EAGLEHAWK NX Controller

Onboard - HMI User Guide

EN2Z-1053GE51 R0719

CONTENTS

APPLICABLE LITERATURE

The following is a list of documents that contains information related to the EAGLEHAWK NX Controller.

Form No.	Title
EN0Z-1052GE51	EAGLEHAWK NX HMI Driver User Guide
EN0Z-1039GE51	EAGLEHAWK NX Product Data
MU1Z-1039GE51	EAGLEHAWK NX Mounting Instructions
EN1Z-1039GE51	EAGLEHAWK NX Installation and Commissioning Instructions
EN2Z-1043GE51	EAGLEHAWK NX Panelbus Driver User Guide
EN2Z-1044GE51	EAGLEHAWK NX Onboard IO Driver Driver User Guide
EN2Z-1041GE51	EAGLEHAWK NX Third Party Licenses
EN2Z-1042GE51	EAGLEHAWK NX PICS
EN0Z-1040GE51	General Security Best Practice

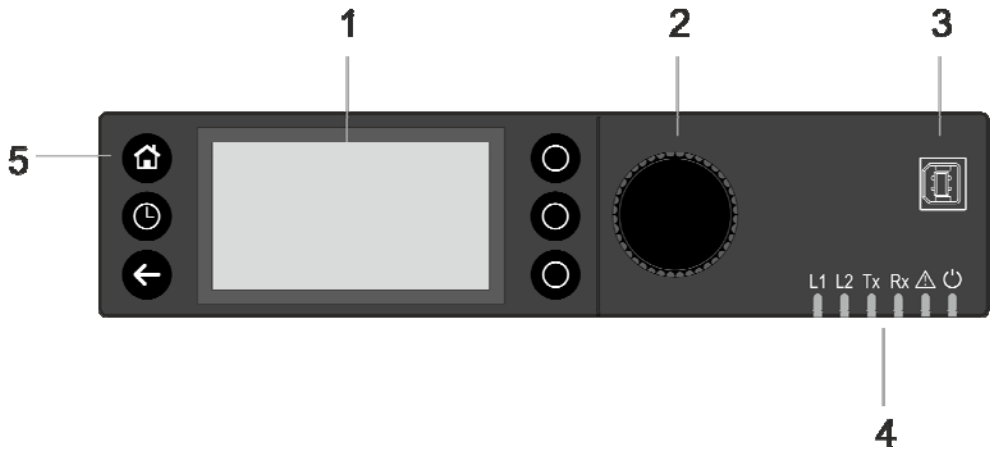
USER INTERFACE DESCRIPTION

The EAGLEHAWK NX controller provides two options of user interfaces:

- An integrated (onboard) user interface (CLNXEHxxxD100A models)
- An external user interface (CLNXEHSERIESxxD)

Both user interface options incorporate the following components:

- LCD Display (1)
- Rotate&Push Button (2)
- USB 2.0 Device Interface (3)
  onboard HMI only, not available on the external HMI
- LEDs (4)
  onboard HMI only, not available on the external HMI
- Operating keys (5)



LCD Display (1)

The LCD display is the graphic interface presenting menu items of functions, operator entries and system information. The LCD display can show max. 5 lines of alphanumeric text with max. 20 characters per line.

The backlight of the LCD is switched on, once an operating key or the rotate&push button is pressed. The backlight is switched off if any of the operating keys or the button is not used for 2 minutes. The entry (HOME) screen shows menus which are accessible by using the Rotate&Push button or by pressing a particular operating key as described in the “(5) Operating keys” section, p. 11.

NOTE: The controller screens shown in this user guide are examples and may differ from the screens displayed on your EAGLEHAWK NX controller.

***HOME* Screen**

In the *HOME* screen, the following symbols are displayed providing access to subjacent menus:

	**Fast Access Lists** Displays all fast access lists that allow quick access to pre-definable groups of datapoints, parameters and schedules
	**Alarms** Displays alarms Flashing number indicates new alarms
	**General menu** Allows access to various sub menus (e.g. station point list, settings and general information)
	**Login / User Options** Context sensitive display for user login / logout Depending on the log status of the user, the first icon (user logged out) or the second icon (user logged in) is displayed. When logged in, the following functions are available: Logout, change PIN, setting auto logout time

Calling up Menus

When highlighting a symbol by turning the Rotate&Push button, the symbol appears larger and the menu name is displayed in the middle of the bottom section. Pressing the Rotate&Push button displays the subjacent menu.

Menu and Sub menus

Menus can include various sub menus:

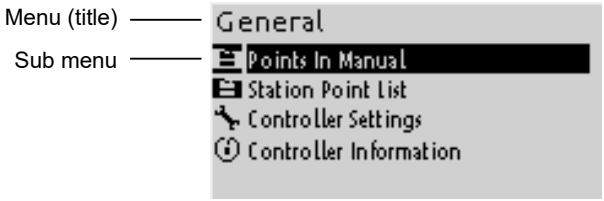


Fig. 1. Menu and sub menus

List Items

A sub menu displays selectable and non-selectable list items such as datapoints, calendar entries, schedules, etc. Depending on the list item, values are displayed and/or options that can be edited (see "Options and Values" below). Station Point List items can show specific status indicators that visually indicate the current status of the datapoint (see "Status Indicators" section below). At certain spots, command symbols with soft keys are provided for further actions such as filtering, editing, copying etc. (see "Command Symbols" section below).

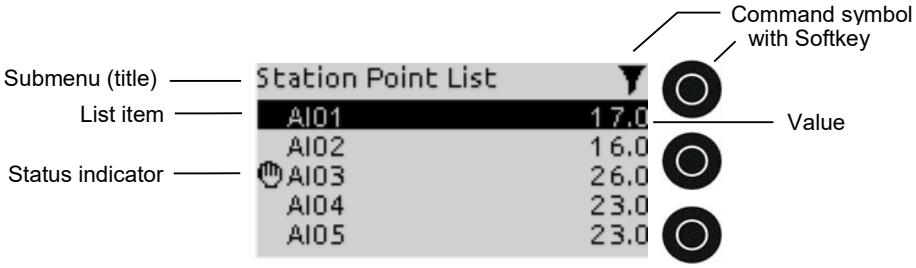


Fig. 2. List items, Status Indicators, Command Symbols with soft keys

NOTE: If a string of various length with the asterisk "*" should appear, this means that currently no value is available.

Options and Values

A list item such as a datapoint can show a value which can be edited and/or options such as the Manual mode which can be enabled/disabled.

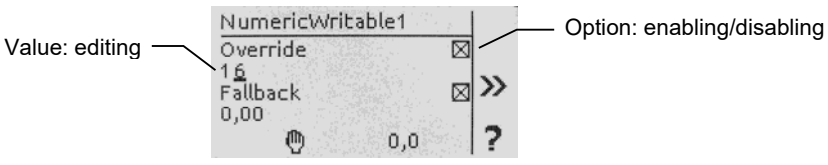


Fig. 3. Option and value of datapoint

Status Indicators

Depending on their current status, datapoints can show one of the following visual status indicators:

	Datapoint is in " Overridden status" (manual mode)
	Datapoint is in "Out of Service status"
	Datapoint is in "Alarm status"
	Datapoint is in alarm status "fault"
	Datapoint is in alarm status "normal" and alarm is not acknowledged
	Datapoint is in alarm status "off-normal" and alarm is not acknowledged
	Datapoint is in alarm and alarm is acknowledged

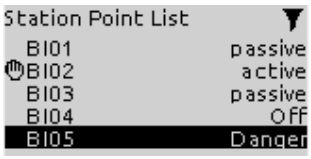
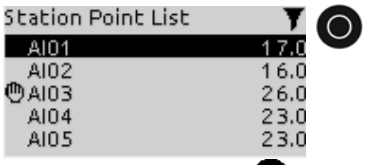


Fig. 4. Status indicator (Manu) of binary datapoint

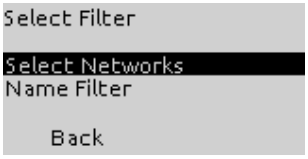
Command Symbols and Soft keys

At certain spots in the operating sequence, special command symbols are available. The corresponding commands are executed by pressing the corresponding operating key (soft key) to the immediate right on the housing.

Example: Displaying filter function in the Station Point List.



Pressing the topmost softkey adjacent to the filter command symbol opens the *Select Filter* menu.



The following command symbols are available:

Symbol	Function
	Add Item (datapoint, time program, etc.) can be added to a list, e.g., a datapoint can be put to a list of trended datapoints
	Copy Item (datapoint, time program, etc.) can be copied
	Delete Item (datapoint, time program, etc.) can be deleted
	Delete Deletes a character
	Toggle Toggles between headline and character library
A··a ·3·#	**Scroll** Browses in the character library line by line
	Scroll forward Scrolls forward through a calendar

Symbol	Function
	Scroll backward Scrolls backward through a calendar
	Today Selects the current date in a calendar
	Select Filter Selects a filter for a list
	Settings Allows setting general schedule properties such as default value and time period, etc.
	Special Events Displays the special events of a schedule
?	**Help** Displays online information on particular screens

Rotate&Push Button (2) (see "User Interface Description" section, p.7)

The **Rotate&Push** button works as follows:

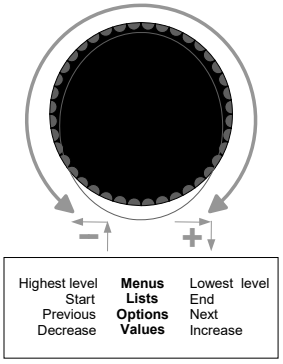
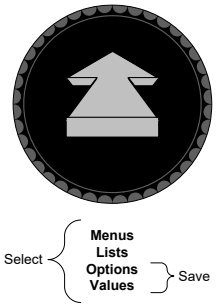
Turning the button clockwise or counterclockwise:	**Navigate - Highlight - Adjust**
• **navigates** through menus and lists • **highlights** items (menu, list, option, value) • **adjusts** options (ON, OFF, etc.) and values (temperature in °C, etc.)	
Pushing the button:	**Select - Save**
• **selects** items (menu, list, option, value) • **saves** options and values	

Table 1. Rotate&Push Button Functionality

USB 2.0 Device Interface (3) Provides connection to CentraLine PC.

LEDs (4) 6 LEDs indicate operational statuses of the controller.

The following section gives an overview over the LEDs with the relevant operational statuses of the controller.

⏻ **Power LED (green)**

	Power LED Behavior	Meaning
1	ON	Normal operation
2	OFF	Power supply not OK

⚠ **Status / Alarm LED (red)**

	LED Behavior	Meaning
1	LED remains OFF after power-up	Normal operation
2	LED is lit continuously after power-up	The controller has encountered a hardware problem or The application has a fault or The controller has been powered up without an application or The operator has manually stopped the application, e.g., using XW-Online. In this case, the LED will light up 20 minutes after power-up without application
3	LED flashes continuously with following pattern: 4 x ON/OFF followed by pause	Sensor failure of analog input
5	LED flashes continuously with following pattern: 7 x ON/OFF followed by pause	Communications failure on Panel Bus

Rx, Tx **RS485-1, Send (Tx) / Receive (Rx) LED (yellow)**

	RS485-1 LED Behavior	Meaning
1	Both LEDs are flickering	Normal operation, RS485-1 communication is functioning properly
2	Both LEDs are OFF	No Rs485-1 communication
3	Rx Led is flashing and Tx is OFF	RS485-1 communication is switched off but controller is receiving data from other controllers
4	Tx Led is flashing and Rx is OFF	Controller is trying to establish a RS 485-1 connection but there is no answer

L1, L2 **Application LEDs (yellow)**

	LED Behavior	Meaning
1	LED is lit continuously	Platform is starting
	LED is flashing	Platform is connected
2	LED is lit continuously	Station is starting
	LED is flashing	Station is running

Operating Keys (5) The operating keys provide the following functions:

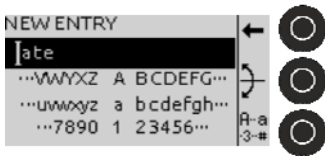
Home key
calls up the default *HOME* screen with Fast Access Lists preselected, or an initial fast access list. The *HOME* screen is displayed by default if no operating key has been pressed for 1 minute (default auto logout delay).

Time Program key
calls up the time program function.

Back key

- Returns to the previous screen.
  If changes in fields are already saved, pressing the **Back** key confirms the saved settings and returns to the previous screen.
- In longer lists where normally multiple changes will be done, pressing the **Back** key discards any changes. Pressing the **Back** key twice, returns to the previous screen.

Soft keys
calls up the command symbol function that is displayed left adjacent in the LCD display



Example:

	Pressing
←	
Deletes a character	
Toggles between headline and character library	
A·a ·3·#	
Browses in the character library line by line	

See command symbols example in the "Command Symbols" description above.

BASIC OPERATION PROCEDURES

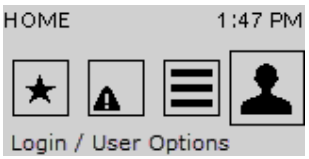
NOTE: The controller screens shown in this user guide are examples and may differ in details from the screens displayed on your EAGLEHAWK NX controller.

Login / Entering PIN

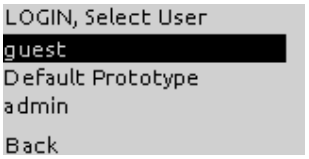
In order to operate the controller, you must always login via pin. The pin is issued in the CentraLine NX workbench and has at least 5 numerical characters (see EAGLEHAWK NX HMI Driver user guide, form no. EN2Z-1052GE51).

Procedure

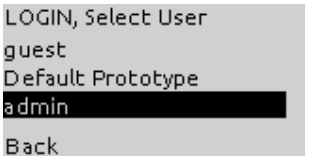
1. On any highlighted menu icon in the *HOME* screen, push the rotate&push button.



   The **LOGIN, Select User** menu displays.



2. Turn the rotate&push button to navigate to and highlight the user.



3. Push the rotate&push button.

   The *LOGIN, Enter PIN* screen displays.

4. Push the rotate&push button. The **PIN** field is enabled and indicated by five asterisks *****. At the first digit, the number 0 is flashing by default.

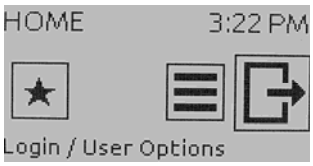
5. Adjust the first number of the pin by turning the rotate&push button.
6. Push the rotate&push button to save the first number. The second digit is flashing, etc.

7. Adjust and save the second and all further numbers of the pin in the same way as the first number.
   The *HOME* screen displays. All functions are enabled and can be executed.

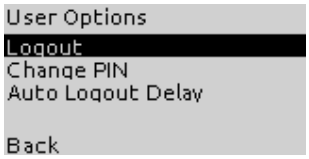
Logout

Procedure

1. To explicitly logout, do the following:
   In the *HOME* screen, turn the rotate&push button to navigate to and highlight **Logout, Select User** menu icon.



2. Push the rotate&push button. The **User Options** menu displays. **Logout** is highlighted.

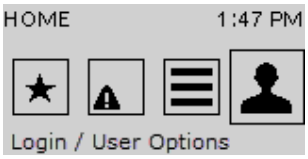


3. Push the rotate&push button. The *HOME* screen redisplays.

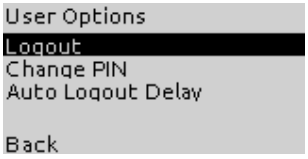
Changing PIN

Procedure

1. If not already logged in, login as described in the “Login / Entering PIN“ section, p. 13 .
2. In the *HOME* screen, turn the rotate&push button to navigate to and highlight **Logout, User Options** menu icon.



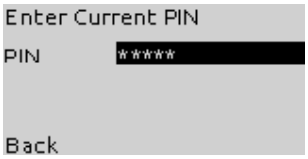
3. Push the rotate&push button. The **User Options** menu displays. **Logout** is highlighted.



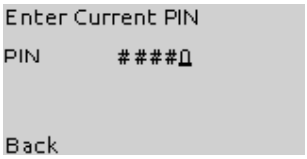
4. Turn the rotate&push button to navigate to and highlight **Change PIN**.

5. Push the rotate&push button.

   The *Enter Current PIN* screen displays.



6. Push the rotate&push button. The **PIN** field is enabled. Enter the current PIN as described in the “Login / Entering PIN” section, p. 13

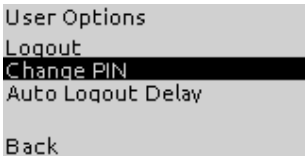


   The *Enter New PIN* screen displays.

7. Push the rotate&push button. The **New PIN** field is enabled.

8. Enter the new PIN in the **New PIN** and in the **Confirm PIN** fields in the same way as described in the previous steps.

The *User Options* menu redisplays

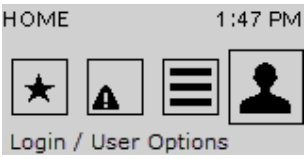


Setting Auto Logout Delay

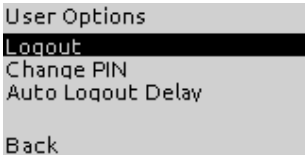
The auto logout delay defines the default time after which the *HOME* screen is displayed automatically if no input has been made (default is 10 minutes).

Procedure

1. In the *HOME* screen, turn the rotate&push button to navigate to and highlight the **User Options** icon.

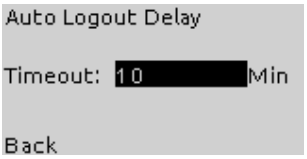


2. Push the rotate&push button. The **User Options** menu displays. **Logout** is highlighted.

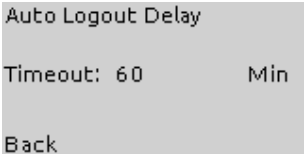


3. Turn the rotate&push button to navigate to and highlight **Auto Logout Delay**.

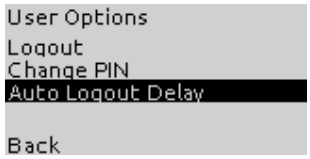
4. Push the rotate&push button. The *Auto Logout Delay* screen displays.



5. Change the value as described in the "Adjusting and Saving Values and Options" section, p 19.



The *User Options* menu redisplays.



Viewing and Editing Information

Basic procedures are:

- Displaying HOME Menu and/or Fast Access List
- Calling up Menus and Sub Menus
- Navigating through Menus, Sub menus and Lists and Highlighting Items
- Selecting Items
- Adjusting and Saving Values and Options
- Enable/Disabling Options
- Working with Command Symbols and Soft keys
- Saving Settings
- Canceling Changed Settings

These are described in the following sections of the same name.

Displaying Home Screen

The initial screen of the EAGLEHAWK NX controller can be explicitly displayed during operation on the HMI by pressing the **Home** key .

The *HOME* screen is displayed by default if no operating key has been pressed for the time in minutes defined as auto logout delay (default = 1 minute).

Calling up Menus and Sub Menus

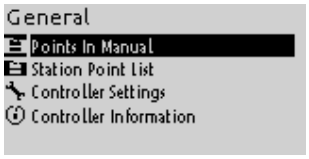
Example: Calling up the **General** menu.

Procedure

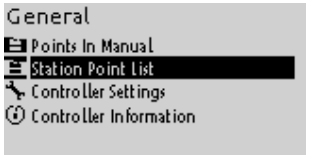
1. In the *HOME* screen, turn the rotate&push button to navigate to and highlight the **General** menu icon .

   The **General** menu symbol appears larger and the menu name is displayed in the middle of the bottom section.

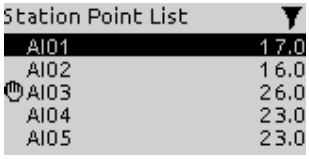
2. Then push the rotate&push button. The GENERAL menu is displayed.



3. Use the rotate&push button to navigate to and highlight the sub menu.



4. Push the rotate&push button. The sub menu is displayed.



Navigating through Menus, Sub Menus, Lists and Highlighting Items

When navigating through menus, and lists by turning the rotate&push button, the list items are automatically highlighted while turning the rotate&push button clockwise or counterclockwise.

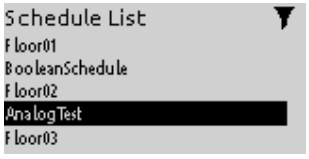


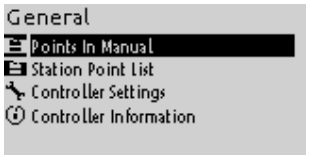
Fig. 5. Navigating / Highlighting Items in the Schedule menu

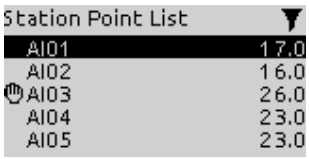
Selecting Items

Selecting items is done by pushing the rotate&push button ● on a highlighted item. Dependig on the highlighted item, the resulting action can be different.

Selecting Menu, Sub Menu and List Items

Pushing the rotate&push button on highlighted menus and list items, typically branches off into further information such as sub menus, e.g., Station Point List of the **General** menu.

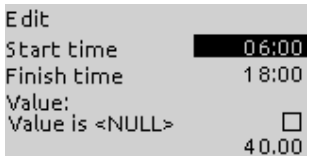


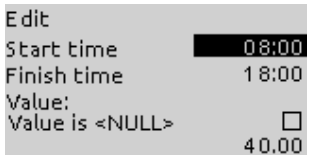


Selecting Values and Options

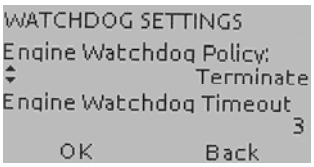
Pushing the rotate&push button on a highlighted value or option is the first step for adjusting values and options. For details, please refer to the subsequent “Adjusting and Saving Values and Options” section, p. 19.

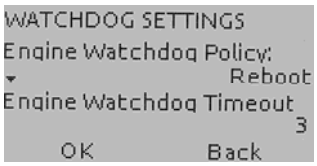
Value Example: Selecting and adjusting the time of a switch point





Options Example: Selecting and adjusting the watchdog.





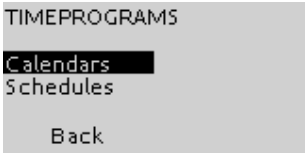
Adjusting and Saving Values and Options

Values are adjustable values such as the temperature of an analog point, the state of a binary point (0-1, ON-OFF), or the time of a switch point in a schedule.

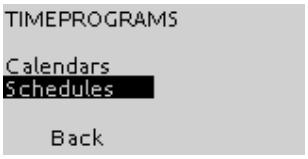
Adjusting and Saving Values

Example: Adjusting and saving the time and the value of an analog switch point

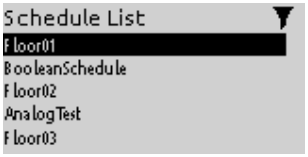
1. On the controller housing, press the time program operating key  .
   The **TIME PROGRAMS** menu displays.



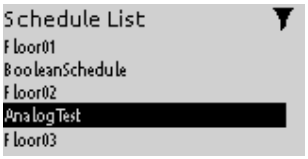
2. Turn the rotate&push button to navigate to and highlight **Schedules**.



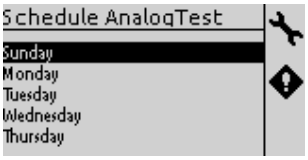
3. Push the rotate&push button.
   The **Schedule List** menu displays.



4. Turn the rotate&push button to navigate to and highlight the schedule.

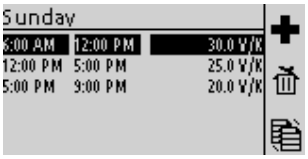


5. Push the rotate&push button. The days of the schedule are displayed.

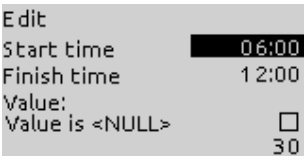


6. Turn the rotate&push button to navigate to and highlight the day.
7. Then push the rotate&push button. The switch points with time and value are displayed. Here you can add new switch points and copy switch points using command symbols and soft keys.

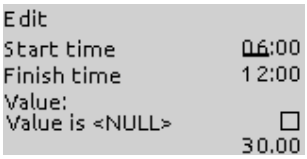
   To add a new switch point, please refer to the "Adding Items to a List" section, p. 27. To copy a switch point, please refer to the "Copying Items" section, p. 28.



8. Turn the rotate&push button to navigate to and highlight the line you want to edit.
9. Then push the rotate&push button.
   The *Edit* screen displays. The time is highlighted.



10. Push the rotate&push button.
    The hours field is flashing.

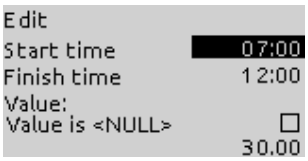


11. Turn the rotate&push button to change the hours. Then push the rotate&push button.

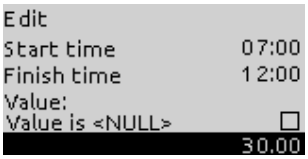
    The minutes field is flashing.

12. Set the minutes in the same way as the hours.

    After finally pushing the rotate&push button, the time is highlighted and set.

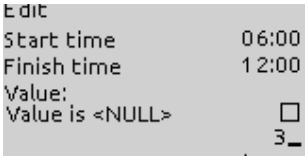


13. Turn the rotate&push button to navigate to and highlight the value.

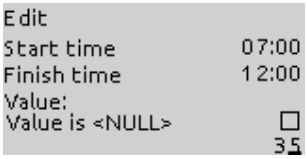


14. Then push the rotate&push button.

    The Ones are flashing.



15. Turn the rotate&push button to change (increase or decrease) the value. Higher digits of the value are automatically increased or decreased.
16. Push the rotate&push button. The new value is displayed and the cursor jumps to an OK field which displays.



    At this point you can pre-save the value, or you can switch to digits before or after the decimal place which are not displayed initially by the original value.

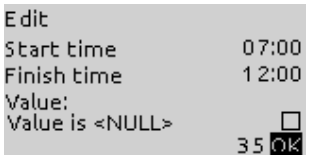
    To pre-save the value, please refer to step 17.

    To display and adjust lower digits (tenths, hundreds. etc.) or higher digits (any higher than the original), please refer to step 18.

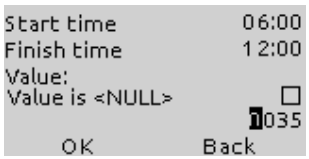
17. Push the rotate&push button while the OK field is highlighted.

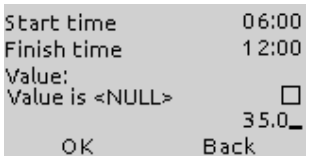
    The changed value is highlighted.

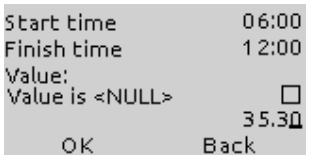
    To save the value, please refer to step 21.



18. To adjust lower or higher digits, do not pre-save the value by pushing the rotate&push button, instead turn the rotate&push button clockwise or counterclockwise to display the higher or lower digits. Depending on the turn direction, the first, second and proximate digits after or before the decimal point will be displayed and can be adjusted (see following examples).

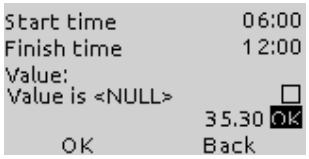




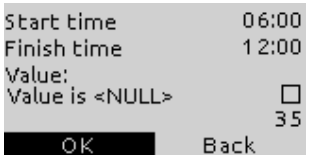


19. Change the lower or higher digits in the same way by turning the rotate&push button, and then by pushing the rotate&push button.
20. Push the rotate&push button to pre-save the value.

    The changed value is highlighted.

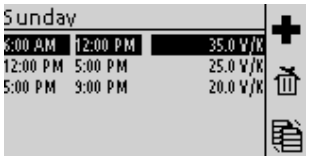


21. To finally save a value, turn the rotate&push button to navigate to and highlight the **OK** command at the bottom of the screen.



22. Push the rotate&push button.

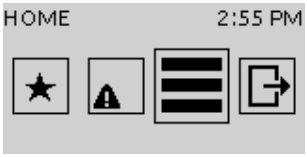
    The day with the changed values is redisplayed.



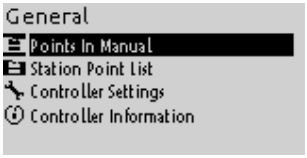
Adjusting and Saving Options

Example: Adjusting and saving the watchdog setting.

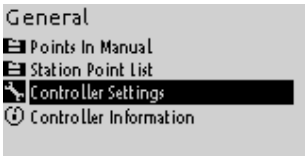
1. In the *HOME* screen, turn the rotate&push button to navigate to and highlight the **General** menu icon .



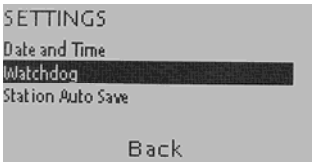
2. Then push the rotate&push button. The **General** menu is displayed.



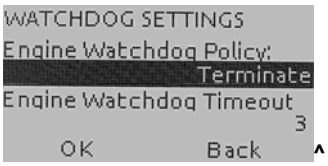
3. Turn the rotate&push button to navigate to and highlight **Controller Settings**.



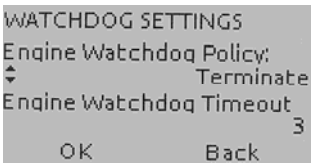
4. Turn the rotate&push button to navigate to and highlight **Watchdog**.



5. Push the rotate&push button.
   The *WATCHDOG SETTINGS* screen is displayed. The current setting is selected.

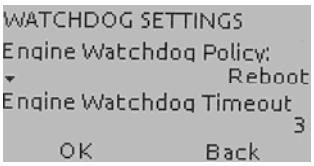


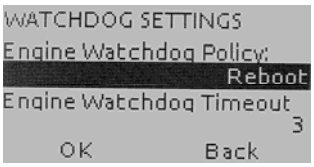
6. To select another option, push the rotate&push button.



   On the left, upward-downward selection arrows become visible.

7. Turn the rotate&push button to scroll through the list, and then push the rotate&push button to select the option.





8. Turn the rotate&push button to navigate and highlight **OK**, and then push the rotate&push button.

9. Press the Back operating key on the controller housing twice to leave the **SETTINGS** menu and display the HOME screen.

Enable/Disabling Options

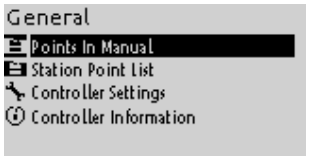
Options can be enabled or disabled by toggling the checkbox symbol:

☒	**Enable/Disable** Option is enabled (checked) or disabled (unchecked)

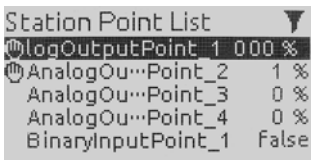
Example Enable the **Override** option for overriding a value of a datapoint.

1. In the *HOME* screen, turn the rotate&push button to navigate to and highlight **General** menu icon .

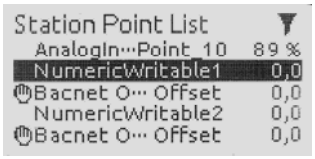
2. Then push the rotate&push button. The **General** menu is displayed.



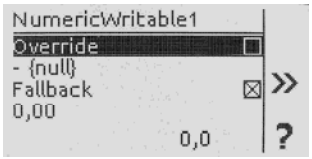
3. Turn the rotate&push button to navigate to and highlight **Station Point List**.
4. Push the rotate&push button.
   The *Station Point List* screen displays showing the datapoints.



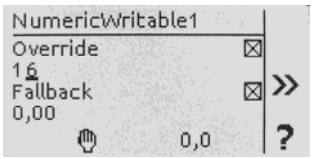
5. Turn the rotate&push button to navigate to and highlight the desired datapoint.



6. Push the rotate&push button. The datapoint details display.



7. Turn the rotate&push button and select the **Override** line with the checkbox symbol.
8. Push the rotate&push button. The **Override** checkbox is checked.

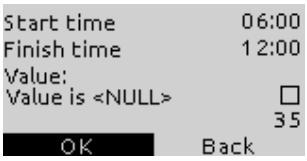


9. Turn the rotate&push button to navigate to the value and set the value as described in the “Adjusting and Saving Values and Options“ section, p. 19.

Saving Settings

Current settings displayed in the screen will be saved by using the **OK** command.

- Turn the rotate&push button to navigate to and highlight the **OK** command at the bottom of the screen.



- Push the rotate&push button.

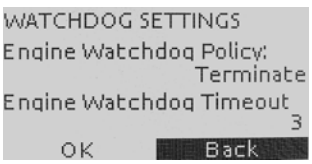
NOTE: In some screens, initially the **OK** command is not visible. Scroll through the screen until the command will be accessible at the bottom.

Canceling Changed Settings

To discard currently changed settings displayed in a screen, do any of the following:

Back command

- Turn the rotate&push button to navigate to and highlight the Back command at the bottom of the screen.



- Push the rotate&push button.
  All inputs already done will be discarded.

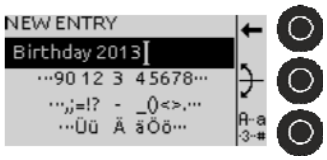
Back operating key

At any point during operation when settings are not confirmed by using the **OK** command, pressing the **Back** operating key discards any changes.

Working with Command Symbols and Soft keys

At certain spots in the operating sequence, special command symbols are available. The corresponding commands are executed by pressing the corresponding operating key (soft key) to the immediate right on the housing.

Example Editing an Entry



	Pressing
←	○
Deletes a character	
⇆	○
Toggles between headline and character library	
A·a ·3·#	○
Browses in the character library line by line	

The following command symbols are available:

Symbol	**Function**
✚	**Add** Item (datapoint, time program, etc.) can be added to a list, e.g., a datapoint can be put to a list of trended datapoints
	Copy Item (datapoint, time program, etc.) can be copied
	Delete Item (datapoint, time program, etc.) can be deleted
←	**Delete** Deletes a character
⇆	**Toggle** Toggles between headline and character library
A·a ·3·#	**Scroll** Browses in the character library line by line
	Scroll forward Scrolls forward through a calendar on monthly basis
	Scroll backward Scrolls backward through a calendar on monthly basis
18	**Today** Selects the current date in a calendar
▼	**Select Filter** Selects a filter for a list

Symbol	Function
	Settings Allows setting general schedule properties such as default value and time period, etc.
	Special Events Displays the special events of a schedule
?	**Help** Displays online information on particular screens

In the followings sections, the basic functions and procedures of the symbols are described.

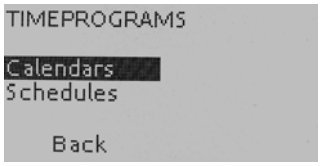
Adding Items to a List

At appropriate spots, lists can be extended by adding new items to the lists. Lists which can be extended, are indicated by the **Add** command symbol:

✚	**Add** Item can be added to a list

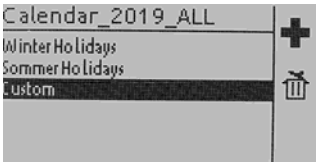
Example Adding a calendar entry to a calendar.

1. On the controller housing, press the time program operating key . The **TIME PROGRAMS** menu displays.



2. Turn the rotate&push button to navigate to and highlight **Calendars**.
3. Push the rotate&push button to. The **Calendar List** menu is displayed.

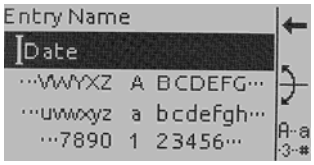
4. Turn the rotate&push button to navigate to and highlight the calendar.
5. Push the rotate&push button. The **Calendar** menu is displayed showing all calendar entries.



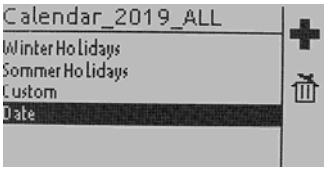
6. To add a new entry, press the topmost soft key adjacent to the **Add** command symbol ✚.

The *New Entry* screen displays. Here you can select the entry type from date, date range, week and day, and custom.

7. Turn the rotate&push button to navigate to and highlight, e.g. **Date**. The following screen displays.



Here you can edit the entry title line by using the command symbols via adjacent soft keys (see "Editing Text of New Entry" section, p. 30). After finishing the creation/edition of the title line, the new calendar is added to the **Calendar** menu.



8. To set the properties for the calendar entry, push the rotate&push button on the highlighted entry, and enter the properties as described in “Adjusting and Saving Values and Options” section, p. 19.

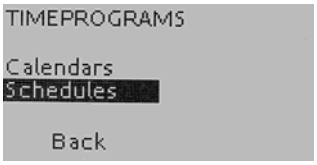
Copying Items

At appropriate spots, lists can be extended by copying existing items within the list.

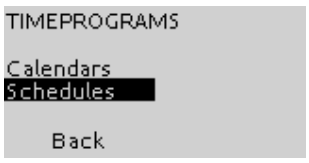
	**Copy** Item can be copied

Example Copying all switch points from one day to another day.

1. On the controller housing, press the time program operating key  .
The **TIME PROGRAMS** menu displays.

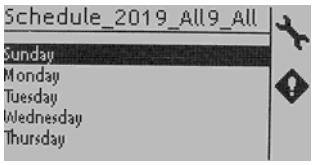


2. Turn the rotate&push button to navigate to and highlight **Schedules**.

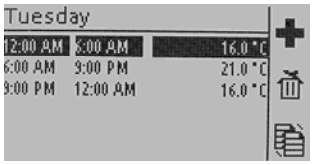


3. Push the rotate&push button.
The **Schedule List** menu displays.

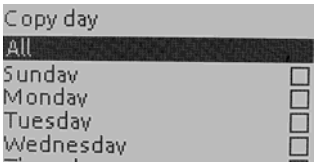
4. Turn the rotate&push button to navigate to and highlight the schedule.
5. Push the rotate&push button. The days of the schedule are displayed.



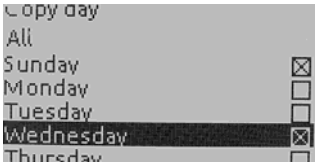
6. Turn the rotate&push button to navigate to and highlight the day.
7. Then push the rotate&push button. The switch points with time and value are displayed.



8. Press the soft key adjacent to the **Copy** command symbol  .



The *Copy day* screen displays. The **All** option is highlighted.



9. If you want to select all days, push the rotate&push button.
10. If you want to select particular days, turn the rotate&push button to navigate to and highlight the day.
11. Push the rotate&push button.
    The selected day is enabled.
12. Enable further days if desired.
13. Turn the rotate&push button to navigate to and highlight the **OK** command at the bottom of the screen.
14. Push the rotate&push button.
    In this example, switch points of Tuesday are copied to all days.

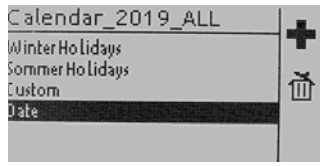
Deleting Items

At appropriate spots, items can be deleted. Items which can be deleted, are indicated by the **Delete** command symbol:

	Delete Item can be deleted

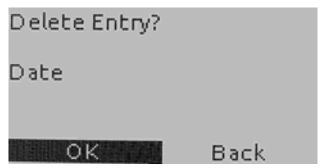
Example Delete a calendar entry.

1. In the **Calendar** menu, turn the rotate&push button to navigate to and highlight the entry.

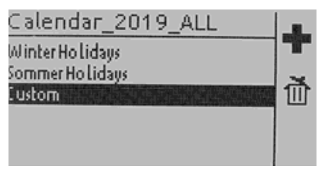


2. To delete the entry, press the soft key adjacent to the Delete command symbol .

   The *Delete Entry* screen displays. **OK** is pre-selected.



3. Push the rotate&push button.
   The entry is deleted and removed from the **Calendar** menu.



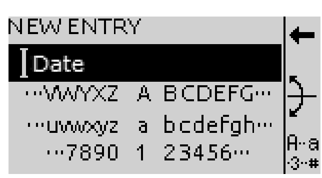
Editing Text of New Entry

When creating a new entry, the text can be edited.

Example Edit name of a calendar entry.

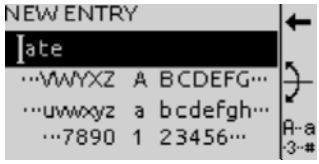
←	**Delete** Deletes a character
	Toggle Toggles between headline and character library
A··a ·3··#	**Scroll** Browses in the character library line by line

1. In the *NEW ENTRY* screen, initially the entry title is highlighted.

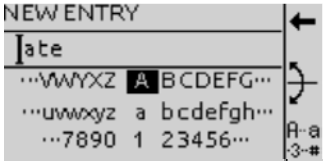


2. Do any of the following:

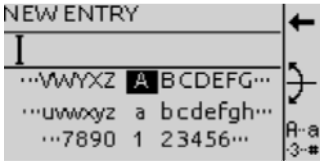
a. In the title line, position the cursor where you want to delete the characters. Deletion occurs from right to left as long as characters are adjacent to the left. If the spot left to the cursor is blank, then the character next to the right will be deleted.
b. Delete the entry title by pressing the soft key adjacent to the **Delete** command symbol ← multiple times.



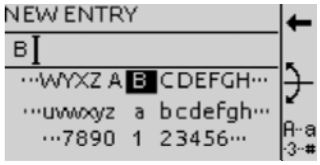
c. Switch to the character library by pressing the soft key adjacent to the **Toggle** command symbol ↻. The cursor jumps into the first line of the character library.



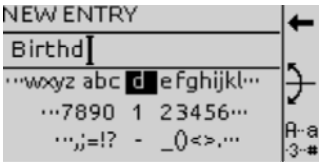
d. Turn the rotate&push button to navigate through the first line of the characters library and highlight the character.
e. Push the rotate&push button.
The character is added to the title line.



f. To scroll through the lines of the character library including capitals, lower case characters, numbers, and special signs, press the soft key adjacent to the **Scroll** command symbol A··a ·3··#. Then select and add the desired character in the same way as described above.



g. If wrong characters have been added, they can be deleted at any time by using the soft key adjacent to the **Delete** command symbol ←.
h. After completing the title line, press the soft key adjacent to the **Toggle** command symbol ↻. The cursor jumps back into the title line.



3. Push the rotate&push button.
The new entry is saved and added to the **Calendar List** menu.

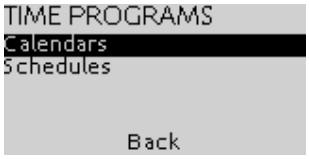
Scrolling through Calendar

When creating a calendar, in the second part, the date(s) for the calendar type (specific date, date range, week and day, custom) can be selected by scrolling through a calendar.

	Scroll forward Scrolls forward through a calendar on monthly basis
	Scroll backward Scrolls backward through a calendar on monthly basis
	Today Selects the current date in a calendar

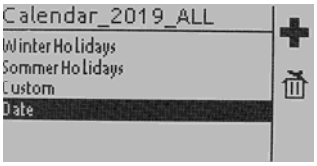
Example Select date for a calendar of type ´Date`.

1. On the controller housing, press the time program operating key . The **TIME PROGRAMS** menu displays.

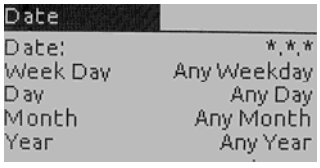


2. Turn the rotate&push button to navigate to and highlight **Calendars**.
3. Push the rotate&push button. The **Calendar List** menu is displayed.

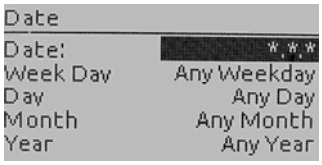
4. Turn the rotate&push button to navigate to and highlight the calendar.
5. Push the rotate&push button. The **Calendar** menu is displayed showing all calendar entries.



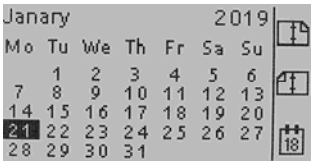
6. Turn the rotate&push button to navigate to and highlight, e.g. **Date**.
7. Push the rotate&push button. The following screen displays.



8. Turn the rotate&push button to navigate to and highlight **Date**. Then, push the rotate&push button



9. The following screen displays. The current date is highlighted.

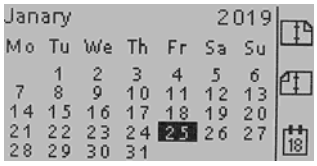


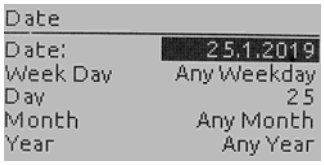
10. Select a date by doing any of the following:
    a. Scroll through the actual month on a daily basis by turning the rotate&push button.
    b. Scroll through the calendar on a monthly basis using the corresponding command symbols with soft keys:

	Scrolls forward and highlights actual date of next month
	Scrolls backward and highlights actual date of previous month
	Selects the current date

    c. In any month displayed, turn the rotate&push button to finally highlight the particular day.

11. Push the rotate&push button to finally select the highlighted day. The date is updated in the previous screen.





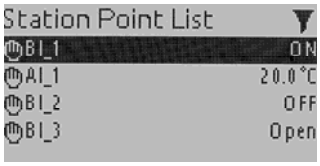
Applying Filter

At appropriate spots, the display of list items can be optimized by applying a filter.

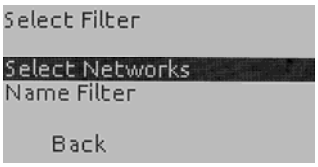
	**Apply Filter** Applies a definable filter for a list

Example Display analog outputs from the datapoints list

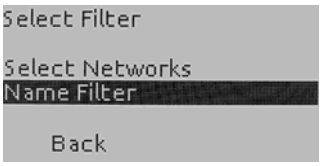
1. In the STATION POINT LIST, press soft key adjacent to the **Filter** command symbol .



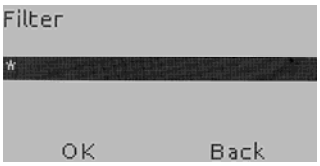
The **Select Filter** menu displays.



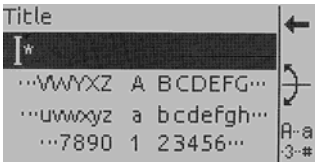
2. Turn the rotate&push button to navigate to and highlight the criteria you want apply as filter, e.g. **Name Filter**.



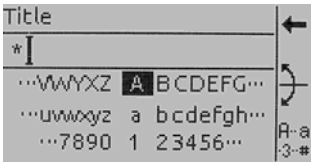
3. Push the rotate&push button.
   The *Filter* screen displays.



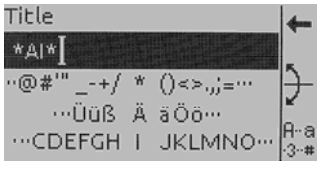
4. Push the rotate&push button**.** The *Title* screen displays

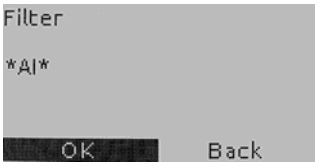


5. Enter a filter string according to the procedure described in the “Editing Text of New Entry“ section, p. 30.

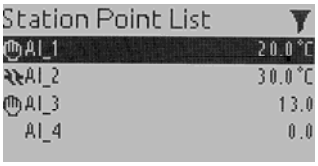


Example: Filter for searching for analog inputs.





The STATION POINT LIST redisplays, and there only analog inputs will be displayed.



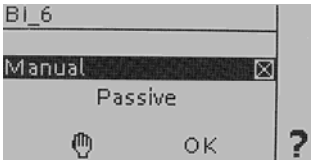
Viewing Help

At appropriate spots, additional help information can be viewed.

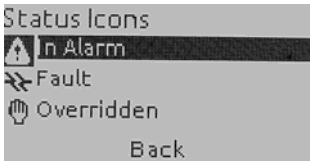
?	**Help** Displays online information on particular screens

Example Viewing status information of datapoint

1. In the datapoint properties view, press the **Help** command symbol ? soft key.



The *Status Icons* screen displays with detailed description of the meaning of the status indicators.



2. To leave the screen, press the Back operating key .

EVERYDAY OPERATIONS

This section details steps for common everyday procedures.

The procedures are grouped by common functions as follows:

- Viewing Fast Access Lists
- Viewing Datapoints in Alarm
- Viewing Alarms
- Viewing Datapoints in Manual Mode
- Setting Datapoints into Manual Mode
- Changing Time Programs
- Changing Datapoint Values

NOTE: The controller screens shown in this user guide are examples and may differ from the screens displayed on your EAGLEHAWK NX controller.

For …	**… refer to the following sections and subsections**	**… on page**
Viewing Fast Access Lists	Fast Access Lists – Viewing Fast Access Lists	42
Viewing Datapoints in Alarm	Alarm List – Viewing Datapoints in Alarm	44
Viewing Alarms	Alarm List – Viewing Alarms	45
Viewing Datapoints in Manual Mode	Datapoints – Viewing Datapoints in Manual Mode	47
Setting Datapoints into Manual Mode	Datapoints – Setting Datapoints into Manual Mode	49
Changing Time Programs	Time Programs – Schedules, Calendars	66, 58
Changing Datapoint Values	Datapoints – Setting Datapoints into Manual Mode	49

Operating Schematics

The following operating schematics (see next page) give an overview of the operation of the EAGLEHAWK NX controller:

- General menu
- Fast Access Lists
- Alarm List
- Login / User Options
- Time Programs

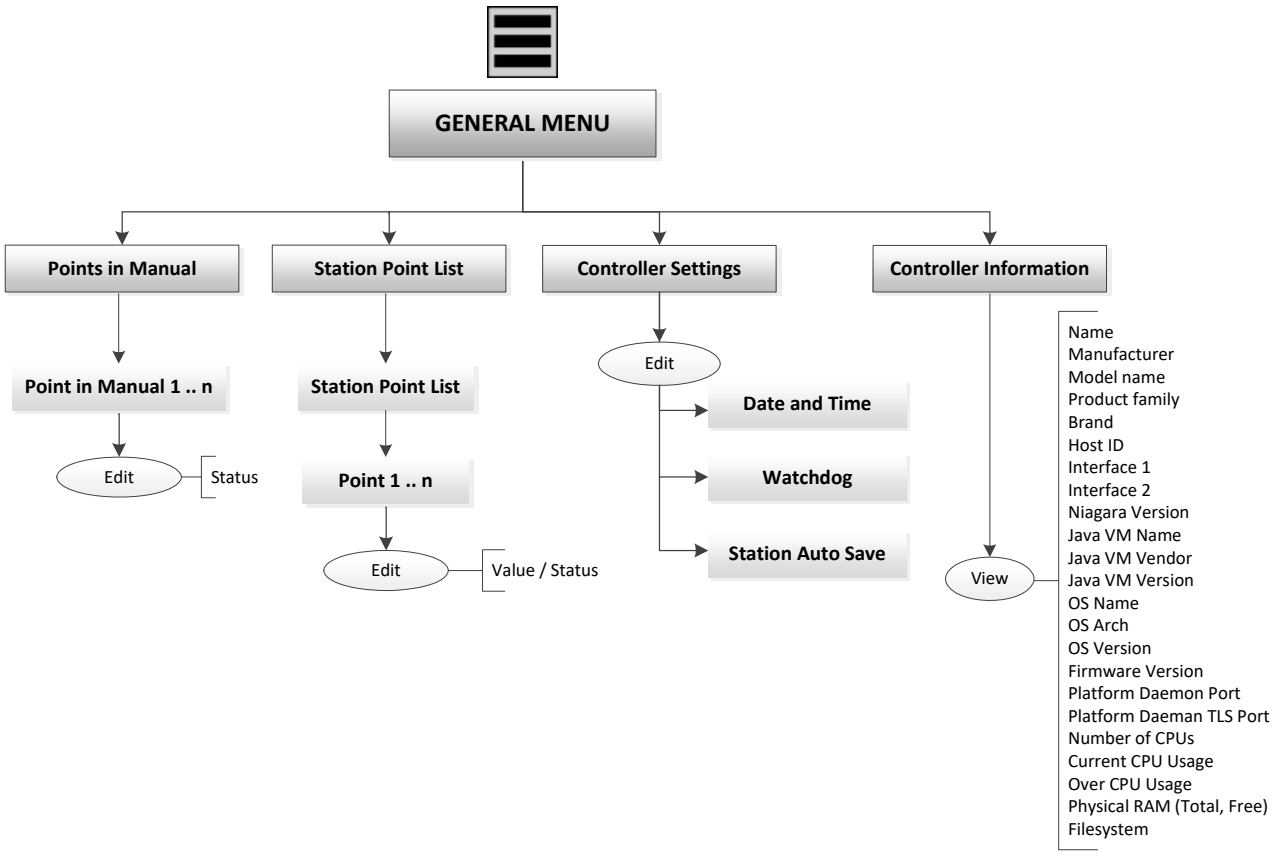


Fig. 6. Operating Schematic: General menu

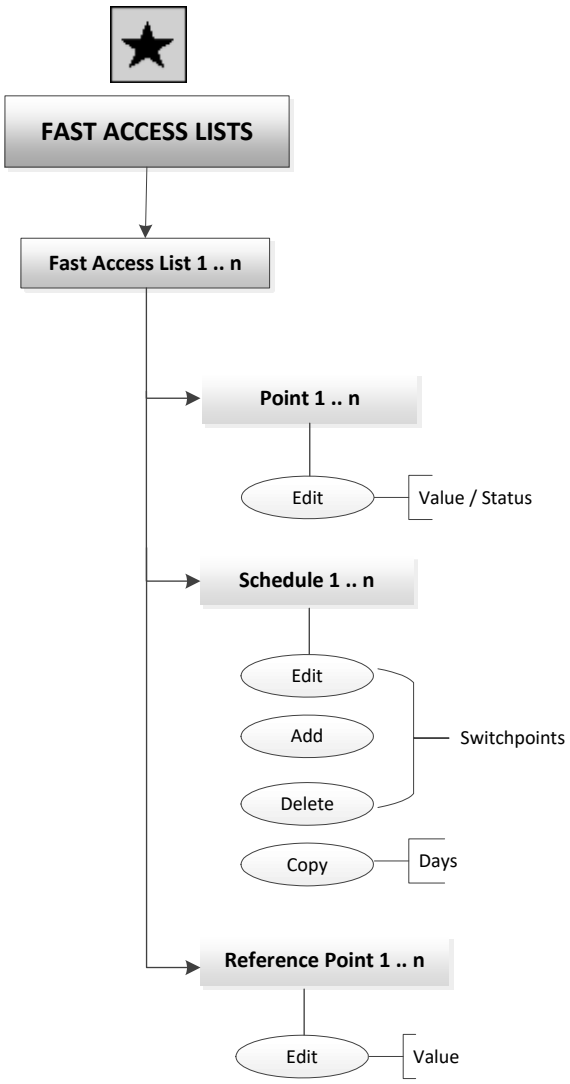


Fig. 7. Operating Schematic: Fast Access Lists

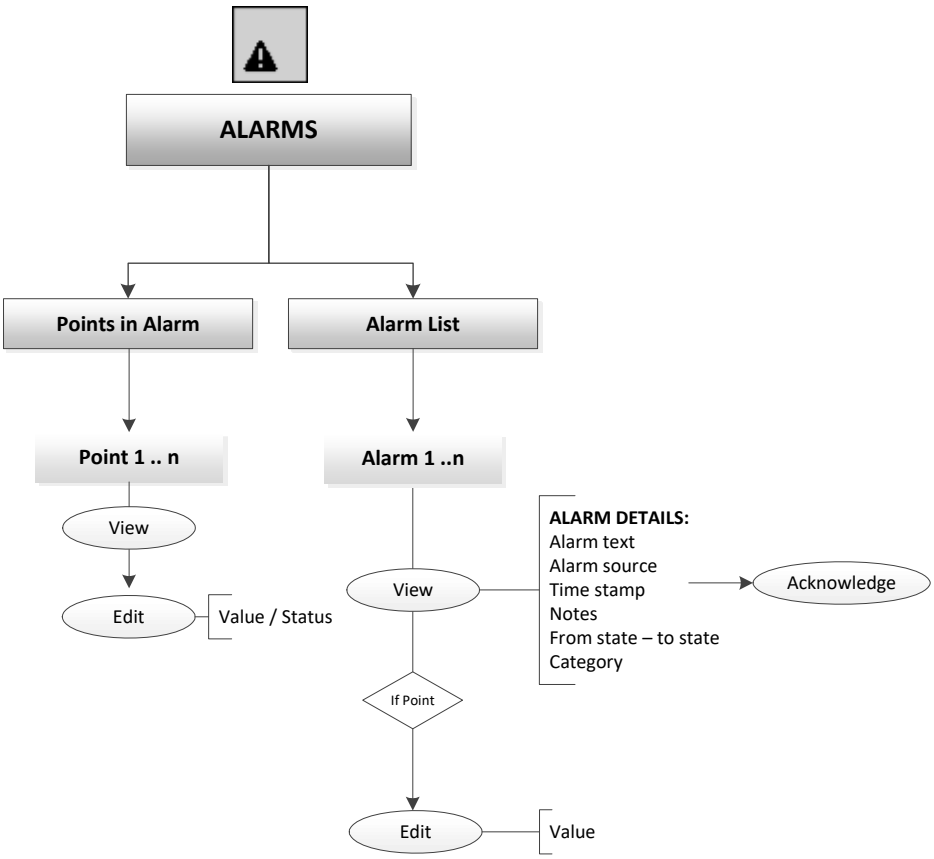


Fig. 8. Operating Schematic: Alarms

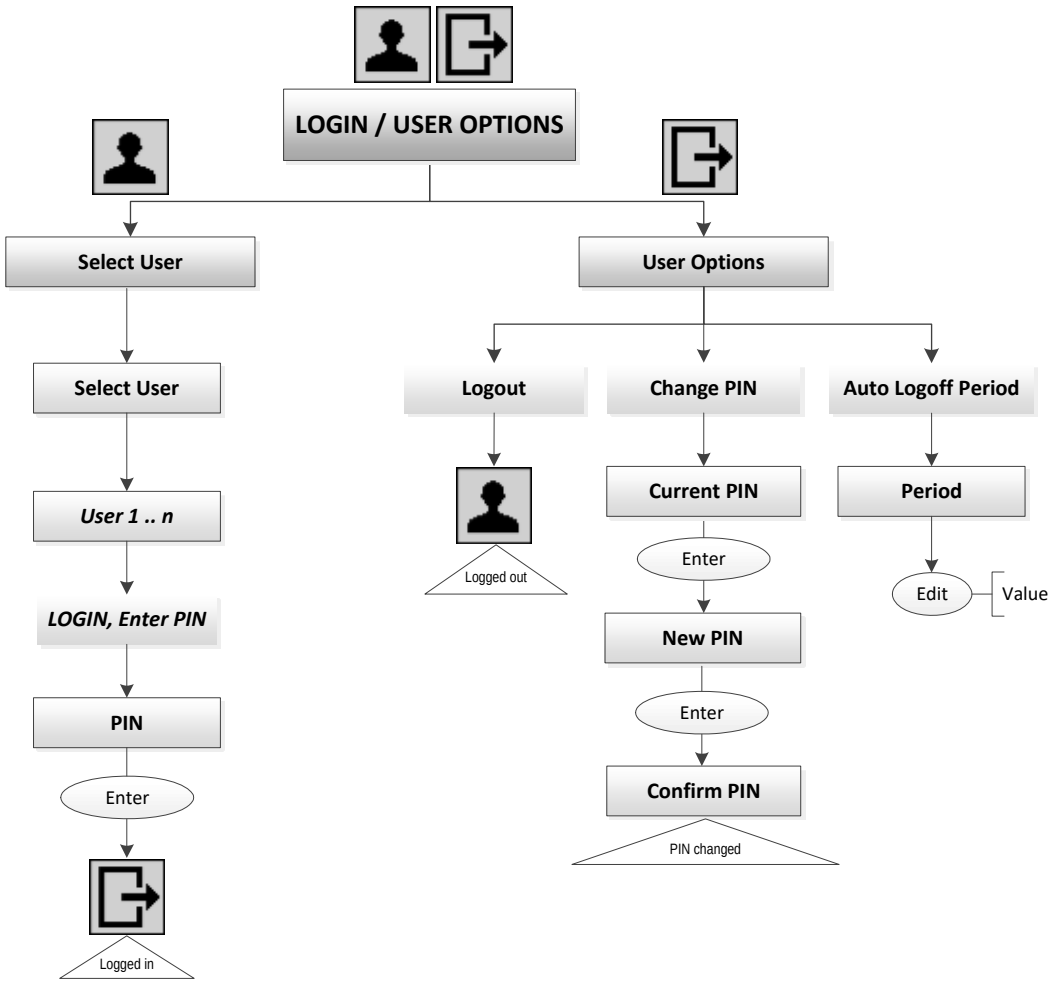


Fig. 9. Operating Schematic: Login / User Options

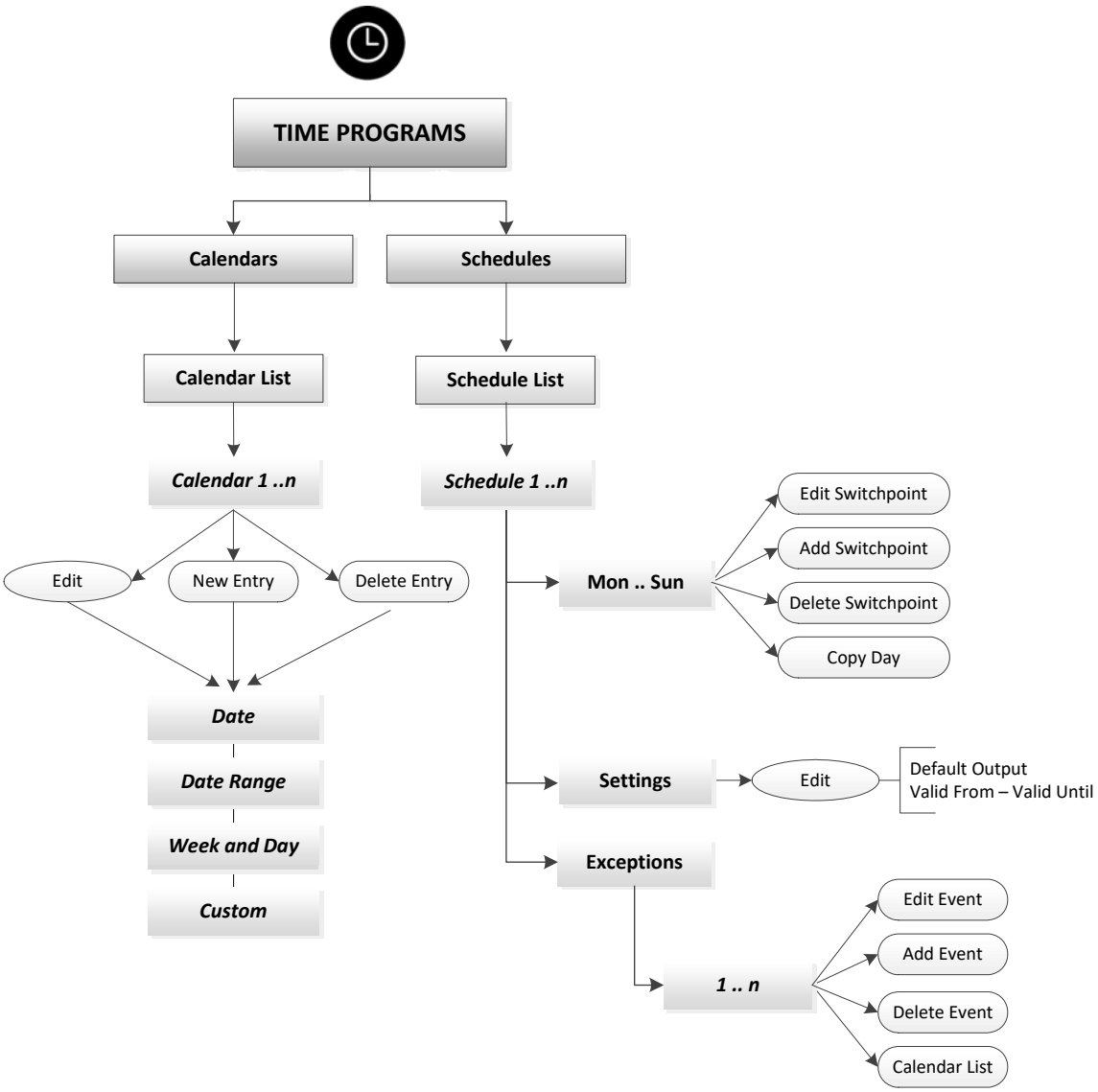


Fig. 10. Operating Schematic: Time Programs

Fast Access Lists

Fast access lists are lists of grouped datapoints and/or schedules and reference points mostly representing a logical part of the application. This allows quick access to a particular part of the application via the corresponding datapoints and/or schedules and reference points.

Viewing Fast Access Lists

Purpose To quickly edit particular datapoints and/or schedules.

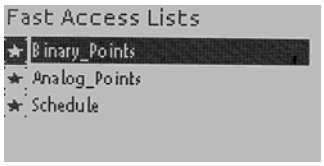
Editing can include:

- auto/manu mode toggling of datapoints
- value changes of datapoints and schedules

Procedure

1. In the *HOME* screen, turn the rotate&push button to navigate to and highlight **Fast Access Lists** ★.

2. Push the rotate&push button.
   The **Fast Access Lists** menu is displayed. All fast access lists are displayed.



3. Turn the rotate&push button to navigate to and highlight the fast access list.
4. Push the rotate&push button.
   The components of the fast access list (datapoints, schedules, reference points) are displayed.

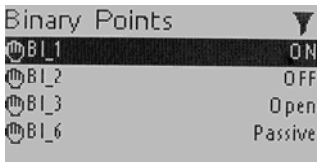


Fig. 11. Fast access list with datapoints

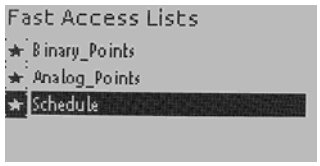


Fig. 12. Fast access list with schedules

5. To edit a datapoint, turn the rotate&push button to navigate to and highlight the component, e.g. datapoint or schedule.

Fig. 13. Editing Datapoint of Fast Access List

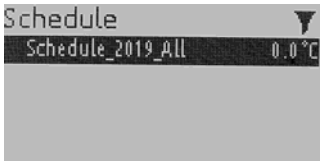


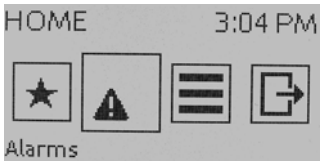
Fig. 14. Editing Schedule of Fast Access List

6. For details on datapoint value editing of schedules, please refer to the “Schedules“ section, p. 66.
7. For details on direct datapoint value editing, please refer the "Adjusting and Saving Values and Options" section, p. 19.

Alarms

The **Alarm** menu provides the following functions:

- viewing datapoints in alarm
- viewing alarms in alarm list including optional acknowledgement of selected alarms

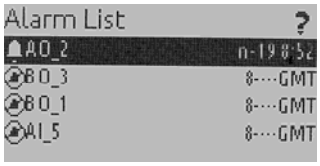


For …	… refer to the following sections and subsections	… on page
Viewing Datapoints in Alarm	Viewing Datapoints in Alarm	44
Viewing Alarm List	Viewing Alarms	45

Alarms are displayed on the controller HMI as follows:

Points in Alarm
Shows all points that are in alarm with graphical alarm status indicator.

Alarm List
Shows all alarms in a list (alarm buffer) with unacknowledgement and acknowledgment status respectively.



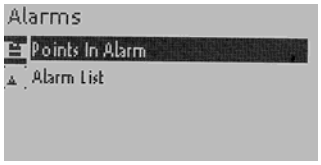
Viewing Datapoints in Alarm

Purpose View any actual points in alarm

Procedure

1. In the *HOME* screen, turn the rotate&push button to navigate to and highlight **Alarm List** .

1. Push the rotate&push button.
   The **Alarms** menu is displayed. The **Points in Alarm** submenu is highlighted.



2. Push the rotate&push button.
   The *Points in Alarm* screen is displayed. All datapoints that are currently in alarm, are displayed.

   Depending on its current alarm status, a datapoint shows any of the following visual status indicators:

Icon	Function
	Datapoint is in "overridden status" (manual mode)
	Datapoint is in "Out of Service status"
	Datapoint is in "Alarm status"
	Datapoint is in alarm status "fault"
	Datapoint is in alarm status "normal" and alarm is not acknowledged
	Datapoint is in alarm status "off-normal" and alarm is not acknowledged
	Datapoint is in alarm and alarm is acknowledged

   NOTE: Multiple statuses can be indicated.

   To get information on the meaning of a status indicator, you can also press he **Help** soft key.

3. Depending on the current operating mode (auto, manu), an alarm datapoint can be set into the opposite operating mode (manual, or auto). For setting a datapoint into manu mode, please refer to the "Setting Datapoint into Manual Mode" section, p. 49.
4. To set a datapoint into auto mode, turn the rotate&push button to navigate to and highlight the datapoint.
5. Then, push the rotate&push button.
6. Press the **Back** operating key on the controller housing.

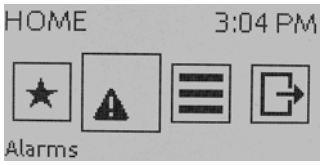
Viewing Alarm List

Purpose View any of the following alarm information:

- actual points in alarm
- critical alarms
- non-critical alarms
- alarm buffer (history)

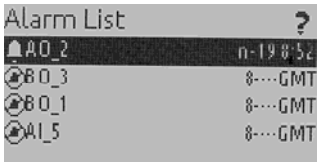
Procedure

1. In the *HOME* screen, turn the rotate&push button to navigate to and highlight the **Alarm List** icon .



2. Push the rotate&push button.
   The **Alarms** menu is displayed.

3. Turn the rotate&push button to navigate to and highlight **Alarm List**.
4. Push the rotate&push button.
   The *Alarm List* screen is displayed. All alarms are displayed with their status indicator (see table below), alarm source, date, and time.



Depending on their current alarm status, datapoints show any of the following visual status indicators:

Icon	Function
	Datapoint is in "overridden status" (manual mode)
	Datapoint is in "Out of Service status"
	Datapoint is in "Alarm status"
	Datapoint is in alarm status "fault"
	Datapoint is in alarm status "normal" and alarm is not acknowledged
	Datapoint is in alarm status "off-normal" and alarm is not acknowledged
	Datapoint is in alarm and alarm is acknowledged

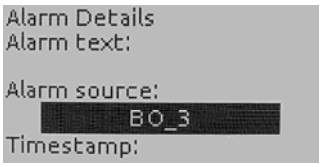
NOTE: Multiple statuses can be indicated

You can select an alarm for viewing its details and acknowledging it if acknowledgement is required.

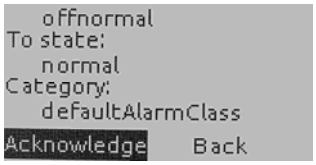
5. To do so, turn the rotate&push button to navigate to and highlight the data point.
6. Then, push the rotate&push button.

The details of the alarm are displayed. Details include the following:

- alarm text time stamp
- alarm source
- time stamp
- notes
- from state to state
- category



7. Scroll through the list to view all details by turning the rotate&push button.



8. To acknowledge an alarm, at the bottom of the *Alarm Details* screen, highlight the **Acknowledge** command, then push the rotate&push button.

   The alarm is acknowledged and removed from the alarm counter. The *Alarm List* screen redisplays.

Datapoints

Datapoints can be operated by doing any of the following actions:

- Viewing Datapoints in Manual Mode
- Setting Datapoints into Manual Mode
- Changing Datapoint Values

For …	… refer to the following sections and subsections	… on page
Viewing Datapoints in Manual Mode	Datapoints – Viewing Datapoints in Manual Mode	47
Setting Datapoints into Manual Mode	Datapoints – Setting Datapoints into Manual Mode	49
Changing Datapoint Values	Datapoints – Setting Datapoints into Manual Mode	49
see also		
Viewing Datapoints in Alarm	Alarm List – Viewing Datapoints in Alarm	44

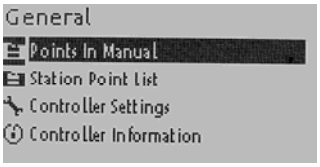
Viewing Datapoints in Manual Mode

Purpose Shows the list of datapoints which are currently in manual mode.

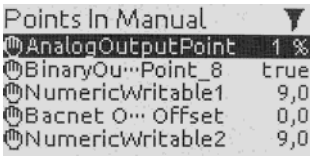
Procedure

1. In the *HOME* screen, turn the rotate&push button to navigate to and highlight the **General** menu icon .

2. Then push the rotate&push button. The **General** menu is displayed.

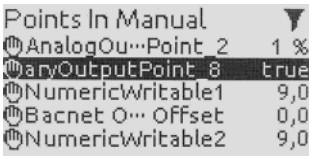


3. On the highlighted **Points in Manual** entry, push the rotate&push button.
   All datapoints that are currently in manual mode are displayed. The manual mode is indicated by the **Manual** command symbol .

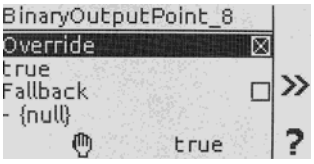


   A datapoint can be set into automatic mode as described in the following.

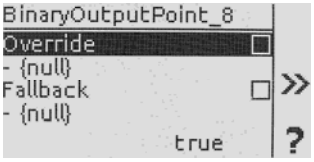
4. To set a datapoint into automatic mode, turn the rotate&push button to navigate to and highlight the datapoint.



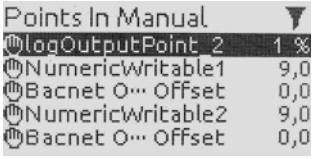
5. Push the rotate&push button. The datapoint details are displayed.



6. Push the rotate&push button. The **Override** checkbox is disabled.



7. Press the **Back** operating key on the controller housing.
   The *Station Point List* screen redisplays. The edited datapoint is removed from the list.



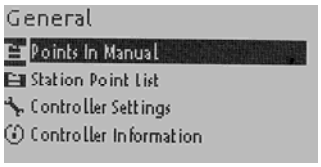
Setting Datapoint into Manual Mode

Purpose Sets a datapoint into manual mode and changes its value.

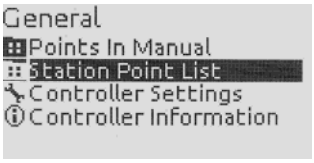
Procedure

1. In the *HOME* screen, turn the rotate&push button to navigate to and highlight the **General** menu icon .

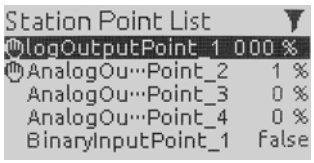
2. Then push the rotate&push button. The **General** menu is displayed.



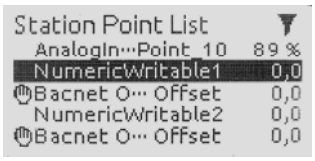
3. Turn the rotate&push button to navigate to and highlight **Station Point List**.



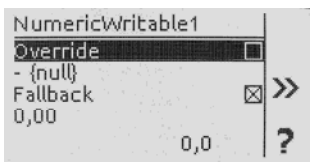
4. Push the rotate&push button.
   The *Station Point List* screen is displayed.



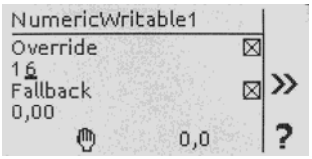
5. To scroll through the list, turn the rotate&push button.
6. Navigate to and highlight the datapoint you want to put into manual mode.

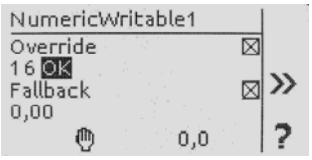


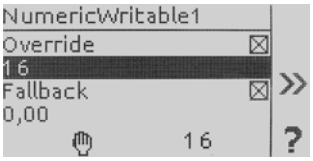
7. Push the rotate&push button. The datapoint details are displayed.



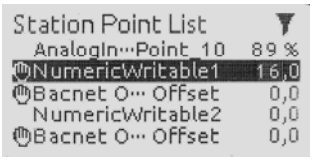
8. Turn the rotate&push button and select the **Override** line with the checkbox symbol.
9. Push the rotate&push button. The **Override** checkbox is checked.
10. Turn the rotate&push button to navigate to the value and set the value as described in the “Adjusting and Saving Values and Options“ section, p. 19.







11. Press the **Back** operating key on the controller housing.
12. The *Station Point List* screen redisplays. The datapoint is in manual mode as indicated by the **Manual** command symbol .



NOTES: The fallback value can be set in the same way as the override value. Do so if desired.

When the fallback value will get valid, the datapoint is not indicated as “in manual mode”.

Setting Slot Value of Datapoint

Purpose Changes a datapoint value by setting the value of a Niagara slot.

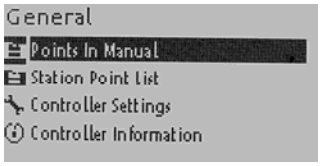
By setting the value of a slot, the datapoint value is changed according to the priority of the changed slot. Lower slots (e.g. 3) have higher priority than higher slots (e.g. 12).

NOTE: When the value of a slot will get valid, the datapoint is not indicated as “in manual mode”.

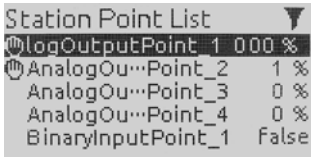
Procedure

1. In the *HOME* screen, turn the rotate&push button to navigate to and highlight the **General** menu icon .

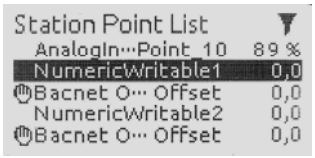
2. Then push the rotate&push button. The **General** menu is displayed.



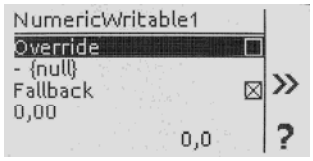
3. Turn the rotate&push button to navigate to and highlight **Station Point List**.
4. Push the rotate&push button.
   The *Station Point List* screen is displayed.



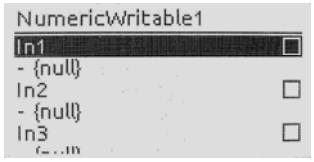
5. To scroll through the list, turn the rotate&push button.
6. Navigate to and highlight the datapoint you want to put into manual mode.



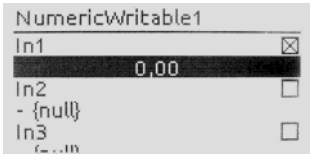
7. Push the rotate&push button. The datapoint details are displayed.



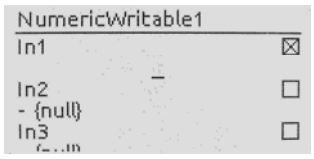
8. Press the softkey adjacent to the double arrow **>>**.
9. Turn the rotate&push button and select a slot line (In1 through In 16) you want to set.



10. Push the rotate&push button. The slot line is checked



11. Turn the rotate&push button to navigate to the value and set the value as described in the “Adjusting and Saving Values and Options“ section, p. 19.



12. Press the **Back** operating key on the controller housing.
13. The *Station Point List* screen redisplays.

Settings

Settings include the following functions:

- Setting date, time and time zone
- Setting the watchdog
- Setting the station auto save time

For …	… refer to the following sections and subsections	… on page
Setting date, time and time zone	Setting Date, Time and Time Zone	52
Setting the watchdog	Setting Watchdog	54
Setting the station auto save	Setting Station Auto Save	55

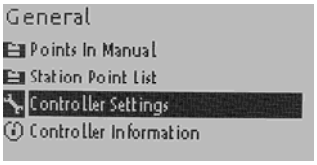
Setting Date, Time and Time Zone

Purpose Sets the date, time and time zone.

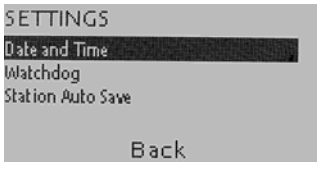
Procedure

1. In the *HOME* screen, turn the rotate&push button to navigate to and highlight the **General** menu icon .

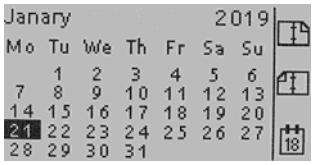
2. Then push the rotate&push button. The **General** menu is displayed.

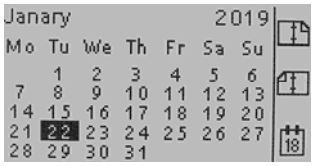


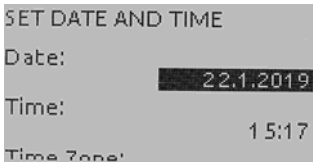
3. Turn the rotate&push button to navigate to and highlight **Settings**.
4. Push the rotate&push button.
   The **SETTINGS** menu is displayed.
5. Turn the rotate&push button to navigate to **Date and Time**.

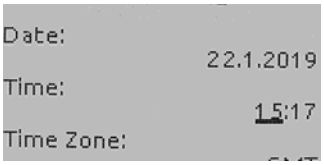


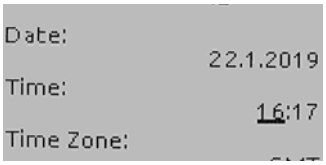
6. Push the rotate&push button, and change the values as shown in the following figures and described in the "Adjusting and Saving Values and Options" and the "Selecting Items" sections.

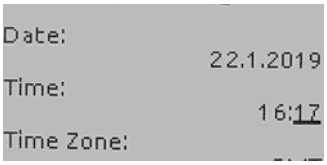


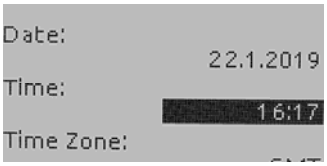


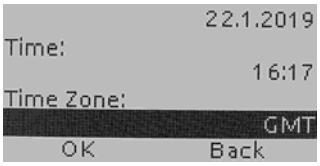












7. Navigate to the **OK** command and press the button to leave the **SETTINGS** menu.

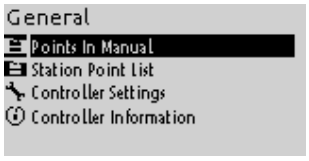
Setting Watchdog

Purpose Sets the watchdog timer.

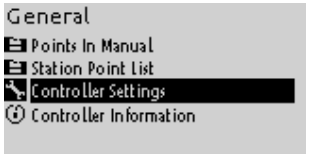
Procedure

1. In the *HOME* screen, turn the rotate&push button to navigate to and highlight the **General** menu icon .

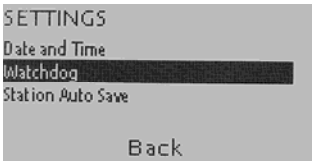
2. Then push the rotate&push button. The **General** menu is displayed.



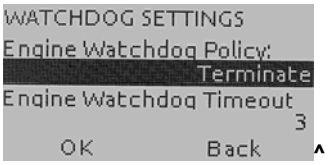
3. Turn the rotate&push button to navigate to and highlight **Controller Settings**.



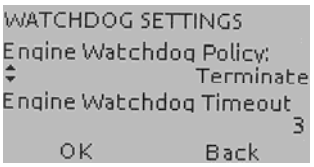
4. Push the rotate&push button. The **SETTINGS** menu menu is displayed.



5. Turn the rotate&push button to navigate to and highlight **Watchdog**.
   The *WATCHDOG SETTINGS* screen is displayed. The current setting is selected.

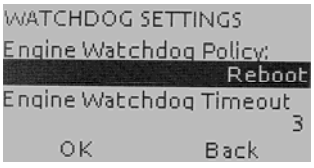


6. To select another option, push the rotate&push button.

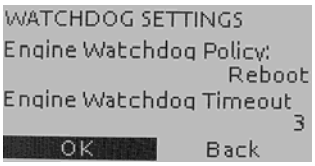


   On the left, upward-downward selection arrows become visible.

7. Turn the rotate&push button to scroll through the list, and then push the rotate&push button to select the option.



8. Turn the rotate&push button to navigate and highlight **OK**, and then push the rotate&push button.



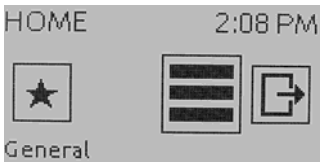
9. Press the Back operating key on the controller housing twice to leave the **SETTINGS** menu and display the HOME screen.

Setting Station Auto Save

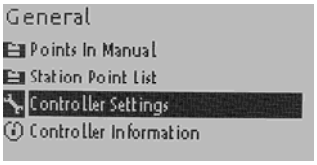
Purpose Sets the auto save options for the station. A station can be saved with a defined frequency and the number of saved stations to be kept can be defined.

Procedure

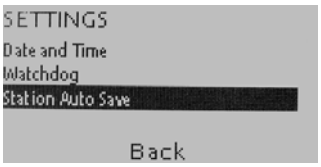
1. In the *HOME* screen, turn the rotate&push button to navigate to and highlight the **General** menu icon .



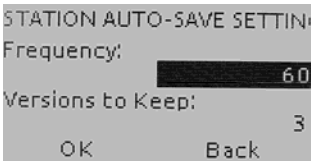
2. Then push the rotate&push button. The **General** menu is displayed.



3. Turn the rotate&push button to navigate to and highlight **Settings**.
4. Push the rotate&push button.
   The **SETTINGS** menu is displayed.



5. Turn the rotate&push button to navigate to **Station Auto Save**.
6. Push the rotate&push button, and change the values in the *STATION AUTO-SAVE SETTINGS* screen as described in the "Adjusting and Saving Values and Options" and the "Selecting Items" sections.



7. Navigate to the **OK** command and press the button to leave the **SETTINGS** menu.

Information

Information shows controller specific properties such as:

- Name
- Manufacturer
- Model name
- Product family
- Brand
- Host ID
- Interface 1
- Interface 2
- Niagara Version
- Java VM Name
- Java VM Vendor
- Java VM Version
- OS Name

- OS Arch
- OS Version
- Firmware Version
- Platform Daemon Port
- Platform Daeman TLS Port
- Number of CPUs
- Current CPU Usage
- Over CPU Usage
- Physical RAM (Total, Free)
- Filesystem

For …	… refer to the following sections and subsections	… on page
Viewing information	Viewing Information	57

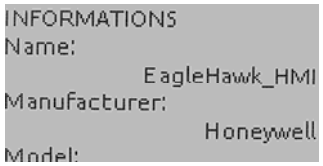
Viewing Information

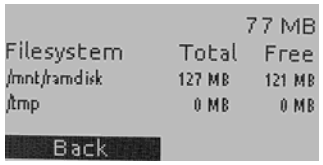
Purpose Shows controller specific properties such manufacturer, SKU number, etc.

Procedure

1. In the *HOME* screen, turn the rotate&push button to navigate to and highlight the **General** menu icon .

2. Then push the rotate&push button. The **General** menu is displayed.
3. Turn the rotate&push button to navigate to and highlight **Information**.
4. Push the rotate&push button.
   The *INFORMATION* screen is displayed.





5. View the information by turning the rotate&push button.
6. Press the Back operating key on the controller housing twice to leave the *INFORMATION* screen and display the HOME menu.

TIME PROGRAMS

Calendars and Schedules

Time programs consist of calendars and schedules.

A calendar includes a list of dates. Initially, calendars are created in the CentraLine NX workbench and downloaded in the controller.

In the controller, you can edit the calendar by doing one of the following:

- Addition of new calendar dates
- Edition and deletion of existing calendar dates

NOTE: You cannot change the name of a calendar and/or create new calendars in the controller.

A schedule includes switch points that switch a datapoint property.

In the controller, you can edit the schedule by doing one of the following:

- Creation of new switch points
- Edition, copy and deletion of existing switch points
- Edition of special events
- Set and edition of general properties (period, default value)

NOTE: You cannot change the name of a schedule and/or create new schedules.

Time programs can be changed by doing any of the following:

- changing time and value of switch points
- adding new switch points
- copying switch points
- deleting switch points
- editing special events by applying any of the above actions to the switch points of the special event

For …	… refer to the following sections and subsections	… on page
For working with calendars	Calendars	58
For working with schedules	Schedules	66

Calendars

Via special events which reference to a project-wide calendar, Niagara provides global scheduling because calendar dates are executed in each controller of the project which references to the calendar. Changes in multiple particular controller schedules can be quickly made by simply changing the referenced calendar.
The schedule-calendar reference provides specific scheduling of a plant by parallel access to the project-wide calendar data.

Adding Calendar Date

Purpose

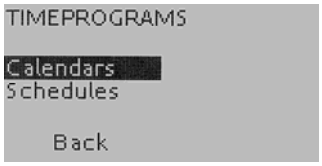
Add a calendar date to the calendar. A calendar date can be one of the following types:

- Date
  Time period is one specific date (day, week, month, year) is to be defined, e.g. Christmas Eve or 5.5., the whole of May, or the whole year of 2013.
- Date Range
  Time period is a date range is to be defined, e.g. Summer holidays from 29.7-7.9.2013.

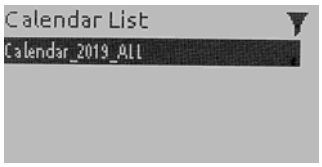
- Week and Day
  Time period is a particular date in a particular week in a particular month, e.g. always the third Monday in February.
- Custom
  Time period is defined by day-of-month, month-of-year, weekday, week-in-month, and year. E.g. the U.S. General Election Day, which must be configured as the first Tuesday after the first Monday in November.

Procedure

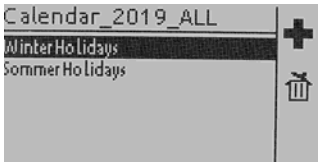
1. On the controller housing, press the **Time Program** operating key . The **TIME PROGRAMS** menu displays.



2. Turn the rotate&push button to navigate to and highlight **Calendars**.
3. Push the rotate&push button to. The **Calendar List** menu is displayed.

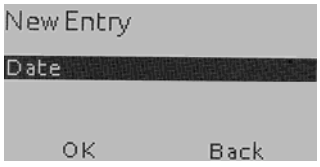


4. Turn the rotate&push button to navigate to and highlight the calendar
5. Push the rotate&push button. The **Calendar** menu is displayed showing all calendar entries.

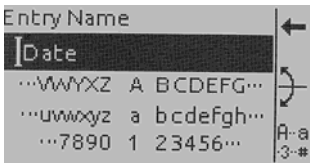


6. To add a new entry, press the topmost soft key adjacent to the **Add** command symbol .
   The *New Entry* screen displays. Here you can select the entry type from date range, specific date, week, and day and custom.

7. Turn the rotate&push button to navigate to and highlight the type of date, and then push the rotate&push button. The corresponding screen for editing the name of the date displays.



   a. If **Date** is selected, please continue with step 8.

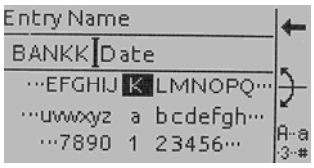


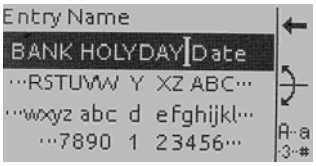
b. If **Date range** is selected, please continue with step 13.

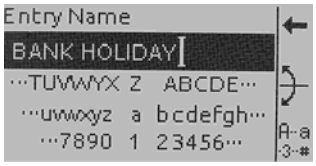
c. If **Week and Day** is selected, please continue with step 17.

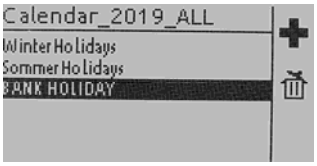
d. If **Custom** is selected, please continue with step 22.

8. Push the rotate&push button.
9. Edit the name of the Date option as described in the "Editing Text of New Entry" section, p. 30.

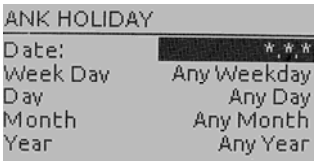








10. Push the rotate&push button. The following screen displays.

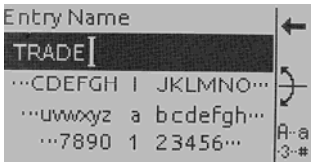


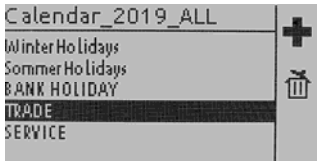
By default, the Date option is set to any week day, any day, any month, any year as indicated by the three asterisks *** in the **Date** field. The result of selections is by “ANDing” all criteria.

Example: For example, if you select weekday of Tuesday, day of month as 5, and the remaining criteria are “any,” the event is specified only on Tuesday, the fifth of any month in any year. If a month does not have Tuesday the fifth, then there is no event that month

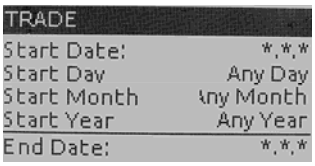
11. Set the options by applying the basic procedures described in the "Adjusting and Saving Values and Options" section, p. 19.
12. Finish with step 23.

13. Edit the name of the Date Range option as described in the "Editing Text of New Entry" section, p. 30.





14. Push the rotate&push button. The following screen displays.



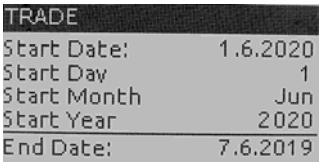
The date range option has a start range and end range, each with 3 criteria, day-of-month, month-of-year, and year.

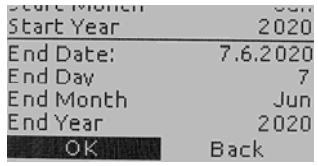
By default, the start date and end date are set to any day, any month, any year as indicated by the three asterisks *** in the **Start Date** and **End Date** fields.

You can make only one selection in each criteria (day-of-month, month, year). Each criteria offers an Any selection, in addition to a specific selection. In each date range, the result is from “ANDing” the criteria. In addition, the start day can be after the end date.

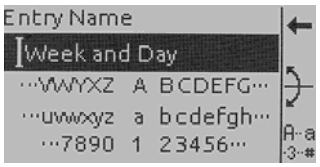
Example: The start day is on 1th June and end date on 7th June.

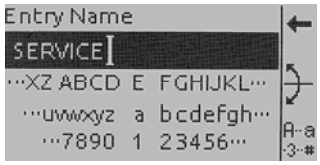
15. Set the options by applying the basic procedures described in the "Adjusting and Saving Values and Options" section, p. 19.

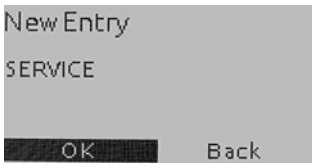




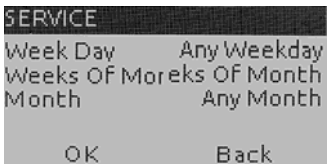
16. Finish with step 23.
17. Edit the name of the Week and Day option as described in the "Editing Text of New Entry" section, p. 30.







18. Push the rotate&push button. The following screen displays.



The week and day option has three criteria: weekday, week-in-month, and month-of-year. You can make only one selection in each criteria (weekday, week-in-month, month). Each criteria offers an Any selection, in addition to a specific selection.

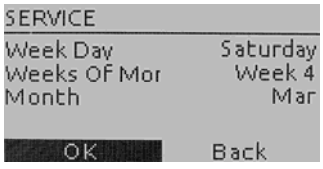
The following criteria offer additional selections, as follows:

- week-in-month:
  - Last 7 days
- month-of-year:
  - Jan-Mar-May-Jul-Sep-Nov
  - Feb-Apr-Jun-Aug-Oct-Dec

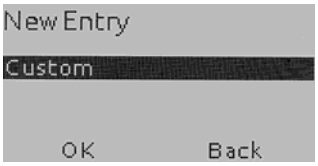
The result is from “ANDing” the criteria.

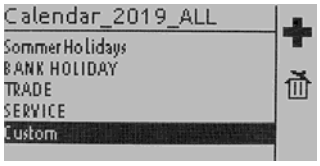
Example: If selections are for weekday as Monday, the month as February, and the week as 3, the event occurs only on the third Monday in February.

19. Set the options by applying the basic procedures described in the "Adjusting and Saving Values and Options" section, p. 19.

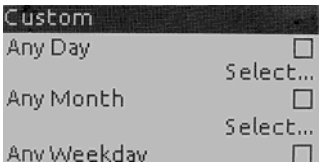


20. Finish with step 23.
21. If desired, edit the name of the Custom option as described in the "Editing Text of New Entry" section, p. 30.





22. Push the rotate&push button. The following screen displays.



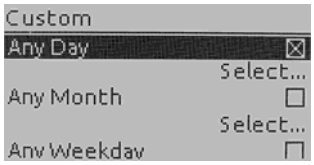
The Custom option, has 5 criteria: day-of-month, month-of-year, weekday, week-in-month, and year.

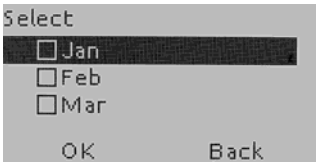
Unlike with other calendar types, you can make multiple selections within each criteria (except if you select “any” which allows only that selection). Each criteria offers an Any selection, in addition to a specific selection. In addition, the following criteria offer additional selections, as follows:

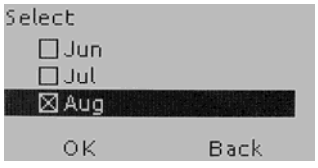
– day-of-month
  - Last day
  - Last 7 days
– week-in-month
  - Last 7 days

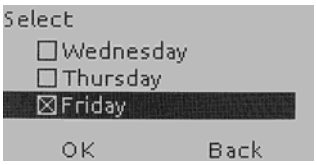
Within any criteria, selections are “OR”ed” The overall result is from “AND’ing” all criteria.

Example: See the following figures.









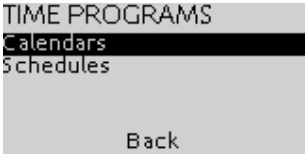
23. Turn the rotate&push button to navigate to and highlight the **OK** command.
24. Push the rotate&push button to save settings.

Editing Calendar Date

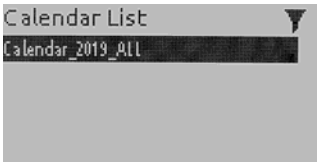
Purpose Edit the name and/or the settings of a calendar date.

Procedure

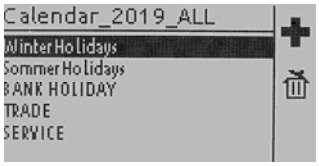
1. On the controller housing, press the time program operating key . The **TIME PROGRAMS** menu displays.



2. Turn the rotate&push button to navigate to and highlight **Calendars**.
3. Push the rotate&push button to. The **Calendar List** menu is displayed.



4. Turn the rotate&push button to navigate to and highlight the calendar.
5. Push the rotate&push button. The **Calendar** menu is displayed showing all calendar dates.



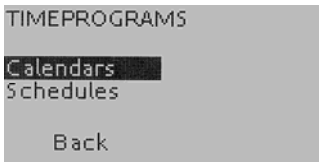
6. To edit a date, turn the rotate&push button to navigate to and highlight the date.
7. Then push the rotate&push button.
8. To edit the name, push the rotate&push button and change the name as described in the "Editing Text of New Entry" section, p. 30.
9. To edit the date settings, please proceed as described in the corresponding steps in the "Add New Calendar Date" section, p. 58.

Deleting Calendar Date

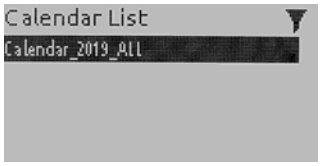
Purpose Delete a date from the calendar.

Procedure

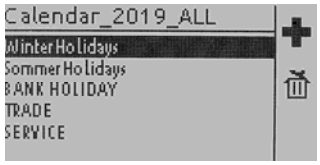
1. On the controller housing, press the time program operating key . The **TIME PROGRAMS** menu displays.



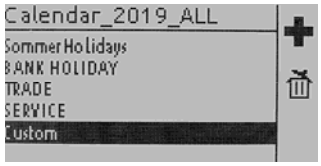
2. Turn the rotate&push button to navigate to and highlight **Calendars**.
3. Push the rotate&push button. The **Calendar List** menu is displayed.



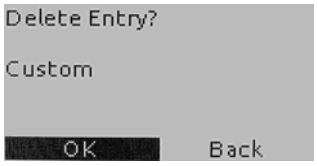
4. Turn the rotate&push button to navigate to and highlight the calendar.
5. Push the rotate&push button. The *Calendar* is displayed showing all calendar dates.



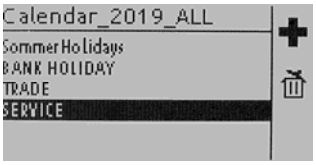
6. Turn the rotate&push button to navigate to and highlight the date you want to delete.



7. On the controller housing, press the soft key right to the **Delete** command symbol .
   The *Delete Entry* screen displays.



8. Push the rotate&push button.
   The date is deleted from the Calendar.



Schedules

On a weekly basis, each schedule specifies a datapoint or a list of multiple datapoints. Each datapoint includes switch points to command the present value of the datapoint (switched properties). The week program defines the normal daily activity of the system by specifying which switch points are to be commanded each day of the week. The week program applies to a definable time period. There is only one week program per schedule.

Besides the week program, specific programs called special events can be created. Special events have higher priority than the week program and will overwrite the week program for a definable time period. Special events can have one of the following time periods:

- Date
  e.g. Christmas Eve or 5.5., the whole of May, or the whole year of 2013
- Date Range
  e.g. Summer holidays from 29.7-7.9.2013
- Week and Day
  e.g. every last Friday of every month
- Calendar Reference
  A project-wide calendar provides dates, e.g. regional holidays and public/religious festivals or any other particular date. The time period can be a specific date, a date range, week and day or custom.

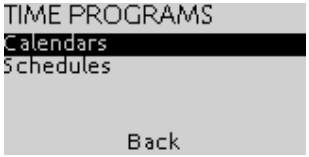
Set / Edit General Schedule Properties

Purpose Set or edit general schedule properties such as the default value and the time period for which the schedule is valid.

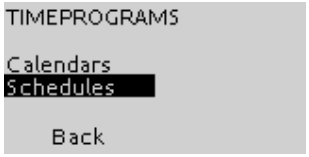
NOTE: The name of the schedule cannot be changed.

Procedure

1. On the controller housing, press the **Time Program** operating key . The **TIME PROGRAMS** menu displays.

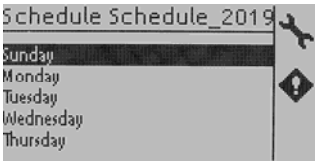


2. Turn the rotate&push button to navigate to and highlight **Schedules**.

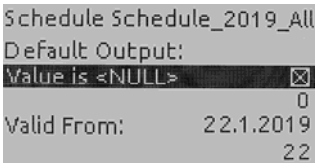


3. Push the rotate&push button. The **Schedule List** menu is displayed.

4. Turn the rotate&push button to navigate to and highlight the desired schedule.
5. Push the rotate&push button. The schedule with its entries is displayed.

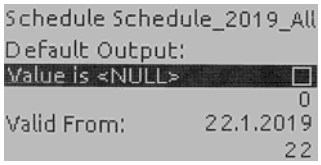


6. Press the softkey adjacent to the **Settings** command symbol .
   The settings of the schedule are displayed. Here you can set or edit the default value and the valid period.

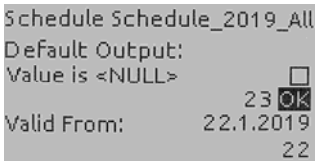


7. To edit the default value, do one of the following:

   a. Turn the rotate&push button to navigate to and highlight **Value is <NULL>**.
   b. Then, enable the option by pushing the rotate&push button.



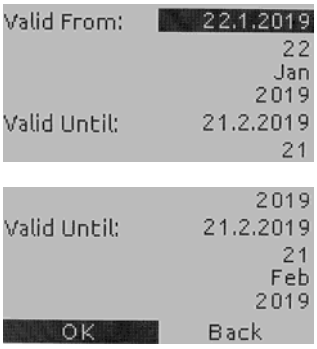
   c. Or, turn the rotate&push button to navigate to and highlight the value.
   d. change the value by turning the rotate&push button
   e. adjust the value by pushing the rotate&push button



   NOTE: The schedule default value is used at 00.00 (twelve midnight) as present value of all switched properties (switch points) when no other value is in effect. The schedule default value can be NULL or any value, for example, ´value in %` for analog outputs, or ´running` for digital outputs. The NULL value removes the current value entry of the switched properties from the priority array. Then the next lower value in the priority array becomes the present value of the switched properties.

8. Set the values for the **Valid from** (start date of valid period) and the **Valid Until** (end date of valid period) by using the basic procedures as described in

the Adjusting and Saving Values and Options" section, p. 19 and the "Enable/Disabling Options" section, p. 24.



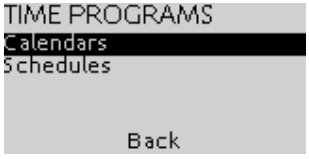
9. Turn the rotate&push button to navigate to and highlight the **OK** command.
10. Push the rotate&push button to save settings.

Adding Switch Point

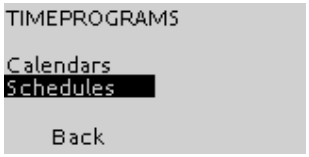
Purpose Add a switch point to a day which is part of the schedule.

Procedure

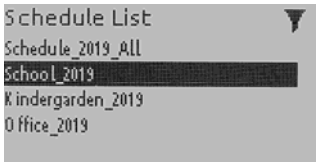
1. On the controller housing, press the time program operating key . The **TIME PROGRAMS** menu displays.



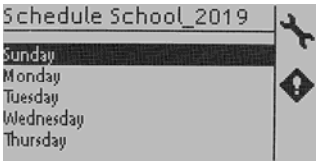
2. Turn the rotate&push button to navigate to and highlight **Schedules**.



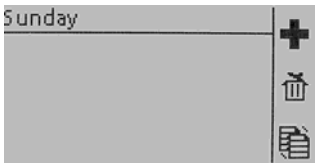
3. Push the rotate&push button. The list of schedules is displayed.
4. Turn the rotate&push button to navigate to and highlight the schedule to which you want to add switch points.



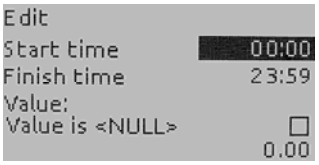
5. Push the rotate&push button.
   The schedule is displayed.



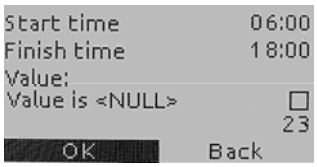
6. Turn the rotate&push button to navigate to and highlight the day.
7. Push the rotate&push button.
   The day is displayed.



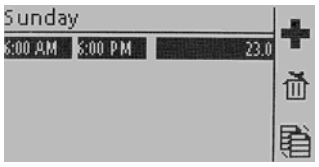
8. On the controller housing, press the soft key right adjacent to the **Add** command symbol ✚.
   The *Edit* screen is displayed.



9. Set the time and value as described in the "Adjusting and Saving Values and Options" section, p. 19 and the "Enable/Disabling Options" section, 24.



10. Turn the rotate&push button to navigate to and highlight the **OK** command.
11. Push the rotate&push button.
    The screen of the day redisplays. The switch point is added and displayed in the list.



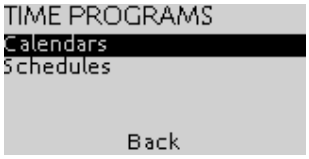
12. Add further switch points in the same way.

Copying Switch Point

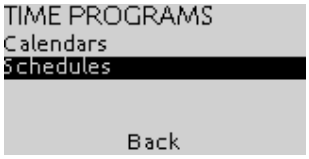
Purpose Copy a switch point from one day to other days.

Procedure

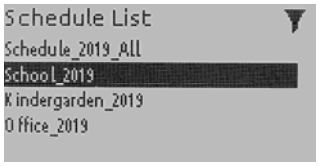
1. On the controller housing, press the **Time Program** operating key. The **TIME PROGRAMS** menu displays.



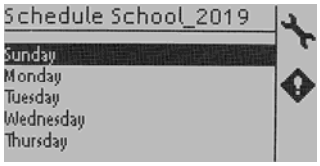
2. Turn the rotate&push button to navigate to and highlight **Schedules**.



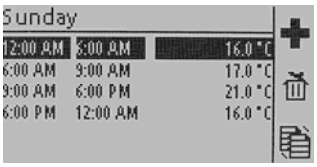
3. Push the rotate&push button. The list of schedules is displayed.



4. Turn the rotate&push button to navigate to and highlight the schedule in which you want to copy switch points.
5. Push the rotate&push button.
   The schedule is displayed.

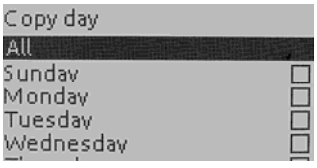


6. Turn the rotate&push button to navigate to and highlight the day.
7. Push the rotate&push button.
   The day with its switch points is displayed.

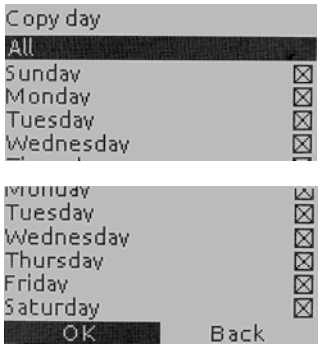


8. Turn the rotate&push button to navigate to and highlight the switch point you want to copy.
9. On the controller housing, press the soft key right adjacent to the **Copy** command symbol  .

   The *Copy day* screen is displayed.



10. Copy the switch point as described in the "Copying Items" section, p. 28.

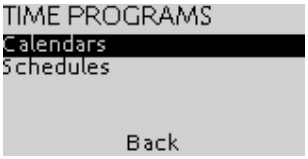


Editing Switch Point

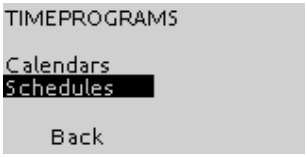
Purpose Copy a switch point from one day to other days.

Procedure

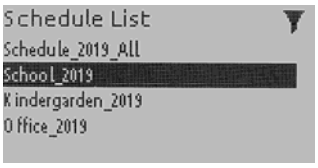
1. On the controller housing, press the **Time Program** operating key. The **TIME PROGRAMS** menu displays.



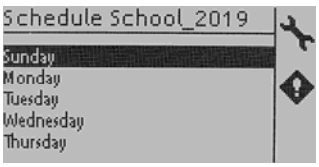
2. Turn the rotate&push button to navigate to and highlight **Schedules**.



3. Push the rotate&push button. The list of schedules is displayed.
4. Turn the rotate&push button to navigate to and highlight the schedule to which you want to add switch points.

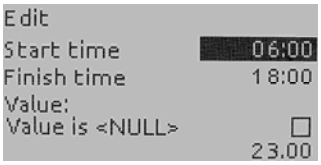


5. Push the rotate&push button.
   The schedule is displayed.

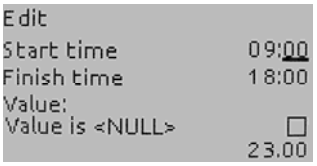


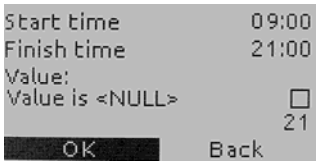
6. Turn the rotate&push button to navigate to and highlight the day.
7. Push the rotate&push button.
   The day with its switch points is displayed.

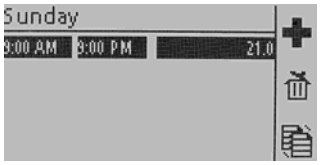
8. Turn the rotate&push button to navigate to and highlight the switch point you want to edit.
9. Push the rotate&push button.
   The *Edit* screen is displayed.

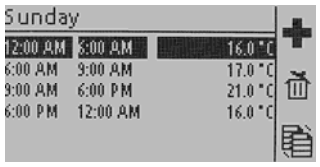


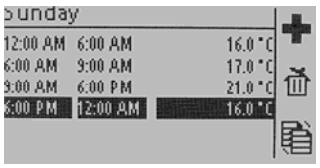
10. Set the time and value as described in the "Adjusting and Saving Values and Options" and the "Enable/Disabling Options" sections.











11. Turn the rotate&push button to navigate to and highlight the **OK** command.
12. Push the rotate&push button.
    The screen of the day redisplays showing the changed switch point.

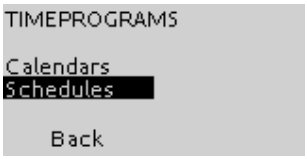
Deleting Switch Point

Purpose Delete a switch point.

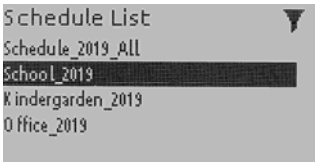
Procedure

1. On the controller housing, press the **Time Program** operating key. The **TIME PROGRAMS** menu displays.

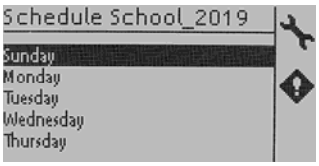
2. Turn the rotate&push button to navigate to and highlight **Schedules**.



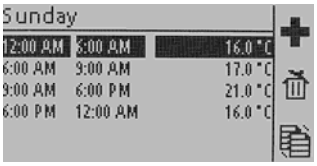
3. Push the rotate&push button. The *Schedule List* screen is displayed.
4. Turn the rotate&push button to navigate to and highlight the schedule.



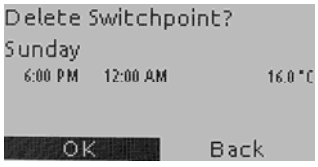
5. Push the rotate&push button.
   The schedule is displayed.



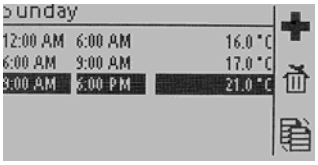
6. Turn the rotate&push button to navigate to and highlight the day.
7. Push the rotate&push button.
   The day with its switch points is displayed.



8. Turn the rotate&push button to navigate to and highlight the switch point you want to delete.
9. On the controller housing, press the soft key right adjacent to the **Delete** command symbol .
   The *Delete Switchpoint* screen is displayed.



10. Push the rotate&push button.
11. The switch point is deleted and the screen of the day redisplays.



Editing Special Event

As the schedule itself, special events include switch points that switch a datapoint property. Initially, special events are created in the CentraLine NX workbench and downloaded in the controller.

Purpose

In the controller, you can edit the special event by doing one of the following:

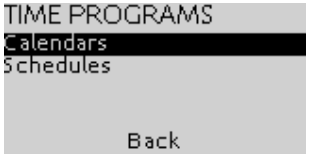
- Creation of new switch points
- Edition, copy and deletion of existing switch points

NOTE: In the controller, you cannot:

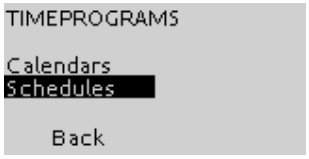
- change the name of a schedule
- create new schedules

Procedure

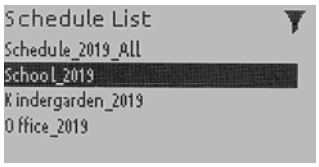
1. On the controller housing, press the **Time Program** operating key . The **TIME PROGRAMS** menu displays.



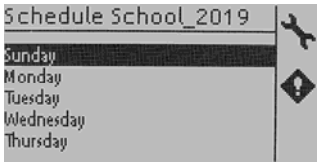
2. Turn the rotate&push button to navigate to and highlight **Schedules**.



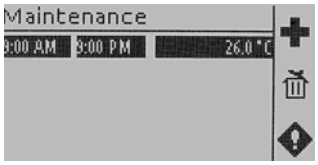
3. Push the rotate&push button. The *Schedule List* screen is displayed.



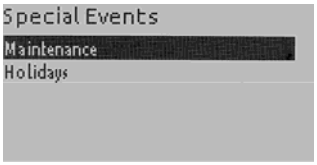
4. Turn the rotate&push button to navigate to and highlight the schedule to which you want to add switch points.
5. Push the rotate&push button.
   The schedule is displayed.



6. Press the soft key adjacent to the **Special events** command symbol .
   The **Special Events** menu is displayed.



7. Turn the rotate&push button to navigate to and highlight the special event you want to edit.



8. Push the rotate&push button.

   The switch points of the special event are displayed.

   Do any or many of the following:

   – create new switch points (see "Adding Switch Point" section, p. 68)
   – edit switch points (see "Editing Switch Point" section, p. 71)

TROUBLESHOOTING

The power and status LEDs at the EAGLEHAWK controller indicate the controller´s statuses and allows troubleshooting. Please refer to the following tables that describe the behavior, meaning and necessary action to check status and solve errors and/problems.

Power LED (green)

	Power LED Behavior	Meaning	Action
1	ON	Normal operation	No action necessary
2	OFF	Power supply not OK	Check power supply voltage / wiring

Status / Alarm LED (red)

	LED Behavior	Meaning	Service Action
1	LED remains OFF after power-up	Normal operation	➢ No action necessary
2	LED is lit continuously after power-up	The controller has encountered a hardware problem or The application has a fault or The controller has been powered up without an application or The operator has manually stopped the application, e.g., using XW-Online. In this case, the LED will light up 13 minutes after power-up without application	➢ Try powering down and then powering up the XCL8010. ➢ If problem persists, check and – if necessary – reload the application. ➢ If problem still persists, replace hardware

RS485-1 Send (Tx) / Receive (Rx) LED (yellow)

	RS485-1 LED Behavior	Meaning	Action
1	Both LEDs are flashing	Normal operation, RS485-1 is functioning properly	➢ No action necessary
2	Both LEDs are OFF	No RS485-1 communication	➢ Check RS485-1 termination switch
3	Rx Led is flashing and Tx is OFF	RS485-1 communication is switched off but controller is receiving data from other controllers	➢ Switch on RS485-1 communication via the CENTRALINE NX WORKBENCH PC tool. Hardware may be defect if this does not work
4	Tx Led is flashing and Rx is OFF	Controller is trying to establish a RS485-1 connection but there is no answer	➢ RS485-1 baud rate is not correct; other controller may have the same device number on RS485, wiring problem or hardware defect

Application LEDs (yellow)

	LED Behavior	Meaning
1	LED is lit continuously	Platform is starting
	LED is flashing	Platform is connected
2	LED is lit continuously	Station is starting
	LED is flashing	Station is running

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