Technical Guide – Firmware

MiNexx Indicator

Foreword

Must be followed!

Any information in this document is subject to change without notice and does not represent a commitment on the part of Minebea Intec unless legally prescribed. The product must only be operated by trained operating personnel. Installation and commissioning must only be performed by trained specialist personnel. In correspondence concerning this product, the type, name, and release number/serial number as well as all license numbers relating to the product must be cited.

Note

Inhaltsverzeichnis

1 Introduction

1.1 Read the safety instructions and the documentation

The following documents are included with the Minebea Intec product in printed form:
– Safety instructions

Please read the safety instructions and the documentation before using the product.
These are part of the product. Keep the safety instructions in a safe and easily accessible location.

1.2 This is what instructions look like

1. - n. are placed before steps that must be done in sequence.

▶ is placed before a step.

▷ describes the result of a step.

1.3 This is what lists look like

– indicates an item in a list.

1.4 This is what warnings look like

Signal words indicate the severity of the danger involved if measures for preventing hazards are not followed.

⚠ **GEFAHR**

Warning of personal injury
DANGER indicates that death or severe, irreversible personal injury will occur if appropriate safety measures are not observed.
▶ Take appropriate safety measures.

⚠ **WARNUNG**

Warning of a hazard area and/or risk of personal injury
WARNING indicates that death or severe, irreversible injury may occur if appropriate safety measures are not observed.
▶ Take appropriate safety measures.

> ⚠ **VORSICHT**

Warning of personal injury

CAUTION indicates that minor, reversible injury may occur if appropriate safety measures are not observed.

▶ Take appropriate safety measures.

> *ACHTUNG*

Warning of damage to property and/or the environment

NOTICE indicates that damage to property and/or the environment may occur if appropriate safety measures are not observed.

▶ Take appropriate safety measures.

Hinweis: User tips, useful information, and notes.

1.5 Support

Telephone Bovenden: +49.551.30983.111
Telephone Hamburg: +49.40.67960.444
Email: help@minebea-intec.com

2 Safety instructions

2.1 Target groups

Operating personal

Employees that use the weighing technology in daily operation and have received comprehensive training in its operation.
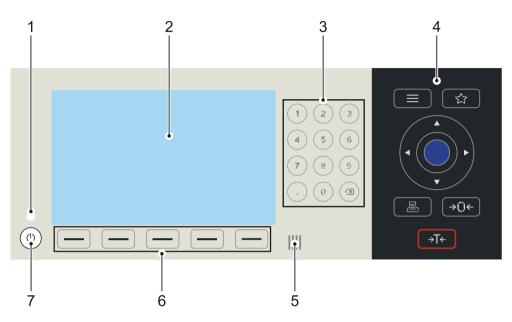
Trained specialists

Employees that perform the configuration, adjustment and calibration of the weighing technology and have received comprehensive training therein.

3 Operating and display
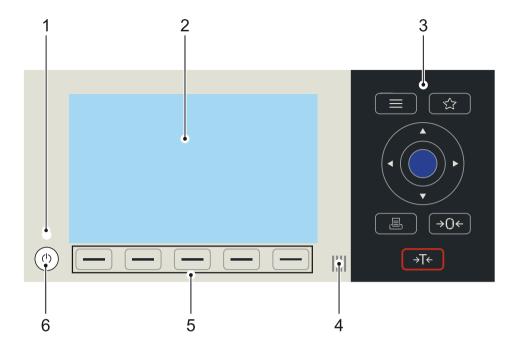
3.1 Overview of device front

Model NICL
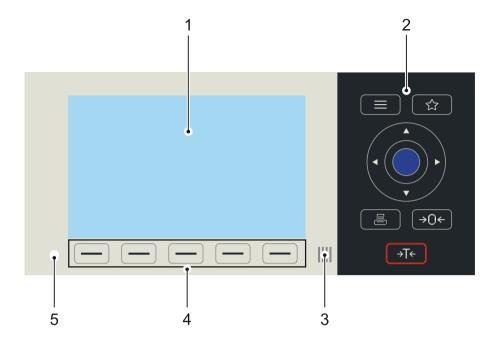
Pos.	Name
	Display elements
1	Power LED
2	TFT color display 5.0"
	Operating elements
3	Numpad
4	Keypad
5	Soft keys
6	Power button
7	NFC antenna

Model NICM

Pos.	Name
	Display elements
1	Power LED
2	TFT color display 5.0"
	Operating elements
3	Keypad
4	Soft keys
5	Power button
6	NFC antenna

Model NICC

Pos.	Name
	Display elements
1	Power LED
2	TFT color display 4.3"
	Operating elements
3	Keypad
4	Soft keys
5	NFC antenna

3.2 Operating

3.2.1 Keypad

Key	PC keyboard	Name
☰	F7	MENU key: Open main menu/close menu (see Menu windows)
☆	F8	CENTRAL key: The key can be configured (see CENTRAL key)
Arrow keys		Navigation keys
	▲	Scroll up in the menu.
	▼	Scroll down in the menu.
	◄	– Cursor to the left – Exit menu/parameters view
	►	– Cursor to the right – Selection – Confirm input/selection
●	ENTER	BLUE key: Confirm input/selection

Key	PC keyboard	Name
	F10	Print key: The function depends on the current application view and setting, see the operating instructions of the application.
	F11	Set zero key: The function depends on the current application view and setting, see the operating instructions of the application.
	F12	Tare key: The function depends on the current application view and setting, see the operating instructions of the application.

Numpad (NICL model only)

3.2.2 Buttons (soft keys)

The five soft keys below the graphical color display trigger the function/action indicated in the taskbar by the icon and text, see Taskbar.

> **Hinweis:** The five soft keys can also be triggered directly with the F1...F5 function keys when an external keyboard or VNC is connected.

3.2.3 Data input
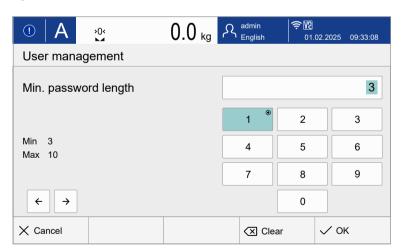
There are different ways of inputting data that depend on the type of parameter.

3.2.3.1 Input window
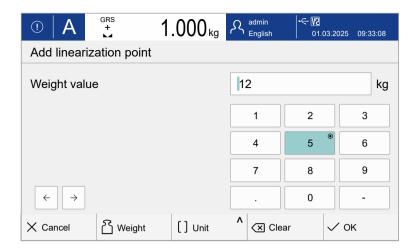
The input window can be used to enter or modify numerical variables and text variables:

– For numerical variables, a numeric keypad is displayed. With the NICL model, the numpad can also be used directly.
– For text variables, a full keyboard is displayed.

Input window for numerical variables
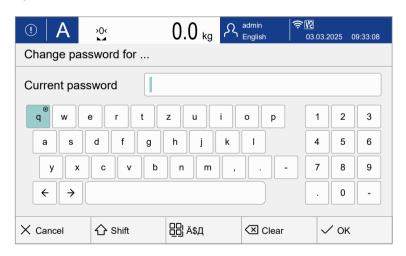
Input window for weight values

①	A	GRS	1.000 kg	admin English	V2 01.03.2025 09:33:08

Add linearization point

Weight value		12	kg

1	2	3
4	5 ◉	6
7	8	9
.	0	-

←	→

✕ Cancel	🖐 Weight	[ ] Unit	^	⌫ Clear	✓ OK
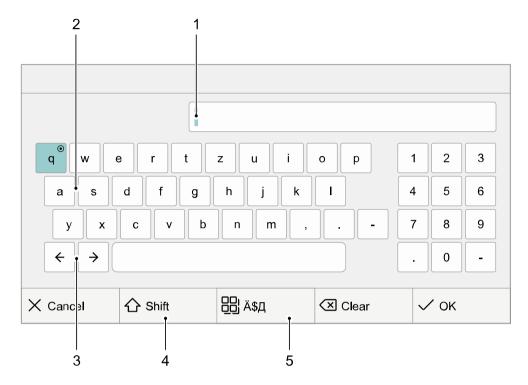
Optional buttons

Button	Function
🖐 Take wgt.	Adopts the weight from the currently selected weighing point.
[ ] Unit	Opens a button group for selecting a weight unit.

Input window for text variables

①	A	›0‹	0.0 kg	admin English	📶 V2 03.03.2025 09:33:08

Change password for ...

Current password		

q ◉	w	e	r	t	z	u	i	o	p		1	2	3
a	s	d	f	g	h	j	k	l			4	5	6
y	x	c	v	b	n	m	,	.	-		7	8	9
←	→										.	0	-

✕ Cancel	⇧ Shift	⊞ Ä$Д	⌫ Clear	✓ OK

3.2.3.1.1 Input on the device

The following elements are available for inputting data on the device:
- Input cursor (1)
- Keyboard cursor for keyboard characters (2) and for cursor arrow keys (3)
- Button for switching between upper case and lower case (4)
- Button for switching the keyboard layout and, if applicable, other input methods (5)

Input cursor (1)

The input cursor shows the current position within a text or a number.
The input cursor can be moved to the left or right by selecting and confirming the cursor arrow keys (3).
When the input window is opened, the entire character string is initially highlighted in blue.

In this case
- confirming a keyboard character (2) replaces the entire character string with the new character.
- pressing the left arrow key (3) moves the cursor to the beginning of the character string.
- pressing the right arrow key (3) moves the cursor to the end of the character string.

Keyboard cursor for keyboard characters (2) and cursor arrow keys (3)

The keyboard cursor is a blue marker on the currently selected keyboard character (2) or the cursor arrow key (3).

The keyboard cursor can be moved using the ◄, ►, ▲, ▼ keys.

The selected character or the cursor arrow key is confirmed with ⬤ (BLUE key).

Switching between upper case and lower case (4)

The [Shift] button can be used to switch between lower case and upper case:

Button	Function
⬆ Shift	Pressing once switches the letter keys to upper case and the button icon to ⬆ .
⬆ Shift	When a character is entered, the letter keys change back to lower case and the icon changes to ⬆ .
⬆ Shift	Pressing the button twice changes the letter keys to permanent upper case and the icon to ⬆ (fixed). When a character is entered, the letter keys remain in upper case. Pressing the ⬆ button again changes the letter keys back to lower case and the icon to ⬆ .

Switching the keyboard layout (5)

If no additional input method is activated (see Language & keyboard layout):

The [⊞ Ä$Д] button can be used to switch between the following keyboard layouts one after the other:
– ASCII (displayed initially)
– Latin
– Symbols
– Cyrillic (if activated)

After activating a character, the selected layout is retained.

If at least one additional input method is activated (see Language & keyboard layout), a button group opens:

Example

– ASCII (displayed initially)
– Latin
– Symbols
– Cyrillic (if activated)
– Pinyin (if activated as an input method)
– Hiragana (if activated as an input method)
– Katakana (if activated as an input method)

After activating a character, the selected layout is retained.
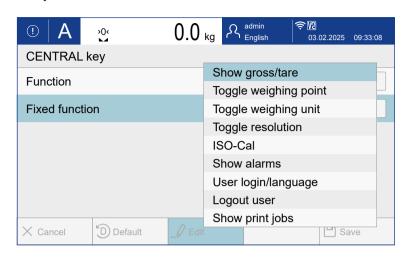
3.2.3.1.2   External operation

Alternatively, an external keyboard (USB, Bluetooth), VNC, or a barcode scanner (as HID) can be used for data entry.

– Characters are entered directly, regardless of the current position of the keyboard cursor (2).
– External arrow keys (⇦, ⇨) correspond to the cursor arrow keys (3).
– External [Alt] + arrow keys (⇦, ⇨, ⇧, ⇩) correspond to the ◄, ►, ▲, ▼ keys.
– External [ENTER] corresponds to pressing [✓ OK] (not BLUE key).
– External [Alt] + [ENTER] corresponds to pressing ⬤ (BLUE key).

3.2.3.2   Selection lists

"Drop-down" selection list
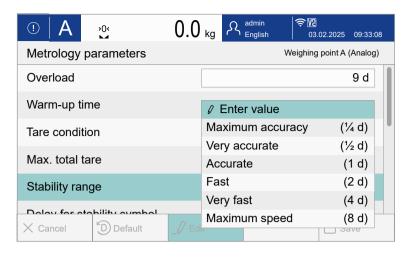
The selection window can be used to select an option from a drop-down list.

– Use the ▲ and ▼ keys to select the required option.

– Confirm the selection with ⬤ (BLUE key).
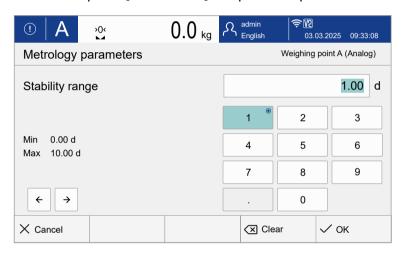
> **Hinweis:** A parameter with a "drop-down" selection list is identified by
>
> the ⌄ icon on the right-hand side.

"Drop-down" selection list with individual value

⚠	A	›0‹ ⊻	0.0 kg	👤 admin English	📶 V2 03.02.2025 09:33:08

Metrology parameters	Weighing point A (Analog)

Overload	9 d
Warm-up time	✎ Enter value
Tare condition	Maximum accuracy (¼ d)
Max. total tare	Very accurate (½ d)
Stability range	Accurate (1 d)
Delay for stability symbol	Fast (2 d)
	Very fast (4 d)
	Maximum speed (8 d)

✕ Cancel	↻ Default	✎ Edit	☐ Save

⇩
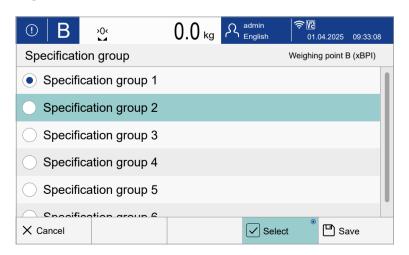
Select the option [Enter value] to open an input window.

⚠	A	›0‹ ⊻	0.0 kg	👤 admin English	📶 V2 03.03.2025 09:33:08

Metrology parameters	Weighing point A (Analog)

Stability range	1.00 d

1 ◉	2	3
4	5	6
7	8	9
.	0	

Min   0.00 d
Max   10.00 d

← →

✕ Cancel			⌫ Clear	✓ OK

Single selection

⚠	B	›0‹ ⊻	0.0 kg	👤 admin English	📶 V2 01.04.2025 09:33:08

Specification group	Weighing point B (xBPI)

- ◉ Specification group 1
- ○ Specification group 2
- ○ Specification group 3
- ○ Specification group 4
- ○ Specification group 5
- ○ Specification group 6

✕ Cancel			☑ Select ◉	💾 Save
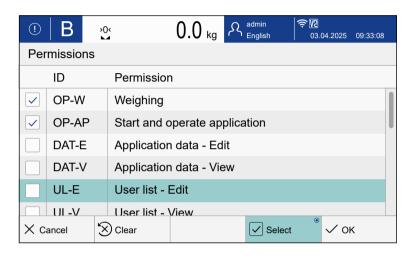
The selection window can be used to select an option from a list.

– Select the required option with the ▲ and ▼ keys (also with ▶ and ◀ if applicable) (highlighted in blue).

– Confirm the selection with [☑ Select] or ⬤ (BLUE key). The confirmed selection is now marked with a radio button.

> **Hinweis:** If the confirmed selection is not possible, a corresponding tool tip appears and the confirmation is ignored.

Multiple selection

①	B	›0‹	0.0 kg	admin English	03.04.2025 09:33:08

Permissions		
	ID	Permission
☑	OP-W	Weighing
☑	OP-AP	Start and operate application
☐	DAT-E	Application data - Edit
☐	DAT-V	Application data - View
☐	UL-E	User list - Edit
☐	UL-V	User list - View

✕ Cancel	⊗ Clear		☑ Select	✓ OK

The selection window can be used to select multiple options from a list.
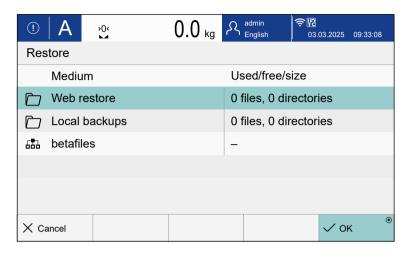
– Select the required option with the ▲ and ▼ keys (highlighted in blue).

– Confirm the selection with [☑ Select]. The selected option is now activated.

– Deactivate the selected option with [☐ Deselect].

– Deactivate all options with [⊗ Clear].

> **Hinweis:** If the number of activated options exceeds the maximum number, a corresponding tool tip appears and the confirmation is ignored.

3.2.4   Directories and files
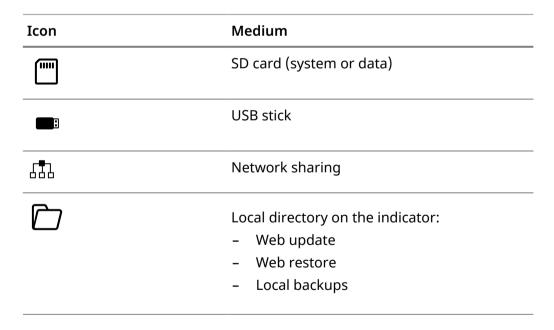
The selection of directories and files is required for reading and writing data.

Example

!	A	›0‹	0.0 kg	admin English	03.03.2025 09:33:08
Restore					
Medium			Used/free/size		
📁 Web restore			0 files, 0 directories		
📁 Local backups			0 files, 0 directories		
🖧 betafiles			–		
✕ Cancel				✓ OK	◉

1. Select medium

The indicator supports the following media for directories and files:

Icon	Medium
▥	SD card (system or data)
▬▯	USB stick
🖧	Network sharing
📂	Local directory on the indicator: – Web update – Web restore – Local backups

Confirm the selected medium with [✓ OK] or ⬤ (BLUE key).

2. Select directory and/or file

Package	Version & Build	Date
Bootloader	00.05.00.539685	2025-02-04-07:24:39
Firmware	00.05.00.540261	2025-02-09-09:14:18
Kernel	00.05.00.535279	2025-02-05-07:49:43
MiNexx-Appl-E...	00.01.03.540370	2025-02-09-14:39:15
MiNexx-Labl-E...	00.01.03.540370	2025-02-09-14:39:15

Screen header: ① A ›0‹ 0.0 kg admin English 01.04.2025 09:33:08 — Confirm update software. Bottom bar: ✕ Cancel | ✓ OK

The directories and files on the selected medium are displayed. Directories are listed before files.

If only a directory can be opened (i.e., no files), no files are displayed.

Navigation

– Select the desired row (directory or file) using the ▲ and ▼ keys.

– For directories only: If [›] is displayed in the right-hand column, the directory can be opened with the ▶ key (for a file with no function).

  If a file has to be selected, the directory can also be opened with [✓ OK] or ⬤ (BLUE key).

– Press the ◀ key to exit the current directory.
  In the top directory, return to [Select medium].

Selection

The function called up determines whether a directory or a file has to be selected.

Examples:
– Update software = file
– Backup = directory

Select file:

– Confirm the selected file with [✓ OK] or ⬤ (BLUE key).

Select directory:

– Confirm the selected directory with [✓ OK] or ⬤ (BLUE key).
– The main directory on a medium is identified by the name "." and can be selected accordingly.

3.3 Display

3.3.1 Overview of the TFT color display

The display consists of various areas.

Pos.	Name
1	Header, see Header
2	Info line
3	Content area with weighing screen, see Weighing screen
4	Taskbar, see Taskbar

3.3.1.1 Header

⊙	A	Max 3000kg	d=0.5kg	👤	admin	📶 🆅🅲 N))
		Min 10kg			English	03.03.2025 09:33:08

The header displays general information about the device and contains the following areas:

– System status
– Weighing point/metrology information
– User/language
– Status information
– Date and time

System status

Icon	Description
⊙	The system is in a functional operating state. There are no warnings or errors.
⚠	There are warnings, but no errors or fatal errors.
❗	There are errors or fatal errors.

> **Hinweis:**
> If the system is in an error state, further information on the warning or error can be found in the alarm list. The message must be acknowledged there if necessary.
> Information on alarms, see Alarms.

Weighing point/metrology information

Display	Description
A	Displays the weighing point ID (here: A).
NET + 0.315 kg	Displays the current weight if the weighing screen is not visible.
Max 10kg d=0.005kg Min 0.1kg	Displays the current metrology information if the weighing screen is visible.

Example

Metrology	displayed as	Description
Max	Max 10 kg	Current maximum capacity (Max) or current upper limit for multiple ranges
Min	Min 0.1 kg	Min. load (Min)
d	d = 0.005 kg	Current scale interval in operation not subject to legal control (or scale class II with d <> e)
e	e = 0.005 kg	Current scale interval (verification scale interval) in operation subject to legal control

User/language

Display	Description
John Doe English	Displays the user and the current operating language if user management has been activated. Displays only the current operating language if user management has not been activated.

Status information

Icon	Description
(battery icons)	Voltage of device battery (only for devices with battery power supply)
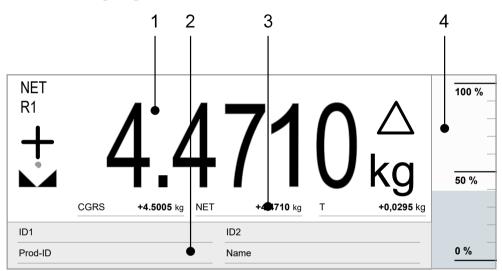
Icon	Description
	Battery charging; flashes (0.5 Hz) together with device battery voltage.
	NICC only: WLAN status Displayed if WLAN has been activated.
	Displayed if VNC is active.
	Keyboard disabled via SPM bit MX20517
	NFC reader – Displayed if an NFC reader is active. – Flashes (1 Hz) if an NFC tag has been read. – Only available in some regions.
	NICC only: Bluetooth Displayed if a Bluetooth device is connected.
	USB port – Displayed if a USB device has been detected. – Flashes (2 Hz) when USB devices are being checked.
	USB stick – Displayed if a USB stick is connected and in use. – USB stick in use must not be removed.
	Displayed if network sharing is accessed.
	GMP series Displayed if a GMP series is active (see the operating instructions of the application).
	Print – Displayed if a print order is being processed.

CPU load

Display example	Description
7.0 %	[Show CPU load] has been switched on: – A running diagram of the last 80 seconds is displayed. – If the load exceeds 50% for 80 seconds, the display area is highlighted in red. – If the load exceeds 50% for 8 seconds, the display area is highlighted in yellow.

3.3.1.2   Info pane

3.3.1.2.1   Weighing screen

Pos.	Name
1	Weight display, see Weight display
2	Application rows (optional, max. 2 lines with max. 3 values each)
3	Display of additional weight types (optional, max. 3) See Weight types
4	Bar graph, see Bar graph

3.3.1.2.1.1 Weight display

Pos.	Name	Icon	Description
1	Weight value		Max. 7 digits
2			Decimal place with frame: For class II scales and non-verifiable decimal place (e<>d)
3	Unit		Mass unit or other unit (e.g., pcs, see application manual)
4	"Value not permissible in legal metrology" display	△	Value not permissible in legal metrology (e.g., 10-fold resolution, deactivated load cell, inadmissible scale).
	"Simulated weight" display	SIM	Indicates an active simulation.
5	"Scale occupied" display	◇	Activated by the application to indicate that the scale is in use. [Off]: Scale is not used by the application [On]: Scale is reserved by the application and is in use. [Flashing]: Slow flashing (~1 Hz): Scale is reserved by the application for further use. Fast flashing (~4 Hz): The application has detected an error status on the scale that is preventing the application from continuing.
6	"Stability" display	◣◢	Weight value stability

Pos.	Name	Icon	Description
7	Sign/zero	$+$	Gross weight value is above +½ d
		$-$	Gross weight value is below -½ d
		›0‹	Gross weight value is within ±¼ d of zero
8	Current range	R1...R4	Only displayed for multi-range/multi-interval scales.
9	Displayed weight type		See Weight types.

> **Hinweis:**
>
> In the event of an error, the weight display only shows
> – an error number in the top right, see Indicator errors.
> – a text for the error number.

3.3.1.2.1.2 Weight types

Display	Weight type	Description
G/B	Gross	Measured gross weight, B if [Country-specific requirements] = [Germany]
NET	Net	Net = gross – total tare
T	Tare	Measured weight in tare memory 1, if only 1 tare memory is in use
PT	Preset tare	Preset tare in tare memory 1, if only 1 tare memory is in use
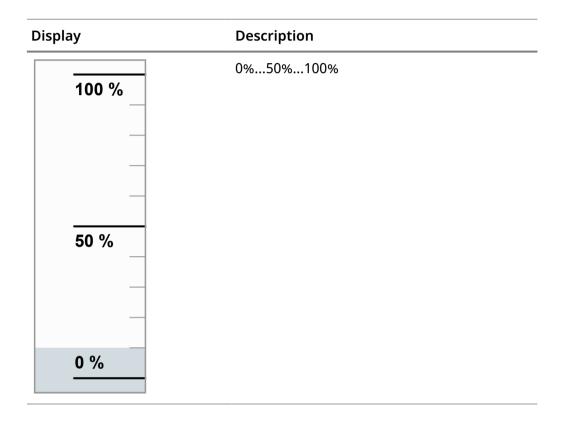
Display	Weight type	Description
T1	Tare 1	Measured weight in tare memory 1, if 2 or 3 tare memories are in use
PT1	Preset tare 1	Preset tare in tare memory 1, if 2 or 3 tare memories are in use
T2	Tare 2	Measured weight in tare memory 2, if 2 or 3 tare memories are in use
PT2	Preset tare 2	Preset tare in tare memory 2, if 2 or 3 tare memories are in use
T3	Tare 3	Measured weight in tare memory 3, if 3 tare memories are in use
PT3	Preset tare 3	Preset tare in tare memory 3, if 3 tare memories are in use
$\sum$T	Total tare	Total of tare memories 1...3
X $_{(10)}$	10-fold resolution	Applies for all above-mentioned weight types
X $_{(100)}$	100-fold resolution	Applies for all above-mentioned weight types
CGRS/CBRT	Calculated gross weight	CGRS = Round (net,d) + $\sum$round (tar(n),d)
CNET	Calculated net weight	CNET = Gross – $\sum$Round (tar(n),d)
appl1...appl3	Applicative weight 1...3	See application manual
flow	Flow	See application manual
setp	Target value	See application manual
diff	Difference	Difference = Net – target value

3.3.1.2.1.3   Bar graph

The use of the bar graph is application-dependent. For more details, see the application manual.

3.3.1.2.1.3.1. Simple weighing

Bar graph display for the current gross weight in relation to the maximum capacity (Max) of the scale

Display	Description
100 % **50 %** **0 %**	0%...50%...100%

3.3.1.2.1.3.2. Target weighing

Bar graph display for the current weight in relation to a target value with tolerances.

Display	Description
Max 3.9kg **Target** 3kg **Min** 2.5kg	In the bar graph, the current weight is displayed in relation to the tolerance range by means of color changes.
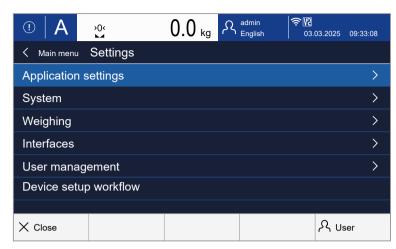
Marking	Description
MMax	2nd positive tolerance (optional)
Max	1st positive tolerance
Target	Target value
Min	1st negative tolerance
MMin	2nd negative tolerance (optional)

Color display

Color	Description
No color	Weight > bar graph range
Yellow	Weight ≤ Min
Green	Min < current weight ≤ Max
Red	Weight > Max

3.3.1.2.2 Menu windows

Example:

ⓘ	A	›0‹ ⛝	0.0 kg	⚇ admin English	🛜 V2 03.03.2025 09:33:08
‹ Main menu **Settings**					
Application settings					›
System					›
Weighing					›
Interfaces					›
User management					›
Device setup workflow					
✕ Close					⚇ User

- Use the ▲ and ▼ keys to select the required menu item.
- Open the selected item using the ▶ key or ⬤ (BLUE key).
- The › icon on the right in a menu item indicates that another sub-menu exists.
- The ‹ icon at the top left in the info line indicates that the ◀ key can be used to return to the higher-level menu.
- Use the ☰ key (MENU key) to close the entire menu and continue with the application.

Taskbar

Button	Description
✕ Close	In the main menu: Close menu and continue application, or close menu level.
❶ Alarms	Open alarm list (see Alarms). This is displayed if there are warnings or critical errors.
⚇ Service	This is displayed if service lock is activated, see also Service user login and logout.

Button	Description
⚇ User	User management is **not** activated: The "Change language" dialog is displayed, see also Change operating language. User management is activated: The login/logout window is displayed, see also User login and logout.

Deactivated menu items

Example:

If a menu item is deactivated (i.e., cannot be opened by the user), the text is displayed in gray.

When a deactivated entry is opened with the ▶ key or ⬤ (BLUE key), a tool tip is displayed with a note explaining why the menu item is deactivated, e.g.:

– The required option card is not available.
– User management is activated and the current user does not have the required permission.

3.3.1.2.2.1   User button

The [⚇ User] button can be used to perform the following functions:
–   Change operating language, see Change operating language.
–   User login (when user management is active), see User login.
–   User logout (when user management is active), see Logout user.
–   Change password (when user management is active and user is logged in), see Change password
–   Reset password for user "admin" (when user management is active), see- Recover password for user <admin>

3.3.1.2.2.1.1. Change operating language

In a menu window, press [⚇ User].
The operating language is changed using the [Language] selection parameter.

Available options:
–   System language, see Language & keyboard layout
–   User language Add/edit users
    [User language] changes the operating language to the user's language. This option is only visible if user management is activated and a user is logged in.
–   Deutsch (de)
–   English (en)
–   Espanol (es)
–   Francais (fr)
–   Italiano (it)
–   日本語 (ja)
–   中文 (zh_CN)

Once the drop-down list is closed, the display texts will appear in the changed language.

> **Hinweis:** If user management is activated and no user is logged in, the [Language] parameter can only be changed if no login data has been entered yet for [User name] or [Password].

3.3.1.2.2.1.2. User login and logout

If user management is activated, different users can log in and out (see User list).

After a user logs out, the default user <everyone> is logged in.

3.3.1.2.2.1.2.1. User login

1. In a menu window, press [⚇ User].

   ▷ The login window opens.

2. Enter the user name.

3. Enter the password.

4. Press [✓ OK] to confirm the login data.

   ▷ The login data is checked. If the data is correct, the user is now logged in, otherwise an error message appears.

> **Hinweis:** The user can also log in directly in the login window using an NFC tag, see Add/edit users.
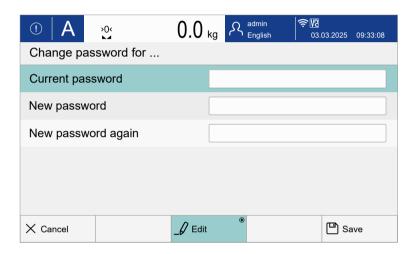
3.3.1.2.2.1.2.2. Logout user

1. In a menu window, press [⚇ User].

   ▷ The logout window opens.

2. Press [↪ Logout].

   ▷ The current user is now logged out and the user <everyone> is logged in.

3.3.1.2.2.1.2.3. Change password

Hinweis: The user must be logged in to change their own password, see User login.

1. In a menu window, press [⋒ User].
   ▷ The logout window opens.

2. Press [⟳ Password].
   ▷ A parameter view opens.

ⓘ	A	›0‹	0.0 kg	⋒ admin English	📶 Vc 03.03.2025 09:33:08
Change password for ...					
Current password					
New password					
New password again					
✕ Cancel		✎ Edit		💾 Save	

3. Enter the current password.

4. Enter the new password.

5. Enter the new password again.

6. Press [💾 Save] to save the inputs.
   ▷ The inputs are checked.

   Has the [Min. password length] (see Activate user management) been adhered to?

   Do the entered passwords match?

   If the data is correct, the password is changed, otherwise an error message appears.

3.3.1.2.2.1.2.4. Recover password for user <admin>

If the password of the user <admin> is no longer known, an activation code
can be requested from Minebea Intec.
The following steps must be taken to activate the user <admin>:
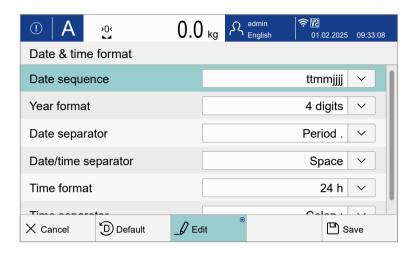
1. In the login window, enter <admin> as the [User name] and "202122" as
    the [Password].
    ▷   A parameter view opens with [Board number], [Unlock query] and
        [Valid until]. These values remain unchanged for 72 hours so that the
        window can be closed in the meantime.

2. Send the values via email to "help@minebea-intec.com".
    ▷   The response from Minebea Intec contains an activation code for
        these parameters.

3. Enter the [Activation code] as a response.

4. Confirm the password recovery with [✓ OK].
    ▷   The entered activation code is checked. If the data including [Valid
        until] is correct, the user <admin> is logged in and their password is
        the activation code.

5. Change password for user <admin>, see Change password.

3.3.1.2.3   Parameters view

This view shows a list of parameters whose values can be displayed and, if necessary, changed/entered.

Example

– Use the ▲ and ▼ keys to select the required parameter.
– Edit the selected parameter using the ▶ key or [✎ Edit] or ● (BLUE key), see Data input.

Taskbar

Button	Description
✕ Cancel	Discard changes and close parameter view. A user dialog may be displayed beforehand.
↺ Default	Reset all parameters to default values.
✎ Edit	See Data input. The parameters with switches ⬤◯/◯◯ are switched on/off directly.
💾 Save	Save values for all parameters.
✓ OK	Apply values for all parameters.

> **Hinweis:** The buttons in the different views may vary depending on the application.
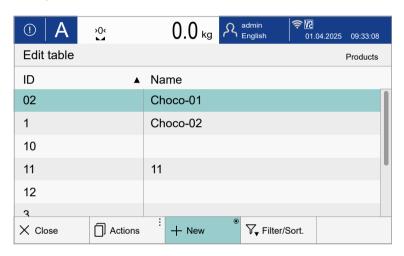
Depending on the use, the following may occur in a parameter view:

– Parameters are displayed as write-protected or deactivated (e.g., the serial number of a connected scale). In this case, [✎ Edit] is deactivated.

– Values of the parameters are displayed as invalid. In this case, the value field of the parameter is outlined in red and the parameter values cannot be saved/accepted.

– Values of protected parameters (password, etc.) are displayed as "hidden" with •••••.

3.3.1.2.4 Table view

The table view is used to input and display records in a table.

Example

– Use the ▲ and ▼ keys to select the required record.

– The ⟩ icon on the right in a record indicates that a detailed view is available.

– The ▲ or ▼ icon in a column header indicates that the table view is sorted in ascending or descending order according to this column (optional).

– The ▽ icon in a column header indicates that a filter has been applied to the entries in this column (optional). Filters can be applied to several columns at the same time (if supported by the application).

Taskbar
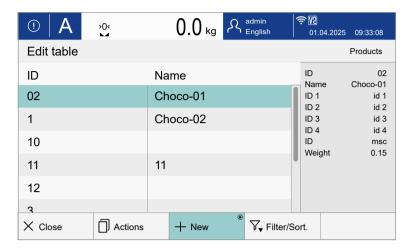
Button	Description
✕ Close	Close table view.
⬚ Actions	The button group contains [Copy], [Delete] and [Edit]
⬚ Copy	Copy the selected record: A parameter view for a new record is opened with the data of the selected record.
🗑 Delete	Delete the selected record.
✎ Edit	Edit the selected record: A parameter view with the data of the selected entry is opened.
+ New	Create new record. A parameter view for a new record is opened.
▽ Filter/Sort.	Button group with filter and sort functions (optional), see application manual
👁 View	Only visible if the table view cannot be edited. View the selected record: A parameter view with the data of the selected entry is opened in read-only mode.

> **Hinweis:**
> The buttons in the different views may vary depending on the application.

Detailed view

Example:

The detailed view is used to display additional parameters.
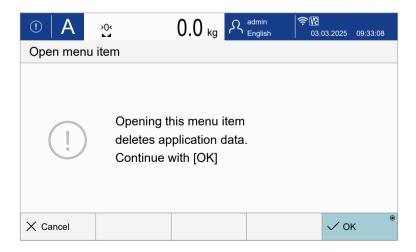
– Open the detailed view with the ▶ key.
– When the detailed view is open, press the ◀ key to close it.

3.3.1.2.5 Dialogs

3.3.1.2.5.1 User dialog

A user dialog informs the user with a message and prompts them to actively confirm or make a decision.

Example

User dialogs are classified by an icon on the right:
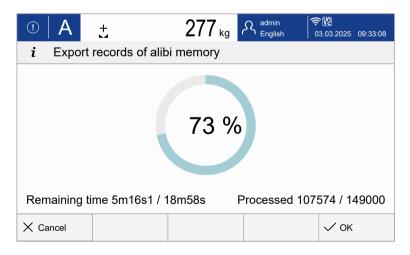
Icon	Message	Buttons
❗	Alarm	[✕ Cancel], [✓ OK]
i	Information	[✓ OK]
❓	Question	[✕ Cancel], [✓ OK]
⚠	Warning	[✕ Cancel], [✓ OK]

Press the relevant soft key to perform the required action.
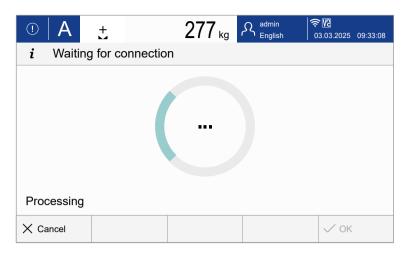
3.3.1.2.5.2 Progress dialog

A progress dialog informs the user about the status of a process that has been running for some time. The process can be ended early using the [✕ Cancel] button.

Example of a progress dialog with known duration

Example of a progress dialog with unknown duration

3.3.1.2.6 Tool tips and displays

3.3.1.2.6.1 Tool tips

Tool tips provide messages relating to a specific element. They are shown until the user triggers another action by pressing a new button.

Error tool tip

NFC not allowed for user <everyone>.

The error tool tip indicates incorrect or invalid parameter values.

Information tool tip

Can only be changed on creation.

The information tool tip indicates a locked or deactivated parameter, menu item, or button.

3.3.1.2.6.2 Displays

Displays provide information about a process that cannot be canceled (process display) or about the result of actions (status display).
An icon on the left-hand side indicates the type of display content.

Process display

 Example:

```
┌─────────────────────────────────────┐
│   💾   Saving configuration         │
└─────────────────────────────────────┘
```
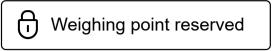
Process displays are shown until the process has ended (with a timeout if necessary) or for at least 2 seconds for short processes.

Icon	Description
⏳	General waiting for the completion of an (external) process that is not controlled by the running software, e.g., waiting for confirmation from the operator.
☀	General processing of data controlled by the running software, e.g.: Processing database queries.
💾	Saving or loading data.
⚖	Waiting for a weight result (e.g., waiting for stability so that the weight can be recorded).
🖶	A print order is started.
🔍	Searching for data.

Status display

Example:

🔒 Weighing point reserved

Status displays are shown until the operator triggers another action by pressing a new button.

Icon	Description
i	Success message
❗	Error message: Action failed
⚠	Warning message: Operator can continue
🔒	Access message
✔	A good result
👎	A bad result

3.3.1.3 Taskbar

✕ Cancel	Ⓓ Default	✎ Edit ⊙		💾 Save

The taskbar contains 5 buttons, each of which is permanently assigned a soft key (see Buttons (soft keys)).

Pressing a soft key calls up the corresponding action displayed for the button. For the button selected in blue (with the dot in the upper right corner), the action can also be called up with 🔵 (BLUE key).
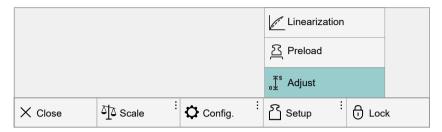
When buttons are disabled, the icon and font are displayed in light gray.

If a soft key for a disabled button is pressed, a tool tip appears with information about the action that cannot be performed.

Button group

✕ Close	⚖ Scale	⚙ Config. ⋮	🧴 Setup ⋮	🔒 Lock

A button group combines a number of buttons in one group.

A button with a group is indicated by three vertical dots in the upper right corner.

			✎ Linearization
			🏋 Preload
			⬇ Adjust
✕ Close	⚖ Scale	⚙ Config. ⋮	🧴 Setup ⋮	🔒 Lock

The group is displayed by pressing the associated soft key.

The required button is selected with the ▲ and ▼ keys.

The action for the selected button is then called up via ⬤ (BLUE key).

When a group is open, pressing another soft key or another key hides the group and calls up the corresponding action directly.

3.4   Power button, power LED and screensaver

3.4.1   Power button

⏻

The power button is only available on the NICL and NICM models.

The function of the power button depends on
– the current device status
– the status of the power supply
– the duration of the button press (short or long)

Standby mode

Briefly pressing the power button generally calls up standby mode, in which the display is switched off.

Pressing the power button again exits standby mode and returns to normal operation from the point at which the power button was pressed.

> **Hinweis:** The application can deactivate standby mode, e.g., during active dosing.

Switching off

The device is switched off by pressing and holding the power button
(>3 seconds).
If [Restart after power key 3s] = [With resume], the entire working memory is
saved first.
Pressing again will switch the device on again.
If the working memory was saved beforehand, the previous operating status
is continued (possibly with restrictions by the application)

3.4.2 Power LED

Operation mode	Color	LED status	Description
Normal operation		Off	
Standby	Red	Continuous illumination	
Screensaver is active	Red	Slow flashing	0.5 Hz = 1 s on/1 s off
Suspend	Red	Fast flashing	Fast flashing (2 Hz) of the LED indicates that saving is active.
Device is switched off		Off	

3.4.3 Screensaver

When the screensaver is activated, the display is switched off.
The power LED flashes slowly, see Power LED.
Pressing any key deactivates the screensaver and returns to the last view. The
power LED turns off again.

> **Hinweis:** For VNC, the screensaver is a black full-screen window with the
> text "Screensaver is active" centered.

4 Network security

Protocols

- The network protocols SBI, SMA, xBPI and remote display protocol PR5110 via TCP/UDP sockets as well as ModBus TCP and PR-Net are insecure protocols. They do not support any protective mechanisms.
- Network protocols must only be used in access-restricted network segments. Protection must be guaranteed by means of local measures.
- Use unique device names. Always follow the IT security guidelines.
- Only use insecure protocols in closed networks according to IEC 62443.

Other

The device must not be operated in productive environments if [Allow customizing] is enabled, see Customizing.

All network services listed are switched off in the default configuration/when delivered.

The device can provide services via the following network ports:

Transport	Port	Protocol	Intended use
TCP	80	HTTP	Web server, see Network services and protocols
TCP	443	HTTPS	Web server, see Network services and protocols
TCP	5900	VNC	VNC remote control (with device front), see Network services and protocols and VNC server
TCP	5901	VNC	VNC remote control (reduced view), see Network services and protocols and VNC server
TCP/UDP	502	ModBus	SPM access via ModBus TCP/UDP, see Network services and protocols
UDP	53	DNS	DNS server (only for WLAN access point)
UDP	67/68	BOOTP	DHCP as server (only for WLAN access point)
TCP	22	ssh	SSH server (only if [Allow customizing] is enabled), see Customizing

Transport	Port	Protocol	Intended use
UDP	11012...11015	stdscale	PR-Net weighing point, see Network services and protocols
TCP	4880	OPC-UA	OPC-UA server, see Network services and protocols
TCP	45155*	Remote display	See Remote display protocol
TCP/UDP	45156*	SBI	See SBI protocol
TCP/UDP	45157*	SMA	See SMA protocol
TCP/UDP	45159*	xBPI	See xBPI protocol

* The port can be changed in the device configuration.

– Remote control of the device may cause injury to operating personnel on site without prior warning.
– The device software must be kept up to date, see https://controller-software.minebea-intec.com/.
– The device supports the creation of a service report to facilitate support in the event of problems.
– The service report contains information about the device (name, versions, identification, options), the configuration and the logging. Security features such as passwords or WLAN keys (only NICC) are either not included or are hashed.

5 Device setup (with workflow)

A device can be set up in different ways:

- – Initially, via the workflow for device setup that appears when the device is switched on for the first time.
- – Subsequently, via the menu item [Main menu] → [Settings] → [Device setup workflow].
- – At any time, via the individual settings under [Main menu] → [Settings].

Device setup via the workflow is described below.

When the device is switched on for the first time or after a [Factory reset], only this workflow for device setup is displayed.

> **Hinweis:**
> The workflow is not displayed for a complete scale because this device is already set up at the factory.
> The workflow can be accessed again at a later stage and continued under [Settings] → [Device setup workflow].

The workflow guides the user through important steps to enable them to use the device.

- – System language, see Set system language
- – Date & time, see Set date and time
- – Scale setup, see Set up scale
- – Network configuration, see Configure network
- – Printer installation, see Install printer
- – User management, see User management
- – End workflow

The status of the individual workflow steps is indicated via an icon on the right-hand side:

Status of the workflow steps

Icon	Status	Description	Step
None	Open	Step has not yet been saved	Can be performed.
◌	Active	Next step for processing	Can be performed.
—	Skipped	Step was skipped (next time the workflow is opened, the status is "Open" again)	Can be performed.
✓	Done	Step has been processed and saved. It can be performed again.	Can be performed.
🔒	Locked	Step has been processed and saved. It cannot be performed again.	**Cannot** be performed .

Taskbar

Button	Function
✕ Close	End workflow and start application (with user dialog if not all steps have been completed).
▷◁ Skip	Skip selected step. Disabled if the step is "Done" or "Locked".
▷ Execute	Perform the selected step. Disabled if the step is "Locked".

> **Hinweis:** If user management is activated, the corresponding permissions are required to perform the individual steps. Otherwise, the [Execute] button is disabled.

5.1   Set system language

Overview

The workflow step for [System language] includes setting the system language, see Language and keyboard layout.

Procedure:

1. Select [System language] and press [▷ Execute].

2. Select system language (see Language and keyboard layout), configure further parameters as needed, and press [🖫 Save].

    ▷ The workflow step [System language] is completed with the status "Done". The next step with the status "Open" becomes active and is selected in the workflow.

5.2   Set date and time

Overview

The workflow step for [Date & time] includes

– Setting the time source, see Time source
– Setting the current date and time, see Current date & time

Procedure:

1. Select [Date & time] and press [▷ Execute].

2. Configure the required parameters (see Time source) and press [> Next].

3. Configure the required parameters (see Current date & time) and press [🖫 Save].

    ▷ The workflow step [Date & time] is completed with the status "Done". The next step with the status "Open" becomes active and is selected in the workflow.

5.3   Set up scale

Overview

The workflow step for [Scale setup] includes
– Legal for trade settings
– Add new weighing point: Select weighing point ID and weighing point type.
The further sub-steps and their sequence depend on the selected weighing point type.

Procedure:

1. Select [Scale setup] and press [▷ Execute].

2. Set the required parameters for "Legal for trade" and press [❯ Next].

3. Select the required weighing point under [Weighing point ID].

   NICM/NICC: Only weighing point A is available.
   NICL: Weighing points A, B, C, D are available.

   For an analog weighing point
   – select [A] if the analog weighing electronics are installed in slot 1, or
   – select [B] if the analog weighing electronics are installed in slot 2, or
   – select [C] if the analog weighing electronics are installed in slot 3.

4. Select the required weighing point type under [Type].

   – Analog WP: Can be selected if an analog weighing electronics board is installed.
   – Digital WP (xBPI): Can be selected if a digital weighing electronics board is installed.
   – Compound WP: Cannot be selected.
   – Digital WP (PR-Net)

5. Press [❯ Next].

   The next steps depend on the type selected and are contained in a workflow in each case.
   – Analog WP: see Add analog weighing point steps 5–12
   – Digital WP (xBPI): see Add digital weighing point (xBPI) steps 5–8
   – Digital WP (PR-Net): see Add PR-Net weighing point steps 5–8

6. Create the weighing point using the corresponding workflow and press
    [🖫 Save].

    ▷   The workflow step [Scale setup] is completed with the status
        "Locked". The next step with the status "Open" becomes active and is
        selected in the workflow.

> **Hinweis:** If all weighing points are deleted, the step [Scale setup] is set
> back to "Open".

5.4   Configure network

Overview

The workflow step for [Network configuration] includes
–   Defining the host name, see Host name and certificate.
–   Selecting the network configuration.
    Configuring the selected networks:
    –   LAN, see LAN settings
    –   WLAN, see WLAN settings
    –   LAN + WLAN
    –   No network (no further steps)

–   Setting the network services and protocols, see Network services and pro-
    tocols.
–   Defining logins for the web server and VNC server if applicable, see Log-
    ins for web server and VNC server.
–   Displaying the network status, see Network status.

ACHTUNG

IT operations halted due to corrupted data.

Protect the network against unauthorized access.

▶   In order to minimize risks, standard IT security guidelines must be
    complied with.

Procedure:

1. Select [Network configuration] and press [▷ Execute].

2. Enter the [Host name] (see Host name and certificate) and press
[❭ Next].

   A selection list for the network configuration appears with the following
   options:
   – LAN
   – WLAN
   – LAN + WLAN
   – No network (no further steps)

3. Select the required option.
   ▷ The next steps depend on the network configuration selected.

   – LAN, see LAN settings
   – WLAN, see WLAN settings
   – LAN + WLAN
   – No network (no further steps)

4. If necessary, activate the required network services (see Network services
   and protocols) and press [❭ Next].

5. If a web server or VNC server is enabled: Define the logins (see Logins for
   web server and VNC server and press [🖫 Save].
   ▷ The status of the configured networks is displayed (see Network
      status).

6. [OK]
   ▷ The workflow step [Network configuration] is completed with the
      status "Done". The next step with the status "Open" becomes active
      and is selected in the workflow.

5.5   Install printer

Overview

The workflow step for [Printer installation] includes
– Select printer installation.
– Add printer: Enter name and select connection.
  The further sub-steps and their sequence depend on the selected printer
  connection.

Procedure:

1. Select [Printer installation] and press [▷ Execute].

   A selection list for the printer installation appears with the following options:
   – Add printer
   – No printer

2. Select the required option.

   ▷ The next steps depend on the option selected.

3. If selecting [**Add printer**] (in step 1), press [＞ Next].

4. Enter a printer name under [Name] and select the required connection under [Connection]:

   – USB
   – Serial
   – Network
   – Bluetooth (for NICC only)

5. Press [＞ Next].

   The next steps depend on the connection selected and are contained in a workflow in each case.
   – USB: see Add USB printer steps 4–8
   – Serial: see Add serial printer steps 4–8
   – Network: see Add network printer steps 4–8
   – Bluetooth: see Add Bluetooth printer steps 4–10 (for NICC only)

6. Create the printer using the corresponding workflow and press
   [✓ Create].

   ▷ The workflow step [Printer installation] is completed with the status "Locked". The next step with the status "Open" becomes active and is selected in the workflow.

7. If selecting [**No printer**] (in step 1), press [🖫 Save].

   ▷ The workflow step [Printer installation] is completed with the status "Done". The next step with the status "Open" becomes active and is selected in the workflow.

> **Hinweis:** If all printers are deleted, the step [Printer installation] is set back to "Open".

5.6 User management

Overview

The workflow step for [User management] includes
– Activating user management, see Activate user management.
– If user management is activated: assign password for user <admin>.

Procedure:

1. Select [User management] and press [▷ Execute].

2. Switch on the [Enable] parameter or leave it switched off.
   ▷ The next steps depend on the switch position.

3. If [Enable] **is switched on**: Press [＞ Next].
   ▷ The dialog for the initial password appears, continue with step 5.

4. If [Enable] **is switched off**: Press [🖫 Save].
   ▷ The workflow step [User management] is completed with the status "Done". The next step with the status "Open" becomes active and is selected in the workflow.

5. Assign the password for the user <admin> and save.
   ▷ User management is activated. The workflow step [User management] is completed with the status "Locked".

6 Main menu overview

6.1 Operating

Menu: [Main menu] ➡ [Operating]

Operating
- **Application 1; e.g.: Weighing**

   See the operating instructions of the application.
- **Application 2; e.g.: Counting + Totalizing**

   See the operating instructions of the application.

6.2 Data

Menu: [Main menu] ➡ [Data]

Data
- **Example: Products**

   See the operating instructions of the application.

6.3 Reports

Menu: [Main menu] ➡ [Reports]

Reports
- **e.g.: Weighings**

   See the operating instructions of the application.
- **e.g.: GMP series**

   See the operating instructions of the application.
- **Example: Delete all reports**

   See the operating instructions of the application.
- **Display alibi memory**
   - **Search for sequence number**

      See Search for sequence number.
   - **Search for date**

      See Search for date.
   - **Browse alibi memory**

      See Browse alibi memory.
   - **Display alibi records**

      See Display alibi records.

6.4   User list

Menu: [Main menu] ➜ [User list]

User list

├ **admin**

    This user cannot be deleted.
    Additional functions via buttons.

├ **everyone**

    This user cannot be deleted.
    Additional functions via buttons.

├ **User ..n**

    See Add/edit users.

6.5   Messages

Menu: [Main menu] ➜ [Messages]

Messages

├ **Alarms**

    See Alarms.

├ **Events**

    See Events.

6.6   Settings

Menu: [Main menu] ➜ [Settings]

Settings

├ **Application settings**

    For more information, see the operating instructions of the application.

├ **System**

    ├ **Operating & display**

        See Operating & display.

    ├ **Language & keyboard layout**

        See Language & keyboard layout.

    ├ **Date & time**

        ├ **Current date & time**

            See Current date & time.

        ├ **Time source**

            See Time source.

        ├ **Date & time format**

            See Date & time format.

– **CENTRAL key**

See CENTRAL key.

– **Licenses**

See Licenses.

– **Customizing**

See Customizing.

– **Weighing**

– **Legal for trade**

See Legal for trade settings.

– **Weighing points**

See Weighing points.

– **Alibi memory**

See Alibi memory settings.

– **Interfaces**

– **Network settings**

– **Host name and certificate**

See Host name and certificate.

– **LAN**

See LAN settings.

– **WLAN***

See WLAN settings.

– **WLAN access point***

See WLAN access point settings.

– **Network services and protocols**

See Network services and protocols.

– **Network shares**

See Network shares.

– **Printer**

See Printers.

– **Input devices**

– **Bluetooth devices***

See Activate Bluetooth devices.

– **External keyboard**

See External keyboard.

– **Application barcode scanner**

See Application barcode scanner.

– **Test input devices**

See Test input devices.

- **Serial communication**
  - **Remote display protocol (PR 5110)**

    See Remote display protocol.
  - **SBI**

    See SBI protocol.
  - **SMA**

    See SMA protocol.
  - **Modbus-RTU**

    See Modbus-RTU protocol.
  - **xBPI**

    See xBPI protocol.
- **Inputs & outputs**
  - **Digital**
    - **Inputs**

      See Configure digital inputs.
    - **Outputs**

      See Configure digital outputs.
  - **Analog**
    - **Inputs**

      See Configure analog inputs.
    - **Outputs**

      See Configure analog outputs.
  - **Signal tower (USB)**

    See Signal tower (USB).
  - **Modbus-TCP I/O modules**

    See Modbus-TCP I/O modules.
- **Fieldbus**

  See Fieldbus settings.
- **Bluetooth***

  See Enable Bluetooth.

– **User management**

    – **User Management - Activate/Deactivate**

      See Activate user management/Deactivate user management.

    – **Settings**

      See Settings.

    – **User roles**

      See User roles.

– **Device setup workflow**

  See Device setup (with workflow).

*for NICC only

6.7 Service

Menu: [Main menu] � [Service]

Service

– **Minebea Service functions**

    – **Service contact**

      See Service contact.

    – **Service lock***

      See Service lock.

    – **TMS Pro scale data**

      See TMS Pro scale data.

    – **Create service report**

      See Create service report.

    – **Reset suspend battery data**

      See Reset suspend battery data.

    – **Configure xBPI scale**

      See Connection settings (xBPI).

– **Print jobs**

  See Print jobs.

– **System**

    – **Alibi maintenance**

      See Alibi maintenance.

    – **Backup & restore**

      See Backup & restore.

    – **Update software**

      See Update software.

- **Test hardware**

  See Test hardware.
- **Export and import databases**

  See Export and import databases.
- **Format SD card/USB stick**

  See Format SD card/USB stick.
- **Shut down & power off**

  See Shut down and switch off the indicator.
- **Factory reset**

  See Performing a factory reset on the indicator.

*only in some regions

6.8   Info

Menu: [Main menu] ➡ [Info]

Info

- **Software version**

  See Software version.
- **System status**

  See System status.
- **Hardware status**

  See Hardware status.
- **Hardware components and I/O options**

  See Hardware components and I/O options.
- **Modbus-TCP I/O modules**

  See Modbus-TCP I/O modules.
- **Network status**

  See Network status.
- **Bluetooth devices***

  See Bluetooth devices.
- **Alibi memory status**

  See Alibi memory status.
- **Weighing points**

  See Weighing points.
- **Service contact**

  See Service contact.
- **Type plate**

  See Type plate.

Thread status

See Thread status.

*for NICC only

7 Menu description

7.1 General information

The main menu is displayed by pressing the MENU key ☰ .

The main menu contains the following items:
– Operating
– Data
– Reports
– User list
– Messages
– Settings
– Service
– Info

7.2 Operating

> **Hinweis:** The menu item [Operating] is disabled if the user does not have the necessary permission (OP-AP).

Menu: [Main menu] ➝ [Operating]

The menu items for starting weighing operations (e.g., "Weighing") are application-specific. Refer to the operating instructions of the application for details.

7.3 Data

> **Hinweis:** The menu item [Data] is disabled if the user does not have the necessary permission (DAT-E or DAT-V).

Menu: [Main menu] ➡ [Data]

The menu items for displaying and editing application data (e.g., products) are application-specific. Details can be found in the application manual.

7.4 Reports

> **Hinweis:** The menu item [Reports] is disabled if the user does not have the necessary permission (DAT-E, DAT-V or ALIBI).

Menu: [Main menu] ➡ [Reports]

The following menu items appear:
– The menu items for displaying report data (e.g., weighings) are application-specific. Details can be found in the application manual.
– [Alibi memory], see Display alibi memory.

7.4.1 Display alibi memory

> **Hinweis:**
>
> The menu item [Alibi memory] is disabled if the license for the alibi memory is not available.

Menu: [Reports] ➡ [Alibi memory]

The following menu items appear:
– Search for sequence number
– Search for date
– Browse alibi memory

7.4.1.1   Search for sequence number

This menu item can be used to search for an alibi record with a known sequence number.

1. Open [Search for sequence number].
    ▷   An input window for entering a sequence number appears.

2. Enter the required sequence number and confirm with [✓ OK].
    ▷   The record is displayed, see Display alibi records.

7.4.1.2   Search for date

This menu item can be used to search for an alibi record with a known date.

1. Open [Search for date].
    ▷   An input window for entering a date appears.

2. Enter the required date and confirm with [✓ OK].
    ▷   The first alibi record for the search date is displayed, see Display alibi records.

7.4.1.3 Browse alibi memory

The entire alibi memory can be searched in this menu item.
Under [Browse alibi memory] a parameter view opens for selecting a date.

Parameter	Type	Description
Year	Selection	Available options: All years for which records are available in the alibi memory. The number of records for the year is also shown, e.g., "2023 150 records". Default: Year of the last alibi record
Month	Selection	Available options: All months from the selected year for which records are available in the alibi memory. The number of records for the month is also shown, e.g., "07.2023 87 records". Default: Month of the last alibi record
Day	Selection	Available options: All days from the selected year and month for which records are available in the alibi memory. The number of records for the date is also shown, e.g., "17.07.2023 36 records". Default: Date of the last alibi record

Select the required date (year, month, day) and press [🔍 Search] to display the first alibi data record for the search date, see Display alibi records.

7.4.1.4 Display alibi records

ⓘ	A	›0‹ ⊻	0.0 kg	admin English	📶 Ⅳⓒ 01.04.2025 09:33:08

alibi record 1/6

Date	17.03.2025
Time	09:51:49
Sequence number	1
WP serial number	748178123
B	+1.453 kg
OBDT	+1.453 kg

✕ Close	⟪ 10	‹ Back	› Next	⟫ 10

The fields of an alibi record are displayed in rows.

If the alibi record is called up via [Search for date] or [Browse alibi memory], the (sequential number)/(number of records) for the selected date is displayed in the info line on the right.

> **Hinweis:** The record with a blue border indicates that the data has been read from the alibi memory and has not been changed.

> **Hinweis:** Non-verifiable weight values are indicated by △ .

Field	Description	Note
Date	Date of the displayed record	Always shown
Time	Time of the displayed record	Always shown
Sequence number	Sequence number of the displayed record	Always shown
WP serial number	Serial number of the weighing point	Always shown
Weight values	Weight type (see Weight types), weighing point (e.g.: A), and measured weight value	The type and number of weight types listed are application-specific.

Taskbar

Button	Description
✕ Close	Close the view.
≪ 10	Scroll back 10 records (within the selected date).
	If the first record is reached again, the last one is displayed.
‹ Previous	Scroll back 1 record (within the selected date).
	If the first record is reached again, the last one is displayed.
› Next	Scroll forward 1 record (within the selected date).
	If the last record is reached, the first one is displayed.
≫ 10	Scroll forward 10 records (within the selected date).
	If the last record is reached, the first one is displayed.

7.5   User list

⚠ **VORSICHT**

Warning: danger of unauthorized access.
Risk of data manipulation without the operator's knowledge.
▶ Activate the user management of the device to protect it from unauthorized access.
▶ Do not enter any personal data in the user list.
▶ Always use non-personalized user names to avoid identifying individuals.

Hinweis:
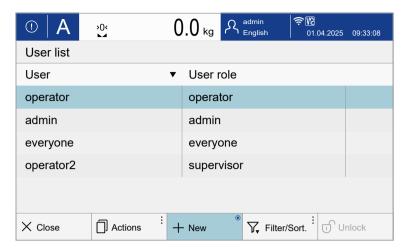
The menu item [User list] is disabled if
– user management is deactivated.
– the user does not have the necessary permission (UL-E or UL-V).

Menu: [Main menu] ➔ [User list]

A table view with the existing users appears.

Permissions

The following permissions must be enabled for the described functions (see also User roles).

ID	Permission	Function
UL-V	User list – View	Open table view and view users
UL-E	User list – Edit	Open table view and add/edit users
UL-L	User list – Unlock	Unlock user
UM-E	User management – Edit	Assign user role

Column description

Parameter	Description
User	User login name
User role	Role assigned to the user. The role determines the available permissions.
Current status	⊕ User locked ✕ User inactive

Taskbar

Button	Description
✕ Close	Close the view.
▢ Actions	Button group with actions for editing/deleting/copying a user.
+ New	Add user, see Add/edit users.
▽ Filter/Sort.	Button group, see description below
☐ Unlock	Unlock user. Activated if user is locked (max. number of password entries for user login has been exceeded).

Button group ▽ Filter/Sort.

Button	Description
✕ Inactive users	Only show inactive users.
☐ Locked users	Only show locked users.
▴▾ User name	Sort by user name in descending/ascending order.
▽ User name	Filter by user name. An input field for a text-based search is displayed (including partial string).
▽ Reset	Reset all filters.

7.5.1 Users <admin> and <everyone>

The users <admin> and <everyone> are created automatically when user management is activated.
These users cannot be deleted or deactivated. In addition, the role assignment of these users cannot be changed.

User <admin>
– is initially created when user administration is activated (with password assignment).
– has the user role <admin>, which always has all permissions (unless restricted by the service lock, see Service lock).
– is the only user that can deactivate user management.
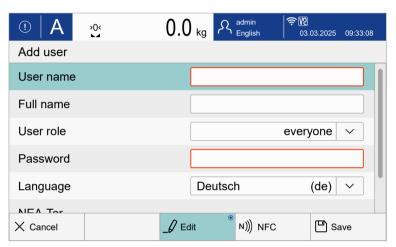
User <everyone>

- – is initially created when user administration is activated (without password).
- – has the user role <everyone>, whose permissions can be modified (see User roles)
- – is "logged in" to the system if no user is logged in (e.g., after user logout).

7.5.2 Add/edit users

[+ New] or [⌀ Edit] will display a parameter view.

⊙	A	›0‹	0.0 kg	admin English	03.03.2025 09:33:08
Add user					
User name					
Full name					
User role		everyone	∨		
Password					
Language		Deutsch (de)	∨		
NFC Tag					
✕ Cancel		⌀ Edit	N))) NFC	💾 Save	

Parameter	Type	Description
User name	Input	Name for user login that cannot be changed subsequently.
Add. info	Input	Additional information
User role	Selection	Available options: – All user roles, see User roles – everyone (default), must be changed.
Password	Input	Concealed display Pressing [⌀ Edit] displays the dialog for the initial password.
Language	Selection	Available options: – System language (default) – Deutsch (de) – English (en) – Other languages, see Language & keyboard layout.
NFC tag	Display	Serial number of the NFC tag, optional
Active	Switch	Switched on ⬤ (default)

Parameter	Type	Description
		If switched off ◎◯ , the user can no longer log in.
		Hinweis: For the users <admin> and <everyone>, the parameter is deactivated and switched on ⊂◉ .

"NFC" button

The [ᴺ⁾⁾⁾ NFC] button can be used to assign an NFC tag to the user.
A dialog for reading in (and, if necessary, subsequently removing) an NFC tag appears. If the user has been assigned an NFC tag, this can be used to log in directly (see User login).

7.5.3   Dialog for initial password

A parameter view opens with the following parameters:

Parameter	Type	Description
Password	Input	Concealed display
New password again	Input	Concealed display

The inputs are checked to determine whether
–   the [Min. password length] (see user management – Settings) is adhered to.
–   the entered passwords match.

7.6   Messages

Menu: [Main menu] ➜ [Messages]

The following menu items appear:
–   Alarms
–   Events

7.6.1 Alarms

The indicator has an alarm manager with the following properties:
- All alarms have the status [On] or [Off].
- Alarms may have to be acknowledged by the user (this depends on the alarm).
- Alarms are classified according to their severity.

> **Hinweis:**
>
> If there are alarms with the severity [Warning], [Error] or [Fatal error], this is also displayed in the header, see Header.
>
> In this case, the [🛈 Alarms] button appears in the menu window; this can be used to display the alarm list directly.
>
> The list of alarms can be found in Alarms.
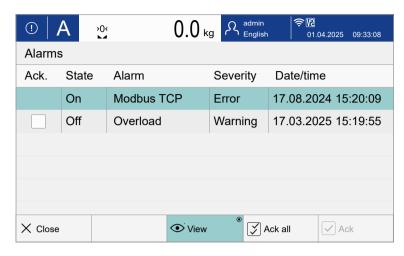
Permissions

The following permissions must be enabled for the described functions (see also User roles).

ID	Permission	Function
	None	Open table view and view alarms (including details)
OP-AP	Start and operate application	Acknowledge alarms
SS-E	System settings – Edit	Acknowledge alarms
SERV	Service	Acknowledge alarms

Menu: [Messages] → [Alarms]

Navigating to [Alarms] or pressing the [🔴 Alarms] button brings up a table view with the active alarms.

Ack.	State	Alarm	Severity	Date/time
	On	Modbus TCP	Error	17.08.2024 15:20:09
☐	Off	Overload	Warning	17.03.2025 15:19:55

The alarms are sorted in descending order by date/time.

Column description

Parameter	Description
Ack.	No icon: Alarm does not have to be acknowledged. ☐ : Alarm must be acknowledged. ☑ : Alarm has been acknowledged.
Status	On: Alarm is active. Off: Alarm is no longer active but still needs to be acknowledged by the operator.
Alarm	Alarm name

Parameter	Description

Severity	Severity of the alarm:
	– Debug:
	   – internal message
	   – no acknowledgment required
	– Info:
	   – Information
	   – no acknowledgment required
	– Warning:
	   – A problem has been detected; the function can be continued.
	   – Display in the header (yellow)
	   – Optionally with acknowledgment
	– Error:
	   – A problem has been detected that prevents the function from continuing.
	   – Display in the header (red)
	   – Optionally with acknowledgment
	– Fatal error (Fatal)
	   – A problem has been detected that makes operation of the entire indicator impossible.
	   – Display in the header (red)
	   – Optionally with acknowledgment

Date/time	Date and time of the alarm

Taskbar

Button	Description
✕ Close	Close the view.
👁 View	Open user dialog with details of the selected alarm.
☑ Ack all	Acknowledge all alarms in the list.
☑ Ack	Acknowledge selected alarm.

7.6.2   Events

The indicator saves general events in an event log.
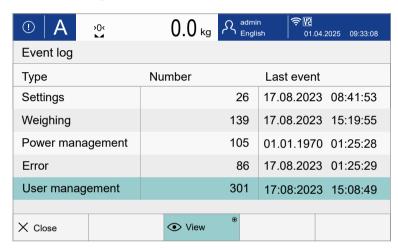
The event log differentiates between the following event types:
– Settings
– Weighing
– Power management
– Errors
– User management

Individual events can be displayed for each type.
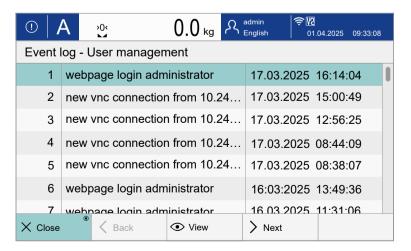
Menu: [Messages] → [Events]

A table view opens.

| ⚠ A | ›0‹ ⤓ | | | 0.0 kg | 👤 admin English | 🛜 Ⓥ | 01.04.2025 | 09:33:08 |

Event log

Type	Number	Last event	
Settings	26	17.08.2023	08:41:53
Weighing	139	17.08.2023	15:19:55
Power management	105	01.01.1970	01:25:28
Error	86	17.08.2023	01:25:29
User management	301	17:08:2023	15:08:49
✕ Close		👁 View ◉	

For each event type, the number of events and the date/time of the last event is displayed.

Select the required event type and press [👁 View].
A table view opens.

| ⚠ A | ›0‹ ⤓ | | | 0.0 kg | 👤 admin English | 🛜 Ⓥ | 01.04.2025 | 09:33:08 |

Event log - User management

1	webpage login administrator	17.03.2025 16:14:04
2	new vnc connection from 10.24...	17.03.2025 15:00:49
3	new vnc connection from 10.24...	17.03.2025 12:56:25
4	new vnc connection from 10.24...	17.03.2025 08:44:09
5	new vnc connection from 10.24...	17.03.2025 08:38:07
6	webpage login administrator	16:03:2025 13:49:36
7	webpage login administrator	16.03.2025 11:31:06

| ✕ Close ◉ | ‹ Back | 👁 View | › Next | |

All events are displayed for the selected event type along with the date/time. The events are sorted in descending order by date/time.

Taskbar

Button	Description
✕ Close	Close the view.
‹ Previous	Scroll back 100 events (if available).
👁 View	Open user dialog with details of the selected event.
› Next	Scroll forward 100 events (if available).

7.7 Settings

> **Hinweis:** The menu item [Settings] is disabled if the user does not have the necessary permission (SS-E/-V, WS-E/-V or UM-E/-V).

Menu: [Main menu] ➜ [Settings]

The following menu items appear:
– Application settings
– System settings
– Weighing
– Interfaces
– User management
– Device setup (with workflow)

7.7.1 Application settings

> **Hinweis:** The menu item [Application settings] is disabled if the user does not have the necessary permission (SS-E or SS-V).

Menu: [Settings] ➜ [Application settings]

The menu items for the application settings are application-specific.
For more information, see the application manual.

7.7.2   System settings

> **Hinweis:** The menu item [System settings] is disabled if the user does not have the necessary permission (SS-E or SS-V).

The device-related settings are configured in this menu item.

Menu: [Settings] ➞ [System]

The following menu items appear:
– Operating & display
– Language & keyboard layout
– Date & time
– CENTRAL key
– Licenses
– Customizing

Permissions
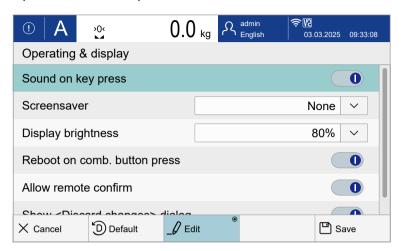
The following permissions must be enabled for the described functions (see also User roles).

ID	Permission	Function
SS-V	System settings – View	Open menu items under [Settings] ➞ [System] and view parameter settings.
SS-E	System settings – Edit	Open menu items under [Settings] ➞ [System] and edit parameter settings.

7.7.2.1 Operating & display

Menu: [System] → [Operating & display]

A parameter view opens.

⚠	A	›0‹ ⌄		0.0 kg	👤	admin English	🛜 🆅🅲	03.03.2025	09:33:08
Operating & display									
Sound on key press									🔘
Screensaver						None			⌄
Display brightness						80%			⌄
Reboot on comb. button press									🔘
Allow remote confirm									🔘
Show <Discard changes> dialog									🔘
✕ Cancel		Ⓓ Default		🖉 Edit				🖫 Save	

Parameter	Type	Description
Sound on key press	Switch	Signal sound on key press 🔘 on (default)
Screensaver	Selection	Available options: – None (default) – After 1 minute – After 5 minutes – After 10 minutes – After 30 minutes Once the screensaver is switched on, operation is only possible once a key has been pressed and, if necessary, a password has been entered, see also User roles.
Brightness of the display	Selection	Available options: 10%, 20%...100%, 80% (default)
Reboot on comb. button press	Switch	🔘 on (default) The key combination consists of the left soft key and the CENTRAL key. A restart without suspend is initiated.

Parameter	Type	Description
Allow remote confirm	Switch	◎◯ off (default) If switched off, the following functions must be confirmed locally on the device: – Software update – System restore – Factory reset Deactivated and switched off if [Subject to legal control] is switched on for a weighing point.
\<Discard changes\> dialog	Switch	◯◐ on (default) If changes have not been saved, a user dialog is displayed when exiting parameter views.
Restart after powerfail	Selection	Available options: – With resume (default) – Without resume
Restart after power key 3 s	Selection	Available options: – With resume (default) – Without resume

Restore suspend and resume

The restore function saves the working memory (suspend) and restores it after switching on (resume).

> **Hinweis:** The working memory is not saved (no suspend) if [Restart after power key 3 s] = [Without resume].

ACHTUNG

Indicator starts up without resume.
A suspend can be performed approximately once per hour. If the power supply is interrupted frequently, the indicator may start up without a restore. The latter is also the case if the working memory has not been completely saved.
▶ If this occurs frequently, it may be necessary to replace the suspend batteries (see Technical manual – Hardware).
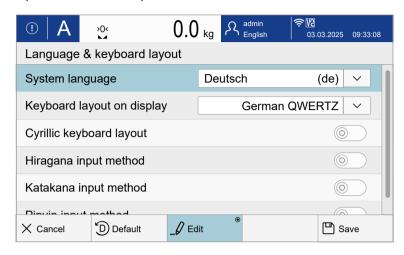
7.7.2.2 Language & keyboard layout

Menu: [System] → [Language & keyboard layout]

A parameter view opens.

Parameter	Type	Description
System language	Selection	The system language is used – if user management is not activated and the language has not been changed. – for printouts. – as the default language for [Change language] or new users. Available options: – Deutsch (de) – English (en) – Espanol (es) – Francais (fr) – Italiano (it) – 日本語 (ja) – 中文 (zh_CN)
Keyboard layout on display	Selection	Keyboard layout for inputting text on the device. Available options: – German QWERTZ – English QWERTY (default) – French AZERTY

Parameter	Type	Description
Cyrillic keyboard layout	Switch	The user can activate a Cyrillic keyboard layout for text input. ◎ off (default)
Hiragana input method	Switch	The user can activate the hiragana input method for text input. ◎ off (default)
Katakana input method	Switch	The user can activate the Katakana input method for text input. ◎ off (default)
Pinyin input method	Switch	The user can activate the Pinyin input method for text input. ◎ off (default)
Input method to language	Switch	If switched on, an input method is selected for text input depending on the operating language: – Pinyin (if switched on) as default for operating language Chinese – Hiragana or Katagana (if switched on) as default for operating language Japanese Visible if one of the input methods is switched on. ◎ off (default)

7.7.2.3   Date & time

Menu: [System] ➡ [Date & time]

The following menu items appear:
– Current date & time
– Time source
– Date & time format

7.7.2.3.1 Current date & time

Menu: [Date & time] → [Current date & time]

A parameter view opens.

Parameter	Type	Description
Current date	Input	Date in format according to Date & time format Read-only if [Time source] = [Remote NTP server]
Current time	Input	Date in format according to Date & time format Read-only if [Time source] = [Remote NTP server]
Time zone	Selection	Time zones according to tz database Default: Berlin, Germany

7.7.2.3.2 Time source

Menu: [Date & time] → [Time source]

A parameter view opens.

Parameter	Type	Description
Time source	Selection	Available options: – Internal hardware clock (default) – Remote NTP server (Network Time Protocol)
IP address	Input	Visible if [Time source] = [Remote NTP server]. IP address of the NTP server
Last NTP server update	Display	Visible if [Time source] = [Remote NTP server]. Displays the date and time when data was last received from the NTP server.
NTP status	Display	Visible if [Time source] = [Remote NTP server]. Status of the NTP server: – Online – Timeout

"Test NTP" button

[⟳ Test NTP] can be used to test the availability of the NTP server.
The result is displayed.

7.7.2.3.3   Date & time format

Menu: [Date & time] ➔ [Date & time format]

A parameter view opens.
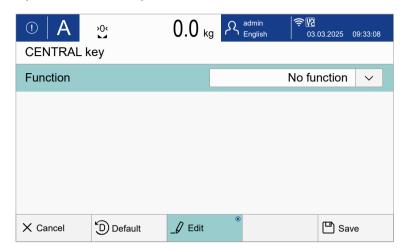
Parameter	Type	Description
Date sequence	Selection	Available options: – mmddyyyy – ddmmyyyy (day.month.year) (default) – yyyymmdd – yyyyddmm d = day, m = month, y = year
Year format	Selection	Available options: – 2 digits – 4 digits (default)
Date separator	Selection	Available options: – Slash "/" – Hyphen "-" – Period "." (default) – Space " " – Japanese 年月日 – None
Date/time separator	Selection	Available options: – Hyphen "-" – Space " " (default) – None
Time format	Selection	Available options: – 12 h (am/pm) – 24 h (default) Disabled and [24 h], when [Time separator] = [Japanese 年月日]
Time separator	Selection	Available options: – Colon ":" (default) – Hyphen "-" – Japanese 年月日 – None

7.7.2.4 CENTRAL key ☆

Menu: [System] ➡ [CENTRAL key]

A parameter view opens.

ⓘ A ›0‹ ⌄	0.0 kg	admin English	🛜 V2 03.03.2025 09:33:08
CENTRAL key			
Function		No function	⌄

| ✕ Cancel | Ɗ Default | ✐ Edit ◉ | | 💾 Save |

Parameter	Type	Description
Function	Selection	Available options: – No function (default) – Fixed function – Choice on activation
Fixed function	Selection	Available options: – Show gross/tare (default) – Toggle weighing point (only if there are multiple weighing points) – Toggle weighing unit – Toggle resolution – ISO-Cal – Show alarms – User login/language – Logout user – Show print jobs – Other options if applicable, see application manual Definition of the function for CENTRAL key Visible if [Function] = [Fixed function]

Description of the functions

Function	Description
Show gross/tare	The gross weight is shown on the display for 3 seconds. The last weight value is then displayed again. If the CENTRAL key is pressed again within the 3 seconds, the total of all tare weight values is shown on the display. In other words, each time the CENTRAL key is pressed within 3 seconds, the system toggles between gross weight and total tare. If no key is pressed for 3 seconds, the previous weight value is displayed again.
Toggle resolution	The 10x resolution of the weight value is shown on the display for 3 seconds. If the CENTRAL key is pressed again within the 3 seconds, the 100x resolution of the weight value is shown on the display. In other words, each time the CENTRAL key is pressed within 3 seconds, the system toggles between 10x and 100x resolution. If no key is pressed for 3 seconds, the previous weight value is displayed again.
Toggle weighing unit	The weight display switches permanently to the next weighing unit. When the last unit is reached, the first unit is displayed again. The weighing units are defined under Weight units (analog)/Weight units (xBPI).

7.7.2.5   Licenses

The available licenses for functions and application programs are activated in this menu item.

> **Hinweis:** The licenses consist of the code and a check number for the serial number of the device. If required, the license details can be requested from Minebea Intec Sales/customer service.

> **Hinweis:**
>
> –   Licenses cannot be changed if the indicator is subject to legal control*.
>
> –   Changes to the licenses only take effect after [🖫 Save] and restarting the device.
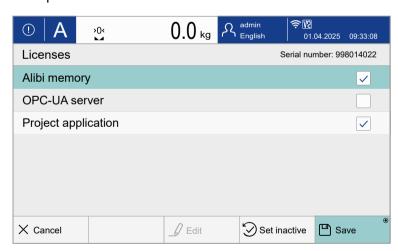
* The indicator is subject to legal control if [Subject to legal control] is enabled for at least one weighing point AND a weighing point is disabled OR the menu lock switch (CAL-1) is closed.

Menu: [System] ➡ [Licenses]

A table view is displayed with the licenses registered in the device.

Example:

Description

Field	Description
Licenses	List of the licenses registered in the device: – Alibi memory – OPC-UA server – Project application Needed for individual programming of the device. – Additional application licenses if applicable (for Minebea Intec standard applications, e.g., Basic)
Status	☑ License is activated.
	☐ License is inactive.
Serial number	Display of the device serial number Needed to generate the license code.

Activate license

1. Select inactive license in the table and press [🖊 Edit].

   ▷ A parameter view is displayed for code entry.

2. Enter the [Code] for the serial number of the device and the selected license.

3. Enter the [Check number] for the serial number of the device and the selected license.

4. Press [✓ OK] to confirm the entered license data.

   ▷ The license data is checked. If correct, the license is activated, otherwise an error message appears.

Deactivate license

5. Select active license in the table.

6. Press [↺ Set inactive] and confirm the user dialog.

   ▷ The license is deactivated.

7.7.2.6   Customizing

Menu: [System] ➜ [Customizing]

A parameter view opens.

Parameter	Type	Description
Show CPU load	Switch	Available options: – ⬤ on – ◯ off (default) See Header.
Allow customizing	Switch	Available options: – ⬤ on – ◯ off (default) If switched on, adjustments can be made in the device.
Upload software from miScript	Switch	Available options: – ⬤ on – ◯ off (default) Visible if [Allow customizing] has been switched on. If switched on, miScript can be used to load application code directly into the device.
Upload print files	Switch	Available options: – ⬤ on – ◯ off (default) Visible if [Allow customizing] has been switched on. If switched on, print files can be loaded into the device with miLabel or via the web server.

Parameter	Type	Description
Upload files from web server	Switch	Available options: – ⬤ on – ⬤ off (default) Visible if [Allow customizing] has been switched on. If switched on, language files (see Upload language files) and print files (see Upload print files) can be loaded directly into the device via the web server.

7.7.3 Weighing

> **Hinweis:** The menu item [Weighing] is disabled if the user does not have the necessary permission (WS-E or WS-V).

This menu item is used to configure the settings relevant to verification and to set up the weighing points (scales).

Menu: [Settings] ➡ [Weighing]

The following menu items appear:
– [Legal for trade]*, see Legal for trade settings
– [Weighing points], see Weighing points
– [Alibi memory], see Alibi memory settings

*if supported by the device configuration

Permissions

The following permissions must be enabled for the described functions (see also User roles).

ID	Permission	Function
WS-V	Weighing point settings – View	Open menu items under [Settings] ➜ [Weighing] and view parameter settings.
WS-E	Weighing point settings – Edit	Open menu items under [Settings] ➜ [Weighing] and edit parameter settings.
WS-C	Weighing point adjust/calibrate	Adjust weighing point. Perform ISO-Cal. Set preload. Perform linearization.

7.7.3.1 Legal for trade settings

> **Hinweis:**
>
> The legal for trade settings cannot be changed if
> –   the menu lock switch (CAL-1) is closed.
> –   at least 1 weighing point is locked.
>
> The legal for trade settings apply across the board to all weighing points installed.
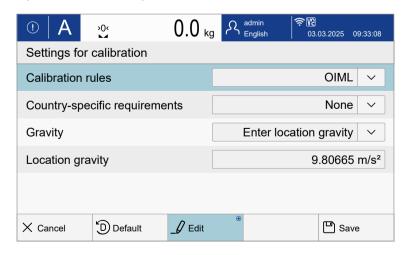
Menu: [Weighing] ➜ [Legal for trade]

A parameter view opens.

Parameter	Type	Description
Standard (Legal for trade reg.)	Selection	Available options: – None (default) – OIML – NTEP The standard to be applied is defined.
Country-specific requirements	Selection	Available options: – None (default) – Germany, cannot be selected for [NTEP] – India, cannot be selected for [NTEP] – China, cannot be selected for [NTEP] – Brazil, cannot be selected for [NTEP] Select a country for the country-specific requirements for the selected standard (Legal for trade reg.).
Gravity	Selection	Available options: – Not used (default) – Enter location gravity – Calculate by gravity zone, see Calculating gravity by gravity zone – Calculate by location, see Calculating gravity by location The gravity is used to adjust the counts of the weighing electronics.
Location gravity	Input	Possible values: – $9.70000...9.90000$ m/s^2 – 9.80665 m/s^2 (normal DIN 1305) (default) Gravity at the scale location in m/s^2 Visible if [Gravity] = [Enter location gravity].
Calculated gravity	Display	Gravity calculated from gravity zone or location. Visible if [Gravity] = [Calculate by gravity zone] or [Calculate by location].

7.7.3.1.1 Calculating gravity by gravity zone

To be selected under [Gravitation] ➜ [Calculate by gravity zone]

1. Press [▦ Gravitation].
   ▷ A parameter view opens.

Parameter	Type	Description
Latitude Limit w1	Input	Possible values: – -90.0°...+90.0° in increments of 0.5° – 0.0° (default)
Latitude Limit w2	Input	Possible values: – -90.0°...+90.0° in increments of 0.5° – 0.0° (default)
Altitude Limit a1	Input	Possible values: – -1000...+10000 m in increments of 100 m – 0 m (default)
Altitude Limit a2	Input	Possible values: – -1000...+10000 m in increments of 100 m – 0 m (default)

2. Enter the parameters for the gravity zone used and confirm with
   [✓ OK].
   ▷ The gravity for the gravity zone is calculated and displayed with the parameter [Calculated gravity].

7.7.3.1.2   Calculating gravity by location

To be selected under [Gravitation] ➜ [Calculate by location]

1. Press [▦   Gravitation].
   ▷   A parameter view opens.
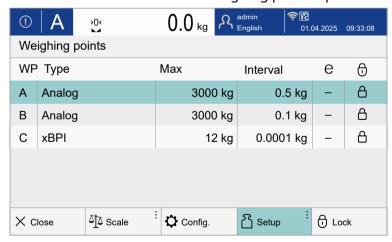
Parameter	Type	Description
Latitude w	Input	Possible values: – -90.0°...+90.0° in increments of 0.5° – 0.0° (default)
Altitude a	Input	Possible values: – -1000...+10000 m in increments of 100 m – 0 m (default)

2. Enter the parameters for the location used and confirm with [✓   OK].
   ▷   The gravity for the location is calculated and displayed with the parameter [Calculated gravity].

7.7.3.2   Weighing points

Menu: [Weighing] ➜ [Weighing points]

A table view with the available weighing points opens.

WP	Type	Max	Interval	e	🔒
A	Analog	3000 kg	0.5 kg	–	🔒
B	Analog	3000 kg	0.1 kg	–	🔒
C	xBPI	12 kg	0.0001 kg	–	🔒

Close | Scale | Config. | Setup | Lock

Column description

Parameter	Description	
WP	ID of the weighing point NICM/NICC: only A NICL: A, B, C, D	
Type	Type of the weighing point Available options: – Analog – xBPI – PR-Net – Compound (only with NICL)	
Max	Maximum load(s) (Max) of the weighing point	
Scale interval	Scale interval(s) of the weighing point	
e	Displays:	
	✓	[Subject to legal control] is switched on for the weighing point.
	—	[Subject to legal control] is switched off for the weighing point.
🔓	Displays:	
	✓	[Lock settings] is switched on for the weighing point.
	—	[Lock settings] is switched off for the weighing point.
	🔒	Menu lock switch (CAL-1) is closed.

Further settings for the weighing points are configured via specific buttons and button groups in the taskbar.

Taskbar

Button	Description
✕ Close	Close the view.
⚖ Scale	Button group for creating a weighing point The assignment of the button group depends on the type of weighing point selected.
✿ Config.	Button group for configuring a weighing point The assignment of the button group depends on the type of weighing point selected.
🗁 Setup	Button group for setting up (adjusting/calibrating) a weighing point The assignment of the button group depends on the type of weighing point selected.
🔓 Lock	Lock weighing point, see Lock/unlock weighing point.

7.7.3.2.1   Analog weighing point

7.7.3.2.1.1   Button groups (analog)

For analog weighing points, i.e., for scales that are connected to analog weighing electronics, the button groups contain the following functions.

Button group ⚖ **Scale**

Button	Description
🗑 Delete	Remove weighing point (with user dialog)
	Deactivated if
	– the menu lock switch (CAL-1) is closed.
	– the weighing point is disabled.
	– the weighing point is a complete scale.
	– the weighing point is part of a compound WP.
+ New	Add weighing point, see Add analog weighing point.
	Deactivated if
	– the menu lock switch (CAL-1) is closed.
	– the maximum number of weighing points is reached (NICC/NICM: 1, NICL: 4).
▤ Specification group	Visible if the scale is a complete scale, see Specification blocks (analog).
↕ Resolution	Visible if the scale is not a complete scale, see Scale resolution (analog).
⚏ Scale definition	See Scale definition (analog).
e Legal parameters	See Legal parameters (analog).

Button group ⚙ **Config.**

Button	Description
⚖ ISO-Cal settings	See ISO-Cal settings (analog).
[ ] Weight units	See Weight units (analog)
X̄ Measurement	See Measurement parameters (analog).
⊞ Metrology	See Metrology parameters (analog).

Button group ⬛ **Setup**

Button	Description
⬛ Linearization	See Linearization (analog).
⬛ Preload	Visible if [Max. preload] is > 0% or [Reduce Max by preload] is switched on. See Set preload (analog).
⬛ ISO-Cal	Visible if [None] was **not** selected under [ISO-Cal function]. See Perform ISO-Cal (analog).
⬛ Adjust	See Adjust the scale (analog).

7.7.3.2.1.2 Add analog weighing point

> **Hinweis:**
>
> An analog weighing electronics board must be installed in the indicator.
> – NICC/NICM: Slot 1
> – NICL: Slot 1...3
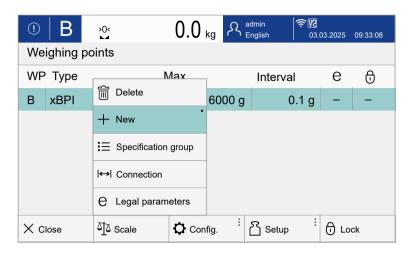
An analog weighing point is added in a workflow.
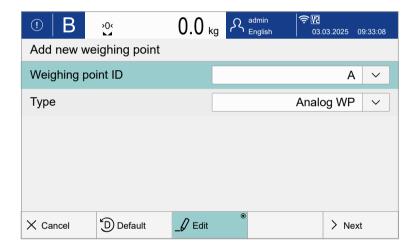
Overview
– Select weighing point ID and type.
– Configure legal parameters, see Legal parameters (analog).
– Configure scale definition, see Scale definition (analog).
– Configure scale resolution, see Scale resolution (analog).
– Adjust scale, see Adjust the scale (analog).

1. Open the [⚖ Scale] button group.

⊙	**B**	›0‹	0.0 kg	admin English	📶 V2 03.03.2025 09:33:08

Weighing points

WP	Type		Max	Interval	e	🔒
B	xBPI		6000 g	0.1 g	–	–

🗑 Delete
+ New
☰ Specification group
|↔| Connection
e Legal parameters

✕ Close	⚖ Scale	⚙ Config. ⋮	🛠 Setup ⋮	🔒 Lock

2. Select [+ New].
   ▷ A parameter view opens.

⊙	**B**	›0‹	0.0 kg	admin English	📶 V2 03.03.2025 09:33:08

Add new weighing point

Weighing point ID	A ⌄
Type	Analog WP ⌄

✕ Cancel	⟳ Default	✎ Edit		› Next

3. Select the weighing point ID:

   NICM/NICC: Only weighing point A is available.
   NICL: Weighing points A, B, C, D are available.
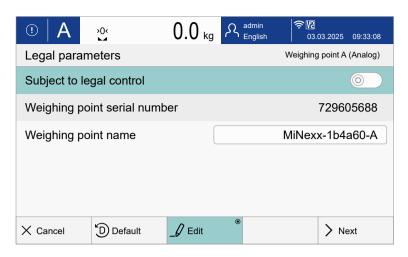
   For an analog weighing point
   – select [A] if the analog weighing electronics are installed in slot 1, or
   – select [B] if the analog weighing electronics are installed in slot 2, or
   – select [C] if the analog weighing electronics are installed in slot 3.

   IDs that have already been assigned are deactivated in the selection.
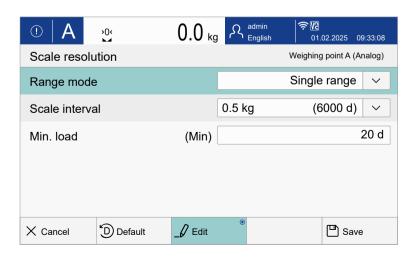
4. Select the type [Analog WP].

5. Press [› Next].
   ▷ A parameter view opens.
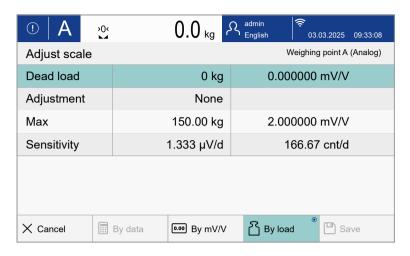
6. Configure the parameters, see Legal parameters (analog).

7. Press [> Next].

   ▷ A parameter view opens.

8. Configure the parameters, see Scale definition (analog).

9. Press [> Next].

   ▷ A parameter view opens.

10. Configure the parameters, see Scale resolution (analog).

11. Press [✓ Create].

    ▷ The weighing point is created and a table view opens.

⊙	**A**	›0‹ ⊻		**0.0** kg	☖ admin English	📶		03.03.2025 09:33:08

Adjust scale		Weighing point A (Analog)
Dead load	0 kg	0.000000 mV/V
Adjustment	None	
Max	150.00 kg	2.000000 mV/V
Sensitivity	1.333 µV/d	166.67 cnt/d

✕ Cancel	▦ By data	0.00 By mV/V	⬚ By load ◉	🖫 Save

12. Define the dead load and adjustment, see Adjust the scale (analog).

13. Press [🖫 Save] to end the workflow.

> **Hinweis:**
>
> The workflow can be aborted at any time by pressing [✕ Cancel].
> – All previous settings are reversed.
> – No weighing point is added.
>
> Once the weighing point has been created, the functions in the button groups (see Button groups (analog)) can be used to configure further settings or change the initial settings.
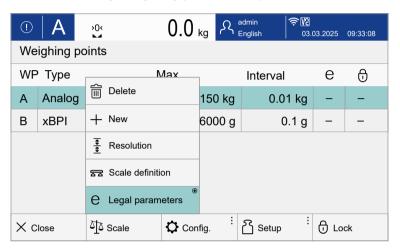
7.7.3.2.1.3 Legal parameters (analog)
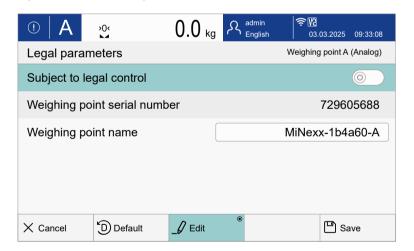
> **Hinweis:**
>
> The legal parameters cannot be changed if
> – the menu lock switch (CAL-1) is closed.
> – the weighing point is disabled.

Select an analog weighing point and open the [⚖ Scale] button group.

WP	Type	Max	Interval	e	🔓
A	Analog	150 kg	0.01 kg	–	–
B	xBPI	6000 g	0.1 g	–	–

Select [e Legal parameters].
A parameter view opens.

Legal parameters	Weighing point A (Analog)
Subject to legal control	⊙
Weighing point serial number	729605688
Weighing point name	MiNexx-1b4a60-A

Parameter	Type	Description
Subject to legal control	Switch	⬭ off (default) Switch on if the weighing point is subject to legal control. The set standard (Legal for trade reg.) and country-specific requirements then apply, see Legal for trade settings.
Complete scale	Switch	Visible and switched on if the scale is a complete scale (ex works). Restrictions then apply to certain parameters.
Weighing point serial number	Display	Serial number of the analog weighing electronics
Weighing point name	Input	Possible values: – Free text – hostname-wpid, e.g., MiNexx-1b347-A (default)

Hinweis:

[Subject to legal control]
– Disabled and switched off if no [Standard (Legal for trade reg.)] (see-
   Legal for trade settings) is switched on.
– Disabled if the scale is a complete scale.
– Disabled and switched on if the weighing point belongs to a com-
   pound WP for which [Subject to legal control] is switched on.

[Complete scale]

If switched off, this parameter can only be restored after [Factory reset] (if
a configuration for the complete scale is available from the factory).
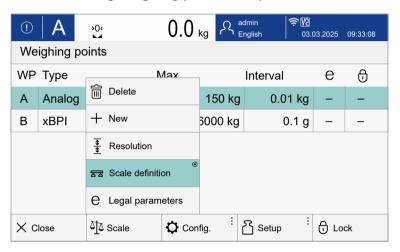
7.7.3.2.1.4   Scale definition (analog)

> **Hinweis:**
>
> The scale definition cannot be changed if
> – the menu lock switch (CAL-1) is closed.
> – the weighing point is disabled.
> – the weighing point is a complete scale.
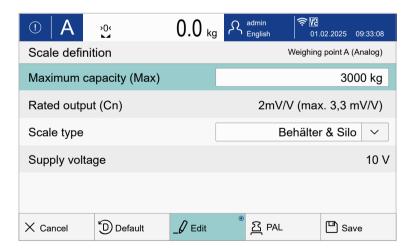
Select an analog weighing point and open the [⚖ Scale] button group.

Select [⛭ Scale definition].

A parameter view opens.
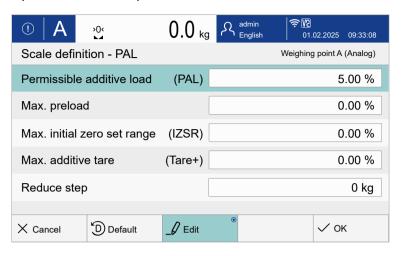
Parameter	Type	Description
Maximum capacity (Max)	Input	Available weight units: – OIML: g, kg, t – NTEP: g, kg, t, lb, oz – Other: mg, g, kg, t, lb, oz – 3000 kg (default) The maximum load (Max) determines the maximum measured weight without dead load.
Rated output (C_n)	Selection	Available options: – 1 mV/V (max. 1.6 mV/V) – 2 mV/V (max. 3.3 mV/V) The rated output cannot be changed at a later stage.
Scale type	Selection	Available options: – Vessel & Silo – Platform (default) For [Vessel & Silo], [Tare/zero at power on] is not visible and is switched off.
Supply voltage	Display	Load cell supply from the analog weighing electronics (read only) – ADC-P-10V ±5 V – ADC-P-10V-EX ±5 V – ADC-P-5V ±2.5 V – ADC-P-5V-EX ±2.5 V – ADC-E-DC5 ±2.5 V

[☒ PAL] can be used to input further parameters for the scale definition. A parameter view opens.

⊙	A	›0‹ ☒		0.0 kg	☌ admin English	📶 🔢 01.02.2025 09:33:08

Scale definition - PAL — Weighing point A (Analog)

Permissible additive load	(PAL)	5.00 %
Max. preload		0.00 %
Max. initial zero set range	(IZSR)	0.00 %
Max. additive tare	(Tare+)	0.00 %
Reduce step		0 kg

✕ Cancel	↻ Default	✐ Edit		✓ OK

Parameter	Type	Description
Permissible additive load (PAL)	Input	Possible values: – 0.00...100.00% – 5% (default) Percentage value (relative to Max) that can be added to the maximum capacity (Max) without exceeding physical limits.
Max. preload	Input	Possible values: – 0.00...100.00% – 0.00% (default) Percentage value (relative to Max) that defines the maximum preload up to which the effective Max is not reduced. The value must be ≤ (PAL – max. IZSR).
Max. initial zero set range (IZSR)	Input	Possible values: – 0.00...100.00% – 0.00% (default) Percentage value (relative to Max) that defines the maximum for the initial zero set range (IZSR). The value must be ≤ (PAL – max. preload).

Parameter	Type	Description
Max. additive tare (Tare+)	Input	Possible values: – 0.00...100.00% – 0.00% (default) Percentage value (relative to Max) that defines the maximum additive tare (Tare+). The value must be ≤ PAL.
Reduce Max by preload	Switch	When switched on, the preload may be greater than the max. preload. In this case, the effective Max is reduced. ⊙◯ off (default)
Reduce step	Input	Weight step used to reduce the effective Max when the preload is greater than [Max. preload]. Visible if [Reduce Max by preload] is switched on.

Effective Max (effective maximum capacity)

Max_{eff} = Max – preload reduction + add. tare
where
Preload reduction = CEIL ((preload – max.) / reduce step) × reduce step
add. tare = MIN (current tare, Tare+R)
Tare+R = MIN ((PAL – preload – IZS – ZS), Max. Tare+)
Example:
Max = 3000 kg, max. preload = 10% (300 kg), reduce step 200 kg
Preload 250 kg → Max is not reduced
Preload 350 kg → Max is reduced to 2800 kg
Preload 501 kg → Max is reduced to 2600 kg

> **Hinweis:** Max = 3000 kg continues to be displayed in the metrology information.

7.7.3.2.1.5   Scale resolution (analog)
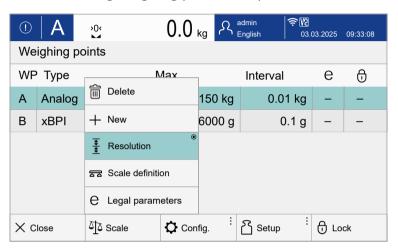
> **Hinweis:**
>
> The view is only visible if the scale is **not** a complete scale.
>
> The scale resolution cannot be changed if
> – the menu lock switch (CAL-1) is closed.
> – the weighing point is disabled.
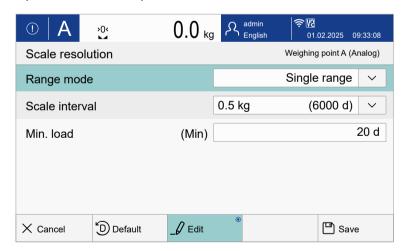
Select an analog weighing point and open the [⚖ Scale] button group.

Select [↕ Resolution].

A parameter view opens.

Parameter	Type	Description
Range mode	Selection	Available options: – Single range (for single-range scale) (default) – Multiple range (for multi-range scale) – Multi-interval (for multi-interval scale)

Additional parameters for single-range scale

Parameter	Type	Description
Scale interval	Selection	Available options: All scale intervals, for which the following applies: – $1{\times}10^x$, $2{\times}10^x$ or $5{\times}10^x$ in the weight unit of maximum capacity (Max) – The number of increments is between 100 d and 1000000 d – The scale interval is an integer divisor of maximum capacity (Max) MAX (3000 d ≤ number d ≤ 10000 d) (default) See examples and information below.
Min. load (Min)	Input	Possible values: – 0...9999999 d – 20 d (default) If [Subject to legal control] has been activated, the value is fixed at [20 d]. Number d (scale intervals) resulting in the minimum weight above which printing is permitted (see application operating instructions)

Example 1

For a scale with Max = 10 kg, the following options are available:
– 0.1 kg (100 d)
– 0.05 kg (200 d)
– 0.02 kg (500 d)
– 0.01 kg (1000 d)
– 0.005 kg (2000 d)
– 0.002 kg (5000 d)
– Default: 0,001 kg (10000 d)
– 0.0005 kg (20000 d)
– 0.0002 kg (50000 d)
– 0.0001 kg (100000 d)
– 0.00005 kg (200000 d)
– 0.00002 kg (500000 d)
– 0.00001 kg (1000000 d)

Example 2

For a scale with Max = 3000 kg, the following options are available:
– 20 kg (150 d)
– 10 kg (300 d)
– 5 kg (600 d)
– 2 kg (1500 d)
– 1 kg (3000 d)
– Default: 0.5 kg (6000 d)
– 0.2 kg (12000 d)
– 0.1 kg (30000 d)
– 0.05 kg (600000 d)

> **Hinweis:**
>
> If [Subject to legal control] is switched on:
> – The increments are identified with e (instead of d).
> – Maximum 10000 increments permitted.
> – The scale interval must be at least 0.1 g.
> – If scale interval ≥ 5 g: there must be at least 500 increments.
> – The scale interval may have a maximum of one zero at the end for OIML (e.g., 10 g) and no zeros for NTEP (e.g., 1 g).

Additional parameters for multi-range and multi-interval scale

Parameter	Type	Description
Number of ranges	Selection	Available options: – Default: 2 – 3 – 4
Min. load (Min)	Input	Possible values: – 0...9999999 d – 20 d (default) Number d (scale intervals) resulting in the minimum weight above which printing is permitted (see application operating instructions)
R1 upper limit (*Number* d)	Input	Max for range 1 The following conditions apply: – Min = 1% of Max – R1 upper limit < R2 upper limit *Number* d = RND (R1 upper limit / R1 scale interval)
R2 upper limit (*Number* d)	Input	Max for range 2 The following conditions apply: – R1 upper limit < R2 upper limit – If number of ranges = 2: R2 upper limit = Max and read only – If number of ranges > 2: R2 upper limit < R3 upper limit *Number* d = RND (R2 upper limit / R2 scale interval)

Parameter	Type	Description
R3 upper limit (*Number* d)	Input	Max for range 3 The following conditions apply: – Visible [if number of ranges] ≥ 3. – R2 upper limit < R3 upper limit – If number of ranges = 3: R3 upper limit = Max and read only – If number of ranges = 4: R3 upper limit < R4 upper limit *Number* d = RND (R3 upper limit / R3 scale interval)
R4 upper limit (*Number* d)	Input	Max for range 4 The following conditions apply: – Visible [if number of ranges] = 4. – R4 upper limit = Max and read only *Number* d = RND (R4 upper limit / R4 scale interval)
R1 scale interval	Selection	Scale interval for range 1 Available options: – See scale interval for single-range scale
R2 scale interval	Selection	Scale interval for range 2 Available options: – See scale interval for single-range scale
R3 scale interval	Selection	Scale interval for range 3 Visible if [Number of ranges] ≥ 3. Available options: – See scale interval for single-range scale
R4 scale interval	Selection	Scale interval for range 4 Visible if [Number of ranges] = 4 Available options: – See scale interval for single-range scale.

Hinweis: For multi-range and multi-interval scale

If [Subject to legal control] is switched on:
–   A maximum of 5000 increments are permitted.
–   Scale interval $d_{Rn} < d_{Rn+1} \leq 10 \times d_{Rn}$
–   Otherwise same as single-range scale

Hinweis: Specification group

If specification blocks are preset in the indicator at the factory (i.e., the indicator was delivered as a complete scale), [⊞ Spec. Block] can be used to switch directly to the selection of a specification block in order to define the scale resolution (see Specification blocks (analog).

7.7.3.2.1.6   Adjust the scale (analog)

Hinweis:

The scale adjustment cannot be changed if
–   the menu lock switch (CAL-1) is closed.
–   the weighing point is disabled.

To adjust the scale, the dead load and the voltage signal must be determined using a known weight. This can be done in several ways.

Set dead load:
–   Measurement with load: Unload the scale and use the measured signal as the dead load weight.
–   Input with mV/V: Enter a voltage signal for the dead load, if known.

Set the adjustment (once the dead load has been determined):
–   Measurement with load: Load the scale with a known weight and use the measured signal as adjustment weight. This weight does not have to correspond to the maximum capacity (Max).
–   Input with mV/V: Enter a voltage signal for a specific, known weight.
–   Smart calibration: Enter load cell data that is used to calculate the adjustment.

> **Hinweis:**
>
> Before adjustment
> – the preload is cleared (with user dialog),
> – the linearization points are cleared (with user dialog),
> – all tare memories are cleared,
> – all zeroings are cleared,
> – the adjustment gravity is cleared (gravity for the last adjustment).

Select an analog weighing point and open the [⌂ Scale] button group.

Select [⬍ Scale definition].

A table view with the available adjustment data opens.

⚠	A	›0‹	0.0 kg	admin English	🖧 03.03.2025 09:33:08
Adjust scale					Weighing point A (Analog)
Dead load		0 kg		0.000000 mV/V	
Adjustment		None			
Max		150.00 kg		2.000000 mV/V	
Sensitivity		1.333 µV/d		166.67 cnt/d	
✕ Cancel	▦ By data	0.00 By mV/V	⌂ By load ◉	💾 Save	

The table contains specific data (parameters) and buttons.

Parameter description

Parameter	Value 1	Value 2	Identifier (optional)
Dead load	*Calculated dead load weight*	*Voltage signal used for dead load*	– 🏋 Measured – ⌨ Entered
Adjustment	– None – By data – *Adjustment weight* – By mV/V	*Measured voltage signal for adjustment* (if available), otherwise empty	– 🖩 Smart Cal – 🏋 Measured – ⌨ Entered
Max	*Maximum capacity (Max)*	*Theoretical voltage signal at Max*	
Sensitivity	*Calculated sensitivity* (in µV/d)	*Calculated number* cnt/d	⚠ Sensitivity too low for [Subject to legal control]

Taskbar

Button	Function
✕ Cancel	Cancel adjustment and close the view.
🔲 By data	If row is selected for adjustment: Open "Smart Calibration" and enter the load cell data from which the adjustment is to be calculated, see Adjustment using load cell data (Smart calibration) The row is indicated with 🔲 .
⌗ By mV/V	If row is selected for dead load: Enter voltage signal for dead load. If row is selected for adjustment: Enter voltage signal for adjustment. The selected row is indicated with ⌗ (Entered).
⚖ By load	If row is selected for dead load: Set dead load. If row is selected for adjustment: Set adjustment with calibration weight. The selected row is marked with ⚖ (Measured).
💾 Save	Permanently save the adjustment data.

7.7.3.2.1.6.1. Adjustment using load cell data (Smart calibration)

The adjustment is performed using a workflow.

Overview
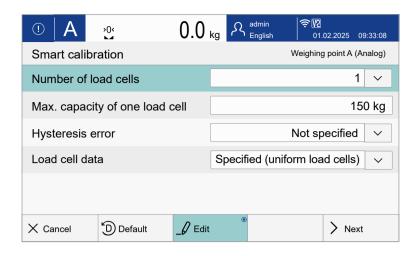
– Enter load cell parameters (quantity, max. capacity, hysteresis error)
– If hysteresis error is specified: Enter hysteresis error.

The next steps depend on the load cell data selected.
– **Specified** (uniform load cells):
    – Enter uniform load cell data (from data sheet)
    – Display the calculated input voltage for Span (mV/V)
– **Certified** (load cell-specific):
    – Enter load cell data for each load cell (from calibration certificates)
    – Display the calculated input voltage for Span (mV/V)

In Adjust the scale (analog) select the row [Adjustment] and press [🔲 With data].
A parameter view opens.

⚠	**A**	›0‹ ⌄		**0.0** kg	👤 admin English	📶 🆅🅒 01.02.2025 09:33:08

Smart calibration	Weighing point A (Analog)

Number of load cells	1 ⌄
Max. capacity of one load cell	150 kg
Hysteresis error	Not specified ⌄
Load cell data	Specified (uniform load cells) ⌄

✕ Cancel	Ⓓ Default	✎ Edit		❯ Next

Smart calibration

Parameter	Type	Description
Number of load cells	Selection	Available options: – 1…12 – 1 (default)
Max. capacity of one load cell	Input	Weight value with unit
Hysteresis error	Selection	Available options: – Specified – Not specified (default) If [Specified] is selected, correction values can be entered for the hysteresis error.
Load cell data	Selection	Available options: – Specified (uniform load cells) (default) – Certified (load cell specific)

Press [❯ Next] to apply the values.

If hysteresis error [Not specified] was selected, the load cell data can be entered as the next step.

If hysteresis error [Specified] was selected, a parameter view appears with the correction values A + B.

Hysteresis error "Specified"

Parameter	Type	Description
Correction value A (Fu)	Input	Possible values: – -0.999...0.999 – 0 (default)
Correction value B (Flin)	Input	Possible values: – -0.999...0.999 – 0 (default)

Press [⟩ Next] to apply the values.

If load cell data [Specified (uniform load cells)] was selected, the parameter view appears with the parameters under "Specified load cell data".

The load cell data to be entered can be found on the data sheet for the load cells used.

Specified load cell data

Parameter	Type	Description
Rated output (C_n)	Input	Possible values: – 0.0 mV/V...5.000000 mV/V – Rated output (C_n) from scale definition (default), see Scale definition (analog)
Output impedance	Input	Possible values: – 0.1 Ω...2000.0 Ω – 600.0 Ω (default)
Factory gravity	Input	Possible values: – 9.70000 m/s^2...9.90000 m/s^2 – 9.80665 (normal DIN 1305) (default)

If load cell data [Certified (load cell-specific)] was selected, the parameter view appears with the parameters under "Certified load cell data".
The load cell data to be entered can be found on the calibration certificate for the load cells used.
A table view appears with one row for each load cell.

Use [🖉 Edit] to enter the individual data for each load cell.

Certified load cell data

Parameter	Type	Description
Output at max. capacity	Input	Possible values: – 0.0 mV/V...5.000000 mV/V – Rated output (C_n) from scale definition (default), see Scale definition (analog)
Output impedance	Input	Possible values: – 0.1 Ω...2000.0 Ω – 600.0 Ω (default)
Calibration gravity	Input	Possible values: – 9.70000 m/s^2...9.90000 m/s^2 – 9.80665 (normal DIN 1305) (default)

Press [› Next] to apply the values.
A dialog with the calculated input voltage for Span appears.

Press [✓ OK] to accept the value.

The row for adjustment is indicated in the overview with 🖩 (see also Adjust the scale (analog).
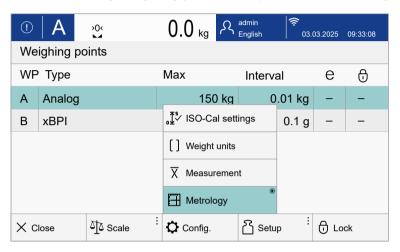
7.7.3.2.1.7   Metrology parameters (analog)
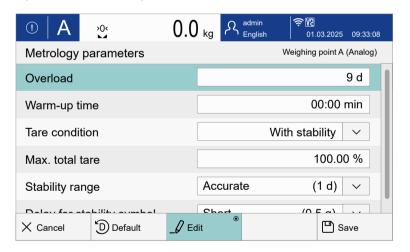
> **Hinweis:**
>
> The metrology parameters cannot be changed if
> – the menu lock switch (CAL-1) is closed.
> – the weighing point is disabled.

Select an analog weighing point and open the [✿ Config.] button group.

Select [⊞ Metrology].

A parameter view opens.

Parameter	Type	Description
Overload	Input	Possible values: – 0...9999999 d – 9 d (default) Weighing range above the maximum capacity (Max), without error message. [Subject to legal control] is switched on: Max. 9 d
Warm-up time	Input	Possible values: – 00:00...60:00 min – 00:00 min (default) Input in minutes (mm:ss) Time after switching on the device before a valid measurement can take place in [Subject to legal control] operation.
Tare condition	Selection	Available options: – Without stability – With stability (default) [Subject to legal control] is switched on: Only [With stability] can be selected
Max. total tare	Input	Possible values: – 0.00...100.00%, based on the maximum capacity (Max) – 100% (default) Maximum value of the sum of all tare memories.
Stability range	Selection	Available options: – Enter value (0.00...10.00 d) – Maximum accuracy (¼ d) – Very accurate (½ d) – Accurate (1 d) – Fast (2 d) – Very fast (4 d) – Maximum speed (8 d) Specified in days d (scale interval) As long as the weight fluctuations remain within this range, the device is determined to be stable. [Subject to legal control] is switched on: Max. 1 d

Parameter	Type	Description
Delay for stability symbol	Selection	Available options: – Enter (0.01...2.00 s) – Immediately (0.2 s) – Short (0.5 s) (default) – Middle (1.0 s) – Long (2.0 s) The parameters [Delay for stability symbol] and [Standstill range] are used to define the standstill of the scale (stable balance).
Zero set range	Selection	Available options: – Enter value (0.00...100.00%) – ±1% of Max – ±2% of Max (default) – ±5% of Max – ±10% of Max 0.00...100.00 % based on the maximum capacity (Max) Determine a ±range around the zero point determined by the dead load during adjustment or by initial zero setting; within this range – the displayed gross weight can be set to zero by pressing the zeroset button (or by a corresponding external command). – automatic zero tracking is activated. [Subject to legal control] is switched on: Max. ±2% of Max

Parameter	Type	Description

Tare/zero at power on	Selection	Available options:
		– Off (default)
		– Initial zero setting (IZS): Clears all tare memories and previous zero set
		– Set zero
		– Set zero or tare:
		  – If within zero set range: clear all tare memories and set zero.
		  – If outside zero set range: clear tare memories 2+3 and set tare memory 1.
		
		Tare/set zero when the device is switched on.
		Visible if [Scale type] = [Platform] (otherwise [Off]).

Initial zero-setting range	Selection	Available options: – Enter value (0.00...100.00%) – +1% of Max – +2% of Max (default) – +5% of Max – +10% of Max – +20% of Max 0.00...100.00 % based on the maximum capacity (Max) Range in which zero is set when the device is switched on. Visible if [Tare/zero at power on] = [Initial zero setting (IZS)]. Options can be restricted by the value of [Max. initial zero set range. (IZSR)]. [Subject to legal control] is switched on: Max. +20% of Max

Parameter	Type	Description
Zero track	Selection	Available options: – On – Off (default) Automatic zero track With zero tracking, the gross or net weight is automatically corrected to zero if the weight is stable within the zero range and the zero tracking display range. In this case, the weight is corrected at most by the zero tracking step. Once the zero tracking rate has expired, the weight is corrected again if necessary until it is zero.
Zero track mode	Selection	Available options: – Gross only: Zero tracking always acts on the gross weight. – Gross and Net: Zero tracking acts on the net weight if tared, otherwise on the gross weight (default). Visible if [Zero track] = [On]
Zero track indication range	Input	Possible values: – 0.01...10.00 d – 0.25 d (default) Relative ±range in which zero tracking is active. Visible if [Zero track] = [On] [Subject to legal control] is switched on: Max. 0.25 d
Zero track step	Input	Possible values: – 0.01...10.00 d – 0.5 d (default) Max. ±increment used to correct toward zero for each rate. Visible if [Zero track] = [On] Also see information.

Parameter	Type	Description
Zero track rate	Input	Possible values: – 0.1...25.0 s – 1 s (default) Waiting time between two successive zero tracking cycles. Visible if [Zero track] = [On] Also see information.
Set zero interval	Input	Possible values: – 0...10080 min – 0 min (default) When the zero interval > 0, monitoring of the regular zero set takes place. If zero is not set within the interval time, a warning message is displayed once the time has expired.

Hinweis:
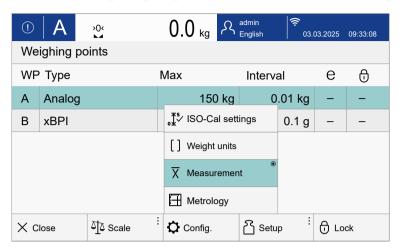
[Subject to legal control] is switched on:
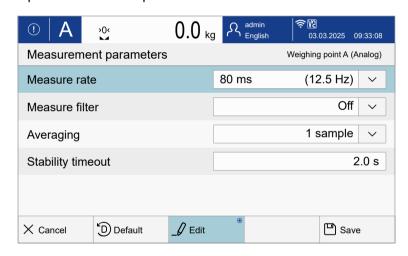
The zero tracking step and the zero tracking rate yield the correction rate:

Correction rate = zero tracking step × zero tracking rate

The correction rate must not exceed 0.5 d/s.

– The zero tracking step must be between 0.01 d and MIN (zero tracking rate × 0.5 d/s, 10.0 d)

– The zero tracking rate must be between (zero tracking step × 2.0 s/d) and 25.0 s

7.7.3.2.1.8 Measurement parameters (analog)

Select an analog weighing point and open the [✿ Config.] button group.

WP	Type	Max	Interval	e	🔓
A	Analog	150 kg	0.01 kg	–	–
B	xBPI		0.1 g	–	–

Weighing points

Header: ⚠ A ›0‹ 0.0 kg admin English 03.03.2025 09:33:08

Menu items: ISO-Cal settings · Weight units · Measurement ⊙ · Metrology

Buttons: ✕ Close · ⚖ Scale · ✿ Config. · Setup · 🔓 Lock

Select [X̄ Measurement].
A parameter view opens.

Header: ⚠ A ›0‹ 0.0 kg admin English 03.03.2025 09:33:08

Measurement parameters   Weighing point A (Analog)

Measure rate	80 ms (12.5 Hz) ⌄
Measure filter	Off ⌄
Averaging	1 sample ⌄
Stability timeout	2.0 s

Buttons: ✕ Cancel · Ⓓ Default · ✎ Edit ⊙ · 💾 Save

Parameter	Type	Description
Measure rate	Selection	Available options: – 160 ms (6.25 Hz) – 80 ms (12.5 Hz) (default) – 40 ms (25 Hz) – 20 ms (50 Hz) – 10 ms (100 Hz) can be selected if supported by the application – 5 ms (200 Hz) can be selected if supported by the application Time between two successive measurements. This results in the output frequency F_{conv} of the analog weighing electronics.
Measuring filter	Selection	Available options: – Enter value (0.10...10.00 Hz), max. $F_{conv} \times 0.4$ – Off – Minimal vibration (5.00 Hz) (default) – Normal vibration (2.50 Hz) – Strong vibration (1.00 Hz) – Extreme vibration (0.50 Hz) Limit frequency F_{cut} for the aperiodic filter
Averaging	Selection	Available options: – 1 sample (default) – 2 samples – 4 samples – 8 samples – 16 samples Block averaging over n measurements generates one measurement result every n measurements, i.e., this increases the measurement time.
Hysteresis	Selection	Available options: – Off – 1/100 d – 1/20 d (default) – 1/10 d – 1/8 d Hysteresis around the measured weight value.

Parameter	Type	Description
Stability timeout	Input	Possible values: – 0.0...25.0 s – 2.0 s (default) Time during which the system waits for stability after a tare or zero setting command before canceling the command (timeout). 0.0 s means that stability must be established immediately.

7.7.3.2.1.9   Specification blocks (analog)

> **Hinweis:**
> This view is only visible if the scale is a complete scale. It offers a selection of specification blocks that are predefined at the factory.
>
> The selection of a specification block cannot be changed if
> – the menu lock switch (CAL-1) is closed.
> – the weighing point is disabled.

1. Select an analog weighing point and open the [⚖ Scale] button group.

2. Select [☰ Specification group].

   ▷ A table view opens.

Column description

Parameter	Description	Note
Range mode	– Single range – Multiple range – Multi-interval	See Scale resolution (analog).
Max	Maximum capacity (Max)	See Scale definition (analog). For multi-range or multi-interval, the upper limits for the ranges are displayed as weight values one below the other (see Scale resolution (analog)).
Interval	Scale interval	See Scale resolution (analog). For multi-range or multi-interval, the following are displayed one below the other for the ranges: – Scale interval (as weight value) – Number d
Min	Min. load (Min)	See Scale resolution (analog). For multi-range or multi-interval, the following are displayed one below the other for the ranges: – Minimum load (as weight value) – Number d

3. Select the required specification block and confirm with [☑ Select].

   ▷ The selected specification block is identified by a radio button on the left.

4. Press [🖫 Save] to save the selection.

7.7.3.2.1.10   Weight units (analog)

In addition to the adjustment unit (see Adjust the scale (analog)), the weight units can be used to configure additional weight units for the display and further display accuracies. Up to three more units can be configured in total.
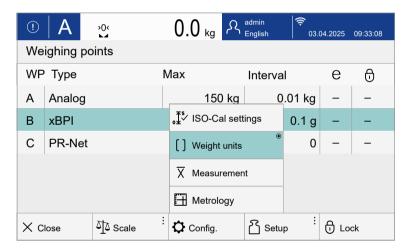
> **Hinweis:**
>
> The weight units cannot be changed if
> – the menu lock switch (CAL-1) is closed.
> – the weighing point is disabled.
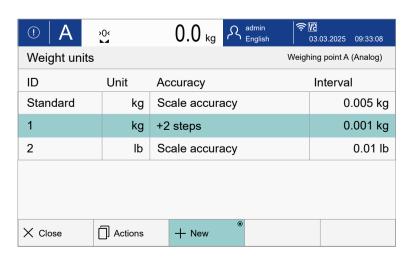
The weight units are toggled on the weighing screen using the CENTRAL key (if configured accordingly, see CENTRAL key) or via the application, see the operating instructions for the relevant application.

1. Select an analog weighing point and open the [⚙ Config.] button group.

2. Select [[] Weight units].
   ▷ A table view opens.

Column description

Parameter	Description	Note
ID	Designation of the unit	– [Standard]: Adjustment unit that is always present and cannot be changed. – [1]: first additional weight unit – [2]: second additional weight unit – [3]: third additional weight unit
Unit	Configured weight unit	mg, kg, t, lb, oz, ct, ozt, grn, dwt, mom, lb:oz, see "Add/edit weight unit".
Accuracy	Display accuracy	With [Standard] always [Scale accuracy], otherwise see "Add/edit weight unit".
Interval	Scale interval	Resulting scale interval

3. Press [+ New] or open the [⧉ Actions] button group and select [⁄ Edit].

▷ A parameter view opens.

Add/edit weight unit

Parameter	Type	Description
Weight unit 1...3	Selection	Available options:
		– mg
		– kg
		– t
		– lb
		– oz
		– ct
		– ozt
		– grn
		– dwt
		– mom
		– lb:oz
		The adjustment unit is selected by default.
		Sequential numbering 1...3 and selection of the weight unit

Parameter	Type	Description
Display accuracy	Selection	Available options: – Scale accuracy (e.g.: 0.1 kg) (default) – -1 increment: e.g., 0.1 → 0.2 – -2 increments: e.g., 0.1 → 0.5 – -3 increments: e.g., 0.1 → 1.0 – +1 increment: e.g., 0.1 → 0.05 – +2 increments: e.g., 0.1 → 0.02 – +3 increments: e.g., 0.1 → 0.01 Increments mean: – ... – 0.01 – 0.02 – 0.05 – 0.1 – 0.2 – 0.5 – 1 – 2 – 5 – 10 The display accuracy determines the resulting scale interval.

Hinweis:

Only weight units for which the resulting number of decimal places is ≤ 6 can be selected.
Example: d = 0.0002 kg is permitted, d = 0.0000002 t is not permitted → Option [t] cannot be selected.
The conversion of the scale intervals between metric and non-metric units is carried out with rounding to 1×10^{n}, 2×10^{n} or 5×10^{n}.
Example 1:
d = 0.5 g → conversion to lb → d = 0.001102311310924388 lb, rounded d is d = 0.001 lb (1×10^{-3})
Example 2:
d = 0.02 oz → conversion to g → d = 0.5669904625 g, rounded d is d = 0.5 g (5×10^{-1})

If [Subject to legal control] is switched on:
- only the units mg, g, kg, t, lb, oz can be selected.
- only one fixed zero is allowed (10 is allowed, 100 is not allowed)
- Only [Scale accuracy] can be selected for the [Display accuracy].

7.7.3.2.1.11 ISO-Cal function (analog)

ISO-Cal are methods for calibrating (measuring) and/or adjusting (correcting) span deviations during the service life of the scale.
During calibration, a calibration weight is used to determine how much the displayed value deviates from the actual measured value. This deviation is compared with a specified target value and can be eliminated by subsequent adjustment if required.
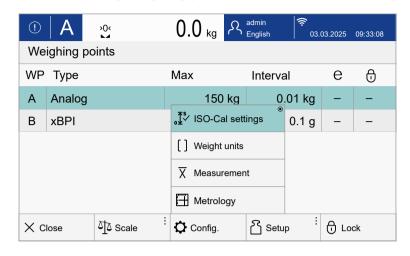
The procedure is described in the following chapters:
- ISO-Cal settings (analog)
- Perform ISO-Cal (analog)

7.7.3.2.1.11.1. ISO-Cal settings (analog)

Select an analog weighing point and open the [✿ Config.] button group.

WP	Type	Max	Interval	e	🔒
A	Analog	150 kg	0.01 kg	–	–
B	xBPI	ISO-Cal settings	0.1 g	–	–

Weight units
Measurement
Metrology

Close — Scale — Config. — Setup — Lock

Select [◻✓ ISO-Cal settings].
A parameter view opens.

Parameter	Type	Description
ISO-Cal function	Selection	Available options: – No function (default) – Choice on activation, see Perform ISO-Cal (analog) – With config. external weight – With entered external weight
Adjustment mode	Selection	Available options: – Manual (calibration/adjustment is confirmed by the user) (default) – Automatic calibration (calibration is performed automatically) – Automatic adjustment (adjustment is performed automatically) Visible if [No function] was **not** selected under [ISO-Cal function].

Parameter	Type	Description
External weight	Input	Possible input of the external calibration weight – Min = 1% of maximum capacity (Max) – max = Maximum capacity (Max) – Default: Maximum capacity (Max) Visible if [ISO-Cal function] = [With config. external weight] or [With entered external weight].
Save to alibi memory	Switch	◎⟲ off (default) If switched on, the ISO-Cal measurements are saved to the alibi memory. Only visible if [No function] was **not** selected under [ISO-Cal function]. This function can only be activated if an alibi license is available.
Print report	Switch	◎⟲ off (default) If this is switched on, a report is printed for an ISO-Cal measurement. Visible if [No function] was **not** selected under [ISO-Cal function].
Printer	Selection	Available options: – Default (always available; selects the default printer) – Additional printers, see Printers. Selecting a printer from the printer configuration, see Printers.

> **Hinweis:**
> If [Subject to legal control] is switched on, [Adjustment mode] ➡ [Automatic adjustment] cannot be selected.

7.7.3.2.1.11.2. Perform ISO-Cal (analog)
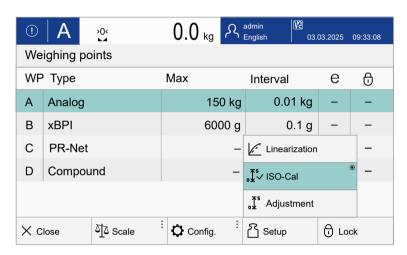
> **Hinweis:**
>
> Before performing ISO-Cal, the scale must
> – display gross weight (all tare memories must be cleared).
> – display zero.
>
> ISO-Cal can also be called up directly depending on the application, see the operating instructions of the respective application.

1. Select an analog weighing point and open the [🖐 Setup] button group.

⚠	**A**	›0‹	**0.0** kg	👤 admin English	V2	03.03.2025	09:33:08

Weighing points

WP	Type	Max	Interval	e	🔒
A	Analog	150 kg	0.01 kg	–	–
B	xBPI	6000 g	0.1 g	–	–
C	PR-Net	–	📈 Linearization		–
D	Compound	–	⚖ ISO-Cal	◉	–
			⚖ Adjustment		

✕ Close	⚖ Scale	⚙ Config.	🖐 Setup	🔒 Lock

2. Select [⚖ ISO-Cal].
   ▷ ISO-Cal starts depending on the selected [ISO-Cal function].

Choice on activation

Option	Description	Note
With config. external weight	With configured external weight	Perform ISO-Cal with external weight that was configured in the ISO-Cal settings. ISO-Cal procedure with method [With config. external weight] is started.
With entered external weight	With entered external weight	ISO-Cal weight is entered by the user. An input window appears, see the description "With entered external weight".

3. Select the required function and press [⟩ Next] to confirm.
   ▷ The selected function is executed.

With entered external weight

4. The [With entered external weight] option was selected:
   ▷ An input window for the external weight appears.

5. Enter the ISO-Cal weight value and press [$>$ Next] to confirm.
   ▷ ISO-Cal procedure with method [With entered external weight] is started.

ISO-Cal procedure

The ISO-Cal procedure is performed in a workflow.
During the workflow, instructions are displayed to the user in the application row.

The weight display shows the calibration weight to be used (Cal target)

The following are displayed as additional weight types:
– Difference in weight Cal delta (= gross – Cal target)
– Gross with 100-fold resolution

Taskbar

Button	Description
✕ Cancel	Cancel ISO-Cal procedure.
⌀Ⅰₛ Display	Toggle weight display between Cal target and gross (in 100-fold resolution).
⌂ Adjust	Measure deviation and adjust the scale with the positioned weight. Visible if [Adjustment mode] = [Manual] Deactivated – if the gross weight deviates from Cal target by more than 1%. – if the weighing point is disabled or the menu lock switch is closed.
✓ Finish	Measure deviation. Visible if [Adjustment mode] = [Manual] Deactivated if the gross weight deviates from Cal target by more than 1%.

6. Start the workflow.

Workflow

Step	Instruction	User action	Note
Start			
1	Place *e.g., 6.0 kg* on the scale.	Place the correct calibration weight on the scale.	
Measurement ended			
2a	Press [Finish] to finish without adjustment.	Press [✓ Finish].	If [Adjustment mode] = [Manual] and the menu lock switch is closed or the weighing point is locked.
2b	Accept.: [Adjust] with adjustment/ [Finish] without adjustment	Press [⬆ Adjust] or Press [✓ Finish].	If [Adjustment mode] = [Manual] and the menu lock switch is open and the weighing point is not locked.
Empty the scale			
3	Remove weight from the scale.	Remove calibration weight from the scale.	As soon as the scale is empty, the ISO-Cal procedure is finished.

7.7.3.2.1.12   Set preload (analog)

> **Hinweis:**
> This view is only visible if [Max. preload] is > 0% or [Reduce Max by preload] is switched on.

The preload of the scale can be set in various ways:
–   Measurement with load: Empty the scale and use the measured signal as the preload weight.
–   Input with mV/V: Enter a voltage signal for the preload, if known.
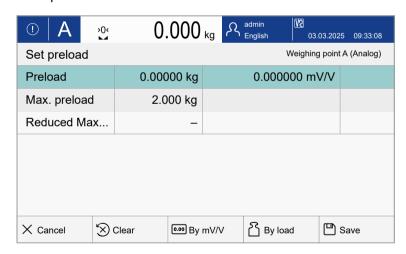
> **Hinweis:**
> If [Reduce Max by preload] is switched off, the preload may not exceed [Max. preload].
> If [Reduce Max by preload] is switched on, the preload may exceed [Max. preload]. In this case, the Max is reduced (see Scale definition (analog)).

Select an analog weighing point and open the [🗁 Setup] button group.
Select [🖳 Preload].
A table view opens.

Example:

①	A	›0‹	0.000 kg	admin English	V2 03.03.2025 09:33:08

Set preload			Weighing point A (Analog)	
Preload	0.00000 kg	0.000000 mV/V		
Max. preload	2.000 kg			
Reduced Max...	–			

✕ Cancel	⊗ Clear	0.00 By mV/V	🗁 By load	💾 Save

Parameter description

Parameter	Value 1	Value 2	Identifier (optional)
Preload	*Preload weight*	*Voltage signal for pre-load*	– ⌂ Measured – ⊡ Entered
Max. preload	*Maximum preload weight* calculated from [Max. preload], see S-cale definition (analog)		
Reduced Max	*Weight value for reduced Max* (if available)		

Reduced Max

This row is only visible if the preload exceeds [Max. preload] and [Reduce Max by preload] is switched on.

Max_{red} = Max – preload reduction
Preload reduction = CEIL ((preload – max.) / reduce step) × reduce step

Taskbar

Button	Function
✕ Cancel	Close the view.
⊗ Clear	Clear the current preload.
⊡ By mV/V	Enter voltage signal for preload.
⌂ By load	Set preload with current weight. (with user dialog)
🖫 Save	Permanently save the preload.

7.7.3.2.1.13   Linearization (analog)
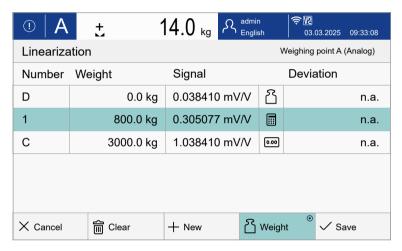
> **Hinweis:**
>
> Linearization cannot be modified or executed if
> – the menu lock switch (CAL-1) is closed.
> – the weighing point is disabled.
>
> The preload is cleared before linearization (with a user dialog).

1. Select an analog weighing point and open the [⌂ Setup] button group.

2. Select [✎ Linearization].
   ▷ A table view with the available linearization points opens.

⊘	A	±	**14.0** kg	admin English	📶 V2 03.03.2025 09:33:08

Linearization					Weighing point A (Analog)
Number	Weight	Signal			Deviation
D	0.0 kg	0.038410 mV/V	⌂		n.a.
1	800.0 kg	0.305077 mV/V	▦		n.a.
C	3000.0 kg	1.038410 mV/V	0.00		n.a.

✕ Cancel	🗑 Clear	+ New	⌂ Weight ⊙	✓ Save

In the table view, the dead load is identified with "D" and the calibration weight with "C". Neither point can be deleted.
The table is sorted in ascending order by weight.

Column description

Parameter	Description
Number	Designation of the linearization points: – D: Dead load (always included) – 1…4: max. 4 linearization points – C: Calibration (always included)
Weight	Weight at the linearization point
Signal	Voltage signal at the linearization point
Identifier	– No icon if not set (applies only to D and C)

Parameter	Description
	– ▦ Calculated: Value has been interpolated, i.e., not yet measured
	– ⚖ Measured: Value has been measured with a weight
	– $\overline{X}$ Averaged: Value has been measured with a weight multiple times and averaged
	– [0.00] Entered: Value for voltage signal has been entered
Deviation	– n.a.: not available
	– Percentage value for the deviation between the interpolated and measured signal.

Taskbar

Button	Function
✕ Cancel	Cancel linearization and close the view. The preload is reset, if applicable.
🗑 Delete	Delete the selected linearization point. (with user dialog)
+ New	Add linearization point (max. 4), see step 3.
⚖ Weight	Measure weight at selected linearization point, see steps 5...8.
💾 Save	Permanently save the linearization: The voltage signals are saved for all linearization points and used for correction. A warning appears if not all linearization points have been measured.

Add linearization point

3. Press [+ New].

   ▷ An input window for entering a weight value appears.

4. Accept the weight value with [✓ OK].

   ▷ The linearization point appears in the table view with the entered weight and is identified with ▦ .

> **Hinweis:**
>
> The following applies to the entered weight:
> – The distance between two linearization points (including D and C) must be at least 10% of the maximum capacity (Max).
> – The linearization point must be above the [Min. load (Min)] of the weighing point (see Scale resolution (analog)).
> – The linearization point must not be above (Max + PAL) (see Scale definition (analog)).

Measure weight at linearization point

5. Select an available linearization point.

6. Press [⬒ Weight].

   ▷ The measurement dialog is displayed.

7. Place the specified weight on the scale.

8. Press [✓ OK] to accept the measured voltage signal for the linearization point.

   ▷ The dialog closes and the linearization point is identified in the table view with ⬒ .

> **Hinweis:**
>
> If the linearization point has already been measured, the [$\overline{X}$ Average] button also appears in the measurement dialog.
>
> As an alternative to [✓ OK], the existing measured value can be averaged by averaging the existing measured value with the new measured value:
>
> $mV/V_{new} = (mV/V_{old} + mV/V_{measured}) / 2$

> **Hinweis:** If the measured voltage signal deviates from the expected, interpolated voltage signal by more than 5% relative to the voltage signal for the maximum capacity (Max), the measured voltage signal cannot be accepted (with warning message).

7.7.3.2.2 Digital weighing point (xBPI)

7.7.3.2.2.1 Button groups (xBPI)

For xBPI scales, i.e., for scales that are connected serially to a digital weighing electronics board, the button groups contain the following functions.

Button group ⚖ Scale

Button	Description
🗑 Delete	Remove weighing point (with user dialog)
	Deactivated if
	– the menu lock switch (CAL-1) is closed.
	– the weighing point is disabled.
	– the weighing point is a complete scale.
	– the weighing point is part of a compound WP.
＋ New	Add weighing point, see Add digital weighing point (xBPI).
	Deactivated if
	– the menu lock switch (CAL-1) is closed.
	– the maximum number of weighing points is reached (NICC/ NICM: 1, NICL: 4).
☲ Specification group	See Specification groups (xBPI).
	Disabled if the scale (xBPI) is not connected.
↦⊣ Connection	See Connection settings (xBPI)
e Legal parameters	See Legal parameters (xBPI)

Button group ⚙ Config.

Button	Description
🖉 Lineariz. settings	See Linearization settings (xBPI) Deactivated if – the connected scale does not support the function. – the function is not supported for the connected scale type (e.g.: IS scale with AOC processor).
📋✓ ISO-Cal settings	See ISO-Cal settings (xBPI) Disabled if the function is not supported for the connected scale type (e.g.: IS scale with AOC processor).
[] Weight units	See Weight units (xBPI) Disabled if the connected scale (xBPI) does not support the function.
X̄ Measurement	See Measurement parameters (xBPI)
⊞ Metrology	See Metrology parameters (xBPI)

Button group ⌂ Setup

Button	Description
🖉 Linearization	See Linearization (xBPI) Deactivated if – the connected scale does not support the function. – the CAL switch of the connected scale (xBPI) is closed. – the function is not supported for the connected scale type (e.g.: IS scale with AOC processor).
🝙 Preload	Visible if the scale (xBPI) supports the function. See Set preload (xBPI)
📋✓ ISO-Cal	Visible if [No function] was **not** selected under [ISO-Cal function]. See ISO-Cal settings (xBPI) Deactivated if – the connected scale does not support the function. – the function is not supported for the connected scale type (e.g.: IS scale with AOC processor).

7.7.3.2.2.2   Add digital weighing point (xBPI)

> **Hinweis:**
>
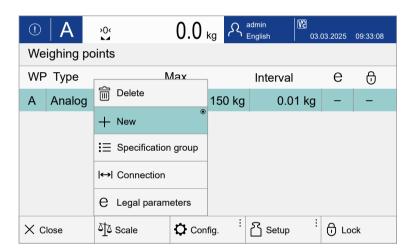> A digital weighing electronics board must be installed in the indicator.
> – NICC/NICM: Slot 1
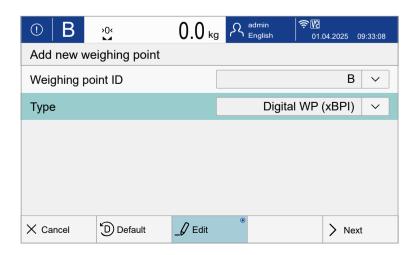> – NICL: Slot 1...3

A digital weighing point is added in a workflow.

Overview

– Select weighing point ID and type.
– Connection settings, see Connection settings (xBPI)
– Configure legal parameters, see Legal parameters (xBPI).

1. Open the [⚖ Scale] button group.

2. Select [+ New].
   ▷   A parameter view opens.

3. Select the weighing point ID:

    NICM/NICC: Only weighing point A is available.
    NICL: Weighing points A, B, C, D are available.
    IDs that have already been assigned are deactivated in the selection.

4. Select the type [Digital WP (xBPI)].

5. Press [> Next].

    ▷ A parameter view opens, see Connection settings (xBPI).

6. Configure the parameters.

7. Press [> Next].

    ▷ A parameter view opens, see Legal parameters (xBPI).

8. Configure the parameters.

9. Press [✓ Create].

    ▷ The weighing point is created.
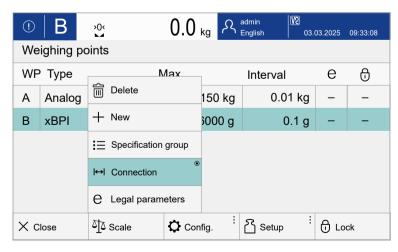
7.7.3.2.2.3 Connection settings (xBPI)

> **Hinweis:**
>
> The connection settings cannot be changed if
> – the menu lock switch (CAL-1) is closed.
> – the weighing point is disabled.

Select an xBPI weighing point and open the [⚖ Scale] button group.

ⓘ	**B**	›0‹ ⯆	0.0 kg	👤 admin English	🆅		03.03.2025	09:33:08

Weighing points

WP	Type		Max		Interval	e	🔒
A	Analog	🗑 Delete	150 kg		0.01 kg	–	–
B	xBPI	＋ New	6000 g		0.1 g	–	–
		≡ Specification group					
		↦ Connection ◉					
		e Legal parameters					
✕ Close		⚖ Scale	⚙ Config. ⋮	🏠 Setup ⋮	🔒 Lock		

Select [↦ Connection].
A parameter view opens.

⚠	**B**	›0‹ ᐟᐣ		0.0 g	👤	admin English		Vc	01.02.2025 09:33:08

Network settings   Weighing point B (xBPI)

Interface	Option slot 2 DWP RS-232 ⌄
Baud rate	9600 baud ⌄
Data bits	8 bits ⌄
Parity	Odd ⌄
Stop bits	1 bit ⌄

✕ Cancel	↻Ⓓ Default	✎ Edit		🖫 Save

Parameter	Type	Description
Interface	Selection	Available options: – Option slot 1 DWP RS-232 – Option slot 1 DWP RS-485 NICL model only: – Option slot 2 DWP RS-232 – Option slot 2 DWP RS-485 – Option slot 3 DWP RS-232 – Option slot 3 DWP RS-485 Select serial interface for connecting the xBPI scale. The options displayed depend on the digital weighing electronics boards installed. Options that have already been used cannot be selected.
Baud rate	Selection	Available options: – 9600 baud (default) – 19200 baud – 38400 baud
Data bits	Display	8 bits (fixed value for xBPI)
Parity	Display	Odd (fixed value for xBPI)
Stop bits	Display	1 bit (fixed value for xBPI)
Connection	Display	Visible if [Interface] = slot with RS-485 2-wire (fixed value for xBPI)

7.7.3.2.2.4   Legal parameters (xBPI)

> **Hinweis:**
>
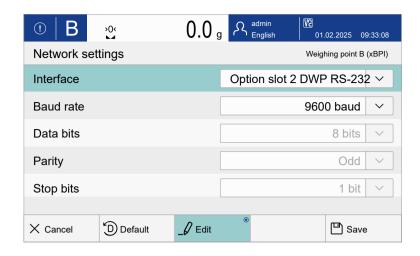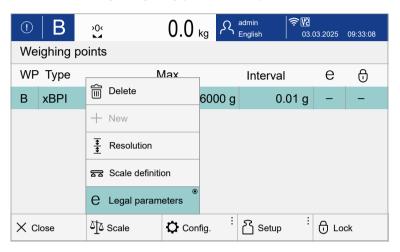> The legal parameters cannot be changed if
> – the menu lock switch (CAL-1) is closed.
> – the weighing point is disabled.

Select an analog weighing point and open the [⚖ Scale] button group.

Select [e Legal parameters].
A parameter view opens.

Parameter	Type	Description
Subject to legal control	Switch	⬤⃝ off (default) Switch on if the weighing point is subject to legal control. The set standard (Legal for trade reg.) and country-specific requirements then apply, see Legal for trade settings.
Complete scale	Switch	Visible and switched on if the scale is a complete scale (ex works). Restrictions then apply to certain parameters.
Weighing point serial number	Display	Serial number of the connected scale (xBPI). If the scale is not connected, 0 is displayed.
Weighing point name	Input	Possible values: – Free text – hostname-wpid, e.g., MiNexx-1b347-A (default)

Hinweis:

[Subject to legal control]
- Disabled and switched off if no [Legal for trade regulations] (see Legal for trade settings) are switched on.
- Disabled if the scale is a complete scale.
- Disabled and switched on if the weighing point belongs to a compound WP for which [Subject to legal control] is switched on.

[Complete scale]

If switched off, this parameter can only be restored after [Factory reset] (if a configuration for the complete scale is available from the factory).
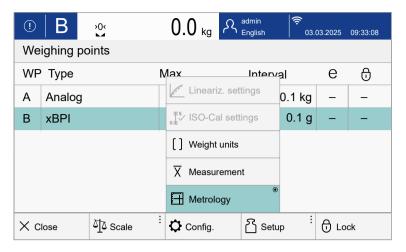
7.7.3.2.2.5 Metrology parameters (xBPI)

Hinweis:
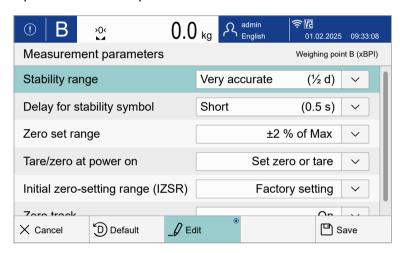
The metrology parameters cannot be changed if
- the menu lock switch (CAL-1) is closed.
- the weighing point is disabled.
- the weighing point is a complete scale.

Select a weighing point (xBPI) and open the [⚙ Config.] button group.

WP	Type	Max	Interval		e	🔒
A	Analog			0.1 kg	–	–
B	xBPI			0.1 g	–	–

Weighing points

- ✎ Lineariz. settings
- ⬍ ISO-Cal settings
- [ ] Weight units
- X̄ Measurement
- ⊞ Metrology

Close | Scale | Config. | Setup | Lock

Select [⊞ Metrology].

A parameter view opens.

Measurement parameters — Weighing point B (xBPI)

Stability range	Very accurate (½ d)	∨
Delay for stability symbol	Short (0.5 s)	∨
Zero set range	±2 % of Max	∨
Tare/zero at power on	Set zero or tare	∨
Initial zero-setting range (IZSR)	Factory setting	∨
Zero track	On	∨

Cancel | Default | Edit | Save

| Parameter	Type	Description
Tare condition	Selection	Available options: – Without stability – With stability
Stability range	Selection	Available options: – Maximum accuracy (¼ d) – Very accurate (½ d) – Accurate (1 d) – Fast (2 d) – Very fast (4 d) – Maximum speed (8 d) Specified in days d (scale interval)
Delay for stability symbol	Selection	Available options: – Immediately (0.2 s) – Short (0.5 s) – Middle (1.0 s) – Long (2.0 s) Indicated in seconds.
Zero set range	Selection	Available options: – ±1% of Max – ±2% of Max – ±5% of Max – ±10% of Max Based on the maximum capacity (Max)

Tare/zero at power on	Selection	Tare/set zero when the device is switched on.
		
		Available options:
		– Set zero or tare:
		  – If within zero set range: clear all tare memories and set zero.
		  – If outside zero set range: clear tare memories 2+3 and set tare memory 1.
		– Off
		– Initial zero setting (IZS): Clears all tare memories and previous zero set.
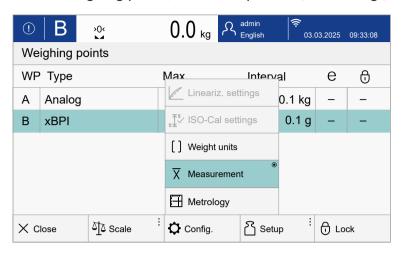
Parameter	Type	Description
Initial zero-setting range	Selection	Available options: – Factory setting – +2% of Max – +5% of Max – +10% of Max – +20% of Max Range in which zero is set when the device is switched on. Based on the maximum capacity (Max)
Zero track	Selection	Available options: – On – Off Automatic zero track
Set zero interval	Input	Possible values: – 0…10080 min – 0 min (default) When the zero interval > 0, monitoring of the regular zero set takes place. If zero is not set within the interval time, a warning message is displayed once the time has expired.
Reduce Max by pre-load	Selection	Available options: – On – Off

Hinweis:

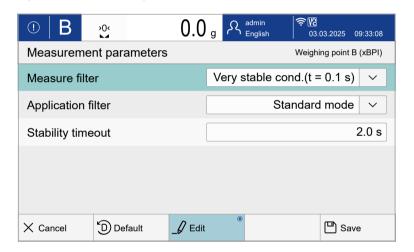– Details of the parameters can be found in the scale documentation.
– There are no default values for the parameters, as these are read directly from the connected scale and are scale-specific.
– The available parameters and options depend on the connected scale, i.e., not all xBPI scales provide all parameters with all options.
– Parameter changes may be restricted by the CAL switch of the scale (xBPI).

7.7.3.2.2.6   Measurement parameters (xBPI)

Select a weighing point (xBPI) and open the [⚙ Config.] button group.

!	B	›0‹		0.0 kg	admin English	📶 03.03.2025 09:33:08

Weighing points						
WP	Type		Max	Interval	e	🔒
A	Analog	⬚ Lineariz. settings		0.1 kg	–	–
B	xBPI	⬚ ISO-Cal settings		0.1 g	–	–
		[ ] Weight units				
		X̄ Measurement ⊙				
		⊞ Metrology				
✕ Close	⚖ Scale	⚙ Config.	🗋 Setup	🔒 Lock		

Select [X̄ Measurement].

A parameter view opens.

!	B	›0‹		0.0 g	admin English	📶 🆅🅲 03.03.2025 09:33:08

Measurement parameters	Weighing point B (xBPI)
Measure filter	Very stable cond.(t = 0.1 s) ˅
Application filter	Standard mode ˅
Stability timeout	2.0 s

✕ Cancel	ⓓ Default	✎ Edit ⊙		🖫 Save

Parameter	Type	Description
Measure rate	Selection	Available options: – Normal output (t×1) – Fast output (t×0.2)
Measuring filter	Selection	Available options: – Very stable cond. (t=0.1s) – Stable conditions (t=0.1s) – Unstable conditions (t=0.2s) – Very unstable cond. (t=0.4s)
Application filter	Selection	Available options: – Standard mode – Manual filling

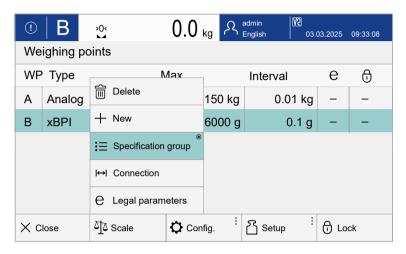| Parameter	Type	Description
		– Automatic dosing
		– Check weighing
Stability timeout	Input	Possible values:
		– 0.0...25.0 s
		– 2.0 s (default)
		Time during which the system waits for stability after a tare or zero setting command before canceling the command (timeout).
		0.0 s means that stability must be established immediately.

Hinweis:

– Details of the parameters can be found in the scale documentation.
– There are no default values for the parameters, as these are read directly from the connected scale and are scale-specific.
– The available parameters and options depend on the connected scale, i.e., not all xBPI scales provide all parameters with all options.
– Parameter changes may be restricted by the CAL switch of the scale (xBPI).

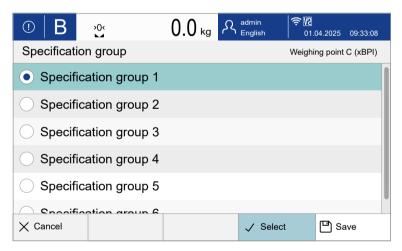### 7.7.3.2.2.7   Specification groups (xBPI)

> **Hinweis:**
> This view is only visible if the scale has specification blocks predefined at the factory.

1. Select a weighing point (xBPI) and open the [⚖ Scale] button group.

2. Select [≔ Specification group].
    ▷   A selection window opens.

The listed options are read from the scale (xBPI).
The configurations stored for the specification blocks listed can be found in the scale documentation.

3. Select the required specification block and confirm with [☑ Select].
    ▷   The selected specification block is identified by a radio button on the left.

4. Press [🖫 Save] to save the selection.

7.7.3.2.2.8 Weight units (xBPI)

In addition to the standard unit, the weight units can be used to configure additional weight units for the display and further display accuracies. In addition to display unit 1, a total of two further units can be configured.

> **Hinweis:**
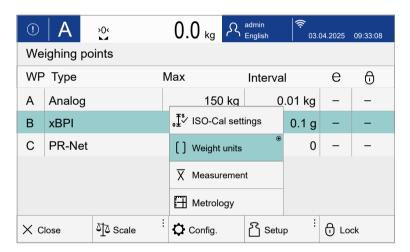> The view is only visible if the connected scale (xBPI) supports further weight units.
> Weight units may be restricted by the CAL switch of the scale (xBPI).

No additional weight units can be added or deleted via the indicator. Only the weight units already stored in the xBPI scale can be changed.
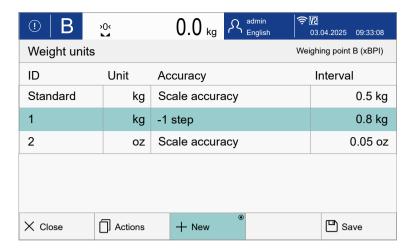The weight units are toggled on the weighing screen using the CENTRAL key (if configured accordingly, see CENTRAL key) or via the application, see the operating instructions for the relevant application.
The [Standard] unit is not displayed.

1. Select a weighing point (xBPI) and open the [✿ Config.] button group.

2. Select [[] Weight units].
   ▷   A table view opens.

⊙	B	›0‹ ⤓		0.0 kg	admin English	🛜 V2 03.04.2025 09:33:08

Weight units   Weighing point B (xBPI)

ID	Unit	Accuracy	Interval
Standard	kg	Scale accuracy	0.5 kg
1	kg	-1 step	0.8 kg
2	oz	Scale accuracy	0.05 oz

✕ Close	⧉ Actions	＋ New		🖫 Save

Column description

Parameter	Description	Note
ID	Designation of the unit	– [Standard]: Adjustment unit that is always present and cannot be changed. – [1]: first additional weight unit (always included for the display) – [2]: second additional weight unit – [3]: third additional weight unit
Unit	Configured weight unit	mg, kg, t, lb, oz, ct, ozt, grn, dwt, mom, lb:oz, see "Edit weight unit".
Accuracy	Display accuracy	With [Standard] always [Scale accuracy], otherwise see "Edit weight unit".
Interval	Scale interval	Resulting scale interval

3. Open the [⬜ Actions] button group and select [✏ Edit].

   ▷ A parameter view opens.

Edit weight unit

Parameter	Type	Description
Weight unit 1...3	Selection	Available options: – mg – kg – t – lb – oz – ct – ozt – grn – dwt – mom – lb:oz The adjustment unit is selected by default. Sequential numbering 1...3 and selection of the weight unit

Parameter	Type	Description
Display accuracy	Selection	Available options: – Scale accuracy (e.g.: 0.1 kg) (default) – -1 increment: e.g., 0.1 → 0.2 – -2 increments: e.g., 0.1 → 0.5 – -3 increments: e.g., 0.1 → 1.0 – +1 increment: e.g., 0.1 → 0.05 – +2 increments: e.g., 0.1 → 0.02 – +3 increments: e.g., 0.1 → 0.01 The display accuracy determines the resulting scale interval. Increments mean: – ... – 0.01 – 0.02 – 0.05 – 0.1 – 0.2 – 0.5 – 1 – 2 – 5 – 10

Hinweis:

– Details of the parameters can be found in the scale documentation.
– The available parameters and options depend on the connected scale, i.e., not all scales (xBPI) provide all parameters with all options.
– The scale (xBPI) may provide additional options that are not supported by MiNexx. These are marked as invalid and cannot be selected.

7.7.3.2.2.9   ISO-Cal function (xBPI)

ISO-Cal are methods for calibrating (measuring) and/or adjusting (correcting) deviations during the service life of the scale.
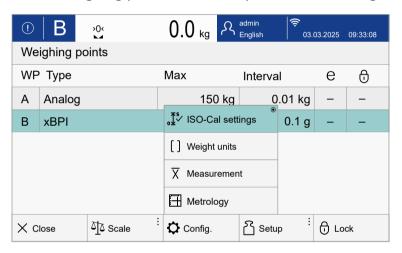During calibration, a calibration weight is used to determine how much the displayed value deviates from the actual measured value. This deviation is compared with a specified target value and can be eliminated by subsequent adjustment if required.

The procedure is described in the following chapters:
–   ISO-Cal settings, see ISO-Cal settings (xBPI)
–   Performing ISO-Cal, see Perform ISO-Cal (xBPI)

7.7.3.2.2.9.1. ISO-Cal settings (xBPI)

Select a weighing point (xBPI) and open the [✿ Config.] button group.

| ⓘ | B | ›0‹ ⤓ | 0.0 kg | 👤 admin English | 🛜 03.03.2025 09:33:08 |

Weighing points

WP	Type	Max	Interval	e	🔒
A	Analog	150 kg	0.01 kg	–	–
B	xBPI	⤒ ISO-Cal settings ◉	0.1 g	–	–
		[ ] Weight units			
		X̄ Measurement			
		⊞ Metrology			

| ✕ Close | ⚖ Scale | ⋮ ✿ Config. | 🔓 Setup | ⋮ 🔒 Lock |

Select [⤒ ISO-Cal settings].
A parameter view opens.

Parameter	Type	Description
ISO-Cal function	Selection	Available options: – No function (default) – Choice on activation, see Perform ISO-Cal (xBPI) – With internal weight – With config. external weight – With entered external weight
Adjustment mode	Selection	Available options: – Manual (with user confirmation) (default) – Automatic (without user confirmation)

Parameter	Type	Description
		Visible if [No function] was **not** selected under [ISO-Cal function].
External weight	Input	Possible inputs of the external calibration weight: – Min = 1% of maximum capacity (Max) – Max = Maximum capacity (Max) – Default: Maximum capacity (Max) Visible if [ISO-Cal function] = [With entered external weight] or [Choice on activation].
Save to alibi memory	Switch	◉⃝ off (default) If switched on, the ISO-Cal measurements are saved to the alibi memory. Visible if [No function] was **not** selected under [ISO-Cal function]. This function can only be activated if an alibi license is available.
Print report	Switch	◉⃝ off (default) If this is switched on, a report is printed for an ISO-Cal measurement. Visible if [No function] was **not** selected under [ISO-Cal function].
Printer	Selection	Available options: – Default (always available; selects the default printer) – Additional printers, see Printers. Selecting a printer from the printer configuration, see-Printers.

> **Hinweis:**
>
> – Details of the parameters can be found in the scale documentation.
> – The parameters and options available depend on the connected scale, i.e., not all scales (xBPI) provide all parameters with all options.
> – Setting the [Adjustment mode] is identical to the [Adjustment mode] under the linearization settings, i.e., a change in the ISO-Cal settings also affects the linearization settings.
> – The ISO-Cal settings are disabled if this function is not supported for the connected scale type (e.g.: IS scale with AOC processor).

7.7.3.2.2.9.2. Perform ISO-Cal (xBPI)

> **Hinweis:**
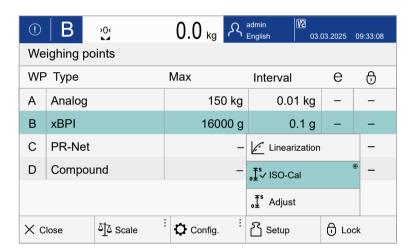>
> Before performing ISO-Cal, the scale must
> – display gross weight (all tare memories must be cleared).
> – display zero.
>
> ISO-Cal can also be called up directly depending on the application, see the operating instructions of the respective application.
> The ISO-Cal function may be restricted by the CAL switch of the scale (xBPI).
> The ISO-Cal function is disabled if this function is not supported for the connected scale type (e.g.: IS scale with AOC processor).

1. Select a weighing point (xBPI) and open the [⌂ Setup] button group.

2. Select [ISO-Cal].
   ▷ ISO-Cal starts depending on the selected [ISO-Cal function].

Choice on activation

Option	Description	Note
With internal weight	With installed calibration weight	Perform ISO-Cal with internal weight. ISO-Cal procedure with method [With internal weight] is started.
With config. external weight	With configured external weight	Perform ISO-Cal with external weight that was defined at the factory. ISO-Cal procedure with method [With config. external weight] is started.

Option	Description	Note
With entered external weight	With entered external weight	ISO-Cal weight is entered by the user. An input window opens, see option [With entered external weight].

3. Select the required function and press [⟩ Next] to confirm.
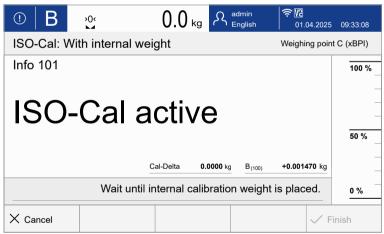
  ▷ The selected function is executed.

With entered external weight

4. The [With entered external weight] option was selected:

  ▷ An input window for the external weight appears.

5. Enter the ISO-Cal weight value and press [⟩ Next] to confirm.

  ▷ ISO-Cal procedure with method [With entered external weight] is started.

ISO-Cal procedure

The ISO-Cal procedure is performed in a workflow.
During the workflow, instructions are displayed to the user in the application row.

The weight display shows
– Info 101
– ISO-Cal active

The following are displayed as additional weight types:
– Difference in weight Cal delta (= gross – Cal target)
– Gross with 100-fold resolution

6. Start the workflow.

Taskbar

Button	Description
✕ Cancel	Cancel ISO-Cal procedure.
⬚ Adjust	Measure deviation and adjust the scale with the positioned weight. Visible if [Adjustment mode] = [Manual]
	Deactivated – if the scale is subject to legal control (CAL switch of the scale is closed and the data record of the scale is verifiable) – if the xBPI scale is busy (if no confirmation is currently required).
✓ Finish	Confirm adjustment. Visible if [Adjustment mode] = [Manual] Deactivated if the xBPI scale is busy (if no confirmation is currently required).

Workflow with internal weight

Step	Instruction	User action	Note
Start			
1	Wait until internal calibration weight is placed.	Wait for the next ISO-Cal step.	Internal weight is placed.
Measurement ended			
2a	Press [Finish] to finish without adjustment.	Press [Finish].	With [Adjustment mode] = [Manual] and scale subject to legal control.
2b	Accept.: [Adjust] with adjustment/[Finish] without adjustment.	Press [Adjust] or [Finish].	With [Adjustment mode] = [Manual] and scale not subject to legal control.
2c	…	Wait for the next ISO-Cal step.	With [Adjustment mode] = [Automatic].
Empty the scale			

Step	Instruction	User action	Note
3	Wait until internal calibration load is removed.	Wait	Weight is removed.
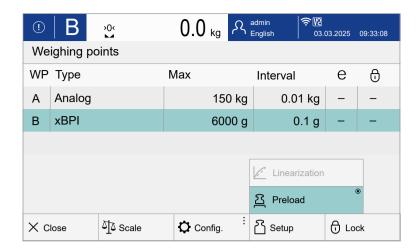
Workflow with external weight (entered or configured)

Step	Instruction	User action	Note
Start			
1a	Place *e.g., 6.0 kg* on the scale.	Place the correct calibration weight on the scale.	If external calibration weight is known.
1b	Place weight on scale.	Place correct calibration weight on the scale.	If external calibration weight is unknown.
Measurement ended			
2a	Press [Finish] to finish without adjustment.	Press [Finish].	With [Adjustment mode] = [Manual] and scale subject to legal control.
2b	Accept.: [Adjust] with adjustment/[Finish] without adjustment.	Press [Adjust] or [Finish].	With [Adjustment mode] = [Manual] and scale not subject to legal control.
2c	...	Wait for the next ISO-Cal step.	With [Adjustment mode] = [Automatic].
Empty the scale			
3	Remove weight from the scale.	Remove external calibration weight from the scale.	As soon as the scale is empty, the ISO-Cal procedure is finished.

7.7.3.2.2.10 Set preload (xBPI)
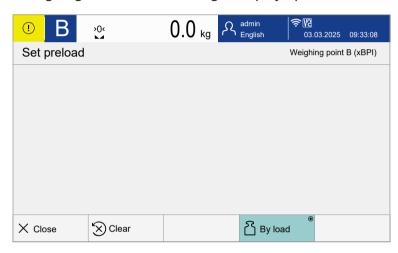
The preload of the scale is set by measuring with a load.

Select a weighing point (xBPI) and open the [⌂ Setup] button group.

WP	Type	Max	Interval	e	🔒
A	Analog	150 kg	0.01 kg	–	–
B	xBPI	6000 g	0.1 g	–	–

Weighing points

Select [⚖ Preload].

A weighing screen without weight display opens.

Set preload — Weighing point B (xBPI)

Taskbar

Button	Function
✕ Close	Close the view.
⊗ Clear	Clear the current preload.
By load	Set preload with current weight. (with user dialog)

7.7.3.2.2.11 Linearization settings (xBPI)

Select a weighing point (xBPI) and open the [⚙ Config.] button group.

Select [✎ Lineariz. settings].

A parameter view opens.

Parameter	Type	Description
Linearization function	Selection	Available options: – Choice on activation, see Linearization (x-BPI) (default) – With predefined weights – With entered weights
Adjustment mode	Selection	Available options: – Manual (with user confirmation) (default) – Automatic (without user confirmation)

Hinweis:

– The available parameters and options depend on the connected scale, i.e., not all scales (xBPI) provide all parameters with all options.
– The setting of the [Adjustment mode] is identical to the [Adjustment mode] under the ISO-Cal settings, i.e., a change in the linearization settings also affects the ISO-Cal settings.
– Linearization may be restricted by the CAL switch of the scale (xBPI).
– The linearization settings are disabled if this function is not supported for the connected scale type (e.g.: IS scale with AOC processor).

7.7.3.2.2.12 Linearization (xBPI)

Hinweis:

Linearization may be restricted by the CAL switch of the scale (xBPI). Linearization is disabled if this function is not supported for the connected scale type (e.g.: IS scale with AOC processor).

1. Select a weighing point (xBPI) and open the [⬚ Setup] button group.

2. Select [✎ Linearization].

   Linearization starts depending on the selected [Linearization function].

Selection option on activation
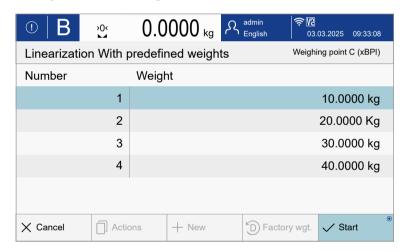
Option	Description	Function
With predefined weights	With factory-defined weights	Linearization with method [With predefined weights] is started.
With entered weights	With configured entered weights	Linearization with method [With entered weights] is started.

3. Select the required function and press [> Next] to confirm.

   ▷ The selected function is executed.
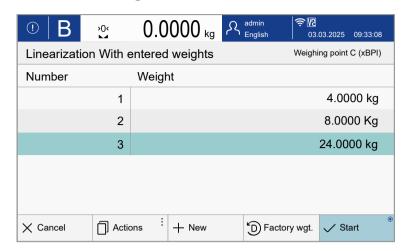
A table view with the available linearization points opens.
In the case of predefined weights, the linearization points cannot be changed.
The linearization points are sorted in ascending order by weight.

With predefined weights

⊙	B	›0‹	0.0000 kg	admin English	📶 ⓥ 03.03.2025 09:33:08

Linearization With predefined weights	Weighing point C (xBPI)

Number	Weight
1	10.0000 kg
2	20.0000 Kg
3	30.0000 kg
4	40.0000 kg

✕ Cancel	▢ Actions	+ New	ⅅ Factory wgt.	✓ Start

With entered weights

⚠	B	›0‹	0.0000 kg	admin English	📶 V2 03.03.2025 09:33:08

Linearization With entered weights	Weighing point C (xBPI)

Number	Weight
1	4.0000 kg
2	8.0000 Kg
3	24.0000 kg

✕ Cancel	▢ Actions ⋮	+ New	⟲ Factory wgt.	✓ Start

Column description

Parameter	Description
Number	Designation of the linearization points: – 1…4: max. 4 linearization points – 1 and 2 are always included.
Weight	Weight at the linearization point

Taskbar

Button	Function
✕ Cancel	Cancel linearization and close the view.
▢ Actions	Button group with actions according to Table view for editing and deleting a linearization point. Disabled for linearization [With predefined weights].
+ New	Add linearization point (max. 4), see "Add/edit linearization point". Disabled for linearization [With predefined weights].
⟲ Factory wgt.	Apply factory weights as entered weights. The number of weights is also applied. Disabled for linearization [With predefined weights].
✓ Start	Start linearization procedure.

Add/edit linearization point

4. Press [+ New] or open the [☐ Actions] button group and select
   [✎ Edit].
   ▷ An input window for entering a weight value appears.

5. Accept the weight value with [✓ OK].
   ▷ The linearization point appears in the table view with the entered
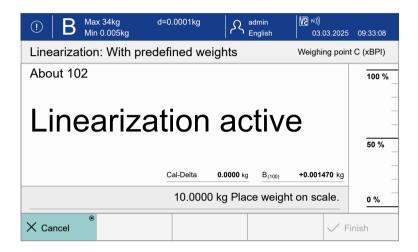   weight.

   The following applies to the entered weight:
   – The distance between two linearization points must be at least 10% of
     the maximum capacity (Max).
   – The linearization point must be above the minimum load of the scale
     (xBPI).
   – The linearization point must not be above the maximum capacity
     (Max).

Linearization procedure

The linearization procedure is performed using a workflow.
During the workflow, instructions are displayed to the user in the application row.

6. Press [✓ Start].

▷ The linearization procedure with the selected adjustment mode and the existing linearization points is started and a weighing screen opens.

⚠	B	Max 34kg Min 0.005kg	d=0.0001kg	👤	admin English	🆅🅲 N))) 03.03.2025 09:33:08

Linearization: With predefined weights   Weighing point C (xBPI)

About 102   100 %

Linearization active

                                                                               50 %

Cal-Delta   **0.0000** kg   B₍₁₀₀₎   **+0.001470** kg

10.0000 kg Place weight on scale.   0 %

✕ Cancel   ✓ Finish

The weight display shows
– Info 102
– Linearization active

The following are displayed as additional weight types:
– Cal target (current linearization weight)
– Difference in weight Cal delta (= gross – Cal target), if present
– Gross with 100-fold resolution

7. Press the required button.

Taskbar

Button	Function
✕ Cancel	Cancel the linearization procedure.
✓ Confirm	Confirm the current linearization point. Visible if [Adjustment mode] = [Manual]. Activated if the scale (xBPI) requests a confirmation.

Step	Instruction	User action	Note
Start			
1	Place *e.g., 6.0 kg* on the scale.	Place the correct calibration weight on the scale.	The calibration weight is the linearization weight for the current linearization point.
Measurement ended			
2a	Confirm the adjustment with [Confirm].	Press [Confirm].	Only for [Adjustment mode] = [Manual].
2b	…	Wait for the measurement.	Only for [Adjustment mode] = [Automatic].
More linearization points?			
	If yes, continue with 1		
	If no, continue with 3		
Empty the scale			
3	Remove weight from the scale.	Remove all calibration weights from the scale.	When the scale is empty: Linearization procedure is finished.

7.7.3.2.3   Compound WP

> **Hinweis:**
> Only NICL has compound WPs because there must be at least three weighing points.

Compound WPs are scales that are made up of 2 or 3 individual weighing points.
They occupy an additional weighing point.
A maximum of one compound WP can be set up.

Applicable properties for the compound WP

Property	[Subject to legal control] Off	[Subject to legal control] On
Assignment of class II scales	Not permitted	Not permitted
Assignment of multi-range/multi-interval scales	Not permitted	Not permitted
Scale interval of the assigned scales	Unit and exponent must be the same.	Unit and exponent must be the same.
Scale interval of the compound WP	MAX (scale interval 1...3)	1 increment above MAX (scale interval 1...3)
Maximum capacity (Max) of the compound WP	Total (MAX 1...MAX 3)	Total (MAX 1...MAX 3) The compound WP must not have more increments than any assigned scale.
Number of increments of the compound WP	Max/scale interval	Max/scale interval
Overload	MIN (overload 1...3)	MIN (overload 1...3)
Min. load (Min)	MIN (minimum load 1...3)	MIN (minimum load 1...3)
Range mode	Always single range	Always single range
Set zero for an assigned scale	Deactivated if compound WP is tared.	Deactivated if compound WP is tared.
Set zero for compound WP	Set zero for assigned scales	Set zero for assigned scales
Weight units	Only adjustment unit	Only adjustment unit
ISO-Cal/linearization	Not available	Not available
Preload	Not available	Not available

7.7.3.2.3.1 Button groups

For compound WPs, the button groups contain the following functions:

Button group ⚖ Scale

Button	Description
🗑 Delete	Remove weighing point (with user dialog)
	Deactivated if
	– the menu lock switch (CAL-1) is closed.
	– the weighing point is disabled.
＋ New	Add weighing point, see Add weighing point for compound WP.
	Deactivated if
	– the menu lock switch (CAL-1) is closed.
	– the maximum number of weighing points is reached (NICC/NICM: 1, NICL: 4).
🗟 Scale assignment	See Scale assignment.
e Legal parameters	See Legal parameters.

Button group ⚙ Config.

deactivated

Button group 🗍 Setup

deactivated

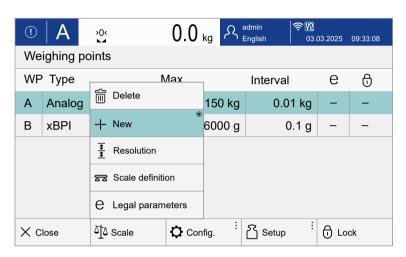### 7.7.3.2.3.2   Add weighing point for compound WP

Prerequisite:

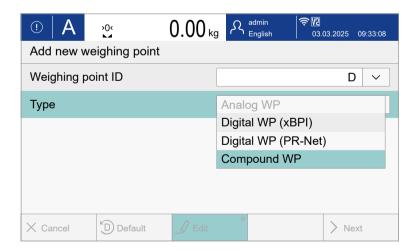At least two weighing points must be set up.

A weighing point for a compound WP is added in a workflow.

Overview

– Assign weighing points, see Scale assignment.
– Configure legal parameters, see Legal parameters.
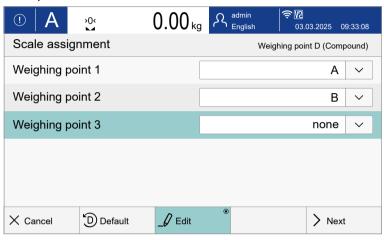
1. Open the [⚖ Scale] button group.

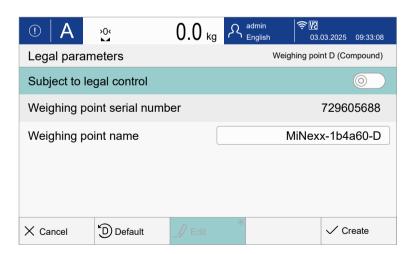2. Select [+ New].
   ▷   A parameter view opens.

3. Select weighing point ID.

    –   Available options: A, B, C, D
    –   IDs that have already been assigned are deactivated in the selection.

4. Select the type [Compound WP].

5. Press [> Next].

    ▷   A parameter view opens, see Scale assignment.

    Example:

⚠	A	›0‹	0.00 kg	admin English	📶 🆅🅲 03.03.2025 09:33:08
Scale assignment					Weighing point D (Compound)
Weighing point 1				A	⌄
Weighing point 2				B	⌄
Weighing point 3				none	⌄
✕ Cancel	Ⓓ Default	✎ Edit			> Next

6. Select the weighing points for the compound WP (2 or 3).

7. Press [> Next].

    ▷   A parameter view opens, see Legal parameters.

⚠	A	›0‹	0.0 kg	admin English	📶 🆅🅲 03.03.2025 09:33:08
Legal parameters					Weighing point D (Compound)
Subject to legal control					◎
Weighing point serial number					729605688
Weighing point name					MiNexx-1b4a60-D
✕ Cancel	Ⓓ Default	✎ Edit			✓ Create

8. Configure the parameters.

9. Press [✓ Create] to add the weighing point.

7.7.3.2.3.3 Scale assignment

> **Hinweis:**
>
> The scale assignment cannot be changed if
> – the menu lock switch (CAL-1) is closed.
> – the weighing point is disabled.

1. Select weighing point of type [Compound] in [Weighing points] and open the [⚖ Scale] button group.

2. Select [▦ Scale assignment].
   ▷ A parameter view opens.

Parameter	Type	Description
Weighing point 1	Selection	Available options: – A (if present) – B (if present) – C (if present) – D (if present) First selectable option (default) First weighing point for the compound WP.
Weighing point 2	Selection	Available options: – A (if present) – B (if present) – C (if present) – D (if present) Second selectable option (default) Second weighing point for the compound WP.
Weighing point 3	Selection	Available options: – None (default) – A (if present) – B (if present) – C (if present) – D (if present) Third weighing point for the compound WP (optional).

3. Select the required weighing points.

7.7.3.2.3.4 Legal parameters

> **Hinweis:**
>
> The legal parameters cannot be changed if
> – the menu lock switch (CAL-1) is closed.
> – the weighing point is disabled.

If [Subject to legal control] is to be switched on, [Subject to legal control] must also be switched on for all associated weighing points.

Select a weighing point of type [Compound] in [Weighing points], open the button group [⚖ Scale] and select [e Legal parameters].
A parameter view opens.

Parameter	Type	Description
Subject to legal control	Switch	◎◯ off (default) Switch on if the weighing point is subject to legal control. The set standard (Legal for trade reg.) and country-specific requirements then apply (see Legal for trade settings). Deactivated and off if [Subject to legal control] is not switched on for at least 1 assigned weighing point.
Weighing point serial number	Display	Calculated as CRC32 from the serial numbers of the assigned weighing points.
Weighing point name	Input	Possible values: – Free text – hostname-wpid, e.g., MiNexx-1b347-A (default)

7.7.3.2.4   PR-Net

PR-Net scales of type [PR-Net] are connected to a PR-Net weighing point via Ethernet.

7.7.3.2.4.1   Button groups (PR-Net)

For PR-Net scales, the button groups contain the following functions:

Button group ⚖ Scale

Button	Description
🗑 Delete	Remove weighing point (with user dialog)
	Deactivated if
	– the menu lock switch (CAL-1) is closed.
	– the weighing point is disabled.
	– the weighing point is part of a compound WP.
+ New	Add weighing point, see Add PR-Net weighing point.
	Deactivated if
	– the menu lock switch (CAL-1) is closed.
	– the maximum number of weighing points is reached (NICC/NICM: 1, NICL: 4).
↦ Connection	See PR-Net connection settings.
e Legal parameters	See Legal parameters (PR-Net).

Button group ⚙ Config.
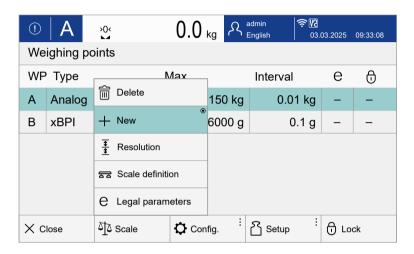
deactivated

Button group 🛆 Setup

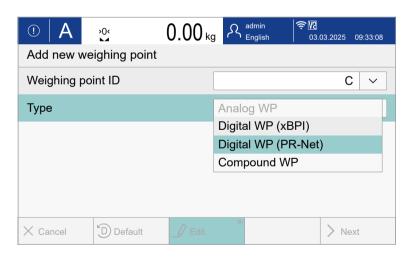deactivated

7.7.3.2.4.2 Add PR-Net weighing point

A weighing point is added in a workflow.

Overview

- Select weighing point ID and type.
- Connection settings, see PR-Net connection settings
- Configure legal parameters, see Legal parameters (PR-Net).

1. Open the [⚖ Scale] button group.

WP	Type	Max		Interval	e	🔒
A	Analog		150 kg	0.01 kg	–	–
B	xBPI		6000 g	0.1 g	–	–

Menu options shown: 🗑 Delete, + New, ↕ Resolution, ⚖ Scale definition, e Legal parameters

Bottom bar: ✕ Close | ⚖ Scale | ⚙ Config. | 🔧 Setup | 🔒 Lock

2. Select [+ New].

   ▷ A parameter view opens.

Add new weighing point

Weighing point ID	C ⌄
Type	

Type options: Analog WP, Digital WP (xBPI), **Digital WP (PR-Net)**, Compound WP

Bottom bar: ✕ Cancel | ↺ Default | ✎ Edit | ❯ Next

3. Select weighing point ID.

   NICM/NICC: Max. 1 weighing point
   - Only A is available

   NICL: Max. 4 weighing points
   - Available options: A, B, C, D
   - IDs that have already been assigned are deactivated in the selection.

4. Select type [Digital WP (PR-Net)].

5. Press [> Next].
   ▷ A parameter view opens, see PR-Net connection settings.

6. Configure the parameters.

7. Press [> Next].
   ▷ A parameter view opens, see Legal parameters (PR-Net).
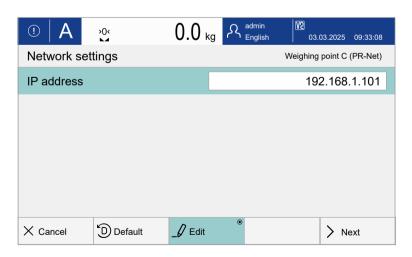
8. Configure the parameters.

9. Press [✓ Create].

7.7.3.2.4.3   PR-Net connection settings

Setting for the IP address of the connected device with PR-Net is defined.

> **Hinweis:**
>
> The connection settings cannot be changed if
> – the menu lock switch (CAL-1) is closed.
> – the weighing point is disabled.

1. Select weighing point of type [PR-Net] in [Weighing points] and open the
   [⚖ Scale] button group.

2. Select [↦ Connection].
   ▷ A parameter view opens.

①	A	›0‹	0.0 kg	admin English	V2 03.03.2025 09:33:08

Network settings	Weighing point C (PR-Net)
IP address	192.168.1.101

✕ Cancel	Ď Default	✎ Edit	◉	> Next

3. Enter IP address (default: 192.168.1.101).

7.7.3.2.4.4   Legal parameters (PR-Net)

> **Hinweis:**
>
> The legal parameters cannot be changed if
> –   the menu lock switch (CAL-1) is closed.
> –   the weighing point is disabled.

Select weighing point of type [PR-Net] in [Weighing points] and open the [⚖ Scale] button group.

Select [e Legal parameters].
A parameter view opens.

Parameter	Type	Description
Subject to legal control	Switch	Always deactivated and ◎◯ switched off.
Weighing point serial number	Display	Serial number of the connected device. If the scale is not connected, 0 is displayed.
Weighing point name	Input	Free text Default: hostname-wpid, e.g., MiNexx-1b347-A

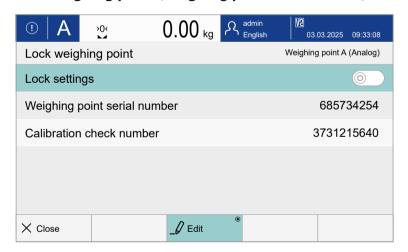### 7.7.3.2.5   Lock/unlock weighing point

> **Hinweis:**
> See also Software switch.
> If [Lock weighing point] is to be switched on for a compound WP, [Lock weighing point] must also be switched on for all associated weighing points.
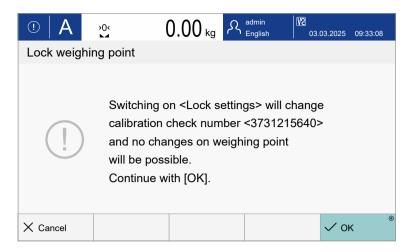
1. Select the required weighing point under [Weighing] ➔ [Weighing points].

2. Press [🔒 Lock].
    ▷ A parameter view opens.

Parameter	Type	Description
Lock settings	Switch	If ⬤ is switched on, the weighing point is locked.
Weighing point serial number	Display	See [Legal parameters].
Calibration check number	Display	Relevant check number

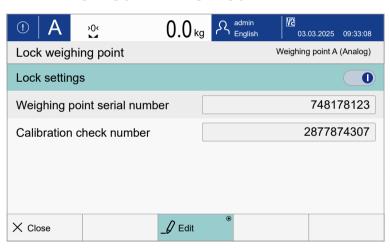**Lock weighing point (weighing point is not locked)**

3. Select [Lock settings] and press [🖊 Edit] or ⬤ (BLUE key).
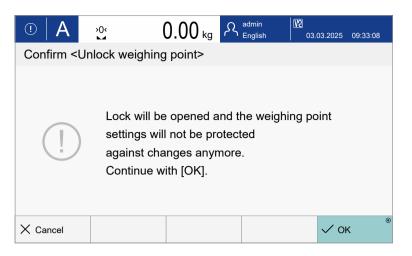   ▷ A user dialog containing the relevant check number appears.

⚠ A	›0‹	0.00 kg	👤 admin English	VC 03.03.2025 09:33:08

Lock weighing point

⚠ Switching on <Lock settings> will change
calibration check number <3731215640>
and no changes on weighing point
will be possible.
Continue with [OK].

✕ Cancel				✓ OK

4. Press [✓ OK].

   ▷ The weighing point is locked.

5. Press [✕ Close] to close the view.

Unlock weighing point (weighing point is locked)

⚠ A	›0‹	0.0 kg	👤 admin English	VC 03.03.2025 09:33:08

Lock weighing point   Weighing point A (Analog)

Lock settings	🔵
Weighing point serial number	748178123
Calibration check number	2877874307

✕ Close		✏ Edit		

6. Select [Lock settings] and press [✏ Edit] or ⚫ (BLUE key).

   ▷ A user dialog containing the relevant check number appears.

7. Press [✓ OK].

   ▷ A follow-up dialog opens.

| ⓘ | **A** | ›0‹ | 0.00 kg | admin English | Vc | 03.03.2025 09:33:08 |

Confirm <Unlock weighing point>

(!)   Lock will be opened and the weighing point
settings will not be protected
against changes anymore.
Continue with [OK].

| ✕ Cancel | | | | ✓ OK |

8. Press [✓ OK].

    ▷ The weighing point is unlocked.

9. Press [✕ Close] to close the view.

7.7.3.3   Alibi memory settings

> **Hinweis:** The settings cannot be changed if the indicator is subject to legal control*.

* The indicator is subject to legal control if [Subject to legal control] is enabled for at least one weighing point AND a weighing point is disabled OR the menu lock switch (CAL-1) is closed.
Prerequisite:
Alibi license is available.

Menu: [Weighing] ➔ [Alibi memory]

A parameter view opens.

Parameter	Type	Description
Clear records	Selection	Available options: – Without retention period (default) – With retention period – Manually (cannot be selected if [Subject to legal control] is enabled for a weighing point.) [Without retention period] If the alibi memory is full, the oldest records are deleted without any further user action or notification. [With retention period] If the alibi memory is full, the records that are older than the retention period are deleted without any further user action or notification. If all records are more recent, then further saving to the alibi memory is not possible. [Manually] If the alibi memory is full, further saving is not possible. A message dialog opens.
Retention period	Input	Possible values: – 1...9999 – 90 days (default) Visible if [Clear records] = [With retention period]

Taskbar

Button	Function
🗑 Erase	– Deletes all the entries in the alibi memory (with con-firmation dialog). – Requires the permission "ALIBI".

7.7.4   Interfaces

> **Hinweis:** The menu item [Interfaces] is disabled if the user does not have the necessary permission (SS-E or SS-V).

Menu: [Settings] ➞ [Interfaces]

The following menu items appear:
– Network settings
– Printers
– Input devices
– Serial communication
– Inputs & outputs
– [Fieldbus] (can only be selected if a fieldbus module is installed), see Fieldbus settings
– [Bluetooth], see Enable Bluetooth and Disable Bluetooth (for NICC only)

Permissions

The following permissions must be enabled for the described functions (see also User roles).

ID	Permission	Function
SS-V	System settings – View	Open menu items under [Settings] ➞ [Interfaces] and view parameter settings.
SS-E	System settings – Edit	Open menu items under [Settings] ➞ [Interfaces] and edit parameter settings.

7.7.4.1   Network settings

Menu: [Interfaces] ➜ [Network settings]

The following menu items appear:
–   Host name and certificate
–   [LAN], see LAN settings
–   [WLAN], see WLAN settings(for NICC only)
–   [WLAN access point], see WLAN access point settings (for NICC only)
–   Network services and protocols
–   Network shares

7.7.4.1.1   Host name and certificate

The indicator provides various types of certificates for network connections:
–   Generated: The certificate is generated from the internal Minebea Intec standard certificate (with domain if required).
–   Import: The certificate is generated on a user-specific basis from an imported certificate file (with a password if required).

> **Hinweis:**
> No certificate is available when the device is delivered (the info line displays "Certificate: no").
>
> In this case, press [🖫 Save] to generate a certificate with the default values ("Certificate: generated").

Menu: [Network settings] ➡ [Host name and certificate]

A parameter view opens.

Parameter	Type	Description
Host name	Input	MiNexx-xxxxxx with at least three bytes of the ETH0 MAC-ID (default) Device name, must be unique in the network
Certificate type	Selection	Available options: – Generated (default) – Import
Domain	Input	Optional Visible if [Certificate type] = [Generated]
Import certificate	Display	Selected certificate file Visible if [Certificate type] = [Import]
Password	Input	Optional Visible if [Certificate type] = [Import]

1. Select/edit the required parameters.

> ### ACHTUNG
>
> **The device name must be unique in the network!**
> Always follow the IT security guidelines.
> ▶ Use unique device names.

Import certificate file

2. Select [Certificate type] = [Import].

3. Press [↗▤ Import] and select a certificate file (.pem), see Directories and files.

   ▷ The selected file is displayed under [Import certificate].

   > **Hinweis:** This button is only visible if [Certificate type] = [Import].

4. Enter the [Password] for the file if required.

Generate certificate

5. Select [Certificate type] = [Generated].

Save certificate

6. Press [🖫 Save] to check the entered data (for [Import]/[Generated]).
   ▷ The type is displayed in the info line.

7.7.4.1.2 LAN settings

Menu: [Network settings] ➔ [LAN]

A parameter view opens.

Parameter	Type	Description
Hardware address	Display	MAC-ID of the Ethernet interface
Use DHCP server	Switch	⬤ on (default)
Ign. routes obt. from DHCP server	Switch	◯ off (default) If off, default network routes from the DHCP server are ignored. Visible if [Use DHCP server] is on.
Network address	Input	Possible values: – Valid IP address – 192.168.1.1 (default) Visible if [Use DHCP server] is off.
Subnet mask	Input	Possible values: – Valid IP address – 255.255.255.0 (default) Visible if [Use DHCP server] is off.
Default gateway	Input	Possible values: – Valid IP address, optional Visible if [Use DHCP server] is off.

Parameter	Type	Description
DNS server	Input	Possible values: – Valid IP address, optional Visible if [Use DHCP server] is off.

1. Select/edit the individual parameters.

2. If required, press [👁 View] to display details of the connected LAN network.

7.7.4.1.3 WLAN settings
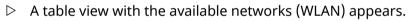
Menu: [Network settings] ➝ [WLAN]

A parameter view opens.

Parameter	Type	Description
Enable	Switch	WLAN ⬜ off (default) If [Enable] is switched on and an SSID is not yet available, the WLAN search is started, see "Available networks".

The following parameters are only visible if [Enable] is switched on.

| Parameter	Type	Description
Hardware address	Display	MAC-ID of the WLAN interface
SSID	Input	Possible values: – Input an SSID or display a selected network
WLAN key	Input	Login key for entered/selected [SSID]
Use DHCP server	Switch	⬤ on (default)
Ign. routes obt. from DHCP server	Switch	⬜ off (default) If off, default network routes from the DHCP server are ignored. Visible if [Use DHCP server] is on.
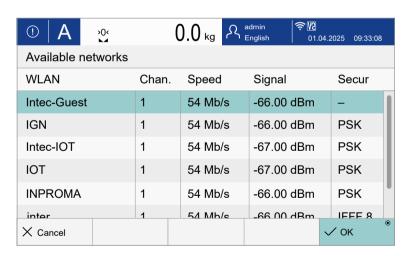
Parameter	Type	Description
Network address	Input	Possible values: – Valid IP address – 192.168.2.1 (default) Visible if [Use DHCP server] is off.
Subnet mask	Input	Possible values: – Valid IP address – 255.255.255.0 (default) Visible if [Use DHCP server] is off.
Default gateway	Input	Possible values: – Valid IP address, optional Visible if [Use DHCP server] is off.

1. Select/edit the individual parameters.

Available networks

2. Press [$\mathbb{Q}$ Search] to start the search for available networks.
   ▷ A table view with the available networks (WLAN) appears.

WLAN	Chan.	Speed	Signal	Secur
Intec-Guest	1	54 Mb/s	-66.00 dBm	–
IGN	1	54 Mb/s	-66.00 dBm	PSK
Intec-IOT	1	54 Mb/s	-67.00 dBm	PSK
IOT	1	54 Mb/s	-67.00 dBm	PSK
INPROMA	1	54 Mb/s	-66.00 dBm	PSK
inter	1	54 Mb/s	-66.00 dBm	IEEE 8

3. Select the required WLAN and confirm with [✓ OK].
   ▷ The WLAN is displayed as [SSID].

Connect network

4. Press [✓ Connect] to test the connection to the WLAN.

   ▷ If successful, the data is saved, a user dialog appears, and the connection is established. In the event of an error, the data is saved and an error message appears.

5. If required, press [👁 View] to display details of the connected WLAN network.

7.7.4.1.4   WLAN access point settings

Menu: [Network settings] ➜ [WLAN access point]

A parameter view opens.

Parameter	Type	Description
Enable	Switch	WLAN ◎⃝ off (default)

The following parameters are only visible if [Enable] is switched on.

Parameter	Type	Description
Hardware address	Display	MAC-ID of the WLAN interface
Authentication method	Selection	Available options: – WPA2-PSK (default) – None
SSID	Input	Possible values: – Definition of the network name – Host name (default)
WLAN key	Input	min. 8 ASCII characters Visible if [Authentication method] = [WPA2-PSK]
Network address	Input	Possible values: – Valid IP address that can be used to connect to the device – 192.168.43.1 (default)
Subnet mask	Input	Possible values: – Valid IP address – 255.255.255.0 (default)
Provide DHCP server	Switch	⃝➊ on (default)
DHCP server:	Input	Valid IP address (default: 192.168.43.20)

Parameter	Type	Description
Start address		Visible if [Provide DHCP server] is on.
DHCP server: Last address	Input	Valid IP address (default: 192.168.43.30) Visible if [Provide DHCP server] is on.

7.7.4.1.5 Network services and protocols

> **Hinweis:**
> The information under Network security must be observed.

> ⚠ **VORSICHT**
>
> **Warning: danger of unauthorized access.**
> Risk of data manipulation without the operator's knowledge.
> ▶ Use the factory default function to set the device to a secure configuration in which all network services are switched off.
> ▶ Activate the user management of the device to protect it from unauthorized access.
> ▶ Deactivate all unused network services.
> ▶ Protect the device and the services with suitable passwords (web server, WLAN access point (for NICC only), OPC-UA server, VNC access).

> **Hinweis:**
> Before external devices can access the network services and protocols, they must be activated individually.
> Furthermore, predefined logins must be activated and protected with a password for access to the web server or VNC server and for the execution of commands via OPC-UA.

Menu: [Network settings] ➔ [Network services and protocols]

A parameter view opens.

Parameter	Type	Description	Note
Web server	Selection	Available options: – Disabled (Default) – HTTP + HTTPS – HTTPS only	See Web server
VNC server	Switch	⬭ off (default)	See VNC server
Modbus-TCP/UDP	Switch	⬭ off (default)	Access to the device via Modbus-TCP/UDP
OPC-UA	Switch	⬭ off (default)	Access to the device via OPC-UA
PR-Net	Switch	⬭ off (default)	Device sends data as PR-Net weighing point

7.7.4.1.5.1 Logins for web server and VNC server

1. Press [👤☰ Logins] to open the table view [Logins for services].

   ▷ The following predefined logins are listed in the table; these cannot be changed.

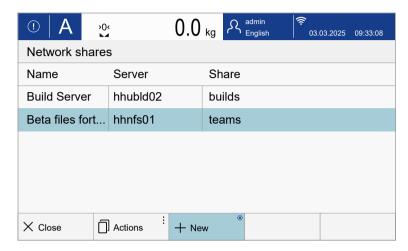| Login	Description	Status
administrator	All web server permissions + VNC	[✔ Enabled]/[✕ Disabled]
guest	Reduced web server permissions + VNC	[✔ Enabled]/[✕ Disabled]

Activate login

2. Select login and press [👤⚙ Password] to open the dialog for creating a password.

3. Enter [Password] (min. 8 characters) and confirm in [New password again].

   ▷ The password inputs are checked. The selected login is activated if the inputs are valid. Otherwise an error message appears.

Deactivate login

4. Select an active login and press [⊗ Disable] (with user dialog).

   ▷ The selected login is deactivated.

7.7.4.1.6 Network shares

Menu: [Network settings] ➜ [Network shares]

A table view opens.

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Network shares

Name	Server	Share
Build Server	hhubld02	builds
Beta files fort...	hhnfs01	teams

✕ Close	⧉ Actions	⋮	+ New		

Column description
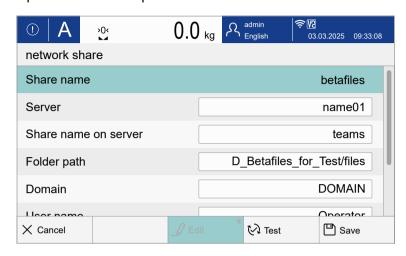
Parameter	Description	Note
Name	Share name	See "Add/edit".
Server	Host name or IP address of the server	See "Add/edit".
Share	Share name on server	See "Add/edit".

Add/edit

Press [+ New] or open the [☐ Actions] button group and select
[✎ Edit].
A parameter view opens.

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network share	
Share name	betafiles
Server	name01
Share name on server	teams
Folder path	D_Betafiles_for_Test/files
Domain	DOMAIN
User name	Operator

✕ Cancel		✎ Edit	✓ Test	💾 Save

> **Hinweis:** Only enter the system-specific parameters in consultation with the system administrator.
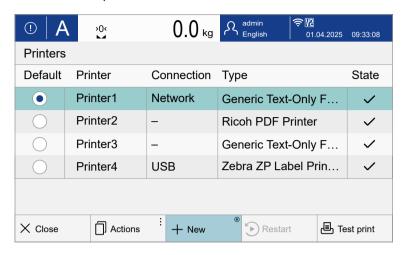
Parameter	Type	Description
Share name	Input	Unique name that cannot be changed.
Server	Input	Host name or IP address of the server
Share name on server	Input	Name of the directory shared on the server
Folder path	Input	Folder path within the share on the server (optional)
Domain	Input	Network domain (optional)
User name	Input	User login on the server
Password	Input	Password for user login on the server

If required, press [✓ Test] to test the configured network share.

7.7.4.2   Printers

Menu: [Interfaces] ➜ [Printers]

A table view opens.

Printers				
Default	**Printer**	**Connection**	**Type**	**State**
⦿	Printer1	Network	Generic Text-Only F…	✓
◯	Printer2	–	Ricoh PDF Printer	✓
◯	Printer3	–	Generic Text-Only F…	✓
◯	Printer4	USB	Zebra ZP Label Prin…	✓

Taskbar: ✕ Close | ▢ Actions | + New | ▷ Restart | ▣ Test print

All installed printers are listed.

Column description

Parameter	Description
Default	Radio button The selected printer is used as the default printer.
Printer	Printer name
Connection	Available options: – USB – Serial – Network – Bluetooth (for NICC only) Type of printer connection
Type	Printer type, see Manufacturer and type
Status	✓ Printer is active. ✕ Printer is inactive.

Further settings for the printers are configured via specific buttons and button groups in the taskbar.

Taskbar

Button	Description
✕ Close	Close the view.
▯ Actions	Button group
🗑 Delete	Remove printer (with user dialog).
👤⚙ Advanced options	See Advanced PPD options.
⚙ Options	See PPD options.
☰ Type	See Manufacturer and type.
⊢↔⊣ Connection	The connection settings depend on the connection of the selected printer: – Serial, see Connection settings for serial printers – Network, see Connection settings for network printers Not visible if the selected printer has a USB or Bluetooth connection.
＋ New	Add printer: – USB, see Add USB printer – Serial, see Add serial printer – Network, see Add network printer – Bluetooth, see Add Bluetooth printer (for NICC only)
↻ Restart	Activate the printer. Disabled if the selected printer is active.
🖶 Test print	See Test print. Disabled if the selected printer is inactive.

7.7.4.2.1 USB printer

7.7.4.2.1.1 Add USB printer
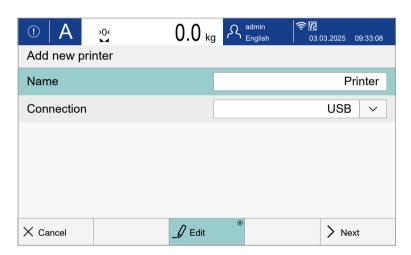
Prerequisite:

A printer is connected to the USB interface.

A USB printer is added in a workflow.

Overview

- – Select connection type.
- – Select USB printer.
- – Select manufacturer and type, see Manufacturer and type.

1. Press [+ New].

    ▷ A parameter view opens.

2. Enter a unique printer name.

3. Select [USB] connection.

    [USB] is only visible if a printer is connected to the USB interface.

4. Press [> Next].

    ▷ A selection list containing the connected USB printers appears.

5. Select the required printer.

6. Press [> Next].

▷   A parameter view opens, see Manufacturer and type.

7.   Configure the parameters.

8.   Press [✓ Create] to create the printer.

7.7.4.2.2   Serial printer

7.7.4.2.2.1   Add serial printer
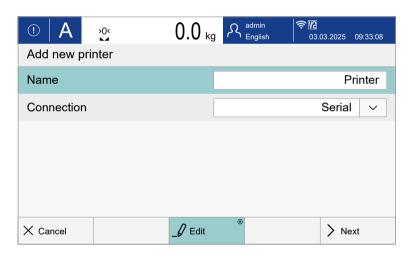
Prerequisite:

A serial option card is installed and available.

A serial printer is added in a workflow.

Overview
–   Select connection type.
–   Configure serial interface.
–   Select manufacturer and type.

1.   Press [+ New].

▷   A parameter view opens.

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Add new printer

Name	Printer
Connection	Serial ⌄

✕ Cancel		✎ Edit		❯ Next

2.   Enter a unique printer name.

3.   Select [Serial] connection.

4.   Press [❯ Next].

▷   A parameter view opens, see Connection settings for serial printers.

5.   Configure the parameters.

6.   Press [❯ Next].

▷   A parameter view opens, see Manufacturer and type.

7. Configure the parameters.

8. Press [✓ Create] to create the printer.

7.7.4.2.2   Connection settings for serial printers

Select a printer with the [Serial] connection and open the [⧉ Actions]
button group.
Select [⟷ Connection].
A parameter view opens.

Parameter	Type	Description
Interface	Selection	Available options: – Option slot 2 RS-232 – Option slot 2 RS-485 – Option slot 3 RS-232 – Option slot 3 RS-485 – Option slot 4 RS-232 (for NICL only) – Option slot 4 RS-485 (for NICL only) Serial interface for connecting the printer. The options displayed depend on the serial option cards installed. Options that have already been used cannot be selected.
Baud rate	Selection	Available options: – 1200 baud – 2400 baud – 4800 baud – 9600 baud (default) – 19200 baud – 38400 baud – 57600 baud – 115200 baud
Data bits	Selection	8 bits (fixed value)
Parity	Selection	No parity (fixed value)
Stop bits	Selection	1 bit (fixed value)

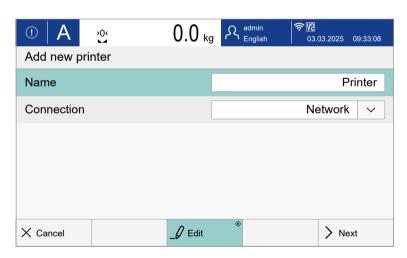| Parameter	Type	Description
Handshake	Selection	Available options: – None (default) – RTS/CTS (only for RS-232) – XON/XOFF (only for RS-232)
Connection	Selection	4-wire (fixed value for printer at RS-485 interface) Visible if [Interface] = slot with RS-485

7.7.4.2.3   Network printer

7.7.4.2.3.1   Add network printer

A network printer is added in a workflow.

Overview
– Select connection type.
– Configure network parameters.
– Select manufacturer and type.

1. Press [+ New].

   ▷ A parameter view opens.

2. Enter a unique printer name.

3. Select [Network] connection.

4. Press [> Next].

   ▷ A parameter view opens, see Connection settings for network printers.

5. Configure the parameters.

6. Press [> Next].

   ▷ A parameter view opens, see Manufacturer and type.

7. Configure the parameters.

8. Press [✓ Create] to create the printer.

7.7.4.2.3.2   Connection settings for network printers

Select a printer with the [Network] connection and open the [⬚ Actions] button group

Select [↦ Connection].

A parameter view opens.

Parameter	Type	Description
Protocol	Selection	Available options: – LPR (default) – Raw – IPP – IPPS – HTTP – HTTPS
IP address	Input	IP address of the printer 192.168.1.102 (default)
Port number	Input	Default depends on the selected protocol: – LRP: 515 – Raw: 9100 – IPP/IPPS: 631 – HTTP: 80 – HTTPS: 443

7.7.4.2.4   Bluetooth printer
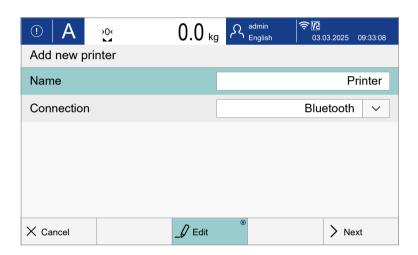
For NICC only

7.7.4.2.4.1   Add Bluetooth printer
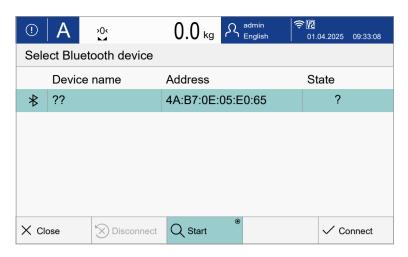
A Bluetooth printer is added in a workflow.

Overview
–   Select connection type.
–   Enable Bluetooth (if switched off).
–   Select Bluetooth device.
–   Select manufacturer and type.

1. Press [+   New].
    ▷   A parameter view opens.

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Add new printer

Name	Printer
Connection	Bluetooth ⌄

✕ Cancel		✐ Edit		❯ Next

2. Enter a unique printer name.

3. Select [Bluetooth] connection.

4. Press [❯   Next].
    ▷   The parameter view for [Bluetooth] appears if [Enable] Bluetooth is
         not switched on, see Enable Bluetooth.

5. Switch on [Enable] and press [▣   Save].
    ▷   A table view for selecting the Bluetooth printer appears.

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Select Bluetooth device

	Device name	Address	State
✳	??	4A:B7:0E:05:E0:65	?

✕ Close	⊗ Disconnect	🔍 Start		✓ Connect

6. If the printer is not in the list, press [🔍 Start] to search for Bluetooth devices.

   ▷ Any new devices found are listed.

7. Press [⚙ Stop] to end the search.

8. Select a printer and press [﹥ Next].

   ▷ A parameter view opens, see Manufacturer and type.

9. Configure the parameters.

10. Press [✓ Create] to create the printer.

7.7.4.2.5 Manufacturer and type

The indicator supports the printing of PDF files (page mode) and text (line mode).
This print mode must correspond to the printer used or its setting.

Select a printer in the [Printers] table view, open the [⧉ Actions] button group, and select [☰ Type].
A parameter view opens.

Parameter	Type	Description
Manufacturer	Selection	Available options: – Zebra (default) – Generic – STAR

Type	Selection	Available options:
		– for [Manufacturer] = [Zebra]:
		  – Zebra ZPL Label Printer (cannot be changed)
		– for [Manufacturer] = [Generic]:
		  – Generic PDF Printer (Default)
		  – Generic Text-Only Printer
		– for [Manufacturer] = [STAR]:
		  – Star SM-S230i (cannot be changed)

Set as default printer	Switch	⬤ on (Default) If switched on, the selected printer is used as the default printer.

> **Hinweis:**
> For all text printers (line mode), [Manufacturer] = [Generic] and [Type] = [Generic Text-Only Printer] should be selected.
> All other settings are only to be selected for printers in page mode (PDF printing).

Select the settings listed below for the printers supported by Minebea Intec.

Printer	[Manufacturer]	[Type]	Note
Minebea Intec YDP 05 (Zebra ZD410) as delivered	Generic	Generic Text-Only Printer	For line printing
Minebea Intec YDP 05x (Zebra ZD410) switched to page mode	Zebra	Zebra ZPL Label Printer	For PDF printing
Minebea Intec YDP 21 (Star SP700)	Generic	Generic Text-Only Printer	Line printing only
ZD420d/ZD421d As delivered	Zebra	Zebra ZPL Label Printer	For PDF printing
ZD420d/ZD421d Switched to line mode	Generic	Generic Text-Only Printer	For line printing
ZD420t/ZD421t	Zebra	Zebra ZPL Label Printer	PDF printing only
SM-S230i in StarPRNT mode	STAR	SM-S230i	For PDF printing
SM-S230i in ESC/POS mode	Generic	Generic Text-Only Printer	For line printing
Other text printer	Generic	Generic Text-Only Printer	For line printing
Other PDF printer	Generic	Generic PDF Printer	For PDF printing

> **Hinweis:**
> When using other printers from other manufacturers, the instructions in the printer documentation must be observed.

7.7.4.2.6 PPD options

The PPD options contain the printer-specific settings for paper format, resolution, paper type (continuous/non-continuous), etc., which must be set for each printer.

Select a printer in the [Printers] table view, open the [⬚ Actions] button group, and select [☰ Options].
A parameter view opens.
The parameters displayed depend on the [Manufacturer]/[Type] of the selected printer, see Manufacturer and type.

Zebra/Zebra ZPL Label Printer

Parameter	Type	Description
Media Size	Selection	Print size Default: 2.25×3.00" (suitable for paper width 56 mm and label length 76 mm)
Resolution	Selection	Resolution Available options: – 203 dpi (default) – 300 dpi – 600 dpi

Media Tracking	Selection	Media tracking
		
		Available options:
		– Continous
		  for continuous paper
		– Non-continous (Web sensing) (default)
		  for labels with backing tape
		– Non-continous (Mark sensing)
		  for labels with marks

Parameter	Type	Description

Media Type	Selection	Media type
		
		Available options:
		– Printer Default (default)
		  Use default setting for the printer
		– Thermal Transfer Media
		  Thermal transfer
		– Direct Thermal Media
		  Direct thermal

Generic/Generic Text-Only Printer

Parameter	Type	Description
Media Size	Selection	Not used
Long Line Hand-ling	Selection	Not used
Tab Stop Width	Selection	Not used

Paginate Output ("On" for shee...)	Selection	Page separation
		
		Available options:
		– On (default)
		  for labels
		– Off
		  for continuous paper

Left Margin	Selection	Left margin (number of columns = blank spaces) Available options: – 0 Columns (default) – 1 Column – 2 Columns ... – 20 Columns

Parameter	Type	Description
Right Margin	Selection	Right margin (number of columns = blank spaces) Available options: – 0 Columns (default) – 1 Column – 2 Columns ... – 20 Columns
Top Margin	Selection	Top margin (number of lines) Available options: – 0 Lines (default) – 1 Line – 2 Lines ... – 20 Lines
Bottom Margin	Selection	Bottom margin (number of lines) Available options: – 0 Lines (default) – 1 Line – 2 Lines ... – 20 Lines

STAR/Star SM-230i

Parameter	Type	Description
Media Size	Selection	Print size

Additional functions for Zebra printers:

Button group 𝄇 Tools

Button	Description
≛ Line mode	Switches the connected Zebra printer to line mode (with user dialog).
→▤ Page mode	Switches the connected Zebra printer to page mode (with user dialog).

7.7.4.2.7   Advanced PPD options

[Advanced PPD options] contain a list of all printer-specific settings for paper format, resolution, paper type (continuous/non-continuous), etc.

Select a printer in the [Printers] table view, open the [▢ Actions] button group, and select [🔧 Advanced options].

The parameters displayed depend on the [Manufacturer]/[Type] of the selected printer, see Manufacturer and type.
For a basic description of the parameters, see PPD options.

7.7.4.2.8   Test print

1. Select a printer in the [Printers] table view.

2. Press [⊟ Test print].

    ▷   A selection appears with the following options.

Option	Description	Function
Graphical	Graphical printout	Test printout as PDF, can only be selected for printers in page mode.
Text	Text printout	Test printout as text, can be selected for all printers.
Poss. further	graphical or text printout	Test printout according to print file (If further print files with the name "firm-testpage-*.xml" have been loaded into the device.)

3. Select a function and press [⊟ Test print].

    ▷   The test print is started.

7.7.4.3   Input devices

Menu: [Interfaces] ➡ [Input devices]

The following menu items appear:
–   [Bluetooth devices], see Activate Bluetooth devices (for NICC only)
–   External keyboard
–   Application barcode scanner
–   Test input devices

7.7.4.3.1   Activate Bluetooth devices

The Bluetooth input devices are set up and managed under [Bluetooth devices].

The following Bluetooth devices can be used:
– Keyboard
– Barcode scanner
– Other Bluetooth devices
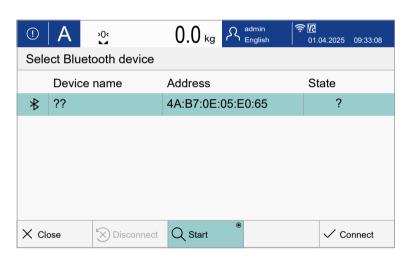
Each device is identified by an icon.

Menu: [Input devices] ➡ [Bluetooth devices]

The parameter view for [Bluetooth] appears if [Enable] Bluetooth is not switched on, see Enable Bluetooth.

1. Switch on [Enable] ⬤ and press [🖫 Save].
   ▷   A table view of already paired or connected input devices appears.

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Select Bluetooth device

	Device name	Address	State
✳	??	4A:B7:0E:05:E0:65	?

✕ Close	⊗ Disconnect	🔍 Start		✓ Connect

Column description

Parameter	Description	Note
Device name		
⊞⊟ 🔫 ✳	Keyboard Barcode scanner Other Bluetooth devices	Read from the input device.
Address	MAC ID of the input device	
Status	✓ Connected ✗ Not connected (But device has already been paired.) ? Unknown	

2. Press [🔍 Start] if the input device is not in the list.

    ▷   A search for Bluetooth devices is started. Any new devices found are listed.

3. Press [☀ Stop] to end the search.

4. When the required Bluetooth device is listed, select it and press [✓ Connect].

5. Press [⊗ Disconnect] to disconnect a connected device.
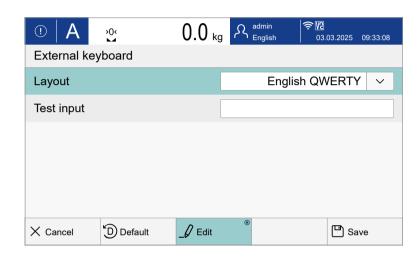
7.7.4.3.2 External keyboard

Under [External keyboard] the layout of an external keyboard (USB or Bluetooth) is set.
Additionally, the input can be checked here via an external keyboard or via a barcode scanner that is not set up as an [Application barcode scanner] (see Test input devices).

Menu: [Input devices] ➔ [External keyboard]

A parameter view opens.

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External keyboard

Layout	English QWERTY ⌄
Test input	

✕ Cancel	D Default	✎ Edit		🖫 Save

Parameter	Type	Description
Layout	Selection	Keyboard layout for inputting text with an external keyboard
		Available options:
		– German QWERTZ
		– Default: English QWERTY
		– French AZERTY
Test input	Input	Test input device (via external keyboard or barcode scanner).

1. Select the required [Layout].

2. If required, select [Test input] and press [✎ Edit].
   ▷ An empty input window opens.

3. Use the external keyboard or barcode scanner to enter or read in any characters and check the display in the input window.

> **Hinweis:** The characters used for [Test input] are not saved.

7.7.4.3.3 Application barcode scanner

Under [Application barcode scanner] a barcode scanner is selected with which special application-specific functions can be carried out (see operating instructions for the application).

> **Hinweis:** A barcode scanner (USB or Bluetooth) can be used to enter characters directly in an input window without any further configuration.

Menu: [Input devices] ➜ [Application barcode scanner]

A parameter view opens.

Parameter	Type	Description
Enable	Switch	◎⃝ off (default) If [Enable] is switched on, the application can access the configured barcode scanner. Deactivated and switched off if no USB/Bluetooth device or serial interface is available.

The following parameters are only visible if [Enable] is switched on.

Parameter	Type	Description
Interface	Selection	Available options: – USB/Bluetooth (all scanners via USB or Bluetooth) (default) – Option slot 2 RS-232 – Option slot 3 RS-232 – Option slot 4 RS-232 (for NICL only) The options displayed depend on the serial option cards installed. Options that have already been used cannot be selected.
Input terminator	Selection	Available options: – CR (line break); default for serial interface, cannot be selected for USB/Bluetooth – LF (line feed); cannot be selected for USB/Bluetooth – ENTER; default for USB/Bluetooth, cannot be selected for serial interface – Timeout
Timeout after	Input	Possible values: – 1...10 s – 2 s (default) Input is accepted after this time if no further characters are sent. Visible if [Input terminator] = [Timeout].

Parameter	Type	Description
The following parameter is only visible if [Interface] = [USB/Bluetooth].		
Input device	Selection	Available options: List of all available HIDs
The following parameters are only visible if [Interface] = [Slot …]		
Baud rate	Selection	Available options: – 300 baud – 600 baud – 1200 baud – 2400 baud – 4800 baud – 9600 baud (default) – 19200 baud – 38400 baud – 57600 baud – 115200 baud
Data bits	Selection	Available options: – 7 bits – 8 bits (default)
Parity	Selection	Available options: – None (default) – Even – Odd
Stop bits	Selection	Available options: – 1 bit (default) – 2 bits
Handshake	Selection	Available options: – None (default) – RTS/CTS – XON/XOFF

7.7.4.3.4　Test input devices

[Test input devices] can be used to test the text entries of all input devices:
– USB keyboard or USB barcode scanner
– Bluetooth keyboard or Bluetooth barcode scanner (for NICC only)
– NFC reader
– Serial barcode scanner (for application)

Menu: [Input devices] ➜ [Test input devices]

Enter a character or string using any input device.
A list of the characters that have been read is displayed.

The type of input device from which the characters were read is indicated as follows:
–　⌨
  –　USB keyboard
  –　USB or Bluetooth barcode scanner (not for application)
  –　Bluetooth keyboard (for NICC only)
–　🔫
  –　Application barcode scanner
–　N))
  –　NFC reader (NFC tag)

> **Hinweis:**
> When the list is opened or after 5 seconds of inactivity, an information message is displayed.
> The list contains a maximum of 20 characters; after that, the oldest characters are overwritten.

7.7.4.4   Serial communication

Menu: [Interfaces] ➜ [Serial communication]

Once the selection has been confirmed, a sub-menu appears with the follo-
wing items:
–   Remote display protocol (PR 5110), see Remote display protocol
–   SBI, see SBI protocol
–   SMA, see SMA protocol
–   Modbus-RTU, see Modbus-RTU protocol
–   xBPI, see xBPI protocol

> **Hinweis:** For the technical description (i.e., what the commands and
> responses look like), refer to the Protocol manual.
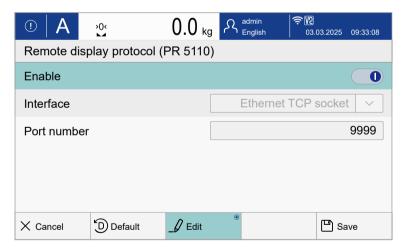
7.7.4.4.1   Remote display protocol

With the [Remote display protocol (PR 5110)], a remote display can be
connected (in particular PR 5110), which enables the weight to be displayed
and the indicator to be controlled with simple weighing commands.
The protocol always sends information via all available weighing points.

Menu: [Serial communication] ➜ [Remote display protocol (PR 5110)]

A parameter view opens.

Parameter	Type	Description
Enable	Switch	⬭ off (default) If [Enable] is switched on, the remote display protocol (PR 5110) is transmitted via the selected interface.

The following parameters are only visible if [Enable] is switched on.

Parameter	Type	Description
Interface	Selection	Available options: – Option slot 2 RS-232 – Option slot 2 RS-485 – Option slot 3 RS-232 – Option slot 3 RS-485 – Option slot 4 RS-232 (for NICL only) – Option slot 4 RS-485 (for NICL only) – Ethernet TCP socket The options displayed depend on the serial option cards installed. Options that have already been used cannot be selected.

The following parameters are only visible if [Interface] = [Slot ...].

Parameter	Type	Description
Baud rate	Selection	Available options: – 1200 baud – 2400 baud – 4800 baud – 9600 baud (default) – 19200 baud
Data bits	Display	7 bits (fixed value for remote display protocol PR 5110)
Parity	Display	Even parity (fixed value for remote display protocol PR 5110)
Stop bits	Display	1 bit (fixed value for remote display protocol PR 5110)
Connection	Display	Visible if [Interface] = slot with RS-485 4-wire (fixed value for remote display protocol PR 5110)

The following parameter is only visible if [Interface] = [Ethernet TCP Socket].

Parameter	Type	Description
Port number	Input	Possible values: – 1024...65535 – 45155 (default)

7.7.4.4.2   SBI protocol

The SBI protocol is a simple protocol that can be used to transfer information to higher-level systems (PC, displays).

> **Hinweis:**
> NICL only:
> If there are multiple weighing points, the data from the currently displayed weighing point is always transmitted.

Menu: [Serial communication] ➔ [SBI]

A parameter view opens.

Parameter	Type	Description
Enable	Switch	⬤◯ off (default) If [Enable] is switched on, the SBI protocol is transmitted to the selected interface.

The following parameters are only visible if [Enable] is switched on.

Parameter	Type	Description
Interface	Selection	Available options: – Option slot 2 RS-232 – Option slot 2 RS-485 – Option slot 3 RS-232 – Option slot 3 RS-485 – Option slot 4 RS-232 (for NICL only) – Option slot 4 RS-485 (for NICL only) – Ethernet UDP socket – Ethernet TCP socket – USB device (not for NICC and only if USB device is configured) The options displayed depend on the serial option cards installed. Options that have already been used cannot be selected.

The following parameters are only visible if [Interface] = [Slot ...].

Parameter	Type	Description
Baud rate	Selection	Available options: – 1200 baud (default) – 2400 baud – 4800 baud – 9600 baud – 19200 baud
Data bits	Selection	Available options: – 7 bits (default) – 8 bits

Parameter	Type	Description
Parity	Selection	Available options: – None – Even – Odd (default)
Stop bits	Selection	Available options: – 1 bit (default) – 2 bits
Connection	Display	Only visible if [Interface] = slot with RS-485 4-wire (fixed value for SBI protocol)

The following parameter is only visible if [Interface] = [Ethernet UDP Socket] or [Ethernet TCP Socket].

Parameter	Type	Description
Port number	Input	Possible values: – 1024...65535 – 45156 (default)

The following parameters are only visible if [Enable] is switched on.

Parameter	Type	Description
Data output	Selection	Available options: – Manual without stability – Manual with stability (Default) – Automatic without stability – Automatic with stability
Output format	Selection	Available options: – 16 characters (without ID) – 22 characters (with ID) (default)

Parameter	Type	Description
Output rate	Selection	Available options:
		– 0.1 s
		– 0.2 s
		– 0.5 s
		– 1.0 s (default)
		– 2.0 s
		– 5.0 s
		– 10.0 s
		– 60.0 s
		Visible if [Data output] = [Automatic...].
Output value	Selection	Available options:
		– Gross
		– Net/Gross (default)
		Net weight if tared, otherwise gross weight

7.7.4.4.3   SMA protocol

The SMA protocol is a simple protocol that can be used to transfer information to higher-level systems (PC, displays).

Menu: [Serial communication] ➞ [SMA]

A parameter view opens.

Parameter	Type	Description
Enable	Switch	◎⬭ off (default)
		If [Enable] is switched on, the SMA protocol is transmitted to the selected interface.

The following parameters are only visible if [Enable] is switched on.

Parameter	Type	Description
Weighing point	Selection	Available options: – A (default) – B – C – D – Follows display (corresponds to the weighing point displayed on the indicator) Only visible with NICL. Weighing point options that are not available in the indicator cannot be selected.
Interface	Selection	Available options: – Option slot 2 RS-232 – Option slot 2 RS-485 – Option slot 3 RS-232 – Option slot 3 RS-485 – Option slot 4 RS-232 (for NICL only) – Option slot 4 RS-485 (for NICL only) – Ethernet UDP socket – Ethernet TCP socket – USB device (not for NICC and only if USB device is configured) The options displayed depend on the serial option cards installed. Options that have already been used cannot be selected.

The following parameters are only visible if [Interface] = [Slot ...].

Parameter	Type	Description
Baud rate	Selection	Available options: – 1200 baud – 2400 baud – 4800 baud – 9600 baud (default) – 19200 baud
Data bits	Selection	Available options: – 7 bits – 8 bits (default)
Parity	Selection	Available options: – None (default) – Even – Odd
Stop bits	Selection	Available options: – 1 bit (default) – 2 bits
Connection	Display	Visible if [Interface] = slot with RS-485 4-wire (fixed value for SMA protocol)

The following parameter is only visible if [Interface] = [Ethernet UDP Socket] or [Ethernet TCP Socket].

Parameter	Type	Description
Port number	Input	Possible values: – 1024...65535 – 45157 (default)

7.7.4.4.4 Modbus-RTU protocol

The Modbus-RTU protocol enables access to the SPM (scratchpad memory) of the indicator.

Menu: [Serial communication] → [Modbus-RTU]

A parameter view opens.

Parameter	Type	Description
Enable	Switch	⬭ off (default) If [Enable] is switched on, the RTU protocol is transmitted to the selected interface.

The following parameters are only visible if [Enable] is switched on.

Parameter	Type	Description
Interface	Selection	Available options: – Option slot 2 RS-232 – Option slot 2 RS-485 – Option slot 3 RS-232 – Option slot 3 RS-485 – Option slot 4 RS-232 (for NICL only) – Option slot 4 RS-485 (for NICL only) The options displayed depend on the serial option cards installed. Options that have already been used cannot be selected.
Baud rate	Selection	Available options: – 1200 baud – 2400 baud – 4800 baud – 9600 baud (default) – 19200 baud
Data bits	Display	8 bits (fixed value for Modbus-RTU protocol)
Parity	Selection	Available options: – None (default) – Even – Odd
Stop bits	Display	1 bit (fixed value for Modbus-RTU protocol)

Parameter	Type	Description
Connection	Display	Visible if [Interface] = slot with RS-485. 2-wire (fixed value for Modbus-RTU protocol)
Modbus address	Input	1...255 1 (default)

7.7.4.4.5   xBPI protocol

With the xBPI protocol, the indicator can be connected as a slave to other devices or systems (e.g., Combics indicator, ProRecipe XT)

Menu: [Serial communication] ➡ [xBPI]

A parameter view opens.

Parameter	Type	Description
Enable	Switch	◉⬭ off (default) If [Enable] is switched on, the xBPI protocol is transmitted to the selected interface.

The following parameters are only visible if [Enable] is switched on.

Parameter	Type	Description
SBN mode	Selection	Available options: – Single WP (no SBN) (default). The selected [weighing point] supplies the data. – Multiple WP (SBN) Fixed addressing for WP-A SBN=1, for WP-B SBN=2 etc. Only visible with NICL.

Parameter	Type	Description
Weighing point	Selection	Available options: – A (default) – B – C – D Weighing point options that are not available in the indicator cannot be selected. Only visible for NICL and if [SBN mode] = [Single WP (no SBN)].
Interface	Selection	Available options: – Option slot 2 RS-232 – Option slot 2 RS-485 – Option slot 3 RS-232 – Option slot 3 RS-485 – Option slot 4 RS-232 (for NICL only) – Option slot 4 RS-485 (for NICL only) – Ethernet UDP socket – Ethernet TCP socket – USB device (not for NICC and only if USB device is configured) The options displayed depend on the serial option cards installed. Options that have already been used cannot be selected.
Connection	Display	Visible if [Interface] = slot with RS-485 2-wire (fixed value for xBPI protocol)
Port number	Input	Possible values: – 1024...65535 – 45159 (default) Only visible if [Interface] = [Ethernet UDP Socket] or [Ethernet TCP Socket].

> **Hinweis:**
>
> The xBPI protocol uses fixed settings for the serial interface that cannot be configured:
> – 7 data bits
> – Odd
> – 1 stop bit
> The baud rate is determined by the connected xBPI master.

7.7.4.5 Inputs & outputs

Menu: [Interfaces] ➞ [Inputs & outputs]

The following menu items appear:
– Digital, see Digital inputs and outputs
– Analog, see Analog inputs and outputs
– Signal tower (USB), see Signal tower (USB)
– Modbus-TCP I/O modules, see Modbus-TCP I/O modules

> **Hinweis:** If no option cards for digital or analog inputs and outputs are available, the corresponding menu items are disabled.

7.7.4.5.1 Digital inputs and outputs

For the digital inputs and outputs, the following option cards are available:

Option card	Digital input	Digital output	Poss. slot
AIC01-DI2O4 AIC01-M12DI2O4	2× active or passive	4× relay	2, 3, 4 (NICL only)
AIC01-DI4O6 AIC01-M12DI4O6	4× passive	6× opto	2, 3, 4 (NICL only)

Menu: [Inputs & outputs] ➞ [Digital]

The following menu items appear:
– Inputs, see Configure digital inputs
– Outputs, see Configure digital outputs

> **Hinweis:** If no option card for digital inputs/outputs has been installed in the indicator, this menu item is disabled.
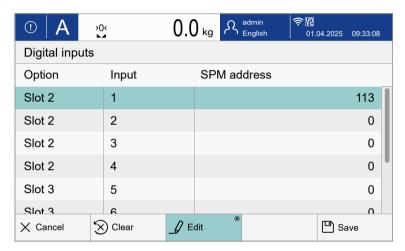
> **Hinweis:**
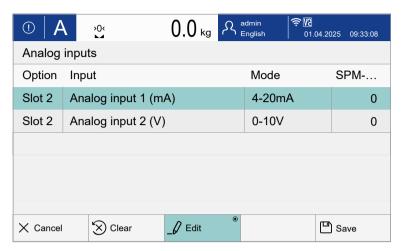> The inputs and outputs are assigned via bit addresses in the SPM (scratchpad memory).
> The SPM address 0 means that the input or output has no function.
> Details of the available signals can be found in the Protocol manual.

7.7.4.5.1.1   Configure digital inputs

Menu: [Digital] ➡ [Inputs]

A table view opens.

Digital inputs		
Option	Input	SPM address
Slot 2	1	113
Slot 2	2	0
Slot 2	3	0
Slot 2	4	0
Slot 3	5	0
Slot 3	6	0

Cancel   Clear   Edit   Save

All digital inputs for all installed option cards are listed.

Column description

Parameter	Description
Option	Slot of the option card with digital inputs
Input	Number (channel) of the digital input
SPM address	Configured SPM address (bit) for the digital input
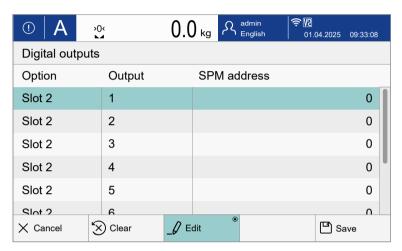
1. Select the required digital input in the table view and press [🖉 Edit].

   ▷   An input window opens.

2. Enter SPM address %MX and confirm with [✓ OK].

3. Repeat the last two steps for additional digital inputs if necessary.

4. Press [⊞ Save] to save the configuration for all digital inputs.

5. Press [⊗ Clear all] to set the SPM addresses of all inputs to 0 if necessary.

   ▷ All inputs then have no function.

7.7.4.5.1.2 Configure digital outputs

Menu: [Digital] → [Outputs]

A table view opens.

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Digital outputs

Option	Output	SPM address	
Slot 2	1		0
Slot 2	2		0
Slot 2	3		0
Slot 2	4		0
Slot 2	5		0
Slot 2	6		0

| ✕ Cancel | ⊗ Clear | ✎ Edit | | ⊟ Save |

All digital outputs for all installed option cards are listed.

Column description

Parameter	Description
Option	Slot of the option card with digital outputs
Output	Number (channel) of the digital output
SPM address	Configured SPM address (bit) for the digital output

1. Select the required digital output in the table view and press [✎ Edit].

   ▷ An input window opens.

2. Enter SPM address %MX and confirm with [✓ OK].

3. Repeat the last two steps for additional digital outputs if necessary.

4. Press [⊟ Save] to save the configuration for all digital outputs.

5. Press [⊗ Clear all] to set the SPM addresses of all outputs to 0.

   ▷ All outputs then have no function.

7.7.4.5.2 Analog inputs and outputs

For the analog inputs and outputs, the following option cards are available:

Option card	Analog inputs	Analog outputs	Poss. slot
AIC01-DAIO AIC01-M12DAIO	1× current 1× voltage	1× current or voltage	2, 3, 4 (NICL only)

Menu: [Inputs & outputs] ➙ [Analog]

The following menu items appear:
- Inputs, see Configure analog inputs
- Outputs, see Configure analog outputs

> **Hinweis:** If no option card for analog inputs/outputs has been installed in the indicator, this menu item is disabled.

> **Hinweis:**
> The inputs and outputs are assigned via 32-bit addresses (DWORD) in the SPM (scratchpad memory).
> The SPM address 0 means that the input or output has no function.
> Details of the available signals can be found in the Protocol manual.

7.7.4.5.2.1 Configure analog inputs

Menu: [Analog] ➜ [Inputs]

A table view opens.

All analog inputs for all installed option cards are listed (2 inputs per option card).

Column description

Parameter	Description
Option	Slot of the option card with analog inputs
Input	Number (channel) of the analog input (1 or 2)
Mode	Input mode, see parameter view below
SPM address	SPM address (32-bit) for the analog input

1. Select the required analog input in the table view and press [✎ Edit].

   ▷   A parameter view opens.

Parameter	Type	Description

Input mode	Selection/Display	Available options:
		– For input 1:
		  – 0-20 mA
		  – 4-20 mA (default)
		– For input 2:
		  – 0-10 V (fixed value)

SPM address %MD	Input	0...8191 0 (default)

2. Enter parameters and confirm with [✓ OK].

3. Repeat the last two steps for additional analog inputs if necessary.

4. Press [🖫 Save] to save the configuration for all analog inputs.

5. Press [⊗ Clear all] to set the SPM addresses of all inputs to 0 and to reset the input mode of channel 1 to 4–20 mA.

   ▷   All inputs then have no function.
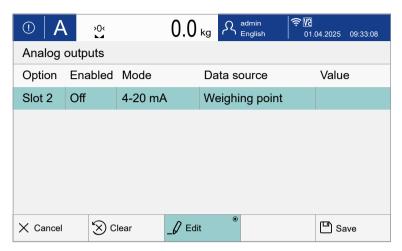
> **Hinweis:**
> The input range of an analog input (0/4-20 mA or 0-10 V) is written to the SPM address as a value between 0 and 1000000 (provided that the SPM address is > 0). The value can be further processed depending on the application.
>
> | Input mode | 0% → value in SPM | 100% → value in SPM |
> |---|---|---|
> | 0-20 mA | 0 mA → 0 | 20 mA → 1000000 |
> | 4-20 mA | 4 mA → 0 | 20 mA → 1000000 |
> | 0-10 V | 0 V → 0 | 10 V → 1000000 |

7.7.4.5.2.2   Configure analog outputs

Menu: [Analog] → [Outputs]

A table view opens.

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Analog outputs				

Option	Enabled	Mode	Data source	Value
Slot 2	Off	4-20 mA	Weighing point	

✕ Cancel	⊗ Clear	✎ Edit ⊙		💾 Save

All analog outputs for all installed option cards are listed (1 output per option card).

Column description

Parameter	Description
Option	Slot of the option card with analog outputs
Enabled	[Enable] switched on/switched off, see parameter view below
Mode	Output mode, see parameter view below
Data source	Weighing point or SPM as data source, see [Data source] in the parameter view below
Value	SPM address (32-bit) for the analog output

1. Select the required analog output in the table view and press [✎ Edit] to configure the output.

   ▷ A parameter view opens.

Parameter	Type	Description
Enable	Switch	⬤▭ off (default) If [Enable] is switched off, the output is always set to 0 mA or 0 V.

The following parameters are only visible if [Enable] is switched on.

Parameter	Type	Description
Output mode	Selection	Available options: – 0–20 mA – 4–20 mA (default) – 0–10 V
Data source	Selection	Available options: – Weighing point (default) – SPM

The following parameters are only visible if [Data source] = [Weighing point].

Parameter	Type	Description
Weighing point	Selection	Available options: – A (default) – B – C – D – Follows display (corresponds to the weighing point displayed on the indicator) Weighing point options that are not available in the indicator cannot be selected. Only visible with NICL.

Parameter	Type	Description
Output value	Selection	Available options: – Gross – Net/Gross (default) Net weight if tared, otherwise gross weight

The following parameters are only visible if
[Data source] = [Weighing point] and [Output mode] = [0–20 mA].

Parameter	Type	Description
Weight at 0 mA (Min)	Input	Weight that corresponds to the output 0 mA. Possible values: – 0...Maximum capacity (Max) of the weighing point – 0 with calibration unit (default) 0 and cannot be changed if [weighing point] = [Follows display]
Weight at 20 mA (Max)	Input	Possible values: – 0...Maximum capacity (Max) of the weighing point – Default: Maximum capacity (Max) Maximum capacity (Max) and cannot be changed if [weighing point] = [Follows display].
Output on weight error	Selection	Available options: – 0 mA (default) – 20 mA – Hold last state
Output at <Min	Selection	Available options: – 0 mA (default) – 20 mA
Output if >Max	Selection	Available options: – 0 mA (default) – 20 mA

The following parameters are only visible if
[Data source] = [Weighing point] and [Output mode] = [4–20 mA].

Parameter	Type	Description
Weight at 4 mA (Min)	Input	Weight that corresponds to the output 4 mA. Possible values: – 0...Maximum capacity (Max) of the weighing point – 0 with calibration unit (default) 0 and cannot be changed if [weighing point] = [Follows display]
Weight at 20 mA (Max)	Input	Weight that corresponds to the output 20 mA. Possible values: – 0...Maximum capacity (Max) of the weighing point – Default: Maximum capacity (Max) Maximum capacity (Max) and cannot be changed if [weighing point] = [Follows display].
Output on weight error	Selection	Available options: – 0 mA – 2 mA (NAMUR NE43) (default) – 4 mA – 20 mA – Hold last state
Output at <Min	Selection	Available options: – 0 mA – 4 mA (NAMUR NE43) (default); Output is 3.8...4 mA – 20 mA – Linear to 0 mA
Output if >Max	Selection	Available options: – 0 mA – 4 mA – 20 mA (NAMUR NE43) (default); Output is 20...20.5 mA – Linear to 24 mA

The following parameters are only visible if
[Data source] = [Weighing point] and [Output mode] = [0–10 V].

Parameter	Type	Description
Weight at 0 V (Min)	Input	Weight that corresponds to the output 0 V.
		Possible values:
		– 0...Maximum capacity (Max) of the weighing point
		– 0 with calibration unit (default)
		0 and cannot be changed if [weighing point] = [Follows display]
Weight at 10 V (Max)	Input	Weight that corresponds to the output 10 V.
		Possible values:
		– 0...Maximum capacity (Max) of the weighing point
		– Default: Maximum capacity (Max)
		Maximum capacity (Max) and cannot be changed if [weighing point] = [Follows display].
Output on weight error	Selection	Available options:
		– 0 V (default)
		– 10 V
		– Hold last state
Output at <Min	Selection	Available options:
		– 0 V (default)
		– 10 V
Output if >Max	Selection	Available options:
		– 0 V (default)
		– 10 V

The following parameter is only visible if [Data source] = [SPM].

Parameter	Type	Description
SPM address %MD	Input	Possible values:
		– 0...8191
		– 0 (default)

2. Enter parameters and confirm with [✓ OK].

3. Repeat the last two steps for additional analog outputs if necessary.

4. Press [🖫 Save] to save the configuration for all analog outputs.

5. Press [⊗ Clear all] to set the SPM addresses of all outputs to 0.

   ▷ The outputs then have no function.

Hinweis:

If [Data source] = [Weighing point], the range [Weight at Min] – [Weight at Max] is written to the output range (0/4–20 mA or 0–10 V).

Output mode	Weighing point 0% (Weight at *Min*)	Weighing point 100% (Weight at *Max*)
0–20 mA	Weight at *Min* → 0 mA	Weight at *Max* → 20 mA
4–20 mA	Weight at *Min* → 4 mA	Weight at *Max* → 20 mA
0–10 V	Weight at *Min* → 0 V	Weight at *Max* → 10 V

Hinweis:

If [Data source] = [SPM], the SPM address is read and its value 0–1000000 is written to the output range (0/4–20 mA or 0–10 V). The value must be set on an application-specific basis.

Output mode	SPM 0% (Value 0)	SPM 100% (Value 1000000)
0–20 mA	0 → 0 mA	1000000 → 20 mA
4–20 mA	0 → 4 mA	1000000 → 20 mA
0–10 V	0 → 0 V	1000000 → 10 V

7.7.4.5.3   Signal tower (USB)

The signal tower "PATLITE LR6-USB" can be connected directly to the USB
interface and operated.
The following parameters determine which signal is displayed on which light
(red, yellow, green).
If no USB signal tower is available, the required output signals can be output
to a signal tower via digital outputs (see Configure digital outputs).

Menu: [Inputs & outputs] ➜ [Signal tower (USB)]

A parameter view opens.

Parameter	Type	Description
Enable	Switch	◉⃝ off (default) When switched on, the signal tower "PATLITE LR6-USB" can be connected and configured with the following parameters. To use digital outputs, switch off [Enable].

The following parameters are only visible if [Enable] is switched on.

Parameter	Type	Description

Data source	Selection	Available options:
		– Weighing point status (default)
		   – Red: Weight error (MX32)
		   – Yellow: Overload (MX34)
		   – Green: Stable (MX38)
		– Application-specific (see application manual)
		– SPM: freely selectable SPM address

Weighing point	Selection	Available options: – A (default) – B – C – D – Follows display (corresponds to the weighing point displayed on the indicator) Weighing point options that are not available in the indicator cannot be selected. Visible for NICL and if [Data source] = [Weighing point status].
Red: SPM address %MX	Input	Possible values: – 0...262143 – 0 (No function) (default) Visible if [Data source] = [SPM]
Yellow: SPM address %MX	Input	Possible values: – 0...262143 – 0 (No function) (default) Visible if [Data source] = [SPM]
Green: SPM address %MX	Input	Possible values: – 0...262143 – 0 (No function) (default) Visible if [Data source] = [SPM]

7.7.4.5.4   Modbus-TCP I/O modules

A maximum of 8 Modbus-TCP I/O modules can be connected to the indicator for use as inputs and outputs.

Menu: [Inputs & outputs] ➞ [Modbus-TCP I/O modules]
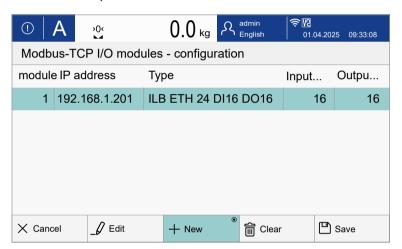
The following menu items appear:
– Configuration, see Configure modules
– Inputs, see Configure inputs
– Outputs, see Configure outputs

7.7.4.5.4.1   Configure modules

Menu: [Modbus-TCP I/O modules] ➞ [Configuration]

A table view opens.

Column description

Parameter	Description	Note
Module	Sequential numbering 1...8	Assigned by the system.
IP address	IP address of the module	
Type	Type of the module	The indicator supports the following modules: – Phoenix ILB ETH 24 DI16 DO16
Input	Number of inputs	
Outputs	Number of outputs	
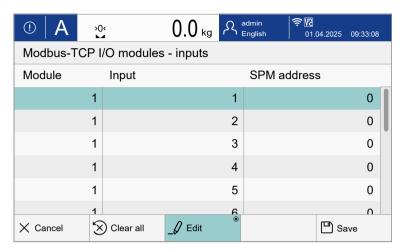
Press [+ New]/[✎ Edit] to add/edit a module.

A parameter view opens.

Parameter	Type	Description
Module number	Display	Sequential numbering
IP address	Input	IP address of the module Default: 192.168.1.201
Port number	Input	502...65535 Default: 502
Protocol	Selection	Available options: – Default: UDP – TCP
Module type	Display	ILB ETH 24 DI16 DO16 (fixed value)
Inputs	Display	Number of inputs (dependent on the selected module type)
Outputs	Display	Number of outputs (dependent on the selected module type)

7.7.4.5.4.2 Configure inputs

Menu: [Modbus-TCP I/O modules] ➡ [Inputs]

A table view opens.

	A	›0‹	0.0 kg	admin English		01.04.2025	09:33:08

Modbus-TCP I/O modules - inputs

Module	Input	SPM address
1	1	0
1	2	0
1	3	0
1	4	0
1	5	0
1	6	0

✕ Cancel	⊗ Clear all	⃒ Edit		💾 Save

All inputs for the modules are listed.

Column description
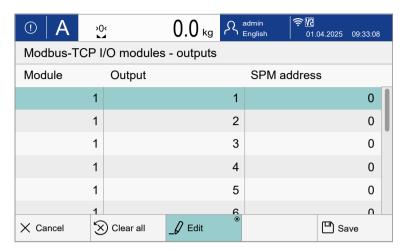
Parameter	Description	Note
Module	Number of the module	See Configure modules.
Input	Number (channel) of the input	
SPM address	Configured SPM address for the input	

1. Select the required input in the table view and press [⃒ Edit].

   ▷ An input window opens.

2. Enter SPM address %MX and confirm with [✓ OK].

3. Repeat the last two steps for additional inputs if necessary.

4. Press [💾 Save] to save the configuration for all inputs.

5. Press [⊗ Clear all] to set the SPM addresses of all inputs to 0 if necessary.

   ▷ The inputs then have no function.

7.7.4.5.4.3 Configure outputs

Menu: [Modbus-TCP I/O modules] ➔ [Outputs]

A table view opens.

Module	Output	SPM address
1	1	0
1	2	0
1	3	0
1	4	0
1	5	0
1	6	0

Modbus-TCP I/O modules - outputs

admin English · 01.04.2025 · 09:33:08 · 0.0 kg

✕ Cancel | ⊗ Clear all | ✎ Edit | 🖫 Save

All outputs for the modules are listed.

Column description

Parameter	Description	Note
Module	Number of the module	See Configure modules.
Output	Number (channel) of the output	
SPM address	Configured SPM address for the output	

1. Select the required output in the table view and press [✎ Edit].
   ▷ An input window opens.

2. Enter SPM address %MX and confirm with [✓ OK].

3. Repeat the last two steps for additional outputs if necessary.

4. Press [🖫 Save] to save the configuration for all outputs.

5. Press [⊗ Clear all] to set the SPM addresses of all outputs to 0.
   ▷ The outputs then have no function.

7.7.4.6 Fieldbus settings
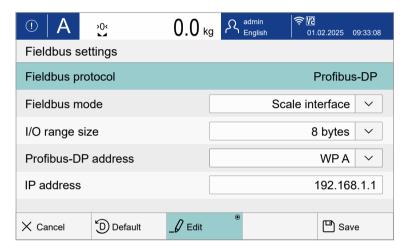
[Fieldbus] can only be selected if a fieldbus module is installed.

The indicator supports the following fieldbus modules and the associated protocols (see Technical manual – Hardware)
– Profibus-DP
– Ethernet/IP
– ProfiNet I/O
– DeviceNet
– CC-Link

Menu: [Interfaces] ➞ [Fieldbus]

A parameter view opens (here: Profibus-DP).

⚠ A	›0‹ ⌄	0.0 kg	admin English	🛜 Vc 01.02.2025 09:33:08
Fieldbus settings				
Fieldbus protocol				Profibus-DP
Fieldbus mode		Scale interface	⌄	
I/O range size		8 bytes	⌄	
Profibus-DP address		WP A	⌄	
IP address		192.168.1.1		
✕ Cancel	D Default	✎ Edit		💾 Save

Parameter	Type	Description
Fieldbus protocol	Display	Displays the installed fieldbus module. Available options: – Profibus-DP – Ethernet/IP – ProfiNet I/O – DeviceNet – CC-Link

Fieldbus mode	Selection	Available options:
		– Scale interface (default)
		– SPM interface:
		  Access to SPM addresses, cannot be selected with CC-Link
		– Application only:
		  Application-specific data, see the operating instructions of the respective application

I/O range size	Selection	Available options: – 8 bytes (default) (cannot be selected for SPM interface and for Ethernet/IP, fixed for CC-Link) – 16 bytes (cannot be selected for ProfiNet, Ethernet/IP, CC-Link) – 24 bytes (cannot be selected for ProfiNet, Ethernet/IP, CC-Link) – 32 bytes (cannot be selected for CC-Link) – 64 bytes (cannot be selected for CC-Link) Default: 32 bytes for [Fieldbus operating mode] = [Ethernet/IP]
Scale interface	Selection	Available options: – WP A (default) – WP A, B (cannot be selected for CC-Link) – WP A, B, C (cannot be selected for CC-Link) – WP A, B, C, D (cannot be selected for CC-Link) Each weighing point requires 8 bytes, so only the options that match the set [I/O range size] can be selected. Visible for NICL and if [Fieldbus mode] = [Scale interface]

The following parameter is only visible if [Fieldbus protocol] = [Profibus-DP].

Parameter	Type	Description
Profibus-DP address	Input	Possible values: – 1...126 – 1 (default)

The following parameters are only visible for network-based protocols if [Fieldbus protocol] = [Ethernet/IP] or [ProfiNet I/O].

Parameter	Type	Description
Use DHCP server	Switch	⬤ on (default) ◎ off and cannot be changed for [ProfiNet I/O]
Client ID	Input	Possible values: – Free text for device name. – hostname-fb, e.g., *MiNexx-1b347-fb* (default) Only visible if [Use DHCP server] is on.
IP address	Input	Possible values: – Valid IP address – 192.168.3.1 (default) Visible if [Use DHCP server] is off.
Subnet mask	Input	Possible values: – Valid IP address, optional – 255.255.255.0 (default) Visible if [Use DHCP server] is off.

> **Hinweis:**
> If [Use DHCP server] is off ◎ , the IP address used may differ from the IP address entered if this is assigned by the connected PLC. In this case, the IP address used should be taken from [Assigned IP address] under [Info] ➜ [Hardware components and I/O options] ➜ [Fieldbus slot] ➜ [View].

The following parameters are only visible if [Fieldbus protocol] = [DeviceNet].

Parameter	Type	Description
DeviceNet baud rate	Selection	Available options: – 125 k (default) – 250 k – 500 k
DeviceNet MAC-ID	Input	Possible values: – 1...62 – 1 (default)
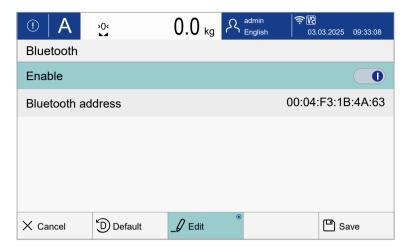
The following parameters are only visible if [Fieldbus protocol] = [CC-Link].

Parameter	Type	Description
CC-Link baud rate	Selection	Available options: – 156 k – 625 k (default) – 2.5 M – 5 M – 10 M
CC-Link MAC-ID	Input	Possible values: – 1...64 – 1 (default)

7.7.4.7 Enable Bluetooth

Menu: [Interfaces] ➜ [Bluetooth]

A parameter view opens.

①	A	›0‹	0.0 kg	admin English	03.03.2025 09:33:08
Bluetooth					
Enable					⬤
Bluetooth address					00:04:F3:1B:4A:63
✕ Cancel	↻ Default	✐ Edit			🖫 Save

1. Switch on the [Enable] ⬤ parameter to connect Bluetooth devices.
   ▷ The Bluetooth address is entered automatically (MAC ID of the Bluetooth chipset).

2. Press [🖫 Save] to save the enabling.

   > **Hinweis:**
   >
   > The connection with Bluetooth devices is made in the device-specific settings:
   > – For printers see Add Bluetooth printer
   > – For keyboards or barcode scanners, see Activate Bluetooth devices

3. If Bluetooth is enabled and the setting has been saved, press [👁 View] to display the list of Bluetooth devices (see Bluetooth devices).

7.7.4.8   Disable Bluetooth

Menu: [Interfaces] ➡ [Bluetooth]

A parameter view opens.

1. Switch off the [Enable] ◎⟋ parameter to disable Bluetooth.

2. Press [🖫 Save] to save the disabling.

7.7.5   User management

⚠ VORSICHT

Warning: danger of unauthorized access.
Risk of data manipulation without the operator's knowledge.
▶ Activate the user management of the device to protect it from unauthorized access.

User management is **deactivated** by default.
User management can be used to limit access to various menu levels and operating functions of the device, if the necessity arises.

> **Hinweis:** The menu item [User management] is disabled if the user does not have the necessary permission (UM-E or UM-V).

> **Hinweis:** Activating user management is optional (see Activate user management). In other words, the device can also be operated without user management.

Menu: [Settings] ➡ [User management]

The following menu items appear:
–   Enable/Disable, see Activate user management/Deactivate user management
–   Settings
–   User roles

Permissions

The following permissions must be enabled for the described functions (see also User roles).
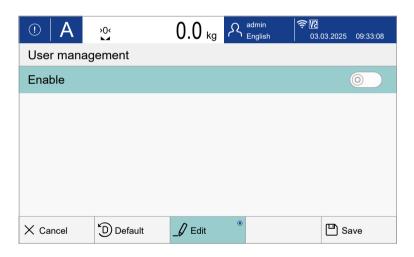
ID	Permission	Function
UM-V	User management – View	Open menu items under [Settings] ➜ [User management] and view parameter settings.
UM-E	User management – Edit	Open menu items under [Settings] ➜ [User management] and edit parameter settings.

7.7.5.1 Activate user management
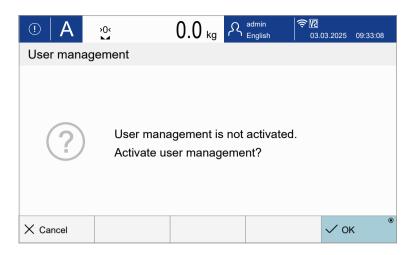
Prerequisite:

User management is not active, i.e., [Enable] is ◎⃝ switched off.
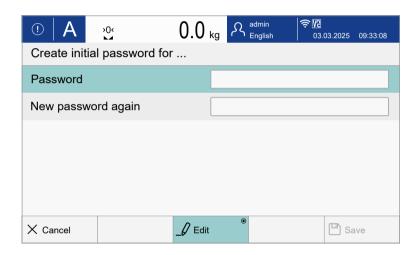
1. Select and confirm the menu item [User management] ➜ [Enable].

    ▷   A parameter view opens.

2. Switch on [Enable] ⊂●.

    ▷   A user dialog opens.

3. Press [✓ OK].

▷ The dialog for the initial password appears.

4. Assign the password for the user <admin> and save.

▷ User management is activated.

When user management is activated, the users <admin> and <everyone> are created automatically.
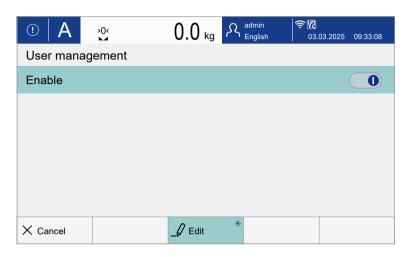
When user management is activated, the user roles <admin>, <everyone>, <operator>, <supervisor>, and <maintenance> are created automatically.

The user role <admin> is assigned to the user <admin>.

The user role <everyone> is assigned to the user <everyone>.
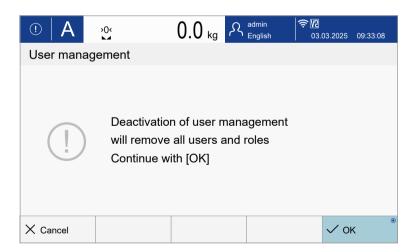
7.7.5.2 Deactivate user management

Prerequisites:
– User management is active, i.e., [Enable] is switched on.
– The user <admin> is logged in or [Service lock] is active and the device is unlocked.

1. Select and confirm the menu item [User management] ➞ [Disable].
    ▷ A parameter view opens.

2. Switch off [Enable] ◯.
    ▷ A user dialog opens.

3. Press [✓ OK].
    ▷ User management is deactivated. All users and user roles are deleted.

7.7.5.3   Settings

Hinweis: [Settings] can only be selected if user management is activated.

Menu: [User Management] → [Settings]

A parameter view opens.

Parameter	Type	Description
Preferred input method	Selection	Available options: – Characters ([q]) (default) – Numbers ([1]) Determines the initially selected character on the keyboard for entering the password.
Min. password length	Input	Possible values: – 3...10 – 3 (default) Number of required characters
New password at 1st login	Switch	◎⊃ off (default) If switched on, a new password must be created when logging in for the first time (dialog for the initial password is displayed).
Password expires after	Selection	Available options: – Enter value (1...365 days); (default: 180 days) – Never (default) – 30 days – 60 days – 90 days After the time has elapsed, a new password must be created when logging in (dialog for the initial password is displayed).

Parameter	Type	Description
Max. number of password tries	Input	Possible values: – 3...10 – 3 (default) When the number of login attempts is reached, the user is locked (see User list).
Automatic unlock after	Selection	Available options: – Never (default) – 5 min – 10 min – 15 min – 30 min – 60 min Waiting time after which a locked user is automatically unlocked.

7.7.5.4   User roles

> **Hinweis:** [User roles] can only be selected if user management is activated.
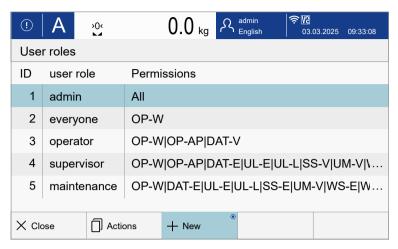
User roles form a group of settings and permissions and are assigned to the users. This gives a user the permissions contained in their user role.

The following principles apply:
– A user role can be assigned to multiple users.
– A user can only be assigned one user role.
– A user role cannot be deleted if it is still assigned to a user.

Menu: [User management] ➜ [User roles]

A table view opens.

⊘	A	›0‹ ⤓	0.0 kg	👤 admin English	📶 V2 03.03.2025 09:33:08

User roles

ID	user role	Permissions
1	admin	All
2	everyone	OP-W
3	operator	OP-W|OP-AP|DAT-V
4	supervisor	OP-W|OP-AP|DAT-E|UL-E|UL-L|SS-V|UM-V|\...
5	maintenance	OP-W|DAT-E|UL-E|UL-L|SS-E|UM-V|WS-E|W...

✕ Close	▭ Actions	+ New	⊙		

All configured user roles are listed.

Column description
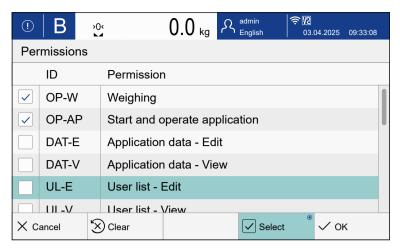
Parameter	Description
ID	ID of the user role (allocated by the system)
User role	Name of the user role, see table below
Permissions	List of permissions assigned to the user role. The IDs of the activated permissions are listed (see- Permissions and Standard user roles).

> **Hinweis:** The user roles [admin] and [everyone] cannot be deleted.

1. Press [+ New] or open the [▭ Actions] button group and select [✎ Edit].
   ▷ A parameter view opens.

Parameter	Type	Description
ID	Display	Max. 99 Sequential numbering (allocated by the system)
User role name	Input	Free text (max. 40 characters)
Screensaver	Selection	Available options: – None (default) – System settings (see Operating & display) – After 1 minute – After 5 minutes – After 10 minutes – After 30 minutes Time without activity, after which the screensaver is switched on.
User action after screensaver	Selection	Available options: – None (default) – Enter password: The login window is displayed, the logged-in user must enter their password (without logging in/out). Exception: the user [admin] can log in if necessary. – New login: The login window is displayed, the logged-in user must enter their password or another user can log in with Logout/Login. Visible if [Screensaver] is **not** set to [None]. Deactivated and [None] for user role [everyone].
Automatic logout	Selection	Available options: – None (default) – After 1 minute – After 5 minutes – After 10 minutes – After 30 minutes Time without activity, after which the logged-in user is automatically logged out.

2. Press [✿ Permissions] to configure the permissions for the user role.

   ▷ A multiple selection with all available permissions appears.

Description of the permissions, see Permissions.

3. Select the required permissions in the list and activate/deactivate with [☑ Select]/[☐ Deselect].

4. If required, press [⊗ Clear] to deactivate all permissions.

5. Press [✓ OK] to confirm the settings.

7.7.5.4.1 Permissions

The following permissions are available, which can be extended for specific applications if necessary (see operating instructions of the respective application).

ID	Permission	Description
OP-W	Weighing	Simple weighing functions, see the operating instructions of the respective application.
OP-AP	Start and operate application	Application functions, see the operating instructions of the respective application. Shut down & power off, see Shut down and switch off the indicator. Acknowledge alarms, see Alarms.
DAT-E	Application data – Edit	Application functions, see the operating instructions of the application. See Display alibi memory.
DAT-V	Application data – View	Application functions, see the operating instructions of the application. See Display alibi memory.
UL-E	User list – Edit	See User list.
UL-V	User list – View	See User list.
UL-L	User list – Unlock	See User list.
SS-E	System settings – Edit	See Application settings. See System settings. See Interfaces. See Print jobs. See Shut down and switch off the indicator.
SS-V	System settings – View	See Application settings See System settings. See Interfaces. See Print jobs.
UM-E	User management – Edit	See User management.

ID	Permission	Description
UM-V	User management – View	See User management.
WS-E	Weighing point settings – Edit	See Weighing.
WS-V	Weighing point settings – View	See Weighing.
WS-C	Weighing point adjust/calibrate	See Weighing.
SERV	Service	Execute service functions: – See TMS Pro scale data. – See Configure xBPI scale. – See Print jobs. – See System. – See Shut down and switch off the indicator. – See Performing a factory reset on the indicator.
DAT-IM	Application data – Import	See Import databases.
DAT-EX	Application data – Export	See Export databases.
ALIBI	Alibi maintenance	Functions in the alibi memory, see Display alibi memory. Clear alibi memory, see Alibi maintenance.

7.7.5.4.2   Standard user roles

When user management is activated, the user roles [admin], [everyone], [operator], [supervisor], and [maintenance] are created automatically. The following table shows the associated activated permissions.

ID	Permission	a	e	o	s	m
OP-W	Weighing	✗	✗	✗	✗	✗
OP-AP	Start and operate application	✗		✗	✗	
DAT-E	Application data – Edit	✗			✗	✗
DAT-V	Application data - View	✗		✗	✗	✗
UL-E	User list – Edit	✗			✗	✗
UL-V	User list – View	✗			✗	✗
UL-L	User list – Unlock	✗			✗	✗
SS-E	System settings – Edit	✗				✗
SS-V	System settings – View	✗			✗	✗
UM-E	User management – Edit	✗				
UM-V	User management – View	✗			✗	✗
WS-E	Weighing point settings – Edit	✗				✗
WS-V	Weighing point settings – View	✗			✗	✗
WS-C	Weighing point adjust/calibrate	✗			✗	✗
SERV	Service	✗				✗
DAT-IM	Application data– Import	✗			✗	✗
DAT-EX	Application data– Export	✗			✗	✗
ALIBI	Alibi maintenance	✗				✗

7.7.6   Device setup workflow

Menu: [Settings] ➡ [Device setup workflow]

After confirming the selection, a workflow for device setup appears, see De-vice setup (with workflow).

7.8   Service

Menu: [Main menu] ➡ [Service]

The following menu items appear:
– Minebea Service functions
– Print jobs
– System
– Shut down & power off, see Shut down and switch off the indicator
– Factory reset, see Performing a factory reset on the indicator

7.8.1   Minebea Service functions

Menu: [Service] ➡ [Minebea Service functions]

The following menu items appear:
– Service contact
– Service lock*
– TMS Pro scale data
– Create service report
– Reset suspend battery data
– Configure xBPI scale

*only in some regions

7.8.1.1 Service contact

The service contact contains contact details that the user can contact in the event of faults.
By default, these are the details of Minebea Intec Service Bovenden or, if the service lock is activated, of the authorized service partner who has activated the service lock.
If the service lock is activated and a service user is logged in, these details can also be changed. Otherwise, the details are only displayed.
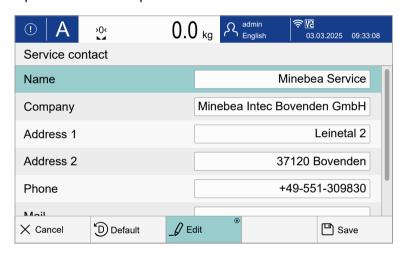
> **Hinweis:** The details are identical to those displayed under
> [Info] ➡ [Service contact].

Menu: [Minebea Service functions] ➡ [Service contact]

A parameter view opens.

All parameters can be entered as free text.

7.8.1.2 Service lock

With the service lock, the device can be locked by an authorized service partner so that certain settings can no longer be changed by the user.
Once the service lock is activated, a service user can temporarily log in to the device with an NFC tag (or manual code entry) and has access to all settings.
Once the service work has been completed, the service user logs out again and the service lock remains activated.

Basic sequence

Activate service lock

1.	Service user activates service lock.	[Service lock] ➡ [Activate] with NFC tag	Service user is logged in. All settings are available.
2.	Service user logs out.	[👤 Service] ➡ Log out	No user is logged in (<everyone> if user management is active).

Normal operation

3.	Normal operation	Permissions according to user management and service lock, see Permissions

Regular service

4.	Service user logs in.	[👤 Service] ➡ Log in with NFC tag	Service user is logged in. All settings are available.
5.	Regular service by service partner		
6.	Service user logs out.	[👤 Service] ➡ Log out	No user is logged in (<everyone> if user management is active).

Repeat steps 3 to 6 as often as necessary.

Deactivate service lock

7.	Service user deactivates service lock.	[Service lock] ➡ [Deactivate] with NFC tag	Permissions according to user management

> **Hinweis:** The service lock applies in addition to user management.

Menu: [Minebea Service functions] ➔ [Service lock]
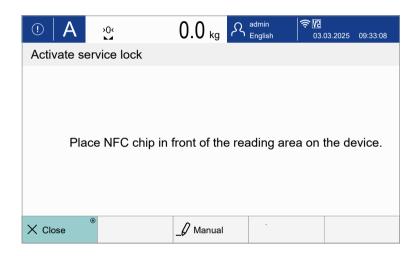
The following menu items appear:

– Activate/Deactivate, see Activate/deactivate service lock
– Permissions, see Permissions
– Events, see Display events

7.8.1.2.1 Activate/deactivate service lock

Activate service lock (if no service lock is activated)

1. Select and confirm [Service lock] ➔ [Activate].

   ▷ A user dialog for reading the NFC tag appears.

2. Read the valid service tag or press [⟋ Manual] to enter the service code manually.

   ▷ The data is checked.

   If the data is correct,
   – the service lock is activated.
   – the service contact (see Service contact) is populated with the read contact details.
   – the service user is logged in.
   – a temporary password for the web server is created and displayed (user <service>).

   If an error occurs, an error message appears.

Deactivate service lock (if service lock is activated)

3. Select and confirm [Service lock] ➞ [Deactivate].

    ▷   A user dialog for reading the NFC tag appears.

4. Read the valid service tag or press [🖉   Manual] to enter the service code manually.

    ▷   The data is checked. If the data is correct, the service lock is deactivated.

7.8.1.2.2   Permissions

Prerequisite:
The service lock is activated.

The permissions available for a user role can be restricted by activating the service lock.
The restrictions based on the available permissions (see Permissions) are defined here.

Menu: [Service lock] ➞ [Permissions]

A multiple selection with all available permissions appears.

The permissions that are restricted (deactivated) when the service lock is activated are marked with " ☐ deselected".

ID	Permission	With service lock active (default)	Remarks
OP-W	Weighing	☑	Cannot be restricted.
OP-AP	Start and operate application	☑	
DAT-E	Application data – Edit	☑	
DAT-V	Application data - View	☑	
UL-E	User list – Edit	☑	
UL-V	User list – View	☑	
UL-L	User list – Unlock	☑	
SS-E	System settings – Edit	☐	
SS-V	System settings – View	☑	
UM-E	User management – Edit	☑	
UM-V	User management – View	☑	
WS-E	Weighing point settings - Edit	☐	
WS-V	Weighing point settings - View	☑	
WS-C	Weighing point adjust/calibrate	☑	
SERV	Service	☐	
DAT-IM	Application data– Import	☑	
DAT-EX	Application data– Export	☑	
ALIBI	Alibi maintenance	☐	

1. Select the required permissions in the list and activate them with
   [☑ Select] or deactivate (restrict) them with [☐ Deselect].

2. Use [⊗ Clear] to deactivate all permissions in the list (if they are able to be restricted).

7.8.1.2.3 Service user login and logout

Prerequisite:
The service lock is activated.

The service user can log in and log out via [🛠 Service] in the taskbar.

Service user login

1. Press [🛠 Service] in a menu window.
   ▷   A user dialog for reading the NFC tag appears.

2. Read the valid service tag or press [✎ Manual] to enter the service code manually. If required, a temporary replacement code can be requested from Minebea Intec via [⑦ Support] in the input window and then entered here.
   ▷   The data is checked. If the data is correct, the service user is logged in and a temporary password for the web server is created and displayed (user [service]).

   > **Hinweis:** When the service user is logged in, "SERVICE" is displayed as the user in the header. The language for the service user is the system language.
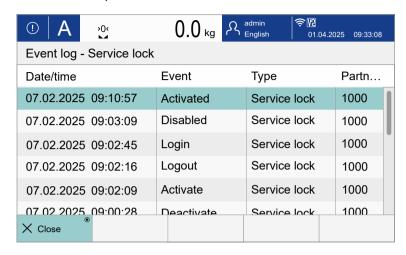
   Service user logout

3. Press [🛠 Service] in a menu window.
   ▷   A user dialog opens.

4. Confirm the user dialog.
   ▷   The service user is logged out. When user management is active, no user is logged in (everyone).

7.8.1.2.4 Display events

Menu: [Service lock] ➜ [Events]

A table view opens.

Event log - Service lock			
Date/time	Event	Type	Partn…
07.02.2025 09:10:57	Activated	Service lock	1000
07.02.2025 09:03:09	Disabled	Service lock	1000
07.02.2025 09:02:45	Login	Service lock	1000
07.02.2025 09:02:16	Logout	Service lock	1000
07.02.2025 09:02:09	Activate	Service lock	1000
07.02.2025 09:00:28	Deactivate	Service lock	1000

X Close

Column description

Parameter	Description
Date/time	Date and time of the event
Event	Type of event: – Activated – Deactivated – Login – Logout
Type	Event type: – Service lock – Emergency
Partner	Partner code When the service lock is activated, this determines the contact details in the service contact (see Service contact).

Press [✕ Close] to close the view.

7.8.1.3 TMS Pro scale data
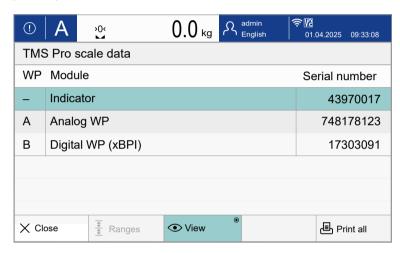
The scale data is prepared and displayed in such a way that it can be transferred directly into the TMS Pro software by Minebea Intec customer service.

The following permission must be enabled for the described functions (see also User roles).

Permission	ID	Function
Service	SERV	View and print TMS Pro scale data.

Menu: [Service] ➜ [TMS Pro scale data]

A table view opens with the indicator and the available weighing points (scales).

Column description

Parameter	Description	Note
WP	ID of the weighing point: – "-" for indicator – NICM/NICC: only A – NICL: A, B, C, D	"-" for indicator is always present in the first row.
Module	Type of module/weighing point: – Indicator – Analog WP – Digital WP (xBPI) – Compound (only with NICL) – PR-Net	The module "Indicator" is always present in the first row.
Serial number	Serial number of the module, depending on the module type	– Indicator: Serial number of the indicator – Analog WP: Serial number of the weighing electronics – Digital WP (xBPI): Serial number of the connected xBPI scale – Compound: CRC32 calculated from the serial numbers of the assigned weighing points. – PR-Net: Serial number of the external scale
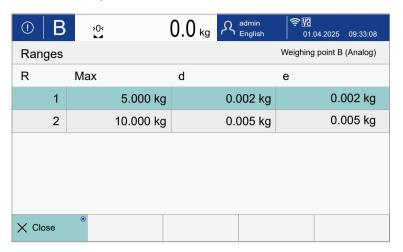
> **Hinweis:** For a complete scale, the corresponding model code is displayed in the information line on the right.

Taskbar

Button	Description
✕ Close	Close the view.
↕ Ranges	Display ranges for the selected module. Deactivated for indicator.
👁 View	Open detailed view for the selected module.
[e Legal options]	Open legal options for the selected module. Deactivated if – module is not an analog or digital weighing point (xBPI). – module (analog or digital weighing point (xBPI)) and [Subject to legal control] is switched off.
🖶 Print all	Print TMS Pro scale data for all modules (as text printout on continuous paper). If multiple printers are installed, one printer can be selected.

7.8.1.3.1 Ranges

Select module in [TMS Pro scale data] and press [⬍ Ranges].
A table view opens.

R	Max	d	e
1	5.000 kg	0.002 kg	0.002 kg
2	10.000 kg	0.005 kg	0.005 kg

Column description

Parameter	Description
R	Number of the range: – only 1 for single-range scale (SR) – 1... max. 4 for multi-range scale (MR)/multi-interval scale (MI)
Max	Single-range scale: Maximum capacity (Max) Multi-range scale (MR)/multi-interval scale (MI): R_x Upper limit
e	Verifiable scale interval Visible if [Subject to legal control] is switched on. Single-range scale: Scale interval Multi-range scale (MR)/multi-interval scale (MI): R_x Scale interval
d	Scale interval Single-range scale: Scale interval Multi-range scale (MR)/multi-interval scale (MI): R_x Scale interval

7.8.1.3.2   Details

Select module in [TMS Pro scale data] and press [👁 View].
A parameter view opens. The values displayed depend on the type of the
selected module.

Indicator, analog weighing point:, digital weighing point (xBPI)

Parameter	Module = Indicator	Module = Analog WP	Module = Digital WP (xBPI)
Serial number	Indicator serial number	Serial number of the weighing electronics	Serial number of the connected xBPI scale
Model	– NICC – NICM – NICL	*not visible*	Model of the connected xBPI scale, e.g., ISEDE-34-HCE
Manufacturer	Minebea Intec	*not visible*	Manufacturer of the connected xBPI scale
Weight unit	*not visible*	– mg – g – kg – t – lb – oz	– mg – g – kg – t – lb – oz
Operating mode	*not visible*	– Single range (SR) – Multiple range (MR) – Multi-interval (MI)	– Single range (SR) – Multiple range (MR) – Multi-interval (MI)
Legal for trade	*not visible*	– On – Off	– On – Off

Compound WP, PR-Net scale

Parameter	Module = Compound	Module = PR-Net
Serial number	CRC32 calculated from the serial numbers of the assigned weighing points.	Serial number of the external scale.
Model	Assigned weighing points, e.g., A+B	Model code of the external scale
Manufacturer	Minebea Intec	Minebea Intec
Unit	– mg – g – kg – t – lb – oz	– mg – g – kg – t – lb – oz
Operating mode	Single range only (SR)	– Single range (SR) – Multiple range (MR) – Multi-interval (MI)
Legal for trade	– On – Off	Off

7.8.1.3.3 Legal options

Select module in [TMS Pro scale data] and press [e Legal options].
A parameter view opens. The values displayed depend on the type of the
selected module.

Parameter	Module = Analog WP	Module = Digital WP (xBPI)
Max. tare	= [Max. total tare] × [Maximum capacity (Max)]	= [Maximum capacity (Max)]
Tare function	always [subtractive]	always [subtractive]
Zero track setting	Yes/No as per [Zero track]	Yes/No as per [Zero track]
Zero setting	always [semi-automatic]	always [semi-automatic]
Initial zero setting	[Yes] if [Scale type] = [Platform] and [Tare/zero at power on] <> off, otherwise [No]	[Yes] if [Tare/zero at power on] <> off, otherwise [No]
Initial zero set range	If [Initial zero setting] = No: *not visible* Otherwise if [Zero set range] = 0%: [Not available] 0.01...20.0%: [Available (≤ 20%)] 20.01...100.0%: [Available (> 20%)]	If [Initial zero setting] = No: *not visible* otherwise [Available (≤ 20%)]

7.8.1.4   Create service report

This menu item is used to export a service report. This file can be sent to Minebea Intec customer service for analysis in the event of technical queries. The service report is saved as an xml file on a USB stick or a network share.

Menu: [Minebea Service functions] ➜ [Create service report]

▶   Select and confirm storage location, see Directories and files.

  ▷   A file *servicereport-hostname-yyyymmdd-hhmmss.xml* is created.

> **Hinweis:** A service report can also be created via the web server.

7.8.1.5   Reset suspend battery data

After replacing the suspend battery, the data must be reset.

Menu: [Service] ➜ [Minebea Service functions] ➜ [Reset suspend battery data]

A user dialog opens.

Confirm with [✓ OK].

7.8.1.6   Configure xBPI scale

This menu item is used to set the serial communication for a connected xBPI scale independently of the indicator (e.g., for a printer at the scale).
The following permission must be enabled for the described functions (see also User roles).

Permission	ID	Function
Service	SERV	Configure xBPI scale.

Menu: [Minebea Service functions] ➜ [Configure xBPI scale]

A parameter view opens.

> **Hinweis:**
> NICL only:
> If more than one xBPI scale is connected, a selection appears with the connected digital weighing points (xBPI).

Parameter	Type	Description
User defined ID	Input	Possible values: – ID of the scale – Free text, max. 8 characters
SBN	Input	Possible values: – 0...31
Communication protocol	Selection	Available options: – SBI – xBPI

The following parameters are only visible if [Communication protocol] = [SBI].

Parameter	Type	Description
Baud rate	Selection	Available options: – 150 baud – 300 baud – 600 baud – 1200 baud – 2400 baud – 4800 baud – 9600 baud – 19200 baud
Parity	Selection	Available options: – Mark – Space – Odd – Even
Stop bits	Selection	Available options: – 1 bit – 2 bits
Handshake	Selection	Available options: – XON/XOFF – CTS with 2 char pause – CTS with 1 char pause

Parameter	Type	Description
Data output	Selection	Available options: – Manual without stability – Manual with stability – Manual with stability, then save – Automatic without stability – Automatic with stability
Automatic print	Selection	Available options: – Start/stop by [ESC P] – Continuous
Output format	Selection	Available options: – 16 characters (without ID) – 22 characters (with ID)
Output rate	Selection	Available options: – With each measurement – Every 2 measurements – Every 5 measurements – Every 10 measurements – Every 20 measurements – Every 50 measurements – Every 50 measurements – Every 100 measurements

Hinweis:

– Details of the parameters can be found in the scale documentation.
– There are no default values for the parameters, as these are read directly from the connected scale and are scale-specific.
– The available parameters and options depend on the connected scale, i.e., not all xBPI scales provide all parameters with all options.
– In addition, parameter changes can be restricted using the CAL switch on the xBPI scale.

7.8.2   Print jobs

> **Hinweis:** The menu item [Print jobs] is disabled if the user does not have the necessary permission (SERV, DAT-E/-V or SS-E/-V).

Under [Print jobs], pending print jobs are managed and can be canceled there if necessary.
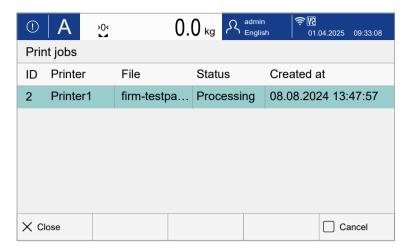
Permissions

The following permissions must be enabled for the described functions (see also User roles).

ID	Permission	Function
SERV	Service	View and cancel print jobs.
DAT-E	Application data – Edit	View and cancel print jobs.
SS-E	System settings – Edit	View and cancel print jobs.
DAT-V	Application data – View	View print jobs.
SS-V	System settings – View	View print jobs.

Menu: [Service] → [Print jobs]

A table view opens.

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Print jobs

ID	Printer	File	Status	Created at
2	Printer1	firm-testpa…	Processing	08.08.2024 13:47:57

✕ Close | | | | ☐ Cancel

Column description

Parameter	Description
ID	Sequential numbering of the print jobs
Printer	Printer to which the print job was sent
File	Name of the file sent to the printer (derived from the name of the print file + ".pdf" or ".txt")
State	Available options: – Pending – Processing – On hold – Stopped (error)
Created at	Date/time of the print order

Taskbar

Button	Description
✕ Close	Close the view.
☐ Cancel	Cancel the print job.

> **Hinweis:** Finished or canceled print jobs are automatically removed from the list.

7.8.3　System

> **Hinweis:** The menu item [System] is disabled if the user does not have the necessary permission (SERV, SS-E, DAT-IM/-EX or ALIBI).

Menu: [Service] ➜ [System]

The following menu items appear:
- Alibi maintenance
- Backup & restore
- Update software
- Test hardware
- Export databases and Import databases
- Format SD card/USB stick

7.8.3.1　Alibi maintenance

> **Hinweis:** The menu item [Alibi maintenance] is disabled if the user does not have the necessary permission (ALIBI).

Prerequisite:
Alibi license is available.
In this menu item, alibi data records are exported to a storage medium and can then be deleted if required.

ACHTUNG

Incorrect operation can cause data loss.
▶ The alibi data records may only be deleted by authorized specialist personnel.

Menu: [System] ➜ [Alibi maintenance]

The following menu items appear:
- Export
- Export & clear

7.8.3.1.1 Export

The exported alibi data records are saved as an xml file on a USB stick or a network share.

Menu: [Alibi maintenance] ➔ [Export]

A parameter view opens.

Parameter	Type	Description
Records in alibi memory	Display	Total number of alibi data records
Select records by	Selection	Available options: – Record number (default) – Sequence number – Number of days – Date range

The following parameters are only visible if [Select records by] = [Record number].

Parameter	Type	Description
Start record	Input	First record to be exported.
Number of export records	Input	Number of records to be exported.
Export – First sequence number	Display	Sequence number of the first record to be exported. Corresponds to the sequence number for the [Start record]. 1 (default)
Export – Last sequence number	Display	Sequence number of the last record to be exported. Calculated from [Export – First sequence number] + [Number of export records] – 1. [Records in alibi memory] (default)

The following parameters are only visible if
[Select records by] = [Sequence number].

Parameter	Type	Description
Export – First sequence number	Input	Possible values: – Sequence number of the first record to be exported – First sequence number in the alibi memory (default)
Export – Last sequence number	Input	Possible values: – Sequence number of the last record to be exported – Last sequence number in the alibi memory (default)

The following parameters are only visible if [Select records by] = [Number of days].

Parameter	Type	Description
Start date	Input	Possible values: – Date of the first record to be exported – Date of the first record in the alibi memory (default)
Number of days	Input	Possible values: – Number of days for which records are to be exported – Number of days with records in the alibi memory (default)
Export – First sequence number	Display	Sequence number of the first record to be exported. Corresponds to the first sequence number for the [Start date].
Export – Last sequence number	Display	Sequence number of the last record to be exported. Corresponds to the last sequence number for the ([Start date] + [Number of days]).

The following parameters are only visible if
[Select records by] = [Date range].

Parameter	Type	Description
Start date	Input	Possible values: – Date of the first record to be exported – Date of the first record in the alibi memory (default)
End date	Input	Possible values: – Date of the last record to be exported – Date of the last record in the alibi memory (default)
Export – First sequence number	Display	Sequence number of the first record to be exported. Corresponds to the first sequence number for the [Start date].
Export – Last sequence number	Display	Sequence number of the last record to be exported. Corresponds to the last sequence number for the [End date].

1. Enter parameters and press [▤ Export].

2. Select and confirm the storage location for the export file (USB stick or network share), see Directories and files.

    ▷ A file *alibi-hostname-yyyymmdd-hhmmss.xml* is created.

7.8.3.1.2   Export & clear

> **Hinweis:** The menu item [Export & clear] is disabled if the indicator is subject to legal control.

Alibi records can be deleted directly, or they are first exported as an XML file to a USB stick or a network share and then deleted.

Menu: [Alibi maintenance] ➜ [Export & clear]

A parameter view opens.

Parameter	Type	Description
Records in alibi memory	Display	Total number of alibi data records
Select records by	Selection	Available options: – Default: Number of records – Percentage – Number of days – End date

The following parameters are only visible if
[Select records by] = [Number of records].

Parameter	Type	Description
Number of export records	Input	Possible values: – Number of records to be exported – 50% of [Records in alibi memory] (default)
Export – First sequence number	Display	Sequence number of the first record (always 1)
Export – Last sequence number	Display	Sequence number of the last record to be exported. Calculated from [Export – First sequence number] + [Number of export records] – 1.

The following parameters are only visible if
[Select records by] = [Percentage].

Parameter	Type	Description
Percentage of export records	Input	Possible values: – 1...100% – 50% (default) Percentage of records to be exported
Export – First sequence number	Display	Sequence number of the first record (always 1)
Export – Last sequence number	Display	Sequence number of the last record to be exported. Calculated from [Export – First sequence number] + ([Records in alibi memory] • [Number of export records]) – 1.

The following parameters are only visible if [Select records by] = [Number of days].

Parameter	Type	Description
Number of days	Input	Possible values: – Number of days for which records are to be exported – Number of days with records in the alibi memory (default)
Export – First sequence number	Display	Sequence number of the first record (always 1)
Export – Last sequence number	Display	Sequence number of the last record to be exported. Corresponds to the last sequence number (date of first record + [Number of days]).

The following parameters are only visible if [Select records by] = [End date].

Parameter	Type	Description
End date	Input	Possible values: – Date of the last record to be exported – Date of the last record in the alibi memory (default)
Export – First sequence number	Display	Sequence number of the first record (always 1)
Export – Last sequence number	Display	Sequence number of the last record to be exported. Corresponds to the last sequence number for the [End date].

Export and clear records

1. Enter parameters and press [▤ Export & clear].

2. Select and confirm the storage location for the export file (USB stick or network share), see Directories and files.

   ▷ A file *alibi-hostname-yyyymmdd-hhmmss-[firstseqnr-lastseqnr].xml* is created.

3. Once the export is complete, confirm the user dialog.

   ▷ If an error occurs, an error message appears.

4. Confirm the user dialog for clear.

   ▷ The selected records are cleared in the alibi memory.

Clear records

– Enter parameters and press [🗑 Clear].
– Confirm the user dialog for clear.
   The selected records are cleared in the alibi memory.

7.8.3.2 Backup & restore

> **Hinweis:** The menu item [Backup & restore] is disabled if the user does not have the necessary permission (SERV).

Menu: [System] ➜ [Backup & restore]

The following menu items appear:
- Backup
- Restore

7.8.3.2.1 Backup

With a backup, the settings and data on the device can be saved in a file. This file can be used for system recovery if required.

Menu: [Backup & restore] ➞ [Backup]

A parameter view opens.

Parameter	Type	Description
Application settings	Switch	⬤ on (Default) If switched on, the application settings are saved.
Weighing points	Switch	⬤ on (Default) If switched on, the weighing point settings are saved.
System settings	Switch	⬤ on (Default) If switched on, the system settings are saved.
Databases	Switch	⬤ on (Default) If switched on, the databases are saved.
User list	Switch	⬤ on (Default) If switched on, the user list is saved.
With password protection	Switch	◎ off (default) If switched on, the backup file is protected with a password. This password must be entered for recovery.
Password	Input	Concealed input of a password. Visible if [With password protection] ⬤ is switched on.

1. Enter parameters and press [✓ OK].

2. Select and confirm the storage location for the backup file (local backups, USB stick, or network shares), see Directories and files.

   ▷ A file *backup-hostname-yyyymmdd-hhmmss.xml* is created.

7.8.3.2.2 Restore

The restore function can be used to restore settings and data from a backup file if required.

> **Hinweis:**
>
> A backup file must be available on one of the following media:
> – Web restore (if backup file was loaded via the web server)
> – Local backups (backup file was created on the device, see Backup)
> – USB stick
> – Network shares
>
> The device must be restarted in order to restore.
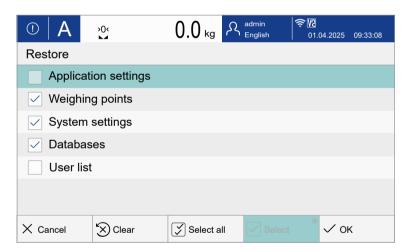
Menu: [Backup & restore] ➜ [Restore]

1. Select and confirm the medium and backup file to be used for the restore (web restore, local backups, USB stick, or network shares).

2. Enter the password for the backup file if required (see Backup).
   ▷ A selection list opens.

By default, all data contained in the backup file is selected.

Data that is not included in the backup file is not selected and [✓ Select] is deactivated.

3. Select the data to be restored.

4. Confirm the user dialog.
   ▷ The restore process is initialized and the device is restarted.

7.8.3.3   Update software

> **Hinweis:** The menu item [Update software] is disabled if the user does not have the necessary permission (SERV).

This menu item enables a software update of the device with an update file for
– Firmware
– Application
– Option cards

These update files are packages and contain the following software:

Update file (package)	Contains software for
Firmware	– Bootloader (optional) – Kernel – Firmware
Application	– Application – Print files
Option cards	Option – FW (firmware)

> **Hinweis:**
>
> An update file must be available on one of the following media:
> – Web update (if update file was loaded via the web server)
> – SD card/system (loaded at the factory)
> – USB stick
> – Network shares
>
> The device must be restarted for the software update.
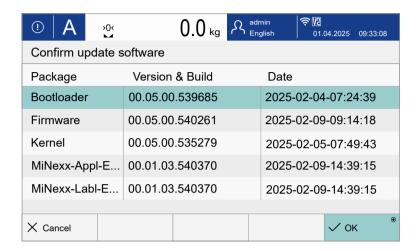
Menu: [System] ➜ [Update software]

1. Select and confirm the medium and update file to be used for the update (web update, SD card/system, USB stick, or network shares).
   ▷ The update package is unpacked on the device. A table view opens and lists the content of the update file.

⚠	A	›0‹		0.0 kg	admin English	🛜 �🖳	01.04.2025	09:33:08

Confirm update software

Package	Version & Build	Date
Bootloader	00.05.00.539685	2025-02-04-07:24:39
Firmware	00.05.00.540261	2025-02-09-09:14:18
Kernel	00.05.00.535279	2025-02-05-07:49:43
MiNexx-Appl-E...	00.01.03.540370	2025-02-09-14:39:15
MiNexx-Labl-E...	00.01.03.540370	2025-02-09-14:39:15

✕ Cancel				✓ OK

Column description

Parameter	Description
Software	Software included in the update package
Version & Build	Version and build number of the software
Date	Date the software was created

2. Press [✓ OK] to install the displayed software.
   ▷ The software is updated and the device is restarted (without resume).

7.8.3.4 Test hardware

> **Hinweis:** The menu item [Test hardware] is disabled if the user does not have the necessary permission (SERV).
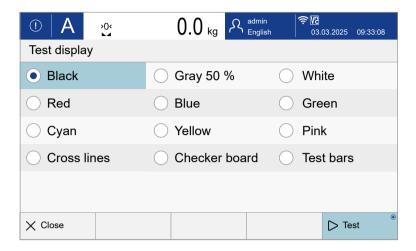
This menu item enables hardware tests of the device.
- Display
- Front keys
- Option cards
- Input devices

7.8.3.4.1 Display

Menu: [Test hardware] ➡ [Display]

A selection window opens.
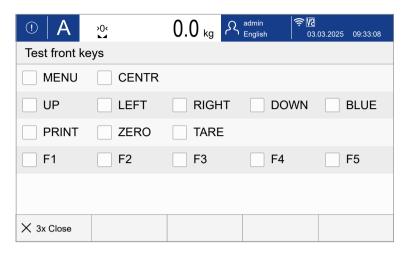
1. Select the required option and press [▷ Test].

   ▷ The selected option fills the entire display.

2. Press any key to end the display test.
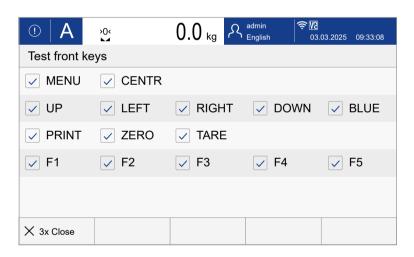
7.8.3.4.2   Front keys

Menu: [Test hardware] ➜ [Front keys]
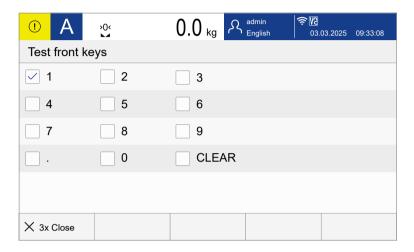
A selection window opens.

1. Press the corresponding keys on the device.
   ▷   The corresponding keys are marked with a check mark.

2. NICL model only: Press a key on the numpad of the device.

   ▷   The selection window for the numpad appears.

3. NICL model only: Press the corresponding keys on the numpad.

   ▷   The corresponding keys are marked with a check mark.

4. NICL model only: Press a key outside the numpad to return to the previous view.

5. Press the [✕ 3× close] button 3 times to end the test.

7.8.3.4.3   Option cards

All option cards installed in the device can be monitored or tested with this menu item.
–   View: Show details of installed option card
–   Monitor: Show current status of the input and output signals
–   Test: Set input and output signals directly for service purposes (regardless of the application status)

⚠ **WARNUNG**
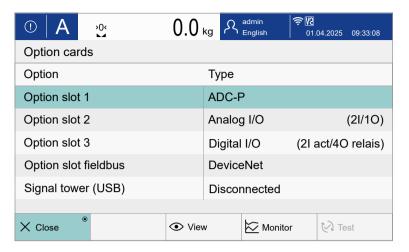
No monitoring or switch-off function available.
When testing the input and output signals, the signals are set to real values.

▶ Perform the test with caution.

Menu: [Test hardware] ➜ [Option cards]

A table view with all available slots appears.

Option cards	
Option	Type
Option slot 1	ADC-P
Option slot 2	Analog I/O (2I/1O)
Option slot 3	Digital I/O (2I act/4O relais)
Option slot fieldbus	DeviceNet
Signal tower (USB)	Disconnected

Controls: ✕ Close · 👁 View · Monitor · Test

Column description
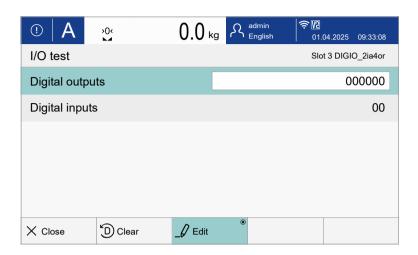
Parameter	Description
Option	Designation of the available slots: – Slot 1 – Slot 2 – Slot 3 – Slot 4 (NICL only) – Fieldbus slot – Signal tower (USB), if activated
Type	Type of the installed option card or "Not installed". For signal tower (USB) "Connected" or "Disconnected"

Taskbar

Button	Description
✕ Close	Close the view.
👁 View	Show details of the selected option card. The parameters displayed depend on the type of option card. Deactivated for the signal tower (USB).
⬚ Monitor	Show current status of the input and output signals. The parameters displayed depend on the type of option card. Available for – Analog weighing point (ADC), see Monitor analog weighing point (ADC) – Digital I/O, see Monitor digital I/O card – Analog I/O, see Monitor analog I/O card – Serial option card, see Monitor serial option card – Fieldbus modules, see Monitor fieldbus module – Signal tower (USB), see Test/monitor signal tower (USB)
⟲ Test	Set input and output signals directly. Available for – Digital I/O, see Test digital I/O card – Analog I/O, see Test analog I/O card – Signal tower (USB), see Test/monitor signal tower (USB)

7.8.3.4.3.1 Test digital I/O card

1. Select an option with "Digital I/O" in the table and press [♡ Test].

    ▷ A parameter view opens.

Parameter	Type	Description
Digital outputs (n...1)	Input	Binary string with the number of outputs on the card. The order is last output (n)...first output. Every output with 1 is switched on. Every output with 0 is switched off. All outputs are set directly after the binary input.
Digital inputs (n...1)	Display	Binary string with the number of inputs on the card. The order is last input (n)...first input. Every input with 1 is switched on. Every input with 0 is switched off.

2. Press [⊗ Clear] to set all output signals to 0 (switch off).

> **Hinweis:** After the parameter view is closed, the digital outputs are set again by the application.

7.8.3.4.3.2 Test analog I/O card

1. Select an option with "Analog I/O" in the table and press [⟳ Test].

   ▷ A parameter view opens.

Parameter	Type	Description
Analog output	Input	Current or voltage value depending on the configuration, see Configure analog outputs. – Current: 0...24 mA – Voltage: 0...10 V – "-" if output is disabled (input not possible)
Analog input 1 (mA)	Display	Current at input 1 (0...24 mA)
Analog input 2 (V)	Display	Voltage at input 2 (0...10 V)

2. Press [⊗ Clear] to set the analog output to 0 mA/V.

> **Hinweis:** After the parameter view is closed, the analog output is set again by the application.

7.8.3.4.3.3 Test/monitor signal tower (USB)

Prerequisite:
The signal tower (USB) is connected.

Test signal tower (USB)

1. Select an option with "Signal tower (USB)" in the table and press
   [⟳ Test].
   ▷ A parameter view opens.

Parameter	Type	Description
Red	Switch	Switch the red light of the signal tower on/off.
Yellow	Switch	Switch the yellow light of the signal tower on/off.
Green	Switch	Switch the green light of the signal tower on/off.

2. Press [⊗ Clear] to switch off all signals.

> **Hinweis:** After the parameter view is closed, the lights of the USB tower are set again by the application.

Monitor signal tower (USB)
– Select an option with "Signal tower (USB)" in the table and press
  [⟳ Monitor].
  The above-mentioned parameter view is displayed as "read only" with the current signals.

7.8.3.4.4 Input devices

See Test input devices.

7.8.3.5   Export and import databases

> **Hinweis:** The export and import functions are always application-specific, i.e., refer to the operating instructions of the application to find out whether the corresponding function is supported and, if so, for which tables.

> **Hinweis:** The menu item [Export and import databases] is disabled if the user does not have the necessary permission (DAT-EX or DAT-IM).

The indicator uses SQL databases for the permanent storage of application data.
Tables for the application-specific data can be created in each database, see the application manual for details.

Overview

Database	Examples of tables	Export function	Import function
Application – Data	Products	Yes	Application specific
Application – Reports	Weighing reports	Yes	No
Application – Export	Consumption data	Yes	No
Application – Import	Orders	No	Application specific

7.8.3.5.1   Export databases

> **Hinweis:** The menu item [Export databases] is disabled if the user does not have the necessary permission (DAT-EX).

Prerequisite:
There must be at least one table definition in a database with an export function.
With the database export, the data from a table can be exported to a file and stored on a USB stick or a network share.

Menu: [Export & import databases] ➜ [Export]

A parameter view opens.

Parameter	Type	Description
Table	Selection	Selection of the table to be exported.
		Available options:
		– All tables from databases with export function (application-specific)
Format	Selection	Selection of the file formats
		Available options:
		– Default: csv
		– json
		– html
		– xml
		– sql
Include headers	Switch	If ⬤ is switched on, column headers are also exported with the field names. Available for [Format] = [csv] or [html], otherwise switched off.
Include primary keys	Switch	If ⬤ is switched on, the internal IDs of the records are also exported.
Include referenced fields	Switch	If ⬤ is switched on, the fields from referenced tables are also exported. This is deactivated and switched off if the selected table does not have any referenced fields.

1. Enter parameters and press [▤   Export].

2. Select and confirm the storage location for the export file (USB stick or network share), see Directories and files.

   ▷ A file *export-tableid-hostname-yyyymmdd-hhmmss.ext* is created.
   If [Include referenced fields] ⬤ is switched on, the additional "tableids" are inserted in the file name.

7.8.3.5.2   Import databases

> **Hinweis:** The menu item [Import databases] is disabled if the user does not have the necessary permission (DAT-IM).

Prerequisite:

There must be at least one table definition in a database with an import function.

The database import can be used to import data from a file into one table at a time.

Menu: [Export & import databases] �][Import]

A parameter view opens.

Parameter	Type	Description
Import table	Selection	Selection of the table into which data is to be imported.
		Available options:
		– All tables from databases with import function (application-specific)
Import file	Selection	Select medium and file to be used for the import (USB stick, web import, or network shares).
		Supported file formats:
		– csv
		– json
		– xml

▶ Enter parameters and press [▤ Import].

  ▷ The import file is checked and the import function is started if the file is valid. Details can be found in the application manual.
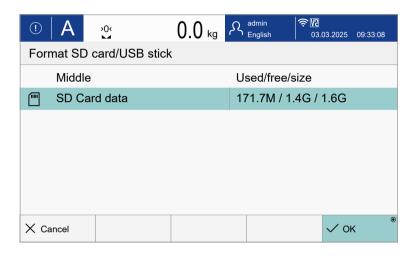
7.8.3.6   Format SD card/USB stick

> **Hinweis:** The menu item [Format SD card/USB stick] is disabled if the user does not have the necessary permission (SERV).

This menu item enables formatting of the SD card (partition for data, e.g., backups, update software packages) or a connected USB stick.

Menu: [System] ➜ [Format SD card/USB stick]

A table view opens.

				admin			
!	A	›0‹	0.0 kg	English		03.03.2025	09:33:08

Format SD card/USB stick

	Middle	Used/free/size
▯	SD Card data	171.7M / 1.4G / 1.6G

✕ Cancel				✓ OK

1. Select medium (data SD card or USB stick) and press [✓ OK].

   ▷   A user dialog opens.

2. Press [✓ OK] to start formatting.

3. Press [✕ Cancel] to cancel the process if necessary.

7.8.4 Shut down and switch off the indicator

> **Hinweis:** The menu item [Shut down & power off] is disabled if the user does not have the necessary permission (SERV, OP-AP or SS-E).

This menu item enables the indicator to be shut down and switched off in a controlled manner, e.g., to replace option cards. No backup of the working memory (suspend) takes place.

⚠ **WARNUNG**
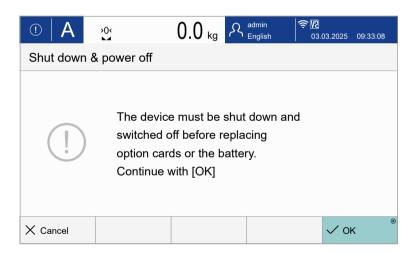
Performing electrical work on a device that is connected and/or switched on can have life-threatening consequences.
▶ The option cards and fieldbus modules may only be installed and removed by trained specialists.
▶ Disconnect the device from the power supply.

The next time the device is switched on, it is restarted so that the new hardware is recognized.

Menu: [Service] ➡ [Shut down & power off]

A user dialog opens.

Press [✓ OK] to shut down and switch off the indicator.

7.8.5 Performing a factory reset on the indicator

> **Hinweis:** The menu item [Factory reset] is disabled if the user does not have the necessary permission (SERV).

> **Hinweis:**
>
> A factory reset can only be performed if
> – the indicator is not subject to legal control*.
> – the indicator is not locked with the service lock.
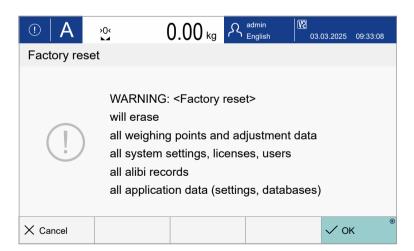
* The indicator is subject to legal control if [Subject to legal control] is enabled for at least one weighing point AND a weighing point is disabled OR the menu lock switch (CAL-1) is closed.

A factory reset clears the following data and parameters:
– all calibration/adjustment data
– the assignment of the weighing points
– all system settings including license and user management
– all alibi records
– all user data including database tables and configuration files

Menu: [Service] ➡ [Factory reset]

A user dialog opens.

1. Confirm with [✓ OK].
   ▷ A user dialog opens.

2. Click [✓ OK] to restore the device to the factory settings.

3. Press [✕ Cancel] to cancel the process if necessary.

7.9   Info

This menu displays information on the hardware and software of the indicator.

Menu: [Main menu] ➜ [Info]

The following menu items appear:
– Software version
– System status
– Hardware status
– Hardware components and I/O options
– Modbus-TCP I/O modules
– Network status
– Bluetooth devices
– Alibi memory status
– Weighing points
– Service contact
– Type plate
– MiNexx scale(Visible if the indicator belongs to a MiNexx scale.)
– Thread status (Visible if [Allow customizing] is switched on.)

> **Hinweis:**
> When user management is active, no user permission is required.

7.9.1 Software version

This menu item displays information about the software installed on the device, with the version and build number as well as the creation date for:
– Bootloader (with checksum check)
– Kernel (with checksum check)
– Firmware (with checksum check)
– Application
– Print files
– Installed option cards
– MCA
– SD card

Checksum check
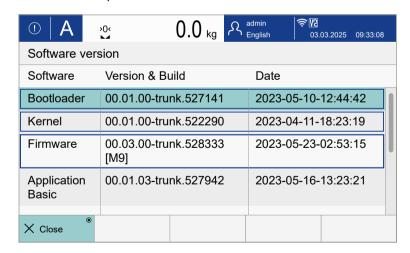
The software for bootloaders, kernels and firmware is subject to an MD5 checksum check, which is performed when the view is opened.

The result of this check is displayed with a colored frame around the respective software.
– Gray: MD5 checksum is valid.
– Blue: MD5 checksum is valid and partition has a valid signature (legal-for-trade mode).
– Red: MD5 checksum is invalid.

Menu: [Info] → [Software version]

A table view opens.

Software	Version & Build	Date
Bootloader	00.01.00-trunk.527141	2023-05-10-12:44:42
Kernel	00.01.00-trunk.522290	2023-04-11-18:23:19
Firmware	00.03.00-trunk.528333 [M9]	2023-05-23-02:53:15
Application Basic	00.01.03-trunk.527942	2023-05-16-13:23:21
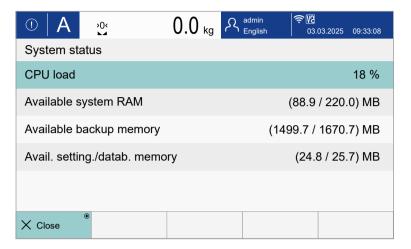
7.9.2   System status

This menu item displays information on the system load.

Menu: [Info] ➜ [System status]

A parameter view opens.

⚠	A	›0‹	0.0 kg	👤 admin English	📶 🔲 03.03.2025 09:33:08
System status					
CPU load					18 %
Available system RAM					(88.9 / 220.0) MB
Available backup memory					(1499.7 / 1670.7) MB
Avail. setting./datab. memory					(24.8 / 25.7) MB
✕ Close					
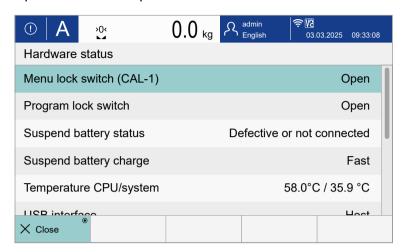
Parameter	Type	Description
CPU load	Display	Displays the processor load in %.
Available system RAM	Display	Displays the free/total system memory in MB.
Available backup memory	Display	Displays the free/total backup memory in MB.
Avail. setting./datab. memory	Display	Displays the free/total memory for settings/databases in MB.

7.9.3   Hardware status

This menu item displays information on the hardware.

Menu: [Info] ➜ [Ha]

A parameter view opens.

Parameter	Type	Description
Menu lock switch (CAL-1)	Display	Displays the status of the switch (Open, Closed).
Program lock switch	Display	Displays the status of the switch (Open, Closed).
Suspend battery status	Display	Displays the status of the suspend battery. Available options: – Defective or not connected – Alarm: battery hot – Alarm: <min. voltage – OK
Suspend battery charge	Display	Displays the charging status of the suspend battery. Available options: – Normal – Fast – Off

Parameter	Type	Description
Temperature CPU/system	Display	Displays the temperatures of the processor/system in °C.
USB interface	Display	– Host: Peripheral devices can be connected to the indicator (e.g., printers, barcode scanners). – Device: The indicator can be connected to a PC as a device.

> **Hinweis:**
> The USB interface is configured at the factory and cannot be changed.
> The USB interface for NICC can only be operated as a host.
> For USB interface as device see USB devices.
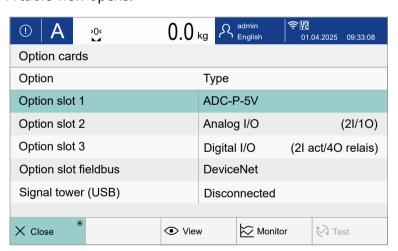
7.9.4 Hardware components and I/O options

This menu item displays information about the status of all available slots and all option cards installed in the device.

Menu: [Info] → [Hardware components and I/O options]

A table view opens.

Column description

Parameter	Description
Option	Designation of the available slots and internal circuit boards: – Slot 1 – Slot 2 – Slot 3 – Slot 4 (NICL only) – Fieldbus slot – Mainboard – Connection board
Type	Type of the installed option card or "Not installed"

Taskbar

Button	Description
✕ Close	Close the view.
👁 View	View details of the selected option card. The parameters displayed depend on the type of option cards.
⋉ Monitor	Display current status of the input and output signals, see Monitor. The parameters displayed depend on the type of option card. Not available for mainboard and connection board.

7.9.4.1   Monitor

[⋉ Monitor] is used to display the current status of the input and output signals (where present).

Available for
– Analog weighing electronics board
– Digital I/O card
– Analog I/O card
– Serial option card
– Fieldbus modules

7.9.4.1.1   Monitor analog weighing point (ADC)

Select an option with "ADC-P" in the table and press [✉ Monitor].
A parameter view opens.

Parameter	Type	Description
Input voltage	Display	Current input voltage at the ADC in mV/V
Counts	Display	Current number of counts output by the ADC.
Zero correction	Display	Weight of the zero correction
Gross	Display	Current gross weight
Net	Display	Current net weight Visible when the weighing point is tared.
Tare memory 1	Display	Current weight in tare memory 1. Visible when tare memory 1 is set.
Tare memory 2	Display	Current weight in tare memory 2. Visible when tare memory 2 is set.
Tare memory 3	Display	Current weight in tare memory 3. Visible when tare memory 3 is set.

7.9.4.1.2   Monitor digital I/O card

Select an option with "Digital I/O" in the table and press [⊠ Monitor].
A parameter view opens.

Parameter	Type	Description
Digital outputs (n...1)	Display	Binary string with the number of outputs on the card and their current status. The order is last output (n)...first output. Each output with 1 is switched on and with 0 is switched off.
Digital inputs (n...1)	Display	Binary string with the number of inputs on the card and their current status. The order is last input (n)...first input. Each input with 1 is switched on and with 0 is switched off.

7.9.4.1.3   Monitor analog I/O card

Select an option with "Analog I/O" in the table and press [⊠ Monitor].
A parameter view opens.

Parameter	Type	Description
Analog output	Display	Current value of the current or voltage, depending on the configuration, see Configure analog outputs. – Current: 0...24 mA – Voltage: 0...10 V – "-" if output is disabled
Analog input 1 (mA)	Display	Current at input 1 (0...24 mA)
Analog input 2 (V)	Display	Voltage at input 2 (0...10 V)

7.9.4.1.4 Monitor serial option card

Select an option with "Serial RS-232/485" or "Digital WP" in the table and press [⊠ Monitor].
A table view opens.

Column description

Parameter	Description
Chan.	Available interfaces on the serial option card: – RS-232 – RS-485

Status	Available options:
	– Not used
	– In use by
	  – Digital WP:
	    – Weighing point A
	    – Weighing point B (NICL only)
	    – Weighing point C (NICL only)
	    – Weighing point D (NICL only)
	  – Serial RS-232/485:
	    – Printer
	    – SBI interface
	    – SMA interface
	    – Remote display
	    – xBPI slave
	    – Barcode scanner
	    – Modbus-RTU

TX	Number of characters transmitted (in bytes)
RX	Number of characters received (in bytes)

Press [⊗ Reset] to reset the counters for TX and RX.

7.9.4.1.5 Monitor fieldbus module

The status information displayed depends on the fieldbus module installed
and the associated protocol:
– Profibus-DP
– Ethernet/IP
– ProfiNet I/O
– DeviceNet
– CC-Link

Select an option for "Fieldbus" in the table and press[✉ Monitor].
A parameter view opens.

Parameter	Type	Description
Fieldbus status	Display	Current status of the fieldbus module
		Available options:
		– Setup
		– Network initialization
		– Waiting for connection
		– Idle
		– Connected
		– Error
		– Fatal error
Additional parameters depending on the fieldbus installed	Display	See description below.
Outputs byte 0...7	Display	Current status of the output bytes 0...7 (HEX)
Outputs byte 8...15	Display	Visible if [I/O range size] ≥ 16 bytes Current status of the output bytes 8...15 (HEX)
Outputs byte 16...23	Display	Visible if [I/O range size] ≥ 24 bytes Current status of the output bytes 16...23 (HEX)
Outputs byte 24...31	Display	Visible if [I/O range size] ≥ 32 bytes Current status of the output bytes 24...31 (HEX)
...	Display	Visible if [I/O range size] = 64 bytes
Outputs byte 56...63	Display	Visible if [I/O range size] = 64 bytes Current status of the output bytes 56...63 (HEX)
Inputs byte 0...7	Display	Current status of the input bytes 0...7 (HEX)

Parameter	Type	Description
Inputs byte 8...15	Display	Visible if [I/O range size] ≥ 16 bytes Current status of the input bytes 8...15 (HEX)
Inputs byte 16...23	Display	Only visible if [I/O range size] ≥ 24 bytes Current status of the input bytes 16...23 (HEX)
Inputs byte 24...31	Display	Visible if [I/O range size] ≥ 32 bytes Current status of the input bytes 24...31 (HEX)
...	Display	Visible if [I/O range size] = 64 bytes
Inputs byte 56...63	Display	Visible if [I/O range size] = 64 bytes Current status of the input bytes 56...63 (HEX)

Additional parameters if [Fieldbus module] = [Profibus-DP]:

Parameter	Type	Description
Module status	Display	– Initialized – Not initialized – Fatal error
Operation mode	Display	– Data exchange – Not online/no power – Parametrization error – Configuration error

Additional parameters if [Fieldbus module] = [Ethernet/IP]:

Parameter	Type	Description
Module status	Display	– Master active – Not configured or master idle – Executing self test – Offline – Recoverable fault – Fatal error
Network status	Display	– Online with connection – Online without connection – Executing self test – Duplicate IP addr. (fatal error) – Connection timed out – Not initialized
Link/activity port 1	Display	– Link (100 Mbit/s) established – Activity (100 Mbit/s) – Link (10 Mbit/s) established – Activity (10 Mbit/s) – No link/no activity
Link/activity port 2	Display	– Link (100 Mbit/s) established – Activity (100 Mbit/s) – Link (10 Mbit/s) established – Activity (10 Mbit/s) – No link/no activity

Additional parameters if [Fieldbus module] = [ProfiNet I/O]:

Parameter	Type	Description
Module status	Display	– Normal operation – Diagnostics event(s) present – Fatal error – Fatal error – Not initialized
Network status	Display	– Online – RUN – Online – STOP – Fatal error – Station name not set – IP address not set – Configuration error – No connection
Link/activity port 1	Display	– Ethernet link est. with comm. – Ethernet link est. w/o comm. – No link/no activity
Link/activity port 2	Display	– Ethernet link est. with comm. – Ethernet link est. w/o comm. – No link/no activity

Additional parameters if [Fieldbus module] = [DeviceNet]:

Parameter	Type	Description
Module status	Display	– Normal operation – Wrong configuration – Executing self test – Offline – Recoverable fault – Unrecoverable fault
Network status	Display	– Online with connection – Online without connection – Executing self test – Module offline – Connection timed out – Critical link failure

Additional parameters if [Fieldbus module] = [CC-Link]:

Parameter	Type	Description
Module status	Display	– Initialized and ready – Fatal error – Offline
Error status	Display	– No error/no power – Error – Station no./baud rate changed – CRC error
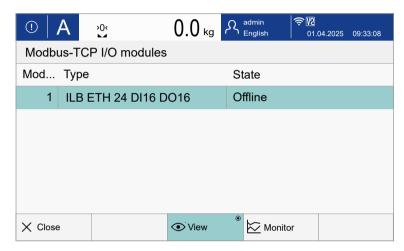
7.9.5 Modbus-TCP I/O modules

This menu item is used to monitor the module of a Modbus-TCP master.

> **Hinweis:** The menu item cannot be selected if no Modbus-TCP I/O modules are configured.

Menu: [Info] ➜ [Modbus-TCP I/O modules]

A table view opens containing all configured Modbus-TCP I/O modules (see Modbus-TCP I/O modules).

Column description

Parameter	Description
Module	Numbering of the modules
Type	Type of the module
Status	Current connection status

Taskbar

Button	Description
✕ Close	Close the view.
👁 View	View details of the selected module.
☒ Monitor	Display current status of the input and output signals, see Monitor Modbus-TCP I/O module.

7.9.5.1 Monitor Modbus-TCP I/O module

Select a module in the table and press [⊠ Monitor].
A parameter view opens.

Parameter	Type	Description
Connection status	Display	Current connection status
		Available options:
		– Active
		– Configuring
		– Offline
		– Idle
		– Error
I/O data active since	Display	Visible if [Connection status] = [Active]
		Date/time since which the connection has been active.
Offline since	Display	Visible if [Connection status] = [Offline]
		Date/time since which the connection has been offline.
Connection counter	Display	Counter for each connection establishment or connection attempt, reset after a restart.
I/O cycles	Display	Visible if [Connection status] = [Active]
		Counter for each data exchange, reset after a restart.
Cycle time	Display	Visible if [Connection status] = [Active]
		Duration of a data exchange
Rd (HREGS *xx*)	Display	Visible if [Connection status] = [Active]
		HEX string with the number of inputs on the module and their current status.
		Displayed as 16 bit register (e.g., 00F3).
		The register address (HREGS *xx*) and the number of input registers depend on the type of the module.
Wr (HREGS *xx*)	Display	Visible if [Connection status] = [Active]
		HEX string with the number of outputs on the module and their current status.
		Displayed as 16 bit register (e.g., 0B02).
		The register address (HREGS *xx*) and the number of output registers depend on the type of the module.

Parameter	Type	Description
Last error	Display	– Initialization failed – Cyclic I/O failed – Communication error – Connection closed – Timeout – Configuration error

7.9.6 Network status
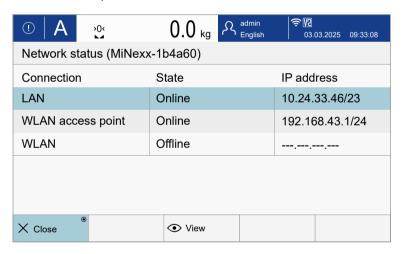
The network status provides an overview of the status of
– LAN
– WLAN access point (for NICC only)
– WLAN (for NICC only)

> **Hinweis:** See also Network settings.

Menu: [Info] ➡ [Network status]

A table view opens.

Column description

Parameter	Description
Interface	– LAN – WLAN access point (for NICC only) – WLAN (for NICC only)
Status	Current status of the network: – Online – Offline – Disabled[]
IP address	Current IP address, configured under network set-tings or received via DHCP.

Taskbar
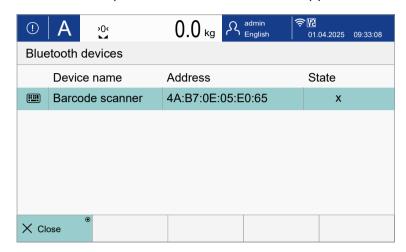
Button	Description
✕ Close	Close the view.
👁 View	View details of the selected network.

7.9.7 Bluetooth devices

> **Hinweis:** The menu item cannot be selected if [Enable] is not switched on for Bluetooth (see Activate Bluetooth devices).

Menu: [Info] ➜ [Bluetooth devices]

A table view of paired or connected devices appears.

Column description

Parameter	Description	Remarks
	Label: – ⌨ Keyboard – 🔫 Barcode scanner – 🖨 Printer – ✳ Other	
Device name	Identification of the device	Read from the device.
Address	MAC ID of the device	
Status	✔ Connected	
	✕ Not connected	Device has already been paired.
	? Unknown	
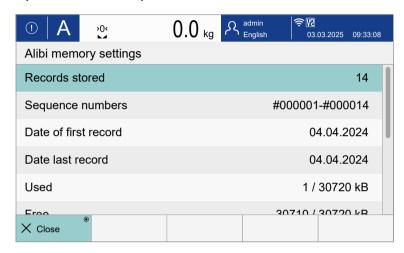
7.9.8 Alibi memory status

The alibi memory has a capacity of approx. 400,000 entries for three weight values (e.g., gross, net, tare).

> **Hinweis:** The menu item cannot be selected if no license for alibi memory is available.

Menu: [Info] ➝ [Alibi memory status]

A parameter view opens.
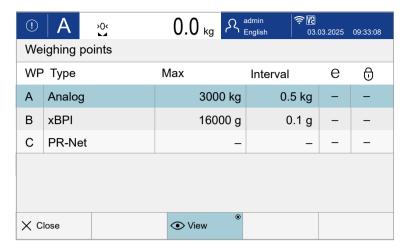
The following parameters are only visible if records exist.

Parameter	Type	Description
Records stored	Display	Total number of alibi data records
Sequence numbers	Display	*#Sequence number of the first record – #Sequence number of the last record*
Date of first record	Display	Date of first record
Date last record	Display	Date of last record
Used	Display	Used memory/Available memory (in kB) Visible if [Allow customizing] is switched on, see Customizing.
Free	Display	Free memory/Available memory (in kB)
Used memory	Display	Used memory/Available memory (in %)

Parameter	Type	Description
Average bytes/record	Display	Average size of a record (in bytes) Only visible if [Allow customizing] is switched on.
Time period	Display	Period in days over which the records extend. Visible if [Allow customizing] is switched on.
Average records/day	Display	Average number of records per day. Visible if [Allow customizing] is switched on.
Free records (estimated)	Display	Total number of records that can still be saved.
Period until memory full (est.)	Display	Estimated number of days for which records can still be saved. Visible if [Clear records] = [Manually] (see Alibi memory settings).
Retention period	Display	Visible if [Clear records] = [With retention period] (see Alibi memory settings).
Records to be deleted	Display	Number of records older than the retention period Visible if [Clear records] = [With retention period] and [Allow customizing] is switched on.
Max. records/day (estimated)		Estimated maximum number of records per day that can be saved within the retention period without the memory becoming full. Visible if [Clear records] = [With retention period].

7.9.9 Weighing points

Menu: [Info] ➜ [Weighing points]

ⓘ	A	›0‹	0.0 kg	admin English	03.03.2025 09:33:08

Weighing points

WP	Type	Max	Interval	e	🔒
A	Analog	3000 kg	0.5 kg	–	–
B	xBPI	16000 g	0.1 g	–	–
C	PR-Net	–	–	–	–

✕ Close		👁 View		

Column description, see Weighing points.

1. Highlights the chosen weighing point and press [👁 View].

   ▷ A parameter view opens.

> **Hinweis:** The parameters displayed depend on the weighing point.

Parameter	Type	Description
Weighing point serial number	Display	Analog: Serial number of the weighing point (ADC) Digital (xBPI or PR-Net): Serial number of the connected scale Compound WP: Calculated as CRC32 from the serial numbers of the assigned weighing points
Calibration check number	Display	Unique number for each weighing point, changed each time the weighing point settings are modified.
Last modified	Display	Date/time of the last change to the weighing point settings
Subject to legal control	Display	Switch turned on/off, see Legal parameters (analog)/Legal parameters (xBPI) for weighing point.
Lock settings	Display	Switch turned on/off, see Lock/unlock weighing point

The following parameters are only visible for analog weighing points:

Type	Display	Type of analog weighing point (ADC)

Parameter	Type	Description
Gravity at adjustment	Display	Visible if set at the factory or configured for adjusting the gravity, see Legal for trade settings.

The following parameters are only visible for digital weighing points:

Parameter	Type	Description
Model	Display	Model of the connected xBPI scale
Manufacturer	Display	Manufacturer of the connected xBPI scale
Version	Display	Software version of the connected xBPI scale
CAL switch at scale	Display	Switched on/switched off
User defined ID	Display	ID of the connected scale Visible if ID is set.
SBN	Display	SBN of the connected scale Visible if SBN > 0.

2. Press [✕ Close] to close the view.

7.9.10   Service contact

Menu: [Info] ➞ [Service contact]

A parameter view opens.

See also Service contact.

7.9.11   Type plate

Menu: [Info] ➞ [Type plate]

A user dialog containing the type plate content appears.

1. Press [⬚ QR code] if required.
    ▷   The type plate content is displayed as a QR code.
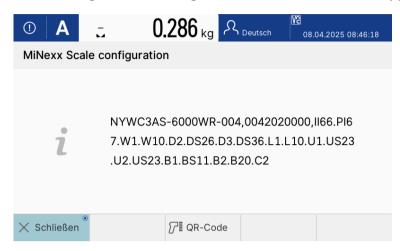
2. Scan the QR code to display and save the data on a mobile device.

7.9.12 MiNexx scale

Menu: [Info] → [MiNexx Scale]

A user dialog with the configuration of the MiNexx scale appears.

1. Press [⬚ QR code] if required.
   ▷ The configuration of the MiNexx scale is displayed as a QR code.

2. Scan the QR code to display and save the data on a mobile device.

7.9.13   Thread status

> **Hinweis:**
> This view is only visible if [Allow customizing] is switched on, see
> Customizing.
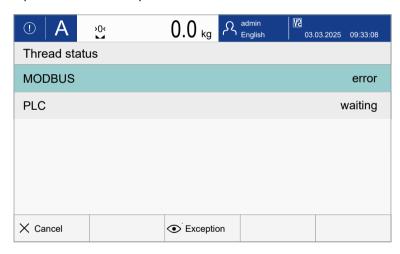
This menu item displays an overview of active threads (tasks). These are supplied from the application or firmware.

The following statuses are possible:
– pending
– running
– waiting
– done
– error
– cancelled
– killed

Menu: [Info] ➜ [Thread status]

A parameter view opens.

For threads with the status [error], press the [👁 Error] button to display further information about the error.

8   Overwrite protection

The overwrite protection protects
– weighing data and settings
– installed programs (software)

The overwrite protection for weighing data and settings can be activated as follows:
– with the **menu lock switch (CAL-1)**, see Lock switch
– with a **software switch**, see Software switch and Lock/unlock weighing point

The overwrite protection for installed programs (software) can be activated with the **program lock switch**, see Lock switch.

8.1   Lock switch

There are two lock switches (hardware) for the overwrite protection:
–   Menu lock switch (CAL-1)
–   Program lock switch

> **Hinweis:**
> For more information, see Technical manual – Hardware.

The exact function of the two lock switches is listed in the table below.

	Write protection activated	Write protection not activated
Hardware switch	Closed	Open

Switch	Meaning of "Write protection activated"
Menu lock (CAL-1)	Blocks changes to the following metrology parameters: – Creating/deleting weighing points – Lock weighing point – Weighing ranges/Parameters – Calibrate/Adjust
Program lock	Blocks changes to the installed software (firmware).

8.2   Software switch

All the weighing points can be individually secured via a software switch. After the overwrite protection has been activated, the one-time calibration check number (calibration code) is updated one last time and can then be written on the calibration label attached to the device.

Menu, see Lock/unlock weighing point.

If the weighing point has been locked via [🔓 Lock],
– the calibration data and parameters of the corresponding weighing point and the weighing point allocation are only viewed as if the menu lock switch (CAL-1) were closed.
– the overwrite protection can only be cleared by calling up [Lock] again (see Lock/unlock weighing point).

> **Hinweis:**
> For more information, see Technical manual – Firmware.

9 Web server and VNC server

The indicator has a web server and a VNC server via which remote display and operation is possible.

9.1 Web server

Prerequisites:
- The web server is activated with [HTTP + HTTPS] or [HTTPS only], see Network services and protocols.
- A certificate is available on the device, see Host name and certificate.

The web server is called up via a browser, e.g., on a PC.

1. Open the browser window.

2. Enter the IP address or host name of the indicator, see Host name and certificate or Network status.
   ▷ The web server login screen opens.

> **Hinweis:** Depending on the settings made under Network services and protocols, the connection is established only via HTTPS (for [Web server] = [HTTPS] only) or optionally via HTTPS or HTTP (for [Web server] = [HTTP + HTTPS].

> **Hinweis:** The web server is only available in English.

9.1.1 Login and home screen

Prerequisite:
At least one login is activated (see Logins for web server and VNC server) or the service lock is active.

Minebea intec
The true measure

MiNexx
Version 0.2.3

User
guest

Password

→ Login

The logins (users) on the web server are predefined and cannot be changed:
– <guest> (see Logins for web server and VNC server)
– <administrator> (see Logins for web server and VNC server)
– <service> (see Activate/deactivate service lock)

1. Enter the required login under [User].

2. Enter the password under [Password].

3. Press [⇥ Login].
   ▷ The login and password are checked. If they are valid, the home screen opens.

Hinweis: After 60 minutes of inactivity on the web server, the user is automatically logged out and the login screen is displayed again.

9.1.2 Weight display in the header
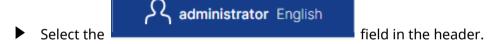
The weight display on the website always follows the active weighing point on the indicator.
The icons are described under Weight display.

Icon	Description
	If the indicator is subject to legal control*, the icon to the right of the weight is displayed to indicate the non-verifiable secondary display. * The indicator is subject to legal control if [Subject to legal control] is enabled for at least one weighing point AND a weighing point is disabled OR the menu lock switch (CAL-1) is closed.

9.1.3 User dialog (Account Settings)

▶ Select the ⟨administrator English⟩ field in the header.

   ▷ The user dialog (Account Settings) opens.

Logout user

▶ Press [⤒ Logout] to log out the currently logged-in user (Login).

   ▷ The login screen opens.

Change password

▶ Press [↺ Change password] to change the password of the currently logged-in user (Login).

   ▷ The login and password are checked.
   If valid, the password for the login is changed.
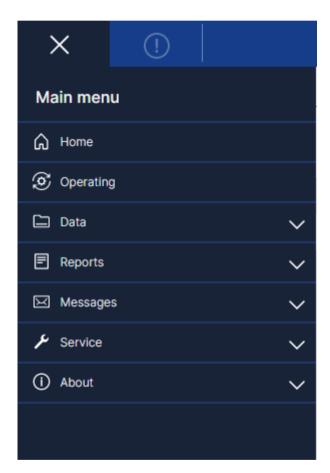
Close user dialog

▶ Press [X] or [✓ OK] to close the user dialog (Account Settings).

9.1.4 Web menu overview

The web menu is located on the left-hand side and can be shown or hidden there.

– Select the [≡] field in the header to show the menu.

– Select the [✕] field in the header to hide the menu.

Hinweis: Menu items for which the user does not have the necessary permission or whose function is deactivated cannot be selected.

Home

— **Home screen**

Operating

— **VNC**

    See Remote operation of the device.

Data

— **Database tables for application data (application-specific)**

    See Display/export application data.

Reports

— **Database tables for report data (application-specific)**

    See Display/export report data.

— **Alibi memory**

    See Display/export alibi records.

Messages

— **Event log**

    See Display event logs.

— **Log files**

    See Display/export log files.

Service

— **Service report**

    See Create service report.

— **System**

    — **Alibi memory maintenance**

        – Export, see Export alibi memory.
        – Export & clear, see Export and clear alibi memory.

    — **Backup & restore**

        – Create backup, see Create backup file.
        – Upload backup file, see Upload backup file.

    — **Update**

        – Upload software, see Upload update file.
        – Install report files, see Upload print files.
        – Install translation files, see Upload language files.

    — **Import database tables**

        See Import application data.

— **TMS Pro scale data**

    See Display/print TMS Pro scale data.

About

　Information

　　See Display device information.

　Configuration

　　– Configuration printout as text, see Configuration printout as text.
　　– Configuration printout as pdf, see Configuration printout as PDF.

　Screenshot

　　See Take screenshot.

　Type plate

　　See Display type plate.

　Manuals

　　See Display/export technical documentation.

9.1.5 Functions

9.1.5.1 Remote operation of the device

> **Hinweis:**
> The VNC server is only available if [VNC server] is switched on for the indicator, see Network services and protocols.
> Before the VNC server is started, the web server password must be entered again.

Select [Main menu] ➜ [Operating] to open the VNC user interface with the entire device front. The keys on the VNC user interface can be operated directly via mouse/touch.

Can be selected for login

– \<administrator\>

– \<service\>

9.1.5.2   Display/export application data

Select [Main menu] ➜ [Data] to open a sub-menu for displaying application data (e.g., products).
The items correspond to the database tables under Data.
This can be selected for all logins.
When a menu item is selected, the relevant data is displayed in table form (with paging, filter, and sorting functions).

> **Hinweis:** The menu items are application-specific. Details can be found in the application manual.

Additional functions in the taskbar

Can be selected for login
–   <administrator>
–   <service>

Press [⤓ Download] to write the record selected in the table to a file (in XML, CSV or PDF format) and export it to the download folder.

Press [⤓ Download all] to write all records displayed in the table to a file (in XML, CSV or PDF format) and export them to the download folder.

9.1.5.3   Display/export report data

Select [Main menu] ➡ [Reports] to open a sub-menu for displaying report data (e.g., weighings).
The items correspond to the database tables under Reports.
This can be selected for all logins.
When a menu item is selected, the relevant data is displayed in table form (with paging, filter, and sorting functions).

> **Hinweis:** The menu items are application-specific. Details can be found in the application manual.

Additional functions in the taskbar

Can be selected for login
– <administrator>
– <service>

Press [⤓ Download] to write the record selected in the table to a file (in XML, CSV or PDF format) and export it to the download folder.

Press [⤓ Download all] to write all records displayed on the current page to a file (in XML, CSV or PDF format) and export them to the download folder.

9.1.5.4   Display/export alibi records

Select [Main menu] ➡ [Reports] ➡ [Alibi memory] to open a table view containing the contents of the alibi memory.
This can be selected for all logins.
The contents of the alibi memory are displayed in table form (sorted in ascending order by sequence number and with paging, filter, and sorting functions).

> **Hinweis:**
>
> – The menu item [Alibi memory] is only visible if the alibi memory is in-itialized.
> – The menu item [Alibi memory] is disabled if the license for the alibi memory is not available.

Other functions

Press [⤓ Download] to write the record selected in the table to a file (in XML format) and export it to the download folder.

Can be selected for login
– <administrator>
– <service>

Press [⤓⤓ Download page] to write all records displayed on the current page to a file (as a ZIP archive with XML files for each record) and export them to the download folder.

Can be selected for login
– <administrator>
– <service>

Press [👁 View] to display details of the selected record.

Field	Description	Note
Sequence number	Sequence number of the displayed record	Always shown
Record date	Date of the displayed record	Always shown
Record time	Time of the displayed record	Always shown
Serial number	Serial number of the weighing point	Always shown
Table with weight values	Fields from the record, the following is displayed for each field – Type (weight type) – Weighing point ID (ID of the weighing point) – non-approved (△ for non-verifiable weight values) – Weight (weight value)	The type and number of weight types listed are application-specific, see also Weight types.

9.1.5.5   Display event logs

Select [Main menu] ➞ [Messages] ➞ [Event log] to open a table view of the event logs.

The following categories exist for the event logs (event type):
–   CONFIG
–   INDICATOR
–   POWER
–   FATAL_ERROR
–   USER_MANAGEMENT

This can be selected for all logins.

Functions

Press [👁 View] to open a table view with individual messages (sorted in ascending order by date/time and with paging) for the selected category (event type).

Press [‹ Back] to return to the overview.

Press [↻ Refresh] to update the display.

9.1.5.6   Display/export log files

Select [Main menu] ➞ [Messages] ➞ [Log files] to open a table view with log files that are updated cyclically (logd.0...logd.9).
This can be selected for all logins.

> **Hinweis:** For the login <service>, further log files are listed for additional system information.

Functions

Press [⤓ Download] to export the log file selected in the table to the download folder.

Press [⤓⤓ Download all] to export all log files displayed in the table to the download folder.

Press [👁 View] to display the content of the selected log file.

9.1.5.7   Create service report

Select [Main menu] ➔ [Service] ➔ [Service report] to create a service report.
This file can be sent to Minebea Intec customer service for analysis in the
event of technical queries.
This can be selected for all logins.
The current host name of the indicator is shown under Host name, see Host
name and certificate.

Functions

Press [⤓ Download] to create a service report as an xml file *servicereport-
hostname-yyyymmdd-hhmmss.xml* and export it to the download folder.

9.1.5.8   Export alibi memory

Select [Main menu] ➔ [Service] ➔ [System] ➔ [Alibi memory
maintenance] ➔ [Export] to open a parameter view for selecting the alibi
records to be exported.

Can be selected for login
–   <administrator>
–   <service>

Alibi memory information

Displays information on

Field	Description
Number of records	Total number of records in the alibi memory
Sequence number of first record	Sequence number of the first record in the alibi memory
Date of first record	Date of the first record in the alibi memory
Sequence number of last record	Sequence number of the last record in the alibi memory
Date of last record	Date of the last record in the alibi memory
Number of bytes used/total bytes	Used memory space/total memory space for alibi memory
Used memory	Proportion of used memory space in total memory space for alibi memory (in %)

Select records

Contains input fields for selecting the alibi records to be exported

Field	Type	Description
Select records by	Display	Record number (Selection by record number)
Number of records to be exported	Input	Number of records to be exported. Total number of records in the alibi memory (default)
First record to be exported	Input	First record that is to be exported. 1 (default)
From sequence number	Display	Sequence number of the first record that is to be exported. Corresponds to the sequence number of [First record to be exported]
To sequence number	Display	Sequence number of the last record that is to be exported. Calculated from: [From sequence number] + [Number of records to be exported] – 1

Functions

Pressing [⬚→ Export] creates a file *alibi-hostname-yyyymmdd-hhmmss-[firstseqno-lastseqno].xml* and exports it to the download folder.

9.1.5.9 Export and clear alibi memory

> **Hinweis:**
> The menu item [Export & clear] is disabled if the indicator is subject to legal control.

Select [Main menu] ➜ [Service] ➜ [System] ➜ [Alibi memory maintenance] ➜ [Export & clear] to open a parameter view for selecting the alibi records to be exported and/or cleared.

Can be selected for login
– <administrator>
– <service>

> **Hinweis:** Export & clear always starts with the first record in the alibi memory.

Alibi memory information

Displays information on

Field	Description
Number of records	Total number of records in the alibi memory
Sequence number of first record	Sequence number of the first record in the alibi memory
Date of first record	Date of the first record in the alibi memory
Sequence number of last record	Sequence number of the last record in the alibi memory
Date of last record	Date of the last record in the alibi memory
Number of bytes used/total bytes	Used memory space/total memory space for alibi memory
Used memory	Proportion of used memory space in total memory space for alibi memory (in %)

Select records

Contains input fields for selecting the alibi records to be exported and/or cleared

Field	Type	Description
Select records by	Selection	Available options: – [Number of records] (default) – [Percentage of alibi memory]

The following parameters are visible when [Select records by] = [Number of records]:

Field	Type	Description
Number of records to be exported	Input	Number of records to be exported/cleared. Total number of records in the alibi memory (default)
From sequence number	Display	Sequence number of the first record that is to be exported/cleared.
To sequence number	Display	Sequence number of the last record that is to be exported/cleared. Calculated from [From sequence number] + [Number of records to be exported] – 1

The following parameters are visible when [Select records by] = [Percentage of alibi memory]:

Field	Type	Description
Percentage of alibi memory to be exported	Input	Possible values: – 1...100% – 50% (default) Percentage of records to be exported/cleared.
From sequence number	Display	Sequence number of the first record that is to be exported/cleared.
To sequence number	Display	Sequence number of the last record that is to be exported/cleared. Calculated from: [From sequence number] + [Number of records] × [Percentage of alibi memory]) – 1

Functions

▶ Pressing [▤⁺ Export & clear] creates a file *alibi-hostname-yyyymmdd-hhmmss-[firstseqno-lastseqno].xml* and exports it to the download folder.

▶ In the confirmation dialog, enter the sequence number of the last record to be cleared and confirm the clearing.

  ▷ The selected records in the alibi memory are cleared.

▶ A confirmation dialog opens when [🗑 Clear] is pressed.

▶ In the confirmation dialog, enter the sequence number of the last record to be cleared and confirm the clearing.

  ▷ The selected records in the alibi memory are cleared.

> **Hinweis:** Recovery see Restore.

9.1.5.10 Create backup file

Select [Main menu] → [Service] → [System] → [Backup & restore] → [Create Backup] to open a parameter view for selecting the backup options.

Can be selected for login
– <administrator>
– <service>

With a backup, the settings and data on the device can be saved in a file. This file can be used for system recovery if required, see Restore.

Data options

Contains input fields for selecting the backup options

Field	Type	Description
Application settings	Switch	⬤ on (default) If switched on, the application settings are saved.
Weighing points	Switch	⬤ on (default) If switched on, the weighing point settings are saved.
System settings	Switch	⬤ on (default) If switched on, the system settings are saved.
Databases	Switch	⬤ on (default) If switched on, the databases are saved.
User list	Switch	⬤ on (default) If switched on, the user list is saved.

File options

Contains input fields for selecting the file options

Field	Type	Description
Password protection	Switch	◎ off (default) If switched on, the backup file is protected with a password. This password must be entered for recovery.
Password	Input	Concealed input of a password. Visible if [Password protection] is switched on.

Functions

Pressing [✓ Create] creates a file *backup-hostname-yyyymmdd-hhmmss.backup* and exports it to the download folder.

9.1.5.11   Upload backup file

Select [Main menu] → [Service] → [System] → [Backup & restore] → [Upload backup file] to open a parameter view for selecting an existing backup file (with the file format *.backup).

Can be selected for login
–   <administrator>
–   <service>

The system settings and data can be restored using the backup file loaded to the device, see Restore.

> **Hinweis:** The web server can only provide a backup file in the device. The restore must then be executed on the device.

File

Field	Type	Description
Upload file	Drag&drop area	Drag&drop area for selecting a backup file. Clicking in this area opens the file manager.

File details

Displays information on the file selected under [Upload file]

Field	Type	Description
File name	Display	Name of the file
File type	Display	Type of file
Last modified	Display	Date/time of last change (creation)

Functions

Press [🖱 Upload] to load the selected file to the device (on the medium [Web restore]). This can then be selected for the restore, see Restore.

Press [⊗ Clear file] to clear the file selection if necessary.

9.1.5.12 Upload update file

Select [Main menu] ➡ [Service] ➡ [System] ➡ [Update] ➡ [Upload software] to open a parameter view for selecting an existing update file (with the file format *.update).

Can be selected for login
–   <administrator>
–   <service>

The software on the device can be updated using the update file loaded to the device, see Update software.

> **Hinweis:** The web server can only provide an update file in the device. The software update must then be executed on the device.

File

Field	Type	Description
Upload file	Drag&drop area	Drag&drop area for selecting an update file. Clicking in this area opens the file manager.

File details
Displays information on the file selected under [Upload file]

Field	Type	Description
File name	Display	Name of the file
File type	Display	Type of file
Last modified	Display	Date/time of last change (creation)

Functions

Press [📤 Upload] to load the selected file to the device (on the medium [Web update]). This can then be selected for the software update, see Update software.

Press [⊗ Clear file] to clear the file selection if necessary.

9.1.5.13   Upload print files

Prerequisite:

[Upload print files] and [Upload files from web server] are activated, see Customizing

Select [Main menu] ➞ [Service] ➞ [System] ➞ [Update] ➞ [Install report files] to open a parameter view for selecting an archive file (with the file format *.zip) that was created with **miLabel**.

Can be selected for login
–   <administrator>
–   <service>

> **Hinweis:** The archive file contains the data sources, fonts, and all print files for a device.

File

Field	Type	Description
Upload file	Drag&drop area	Drag&drop area for selecting an archive file. Clicking in this area opens the file manager.

File details
(Visible if a file was selected under [Upload file].) Displays information on the file selected under [Upload file]

Field	Type	Description
File name	Display	Name of the file
File type	Display	Type of file
Last modified	Display	Date/time of last change (creation)

Workflow

1. Press [⬆ Upload] to load the selected archive file to the device, unpack it, and verify it.

    ▷ The print files from the archive file that were successfully uploaded to the device are listed under **Loaded files** (with the file format *.xml).

2. Press [✓ Install] to install the loaded print files.

    ▷ All print files, fonts, and data sources are updated.

3. Press [⊗ Clear file] to clear the entire file selection if required.

> **Hinweis:**
> Press [Install] to update or add all print files that are contained in the archive file from **miLabel** and listed under **Loaded files**.
> After a software update (see Update software), these files are deleted and only the print files contained in the update package are available on the device. In other words, changed or new print files must be reinstalled after a software update.

9.1.5.14 Upload language files

Prerequisite:

[Upload print files] is activated, see Customizing

Select [Main menu] ➡ [Service] ➡ [System] ➡ [Update] ➡ [Install translation files] to open a parameter view for selecting language files (with the file format *.mo or packed as *.zip).

Can be selected for login
– <administrator>
– <service>

Language files can be used to adapt the texts displayed on the device for the application in existing languages or to translate them into other languages. A separate .mo file is required for each language, containing the language identifier in its file name (e.g., *appl-de.mo* for German, *appl-en.mo* for English, etc.)

File

Field	Type	Description
Upload file	Drag&drop area	Drag&drop area for selecting language files (individual mo files or archive files, multi-select). Clicking in this area opens the file manager.

File details

Displays information on the files selected under [Upload file]

Field	Type	Description
File name	Display	Name of the file
File type	Display	Type of file
Last modified	Display	Date/time of last change (creation)

Workflow

1. Press [⬆ Upload] to load the selected files to the device, unpack them if necessary, and verify them.

   ▷ The .mo files that were successfully uploaded to the device are listed under **Loaded files**.

2. Press [✓ Install] to install the loaded language files.

   ▷ Existing languages are updated if necessary and new ones are added.

3. The next time the language is switched on the device (see Change operating language), the updated or new languages will be available.

4. Press [⊗ Clear file] to clear the entire file selection if required.

> **Hinweis:**
> Press [Install] to update or add all language files listed under **Loaded files**.
> After a software update (see Update software), these files are deleted and only the language files contained in the update package are available on the device. In other words, changed or new language files must be reinstalled after a software update.

9.1.5.15   Import application data

Prerequisite:

At least one table definition exists in a database with an import function, see Export and import databases.

Select [Main menu] ➡ [Service] ➡ [System] ➡ [Import database tables] to open a parameter view for selecting an import file (with the file format *.json, *.xml or *.csv).

Can be selected for login

– <administrator>

– <service>

The import file loaded into the device can be used to perform a database import for a table, see Import databases.

> **Hinweis:**
> The web server can only provide an import file in the device. The import must then be executed on the device, see Import databases.
> The import function is always application-specific, i.e., refer to the application manual to determine whether the import function is supported, and if so, for which tables.

File

Field	Type	Description
Import file	Drag&drop area	Drag&drop area for selecting an import file. Clicking in this area opens the file manager.

File details

Displays information on the file selected under [Upload file]

Field	Type	Description
File name	Display	Name of the file
File type	Display	Type of file
Last modified	Display	Date/time of last change (creation)

Functions

Press [📤 Upload] to load the selected file to the device (on the medium [Web import]). This can then be selected for the database import, see Import databases.

Press [⊗ Clear file] to clear the file selection if necessary.

9.1.5.16 Display/print TMS Pro scale data

Select [Main menu] ➞ [Service] ➞ [TMS Pro scale data] to open a parameter view with scale data that Minebea Intec Service can copy directly to the TMS Pro software.

Can be selected for login
- <administrator>
- <service>

Indicator

Displays information on the indicator

Field	Description	Note
Serial number	Serial number of the indicator	
Model	Indicator model	Available options: – NICC – NICM – NICL
Manufacturer	Manufacturer	Minebea Intec
Complete scale	Model code of the MiNexx scale	if present

Scales

Displays information on all available weighing points

Field	Description	Note
Weighing point	Weighing point	NICC/NICM: only A NICL: A, B, C, D
Module	Type of module/weighing point	Available options: – Analog WP – Digital WP (xBPI) – Compound WP (Compound, only with NICL) – PR-Net
Serial number	Serial number of the module, depending on the module type	See Details.

Field	Description	Note
Model	Model of the connected scale	See Details.
Manufacturer	Manufacturer of the scale	
Unit	Weight unit of the scale	
Weighing mode	Operating mode of the scale	
Acceptable for verification	Verifiable (On/Off)	
Max	Maximum capacity (Max)	Visible for single-range scale.
e	Verifiable scale interval	Visible for single-range scale and if [Subject to legal control] is switched on.
d	Scale interval	Visible for single-range scale.
Ranges	Table with Max, e, d per range (R)	See Ranges. Visible for multi-range/multi-interval scales e is only visible if [Subject to legal control] is switched on.

The following parameters are only visible if [Subject to legal control] is switched on for the weighing point:

Max tare	Max. tare	See Legal options.
Tare function	Tare function	Always subtractive
Zero-tracking device	Zero-tracking device (On/Off)	See Legal options.
Zero-setting device	Zero setting	Always semi-automatic
Initial zero-setting device	Zero setting at power on (On/Off)	See Legal options.
Initial zero-setting range	Zero set range at power on	See Legal options.

Other functions

Press [🖶 Printout] to display a printout containing the TMS Pro scale data for all modules (indicator and installed weighing points).

Press [⤓ Download] to write the displayed content to a text file *tmspro-hostname.txt* and export it to the download folder.

Press [🖶 Print] to print out the displayed content (with preview).

Press [〈 Back] to return to the overview of the TMS Pro scale data.

9.1.5.17   Display device information

Select [Main menu] ➡ [About] ➡ [Information] to open a view containing information on the device.

Device information
Displays information on the device

Field	Description	Note
Host name	Host name of the indicator	See Host name and certificate
Service lock active	The service lock is activated	See Service lock.
User management active	User management is activated	See User management.
Allow download to filesystem	[Allow customizing] is activated	See Customizing.

Version information

Displays information on installed software, see Software version.

9.1.5.18   Create configuration printout

In this menu, the indicator configuration can be displayed and printed out as a text file or PDF file if required.
This can be selected for all logins.

9.1.5.18.1   Configuration printout as text

Select [Main menu] ➜ [About] ➜ [Configuration] ➜ [Configuration printout as text] to display a text printout containing all the configuration settings.

Other functions

Press [⭳ Download] to write the displayed content to a text file *configuration-hostname-yyyymmdd-hhmmss.txt* and export it to the download folder.

Press [🖶 Print] to print out the displayed content (with preview).

9.1.5.18.2   Configuration printout as PDF

Select [Main menu] ➡ [About] ➡ [Configuration] ➡ [Configuration printout as pdf] to display a PDF containing all the configuration settings.

Other functions

Press [⤓ Download] to write the displayed content to a PDF file *configuration-hostname-yyyymmdd-hhmmss.pdf* and export it to the download folder.

Press [🖶 Print] to print out the displayed content (with preview).

9.1.5.19   Take screenshot

Select [Main menu] ➡ [About] ➡ [Screenshot] to take a screenshot of the current display on the indicator.
This can be selected for all logins.
A list of screenshots is also displayed if several screenshots have been taken.

Functions

Press [＋ Screenshot] to take another screenshot of the current display on the indicator. This is added to the list of screenshots.

Press [⧉ Clipboard] to copy the screenshot selected in the list to the operating system clipboard.

Press [⤓ Download] to write the screenshot selected in the list to a file *screenshot-hostname-yyyymmdd-hhmmss.png* (in PNG format) and export it to the download folder.

Press [⤓ Download all] to write all screenshots displayed in the list to individual files *screenshot-hostname-yyyymmdd-hhmmss.png*. These are packed into a ZIP archive and exported as a ZIP file to the download folder.

9.1.5.20   Display type plate

Select [Main menu] ➡ [About] ➡ [Type plate] to display the information shown on the type plate of the device.
This can be selected for all logins.

Type plate data

Displays the content of the type plate as text.

QR code

Displays the content of the type plate as a QR code.

Other functions

Press [⤓ Download] to write the content of the type plate to a text file *typeplate-hostname.txt* and export it to the download folder.

9.1.5.21   Display/export technical documentation

Select [Main menu] ➡ [About] ➡ [Manuals] to open a table view containing technical documentation loaded at the factory. These documents can be found as PDF files on the SD card.
This can be selected for all logins.

Functions

Press [⤓ Download] to export the file selected in the table to the download folder.

Press [⤓⤓ Download all] to pack all the files displayed in the table into a ZIP file and export them to the download folder.

Press [👁 View] to display the content of the selected file.

9.2   VNC server

Prerequisite:

The VNC server is switched on, see Network services and protocols.

> ⚠ **VORSICHT**
>
> **Warning: danger of unauthorized access.**
> The VNC connection via port 5900/5901 is not encrypted.
> ▶ Use VNC via HTTPS (device website) for a higher level of
>   protection.
> ▶ HTTP must be deactivated if it is not required.
> ▶ Always install a suitable server certificate.

The VNC server is called up via a VNC client program (VNC Viewer), which is installed on a PC, for example.

1. Start the VNC client.

2. Enter the IP address or host name of the indicator, see Host name and certificate or Network status.

3. Start the connection.

4. Enter the password for the <administrator>, <guest> or <service> login (see Logins for web server and VNC server and Service lock).

   ▷   The VNC user interface is displayed.

Hinweis:

– The VNC viewer can be operated both via the function keys on the PC (see Keypad) and directly via mouse/touchscreen.
– If only the IP address or the host name of the indicator has been entered, the VNC user interface shows the entire front panel of the indicator and also enables direct operation of all front buttons.
– If ":1″ is added at the end of the IP address or host name of the indicator, the VNC user interface only shows the indicator display.

Hinweis:

The settings in the VNC client may need to be adjusted for operation with a mouse/touchscreen and for correct color display.

Hinweis:

If the device is subject to legal control*, the icon is displayed to identify the non-verifiable secondary display.
* The indicator is subject to legal control if [Subject to legal control] is enabled for at least one weighing point AND a weighing point is disabled OR the menu lock switch (CAL-1) is closed.

10   USB devices

> **Hinweis:**
> The USB interface for NICC can only be operated as a host.

Prerequisite:
The indicator is configured at the factory as a USB device. The status is displayed under [Hardware status] ➡ Parameter [USB interface] = [USB device].

The indicator can be used as a USB device for various functions:
– as a storage medium (USB stick) for reading data
– as a virtual serial interface
– as a network adapter for serial functions

> **Hinweis:** After the indicator has been restarted, the other side must also be restarted.

10.1   Storage medium

When the indicator is connected to a PC via the USB interface, a storage medium (drive) named "MINEXX_SYS" appears on the PC with read access. This storage medium contains the software installed at the factory and the technical documentation.
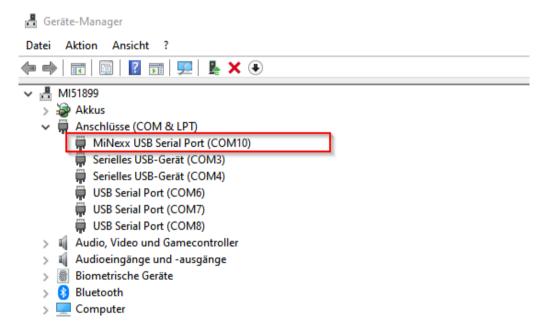
10.2   Virtual serial interface

With the virtual serial interface, the serial protocols under SBI protocol, SMA protocol and xBPI protocol can be transferred via USB as a virtual COM port.

> **Hinweis:**
> On a PC with MS Windows operating system, a driver must first be installed via the Device Manager.
> This is not necessary on a LINUX-based PC.

The MiNexx indicator appears as a device under the connections (COM & LPT) and the connection can be established using the COM port number.

10.3 Network adapter

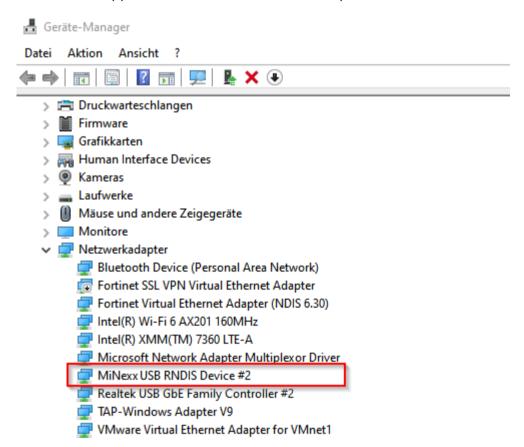With the network adapter function, the following functions can be performed via the USB connection:

– Web server, see Network services and protocols and Web server
– OPC-UA, see Network services and protocols and Protocol manual
– Serial protocols, see SBI protocol, SMA protocol and xBPI protocol

> **Hinweis:**
> On a PC with MS Windows operating system, a driver must first be installed via the Device Manager.
> This is not necessary on a LINUX-based PC.

The indicator appears on the PC as a network adapter.

The indicator provides a DHCP server that assigns an IP address in the range 192.168.5.20...30 to the connected USB client (PC).
The USB client can then access the indicator via the IP address 192.168.5.1 and subnet 255.255.255.224 and execute the required function.

11 System recovery

11.1 Recovery menu

If the device cannot perform a normal system start, the Recovery menu must be used to do this.

Menu item	Name	Description
1.	Reboot (restart device without resume)	The device is restarted. (without resume)
2.	Switch device off	The device is switched off.
3.	Restore last good software version (keep settings and data)	The last successfully installed software version is restored and the device restarted. Settings and data are kept.
4.	Restore factory software version (keep settings and data)	The factory software version is restored and the device restarted. Settings and data are kept.
5.	Factory reset (settings and data cleared)	The device is reset to factory settings.

The recovery menu is indicated by a red bar on the right-hand side of the display.

> **Hinweis:**
> The recovery menu is always in English, regardless of the selected language settings.
> Menu items 3 to 5 are not visible if the device is subject to legal control.
> * The indicator is subject to legal control if [Subject to legal control] is enabled for at least one weighing point AND a weighing point is disabled OR the menu lock switch (CAL-1) is closed.

11.2   Recovery key

The operator can access the Recovery menu using the Recovery key ⬤ (BLUE key).

1. Switch on the indicator and then hold down the ⬤ (BLUE key).
    ▷   The message "Recovery key detected! Please release the button" appears.

2. Release the ⬤ (BLUE key).
    ▷   The Recovery menu opens.

11.3   Start indicator without application

If an application is faulty and prevents normal operation of the indicator, the indicator can be started without an application in order to access the main menu. This allows settings to be changed, a backup to be imported, or the software to be updated.

1. Switch on the indicator.

2. Press and hold the [☆] (CENTRAL key) until the LED lights up.
    ▷   A message appears.

3. Release the [☆] (CENTRAL key).
    ▷   The indicator starts without an application.

> **Hinweis:** The indicator is only started without an application if it has previously been switched off without resume (suspend). In other words, if [Restart after powerfail] or [Restart after power key 3 s] is set to [Without resume] (see Operating & display) or the indicator was switched off in accordance with Shut down and switch off the indicator.

12 Messages

12.1 Alarms

List of alarms

(see also Alarms)

Alarm	Cause	Remedy
Battery: Suspend battery defective.		Battery replacement by trained specialists
xBPI scale Communication timeout on WP x	No connection to xBPI scale	– Check cable. – Check scale. – Connect scale to mains power supply.
Overload: Weighing point x	The weight value has exceeded the measuring range (gross > max + additive tare + overload)	Unload the scale.
Update: Uploaded file pending for update software.	New software has been loaded to the device via the web server but has not yet been installed.	Perform the software update.
Update: Backup file pending for restore.	A backup has been loaded to the device via the web server but has not yet been installed.	Restore from the backup.
Device: Problems in hardware setup:	The cause is displayed.	
Startup: System has been unexpectedly re-started due to…	The details are listed.	

Alarm	Cause	Remedy
Startup: Problem from bootloader	Bootloader detects a/an – Watchdog – Update error – A serious system error forces a reboot. – Hardware error – Unexpected reboot after previous suspend.	Send a service report via email to "help@minebea-intec.com" (see also Create service report).
System time Current system time is older than date of firmware		– Set the time or configure on the NTP server. – Check the clock battery.
Startup: Reboot after previous suspend		
Database: Setup database failed:	The cause is displayed.	
PLC: Cyclic service encountered unexpected error:	The cause is displayed.	
Modbus-TCP: Cyclic service encountered unexpected error:	The cause is displayed.	
Modbus-TCP: Connection failure for Modbus-TCP I/O module:	The cause is displayed.	
Modbus-TCP: Modbus-TCP I/O module x encountered error in cylce:	The cause is displayed.	
Disk space: More than xx % of available disk space used.		Clean up databases

Alarm	Cause	Remedy
Initial zero set: Initial zero set failed on WP x.	– Scale is loaded at power on. (Weight is outside the permitted zero set range.) – Scale has no stability.	– Unload the scale – Stabilize the scale
Catchweigher: Set zero is required on WP x	Set zero interval has expired	Set zero

12.2   Indicator errors

List of indicator errors/messages on the weight display

(see Weight display)

Error no./Message
Error 1/Arithmetic error
Error 2/Overload
Error 3/Inp.voltage too high
Error 4/Value n. displayable
Error 5/No value
Error 6/No sense voltage
Error 7/Wrong polarity
Error 8/Incompatible units
Error 9/Communicat. error
Error 11/No weight value

Error no./Message
Error 12/Scale not ready
Error 13/Config incorrect
Error 14/Scale busy
Error 15/Wrong device
Error 16/Warm up active
Error 17/Error reading config
Error 18/ADC not initialized
Error 19/WP not available
Error 20/IZS failed
Error 21/Wait for WP
Error 22/Compound WP inval
Error 23/No connection
Error 97/Underload
Static xx/Static error
Fatal xx/Fatal error

Information no./Message
Info 101/ISO-Cal active
Info 102/Linearization active

Minebea
intec
The true measure