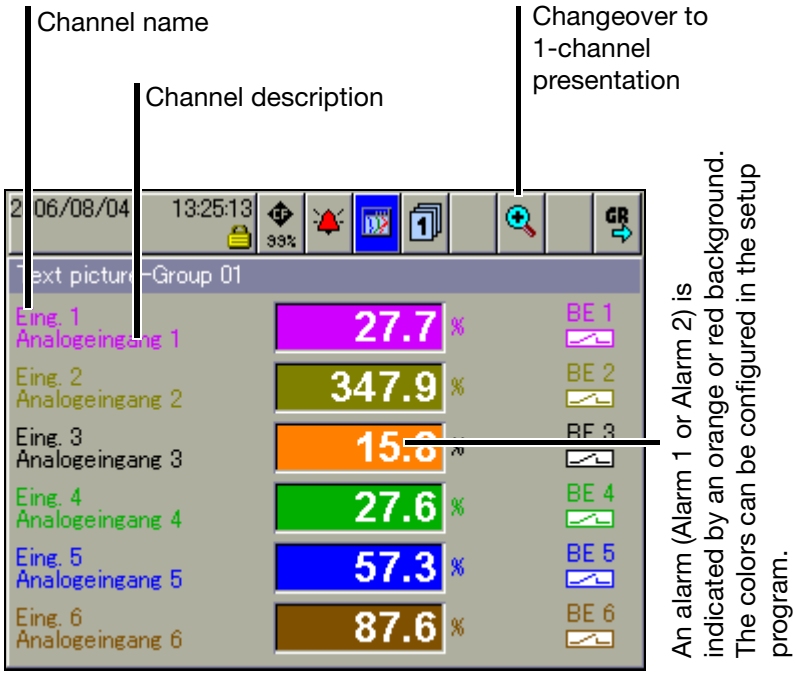


If only digital channels are to be presented, then Chapter 3.7 “Binary presentation” is recommended.

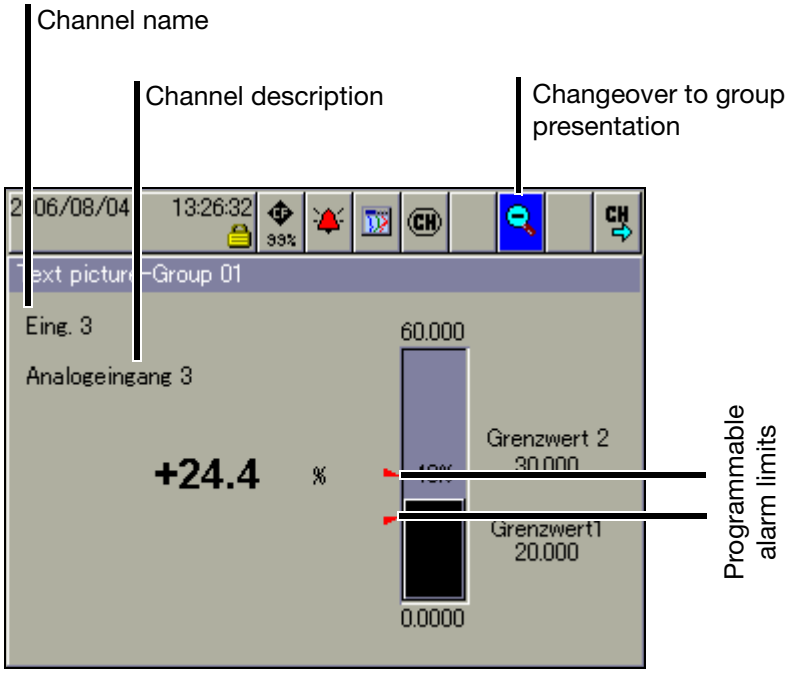
3.5 Textual presentation

In presentation, the analog channels are presented numerically, together with the channel name and the channel description. In addition to the analog channels, the digital inputs can also be visualized at the right-hand edge of the display.

Group presentation



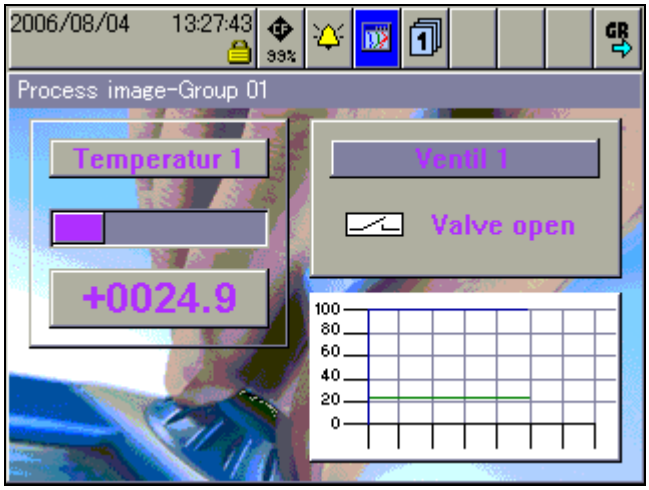
1-channel presentation



3 Operator level (visualization)

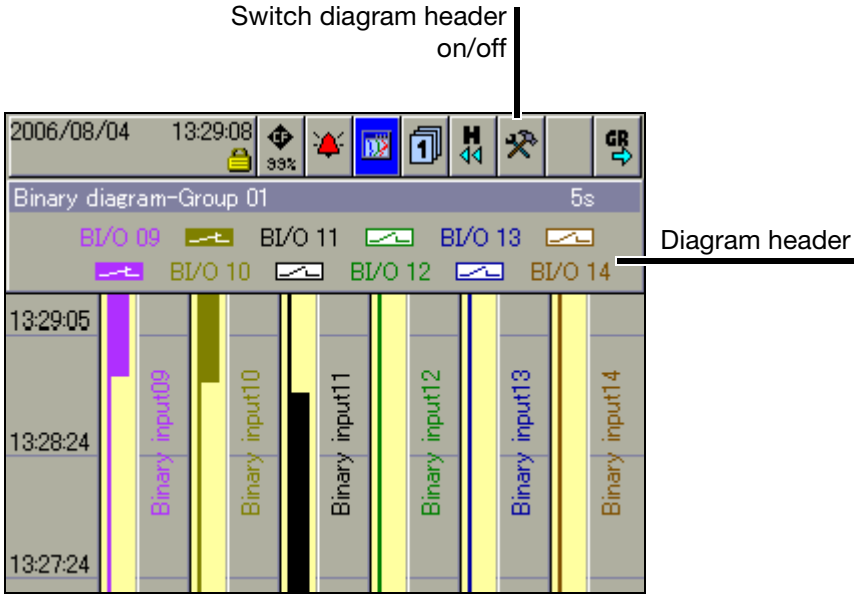
3.6 Process diagram

In the presentation, selected measurement signals and background pictures are shown in a process diagram (one group per process diagram). The preparation and configuration of the diagram can only be carried out by the device manufacturer.



3.7 Binary presentation

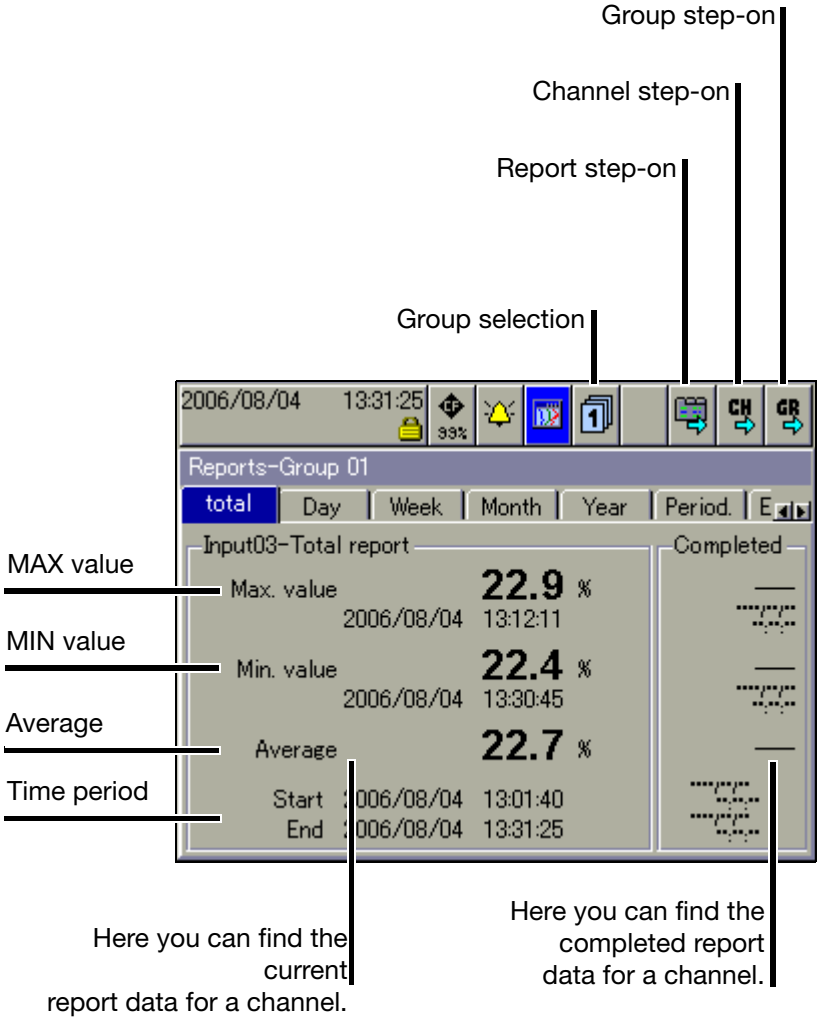
In the presentation, the analog channels are left out and only the digital channels are visualized.



3.8 Report

Each one of the reports covers all the analog channels in a group. An individual and configurable report is provided for each group.

The current reports are visualized in the presentation.



Group selection — You can use this function to directly select any one of the groups and display the report data.

Report step-on — This function is used to switch between the various types of report for the current channel.

Channel step-on — This function can be used to switch between the individual channels of the currently active group.

Group step-on — Unlike “Group selection”, where any group can be selected, this function is used to select the groups one after another.

3 Operator level (visualization)

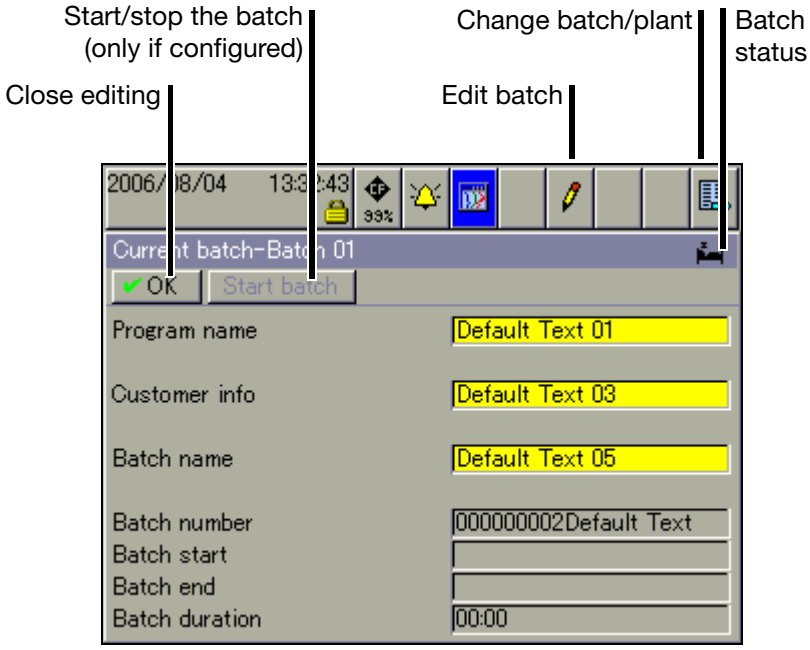
3.9 Batches/plants

When recording batch processes, a distinction is made between the plant and the batch.

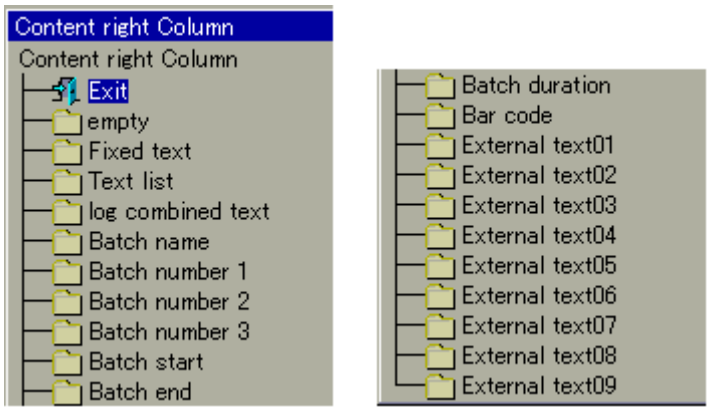
The instrument can combine and record the data from up to 3 plants as a batch (batch protocol). The number of batches for a plant is not limited. The instrument distinguishes between “current batch” and the most recently “completed batch” for a plant. The number of plants that are used and the texts in the batch template can be configured on the instrument or in the setup program.

3.9.1 Current batches

⇨ This display shows the current data for the batch(es). Further information about entering the texts in the left and right columns can be found in the Operating Manual B 70.6580.0.



The batch texts on the right-hand side can be entered by using one of the following options:



Edit batch

This function can be used to edit the batch text fields that are available (configured for this purpose). When the function has been called up, the first editable field in the screen will be activated.

* Press the control knob to start editing.
* Enter the text (Chapter 8 “Entering text and values”).

* Rotate the control knob to select a new field or button, and activate it by pressing the control knob.

Change batch/plant

Changeover between the individual batches/plants. A maximum of 3 plants can be configured.

Start/stop batch

Use the parameter *Device manager* ➔ *Configuration* ➔ *Batches/plants* ➔ *Plant X* ➔ *General* ➔ *Batch start* to configure how a batch starts and stops. The following are available:

- start/stop by a binary signal (control signal),
- start/stop by a bar code reader, and
- manual start/stop by control knob.

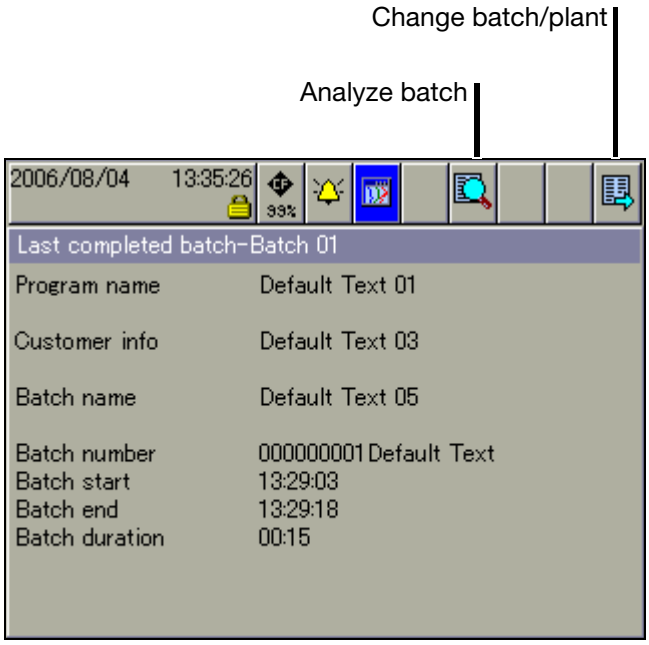
☞ At least 5 seconds must elapse between the stop of a batch (batch end) and the next start (batch start). A new batch can only be started when this time has elapsed.

Batch status

 The batch report that is displayed is active.

 The batch report that is displayed is **not** active.

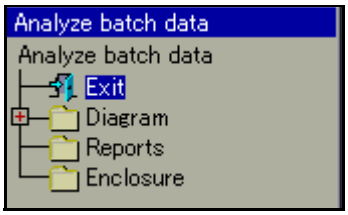
3.9.2 Completed batches



Analyze batch

Completed batches can be analyzed in three different ways:

- batch data (graphical presentation)
- report (numerical presentation)
- attachments (e.g. recipes).



✱ Rotate the control knob to select a type of presentation, then press the knob to activate this type.

Activating the door symbol in the header closes the selected presentation, and the batch data will be displayed again.

Change batch/plant

The corresponding batch data will be shown in its own batch screen template, depending on how many plants have been configured.

3.9.3 Batch control through barcode reader

If a barcode reader is connected to the interface “RS232 for barcode reader” (extra code, connector 2) or “RS232/RS485” (connector 7), then the batch start, batch stop, and input of batch texts in a current batch report, can be controlled by the barcode reader. The bar codes that are used all correspond to the type “Code39”.

Preconditions

- The interface must be configured for barcode operation.
  Example:
  Configuration ➔ *Interface* ➔ *RS232 for barcode reader* ➔ *General* ➔ *Protocol* = Bar code.
- The batch start (= batch stop) must be configured.
  Example for batch start/stop:
  Configuration ➔ *Batches/plants* ➔ *Plant 1* ➔ *General* ➔ *Batch start* = Bar code.
- Every line that is to be set by the bar code must be configured.
  Example for plant 1, line 1 (program name):
  Configuration ➔ *Batches/plants* ➔ *Plant 1* ➔ *Line 1* ➔ *content of right column* = Bar code.

Activate batch

☞ Before entering commands through a barcode reader, the corresponding plant 1 — 3 must be prepared by scanning in “BATCH1 — 3” for the bar code commands, regardless of whether or not they are automatically displayed.

Show batch report

If one of the visualizations is active, and nothing is being entered or edited at the moment, then the current batch report can be shown via the barcode reader. The preconditions is that the batch is active and the parameter is set to *Configuration* ➔ *Screen* ➔ *Barcode -> act. batch* = Yes.

Active and display (if required) batch report for plant 1:

Activate and display (if required) batch report for plant 2:

Activate and display (if required) batch report for plant 3:

Start/stop batch report

If the batch report is configured for start/stop via barcode reader, then it will be started and stopped as follows.

Start batch

* Scan bar code for “Batch report for Plant 1 — 3”.
* Start scan.

Stop batch

* Scan bar code for “Batch report for Plant 1 — 3”.
* Stop scan.

If a batch report is stopped, then texts that have been activated by a bar code will be reset to the standard (default) text in the batch report that is currently active.
In the completed batch report, the texts will be saved.

Activate batch texts

If a line in a batch report is configured for bar code activation, the activation proceeds as follows.

Activate text:

* Scan bar code for “Batch report for Plant 1 — 3”.

Scan text.

The first line of the activated batch report that has been configured for text input via bar code will automatically be filled with the text that corresponds to the bar code. If several line have been configured for bar code activation, then they will be processed one after another, from top to bottom.

Reset entry

Execution of the following bar code will reset the activation of the batch texts. The standard (default) texts (parameter *Factory setting*) will be displayed, and the first line will be prepared for input.

Summary of the bar codes

All the bar codes that are required are also collected together in the appendix of the operating manual B 70.6580.0.

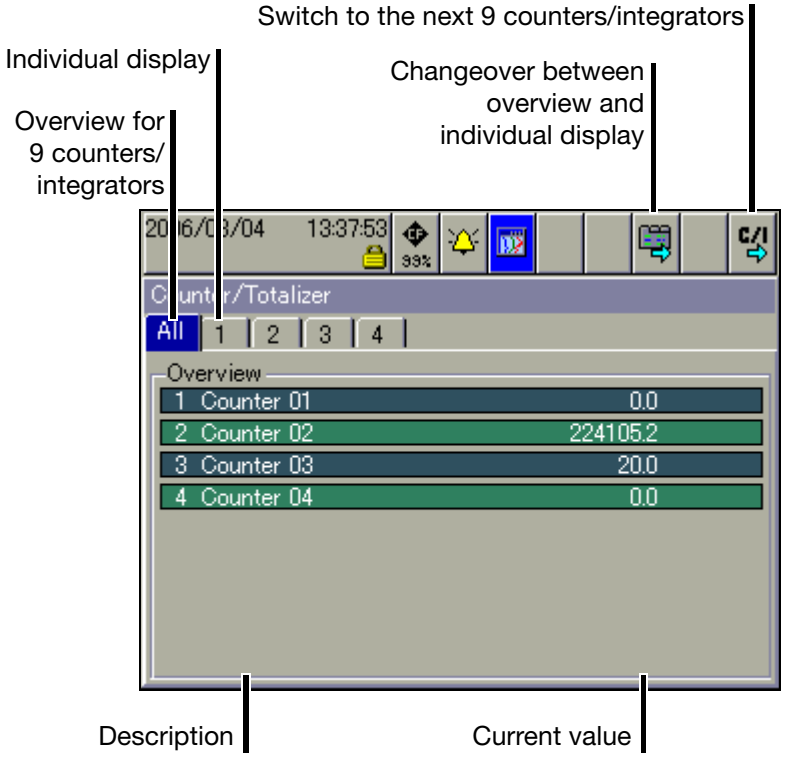
The codes for batch control (BATCH1, BATCH2, BATCH3, START, STOP, RESET) cannot be used for setting batch texts.

3 Operator level (visualization)

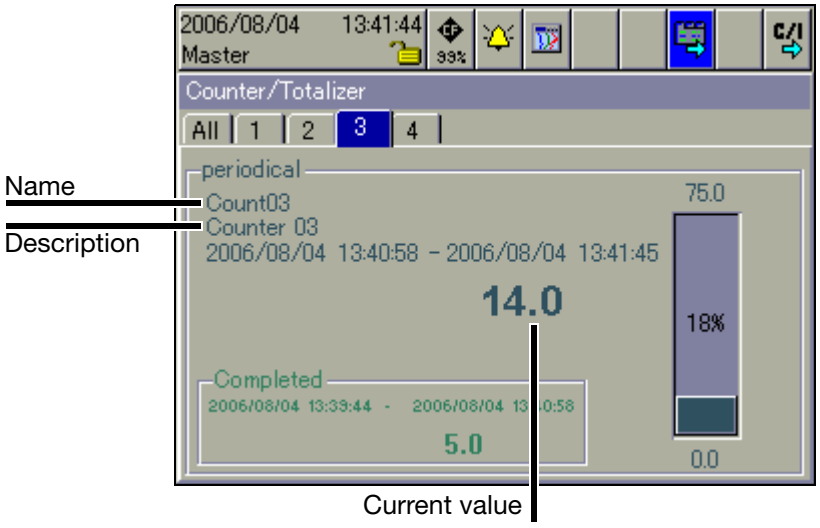
3.10 Counters and integrators

In this presentation, the current states of the counters and integrators are displayed, as well as the operating hours counter. Up to 9 counters and integrators can be shown in one screen template. The functional characteristics, as counter, integrator or operating hours counter, are defined in the device configuration.

Overview presentation

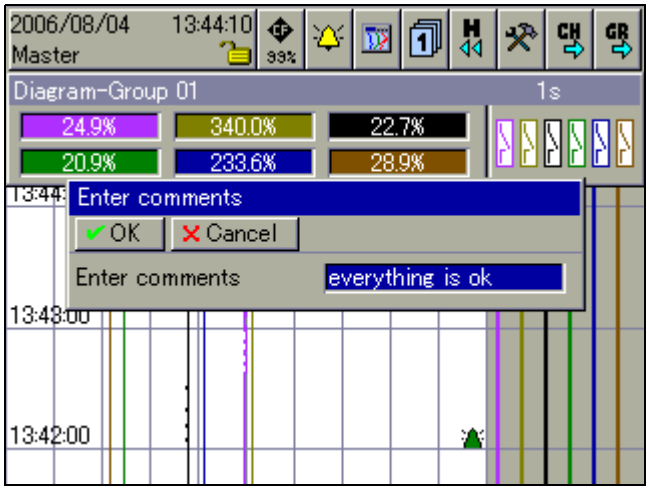


Individual presentation



3.11 Comment entry

This function can be used to enter a text (max. length 31 characters) that is entered in the event list when the input is completed.



In the curve presentation (in the displayed group), the text entry is marked by a pencil symbol.

⇨ Chapter 5 “Alarm and event lists”

⇨ Chapter 3.3 “Curve presentation”

⇨ Chapter 3.11 “Comment entry”

The text can now be found in the event list, under the heading “All events”, and also under the corresponding batch.

If plants (batches) are used (parameter: *Device manager* ➔ *Configuration* ➔ *Batches/plants* ➔ *Gen. plant parameters* ➔ *Number of plants* is larger than 0), then the groups have a fixed assignment to the plants (batches).

Plant number	Group	Plant (batch)
1	1 — 9	1
2	1 — 3 4 — 6 7 — 9	1 2 not assigned
3	1 — 3 4 — 6 7 — 9	1 2 3

3 Operator level (visualization)

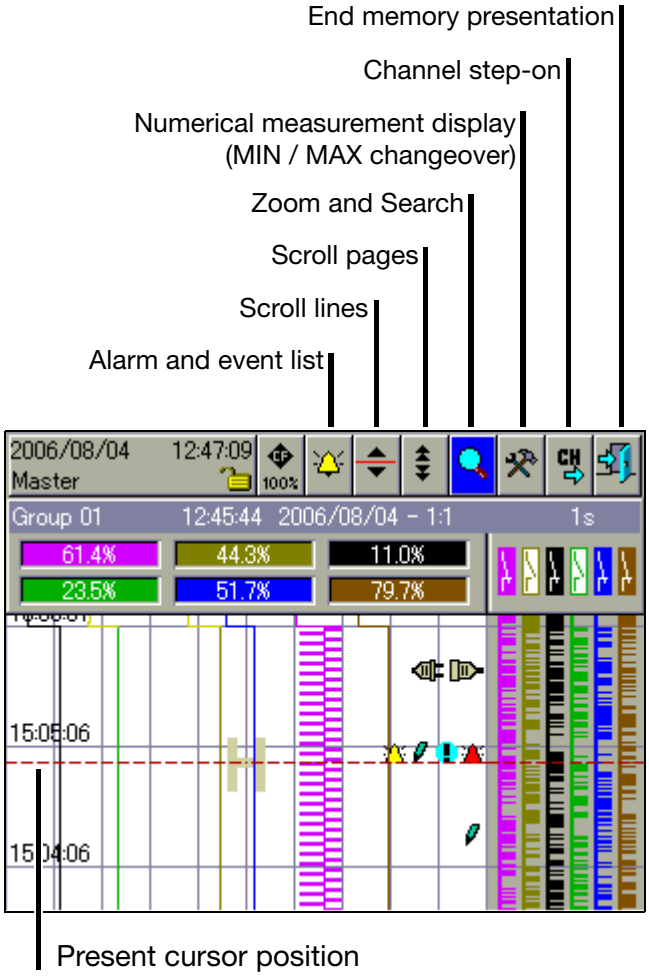
4 Memory presentation (History)

The memory presentation (History) function can be used to display and check data from the internal main memory of the instrument. The size of the memory for memory presentation can be configured.

The memory presentation can be activated in the visualization modes “Curve display” and “Digital presentation”, and is also used for the display of completed batches.

Activate memory presentation

* In “Curve display” or “Digital presentation”, rotate and press the “H” symbol to select and activate the History presentation.



A cursor is now shown in the center of the visualization window. The corresponding measurements are shown in the line for “Numerical measurement display”.

Alarm and event lists

This function is used to present the alarm and event lists for the group that is being displayed.

⇨ Chapter 5 “Alarm and event lists”

Scroll lines

Rotating the control knob moves the cursor through the visualization window. The data in the “Numerical measurement display” are updated for every shift. If you move right up to the edge of the window, the measurement curve will automatically be shifted and the required data will be presented.

“Scroll lines” is ended by pressing the control knob.

Scroll pages

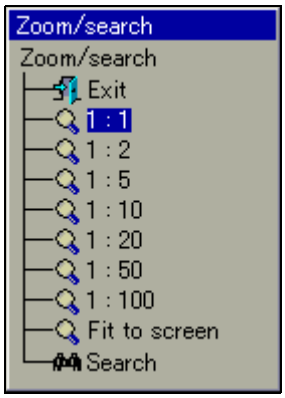
Rotating the control knob moves the cursor an entire screen (=page) at a time. The data in the “Numerical measurement display” are updated for every shift. The system automatically positions the cursor at the end of the page, as required.

“Scroll pages” is ended by pressing the control knob.

Zoom and search

This function affects how many measurements are used to calculate a point in the diagram, and to search for measurements according to date and time.

Zoom



The factory setting is “1:1”, which means that every measurement in the History memory will be displayed. “1:2” means that two measurements are combined into one, which is then displayed, and so on.

* Select the zoom factor by rotating the control knob.
* Pressing the control knob closes the dialog window and activates the new Zoom factor.
* Selecting “Exit” closes the dialog window, and the presentation remains unchanged.

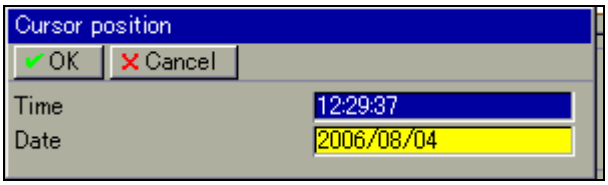
Adjust

This function is only available for presenting the data for a completed batch.

If you select this function, all the available measurements for the completed batch are displayed in a window. In this way, you can get a quick overview of all the recorded measurements.

Search

If you select “Search”, the dialog window for entering the date will be shown.



* Select the date and time, and use OK to close the dialog.

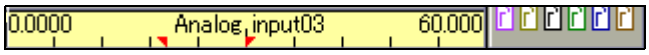
If the date that you entered is in the History memory, the cursor will move to this position and the data will be shown.

Numerical measurement display

This function decides whether the MAX or MIN values are shown in the "Numerical measurement display". MIN or MAX values arise when more measurements are recorded than are displayed. This will be the case if "MIN/MAX recording" is activated in the operating mode for a group.

Channel step-on

This function activates the scaling display. Repeatedly activating the function steps through the scaling for the channels within the group, and then blanks it out again.



Close memory presentation

This function ends the presentation of the data that are available in the internal main memory of the instrument.

4 Memory presentation (History)

The alarm and event lists can be called up in two ways:

- a call from one of the visualizations, e.g. curve presentation (Chapter 3.2 “Overview of header lines”)

or

- a call from the memory presentation (Chapter 4 “Memory presentation (History)”).

Alarm lists

Alarm lists contain only the alarms that are currently present.

The alarm list will not be updated as long as the window is open. Remedy: close once, and open again. This will update the alarms.

Event lists

Events list contain all the events that have occurred, as well as all alarms.

A maximum of 150 entries can be fitted into the two lists. The lists will be deleted if a reconfiguration takes place.

The following description assumes that three batches are being used. The number of batches may vary, because it can be configured by the user.

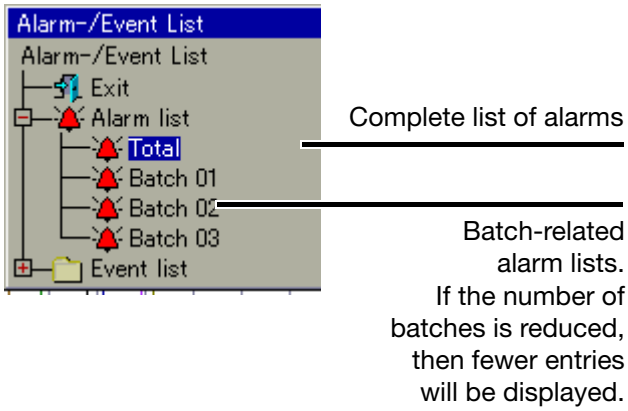
5 Alarm and event lists

5.1 Call from one of the visualization modes

* In the header line, rotate the control knob to select the bell symbol, and press the knob to activate the symbol.

* Select the required list.

Activate alarm list

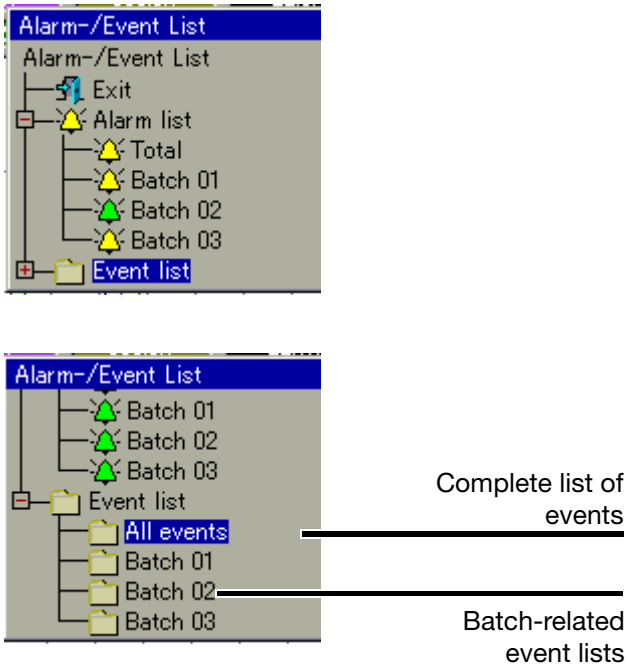


* Rotate the control knob to select a list, then press the knob to activate the list.

Activate event list

First, it is necessary to “fold down” the directory tree for the event lists.

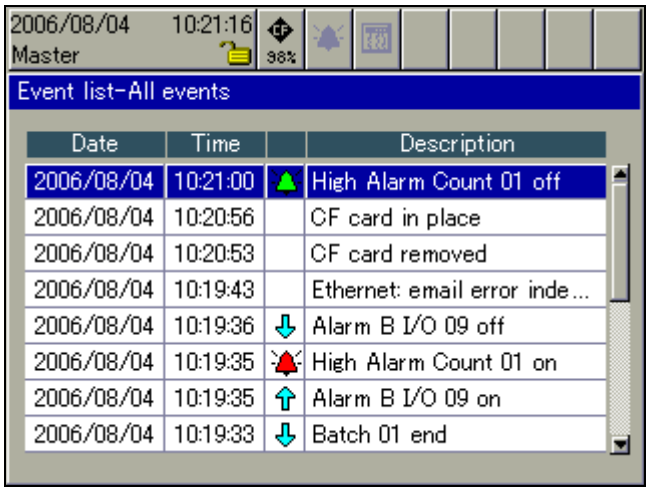
* Rotate the control knob to select an event list, then press the knob to activate the list.



* Rotate the control knob to select a list, then press the knob to activate the list.

Example

In the example you can see a complete event list.



Close list

* Close the event list by pressing the control knob.

The visualization that was active before the list was called up will now be displayed again.

5 Alarm and event lists

5.2 Call from the memory presentation

* In the header line, rotate the control knob to select the bell symbol, and press the knob to activate the symbol.

In memory presentation mode, only the event list for the active group will be shown.

Close list

* Close the event list by pressing the control knob.

The memory presentation that was active before the list was called up will now be displayed again.

5.3 Symbols

	Power on (instrument has been switched on)
	Power off (instrument has been switched off)
	Error
	Alarm disappears (alarm is no longer present)
	Alarm occurs (an alarm is present)
	Comment
	Event occurs (e.g. binary input has been closed)
	Event disappears (e.g. binary input has been opened)
(no symbol)	other messages

The symbol for the memory manager (menu: Memory manager) can be shown in different ways.

This shows the available memory of the CompactFlash memory card that has been inserted.

If no CF card has been inserted, then one of the following symbols will be shown, depending on the type of data read-out that was configured.

The display shows the available internal memory for data read-out via a CompactFlash memory card.

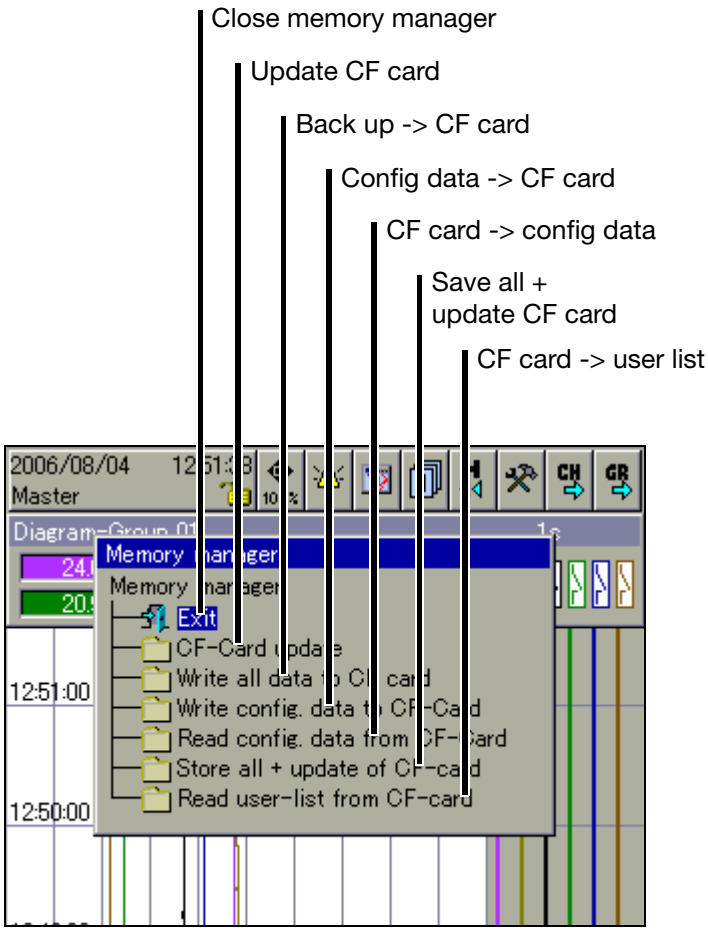
This shows the available internal memory for data read-out via the interface.

The memory manager can only be accessed when a CF card has been plugged into the instrument. After the card has been plugged in, the menu will appear automatically.

If not all functions are available, then you have to log in to the device first, in order to obtain the required access rights.

⇨ Chapter 7.1 “Logging in and logging off”

* Select the memory manager by rotating the control knob, and then press it to activate the function.



Close memory manager — Close the memory manager and reactivate the previous visualization.

Update CF card — Measurement data that have not yet been saved are written onto the CompactFlash memory card.

Backup -> CF card — All measurement data in the memory (also those which have already been fetched) are written to the CompactFlash memory card.

Config data -> CF card — The configuration data and the user list (fo password management) are written to the CompactFlash memory card.

CF card -> config data — The configuration data are read in from the CompactFlash memory card. This will give the recorder a new configuration.

Save all + CF card update — All current reports will be concluded and written to the CompactFlash memory card, together with the measurement data that have not yet been saved. The present counter and integrator states will also be saved.

CF card -> user list — The user list is read in from the CompactFlash memory card.

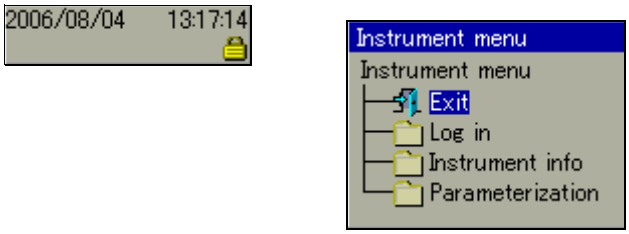
General note

The function *Update CF card* reads out data that have not yet been read out. After read-out, the data will be marked as read in the instrument, but not deleted.
The function *Backup* ➔ *CF card* reads out all the data from the internal memory, including those that had already been read out. After read-out, the data are **not** marked as read in the recorder. This means that they remain available for the function *CF card* ➔ *Update*. The function *Backup* ➔ *CF card* is therefore ideal for test and service work.

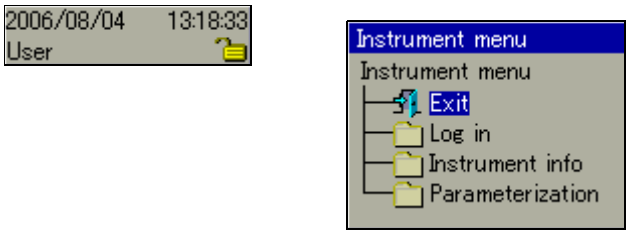
6 Memory manager

The functions of the Device manager vary, depending on whether a user is logged in or not.

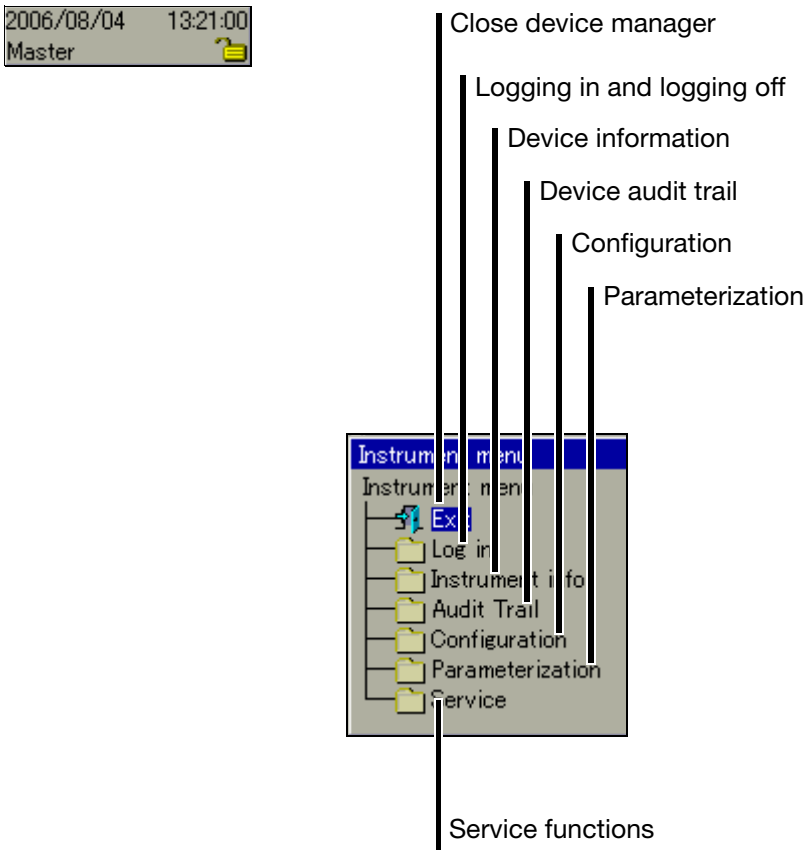
No user logged in



“User” logged in



“Master” logged in



☞ The differences between “No user logged in“ and “User logged in” only become visible in the submenu “Parameterization”.

Close device manager

Close the device manager and reactivate the previous visualization.

Log-in and log-off

⇨ Chapter 7.1 “Logging in and logging off” (Page 53)

Device information

This function provides you with information on the hardware and software components of the instrument. The momentary values of all the internal and external inputs can also be checked.

The control knob can be rotated to display every single table. The function is ended by pressing the control knob.

Device audit trail

This function can be used to display the audit trail for the device.

The audit trail differs from the alarm and event lists.

⇨ Further information can be obtained from the Operating Manual B 70.6580.0.

The function is ended by pressing the control knob.

Configuration

This function can be used to alter the configuration of the recorder.

⇨ Further information can be obtained from the Operating Manual B 70.6580.0.

An alteration of the configuration results in the current recording being closed down and the new data being recorded in a separate time frame from the “old” data. It is not possible to present the data before reconfiguration and the data after reconfiguration as a single entity.

Parameter-ization

For parameterization, some functions will not be available if no user is logged in, or the user who is logged in does not have the access rights for these functions.

Only the setting of individual current batch numbers is enabled in the factory (default) setting.

The following functions may also be available, depending on the rights owned by the user who is logged in.

- Fine adjustment of internal analog inputs,
- Setting of counter and integrators states, and
- Setting the date and time.

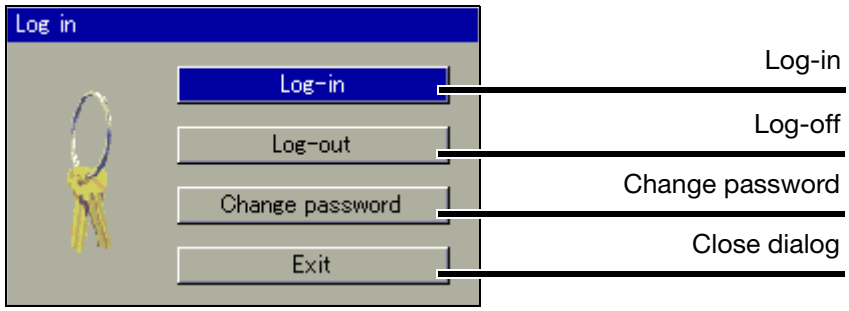
Service

The Service functions will also not be available if no user is logged in, or the user who is logged in does not possess access rights for these functions.

⇨ Further information can be obtained from the Operating Manual B 70.6580.0.

7.1 Logging in and logging off

* *Select the Device manager* in the header line, by rotating the control knob.
* *Activate the Device manager* by pressing the control knob.
* Activate the *Security* function in *Device manager*.



Standard user

The paperless recorder is delivered ex-factory with an internal user list which contains two users.

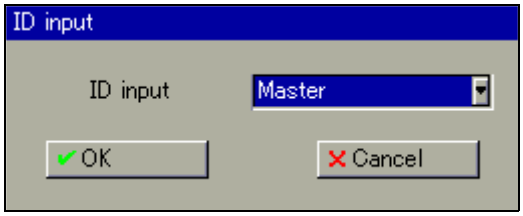
User 1: Master password: 9200

User 2: User password: 0

The setup program can be used to alter the two user names and their passwords and access rights, and transfer this information to the device.

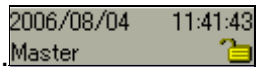
Log-in

* In the menu *Device manager* ➔ *Log-in*, activate the function *Log-in*.



* Select the user. The user name can be changed by rotating the control knob.
* Select “OK” with the control knob, and press the control knob.

* Enter the password by rotating and pressing the control knob, and finish the entry with “OK”.

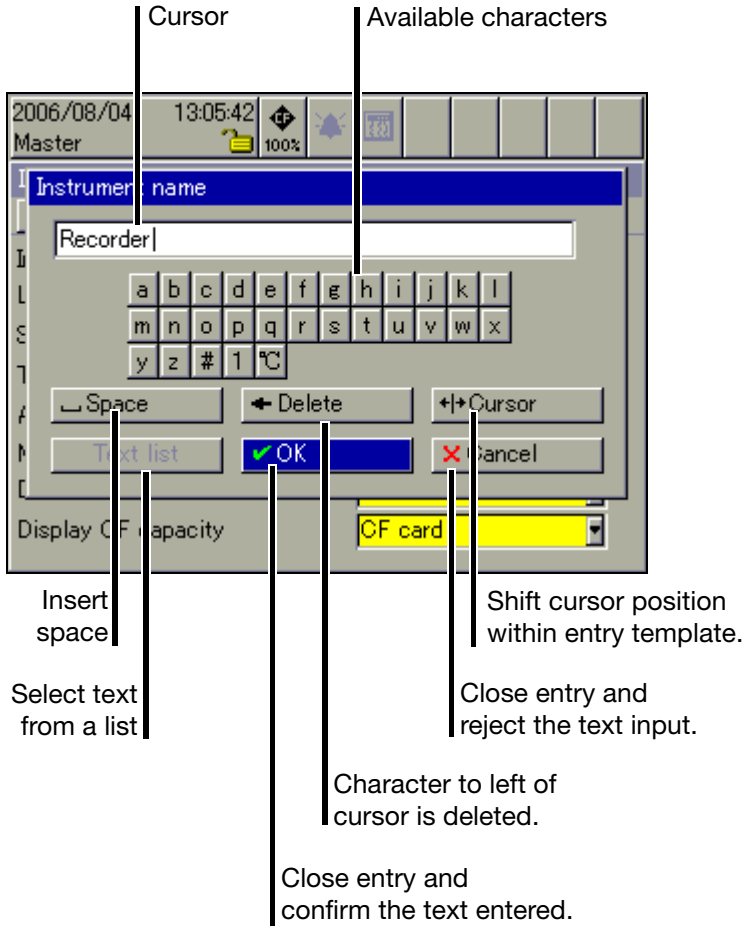
You are now logged in to the system. 

8.1 Text entry

8.1.1 Entering characters

If a text entry field is selected, and then activated by pressing the control knob, then a text can be entered or altered.

The cursor (position marker) is at the end of the current setting. The active key or function that will be performed when the control knob is pressed is shown in blue.



Available characters

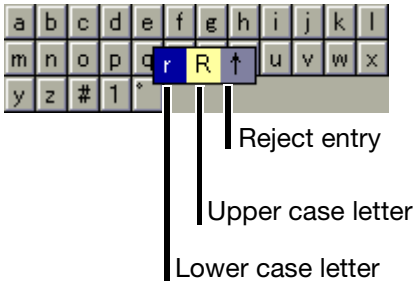
The characters that are shown as available are just an example. They can be adjusted to suit your needs through the setup program.

8 Entering text and values

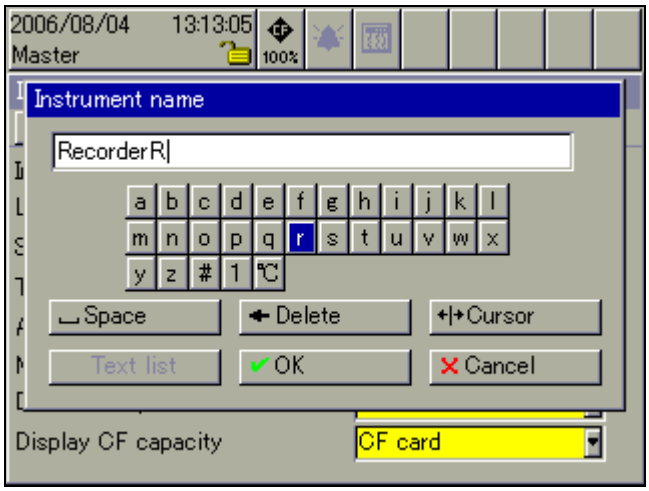
Character entry

* Move the cursor onto the required character, and press the control knob.

Another selection window will open.



* Rotate the control knob to select upper case (capital) or lower case (small) letters, activate/confirm the choice by pressing the control knob.



Entering special characters

Special characters are entered as text.

* Select the # symbol, and press the control knob.

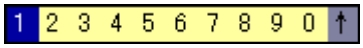
All the special characters that can be selected will now be shown.

Here, too, the selection and confirmation of the characters are made, by rotating and pressing the control knob.

Numerical entry

* Select number “1”, and press the control knob.

All the numbers that can be selected will now be shown.

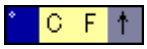


The selection and confirmation of the numbers are made by rotating and pressing the control knob.

Select temperature unit

* Select “°” and press the control knob.

All the temperature units that can be selected will now be shown. For better legibility, the degree sign (°) and the unit (C or F) are separated, and must be individually selected.



The selection and confirmation of the symbol is made by rotating and pressing the control knob.

8.1.2 Insert space

* Select the space button (

) and press the control knob.

The space character will be inserted to the right of the cursor.

8.1.3 Delete character.

* Select the delete button (

) and press the control knob.

The character to the left of the cursor will be deleted.

8.1.4 Move cursor.

* Select the cursor positioning button (

) and press the control knob.

The cursor can now be moved. The shifting is ended by operating the control knob again.

8.1.5 Enter text from text list

All the texts that have already been entered (confirmed by *OK*) are stored in the recorder in an internal text list. This function can be used to call up the list and select a text for current application.

* Call text list (

).

The selection and confirmation of the required text are made by rotating and pressing the control knob.

8.1.6 Finish entry

* Select the *OK* button (

) and press the control knob.

Character entry will now be ended. The text that was entered is accepted, and the dialog window is closed.

8.1.7 Reject entry

* Select the “Cancel” button (

) and press the control knob.

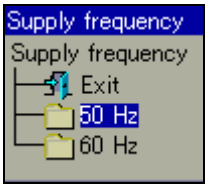
Character entry will now be ended. The text that was entered is **not** accepted, and the dialog window is closed. The previously active setting is retained.

8.2 Entry via selection field

If a selection field is selected, and then activated by pressing the control knob, then the text (value) can be entered from a previously defined list.

The cursor (position marker) is on the current setting.

* Make the selection by rotating and pressing the control knob.



8.3 Entering values

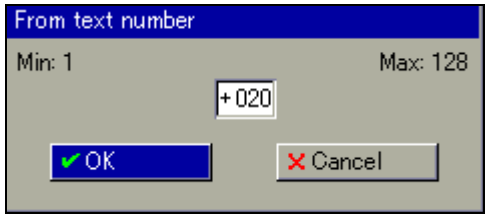
8.3.1 Whole numbers (integers)

There are two possibilities for entering integer numbers:

- selection by altering the individual digits of a number, or
- selection by incrementing and decrementing.

Selection by altering the individual digits of a number

For this entry, each digit of the number (units, tens, ...) and the sign are selected with the control knob.



Example

* Select “2” (the tens digit) by rotating the control knob (+020).
* Press the control knob.

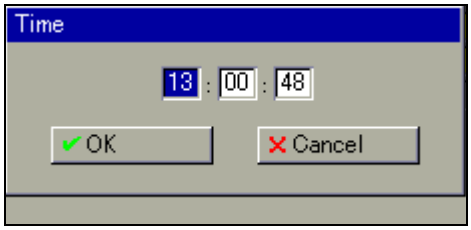
The tens digit is now shown in red, to indicate that this digit can now be altered (+020).

* Rotate the control knob to alter the tens digits, and then confirm the entry by pressing the control knob.

The tens digit has now been altered, and is shown in blue again (+030).

Selection by incrementing and decrementing

For this entry, the complete number is reduced by 1 (decremented) or increased by 1 (incremented) with the control knob.



Example

* Select the hour by rotating the control knob (13).
* Press the control knob.

The number is now shown in red, to indicate that it can now be altered (13).

* Rotate the control knob to alter the number, and then confirm the entry by pressing the control knob.

The number has now been altered, and is shown in blue again (14).

8.3.2 Real numbers (floating point)

To enter real numbers (with a decimal point) for each digit of the number (units, tens, ...) the decimal point position and the sign are selected with the control knob.

Sequence

- Position the cursor.
- Enter the number, or define the decimal point position.

For number entry, the number is inserted at the right of the cursor.

Cursor positioning

✱ Select “Cursor” and press the control knob.

The real number is indicated by a blue background.

✱ Rotate the control knob to move the cursor to the required position, and then press the control knob.

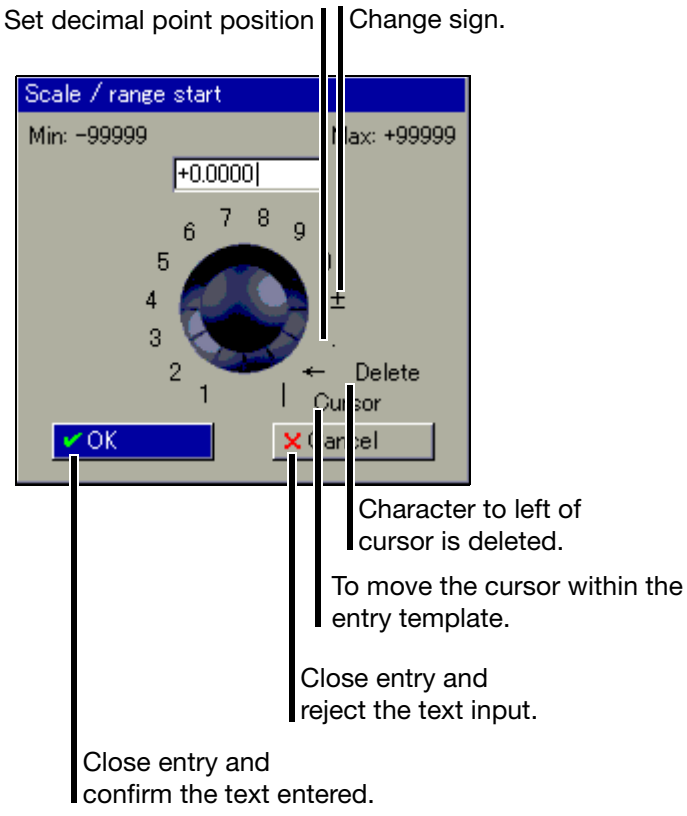
When a number is entered, it is inserted at the right of the cursor. When deleting, the digit to the left of the cursor is deleted.

Character deletion

✱ Position the cursor.

✱ Select “Delete” and press the control knob.

The character to the left of the cursor will be deleted.



Numerics

A

B

C

D

E

G

H

I

K

L

M

N

O

P

R

S

T

U

V

W

Z

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